
Development of Problem Statements and Goals

The three Research Teams investigated the benchmark data and existing water quality information to determine the scope of each water quality concern and develop problem statements that adequately summarize the main concerns within the watershed. The following paragraphs and Table 14 summarize the discussions and decisions made by the Research Teams.

Problem Statements

The Agricultural Nonpoint Source Team (Ag Team) determined that existing data established the presence of waterborne pathogens in many streams in the watershed, and visual assessment results confirmed the presence of livestock in some streams and evidence of trampling, resulting in eroded streambanks. In addition, tillage transect survey results for Johnson County indicated that rates of conservation tillage adoption are low, especially for corn crops, and the Tillage Survey identified that local farmers face barriers to the adoption of conservation tillage. Based on this evidence, the Ag Team adopted the following problem statements:

1. Livestock with uncontrolled access to waterbodies may trample riparian areas, leading to increased bank erosion and sediment pollution. Further, pathogens from animal waste can cause digestive and other health problems in humans.
2. Conventional tillage methods leave exposed soils resulting in sedimentation and nutrient contributions to waterbodies in the watershed.
3. Results from the tillage survey indicate that operators/landowners are not informed about conservation practices on farmland and how farmland practices impact water quality. Additionally, they are unaware of the potential funding sources and manpower available to assist with conservation efforts.

The Loss of Riparian Corridors Team (Riparian Team) determined from landuse maps and visual observations that many buffer zones in the watershed are poorly vegetated, especially in the northern half of the watershed. The team also noted from visual observations that poor canopy cover was often correlated with the presence of algae, especially in summer months, and that streams within the county's legal drain system were less likely to have adequate riparian buffer zones. The lack of adequate buffer impacts a variety of water quality parameters, including aquatic habitat, stream temperature, the ability to filter pollutants from run-off water, and decreased aesthetic qualities. Based on this evidence, the Riparian Team adopted the following problem statement:

The lack of protective vegetated buffer impacts the health of the streams in the Youngs Creek Watershed. This is exhibited by increased sedimentation, erosion, flooding, and algal blooms in summer, increased *E. coli* contamination, decreased in-stream habitat (temperature, contaminants, sediment), and decreased aesthetic qualities.



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Table 14. Concerns, Stressors, Sources, and Problem Statements

Water Quality Concern	Stressor	Source	Problem Statement
Agricultural Nonpoint Source Pollution	Trampling of streambanks	Livestock farming practices	Livestock with uncontrolled access to waterbodies may trample riparian areas, leading to increased bank erosion and sediment pollution. Further, pathogens from animal waste can cause digestive and other health problems in humans.
	Presence of waterborne pathogens		
	Sediment leaves cropland and is carried in run-off water into streams	Low rate of conservation tillage adoption, especially with corn crops	Conventional tillage methods leave exposed soils resulting in sedimentation and nutrient contributions to waterbodies in the watershed. Results from the tillage survey indicate that operators/landowners are not informed about conservation practices on farmland and how farmland practices impact water quality. Additionally, they are unaware of the potential funding sources and manpower available to assist with conservation efforts.
Loss of Riparian Corridors	Occurrence of streambank erosion	Inadequate bank cover and shading	The lack of protective vegetated buffer impacts the health of the streams in the Youngs Creek Watershed. This is exhibited by increased sedimentation, erosion, flooding, and algal blooms in summer, increased <i>E. coli</i> contamination, decreased in-stream habitat (temperature, contaminants, sediment), and decreased aesthetic qualities.
	Presence of algae during low-flow conditions		
	Inability of streams to support aquatic habitat		
	Sediment and other pollutants entering streams in run-off water	Inadequate buffers to filter sediment and other pollutants from run-off water	
Increased Impervious Surface / Urban Nonpoint Source Pollution	Evidence of trash, illicit dumping, and poor management of riparian zones in urban and urbanizing areas	Increased population in the watershed, resulting in increased amounts of impervious surfaces and urban landuses	Future increases in impervious surfaces and urban landuses threaten to increase pollutants that degrade aquatic health.
	Sediment entering streams	Lack of adequate erosion control implemented on construction sites in developing areas	

