DIX RIVER WATERSHED STAKEHOLDER MEETING

November 19, 2019
Danville City Hall
AGENDA

1. Introductions
2. Review of Improvement Efforts
   - Watershed Based Plan Development and past projects in the Dix
   - Septic and Riparian Buffer 319 Watershed Improvement Projects
   - Hustonville-Ruritan Park Buffer and park improvements
   - City of Danville stormwater projects
   - Clarks Run Trail improvements and educational signage initiative
   - CREEC projects and current initiatives
   - US Highway 127 (Phase I and Phase II) sewer projects
   - EQIP funding in Hanging Fork watershed
3. Current Water Quality Data (KRWW)
4. Open discussion of goals, focus areas for the future, idea sharing, etc.
STAKEHOLDER ROLES

GOALS OF THE STAKEHOLDER GROUP

1. Improve water quality in the Dix River watershed
2. Identify areas of concern and provide input on watershed problems and management strategies
3. Foster partnerships and collaboration
4. Help with community education and outreach
WATERSHED BASED PLAN DEVELOPMENT AND PAST PROJECTS IN THE DIX RIVER WATERSHED (MALISSA MCALISTER)
HIGH BACTERIA LEVELS

Reaches of Clarks Run and Hanging Fork watersheds are not safe for activities such as swimming, where there is significant risk of ingesting water.
2013-2016 SEPTIC PROJECTS

Map Link:
https://batchgeo.com/map/e96a916a79ab775508d1b2b061e3783d

BLUEGRASS GREENSOURCE
CLARKS RUN & HANGING FORK WATERSHED
HANGING FORK
RECOMMENDATIONS

• Reduce human bacteria inputs from septic tanks and sewer leaks

• Identify and replace failing and improperly maintained septic systems and straight pipes
RECOMMENDATIONS

• Reduce pollution from livestock waste

• Restrict agriculture grazing from the riparian zone and install streamside buffers and fencing to reduce fecal input from stormwater runoff
319 WATER QUALITY GRANT

- Administered through the KY Division of Water
- Implementation of portions of the Clarks Run and Hanging Fork Watershed Based Plans

Objectives:
- Implement practices to reduce human and livestock fecal inputs and address high pathogen and nutrient levels
- Increase riparian buffer width
- Increase knowledge of water quality issues for local citizens, officials, and students
SEPTIC PUMPOUT & REPAIR PROGRAM

SEPTIC WORKSHOPS:

• Education on septic system function

• Instruction on how to properly maintain septic systems

• Information and applications for financial assistance
SEPTIC SYSTEM FUNDING ASSISTANCE

APPLICATIONS AVAILABLE FOR:

• FREE septic tank pumpout
  ✓ Includes riser installation up to a designated amount, if necessary
• 80/20 Cost-share grants for septic system repairs
  ✓ Solution for those with chronically failing systems or straight pipe conditions
  ✓ Based on guidance from the County Health Department
SEPTIC FUNDING ELIGIBILITY

ELIGIBLE APPLICANTS MUST:

• Reside within the Clarks Run or Hanging Fork watershed

• Attend a septic workshop hosted by Bluegrass Greensource

• Submit a signed “Application for Septic Pumpout Program” or “Application for Septic System Repair Program”
SEPTIC PROGRAM PROMOTION

• Attended Community Events (tabled and presented)
• Local Health Department coordination/promotion
• Conservation District Tree Giveaways
• Promotion through County Chamber of Commerce
• Cooperative Extension Newsletters
• Articles in local newspapers
• Flyers in local business windows and on Library bulletin boards
• Facebook/Instagram promotion
SEPTIC PROGRAM SPRING 2018

- Workshops were held in each county and applications collected throughout the month of April 2018.
- 131 in attendance with 93 applications collected.

<table>
<thead>
<tr>
<th>County</th>
<th>Workshop Date</th>
<th>No. Attendees</th>
<th>Pumpout Applications</th>
<th>Repair Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicholas</td>
<td>4/09/2018</td>
<td>40</td>
<td>15</td>
<td>20</td>
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<tr>
<td>Montgomery</td>
<td>4/12/2018</td>
<td>25</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Bourbon</td>
<td>4/17/2018</td>
<td>41</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Boyle</td>
<td>4/21/2018</td>
<td>18</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Lincoln</td>
<td>4/24/2018</td>
<td>7</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45</strong></td>
<td><strong>48</strong></td>
<td></td>
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</tr>
</tbody>
</table>

Total Applications Received = 93
SEPTIC PROGRAM SPRING 2019

- Workshops were held in each county and applications collected throughout the month of March 2019.
- 66 in attendance with 45 applications collected.

