

**Kentucky Division of Water**

**2018 GENERAL PERMIT ANNUAL COMPLIANCE REPORT**

**Phase II Stormwater MS4**  
Kentucky Division of Water

**For questions regarding this form, contact:**  
**Abigail Rains**  
ENERGY AND ENVIRONMENT CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
Division of Water  
300 Sower Boulevard, 3<sup>rd</sup> Floor  
Frankfort, KY 40601  
Phone: (502) 782-7044

- NOTE:**
- In order to comply with KPDES sMS4 permits, annual reports must be submitted to the Kentucky Division of Water.
  - **Please type or print in ink.**
  - Please answer all questions **thoroughly** and return the form by the due date.
  - Return this form and any required addenda to the KDOW MS4 Coordinator at the address listed in the box on the upper-right.
  - **Due April 15, 2018 (Extension to May 31, 2019 provided by KDOW).**

REPORTING YEAR (Check one)
<input type="checkbox"/> 2016
<input type="checkbox"/> 2017
<input checked="" type="checkbox"/> 2018

1. Report Completed By:	Ryan Eastwood, City of Ashland <small>(MS4 Operator — i.e., name of permit holder)</small>									
2. Permit Number:	<table border="1" style="border-collapse: collapse; width: 100px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">K</td> <td style="width: 20px; height: 20px; text-align: center;">Y</td> <td style="width: 20px; height: 20px; text-align: center;">G</td> <td style="width: 20px; height: 20px; text-align: center;">2</td> <td style="width: 20px; height: 20px; text-align: center;">0</td> <td style="width: 20px; height: 20px; text-align: center;">0</td> <td style="width: 20px; height: 20px; text-align: center;">0</td> </tr> </table>	K	Y	G	2	0	0	0	AI # 6690 42,000_	4. Population Urbanized area – <b>City of Ashland – 21,700</b>
K	Y	G	2	0	0	0				
5. Mailing Address:	P.O. Box 1839 Street Address: 1700 Greenup Avenue									
<input checked="" type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Other	of: Ashland, Kentucky	Zip: 41105-1839	County: Boyd							

**PART B: GENERAL INFORMATION – CONTACT PERSON**

6. Contact Person Name (please print):	Ryan Eastwood, PE
7. Contact Person Title:	Director of Engineering and Utilities
8. Phone Number:	606-327-2008
9. Facsimile Number (if applicable):	606-327-2060
10. E-mail Address (if applicable):	reastwood@ashlandky.org

**11. For the following items, please provide a summary of control measure activities related to SMS4 performed during the previous year. List any updated measurable goals from the Stormwater Quality Management Plan (SWQMP), compliance activities, Best Management Practices (BMP) installed or initiated, and updated or developed regulatory mechanisms with effective dates.**

## **A. Public Education and Outreach:**

Describe your public education/outreach efforts during 2018:

### **1. KYTC Outreach Program**

The City of Ashland continues to maintain the Stormwater Management Program website, that covers the the City's Phase II MS4 Storm Water Program. Information such as the history of the program, narrative of the six(6) minimum control measures, who to contact to get involved, and who to contact to report an illicit discharge. PDFs of the three storm water related ordinances (Erosion and Sediment Control, Illicit Discharge and Post-Construction), BMP Manual and previous compliance reports are provided on the website. Boyd County Fiscal Court continues to update and maintain their MS4 program activities on their website.

KYTC with our MS4 and partner communities utilize several approaches to public education. The most pronounced is a mass media play via radio and television. We also utilize a website tied in with the radio and television spots. KYTC in a combined effort with the MS4 communities manage the Adopt-A-Highway program. KYTC also utilizes our Kentucky Engineers Exposure Network (KEEN) to promote stormwater issues in community schools. During 2018 KYTC completed a Statewide Stormwater Survey. This survey is a follow-up to the survey conducted in 2008.

The KYTC Media Outreach Program (MOP), in conjunction with our partner MS4 communities, contracted with the Kentucky Broadcasters Association (KBA) to air a video spot and six audio spots in 2018. The 30 second spots have been aired statewide as a public education initiative to inform the general population about stormwater issues. The ads messages were developed after the statewide survey conducted in 2008 identified that half of the population is unaware that storm drains discharge directly to waters of the Commonwealth without treatment. The ads can be viewed on [stormwater.ky.gov](http://stormwater.ky.gov). The TV and radio plays combined totaled 62,533 plays statewide in 2018 for a total value of \$1,536,691.

KYTC initiated a committee of five MS4 representatives and the DOW representative in 2009 to work with our consultant, New West, to develop the ads. The members are Abby Rains – DOW, Suzie Bradley – Campbellsville, Randy Stambaugh – MSD, Vicki Brackett – Hardin County, Jamie Holtzapfel – SD1 and Jack Wright – Plum Springs Warren County Joint Storm Water Sewer Agency. A mix of general information and specific item ads were developed. The resulting work of the committee was the six audio spots and the one video spot. In 2012 the committee was called together again to develop a new TV advertisement for the stormwater program. The new ad began airing in December 2012. KBA distributes the ads to 230 stations in 132 communities. The KBA receives certified reports from the member stations verifying the number of times the spots are played. Since the inception of the Media Outreach Program there have been 671,422 plays for a total value of \$13,471,918.

The 2018 summary of ad play is as follows:

55,713 radio Spots with a value of \$1,182,611

6820 television plays with a value of \$354,010

TV and radio plays combined totaled 62533 plays statewide for a total value of \$1,536,691.

A new website URL (<https://transportation.ky.gov/Stormwater/Pages/default.aspx>) was secured and a new website prepared to help launch the MOP and provide a statewide resource for the KYTC and our partner MS4 communities to promote stormwater issues. The website was designed to address both the public and those involved with the MS4 program either as a permitted community, construction contractor or KYTC. It provides basic information regarding what is stormwater and stormwater pollution, who to contact if more information is needed or a concern needs to be reported, and technical information for MS4 communities and contractors. The website had 1486 visits in 2018 and 1985 page views.

Kentucky has participated in the International Adopt-A-Highway Program since 1988. The Commonwealth has one Statewide Adopt-A-Highway Coordinator in central office and 12 Adopt-A-Highway District Coordinators throughout the state. The Adopt-A-Highway program involves community groups to organize and pick up litter. The Transportation Cabinet participates in Adopt-A-Highway meetings as agreed upon by the Local Community and KYTC. There are 719 groups that manage 3,133 miles of roads throughout the state.

### **2. City of Ashland and Kentucky Power and Ashland Community and Technical College Outreach Program**

Ashland/Boyd County in a combined effort with Kentucky Power and Ashland Community and Technical College hosted a Tree Giveaway. See **Appendix A** for advertisement. In total 3,300 tree saplings were handed out and planted at a cost of \$1,712.26.

### **3. Public Notice/Advertisements**

- A proclamation was made by Mayor Gilmore proclaiming April 27<sup>th</sup>, 2018 as "Arbor Day" and encouraged all citizens to participate by planting trees "to gladden the hearts and promote the well-being of present and future generations. Proclamation is provided in **Appendix A**.
- With a circulation of 15,000 to 20,000 the advertisements and public notice runs provided an opportunity to reach 75,000 to 100,000 citizens. **See Appendix A** for advertisements and public notices.

#### 4. Miscellaneous Activities

- The storm water management section under the Public Works Department on the Ashland and Boyd County website continues to be a source of information and outreach to the general public on the storm water management program.
- Spring and Fall Cleanup Program – This community and municipality collaborative program allowed citizens to make a visible difference in their community by cleaning-up dumped and washed-up trash.

Are public education/outreach efforts targeted towards a pollutant of concern or local waterbody or a particular segment of the population?

- Public education and outreach is an integral component of stormwater management. We believe an informed public is essential to the success of protecting water resources, which is why we believe in both a broad as well as focused educational outreach. Ashland and Boyd County's education and outreach program not only focuses on educating city and municipal staff and officials but also the public. Ashland and Boyd County's continued partnership with KYTC and The University of Kentucky Horticulture Extension as well as their new innovative website allow them to reach each of these target sectors to provide a variety of education and resources that target pollutants of local concern. These targeted pollutants include trash & illegal burning, stormwater runoff, illicit discharges and commercial/industrial activities.

What is your budget for MCM #1? – Approximately \$5,000

#### B. Public Involvement and Participation:

Describe any events or activities facilitated by or sponsored by the MS4 in 2018:

##### 1. Stormwater Advisory Committee (SWAC)

The Ashland and Boyd County SWAC is made up of city and county staff, private practitioner, health department representative, general contractor and members of Ashland Community Technical College, FIVCO Area Development District and Chamber of Commerce.

Currently all of the members of the SWAC committee have retired. Both the City of Ashland and Boyd County are currently in the process of filling these vacated positions on the SWAC. We plan to re-establish the SWAC in 2019 and conduct several meetings.

##### 2. University of Kentucky Horticulture Extension Outreach Program

Ashland/Boyd County in a combined effort with the University of Kentucky's Horticulture Extension office have hosted several workshops and programs to aid in public participation and outreach as described above in the Public Outreach and Education section.

##### 3. Ashland Pre-Treatment Program

This program informs the public of requirements for the use of the public sewer system in Ashland, SD No. 4 and Boyd County Sanitation District. Ashland also issues the commercial and industrial permits for use of the sewer system which defines limitation on allowable waste entering the sewer system. The City of Ashland provides water service to all three of our communities.