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1 The Increased Impervious Surface / Urban Nonpoint Source Pollution Team (Urban Team)
2 determined that landuse maps show a definite increase in urban areas and impervious surfaces in the
3 watershed, and these increases have the potential to impact water quality in the watershed. In
4 addition, the growing urban population in a traditionally agricultural watershed requires the need for
5 more urban-based water quality education. Visual observations confirmed that trash material is
6 entering waterbodies in and around urban areas and that run-off from construction areas often
7 contains sediment that enters waterbodies in the watershed. Based on this evidence, the Urban Team
8 adopted the following problem statement:

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10 Future increases in impervious surfaces and urban landuses threaten to increase pollutants
11 that degrade aquatic health.
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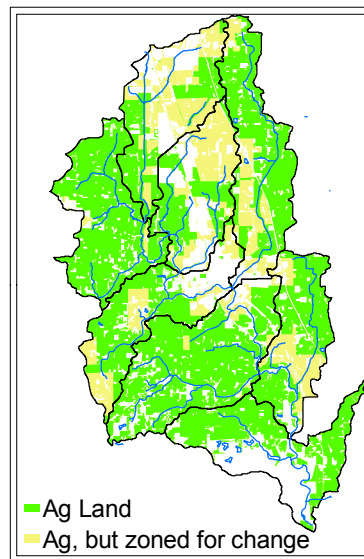
13 **Development of Goals**

14 Based on the problem statements in the previous section, each Research Team reviewed
15 existing data, considered alternatives, and developed twelve main goals to address water quality
16 issues in the Youngs Creek Watershed:
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18 **Agricultural Goals**

- 19 1. By August 2007, implement no-till on 40% of corn after
20 soybeans and 80% of beans after corn.
- 21 2. Increase awareness about how farmland practices may
22 impact water quality. Increase participation in
23 conservation programs by 100% through cost-share, Farm
24 Bill programs, and other efforts by 2007.
- 25 3. Encourage and promote the use of watering and manure
26 management systems.

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28 These efforts will be directed to existing agricultural land
29 within the watershed and will be specifically targeted to land that
30 is not likely to undergo landuse change; this area is shaded in green
31 at right.



32 **Figure 48. Area of focus for Agricultural Goals**



Riparian Goals

These goals will be targeted to areas that currently do not have adequate buffer, located predominantly in the northern half of the watershed. Current buffers are shaded in green in Figure. More precise prioritization will occur at the completion of the riparian buffer assessment (Goal #4).

4. Assess the status of riparian buffers in the Youngs Creek Watershed.
5. Prioritize riparian buffer restoration areas within the Youngs Creek Watershed.
6. Improve or maintain riparian buffers adjacent to streams (natural, man-made, or altered), ponds, and wetlands throughout the watershed. This consists of an ongoing and incremental goal of increasing buffers where absent or insufficient, maintaining existing buffers, and connecting existing buffers where possible.
7. Promote riparian buffer installation through outreach efforts targeted at three primary audiences within the watershed: agricultural producers urban residents, and rural or low-density residential.
8. Equip policy makers with information they need to improve and maintain riparian buffers in the watershed.

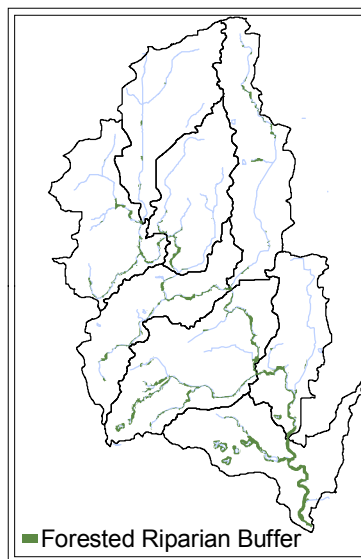


Figure 49. Current locations of adequate forested buffer

Urban Goals

These strategies will be targeted to urban and urbanizing areas (Figure).