<table>
<thead>
<tr>
<th>County</th>
<th>Workshop Date</th>
<th>No. Attendees</th>
<th>Pumpout Applications</th>
<th>Repair Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boyle</td>
<td>2/26/2019</td>
<td>10</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Montgomery</td>
<td>3/5/2019</td>
<td>18</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Bourbon/Nicholas</td>
<td>3/7/2019</td>
<td>22</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Lincoln</td>
<td>3/12/2019</td>
<td>16</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>24</strong></td>
<td><strong>21</strong></td>
<td></td>
</tr>
</tbody>
</table>

Total Applications Received = 45
SEPTIC CARE WORKSHOPS
APPLICATION PRIORITIZATION

- Proximity of homeowner’s property to a stream or tributary
- Current septic system condition and age (if available)
- Proximity to a priority area identified in the watershed based plan
- Proximity to other implementation projects
- Annual household income
SEPTIC PROGRAM PROGRESS

- **64** pumpout applications approved in 2018 & 2019
- Repair Applications reviewed and prioritized for assistance award. Number of projects selected based on the funding available and the average cost of septic installation or repair ($7,000)

- Dix River Projects:

<table>
<thead>
<tr>
<th></th>
<th>Completed Dix River Projects</th>
<th>Total Dix River Projects</th>
<th>Overall (both watershed areas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pumpouts</td>
<td>12</td>
<td>17</td>
<td>64</td>
</tr>
<tr>
<td>Septic Repairs</td>
<td>3</td>
<td>5</td>
<td>33</td>
</tr>
<tr>
<td>Riparian Buffers</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>27</strong></td>
<td><strong>103</strong></td>
</tr>
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</table>

*small changes BIG IMPACT*
DIX RIVER PROJECT MAP

Map Link:
https://batchgeo.com/map/2211ed1df2cb339b3fdc7f7a7e4b
PROJECT MAP
RIPARIAN BUFFER PROGRAM

SAVING YOUR STREAMBANKS WORKSHOPS:

• Education on the benefits of streamside native plantings
• Instruction on how to plant and maintain a riparian buffer, as well as identify and remove invasive species
• Information and applications for financial assistance

BLUEGRASS GREENSOURCE
small changes BIG IMPACT
RIPARIAN BUFFER ASSISTANCE

APPLICATIONS AVAILABLE FOR:

• 80/20 cost-share grants for establishing streamside buffers
  ➢ BGGS will reimburse 80 percent of project cost, Up to $2,000
  ➢ Applicant responsible for 20 percent of the project cost and any additional amount over the maximum reimbursable amount
  ➢ Open to public community projects, as well as private property owners
RIPARIAN BUFFER ASSISTANCE

STATE AND FEDERAL PROGRAMS:

- Kentucky State Cost-Share Program
  - Local Conservation District Office
  - Streambank BMPs to help agricultural operations protect the soil and water resources

- Environmental Quality Incentives Program (EQIP) Program
  - Local Natural Resources Conservation Service (NRCS) Office - Similar conservation practices as offered in State Cost-Share Program
RIPARIAN PROGRAM PROMOTION

- Attended Community Events (tabled and presented)
- Local Health Department coordination/promotion
- Conservation District Tree Giveaways
- Promotion through County Chamber of Commerce
- Cooperative Extension Newsletters
- Articles in local newspapers
- Flyers in local business windows and on Library bulletin boards
- Facebook/Instagram promotion
RIPARIAN PROGRAM FALL 2018

• Workshops were held in each county. The deadline for application submittal was Nov 30, 2018. Applications reviewed and approved in December for installation in Spring 2019.

<table>
<thead>
<tr>
<th>County</th>
<th>Workshop Date</th>
<th>No. Attendees</th>
<th>Riparian Applications</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boyle</td>
<td>10/2/2018</td>
<td>14</td>
<td>4</td>
<td>Danville/WTE/ 2-Private Properties</td>
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<tr>
<td>Nicholas</td>
<td>10/9/2018</td>
<td>10</td>
<td>1</td>
<td>4-H Camp project</td>
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<tr>
<td>Bourbon</td>
<td>10/16/2018</td>
<td>23</td>
<td>1</td>
<td>Millersburg Community Park</td>
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<tr>
<td>Lincoln</td>
<td>10/18/2018</td>
<td>10</td>
<td>1</td>
<td>Hustonville Park Project</td>
</tr>
<tr>
<td>Montgomery</td>
<td>10/22/2018</td>
<td>7</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Total Applications Received = 7
RIPARIAN WORKSHOPS
RIPARIAN PROGRAM PROGRESS