##### 4. The Ohio River Sweep Program

This program that spans six states and 3,000 miles from Illinois to Pennsylvania was conducted on June 16, 2018 in Catlettsburg and Ashland. The river sweep site was along Catlettsburg City Park, The Old Boat Landing in South Shore, and the riverbank near Riverside Drive in Russell, the Worthington City Park and the Greenup City Park. Volunteers take pride in keeping waterways clean, for their own benefit as well as for the wildlife that depend on the river. The public understands how valuable a resource the Ohio River and its surrounding tributaries are. The FIVCO Area development District planned the cleanup. The river sweep is supported by all three governmental bodies. Over 200 people volunteered, collecting several tons of trash. See **Appendix A** for Newspaper Articles relating to the event.

##### 5. Kentucky PRIDE Organization

As members of Hal Rogers' Pride Organization Ashland and Boyd County will continue to draw upon this organization and become active in various environmental programs.

### **6. City of Ashland, Boyd County and Catlettsburg Cleanup Days**

Each held cleanup days this past year with cost to haul waste to landfills paid by the local governments.

The Spring Cleanup was conducted in April of 2018.

The Fall cleanup was conducted in October of 2018. Waste collected included construction debris, household hazardous waste and electronic waste (TV's, computers, and phones).

From all clean up days approximately 6,600 lbs of scrap metal was collected and the City/County received approximately \$500.

Hazardous waste collected included: driveway sealer, oil, acids, batteries, paints, solvents, aerosols, bulbs, lamps, pesticides, fire extinguishers, cylinders, carbon dioxide cylinder, and propane tanks.

### **7. The Ashland Tree Board Plant a Tree Outing**

Ashland held its annual Arbor Day Plant A Tree Project in April of 2018 at Central Park. Several tree seedling species including but not limited to birch, persimmon, sassafras, dogwood, white and red pine and pecan were given away with the help of Ashland Community and Technical College (ACTC) students and volunteers from the Ashland Group Home. Thanks to ACTC's considerable efforts in tree conservation and restoration through the years, it was awarded "Tree Campus USA" this year. The City expends a substantial amount of funds on seedlings, trees, mulch, tree maintenance along streets and parks and labor each year. With these expenditures, Ashland is also able to maintain its certifications as "Tree City USA". More trees add green canopy and more infiltration and filtration to rain water, which improves the overall water quality in the local streams and rivers.

### **8. Ashland Water Plant and Wastewater Plant Tours**

Tours are made available upon request for civic groups, school classes, and members of the general public.

### **9. Charles and Betty Russell Walking Trail – Maintenance and Upkeep**

Ashland, Catlettsburg and Boyd County take pride in the maintaining and cleaning the miles of walking trails.

The walking trail was opening in 2014 and consists of hiking trails along creeks and hills and construction of several trail heads. The Russell's donated 20 acres on a hill between Forest and Ashland avenues. Volunteers cleaned and prepared paths. The trails are an asset to the City which will promote more health related activities and provide an avenue for the public to appreciate the local streams and environment. The grand opening was conducted on October 16th, 2014.

### **10. State Tire Recycle Program**

The Waste Tire Collection Program was established in 1998 as part of the Energy and Environment Cabinet's (EEC) ongoing effort to rid Kentucky's landscape of waste tires. During a waste tire collection event, individuals can drop off their unwanted tires at a specific location within their county as no cost. The EEC contracts for the removal and delivery of the recovered tires to "beneficial end use" markets where they are recycled to become product such as tire-derived fuel or crumb rubber. This past year the City of Ashland collected 399 waste tires.

### **11. Public Recycling Bins**

Ashland, Catlettsburg and Boyd County make recycling easy and attainable by offering recycling bins for residents to drop off recyclable materials.

How can the public find information about the SWQMP?

The current SWQMP is easily accessed on the Ashland and Boyd County Department website in the Storm Water Management Program page under the Public Works Department ([http://www.ashlandky.gov/departments/public\\_works/swmp.php](http://www.ashlandky.gov/departments/public_works/swmp.php)). Many other resources are also available on this page as well as contact information (phone number and email address) for SWMP representatives for the City of Ashland, the City of Catlettsburg and Boyd County in case the public has any specific questions or concerns.

Ashland and Boyd County are currently in the process of updating the SWQMP and will formally adopt it in the Summer of 2019

The City of Ashland also continues to use sewer bill inserts to educate the public on CSOs

What is your budget for MCM #2? – Approximately \$5,000

Please attach documentation of any public involvement/participation events held in 2018.

## **C. Illicit Discharge Detection and Elimination:**

Did you have any reported/discovered illicit discharges for 2018? If so, describe the incident and the elimination.

See **Appendix D** for KPDES CSO Annual Report for Publicly Owned Treatment Works

## How can the public notify the MS4 of spills or illicit discharges?

Illicit discharges can be reported to the City of Ashland, Catlettsburg, and Boyd County by phone or email. The public can find this contact information on the Ashland, Catlettsburg, Boyd County website on the Storm Water Management Program page under the Public Works department. The Public can find the information under the heading "How Do I Report an Illegal or Illicit Discharge?" as well as a description of what is considered an illicit discharge. The public can also find on this page a link to the adopted 2005 Illicit Discharge Elimination ordinance.

## Do you have a written IDDE Plan in place?

Yes. An IDDE plan was adopted in February 2007 and provided in the 2010 Annual Report. Ashland and Boyd county are currently in the process of updating the existing IDDE plan and will have it adopted in the Summer of 2019.

Illicit discharges that are detected are eliminated immediately. Sanitary sewer back-ups and overflows are corrected the same day or next day at the latest. The corrections include cleaning with jet vacuum, replacing the damaged pipe and snaking the lateral or pipe to clear debris.

Ashland, Catlettsburg and Boyd County Sanitation District have continued smoke and dye testing in the collection systems to detect breaks or illicit connections to the sanitary sewer. The City of Ashland has installed flow meters on all CSO outfalls and rain gauges at three strategic locations within the collection system. The City continues to use data collected by the flow meters to document CSO discharge information.

The City of Ashland has made minor modifications to the CSS to increase in-system storage as part of the early action projects of the LTCSP. City personnel continued to look for opportunities to make minor modifications to the CSS to maximize in-system storage. The City's maintenance activities included the removal and prevention of accumulations of debris and sediment that restrict flow.

See **Appendix D** for KPDES CSO Annual Report for Publicly Owned Treatment Works

Boyd County Sanitation District continues to eliminate septic tanks and on-site treatment systems with the construction of gravity sanitary sewers.

Strand Engineering is Ashland's consulting firm involved with the CSO program, which includes a Long Term Control Plan. Ashland is under a consent decree with Kentucky Division of Water and an administrative order from EPA Region 4. Boyd County does not have combined sewers and Catlettsburg is working with KDOW on their CSO concerns. Catlettsburg has placed warning signs at all CSO outfalls. A copy of Ashland's Consent Judgment Annual Report 2015 was submitted to Kentucky Division of Water in February 2016.

## Have you completed the mapping of major outfalls?

Ashland and Boyd County – Yes, with the new MS4 General Permit we are updating the mapping to include 12" diameter or equivalent outfalls for lands zoned for industrial activity.

## Have you dry-screened your major outfalls?

Ashland and Boyd County have completed dry screening major outfalls.

City of Catlettsburg - Ashland and Boyd County will continue to share information, templates, etc. to get them started.

The following provides a time table for the MS4 Group screening program:

- Ashland completed dry weather screening inspection of 204 outfalls in the summer and fall of 2014. For the new permit term the MS4 group plans to perform dry weather screening (20% per year) of all major outfalls through April 2023. Outfall IDs, photos, date of inspection, temperature and weather condition, description of outfall, size and shape, flow description, and water quality parameters such as floatables, turbidity, sedimentation, pH, water temperature, will be updated for existing and new outfalls and entered into the GIS database.
- In March of 2015 Ashland developed a Phase II Stormwater Monitoring Program and submitted to KDOW. A copy of the Phase II Stormwater Monitoring Program Report and the dry weather screening results and map are provided in **Appendix C**.

What is your budget for MCM #3? – Approximately \$3,500

Please attach documentation of any illicit discharge detection and eliminations resolved in 2018.

## D. Construction Site Stormwater Run-off Control:

### How can the public notify the MS4 of possible noncompliance at construction sites?

Possible noncompliance at construction sites can be reported to the City of Ashland, Catlettsburg, and Boyd County by phone or email. The public can find this contact information on the new Ashland, Catlettsburg, Boyd County website on the Storm Water Management Program page under the Public Works department. The Public can find the information under the heading "Who do I contact to become involved or obtain more information on Ashland, Catlettsburg and Boyd County SWMP?" The public can also find on this page, a description of Post-Construction Runoff Control and a link to the City of Ashland, Catlettsburg, and Boyd County's adopted Erosion and Sediment

Control ordinance.

Do you give the developer/contractor a permit from you, the MS4, for land disturbances for one acre or larger, or smaller than one acre if part of a larger common plan of development or sale?

Yes

How many permits were issued by the MS4 in 2018?

Under the erosion and sediment control ordinance:

Boyd County issued 81 Level 1 through 3 permits for all site disturbances per ordinance. Inspections were provided on all permit activities.

Ashland issued 2 permits.

Does the MS4 or its designee perform plan reviews for land disturbances for one acre or larger, or smaller than one acre if part of a larger common plan of development or sale? Of not, who does? Is there a standardized form that is used to review plans?

Yes

At what frequency are inspections occurring at active construction sites?

Typically before construction, after BMPs are installed and (depending on the duration and magnitude of the project) at least monthly, and at final completion. Boyd County conducted inspections every 7 days.

How many inspections in 2018 resulted in enforcement actions? Fines collected?

No violations were observed from the site disturbance inspections.

Describe any training given to operators/contractors in 2018?