9. Promote water-friendly behaviors among residents and officials in urban and urbanizing areas of the watershed.
10. Promote dialogue among engineers, officials, and other professionals in the watershed about the installation and maintenance of structures and/or practices (BMPs) that counterbalance impervious surface run-off.
11. Determine the need to re-design or alter retention ponds in existing subdivisions to meet design standards set forth in the Johnson County Subdivision Control Ordinance, and share this information with the subdivision residents.
12. Provide input to Stormwater Phase II entities in Johnson County during the Phase II planning process.

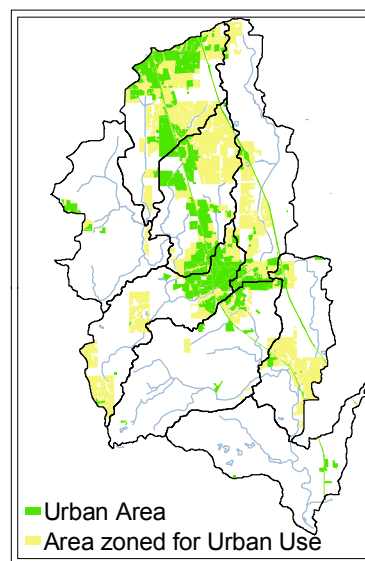


Figure 50. Area of focus for urban goals



1 For each goal, the research teams developed a list of objectives, action items, target
2 audiences, responsible parties, tentative schedules, and potential indicators to measure progress. The
3 Agricultural Goals and objectives are listed in Table 15; the Riparian Goals and objectives are listed
4 in Table 16; and the Urban Goals and objectives are listed in Table 17. Each Research Team also
5 created an action register, listing each action item, description of the action, technical resources,
6 estimated costs, financial resources, and potential financial partners. Appendix K includes action
7 registers for the Agricultural Goals, the Riparian Goals, and the Urban Goals.



Table 15. Agricultural Goals and Objectives

Agricultural Problem Statement:
 Conventional tillage methods leave exposed soils resulting in sedimentation and nutrient contributions to waterbodies in the watershed.

Goal 1:
 By August 2007, implement no-till on 40% of corn after soybeans and 80% of beans after corn.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Provide up-to-date information about conservation tillage.	Evaluate current studies on conservation tillage.	Agricultural landowners/operators	SWCD Youngs Creek Project – Ag Outreach Specialist	Dec 2003-Dec 2008	# Farmers who convert to no-till or reduced till
	Develop and distribute fact sheets.				
Promote existing educational and incentive programs for conservation tillage.	Inform operators about USDA programs through mailings.	Agricultural landowners/operators	SWCD Youngs Creek Project – Ag Outreach Specialist	On-going	# Program applicants # People at meetings
	Hold informational meetings about existing incentive programs.				
	Develop web-based resource site about USDA programs.				
Create a cost-share program that encourages conservation tillage.	Develop criteria for cost-share program.	Agricultural landowners/operators	SWCD Youngs Creek Project – Ag Outreach Specialist	Development Dec 2003-June 2004 Cost-share distribution July 2004-Dec 2005	# Projects funded through cost-share Estimated amount of soil erosion reduced through cost-share
	Promote the cost-share program.				
	Implement the program.				

