Curry's Fork Technical Committee Kick off Meeting

August 20, 2008
Oldham County Fiscal Court Building

Goals of the Meeting:
a. Technical Group Foundation

1. Introductions

1. Bryant Willard	OCSD	bwillard@oldhamcountysewer.com
2. Todd Lafollette	Oldham County Health Dept	Toddg.lafollette@ky.gov
3. Margi Jones	KDOW	margi.jones@ky.gov
4. Stuart Strickler	OC Board of Edu	stuart.strickler@oldham.kyschools.us
5. Clark Dorman	DOW Inspector	Clark.Dorman@ky.gov
6. Kurt Mason	Soils	kurt.mason@ky.usda.gov
7. Bill Vesby	University of Louisville	william.vesely@louisville.edu
8. Mike Croasdaile	University of Louisville	m.croasdaile@louisville.edu
9. Paul Maron	Strand Associates	Paul.maron@strand.com
10. Andrea Rogers	Strand Associates	andrea.rogers@strand.com

2. Purpose of the Technical Committee
    a. Paul Maron described the significance of the technical committee group. The purpose is to share information on the current status and on-going activities within the Curry's Fork Watershed that can assist and build on the Watershed Based Plan development efforts. After the plan is developed and recommendations are formalized funds can be leveraged.

3. Structure of Group
    a. Frequency of Meetings
    The technical committee will meet more frequently than the stakeholder group. A meeting is tentatively scheduled for 6-8 weeks out.
    b. Advisory Role
    The role of the group is to provide input and technical resources. We are not a decision making body.

4. Presentation
    a. Project Status
        i. Watershed Characterization
            1. This is the same presentation given to the stakeholder group on July 24, 2008. It is new for a majority of the folks here.
            2. To date we have gathered information to characterize our watershed.
            3. The United States has political boundaries such as state and county lines and natural water boundaries based on hydrologics. The Curry's fork watershed has 4 HUC14 watersheds.
            4. Stream Orders define the magnitude of the stream. Currys Fork drains into the Floyds Fork which in turn drains in the Salt River which drains into the Ohio.
            5. The 100 year flood plain is described in the figure. As development and impermeable surfaces increase the flood plain also increases.
            6. In general Oldham County has gentle rolling terrain. This impact how quick water moves through our watershed. If the watershed was steep, water would move quickly. If the watershed was flat, water would move slowly.

7. Soil classifications are mainly silty loam. The hydrologic group associated with silty loam is group b. Group A is sandy soils with high infiltration rates and b has moderate rates. The table on slide 20 describes a typical rain fall event and infiltration rates of hydrologic group b.
8. Climate and Precipitation
    a. Oldham County receives an evenly distributed amount of rain throughout the year totaling 45 in/year.
    b. The climate temperatures range from 20 to 40 in the winter and 60 to 80 in the summer. When we are selecting flora or plants for our projects the climate and precipitation will narrow our search.
9. Habitat
    a. Wetlands provide natural buffers for our streams. The national Wetland Inventory delineates wetlands.
10. Fish and Wildlife
    a. Currys Fork supports a wide array of wildlife.
11. Land Use and Population
    a. In 2002, the top 3 land cover classifications were Deciduous Forest, Pasture Land and Developed, Open Space provided by the USGS.
    b. The Phase 2 Stromwater permit requires ordinances to be developed. Currys WBP will coordinate with this effort and document existing ordinances.
    c. Zoning in Currys is mainly residential.
    d. Oldham County is well above the national average on education, income and owner occupied houses.
12. Waterbody and Watershed Conditions
    a. Paul Maron reviewed the watershed conditions
    b. Every stream has a designated use. Streams are evaluated to see if the stream is meeting the designated use. Water quality data is collected to support the evaluation.
    c. Water quality data is compiled in different reports. Curry's Fork was listed in the 2004, and 2002 303d List as a 1st priority stream.
    d. Other planning documents describe the regions future planning efforts for the Currys Fork area and the county at large.
    e. Pollution Sources are defined in two ways point and non point.

ii. Summary Water Quality Sampling

iii. University of Louisville Stream Restoration Project
1. Conservation Easement on OCPS Property
    a. Stream Restoration at school site is in design stages. Stuart Stricker comment the easement will be reviewed at the meeting on Monday. There are concerns about removing access for future high school site. The process involves a permitting phase, then a 30 day comment period. The design is based on storage for a 100 year event. The area typically has severe flooding. The design will include a smaller channel inside the flood. The interaction between the stream and the floodplain will increase. Meanders will be added. KM development plans upstream of restoration site (1000 acres). Kurt asked what flow the restoration was designed to handle. Should the design be for ultimate flow in the area?

2. Discussion
    a. Todd. Old septic tanks that are over 20 to 30 years in developments such as Borewick Farms and Crystal Lake should be targeted. The health department works on a complaint basis.