Storm water training – This training provided guidance and criteria for selection and design of stormwater best management practices (BMPs) for water quality. These water quality BMPs apply to public and private development and redevelopment projects within the City of Ashland and Boyd County. The overall goal of the training is protection of receiving waters of the Commonwealth of Kentucky including tributaries of the Little Sandy River with smaller areas that drain to the Big Sandy River and Ohio River directly.

In 2018 the MS4 Coordinators for Ashland, Boyd and Catlettsburg met with HDR to review the new MS4 General Permit requirements. During the working session and from subsequent phone conferences with the MS4 Group a matrix of activities was developed to implement over the 5-year permit plan. This information was incorporated into the revised SWQMP

What is your budget for MCM #4? – Approximately \$5,000

Please attach documentation of any construction site stormwater runoff events or outreach occurring in 2018.

#### **E. Post-construction Stormwater Management in New Development and Redevelopment:**

Describe how the MS4 is implementing the post-construction stormwater management in new development or redevelopment requirements in your MS4; including the 80% stormwater treatment standard.

The Ashland/Boyd County Post-Construction Stormwater Management Ordinance adopted in 2010 requires water quality treatment for storm water runoff from an 80 percentile storm event. For Ashland and Boyd County an 80th percentile storm event is equivalent to a rainfall event of 0.80 inches.

The goal of the Ashland/Boyd County SWQMP is to have new developments treat the MEP runoff generated from the first 0.80 inches of rainfall by conveying the runoff through a water quality BMP.

Per the KYG20 Permit on Part Page II-9 - The permittee shall demonstrate compliance with the requirements for post-construction controls by summarizing the following in the annual report. A summary of the number and types of projects that the permittee reviewed for new and redevelopment considerations and the types of BMPs installed including green infrastructure and buffers.

Does the MS4 do follow-up inspections to review the efficacy of the installed BMPs for post-construction or permanent stormwater management for new development or redevelopment? Describe.

Boyd County – yes  
Ashland Catlettsburg – yes

MS4 staff must be trained in the fundamentals of long-term stormwater-quality treatment management practices and in how to review such practices on construction plans and how to inspect practices for long-term protection, operation and maintenance. Please describe the training of staff in 2018.

Storm water training – This training provided guidance and criteria for selection and design of stormwater best management practices (BMPs) for water quality. These water quality BMPs apply to public and private development and redevelopment projects within the City of Ashland and Boyd County. The overall goal of the water quality BMP training is protection of receiving waters of the Commonwealth of Kentucky including tributaries of the Little Sandy River with smaller areas that drain to the Big Sandy River and Ohio River directly.

Flood Plain training – No flood plain trainings were attended last year.

Training for MS4 staff is available through the Kentucky Stormwater Association, participating in EPA webinars, and conducting consultant and vendor workshops. Available funding will limit how training can be provided.

Kevin Hill, Senior Engineering Assistant, went to a KY Erosion Permit and Sediment Control (KEPSC) Inspector Qualification training in April of 2017. It was held at the UK Transportation Center. The city of Ashland did not attend KEPSC training.

What is your budget for MCM #5? – No budget is allocated for Post Construction Stormwater Management; However, for re-development and new development projects post construction BMPs are included in the site design when feasible. The cost of these BMPs are absorbed by the developer.

Please attach documentation of any post-construction site stormwater runoff events or outreach occurring in 2018.

#### **F. Pollution Prevention and Good Housekeeping for Municipal Operations:**

The permittee must develop and implement an Operation and Maintenance (O & M) program that includes a training component with the goal of preventing or reducing pollutant runoff from municipal operations. Please describe the progress the Pollution Prevention/Good Housekeeping Program has made in 2018.

As a MS4 Group we continue to review our ordinances that pertain to storm water BMPs, the Storm Water Quality Management Plan and the Storm Water BMP Manual. These documents are available to municipal operations staff and are reviewed regularly. We also take opportunities to participate in EPA webinars, when possible. In 2019 we plan to provide re-fresher training for the following areas:

- NPDES History and Program Requirements
- Ashland/Boyd County SWQMP
- Protecting Water Quality from Urban Runoff
- O&M Programs for Parks & Recreation, Fleet Maintenance, Streets, Public Works, Engineering, Code Enforcement
- Spill/Leak Prevention Measures
- Spill Response Procedures
- Spill Cleanup Procedures
- Reporting

Available funding will limit how training can be provided. Even with budget cutbacks and staff turnover we believe our Phase II program is making a difference in helping reduce pollution and maintain the water quality in our local streams and rivers.

Has a comprehensive assessment of the pollutant discharge potential for all municipally-owned facilities been conducted? If not, indicate a status and planned completion date.

Ashland completed a KPDES CSO Annual Report for Publicly Owned Treatment Works in 2018 outlining active CSOs, Long term Control Plans, CSO Discharges, Dry Weather Overflow Events, Precipitation events and activities implemented for each of the nine minimum controls during the reporting period as well as benefits achieved by implementing each activity.

Ashland had approximately 650 gallons of used motor oil and coolant hauled away from the fleet garage.

Boyd County removed the following used fluids: motor oil, diesel fuel and cleaning solvent.

The Boyd County Road Department garage has an oil/grease separator to eliminate problem fluids from entering the drain. This separator also serves the wash bay area.

Ashland Solid Waste Division collected solid waste from combined street sweeping operations and cleanup days. Collected 10,305 tons household garbage and trash, recycled 244 tons of waste and collected 671 gallons of waste oil.

Boyd County has a salt barn with a non-pervious pad to catch loose salt to be put back in the barn.

City of Ashland's bus garage facility has an oil/water separator and other devices to prevent polluted water and used fluids from entering the sanitary or storm sewer systems.

Boyd County installed approximately 600 lf of storm pipe and re-graded approximately 100 lf of ditch flow lines.

Is the Operation and Maintenance Program/Plan formalized or written?

Describe any training presented to city staff on pollution prevention/good housekeeping in 2018.

We hope to re-visit existing plans and develop new SMOPs for City and County building, operation and maintenance facility sites in 2019.

Storm water training – This training provided guidance and criteria for selection and design of stormwater best management practices (BMPs) for water quality. These water quality BMPs apply to public and private development and redevelopment projects within the City of Ashland and Boyd County. The overall goal of the water quality BMP manual is protection of receiving waters of the Commonwealth of Kentucky including tributaries of the Little Sandy River with smaller areas that drain to the Big Sandy River and Ohio River directly

Flood Plain training – 3 attendees from Boyd County were present for flood plain training which educated attendees on the basics of the state flood plain program and a general overview in order to avoid regulatory compliance issues.

Training for MS4 staff was provided utilizing Kentucky Stormwater Association, participating in EPA webinars, and conducting consultant and vendor workshops. Available funding will limit how training can be provided.

What is your budget for MCM #6? – Approximately \$5,000

Please attach documentation of any pollution prevention/good housekeeping events or outreach occurring in 2018, including training events.

**PART D: MISCELLANEOUS INFORMATION**

**Provide any data regarding the following indicators (if applicable). Attach separate sheets as necessary, and indicate, as appropriate, the rationale behind not using a listed indicator.**

- a) Number or percentage of citizens that aware of storm water quality issues**
  - Through our public education and outreach program we estimate 95% of our citizens are aware of storm water quality issues.
- b) Number and description of meetings, training sessions, and events conducted to involve citizens**
  - Spring and Fall Cleanups, Ohio River Sweep, Tree Board Arborist Day, Public Meetings, Fiscal Court Meetings; Some of these meetings were in partnership with KY Pride.
- c) Number or percentage of citizens that participate in storm water quality improvement projects**
  - 15% involved in the programs listed in Item b.)
- d) Number and location of storm drains marked**
  - City of Ashland started storm drain marking/stenciling in 2014.
- e) Estimated linear feet or percentage of MS4 conveyances mapped**
  - Ashland and Boyd County – 95 to 100% of conveyance system is mapped
- f) Number and location of MS4 area outfalls mapped**
  - Approximately 340 outfalls and storm structure have been mapped in Ashland and Boyd County (see **Appendix C**)
- g) Number and location of MS4 area outfalls screened for illicit discharges**
  - Approximately 340 outfalls and storm structures have been mapped in Ashland and Boyd County (See **Appendix C**)
- h) Number and location of illicit discharges detected**
  - (See Appendix D)
- i) Number and location of illicit discharges eliminated**
  - None, SSOs were eliminated.
- j) Number of, and amount of material collected from, hazardous household waste (HHW) collections**
  - Hazardous waste collected driveway sealer, oil, acids, batteries, paints, solvents, aerosol, bulbs, lamps, pesticides, fire extinguishers, carbon dioxide cylinder, and propane cylinders.
- k) Number and location of citizen drop-off centers for automotive fluids**
  - Two auto parts stores take automobile fluids on a regular basis. Neither of the governmental bodies sponsors a permanent drop off facility
- l) Number or percentage of citizens that participate in HHW collections**
  - Through the Fall and Spring Clean-up days and from Solid Waste, the City paid ~\$12,500 for hazardous material and e-waste haul off.
- m) Number of construction sites permitted for storm water quality**
  - Boyd County issued land disturbance permits for all development projects.
- n) Number of construction sites inspected**
  - The construction site permits approved by Boyd County were inspected.
- o) Number and type of enforcement actions taken against construction site operators**
  - Minor actions; Any deficiencies identified were addressed immediately by the developer/contractor/builder
- p) Number of public informational requests received related to construction sites**

None

**q) Number, type, and location of structural BMPs implemented**

- 29<sup>th</sup> Street CSO Separation Project was completed in 2018.
- During 2017 porous pavement was installed in the JD Byrider parking lot to help filter and absorb stormwater into the ground.

**r) Number, type, and location of structural BMPs inspected in 2018.**

- The 29<sup>th</sup> Street CSO Separation Project was inspected in 2018.
- The JD Byrider parking lot was inspected.