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Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Conduct adult and youth education programs related to conservation practices	Develop basic series for adults on the economics of conservation tillage, focusing on "how to make it work."	Landowners/operators Agency personnel	SWCD Youngs Creek Project – Ag Outreach Specialist	Program development Dec 2003-Dec 2005	# Program applicants # Attendees at programs # Participants in youth activities
	Develop youth education series on the economics of soil erosion and land use decisions.	4-H FFA Youth Board		Education on-going	
Showcase successful practices and operators.	Develop criteria for conservation award.	General public Landowners/operators	SWCD Youngs Creek Project	Jan 2004-June 2004	Conservation tillage transect data
	Provide awards and public recognition to operators succeeding with conservation tillage.			Initiate Awards by 2005 and distribute on an on-going basis	
	Provide tours of successful operations			Tours, annual beginning in 2005	

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Agricultural Problem Statement:

Results from the tillage survey indicate that operators/landowners are not informed about conservation practices on farmland and how farmland practices impact water quality. Additionally, they are unaware of the potential funding sources and manpower available to assist with conservation efforts.

Goal 2:

Increase awareness about how farmland practices may impact water quality. Increase participation in conservation programs by 100% through cost-share, Farm Bill programs, and other efforts by 2007.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Secure personnel to promote existing programs, encourage the use of BMPs, and conduct education and outreach programs.	Hire an Ag Outreach Specialist	---	SWCD	Begin in Nov 2003	--



Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Solicit input of agricultural leaders on how to reach rural/ag community.	<p>Meet with representatives of local agencies and businesses to identify respected leaders in the ag community.</p> <p>Develop improved mailing lists for newsletters, publications, and special event mailings.</p>	Agricultural landowners/operators	Youngs Creek Project – Ag Outreach Specialist NRCS	Identify leaders on-going Mailing List completed by Dec 2004	# People reached by mailings
Educate stakeholders about environmental stewardship on their land.	<p>Research and illustrate economic benefits of conservation practices.</p> <p>Discuss conservation practices with stakeholders through public meetings and personal contact.</p> <p>Utilize infrared photography to help stakeholders recognize need and opportunities for conservation projects.</p> <p>Develop worksheets to record environmental stewardship and land concerns.</p> <p>Develop an Ag Water Quality Field Day.</p>	Agricultural landowners/operators	Youngs Creek Project – Ag Outreach Specialist NRCS Youngs Creek Project – Ag Outreach Specialist NRCS	Economic research completed by Oct 2004 Meetings on-going Infrared photos available in May 2004 Worksheets developed Dec 2004 Field Day completed by Dec 2004	# of people contacted through personal contacts and public meetings # of participants and sponsors for field day



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Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
<p>Develop relationships and collaborations with local agribusinesses.</p>	<p>Identify and develop contact list for local agriculture-related businesses.</p> <p>Inventories existing events that offer the potential to involve agribusinesses.</p> <p>Utilize businesses to help promote existing conservation and incentive programs and distribute informational material.</p>	<p>Agribusiness owners and employees</p>	<p>Youngs Creek Project – Ag Outreach Specialist</p> <p>NRCS</p>	<p>Contact list completed June 2004</p> <p>Collaboration ongoing</p>	<p># of agricultural businesses involved in conservation initiatives</p>
<p>Enroll participants in incentive programs and provide technical services for practices including grassed waterways, WASCObS, grade stabilization structures, filter strips, riparian forest buffer, nutrient management, and pest management.</p>	<p>Discuss with potential applicants the benefits of conservation programs and the assistance they can receive.</p> <p>Assist participants with cost-share applications for Farm Bill and other incentive programs.</p>	<p>Agricultural landowners/operators</p>	<p>Youngs Creek Project – Ag Outreach Specialist</p> <p>NRCS</p>	<p>Contact on-going</p>	<p># of participants in Farm Bill Programs</p> <p># acres with conservation plans and practices</p>

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1 **Agricultural Problem Statement:**
 2 Livestock with uncontrolled access to waterbodies may trample riparian areas, leading to increased bank erosion and sediment pollution. Further, pathogens
 3 from animal waste can cause digestive and other health problems in humans.

