Curry's Fork Warm Water Aquatic Habitat Watershed Roundtable Notes

February 2, 2011 John Black Community Center

Over twenty citizens of the Curry's Fork watershed gathered to hear about the warm water aquatic habitat (WAH) concerns and provide feedback on proposed solutions. The meeting opened with an introductory presentation on the overall objectives and the need for public input. The project goal is to improve the water quality of Curry's Fork through development of a watershed based plan and targeted implementation. Curry's Fork Watershed has four sub-watersheds: North Curry's Fork, South Curry's Fork, Curry's Fork and Ashers Run that drain into Floyd's Fork. The total budget to develop a watershed plan and implement priority actions is \$1.6 million dollars.



The water quality data was analyzed in two phases: the first phase was focused on bacteria water quality and was discussed at the Bacteria Roundtable held on July 15, 2010. The second phase discussed at this Roundtable focused on the WAH which includes biological assessments, physical habitat assessments, and water chemistry sampling. WAH related pollutants that were reviewed include nutrients, sediment, dissolved oxygen, and more.

WAH data was collected between 2007 and 2010 and was evaluated in the fall of 2010. Data results were reviewed by a Water Quality Data Analysis Team which includes representatives from the United States Geological Survey, Kentucky Division of Water, University of Louisville, Sustainable Streams, Third Rock Consultants and Strand

Associates, Inc. Based on the review, each subwatershed was classified a condition based on the biological, water chemistry, and physical habitat assessments performed. The table below summarizes the watershed conditions presented at the WAH Roundable.

Watershed	Biological	Water Chemistry	Physical Habitat
Curry's Fork (Main Stem)	Better	Average	Average
Ashers Run	Worse	Better	Worse
North Curry's Fork	Average	Average	Better
South Curry's Fork	Worse	Average	Worse

Data results, probable pollutant sources and effective solutions were discussed with the Curry's Fork Watershed Technical Committee over the course of several meetings. The probable pollutant sources and effective solutions were discussed and citizens provided input on the feasibility of implementating various solutions.

The Curry's Fork WAH Roundtable provided a summary of the WAH conditions and provided an opportunity to discuss proposed solutions with residents in the watershed. Attendees to the meeting completed a survey and provided feedback on proposed solutions or remediation activities for each subwatershed and for the entire watershed. Solutions were scored on a scale of 1 to 5, with 5 being the most effective. The results for each subwatershed are presented on the following pages. Results from the WAH Roundtable will be incorporated into the final Watershed Plan along with results from the 2009 and 2010 Roundtables.

Ashers Run Subwatershed - Results Summary

Curry's Fork Aquatic Habitat Roundtable Wednesday February 2, 2011 John Black Community Center



Solution	Number of Responses	Total Score	Average Score	Percent of "5" Responses	Percent of "4" Responses	Percent of "3" Responses	Percent of "2" Responses	Percent of "1" Responses	Percent of "No Opinion" Responses
Implement BMPs to address to improve habitat and riparian areas along agricultural lands.	17	68	4.0	35%	35%	24%	6%	0%	0%
Complete stream restoration projects that have been identified as feasible to implement and effective.	16	61	3.8	25%	50%	13%	6%	6%	0%
Use the findings of the Watershed Plan to augment the implementation of Oldham County's Stormwater Quality Management Plan	17	64	3.8	29%	35%	24%	6%	6%	0%
Develop and implement Agricultural Water Quality Plans.	16	54	3.4	19%	25%	38%	13%	6%	0%
Encourage producers with marginal pasture lands to put their land into conservation easements	16	50	3.1	6%	31%	38%	19%	6%	0%

Proposed Solution/Remediation Activity Effectiveness

Biological Assessment - "Worse" Condition

Physical Habitat - "Worse" Condition

Water Chemistry - "Better" Condition

North Curry's Subwatershed - Results Summary

Curry's Fork Aquatic Habitat Roundtable Wednesday February 2, 2011 John Black Community Center



Solution	Number of Responses	Total Score	Average Score	Percent of "5" Responses	Percent of "4" Responses	Percent of "3" Responses	Percent of "2" Responses	Percent of "1" Responses	Percent of "No Opinion" Responses
Require dischargers to the stream to meet more stringent nutrient limits.	18	80	4.4	61%	33%	0%	0%	6%	0%
Eliminate Sewer Overflows	18	78	4.3	67%	11%	17%	0%	6%	0%
Increase stormwater infiltration into the ground to address flooding and water quality issues	18	74	4.1	39%	33%	28%	0%	0%	0%
Use enhanced development guidelines in undeveloped areas that promote the incorporation of low-impact design elements and water quality BMPs into the design and construction.	18	69	4.1	50%	28%	0%	6%	11%	6%
Complete stream restoration projects that have been identified as feasible to implement and effective.	18	56	3.3	17%	17%	39%	22%	0%	6%

Proposed Solution/Remediation Activity Effectiveness

Biological Assessment - "Average" Condition

Physical Habitat - "Better" Condition

Water Chemistry - "Average" Condition

South Curry's Subwatershed - Results Summary

Curry's Fork Aquatic Habitat Roundtable Wednesday February 2, 2011 John Black Community Center