**s) Number, type, and location of structural BMPs maintained, or improved in 2018.**

- No BMPs were improved in 2018.

**t) Type and location of nonstructural BMPs utilized in 2018.**

- Silt fences, rock check dams and construction entrances were utilized at construction sites.

**u) Estimated acreage or square footage of open space preserved and mapped in 2018.**

- Aerial images were developed in 2010; No open spaces were preserved through easement or likewise.

**v) Estimated acreage or square footage of mapped pervious and impervious surfaces in 2018.**

- None

**w) Number and location of retail gasoline outlets or municipal, state, federal, or institutional refueling areas with implemented BMPs**

- 100% of all stations have some type of BMP in place that are regulated by other agencies.

**x) Number and location of entities that have containment for accidental releases**

- Not available; Marathon Petroleum and AK Steel have containment structures at the tank farm where fuel and chemicals are stored.

**y) Estimated acreage or square footage and location where pesticides, herbicides and fertilizers are applied by the entity**

- City of Ashland applies along sidewalks and roadways; Approximately 120 acres.

**z) Estimated linear feet or percentage and location of unvegetated swales and ditches that have an adequately sized vegetated filter strip.**

- None

**aa) Estimated linear feet or percentage and location of stormwater sewer cleaned or repaired in 2018.**

- Ashland—Approximately 1000' @ 50+ locations

**bb) Estimated linear feet or percentage and location of roadside shoulders and ditches stabilized in 2018.**

- Approximately 2000'+ (Skyline Dr., Gallaher Rd. Marsh Rd. Crum St. Marcia Rd.)

**cc) Number and location of storm water outfall areas remediated from scouring conditions in 2018.**

- 20+ (Pollard Road, Kirk St. Rt. 168, 39<sup>th</sup> St., Queen St. Roberts Dr. Oakview Rd. Woodlawn Ave., Ashland Community & Technical College, Gallaher Dr. Brown St., Beech St., Woodbrook Ave.)

**dd) Number and location of de-icing salt and sand storage areas covered or otherwise improved to minimize storm water exposure in 2018.**

- All storage areas are covered. Ashland – Street/Garage 21st and Greenup Street garage; Boyd County – Road Department; Catlettsburg – Road Dept Facility

**ee) Estimated amount, in tons, of salt and sand used for snow and ice control in 2018.**

431 tons of material used for de-icing operations.

**ff) Estimated amount of material collected from catch basin, trash rack, or other structural BMP cleaning in 2018.**

- Approximately 100 tons

**gg) Estimated amount of material collected from street sweeping in 2018.**

925 tons of waste/debris was collected from street sweeping

**hh) Number or percentage and location of canine parks sited at least 150 feet away from a surface water body**

- Boyd County Dog Park/US 60 up on flat part of hill with vegetation around perimeter – runoff goes to Shopes Creek

**ii) Other**

**13. Stormwater Quality Management Plan**

a.) Have there been any changes to the urbanized area covered by the MS4? If yes, is this reflected by updates to the SWQMP?

There have been no changes

b) Are there any proposed changes to the goals or BMPs in the SWQMP?

No. We are still implementing the BMPs outlined in the BMP manual.

**14. Discuss any problems encountered during this period (include any BMP changes in response to problems encountered).**

As in years past the biggest challenges facing the MS4 Group is lack of funding sources coupled with budget cutbacks in the general fund that limits the amount of resources that can be committed to the MS4 program. This limitation presents challenges in implementing post-construction BMPs activities identified in the Ashland and Boyd County SWQMP.

The MS4 Group will continue to look for ways to share resources with other MS4 Groups and KYTC and spend dollars cost effectively to provide existing water quality programs and develop new programs and activities. The MS4 Group will continue to utilize training materials and water quality information available from the EPA. Summer help from local high school and college students will be used where possible

**15. Identify any new funding source(s) for implementing this permit.**

Ashland continues to use summer interns to assist with activities if possible.

There are no new funding sources available other than limited general funds. With the turndown in the local economy there will be less funding available to support this program.

**16. Provide a summary of complaints received and the follow-up actions taken in reference to storm water quality issues.**

No major complaints in 2018.

**17. Implementation status:**

a. Are the six minimum control measures being implemented within the compliance schedule and SWQMP timetables?

Yes  No\*

\* If no, submit revised compliance schedule and SWQMP Timetables.

b. Do you foresee any problems which may affect full implementation of all the measures?

Yes  No\*

\* If yes, explain:

As mentioned last year, education and buy-in from the new leadership will be critical for the success of our programs.

Obtaining funding to start new activities, especially under the illicit discharge detection and elimination program, and continuing to educate staff through attendance at EPA and KDOW sponsored workshops and seminars.

**18. Do you have any impaired streams? If so, impaired for what pollutant?**

Yes, 10 streams are listed on the 2016 Kentucky 303(d) List. These streams and impairments are provided below:

- East Fork Little Sandy River (27.6 to 30.9) – Sedimentation
- Ellingtons Bear Creek (0.0 to 1.5) – Temperature, Sedimentation, Nutrient
- Garner Creek (0.0 to 1.9) – Sedimentation
- Hood Creek (0.8 to 5.3) – E. coli, pH, Ammonia
- Hurricane Fork (0.0 to 2.3) – Nutrient, Sedimentation
- Ice Dam Creek (0.0 to 0.4) – Nitrogen, Sedimentation, Cause Unknown
- Ice Dam Creek (0.4 to 2.7) – Sedimentation, Nitrogen, Cause Unknown, Total Dissolved Solids
- Lockwood Creek (2.6 to 3.2) – Nutrient, Cause Unknown
- Paddle Creek (0.0 to 1.6) – Nutrient, Organic Enrichment, Sedimentation, Total Dissolved Solids,
- Savage Branch (0.0 to 1.9) – Sedimentation
- Williams Creek (0.0 to 2.85) – Cause Unknown

**19. TMDL – Do you have a TMDL in your MS4? For which stream segments? What is the impairment?**

No.

**20. What can the Division of Water do to assist you with program compliance?**

The quarterly Storm Water Association conferences are a great opportunity to obtain training and share information about MS4s. Our limited funding however has required cut backs on the amount of staff/employees sent to the conferences. We would like to see the KDOW conduct some workshops in the Boyd-Greenup County area in 2018, to allow more staff/employee participation and training.

► The individual completing this report, listed in "PART A: GENERAL INFORMATION – MS4 OPERATOR" must sign the following certification statement:

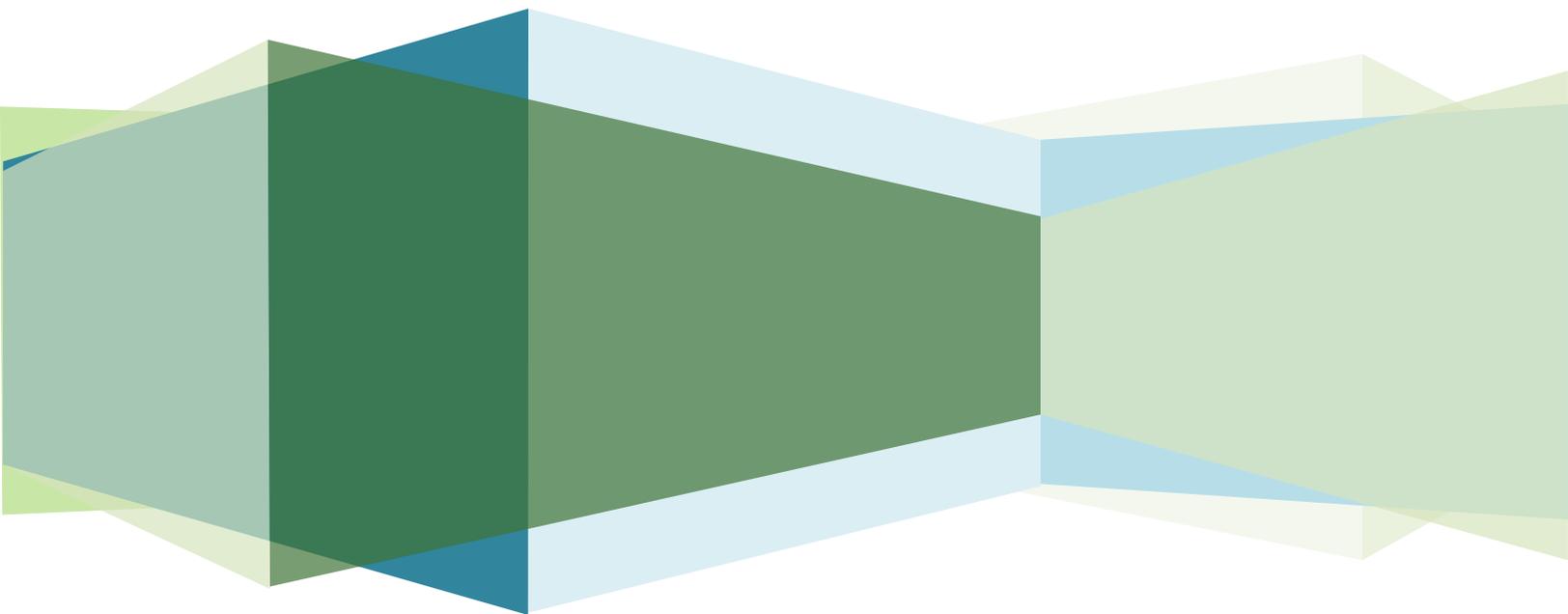
*"By signing this annual report, I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

Type or Print Name: Ryan Eastwood, PE  
Director of Engineering and Utilities, MS4 Coordinator

Signature: \_\_\_\_\_ Date: 05/30/2019  
(mm/dd/year)

# Appendix "A"

- Public Notices
- Advertisements



**PROCLAMATION BY  
STEPHEN E. GILMORE, MAYOR  
CITY OF ASHLAND, KENTUCKY**

\*\*\*\*\*

**WHEREAS**, in 1872 J. Sterling Morton proposed to the Nebraska Board of Agriculture that a special day be set aside for the planting of trees; and

**WHEREAS**, this holiday, called Arbor Day, was first observed with the planting of more than a million trees in Nebraska; and

**WHEREAS**, Arbor Day is now observed throughout the nation and the world; and

**WHEREAS**, trees can reduce the erosion of our precious topsoil by wind and water, cut heating and cooling costs, moderate the temperature, clean the air, produce oxygen, and provide habitat for wildlife; and

**WHEREAS**, trees are a renewable resource giving us paper, wood for our homes, fuel for our fires and countless other wood products; and

**WHEREAS**, trees in our city increase property values, enhance the economic vitality of business areas, and beautify our community; and

**WHEREAS**, trees, wherever they are planted, are a source of joy and spiritual renewal; and

**WHEREAS**, Ashland has been recognized as a Tree City USA by the National Arbor Day Foundation and desires to continue its tree-planting ways.

