

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 Roundtable.

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 implementing 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.

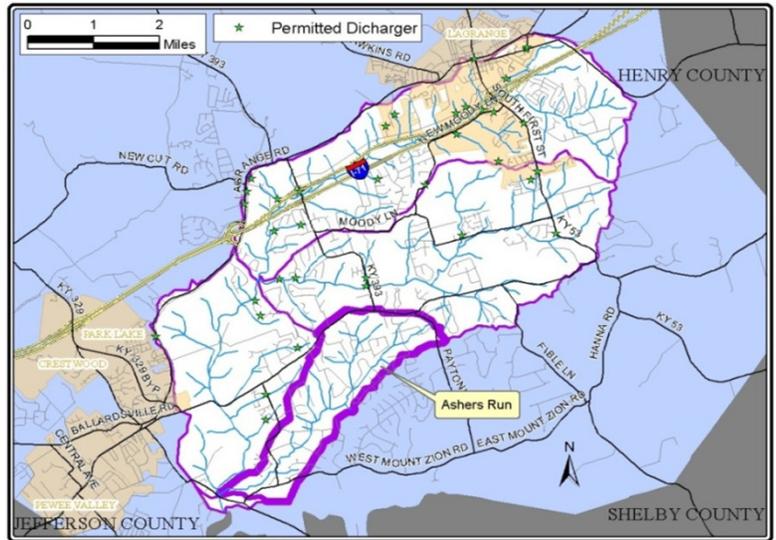
Ashers Run Subwatershed - Results Summary

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Biological Assessment - "Worse" Condition

Physical Habitat - "Worse" Condition

Water Chemistry - "Better" Condition



Proposed Solution/Remediation Activity Effectiveness

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%

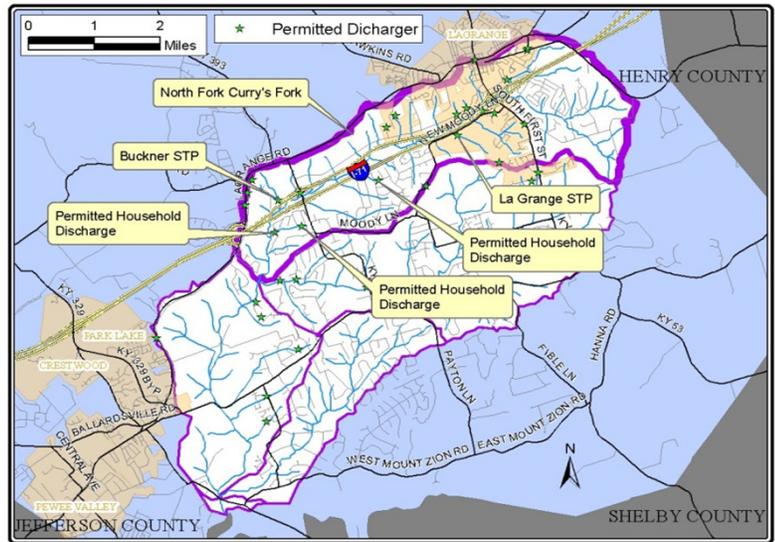
North Curry's Subwatershed - Results Summary

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Biological Assessment - "Average" Condition

Physical Habitat - "Better" Condition

Water Chemistry - "Average" Condition



Proposed Solution/Remediation Activity Effectiveness

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%

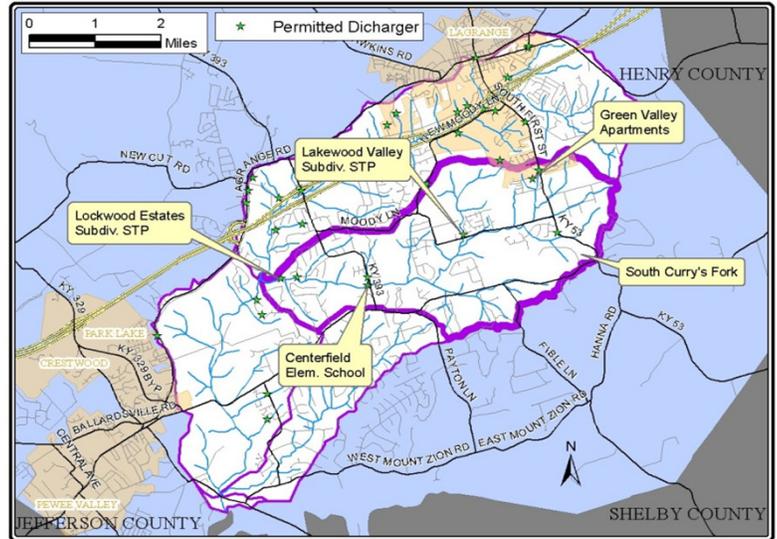
South Curry's Subwatershed - Results Summary

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Biological Assessment - "Worse" Condition

Physical Habitat - "Worse" Condition

Water Chemistry - "Average" Condition



Proposed Solution/Remediation Activity Effectiveness

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%

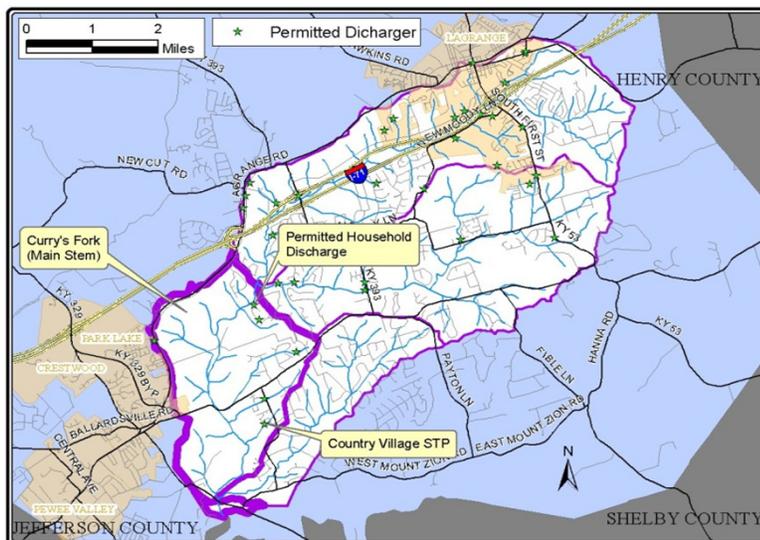
Curry's Fork (Main Stem) Subwatershed - Results Summary

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Biological Assessment - "Better" Condition

Physical Habitat - "Average" Condition

Water Chemistry - "Average" Condition



Proposed Solution/Remediation Activity Effectiveness

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
Eliminate small treatment plants in the watershed	16	73	4.6	69%	19%	13%	0%	0%	0%
Require dischargers to the stream to meet more stringent nutrient limits.	17	73	4.3	53%	35%	6%	0%	6%	0%
Eliminate Sewer Overflows	16	68	4.3	56%	25%	13%	0%	6%	0%
Use the findings of the Watershed Plan to augment the implementation of Oldham County's Stormwater Quality Management Plan	17	72	4.2	53%	24%	18%	6%	0%	0%
Complete stream restoration projects that have been identified as feasible to implement and effective.	16	62	3.9	31%	44%	6%	19%	0%	0%

Entire Curry's Fork Watershed - Results Summary

Curry's Fork Aquatic Habitat Roundtable

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Proposed Solution/Remediation Activity Effectiveness

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 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 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%