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5 **Goal 3:**
 6 Encourage and promote the use of watering and manure management systems.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Investigate new technologies for watering and manure management systems.	Gather information and evaluate current research	Livestock Operators	Young Creek Project NRCS	Investigation on-going, complete by 2008	--
Provide information to producers about manure management alternatives.	Develop and distribute fact sheets about water quality.	Livestock Operators	Youngs Creek Project – Ag Outreach Specialist NRCS	Meetings on-going Fact sheets complete by 2005	# of people who receive information
	Host a seminar series.				
Promote livestock exclusion and manure management practices by utilizing incentive programs.	Meet individually with livestock producers.	Livestock Operators	SWCD/Youngs Creek Project NRCS	Promotion on-going	# Plans developed for nutrient management and livestock watering facilities, # Participants enrolled in incentive programs, # of livestock observed in streams, <i>E.coli</i> counts in watershed streams

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Table 16. Riparian Goals and Objectives

Riparian Problem Statement:

The lack of protective vegetated buffer impacts the health of the streams in the Youngs Creek Watershed. This is exhibited by increased sedimentation, erosion, flooding, and algal blooms in summer, increased *E. coli* contamination, decreased in-stream habitat (temperature, contaminants, sediment), and decreased aesthetic qualities.

Goal 4:

Assess the status of riparian buffers in the Youngs Creek Watershed.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Identify riparian vegetated buffers in the watershed.	Conduct visual field assessments.	SWCD/Youngs Creek Assessment	SWCD/Youngs Creek Assessment	Present to 2 years	Watershed-wide map of existing stream buffer types and widths.
	Map the watershed using all data sources.				
	Document status of riparian buffers by ground photography, aerial photography, and/or satellite imagery.				

Goal 5:

Prioritize riparian buffer restoration areas within the Youngs Creek Watershed.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Identify the appropriate riparian buffer type, width, and distribution for each land use category in the watershed.	Determine ranking criteria.	SWCD/Youngs Creek Assessment	SWCD/Youngs Creek Assessment	Year 1 to Year 3	Watershed-wide map of riparian-buffer restoration priority areas (ranked).
	Identify primary land use categories.				
	Identify future zoning and areas of potential development.				
	Apply criteria to the watershed to determine restoration priorities.				



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Goal 6:

Improve or maintain riparian buffers adjacent to streams (natural, man-made, or altered), ponds, and wetlands throughout the watershed. This consists of an ongoing and incremental goal of increasing buffers where absent or insufficient, maintaining existing buffers, and connecting existing buffers where possible.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Increase stream buffers by 40% in the northern part of the watershed near agricultural land use. Also concentrate on any high priority areas in the rest of the watershed identified in Goal #2.	Determine criteria for various funding-grant-incentive programs.	Agricultural producers.	SWCD/Young Creek Assessment; Agricultural outreach personnel, NRCS	Present to Year 5	Visual assessment. QHEI scoring after five years should show whether additional buffers are having an impact on stream health.
	Attempt to predetermine qualification for programs for farmers and present the options to each one as a “package” of options.				
Increase stream buffers in the northern part of the watershed so that nearly 100% of streams have at least a minimum width of riparian vegetated buffer.	Determine criteria for various funding-grant-incentive programs.	Landowners in the northern portion of the watershed, including agricultural and urban areas.	SWCD/Young Creek Assessment; Agricultural outreach personnel, NRCS	Year 5 to Year 10	Visual assessment. QHEI scores.
	Attempt to predetermine qualification for programs for farmers and present the options to each one as a “package” of options				
Connect existing buffers to create continuous buffers where possible throughout the entire watershed.	Provide cost-share funding, education, outreach, and demonstration projects.	Landowners in the northern portion of the watershed, including agricultural and urban areas.	SWCD/Young Creek Assessment	Year 5 to Year 10 (ongoing)	Visual assessment. QHEI scores.
	Provide cost-share funding, education, outreach, and demonstration projects.				
Improve buffers throughout entire watershed so that appropriate buffer types and widths exist for 50% of the entire watershed.	Provide cost-share funding, education, outreach, and demonstration projects.	Landowners in the northern portion of the watershed, including agricultural and urban areas.	SWCD/Young Creek Assessment; Agricultural outreach personnel, NRCS	Year 10 to Year 15	Visual assessment. QHEI scores.