**NOW THEREFORE**, I, Stephen E. Gilmore, Mayor of the City of Ashland, Kentucky, do hereby proclaim Friday, April 27, 2018 as

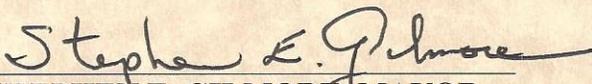
**“ARBOR DAY”**

in the City of Ashland, and urge all citizens to support efforts to care for our trees and woodlands and support our city’s community forestry program.

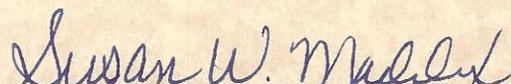
**FURTHER**, I urge all citizens to plant trees to gladden the hearts and promote the well-being of present and future generations.

**IN WITNESS WHEREOF**, I have hereunto set my hand and caused the seal of the City of Ashland, Kentucky to be affixed this 2<sup>nd</sup> day of April, 2018.



  
STEPHEN E. GILMORE, MAYOR

Attest:

  
SUSAN W. MADDIX, CITY CLERK



Division of Forestry  
Energy and Environment Cabinet  
Department of Natural Resources  
Frankfort, KY 40601



## SALES RECEIPT

Order No: 9689

Payment Method: Delayed Payment

Order Date: 11/21/2017

CR No:

Print Date: 01/31/2018

**Sold To:** AMBER BERRY  
CITY OF ASHLAND  
1700 GREENUP AVENUE  
ASHLAND, KY 44101

**Ship To:** AMBER BERRY  
CITY OF ASHLAND  
1700 GREENUP AVENUE  
ASHLAND, KY 44101

Specie	Quantity	Full Price
Cypress	100	\$55.00
Eastern Redbud	100	\$55.00
Hazelnut	300	\$165.00
Pawpaw	300	\$165.00
Sassafras	200	\$110.00
Silky Dogwood	300	\$165.00
Persimmon	300	\$165.00
Chinese Chestnut	300	\$165.00
Kentucky Coffeetree	300	\$165.00
Northern Red Oak	300	\$165.00
Willow Oak	300	\$165.00
Virginia Pine	300	\$165.00
Eastern Redbud	200	\$110.00

**Total Price** \$1,815.00  
**Tax Exempt Adjustment** (\$102.74)  
**Order Total** 3,300 \$1,712.26



[https://www.dailyindependent.com/news/free-trees-available-saturday-in-ashland/article\\_21ec552a-44bc-11e8-a6ea-fbc5afaef48.html](https://www.dailyindependent.com/news/free-trees-available-saturday-in-ashland/article_21ec552a-44bc-11e8-a6ea-fbc5afaef48.html)

## Free trees available Saturday in Ashland

Submitted Content Apr 20, 2018



Free trees available Saturday in Ashland at ACTC. Submitted photo.



ASHLAND In celebration of Earth Day and Arbor Day, Kentucky Power is giving away thousands of low-growth tree saplings to customers on Saturday.

The saplings will be available on a first-come, first-served basis while supplies last beginning at 9 a.m. in Ashland, Hazard, Pikeville and Whitesburg. There is no charge to customers for the trees. Four varieties will be available: Grey Dogwood, Silky Dogwood, Hazelnut and Wild Plum. Supplies are limited, so customers should plan to pick up their saplings early. Customers may not reserve trees or place orders in advance.

“Low-growth trees are great for landscaping around homes,” said Dusty Roll, Kentucky Power’s region forestry supervisor. “These trees typically have nice shapes and will not grow so tall that they interfere with overhead utility lines or structures. Plus, planting trees is an excellent way to improve the environment, add beauty to the landscape and improve air quality.”

In Ashland, Kentucky Power has teamed up with the City of Ashland and Ashland Community and Technical College to combine their annual tree giveaways at a central location this year. Additional varieties will be available, including some hardwoods. In addition, Kentucky Power foresters and school experts will provide education on planting the right tree in the right place to avoid interfering with overhead power lines.

“Ashland Community and Technical College is proud to be honored with a Tree Campus USA recognition for the third year in a row,” said Paul Season, director of maintenance and operations at ACTC. “Part of how we earn that recognition is by service learning projects like the tree giveaway. Other ways we meet Tree Campus requirements are maintaining a tree advisory committee, a campus tree-care plan and dedicated annual expenditures for a campus tree program. We are thrilled to be partnering with Kentucky Power on this year’s giveaway.”

The free trees are available at Ashland Community and Technical College 1400 College Drive.

**0 comments**

**Sign in**

**1 person listening**

		+ Follow	<b>Post comment as...</b>

**Newest** | Oldest

# Riverfront cleanup draws big turnout

- Glenn Puit Daily Independent
- Jun 18, 2018



Participants in Saturday's Ohio riverfront cleanup celebrate a morning well spent in downtown Ashland early Saturday. Photo by Glenn Puit.

Roy and Melissa Dillon showed up at the Ashland riverfront park early Saturday morning with Boy Scouts and Girl Scouts, all with a noble purpose in mind.

They were here to help clean up the Ohio riverfront.

"We've been out here for the last four years," Roy Dillon said after the group finished picking up trash with nearly 50 other people.

Heaped in a pile nearby were the fruits of everyone's labor - nearly a half a ton of trash picked up in an effort to continue beautification of the area that has become an important part of downtown Ashland's riverfront experience.

"This is a place for the community to give back," said Eric Patton, site manager for Fivco Area Development District. "The scouts have always been great to show up. They bring an army of people. It is a way to give back and make sure the river looks good park looks good. There are big events coming up here 4th of July weekend so this makes sure everything looks good and puts forth Ashland's best face. As you can see we probably have half a ton of trash."

Each year, thousands of volunteers from public organizations, civic groups, recreational clubs and the general public in six states bordering the river come together to collect more than 22,000 tons of trash and other debris from the banks of the Ohio River and tributaries. River Sweep encompasses the entire length of the river, from its origin in Pittsburgh, PA to its end in Cairo, IL, including over 3,000 miles of shoreline and many tributaries.

Several members of the community, leaders of the city and candidates for office participated. City Commissioners Marty Gute and Matt Perkins and City Manager Michael Graese were on hand.

"I saw it in the paper and the commission meeting, and I'm trying to be more involved with the community and the whole county," Bill Hensley said. "Working with the city I've seen how the riverfront has been, how it's improving being clean and how many people want it to be an important part of the city. I wanted to come and do my part in it."

Chuck "Moose" Williams showed up with his family and son Nick who, despite a broken leg, helped pick up trash while seated in a wheelchair.

"I come down here because we've been doing it for four years now and we've got to give back," Williams said. "We are teaching these kids to give back to the community so when they get older its something they've been taught. If we don't do it who is going to inspire them? It is important to our community."

Dillon said the 47 people who showed up is the largest turnout for Ashland in the event's history.

(606)326-2648|

# River Sweep set for Saturday

- Staff Report
- Jun 12, 2018



Ashland Cub Scout Pack 1100 spent its Saturday searching for trash at the Ashland Riverfront during the annual river sweep. Photo by Andrew Adkins | The Daily Independent  
Andrew Adkins

**ASHLAND** The annual River Sweep will take place this Saturday where locals will pitch in to cleanup the Ohio River and its tributaries.

Each year, thousands of volunteers from public organizations, civic groups, recreational clubs and the general public in six states bordering the river come together to collect more than 22,000 tons of trash and other debris from the banks of the Ohio River and tributaries. River Sweep encompasses the entire length of the river, from its origin in

Pittsburgh, PA to its end in Cairo, IL, including over 3,000 miles of shoreline and many tributaries.

Local cleanup will take place from 8:30 a.m. to noon. The following is a list of cleanup sites:

### **Boyd County**

- Ashland – River Front
- Catlettsburg - City Park

### **Greenup County**

- Russell - Riverbank along Riverside Drive
- Greenup - City Park
- Worthington - City Park

### **Lawrence County**

- Louisa – City Pool

Volunteers are not required to stay for the entire duration of the cleanup and can come and go as they please. For participating, volunteers will receive a free t-shirt.

FIVCO Economic Development Director and local site coordinator Kelly Ward said last year's event was a success.