Solution	Number of Responses	Total Score	Average Score	Percent of "5" Responses	Percent of "4" Responses	Percent of "3" Responses	Percent of "2" Responses	Percent of "1" Responses	Percent of "No Opinion" Responses
Utilize BMPs that maximize infiltration, reduce runoff, and improve water quality.	18	82	4.6	67%	22%	11%	0%	0%	0%
Use enhanced development guidelines in undeveloped areas that promote the incorporation of low-impact design elements and water quality BMPs into the design and construction.	17	74	4.4	65%	18%	12%	0%	6%	0%
Require dischargers to the stream to meet more stringent nutrient limits.	17	72	4.2	53%	29%	6%	12%	0%	0%
Implement BMPs to address to improve habitat and riparian areas along agricultural lands.	18	74	4.1	50%	17%	28%	6%	0%	0%
Use the findings of the Watershed Plan to augment the implementation of Oldham County's Stormwater Quality Management Plan	17	69	4.1	29%	47%	24%	0%	0%	0%
Complete stream restoration projects that have been identified as feasible to implement and effective.	17	62	3.6	24%	24%	47%	6%	0%	0%

Proposed Solution/Remediation Activity Effectiveness

Biological Assessment - "Worse" Condition

Physical Habitat - "Worse" Condition

Water Chemistry - "Average" Condition

Curry's Fork (Main Stem) Subwatershed - Results Summary

Curry's Fork Aquatic Habitat Roundtable Wednesday February 2, 2011 John Black Community Center



Score Percent of "No Percent of "4" Responses ľ Percent of "1" ماً Percent of "2" Percent of ": Responses Number of Responses Percent of "5 Responses Total Score Responses Responses Responses Average Opinion" Solution 73 Eliminate small treatment plants in the watershed 16 4.6 69% 19% 13% 0% 0% 0% Require dischargers to the stream to meet more stringent 17 73 4.3 53% 35% 6% 0% 0% 6% nutrient limits. Eliminate Sewer Overflows 16 68 4.3 56% 25% 13% 0% 0% 6% Use the findings of the Watershed Plan to augment the implementation of Oldham County's Stormwater Quality 17 72 4.2 53% 24% 18% 6% 0% 0% Management Plan Complete stream restoration projects that have been 16 62 3.9 31% 44% 6% 19% 0% 0% identified as feasible to implement and effective.

Proposed Solution/Remediation Activity Effectiveness

Biological Assessment - "Better" Condition

Physical Habitat - "Average" Condition

Water Chemistry - "Average" Condition

Entire Curry's Fork Watershed - Results Summary

Curry's Fork Aquatic Habitat Roundtable Wednesday February 2, 2011 John Black Community Center

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Solution	Number of Responses	Total Score	Average Score	Percent of "5" Responses	Percent of "4" Responses	Percent of "3" Responses	Percent of "2" Responses	Percent of "1" Responses	Percent of "No Opinion" Responses
Improve the performance and regulation of on- site wastewater systems	18	80	4.7	78%	17%	6%	0%	0%	0%
Educate planners, designers, reviewers, etc. of developments on low-impact design and incentivize its inclusion in new developments and re-developments.	18	77	4.5	67%	28%	0%	0%	6%	0%
Expand and enhance "no-disturb"/riparian zones around creeks.	18	73	4.3	50%	39%	6%	0%	6%	0%
Preserve forested areas	18	74	4.3	56%	22%	17%	6%	0%	0%
Use stream restoration projects to improve stream function and to educate.	18	69	3.9	44%	22%	17%	17%	0%	0%
Expand and the level of protection for floodplains	18	67	3.9	22%	50%	28%	0%	0%	0%
Promote the use of voluntary conservation easements to protect lands around creeks.	18	65	3.7	39%	17%	22%	22%	0%	0%
Establish a citizen-based watershed group.	18	59	3.4	33%	6%	28%	33%	0%	0%
Provide watershed educational and recreational opportunities	18	59	3.3	22%	11%	50%	11%	6%	0%

Proposed Solution/Remediation Activity Effectiveness

Proposed Solution/Remediation Activity Ranking

Solution	Number of Responses	Average Rank	Percent of Rank "1" Responses	Percent of Rank "2" Responses	Percent of Rank "3" Responses	Percent of Rank "4" Responses	Percent of Rank "5" Responses	Percent of Rank "6", "7", "8", and "9" Responses
Provide watershed educational and recreational opportunities	15	2.0	53%	13%	20%	7%	7%	0%
Improve the performance and regulation of on- site wastewater systems	17	2.8	12%	35%	18%	29%	6%	0%
Expand and enhance "no-disturb"/riparian zones around creeks.	14	3.5	29%	7%	21%	7%	21%	14%
Establish a citizen-based watershed group.	10	3.6	20%	10%	0%	30%	40%	0%
Educate planners, designers, reviewers, etc. of developments on low-impact design and incentivize its inclusion in new developments and re-developments.	10	4.3	0%	0%	40%	20%	10%	30%
Promote the use of voluntary conservation			0 / 0	0 / 0	10 / 0	2070	1070	0070
easements to protect lands around creeks.	11	4.4	0%	18%	27%	18%	9%	27%
Preserve forested areas	9	4.6	0%	22%	0%	22%	33%	22%
Use stream restoration projects to improve stream function and to educate.	8	4.9	0%	25%	25%	0%	13%	38%
Expand and the level of protection for floodplains	7	5.7	14%	14%	0%	0%	29%	43%