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Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Improve buffers throughout entire watershed so that appropriate buffer types and widths exist for nearly 100% of the entire watershed.	Provide cost-share funding, education, outreach, and demonstration projects.	Landowners in the northern portion of the watershed, including agricultural and urban areas.	SWCD/Young Creek Assessment; Agricultural outreach personnel, NRCS	Year 15 to Year 20	Visual assessment. QHEI scores.
	Conduct visual field assessments.				
Reassess riparian vegetated buffers in the watershed.	Map the watershed using all data sources.	SWCD/Young Creek Assessment	SWCD/Young Creek Assessment	Year 20 (Assessment will occur every 5 years, but the current goal is to have a watershed-wide riparian buffer corridor by Year 20).	Thorough description and assessment. QHEI scores.
	Document status of riparian buffers by ground photography, aerial photography, and/or satellite imagery.				

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Goal 7:

Promote riparian buffer installation through outreach efforts targeted at three primary audiences within the watershed:

1. Agricultural producers
2. Urban or high-density residential (homeowners' associations, apartment complexes, schools, some businesses)
3. Rural or low-density residential (individual homeowners who are personally responsible for decisions made on their properties)

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Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Promote riparian buffer installation adjacent to agricultural lands within the watershed.	Market existing programs (CRP, EQIP, WRP, WHIP, etc.) to agricultural producers.	Agricultural producers FFA, Farm Bureau, Extension Advisory Board	Agricultural outreach personnel, NRCS	Present to Year 20. (ongoing)	Number of participants/acres enrolled in programs.
	Develop system of recognition.				

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Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
<p>Promote riparian buffer installation adjacent to retention ponds in subdivisions.</p>	<p>Install a buffer demonstration project in a subdivision. Educate homeowners by providing information. Install a demonstration project at a local school showing plant species that are attractive, easily maintained, and appropriate for buffers. Make cost-share funds available to homeowners' associations for buffer installation in urban areas. Develop a system of recognition for homeowners' associations or local communities.</p>	<p>Urban audiences</p>	<p>SWCD/Young Creek Assessment</p>	<p>Present to Year 5. (ongoing)</p>	<p>Number of homeowners' associations who agree to receive information; number of visitors to demonstration areas; number of cost-share projects funded; and number of associations or communities that qualify for recognition (number of associations implementing water-friendly practices).</p>
<p>Initiate a targeted campaign to raise awareness about stream buffers and promote riparian buffer installation adjacent to streams in rural non-agricultural areas of the watershed.</p>	<p>Cooperate with experts and businesses to develop literature that gives specific guidance for buffer installation and create opportunities for discounted purchase of buffer plants (i.e., local nurseries or home/garden stores). Develop a system of recognition to reward individual homeowners.</p>	<p>Rural audiences</p>	<p>SWCD/Young Creek Assessment</p>	<p>Present to Year 5. (ongoing)</p>	<p>Number of stores participating in campaign; number of coupons redeemed; number of homeowners recognized.</p>



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Goal 8:
Equip policy makers with information they need to improve and maintain riparian buffers in the watershed.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
<p>Promote riparian buffer installation adjacent to waterways within city/county control.</p>	<p>Monitor governmental agenda, upcoming decisions or legislation that have the potential to impact water quality.</p>	<p>City/County Councils (local government); Drainage Board; county commissioners; County Surveyor;</p>	<p>SWCD/Young Creek Assessment</p>	<p>Present to Year 5. (ongoing)</p>	<p>Number of issues where experts provided information about impacts to water quality; number of special speakers/ meetings.</p>
	<p>Identify and organize local experts who are willing to provide information to decision-makers when such information is needed.</p>				
	<p>Identify opportunities for agencies such as the Central Indiana Land Trust, IDNR, or IDEM to speak to local decision-makers.</p>				
<p>Encourage county government to take green space, buffers, and corridors into account when planning for future zoning and development. (**Important for stream health as well as aquifer recharge and subsurface water quality.)</p>	<p>Monitor governmental agenda, upcoming decisions or legislation that have the potential to impact water quality.</p>	<p>County Planning and Zoning Board, County government officials, boards, commissions, task forces, study groups.</p>	<p>SWCD/Youngs Creek Assessment</p>	<p>Present to Year 5. (ongoing)</p>	<p>Number of issues where experts provided information about impacts to water quality; number of special speakers/ meetings.</p>
	<p>Identify and organize local experts who are willing to provide information to decision-makers when such information is needed.</p>				
	<p>Identify opportunities for agencies such as the Central Indiana Land Trust, IDNR, or IDEM to speak to local decision-makers.</p>				



Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Encourage county officials to change maintenance practices along legal drains to include vegetated riparian buffer installation and less chemical application.	<p>Monitor governmental agenda, upcoming decisions or legislation that have the potential to impact water quality.</p> <p>Identify and organize local experts who are willing to provide information to decision-makers when such information is needed.</p> <p>Identify opportunities for agencies such as the Central Indiana Land Trust, IDNR, or IDEM to speak to local decision-makers.</p>	County Surveyor, County government officials, boards, commissions, task forces, study groups.	SWCD/Youngs Creek Assessment	Present to Year 5. (ongoing)	Number of issues where experts provided information about impacts to water quality; number of special speakers/ meetings.

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Table 17. Urban Goals and Objectives

Urban Problem Statement:
 Future increases in impervious surfaces and urban landuses threaten to increase pollutants that degrade aquatic health.

Goal 9:
 Promote water-friendly behaviors among residents and officials in urban and urbanizing areas of the watershed.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Initiate large-scale campaign to make residents of urban and urbanizing areas aware of water quality issues.	Publish a series of articles in existing newsletters or newspapers	General public	SWCD/Youngs Creek Project	Initiate by year 2, with a target of 4 articles released/year.	Estimated audience.
	Exhibit a series of displays about water-friendly behaviors.	General public – targeted to urban locations.	SWCD/Youngs Creek Project	Initiate by year 2, with a target of 2 displays/year.	Number of locations hosting displays.
	Display a video and distribute related promotional items at county and community fairs.	General public	SWCD/Youngs Creek Project	Initiate by year 2, with a target of 1 display/year.	Estimated audience at each fair.
Promote existing programs (Indy Tox-drop and Spring Cleanup Day) that collect household hazardous wastes.	Initiate a targeted literature campaign.	General public	SWCD/Youngs Creek Project, Johnson County Solid Waste Management District	Initiate campaign in year 1 (Indy Tox-Drop is ongoing, Cleanup Day is yearly).	Number of Tox-Drop vouchers issued, number of cars served at Franklin clean-up, number of HHW lbs collected.
Promote awareness of storm drain pollution among residents of subdivisions within the watershed.	Sponsor storm drain labeling projects	Residents of subdivisions with storm drains.	SWCD/Youngs Creek Project	Initiate by year 2, with a target of 4 subdivisions labeled/year.	# of subdivisions labeled, articles or press releases issued, civic groups involved in labeling, total flyers passed out
Promote automobile maintenance among watershed residents.	Initiate a targeted literature campaign.	Citizens who change their own motor oil/ other auto fluids.	SWCD/Youngs Creek Project	Initiate by year 2, with materials made available on an ongoing basis.	Quantity of literature distributed, before/after rates of local oil/fluid recycling