Septic tanks get a bad rap. Most of the septic tanks are doing their job. There are a few outliers that make septics look bad. Suggestion: to have septic tanks inspected whenever the house changes hands.

b. Bryant (OCSD There are two package treatment plant facilities. They have files on existing systems. Crystal Lake subdivision has a strong neighborhood association. Local water quality issue. Septic to sediment. The state requires septics to meet design standards in Kentucky.
c. Stressors.
    i. Deer population on I-71. There was a car fatality.
    ii. Package Plants
    iii. Septic Tanks- Borwick Sewer
d. Like to See in Plan
    i. Sewers in Area
    ii. Public Education
        1. Septic Tanks
        2. All land Uses
        3. Target Decision Makers
    iii. Septic Tank Inspections when homes transfer
    iv. Changes in Sewer District to Storm
    v. Greenway group access
    vi. Parks
        1. Identify properties to purchase
    vii. Teaching Tool with Stream Restoration project
    viii. Flooding
e. Next Meeting
    i. Oct 1 10-12
    ii. Invite Parks and Rec
    iii. Lagrange Utility Commission John Bennett
    iv. Farm Services- Steve Blandford

5. Questions and Comments

Curry's Fork Watershed Based Plan Technical Committee Meeting

August 20 , 2008 9-11 AM

Oldham County Stream Team

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Mapping Out the Meeting

1. Introductions
2. Purpose of the Tech Committee
3. Structure of Group
4. Project Status
5. Roundtable
6. Curry's Fork Information

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1. Curry's Fork **Stream Team**

- Beth Stuber
  - Oldham County Engineer
- Paul Maron
  - Project Manager – Strand Associates
- Andrea Rogers
  - Stakeholder Group Facilitator– Strand Associates
- Mike Croasdaile
  - University of Louisville
- YOU!

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2. Purpose of Technical Committee

- Share information on the current status and ongoing activities within the Curry's Fork Watershed that can assist and build on the Watershed Based Plan

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What is a Watershed-based Plan?

A *watershed-based plan* is a **strategy** that provides assessment and management information for a geographically defined watershed, including the analyses, actions, participants, and resources related to developing and implementing the plan.

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Why Participate in the Group?

- Environmental Improvement
- Effect Positive Change in Your Community
- Provide Input on Proposals that May Affect You or Your Organization

6

Sharing Information

- Failing Septic Tanks
- Stream Alteration
- Farming Practices

7

Sharing Activities

- Farmers Markets
- Library Presentation
- School Curriculum Development
- New Subdivisions

8

Assisting in the Plan Development

- Providing Valuable Input
- Voice is Heard and Documented

9

Benefiting from the Plan Development

- Leveraging Funds
- Detailed Plan for Water Quality

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3. Structure of Group

- Frequency of Meetings
- Role of Group

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4. Where are we NOW?

- Watershed Characterization
- Summary of Water Quality Sampling
- University of Louisville Stream Restoration Project

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2.01 Physical and Natural Features

- Define Currys Fork….
  - A. Watershed
  - B. Hydrology
  - C. Floodplain
  - D. Topology
  - E. Soils
  - F. Climate and Precipitation
  - G. Habitat
  - H. Fish and Wildlife

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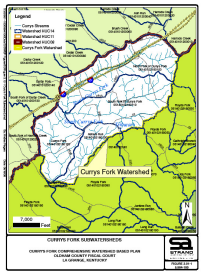
A. Watershed Boundaries

- USGS HUC-14
  - The United States is divided and subdivided into smaller hydrologic units based on watersheds. The number of digits the represents the level of detail.



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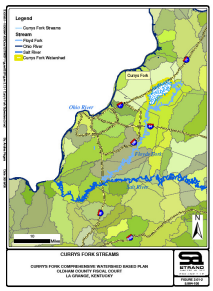
B. Hydrology

- Stream Order
  - Currys Fork Streams are in the stream order of 1 through 4
- Currys Fork (4) drains into
  - Floyds Fork (6) discharges into the
    - Salt River (6) discharges into the
      - Ohio River (8)
- There are approximately 1.4 miles of waterways in Currys Fork Watershed



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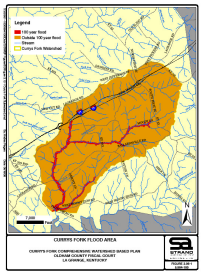
C. Flood Plains

- Urban Development often increases flooding
- Federal Emergency Management Agency delineates 100 year flood zones



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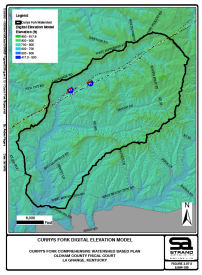
D. Topography