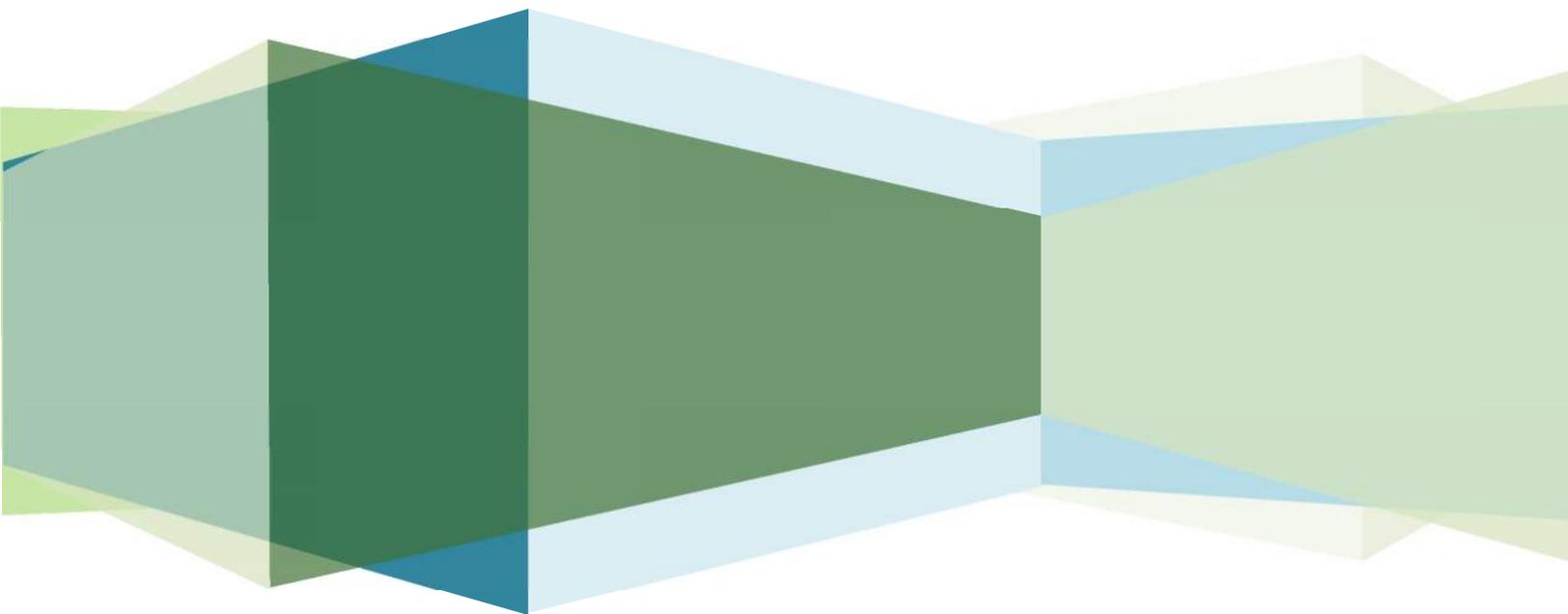
“It was one of the better turnouts I’ve had in the 16 years I have been coordinator, we had around 150 volunteers and I am hoping for another big turnout at all of our site locations again this year,” he said. “Everyone is encouraged to attend, there is no age limit for the volunteers, however younger children will need to be accompanied by an adult.”

Kelly believes those in the region take for granted how valuable the Ohio River and its surrounding tributaries are.

“People should take great pride in keeping our waterways clean, not only for our benefit for such activities as boating, fishing and kayaking, but for all of the local wildlife that depend heavily on the Ohio River for their own way of life,” he said.

# Appendix “B”

- DRAFT SWQMP





**DRAFT** ASHLAND, CATLETTSBURG  
AND BOYD COUNTY

**STORMWATER QUALITY MANAGEMENT PLAN**

*December 2018*

*Updated: 12/26/2018*

Permittee: City of Ashland  
Co-Permittees: City of Catlettsburg  
Boyd County Fiscal Court

**SWQMP Submittal By:**

**Mr. Ryan S. Eastwood, P.E.**  
reastwood@ashlandky.gov [www.ashlandky.gov](http://www.ashlandky.gov)  
Director of Engineering and Utilities  
1700 Greenup Avenue  
Suite 408  
Ashland, KY 41105  
Phone: 606/327-2008

**KDOW AI#6690**

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### Appendices

- A – MS4 Group Area/Major Roads
- B – Percent Accumulated Imperviousness
- C – Stream Support Maps
- D – SWQMP Matrix of BMPS, Activities and Milestones
- E – MS4 Outfalls

The City of Ashland, City of Catlettsburg and Boyd County are part of the larger Huntington-Ashland WV/KY/OH urbanized area as calculated by the U.S. Bureau of the Census. Being a part of this urbanized area each entity is designated a small municipal separate storm sewer system (small MS4) operator by US Environmental Protection Agency (USEPA), subject to the Clean Water Act and the NPDES Phase II storm water program requirements.

A MS4 is a conveyance, or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains that are (1) owned or operated by a state, city, town, county, district, association or other public body having jurisdiction over disposal of storm water that discharges to waters of the commonwealth, (2) is designed or used for collecting or conveying storm water, (3) is not a combined sewer and (4) is not a part of a publicly owned treatment works.

In the state of Kentucky the Kentucky Division of Water (KDOW) under the Department for Environmental Protection is the administrator of the Phase II Storm Water MS4 program.

To meet these Phase II Storm Water Program requirements, Ashland, Catlettsburg and Boyd County (fiscal court), collectively called the "MS4 Group", joined together in developing and implementing a comprehensive storm water quality management program (SWQMP). For a map of the MS4 Group area see Appendix "A".

To develop the SWQMP a review of city and county departments' programs and operations were conducted to obtain information on existing activities as they pertain to stormwater quality and the following six minimum controls which are required by USEPA:

- Public Education and Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Stormwater Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

After significant input from staff from the City of Ashland, Boyd County, and City of Catlettsburg, a SWQMP that addresses the water quality needs of the Ashland, Catlettsburg and Boyd County and the storm water permit requirements was updated by the MS4 Group. In March 2002 the SWQMP was submitted to KDOW along with a Notice of Intent for Storm Water Discharges from small MS4s. In September 2003 KDOW issued a Phase II Storm Water Permit (KPDES No. KYG200002) to Ashland (permittee) and Catlettsburg and Boyd County (co-permittees). The effective date of the 1<sup>st</sup> 5-year permit term was from January 1, 2003 through December 31, 2007.

In July 2008 the SWQMP was updated to address the anticipated requirements for the 2<sup>nd</sup> 5-year storm water permit. After public notice was provided and comments were received on the draft permit and fact sheet, the Kentucky Division of Water issued the 2<sup>nd</sup> 5-year permit that authorizes discharges of stormwater runoff from small Municipal Separate Storm Sewer Systems. KPDES Permit No. KYG20, AI No.35050, became effective on April 1, 2010 and shall expire on March 31, 2015.

After the pervious 2<sup>nd</sup> cycle permit expired a new permit was not issued at that time. The MS4 Group continued to abide by the 2<sup>nd</sup> cycle permit until the 3<sup>rd</sup> cycle permit was issued by Kentucky Division of Water. KPDES Permit No. KYG20, AI No.35050, became effective on May 1, 2018 and shall expire on April 30, 2020.

This SWQMP, dated December 2018, modifies, updates, and expands upon stormwater quality related activities for the Ashland, Catlettsburg and Boyd County urbanized area to meet stormwater quality requirements for discharges of stormwater runoff into MS4 conveyance systems for the next 5 years.

The new permit authorizes the MS4 Group to discharge stormwater runoff from small MS4s to waters of the Commonwealth in accordance with narrative effluent limitations, monitoring requirements and other conditions of the permit. The following discharges are not authorized discharges:

- Discharges of *non-stormwater* into the MS4, except where such discharges have coverage under a separate KPDES permit or where those discharges have been determined not to represent significant sources of pollution, consistent with state and federal regulations;
- Discharges of materials resulting from a spill, except emergency discharges required to prevent imminent threat to human health or to prevent severe property damage, provided reasonable and prudent measures have been taken to minimize the impact to water quality of the discharges; and
- Discharges of any pollutant into any water for which a Total Maximum Daily Load (TMDL) for a pollutant of concern has been established prior to the issuance of the KYG20 permit, which the MS4 Group did not have.

Cross-connections between sanitary sewers and storm sewer/MS4 are

prohibited and are not authorized under this permit.

The MS4 Group is authorized to discharge the following non-stormwater sources provided that the division has not determined these sources to be substantial contributors of pollutants of the MS4:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharged from potable sources
- Air conditioned condensate
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual car washing
- Natural flows from riparian habitat and wetlands
- Dechlorinated swimming pool discharges
- Street wash water
- Discharges of flows from fire fighting activities

MS4 Entities

For the MS4 Group the City of Ashland is the designated MS4 permittee with Catlettsburg and Boyd County Fiscal Court being listed as MS4 co-permittees. Each entity is responsible for implementing elements of the SWQMP that pertains to their community and designated area.

Each co-permittee is individually responsible for:

- Permit compliance for discharges from those areas of the MS4 where the permittee or co-permittee is the operator or owner;
- Ensuring that the six (6) minimum control measures are implemented for those areas of the MS4 where the permittee or co-permittee is the operator or owner; and
- Any permit conditions that are established for specific areas of the MS4 owned or operated by that co-permittee.

Each co-permittee is jointly responsible for compliance with annual reporting requirements, except that a co-permittee is individually responsible for any parts of the annual report that relate exclusively to those areas of the MS4 where it is the operator.

Ashland, Boyd County and Catlettsburg have established inter-local agreements to establish the legal responsibility for complying with the permit and carrying out SWQMP.