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Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Promote proper retention pond maintenance to homeowners' associations (HAs) and other groups.	Distribute informational material to each HA. Hold a field day/workshop for HAs and other related groups.	HA representatives. HAs, planners, developers, others who design or maintain ponds	SWCD/Youngs Creek Project SWCD/Youngs Creek Project	Information to be made available within the next 2 years. To be initiated after completion of the riparian buffer demonstration project.	# HAs reached # of residents represented by each HA # of participants
Encourage homeowners to reduce applications of fertilizers and other yard chemicals.	Initiate a targeted literature campaign.	People who purchase and apply synthetic chemicals to lawns and gardens.	SWCD/Youngs Creek Project	Initiate by year 2, with materials made available on an ongoing basis.	# of places where educational materials are made available # of printed materials distributed.
Promote proper use of road salt and sand among city and county officials within the watershed.	Provide literature to city and county street departments. Hold a 2-hr special meetings for officials.	City and county officials	SWCD/Youngs Creek Project	Initiate by year 2, with materials made available on an ongoing basis.	# of participants, amount of literature distributed.
Promote proper septic system maintenance among residents in the watershed.	Targeted literature campaign.	Septic system owners.	SWCD/Youngs Creek Project County Health Department	Initiate by year 2.	# of places where materials are made available.



- 1 **Goal 10:**
- 2 Promote dialogue among engineers, officials, and other professionals in the watershed about the installation and maintenance of structures and/or practices
- 3 (BMPs) that counterbalance impervious surface run-off.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Encourage builders, developers, contractors, and other onsite workers to implement appropriate sediment control measures during construction	Hold meeting or workshop for builders, developers, and contractors to discuss or demonstrate BMPs.	Builders, developers, contractors, and other onsite workers.	SWCD/Youngs Creek Project	Initiate by year 1. Depending on success, it may become an annual event.	Number of people who attend the meeting or receive information.
Encourage discussion about more stringent water quality standards for retention ponds among city officials.	Make information about proper techniques and procedures available.	Onsite workers	SWCD/Youngs Creek Project	Initiate by year 1, through planning dept and IDNR soil conservationist.	Number of printed materials distributed.
Promote impervious surface alternatives in the watershed	Hold a meeting for town boards, councils, and other interested officials to discuss their subdivision control ordinances.	City and county officials	SWCD/Youngs Creek Project	Initiate by year 2, with information made available continuously.	# of people at the meeting. # of towns/cities represented.
Construct a permeable surface demonstration plot and signage in a visible area to raise awareness.	Construct a permeable surface demonstration plot and signage in a visible area to raise awareness.	General public, officials, planners, etc.	SWCD/Youngs Creek Project	To be initiated when an opportunity is provided for construction of a new parking lot.	



- 1 **Goal 11:**
- 2 Determine the need to re-design or alter retention ponds in existing subdivisions to meet design standards set forth in the Johnson County Subdivision Control
- 3 Ordinance, and share this information with the subdivision residents.

Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Evaluate pond standards in existing subdivisions in Johnson County	Conduct a records survey.	NA	SWCD/Youngs Creek Project	To be initiated within 1 year.	Number of subdivisions examined.
	Share survey results with the public.	General public, HA's	SWCD/Youngs Creek Project	To be completed at the end of the records survey.	Number of people informed about the status of their subdivisions

- 4 **Goal 12:**
- 5 Provide input to Stormwater Phase II entities in Johnson County during the Phase II planning process.
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Objective	Action Items	Target Audience	Responsible Party	Schedule	Indicators
Distribute results of the Youngs Creek Assessment and Management Plan to Phase II entities in the county.	Obtain contact information for and distribute watershed-related materials to all Phase II entities in the county.	Phase II entities	SWCD/Youngs Creek Project	To be completed within 1 year.	Number of entities receiving information.
Participate in the Phase II planning process.	Attend public meetings and other open forums to discuss issues.	Youngs Creek Advisory Group Concerned citizens;	Youngs Creek Advisory Group	To be initiated when the Phase II process gets underway.	Attendance at public meetings.
Provide other support to Phase II entities as needed.	Provide technical support, assistance in communication and advertising, and other cooperation to Phase II entities.	Phase II entities.	SWCD/Youngs Creek Project Youngs Creek Advisory Group	To be initiated when the Phase II process gets underway.	

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