- Gentle Rolling Terrain
- Rarely exceeds 20% grade
- Lowest Point 420 ft
- Highest Point 920 ft



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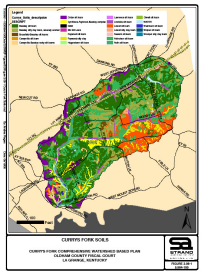
E. Soils Classification

- Soils consist of a mainly silty loam



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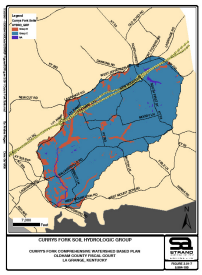
E. Soils Hydrologic Soil Group

- Hydrologic Soil Group of primarily B
- Group B indicates a shallow loess and sandy loam soil types with a moderate infiltration rate.
- The potential for runoff is moderate.



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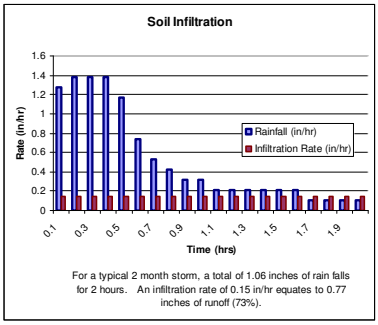
E. Soil Infiltration Rate



For a typical 2 month storm, a total of 1.06 inches of rain falls for 2 hours. An infiltration rate of 0.15 in/hr equates to 0.77 inches of runoff (73%).

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F. Climate and Precipitation

- Oldham County receives approximately 45 in/year precipitation.

Month	Inch
Jan	3.08
Feb	2.96
Mar	3.96
Apr	3.52
May	5.00
Jun	4.63
Jul	4.73
Aug	4.05
Sep	2.58
Oct	2.86
Nov	3.55
Dec	3.77
Annual	44.69

Table 2.01-2 Annual Precipitation (Lagrange Station)

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F. Climate and Precipitation

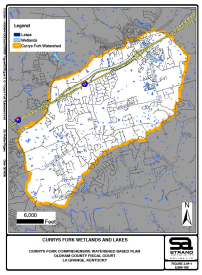
- January coldest month ranging from 20-40 degrees
- July warmest temperatures ranging from 62 to 88 degrees

Month	Max °F	Mean °F	Min °F
Jan	40.2	29.8	19.3
Feb	45.9	33.8	21.6
Mar	56.2	43	29.8
Apr	66.9	52.4	37.9
May	76.4	62.5	48.5
Jun	84.3	70.8	57.3
Jul	88.1	75.1	62
Aug	86.6	73.3	60
Sep	80.3	66.2	52
Oct	69	54.4	39.7
Nov	56.2	44.1	32
Dec	44.8	34.3	23.8
Annual	66.2	53.3	40.3

Table 2.01-3 Temperature (Shelbyville Weather Station)

G. Habitat

- Aquatic Habitat
  - Defined by National Wetland Inventory for US Fish and Wildlife
  - Small areas, scattered throughout watershed



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H. Fish and Wildlife

- Excluding Lagrange, Currys Fork is rural
- Landscape creates a supportive environment for a diverse assortment of wildlife
- Endangered and/or threatened species
- Fish advisories

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2.02 Land Use and Population

- A. Land Use and Land Cover
- B. Land Use Management Practices
- C. Demographics

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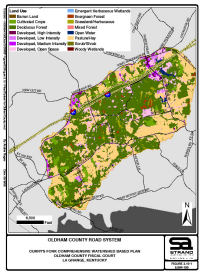
A. Land Use and Land Cover

- Top 3 Land Use Classifications are
  - Deciduous Forest,
  - Pasture Hay
  - Developed, Open Space
- Top 3 total over 80% of the watershed.



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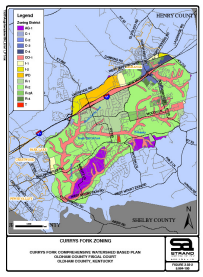
B. Land Use Management Practices

- Water, Waste Water and Storm Ordinances
- Zoning



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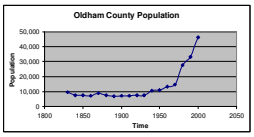
Currys Fork Zoning Breakdown

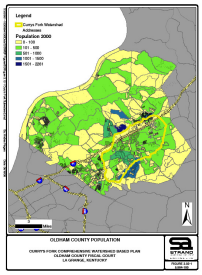
- Residential Zoning has the Highest Percentage of land acreage in Currys Fork

