# **Upper Ashers Run Subwatershed**

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center

# **Bacteria Restoration Protection Priority**

The bacteria pollution protection priority in the Upper (headwaters) Area of Ashers Run is high priority restoration.

## **Pollutant Sources**

The more probable bacteria pollution sources in the Upper (headwaters) Area of Ashers Run are (<u>Listed in no particular</u> order or rank):

- Low-intensity animal operations (small numbers of goats, horses, etc. as well as some 'non-traditional' livestock on relatively small properties)
- Septic Systems
- Wildlife

# Permitted Discharge Upper Ashers Run HILLCREST CT OEASTWOOD DRODGE CROOKED ORK CT ARABAMA ARABAMA RESTWOOD DRODGE CROKED ORK CT ARABAMA RESTWOOD DRODGE CROKED ORK CT RESTWOOD DRODGE RESTWOOD DRODGE

## Proposed Solutions / Remediation Activities

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Upper (headwaters) Area of Asher's Run? The solutions are listed in no particular order or rank. Circle your selection.

No.	Bacteria Remediation Activity	Mos	st◀	<b>→</b>	Lea	st	Effective
1	Develop a program to ensure regular septic system inspections, and, as necessary, upgrades or repairs of systems.	5	4	3	2	1	No Opinion
2	Implement an aggressive and targeted program to educate homeowners on effective septic system maintenance, management and operation	5	4	3	2	1	No Opinion
3	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5	4	3	2	1	No Opinion
4	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	5	4	3	2	1	No Opinion
5	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	No Opinion
6	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	No Opinion
7	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	No Opinion
8	Educate homeowners, livestock owners and farms of non-traditional animals on appropriate BMPs for pathogen reduction.	5	4	3	2	1	No Opinion
9	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	No Opinion
10	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2	1	No Opinion
11	Increase monitoring of streams in watershed.	5	4	3	2	1	No Opinion
12	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	No Opinion

# Lower Ashers Run Subwatershed

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center

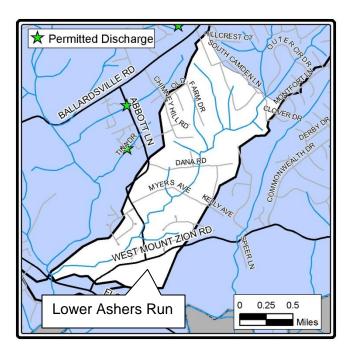
## **Bacteria Restoration Protection Priority**

The bacteria pollution protection priority in the Lower (downstream) Area of Ashers Run is high priority protection.

## **Pollutant Sources**

The more probable bacteria pollution sources in the Lower (downstream) Area of Ashers Run are (<u>Listed in</u> no particular order or rank):

- Upstream Contributions
- Wildlife



# **Proposed Solutions / Remediation Activities**

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Lower (headwaters) Area of Asher's Run? The solutions are listed in no particular order or rank. Circle your selection.

No.	Bacteria Remediation Activity				Most ← → Least Effective								
1	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5 4 3		3	2	1	No Opinion						
2	Implement program to educate homeowners on effective septic system maintenance, management and operation	5	4	3	2	1	No Opinion						
3	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	5	4	3	2	1	No Opinion						
4	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	No Opinion						
5	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	No Opinion						
6	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	No Opinion						
7	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	No Opinion						
8	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2	1	No Opinion						
9	Increase monitoring of streams in watershed.	5	4	3	2	1	No Opinion						
10	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	No Opinion						

# Upper North Curry's Fork Subwatershed

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center

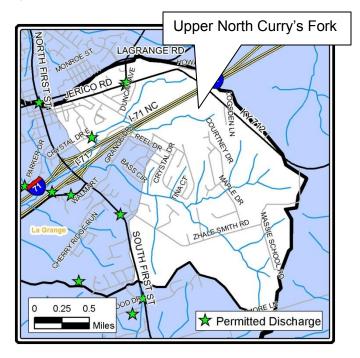
# **Bacteria Restoration Protection Priority**

The bacteria pollution protection priority in the Upper (headwaters) Area of North Curry's Fork is low priority restoration.

#### **Pollutant Sources**

The more probable bacteria pollution sources in the Upper (headwaters) Area of North Curry's Fork are (<u>Listed in no particular order or rank</u>):

Septic Systems in Crystal Lake Subdivision



## **Proposed Solutions / Remediation Activities**

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Upper (headwaters) Area of North Curry's Fork? The solutions are listed in no particular order or rank. Circle your selection.