• Native plants ordered in March/April
  ➢ Mix of native trees (1 and 2 gal), native shrubs (3 gal and nursery quart sizes), native grasses and perennials (plugs and nursery quart sizes)
  ➢ Willow live staking in February at 2 project locations
• Plantings scheduled for May and June 2019
• Projects completed by July 2019
HUSTONVILLE BUFFER

COMMUNITY PARK PROJECT

City of Hustonville and Ruritan Club partnered to establish a riparian buffer along the confluence of Baughman and Hanging Fork Creek.
NO MOW ZONE SIGNAGE

NO MOW ZONE
Managed Planted Buffer Area

These Kentucky native plants stop pollution from entering the stream and their roots hold the soil in place. They form a buffer that provides wildlife habitat and improves water quality.

Let it grow

BLUEGRASS GREENSOURCE  small changes BIG IMPACT
EDUCATIONAL SIGNAGE

Hustonville Ruritan Park Riparian Buffer
protecting our streams

This vegetated area surrounding Baughman and Hanging Fork Creek is called a riparian buffer. The planted buffer serves many critical functions to help protect water quality and aquatic life. A diverse planting of Kentucky native trees, shrubs, grasses, and perennials will help filter out pollutants in the stormwater runoff from our homes, farms, and roads. Plant roots hold tight to soil and prevent it from being washed away, stabilizing streambanks and reducing downstream sedimentation. Additionally, the plants provide food and cool shade for wildlife in and around the stream.

What is a watershed?
A watershed is the area of land that drains all the precipitation and streams to a common point, such as a lake, stream, or river.

We can preserve stream buffers by allowing trees and shrubs to grow next to our waterways—just 15 feet can make a difference! Avoid mowing or animal grazing close to the water.

How do we impact our watersheds?
- Residential Activity: Yard waste, pet waste, oil, fertilizers, and pesticides can be carried from our lawns and driveways into storm drains and local waterways.
- Roadways: Pollutants such as trash, engine fluids, and road salt can wash from surfaces into waterways.
- Septic Tanks: Poorly maintained septic systems can leak wastewater into the groundwater and onto the surface.
- Farmland: Fertilizers, animal waste, and pesticides wash away into lakes and streams which can be toxic to wildlife or spark algal blooms.

The Hanging Fork Watershed
Hustonville Ruritan Park is located within the Hanging Fork’s watershed, so all of its water will drain into Hanging Fork. However, the Hanging Fork watershed is part of larger watersheds. The stream will drain into the Dix River, which flows into the Kentucky River, then the Ohio River, later joining the Mississippi, until it eventually flows into the Gulf of Mexico.

BLUEGRASS GREENSOURCE small changes BIG IMPACT
CLARKS RUN TRAIL BUFFER

CLARKS RUN AND 2ND STREET BRIDGE

City of Danville planted a 300FT buffer along Clarks Run Trail in conjunction with the 2ND Street Bridge construction.
ALUM SPRINGS BUFFER

LAWSON PROPERTY BUFFER

The Lawson buffer combined riparian seed mix, plugs, and container sized perennials, grasses, shrubs, and trees. Site was cleared, cleaned up, and planted along the headwaters of Clarks Run.
WILDERNESS TRACE BUFFER

PHASED BUFFER PROJECT

Wilderness Trace Solar/Environmental partnered with Boyle County to plant a buffer along a tributary to Clarks Run. Native trees, shrubs, perennials, and seed mix combined to test different methods along the buffer.
DENHAM BUFFER

BANK STABILIZATION AND BUFFER PROJECT

Water Quality Certification obtained for realigning and grading the streambank, and BGGS grant used to plant buffer along the new grade.
COMMUNITY OUTREACH

• Working with local watershed partners and community groups to establish long-term water quality awareness and protection as a local priority:
  ➢ Work with local agencies, organizations, and others to expand the reach of the project into the communities
  ➢ Build stakeholder capacity – Dix River Watershed Stakeholder Meeting Tuesday, November 19, 2019 (5:30PM-7:30PM Danville City Hall Training Room)
  ➢ Table and present at local events and meetings throughout the year to build awareness and promote workshops and financial assistance opportunities
COMMUNITY OUTREACH
K-12 OUTREACH

- Working with schools to establish long-term water quality awareness and protection as a local priority
  - Our environmental educators work with local teachers and school groups
  - Build water-related environmental education in the community for greater watershed improvement
  - K-12 education and classroom activities, 3 or 4 visits a year with an end of year water-related project
K-12 OUTREACH
QUESTIONS/CONTACT