	Zone	Acres	Percentage		Zone	Acres	Percentage
Agriculture	AG-1	1,206	7%	Industrial	I-1	332	2%
	IPD (Industrial Park District)	498	3%		I-2	291	2%
		1,704	*9%*		IPD (Industrial Park District	179	1%
						803	*4%*
Commercial	C-1	85	0%	Residential	R-1	2,217	12%
	C-2	0	0%		R-2	8,635	48%
	C-3	181	1%		R-2A	446	2%
	C-4	149	1%		R-4	188	1%
		415	*2%*			*11,486*	*63%*
Current Open	CO-1	3,682	20%	Special	T	37	0%
		3,682	*20%*			*37*	*0%*

Table 2.02-2 Oldham County Zoning

B. Population and Demographics





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C. Demographics

- Oldham County is the wealthiest county in Kentucky and the 48th wealthiest county in the US.
- Typically ranks above national average

	Category	Oldham	Oldham Percent	US	Compared to US
Population	Population	46,178			
Education	Population over 25	30,366			
	Bachelors Degree or Higher	9,299	30.6%	24.4%	Above
Housing	Median Household income 1999 (dollars)	$70,495		$50,046	Above
	Individuals below Poverty	1,717	4.1%	12.4%	Lower
	Total Housing Units	15,541			
	Owner-occupied housing unites	12,913	86.9%	80.4%	Above
	Renter-occupied housing units	1,943	13.1%	33.8%	Above
	House Median Value	$158,600		$119,600	Above

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2.03 Waterbody and Watershed Conditions

- A. Water Quality Standards
- B. Water Quality Reports
- C. Watershed Related Reports

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A. Water Quality Standards

- Water Quality Data determines if Designated Uses are being supported.

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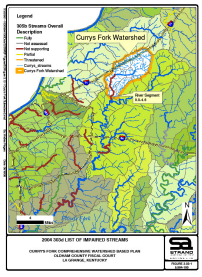
B. Water Quality Reports

- 303d List
  - 2004 Currys Fork 1st Priority Stream
  - 2002 Currys Fork 1st Priority Stream
  - 1998 Currys Fork not identified as impaired
- Integrated 303d and 305b Reports
  - Currys Fork identified as impaired
- Biannual 305 State Water Quality Report
  - Currys Fork from 0 to 4.8 impaired
  - UT to North Currys Fork 0 0.1 mile impaired



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C. Watershed Related Reports

- Facilities Plan Oldham County Sewer District, 2007
- Lagrange Facilities Report
- Floyds Fork Action Plan
  - Currys Fork is smaller subwatershed inside of the larger Floyds Fork Watershed
- Currys Fork WBP
- Darby Creek WBP
  - Adjacent WBP within Oldham County
- Floyds Fork WBP
  - The watershed at large is undergoing a plan.
- Other Sources (DOW, Watershed Watch etc.)

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2.04 Pollution Sources

- A. Point
  - Specific Location
  - Easy to Characterize Waste
- B. Non Point
  - Non Specific Location
  - Difficult to Quantify

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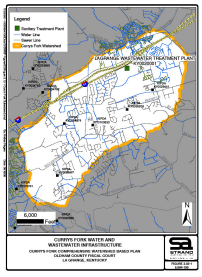
2.04 Pollution Sources

- Point Sources
  - La Grange Wastewater Treatment Plant (0.775 MGD)
  - 5 Package Treatment Plants
- Non Point Sources
  - Poorly Functioning Septic Tanks
  - Chemical Runoff
  - Human and Pet Runoff



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Wastewater Discharge Permits

KPDES	Name	Capacity (MGD)
KY0020001	LaGrange Wastewater Treatment Plant	0.775
KY0029441	Green Valley Apts	0.030
KY0039870	Lakewood Valley Subd Stp	0.100
KY0100633		
KY0054674	Lockwood Estates Subd Stp	0.045
KY0060877	Country Village Stp	0.060

Table 2.02-2 Wastewater Discharge Permits

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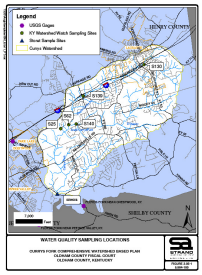
2.05 Water Body Monitoring Data

- EPA Storet
  - Collected between 1999-2004
  - Fecal issues on 15 out of 30 samples
- Watershed Watch
  - Establish baseline data



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B. Biological Data

- Index

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C. Geomorphologic Data

- University of Louisville

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In Summary

- Chapter 1 50% Draft Complete
- Chapter 2 30% Draft Complete
- Identified Watershed Based Plan Goals
- Existing Data demonstrates Currys Fork Watershed is threatened by sediment and bacteria impairments
- Collecting Water Quality Data to identify areas of concern

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Curry's Fork Information

- Known Impairments

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Curry's Fork Information

- Known Impairments

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Curry's Fork Information

- Known Sources and Stressors

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Curry's Fork Information

- Future and/or Potential Stressors and Sources

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Curry's Fork Information

- Goals for the Watershed

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Curry's Fork Information

- Upcoming Projects

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Questions/ Comments

- Thank you for your Input!

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