No.	Bacteria Remediation Activity				Most ← → Least Effective									
1	Develop a program to ensure regular septic system Inspections, and, as necessary, upgrades or repairs of systems.	5	4	3	2	1	No Opinion							
2	Implement an aggressive and targeted program to educate homeowners on effective septic system maintenance, management and operation	5	4	3	2	1	No Opinion							
3	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5	4	3	2	1	No Opinion							
4	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	5	4	3	2	1	No Opinion							
5	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	No Opinion							
6	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	No Opinion							
7	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	No Opinion							
8	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	No Opinion							
9	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2	1	No Opinion							
10	Increase monitoring of streams in watershed.	5	4	3	2	1	No Opinion							
11	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	No Opinion							

# Lower North Curry's Fork Subwatershed

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center

Lower North Curry's Fork

#### **Bacteria Restoration Protection Priority**

The bacteria pollution protection priority in the Lower (downstream) Area of North Curry's Fork is medium priority restoration.

#### **Pollutant Sources**

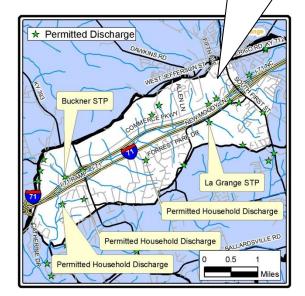
The more probable bacteria pollution sources in the Lower (downstream) Area of North Curry's Fork are (<u>Listed in no particular order or rank</u>):

- Failing septic systems in Borowick Farms
- Stormwater from MS4 Areas (La Grange and Oldham County)
- Buckner Package Treatment Plant
- La Grange Wastewater Treatment Plant
- Permitted Household Discharge
- Stormwater leaking into sewers and taking up capacity, causing overflows and/or plant upsets

## Proposed Solutions / Remediation Activities

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at

all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Lower (downstream) Area of North Curry's Fork? The solutions are listed in no particular order or rank. Circle your selection.



No.	Bacteria Remediation Activity	Mos	t◀		<b>▶</b> [	_ea	st Effective
1	Develop a program to ensure regular septic system Inspections, and, as necessary, upgrades or repairs of systems.	5	4	3	2	1	No Opinion
2	Implement an aggressive and targeted program to educate homeowners on effective septic system maintenance, management and operation	5	4	3	2	1	No Opinion
3	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5	4	3	2	1	No Opinion
1	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	5	4	3	2	1	No Opinion
5	Support wastewater facility upgrades and rehabilitations to enhance wastewater treatment.	5	4	3	2	1	No Opinion
3	Transfer management of smaller wastewater treatment centers to larger municipalities	5	4	3	2	1	No Opinion
7	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	No Opinion
3	Ensure wastewater treatment plant capacity for current and future users through sewer infrastructure repair or upgrades.	5	4	3	2	1	No Opinion
)	For the planned elimination of small wastewater treatment plants, extend sewers to areas in immediate proximity of planned wastewater line work.	5	4	3	2	1	No Opinion
10	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	No Opinion
11	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	No Opinion
12	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	No Opinion
13	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2		No Opinion
14	Support and encourage of Oldham County's and La Grange's stormwater programs.	5	4	3	2	1	No Opinion
15	Reduce the volumes and concentrations of stormwater pollution entering creeks.	5	4	3	2	1	No Opinion
16	Increase monitoring of streams in watershed.	5	4	3	2	1	No Opinion
17	Increase education/outreach programs to and enforcement of private homeowners with permitted wastewater discharges	5	4	3	2	1	No Opinion
18	Develop and conduct program to educate homeowners about responsibilities pertaining to sewer lateral lines.	5	4	3	2		No Opinion
19	Eliminate sewer overflows.	5	4	3	2	1	No Opinion
20	Improve compliance with sump pumps/down-spout ordinance(s) to reduce non-wastewater flows to sewers.	5	4	3	2		No Opinion
21	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	No Opinion

# Upper South Curry's Fork Subwatershed

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center

#### **Bacteria Restoration Protection Priority**

The bacteria pollution protection priority in the Upper (headwaters) Area of South Curry's Fork is medium priority restoration.

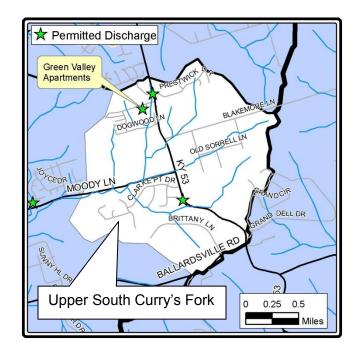
#### **Pollutant Sources**

The more probable bacteria pollution sources in the Upper (headwaters) Area of South Curry's Fork are (Listed in no particular order or rank):

Green Valley Package Treatment Plant

## Proposed Solutions / Remediation Activities

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Upper (headwaters) Area of South Curry's Fork? The solutions are listed in no particular order or rank. Circle your selection.