The Kentucky Transportation Cabinet (KTC) District #9 is not a co-permittee with the MS4 Group for the 3<sup>rd</sup> 5-year permit term. However, stormwater quality information and initiatives are being shared between the KTC and the MS4 Group. KTC has developed a separate SWQMP that encompasses all the highway districts throughout the state, and is not responsible for carrying out elements in this SWQMP.

### Location

Boyd County is located in the state of Kentucky. The county sits on 160 square miles at the northeastern edge of Kentucky on the banks of the Ohio River and Big Sandy River. The county seat is Catlettsburg, Kentucky and Ashland, Kentucky is the largest city. Boyd County is bordered by the states of West Virginia and Ohio which forms the Huntington-Ashland, WV-KY-OH, Metropolitan Area (Ashland Alliance).

Ashland, Kentucky, Huntington, West Virginia and Ironton, Ohio form a vibrant metropolitan Tri-State area of more than 300,000 people, making this area not only culturally alive, but culturally diverse.

Ashland and Catlettsburg are approximately 16 and 10 miles west of Huntington, West Virginia, respectively and approximately 118 miles east of Lexington, Kentucky, the second largest city in the Commonwealth of Kentucky.

This SWQP covers stormwater discharges into MS4 conveyance systems throughout the entire Ashland, Catlettsburg and Boyd County geographical area.

### Transportation Corridors

Interstate 64 runs east-west through the southern section of Boyd County. Highways US 60 and US 23 cross I-64 and run through both Ashland and Catlettsburg. A portion of these highways run parallel to the Ohio River.

The Ohio River provides the northern border of Boyd County and boundary between Kentucky and the states of Ohio and West Virginia.

For a map of major roads in Ashland, Catlettsburg and Boyd County see Appendix "A".

### Population, Land Uses and Employers

Boyd County encompasses 160 square miles. In 2010 the population for the City of Ashland was 21,684 and for all of Boyd County was 49,542. This represents a negligible increase in population from the US Census Bureau 2000 data which indicated a population of 49,752 for Boyd County (Ashland Alliance and US Census Bureau).

Land use for the City of Ashland is made up of rural residential, suburban residential, commercial/office, recreation, industrial, institutional and agricultural. Predominant land use for Boyd County is agricultural and woodlands. The City of Catlettsburg is made up of residential, industrial and commercial.

Artificial structures, such as pavements, rooftops, sidewalks, roads, and parking lots are covered by impervious materials such as asphalt, concrete, brick, and stone. These types of surfaces prevent rainwater from infiltrating into the ground and natural groundwater recharge. Impervious areas contribute to the runoff of pollutants in stormwater.

The impervious area for the City of Ashland ranges from 5-10% to greater than 25% in downtown Ashland. For Boyd County the impervious area ranges from 0-5% to 5-10%. For a map of the percent accumulated imperviousness see Appendix "B" (KDOW-DWB).

The top employers include King's Daughters Medical Center, Marathon Petroleum, Our lady of Bellefonte Hospital, Ashland Independent and Boyd County Schools and City and County government (Ashland Alliance).

No significant changes in population or land use are anticipated over the next 5-years.

There are twelve major watersheds, or river basins, in Kentucky. The 160 square miles that encompasses Ashland, Catlettsburg and Boyd County is part of the Big Sandy River Basin.

The Big Sandy River flows along the eastern border of the Commonwealth of Kentucky and western border of West Virginia. The river flows north and empties in the Ohio River. The major subbasins within the river basin are Big Sandy, Little Sandy and Tygarts Basin. A majority of the MS4 Group area is tributary to the Little Sandy River with smaller areas that drain to the Big Sandy River and the Ohio River directly (Big and Little Sandy River Basin Status Report, January 2002).

### Total Maximum Daily Loads (TMDLs)

Under section 303(d) of the Clean Water Act, the Commonwealth of Kentucky is required to develop lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet the water quality standards to support the designated use of the stream/lake set by the Commonwealth. The law requires priority rankings for waters on the lists and development of total maximum daily loads (TMDLs) for these waters.

A TMDL is a calculation of the maximum amount of a pollutant that a stream, river or lake can receive and still safely meet water quality standards. Examples of pollutants are sedimentation/silt, pathogens (fecal coliform and E. coli bacteria), nutrients, total dissolved solids, and physical habitat alterations. Probable sources of these impairments to streams are agriculture, habitat modification (loss of riparian habitat, channelization, site clearance, etc.), urbanization (urban runoff/storm sewer, impervious surface/parking lot runoff, combined sewer overflows, sanitary sewer overflows, etc.) and mining practices. A TMDL may refer to a written report, which includes detailed assessment information of site-specific impaired waters, watershed information, mathematical modeling and the calculated number of a pollutant load.

### Approved TMDLs

Kentucky has a total of 62 approved Total Maximum Daily Load (TMDL) reports. The TMDL reports contain 468 pollutant waterbody combinations. Per KDOW's 2016 KY 3030(d) list other TMDLs are under development with additional 223 due by 2022.

A TMDL Report (fecal coliform pollutant) was completed in 1992 for segments of the East Fork Little Sandy River in Boyd County. 1991 when water quality data was obtained, dissolved oxygen violations were observed along the East Fork Little Sandy and Shope Creek near Ashland due to discharges from numerous wastewater package plants. Since the 1992 water quality report, regional sewer line extensions have been completed to eliminate a majority of the wastewater package plants. As a result of

these improvements water quality has improved in these streams.

The *"Integrated Report to Congress on the Condition of Water Resources in Kentucky, 2016"* prepared by KDOW has requested that no TMDL designated streams in Boyd County to be "*delisted*".

### TMDLs under Development

According to the *KDOW Website* for Boyd County there are four TMDL Reports under development or TMDL Working Draft Reports. The impaired waterbodies are the following:

- Ohio River (317.2 to 319.4) – E. coli
- Ohio River (319.4 to 340.8) – E. coli [partially Boyd County]
- East Fork Little Sandy River (24.9 to 26.4) – E. coli
- Hood Creek – (0.8 to 5.3) – E. coli

For a full copy of the TMDLs currently being written and other TMDL information visit <http://water.ky.gov/waterquality/Pages/TMDLsDevelopment.aspx>.

### Impaired Waterbodies

Streams, rivers and lakes identified as impaired from one or more pollutants and do not meet the water quality standards for its designed use are put on a 303(d) list of impaired water bodies. Impaired waters are identified through assessment and monitoring programs conducted by Kentucky Division of Water personnel, volunteer networks and other local, state and federal agencies.

The 303(d) list is produced every other year for Kentucky. Every 303(d) list that is published includes a status of previously listed waters and any new waters assessed since the last report. Impaired water status categories include:

Water is impaired - no change from a prior report, or a new listing.

Impaired water with a TMDL under development.

Impaired water with an approved TMDL.

Water no longer impaired and proposed for delisting.

For the MS4 Group area (Boyd County) the following streams have been identified on the 303(d) list:

- Big Sandy River (0.0 to 27.1) – Sedimentation
- East Fork Little Sandy River (16.9 to 24.9) – Sedimentation, Nutrient, Specific Conductance
- East Fork Little Sandy River (24.9 to 26.4) – E. coli,

- East Fork Little Sandy River (27.6 to 30.9) – Sedimentation
- Ellingtons Bear Creek (0.0 to 1.5) – Temperature, Sedimentation, Nutrient
- Garner Creek (0.0 to 1.9) – Sedimentation
- Hood Creek (0.8 to 5.3) – E. coli, pH, Ammonia
- Hurricane Fork (0.0 to 2.3) – Nutrient, Sedimentation
- Ice Dam Creek (0.0 to 0.4) – Nitrogen, Sedimentation, Cause Unknown
- Ice Dam Creek (0.4 to 2.7) – Sedimentation, Nitrogen, Cause Unknown, Total Dissolved Solids
- Lockwood Creek (2.6 to 3.2) – Nutrient, Cause Unknown
- Paddle Creek (0.0 to 1.6) – Nutrient, Organic Enrichment, Sedimentation, Total Dissolved Solids,
- Savage Branch (0.0 to 1.9) – Sedimentation
- Williams Creek (0.0 to 2.85) – Cause Unknown

These 303(d) streams have impaired use from various pollutants including sedimentation/siltation, water temperature, nutrients and pathogens.

For a full copy of the draft 303(d) list and other water quality information visit <http://water.ky.gov/waterquality/Pages/303dList.aspx>.

### Un-impaired Waterbodies

For a list of the unimpaired streams in the MS4 Group area see the integrated report referenced below.

### Special Use Waters

Special use waters are rivers, streams and lakes listed in Kentucky Administrative Regulations that are worthy of additional protection. These special uses include cold water aquatic habitat, exceptional waters, reference reach waters, outstanding state resource waters, outstanding national resource waters, state wild rivers and federal wild and scenic rivers. Currently, there are no special use waters in the MS4 Group area.

A full copy of the draft “Integrated Report to Congress on the Condition of Water Resources in Kentucky, 2016” can be obtained from the KDOW at <http://water.ky.gov/waterquality/Integrated%20Reports/2016%20Integrated%20Report.pdf>.

### Drinking Water Intakes

The City of Ashland has a permitted drinking water intake on the Ohio River.

Raw water from the Ohio is pumped to the water treatment plant sedimentation basin for treatment.

#### Wastewater Treatment Plants (WWTP)

City of Ashland has a WWTP (KPDES #KY0022373) at 26<sup>th</sup> Street & River Road that discharges effluent to the Ohio River.

City of Catlettsburg has a WWTP (KPDES #KY 003546) that discharges effluent to the Big Sandy River.

Hidden Valley Trailer Park (private) has a package WWTP that discharges to Pearman Creek.

#### Maps

See Appendix "C" for stream assessment maps for support of aquatic life, primary contact recreation and fish tissue consumption.