Ashers Run Subwatershed - Survey Comments

Count	Survey No.	Survey Comments
1	1	Need Residential/Subdivision Solutions
2	2	Need more residential control on what goes into runoff of the streams
3	3	Add subdivisions as part of program
4	5	Where is the agriculture here? Need a neighborhood approach
5	6	Watch what you do with agriculture - marginal pasture lands for compensation
		Keep out of agriculture land EXCEPT:
		-Stream Restoration
		-Buffer Zone
		-Riparian Zone
		Subdivisions - those lands should become a focus
6	10	Public Education & outreach to individual land owners
7	11	Add subdivision related solutions
8	12	Add subdivision related solutions!!
9	13	All options are important, feel sequence is as noted
10	14	You might check out this area's subdivisions
11	19	Subdivision Management/Conservation Plans (5)

North Curry's Subwatershed - Survey Comments

Count	Survey No.	Survey Comments
1	1	
		Household septic systems and home owners who have cleared stream banks are huge culprits
2	5	Fecal strip bacteria - animal waste
		Fecal coliform bacteria - human waste
		Differentiate between the sources and to what degree
3	6	Educating home owners as to what things they do that harm or help the watershed
4	8	Construction not to be started for 5-10 years {referring to solution 1}. NOTE (esp. Corrine): Walsh
		Park AKA L&N Lake, SEVERE algae blooms year round. This lake is located at the end of
		Lakeshore Drive, and is surrounded by residences. Yards all slope DOWNHILL into Lake Bed. No
		Mitigation.
		This is an issue that actually affects the ECONOMIC and SOCIAL attitude in town. It & pollution is
		THAT BAD.
		HUGE EDUCATION POSSIBILITY
5	9	Robert Craouse 2210 Meadowbrook. Meadowbrook prob issues. Algae blooms & L&N Lake.
		Abaondoned Park nearby bus stop.
6	10	Very important for new development {referring to Solution 1}.
		Also consider BMPs in La Grange to further control stormwater runoff.
7	14	Get State DOT to maintain their runoff control. Our creek (2210 Meadowbrook) is being negatively
		impacted by the commonwealths lack of maintenance.
8	19	Subdivision Management/Conservation Plans (5)

South Curry's Subwatershed - Survey Comments

Count	Survey No.	Survey Comments
1	8	What about educating the public
2	11	Keep roadway free from trash, dead animals, and salt (use brine more and salt less)
		Agricultural lands - they have the Right to do business, by providing assistance to help financially
		develop riparian areas.
3	18	Subdivision Management/Conservation Plans (5)

Curry's Fork (Main Stem) Subwatershed - Survey Comments

Count	Survey No.	Survey Comments
1	2	Subdivision Management/Conservation Plans (5)
2	6	Construction of and improving existing riffles in the reach can improve dissolved oxygen levels. This
		is in addition to nutrient level reductions in North and South reaches.
3	7	Take care of North & South & that should help here {Curry's Fork Main Stem}.
4	10	Eliminate influent discharge #1 priority

Entire Watershed - Survey Comments

Count	Survey No.	Survey Comments
1	1	Subdivision Management/Conservation Plans (5)
2	2	Use Various media sources to educate
		Websites
		Print Media
		Educate youth in a way for them to engage parents
		Incentives for landowners/homeowners i.e rainbarrells, etc.
3	4	We missed the first meeting and may have missed the bacteria information.
4	7	Get Local projects going {referring to No. 7 and 9}
		Oldham Co could join the Jeff. Co parks project along with Curry's Fork to provide some recreation
		area.
		Get Citizens involved in the restoratoin of the stream in their neighborhood.
5	8	Zoning and Building codes that support good streams - enhance what is on the books
		-buffers strips
		Building design and upkeep of wastewater systems
6	11	Provide trans pickup for residents who clean up the creek. Organize "pick-up in/around stream days"
		with a get together after work.
		I hope these roundtable discussions are not just "checking the box", but that the suggestions are
		considered and acted upon.
7	12	Unsure what will yield the most benefit due in part to not knowing all that is being done now.
8	13	1. Establish regional detention basins within each watershed to address existing flooding
		2. Clean/maintain existing detention basins to increase capacity
		3. Zero net gain (Low Impact Design) standards
9	14	Make doing the best practices easier than not doing them.
10	18	N. Curry - Least impacted
		S. Curry - Most impacted
		no habitat
		low nutrients?
		Main - average - less encroachment
		Ashers Run - Small inputapplies/{cannot make out word} encroachment upstream. Drys up - (dry
<u> </u>		wash)
11	19	Don't put much value on my answers because I feel that I don't have enough technical data to help
		decide. Phil Fortwengler