No.	Bacteria Remediation Activity	Most ← ► Least Effective								
1	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5	4	3	2	1	No Opinion			
2	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	5	4	3	2	1	No Opinion			
3	Transfer management of smaller wastewater treatment centers to larger municipalities	5	4	3	2	1	No Opinion			
4	Support wastewater facility upgrades and rehabilitations to enhance wastewater treatment.	5	4	3	2	1	No Opinion			
5	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	No Opinion			
6	Ensure wastewater treatment plant capacity for current and future users through sewer infrastructure repair or upgrades.	5	4	3	2	1	No Opinion			
7	For the planned elimination of small wastewater treatment plants, extend sewers to areas in immediate proximity of planned wastewater line work.	5	4	3	2	1	No Opinion			
8	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	No Opinion			
9	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	No Opinion			
10	Educate homeowners, livestock owners and farms of non-traditional animals on appropriate BMPs for pathogen reduction.	5	4	3	2	1	No Opinion			
11	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	No Opinion			
12	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2	1	No Opinion			
13	Increase monitoring of streams in watershed.	5	4	3	2	1	No Opinion			
14	Develop and conduct program to educate homeowners about responsibilities pertaining to sewer lateral lines.	5	4	3	2	1	No Opinion			
15	Eliminate sewer overflows.	5	4	3	2	1	No Opinion			
16	Improve compliance with sump pumps/down-spout ordinance(s) to reduce non-wastewater flows to sewers.	5	4	3	2	1	No Opinion			
17	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	No Opinion			

# Lower South Curry's Fork Subwatershed

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center

## **Bacteria Restoration Protection Priority**

The bacteria pollution protection priority in the Lower (downstream) Area of South Curry's Fork is medium priority restoration.

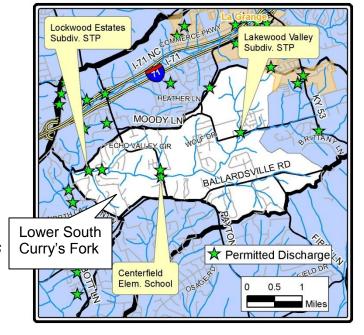
#### **Pollutant Sources**

The more probable bacteria pollution sources in the Lower (downstream) Area of South Curry's Fork are (<u>Listed in no particular order or rank</u>):

- Lockwood Package Treatment Plant
- Lakewood Package Treatment Plant
- Centerfield Elementary Package Treatment Plant
- Septic Systems

## Proposed Solutions / Remediation Activities

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Lower (downstream) Area of South Curry's Fork? The solutions are listed in no particular order or rank. Circle your selection.



No.	Bacteria Remediation Activity				Most ← → Least Effective									
1	Develop a program to ensure regular septic system inspections, and, as necessary, upgrades or repairs of systems.	5	4	3	2	1	No Opinion							
2	Implement an aggressive and targeted program to educate homeowners on effective septic system maintenance, management and operation	5	4	3	2	1	No Opinion							
3	Transfer management of smaller treatment centers to larger municipalities	5	4	3	2	1	No Opinion							
4	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5	4	3	2	1	No Opinion							
5	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	5	4	3	2	1	No Opinion							
6	Support wastewater facility upgrades and rehabilitations to enhance wastewater treatment.	5	4	3	2	1	No Opinion							
7	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	No Opinion							
8	Ensure wastewater treatment plant capacity for current and future users through sewer infrastructure repair or upgrades.	5	4	3	2	1	No Opinion							
9	For the planned elimination of small wastewater treatment plants, extend sewers to areas in immediate proximity of planned wastewater line work.	5	4	3	2	1	No Opinion							
10	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	No Opinion							
11	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	No Opinion							
12	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	No Opinion							
13	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2	1	No Opinion							
14	Increase monitoring of streams in watershed.	5	4	3	2	1	No Opinion							
15	Develop and conduct program to educate homeowners about responsibilities pertaining to sewer lateral lines.	5	4	3	2	1	No Opinion							
16	Eliminate sewer overflows.	5	4	3	2	1	No Opinion							
17	Improve compliance with sump pumps/down-spout ordinance(s) to reduce non-wastewater flows to sewers.	5	4	3	2	1	No Opinion							
18	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	No Opinion							

# Curry's Fork Subwatershed

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center

# Bacteria Restoration Protection Priority

The bacteria pollution protection priority in the Curry's Fork (mainstream) Area is high priority protection.