Lindsie Nicholas, P.E.
Watershed Coordinator
Bluegrass Greensource
835 National Ave, Lexington, KY
lindsie@bggreensource.org
859-266-1572
HUSTONVILLE-RURITAN PARK BUFFER AND PARK IMPROVEMENTS (MARGO SMITH & LINDSIE NICHOLAS)
HUSTONVILLE-RURITAN PARK

CONCEPT PLAN
FUNDING OPPORTUNITIES

PARK IMPROVEMENT UPDATES

• Land and Water Conservation Fund Application through Bluegrass ADD ($15,024 LWCF/ $15,025 match) submitted 5/29/2019
  • Playground equipment
  • Updated pavilion electrical and lighting
  • Rebuild park benches and picnic tables
  • Resurface and stripe parking lot and basketball court

• KRA Grant ($2,700) and BGGS Grant ($2,000) for streamside buffer and educational signage installation Summer 2019

• Seeking outdoor classroom grants (Lowes Grants?)

• Looking into Tony Hawk Foundation skatepark grant to convert old tennis court into small skate park
HUSTONVILLE BUFFER

COMMUNITY PARK PROJECT

City of Hustonville and Ruritan Club partnered to establish a riparian buffer along the confluence of Baughman and Hanging Fork Creek.
BUFFER PLANTING

Help Us Plant the Park!
May 13-15
Meet at Ruritan Park Pavilion in Hustonville
9:00 AM each morning
Bring shovel, trowel, and gloves if you have them!
800 + Plants to get in the ground!

Volunteers Needed

BLUEGRASS GREENSOURCE
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small changes BIG IMPACT
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We can preserve stream buffers by allowing trees and shrubs to grow next to our waterways—just 15 feet can make a difference! Avoid mowing or animal grazing close to the water.

What is a watershed?
A watershed is the area of land that drains all the precipitation and streams to a common point, such as a lake, stream, or river.

Watershed Boundary: The high points of a watershed. Water runs downhill; it then downward slopes into the ground to become groundwater.

Tributaries: Smaller bodies of water within a watershed that flow into larger streams and rivers.

Groundwater: Water that streams down underground into the surface and fills the gaps between soil and rocks.

Main Stream Channel: Water flows downhill to form a main stream or river, which flows downstream to join larger rivers and eventually the ocean.

How do we impact our watersheds?

Residential Activities: Yard waste, pet waste, oil, fertilizers, and pesticides can be carried from our lawns and driveways into storm drains and local waterways.

Roadways: Pollutants such as trash, engine fluids, and road salt can wash from surfaces into waterways.

Septic Tanks: Poorly maintained septic systems can leak runoff into the groundwater and onto the surface.

Fertilizers: Fertilizers, animal waste, and pesticides wash away into lakes and streams which can be toxic to wildlife or spark algal blooms.

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BLUEGRASS GREENSOURCE
small changes BIG IMPACT
GRAND OPENING FESTIVAL

CELEBRATING HUSTONVILLE RURITAN PARK

Grand Opening
SATURDAY | JULY 20
4pm to 8pm

HUSTONVILLE RURITAN PARK PAVILION

Live Music • Food • Stream-side Activities • Fun for Kids

An evening of fun! Come learn about the work being done in your community while enjoying live 'Music with Joe' and good eats. Bring lawn chairs or a blanket for the family!

10039 West Main St, Hustonville Ky...
CITY OF DANVILLE
STORMWATER PROJECTS
(JOHN CASSEL)
CLARKS RUN TRAIL IMPROVEMENTS AND EDUCATIONAL SIGNAGE INITIATIVE (JENNIFER KIRCHNER)
CREEC PROJECTS AND CURRENT INITIATIVES
(PRESTON MILES)
US HIGHWAY 127
PHASE I AND PHASE II
SEWER PROJECTS
(BILL PAYNE)
EQIP FUNDING IN HANGING FORK WATERSHED (PEGGY BAGWELL)
OPEN DISCUSSION
OPEN DISCUSSION

WHAT DOES CLEAN WATER IN THE DIX RIVER WATERSHED LOOK LIKE TO YOU?
OPEN DISCUSSION

Target/ Focus Areas
Concerns/ Issues
Community Outreach & Education
Water Quality Management Ideas
Success Stories
Partnerships

Grant Opportunities
Future Initiatives

BLUEGRASS GREENSOURCE
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859-266-1572