#### **Pollutant Sources**

The more probable bacteria pollution sources in the Curry's Fork (mainstream) Area are (<u>Listed in no particular order or rank</u>):

- North Curry's Upstream Contribution
- South Curry's Upstream Contribution
- Permitted Household Discharge
- Country Village Package Treatment Plant

# **Proposed Solutions / Remediation Activities**

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Curry's

Permitted Discharge

Clenary

Crestwood

Crestwood

Permitted Household

Dishcarge

County Village STP

Curry's Fork

Curry's Fork

Curry's Fork

Curry's Fork

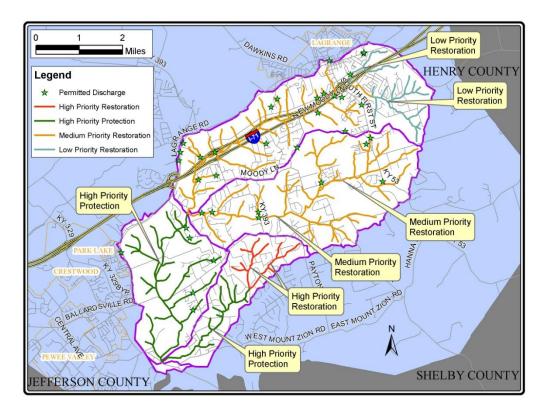
Curry's Fork

Fork (mainstream) Area? The solutions are listed in no particular order or rank. Circle your selection.

No.	Bacteria Remediation Activity					as	t Effective
1	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5	4	3	2	1	No Opinion
2	Implement program to educate homeowners on effective septic system maintenance, management and operation	5		3	2	1	No Opinion
3	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	1 5	4	3	2	1	No Opinion
4	Transfer management of smaller wastewater treatment centers to larger municipalities	5	4	3	2	1	No Opinion
5	Support wastewater facility upgrades and rehabilitations to enhance wastewater treatment.	5	4	3	2	1	No Opinion
6	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	No Opinion
7	Ensure wastewater treatment plant capacity for current and future users through sewer infrastructure repair or upgrades.	5	4	3	2	1	No Opinion
8	For the planned elimination of small wastewater treatment plants, extend sewers to areas in immediate proximity of planned wastewater line work.	5	4	3	2	1	No Opinion
9	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	No Opinion
10	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	No Opinion
11	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	No Opinion
12	Promote watershed protection status and encourage continued protection in identified pathogen priority protection areas.	5	4	3	2	1	No Opinion
13	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2	1	No Opinion
14	Increase monitoring of streams in watershed.	5		3	2	1	No Opinion
15	Increase education/outreach programs to and enforcement of private homeowners with permitted wastewater discharges	5	4	3	2	1	No Opinion
16	Develop and conduct program to educate homeowners about responsibilities pertaining to sewer lateral lines.	5	4	3	2	1	No Opinion
17	Eliminate sewer overflows.	5	4	3	2	1	No Opinion
18	Improve compliance with sump pumps/down-spout ordinance(s) to reduce non-wastewater flows to sewers.	5	4	3	2	1	No Opinion
19	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	No Opinion

# Entire Curry's Fork Watershed

Curry's Fork Bacteria Roundtable Thursday July 15, 2010 John Black Community Center



## **Proposed Solutions / Remediation Activities**

On a scale of 1 to 5 with 5 being "extremely effective" and 1 being "not at all effective", how effective do you think these solutions will be at addressing bacteria pollution in the Lower (downstream) Area of South Curry's Fork? Circle your selection. The solutions are listed in no particular order or rank. Under the 'Rank' column, please rank your top 5 proposed solutions 1 through 5, 1 being the highest rank and 5 being the lowest rank.

No.	Bacteria Remediation Activity	Mos	t <b>←→</b>	Rank			
1	Implement an education and outreach program to raise awareness about watershed conditions and solutions/actions to improve water quality	5	4	3	2	1	
2	Encourage and support wastewater planning efforts at a watershed scale to create long-term solutions for utilities and residents. For example, include plans to extend sewer lines when planning to extend water lines.	5	4	3	2	1	
3	Support efforts to continue collaboration, cooperation and communication between county agencies at a watershed scale.	5	4	3	2	1	
4	Ensure communication, guidelines and pre-planning/approval for any wastewater system improvements, modifications or upgrades on a watershed scale.	5	4	3	2	1	
5	Establish a communication plan to convey the findings of the watershed plan.	5	4	3	2	1	
6	Encourage preservation and creation of green space and buffer strips near streams.	5	4	3	2	1	
7	Water quality and watershed education to homeowners specific to watershed and its impairments.	5	4	3	2	1	
8	Increase monitoring of streams in watershed.	5	4	3	2	1	
9	Encourage and support the formation of a citizen-based watershed organization for Curry's Fork.	5	4	3	2	1	