The stream assessment maps were compiled by KDOW Drinking Water Branch (5/1/08) with GIS information from the KYDEP GIS Portal Data.

## Summary

The MS4 Group began implementation of the Phase II Storm Water Management Program in March 2002 and had many accomplishments during the two permit cycles. A few of these storm water quality related activities completed and ongoing include:

### Public Education/Involvement

- Conduct quarterly Storm Water Advisory Committee (SWAC) meetings to discuss SWMP and related storm water qualities issues
- Distribute water quality brochures in water bills
- Provide NPDES Phase II storm water pamphlets and fliers at County Fair, Catlettsburg Labor Day Parade, and various civic groups
- Participate in University of Kentucky Horticulture Extension Outreach Programs
- Participate in the FIVCO Ohio River Sweep Program
- Participate in US 23 Alliance Beautification Program - clean up trash and debris
- Participate Ashland Tree Board Program - provide trees and seedlings for plantings to promote "green"
- Participate in Charles and Betty Russell Walking Trail – Maintenance and Upkeep
- Conduct Fall and Spring County Wide Pick-up - clean up trash, household pesticides and chemicals.

Develop and update storm water quality information webpages

### Illicit Discharge Detection and Elimination

- Develop and update map of MS4 outfalls
- Pass an ordinance prohibiting illicit discharges
- Perform dry-weather screening for all known major outfalls
- Perform dye & smoke testing in areas of potential or probably illicit connections

### Construction Site Runoff Control

- Pass an ordinance to address construction site runoff
- Adopt KDOW BMP Manual
- Develop a process for having contractors/developers to obtain an Erosion Control Permit
- Establish procedures for construction site inspection and enforcement

### Post-Construction Stormwater Management in New Development and Redevelopment

- Pass an ordinance to address post-construction stormwater management
- Provide street sweeping
- Provide culvert and channel maintenance

### Pollution Prevention/Good Housekeep for Municipal Operations

- Provide Phase II training and workshops to City and County employees
- Perform a review each year of city/county operations to identify ways to prevent and reduce storm water pollution runoff from municipal activities

The MS4 Group was faced with many challenges continuing the SWQMP during the 2<sup>nd</sup> permit cycle. Primary challenges included procuring adequate funding or revenue to implement storm water quality related activities; educating the general public, contractors, developers, newly elected officials and other local departments; and insufficient staffing to issue permits, provide inspection, continue mapping conveyance systems and screening for illicit discharges and connections.

### **Stormwater Quality Management Program (SWQMP) Objective**

The effluent limit requirements in the KYG20 permit are narrative. The MS4 Group is required to develop, implement, enforce and update, as needed, a SWQMP which shall include controls intended to reduce the discharge of pollutants from its MS4 conveyances. The SWQMP includes controls that shall consist of a combination of best management practices (BMPs), control techniques and systems, design and engineering methods, public participation and education, and other appropriate provisions designed to limit the discharge of pollutants from the MS4 conveyances which are environmentally beneficial and technically and economically feasible.

The requirements in the KYG20 permit provide the control standard for limiting the discharge of pollutants to the Maximum Extent Practicable (MEP).

### **Narrative**

The SWQMP is an integral part of the Commonwealth's overall watershed management program. Implementation of the SWQMP to effectively reduce pollutants (including floatables) in discharges from municipal separate storm sewers must include program elements that address public education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post-construction stormwater management for new development and redevelopment, and good housekeeping and pollution prevention in municipal operations. The program shall be formalized in the SWQMP. This written plan details the procedures in which the MS4 Group will implement the required six minimum control measures and is a dynamic document that shall be modified to meet the needs of the MS4 Group.

The SWQMP for the 3<sup>rd</sup> permit cycle will focus on program metrics for storm water quality activities and programs. The metrics will include measurable goals and quantifiable products. To gauge permit compliance and program effectiveness the SWQMP identifies specific measurable goals for activities and programs in each of the six minimum control measures (MCMs). Implementation plans are provided will be developed for each activity and program.

The SWQMP will include the following MCM requirements and key activities:

***MCM 1/Public Education and Outreach***

1. The MS4 Group will maintain a public education program and conduct public outreach activities in the community that focus on impacts from stormwater discharges to water bodies and the steps that the public can take to reduce pollutants in stormwater runoff. The public education program is designed to achieve measurable improvements in the target audience's understanding of stormwater pollution and actions of prevention. The public education and outreach activities are the sole responsibility of Ashland, Catlettsburg and Boyd County, but the MS4 Group will take advantage of the public outreach program developed by KYTC.
2. The MS4 Group will prioritize public education and outreach efforts to focus on pollutants impairing or threatening the local waterways, such as sedimentation, nutrients, and pathogens.
3. The MS4 Group will utilize as guidance the Stormwater Education Toolkit developed by the Kentucky Transportation Cabinet with support from the Division of Water, EPA's Nonpoint Source Toolbox, found at <http://www.epa.gov/nps/toolbox/>, or substitute alternate outreach materials that provide an effective equivalent.
4. The MS4 Group will target education and outreach efforts toward contractors/developers, students, industry, policy-makers, local citizens, and other stakeholders.
5. The MS4 Group will measure the understanding and adoption of the targeted behaviors among the targeted audiences. The resulting measurements will be used to direct education and outreach resources more effectively, as well as to evaluate changes in adoption of water-quality benefiting behaviors.
6. The MS4 Group will measure the targeted audience understanding of their impacts on water quality and the adoption of the behavior changes resulting from public education and outreach efforts. The resulting measurements will be used to direct education and outreach resources more effectively.
7. All activities relative to this program element will be tracked as necessary to document compliance with permit requirements and prepare the annual system-wide report.
8. The MS4 Group will refer to DOW's Phase II SWQMP Preparation Guidance for specific BMPs that may be used to comply with this Minimum Control Measure.

***MCM 2/Involvement and Participation***

1. The MS4 Group will implement a public involvement/participation program that includes a local stormwater advisory committee, public notices and public hearings facilitating education volunteers, assisting with program coordination and monitoring efforts. The public notice will be provided of program

participation opportunities.

2. The MS4 Group will facilitate opportunities for citizen volunteers who want to participate in the MS4 program (e.g., participating on a Stormwater Advisory Council, volunteer stream monitoring programs, storm-drain marking, riparian planting, stream clean-up events or an effective equivalent). The MS4 Group will advertise the public involvement opportunities identified in the SWQMP by inserts in the water bill, websites, county fair handouts, permits, and social media.
3. The MS4 Group will track activities relative to this program element as necessary to document compliance with permit requirements and prepare the annual system-wide report.
4. The MS4 Group will refer to DOW's Phase II SWQMP Preparation Guidance for specific BMPs that may be used to comply with this Minimum Control Measure.

The following key activities for Public Education/Involvement will be performed:

- Re-establish SWAC and recruit new members
- Provide information on recycling program
- Utilize stormwater education toolkit for public outreach activities in local schools (KTC initiative)
- Partner with University of Kentucky Horticulture Extension Outreach Program
- Household hazardous waste clean-up (Fall and Spring)
- Participate in Ohio River Sweep
- Engage Build Ashland to participate and promote in stormwater outreach activities

### ***MCM 3/Illicit Discharge Detection and Elimination***

1. The MS4 Group will continue implementation and enforcement of a program to prohibit, detect, and address illicit discharges, including illegal dumping to the MS4 system, per applicable state and federal requirements.
2. The MS4 Group will continue to maintain and update a storm-severe system map showing all the known major outfalls. The MS4 Group will develop a comprehensive storm sewer system map including the MS4 Groups small MS4 systems (owned and/or operated by the permittees), including catch basins, pipes, ditches, flood control facilities (retention/detention ponds), post-construction water quality BMPs, and private post-construction water quality BMPs which have been approved by the MS4 Group.
3. The MS4 Group will update and continue implementing a written plan to address illicit discharges including illegal dumping. The Illicit Discharge Plan shall include the following:

- a. Procedures for locating priority areas likely to have illicit discharges will be developed.
  - b. Field assessment will be performed, including visual inspection of priority areas identified above during dry weather and for the purposes of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges.
  - c. A mechanism and protocols are in place that provide for the public reporting of spills and other discharges.
  - d. Procedures have been developed to provide for the investigation of any complaints, reports, or monitoring information that indicates a potential illicit discharge, spill, or illegal dumping. The MS4 Group will investigate problems and violations determined to be emergencies or otherwise judged urgent or severe. Where water quality impairments are deemed severe or urgent, the MS4 Group will promptly refer the incidents to the Department for Environmental Protection's Environmental Emergency 24-hour hotline at (502) 564-2380 or (800) 928-2380.
  - e. Timeframes for the investigation and removal of illicit discharges have been developed and are outlined in the illicit discharge detection and elimination plan.
  - f. Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, collecting and analyzing water samples, and other detailed inspection procedures have been developed.
  - g. Procedures for removing the source of the discharge; including notification of appropriate authorities, notification of property owners; technical assistance for eliminating the discharge; follow-up inspections; and enforcement if the discharge is not eliminated have been developed.
4. The MS4 Group has mechanisms and protocols in place that provide for public reporting of spills of illicit discharges into the MS4.
  5. The MS4 Group will continue to provide training and refresher courses for staff on the identification and reporting of illicit discharges into the MS4.
  6. If, in the course of illicit discharge detection, it is demonstrated that a sanitary sewer line failure or defect is a source to the MS4, the Kentucky Division of Water's Regional Office will be contacted.
  7. The MS4 Group will track activities relative to this program element as necessary to document compliance with permit requirements and prepare the annual system-wide report.
  8. The MS4 Group will refer to DOW's Phase II SWQMP Preparation Guidance for specific BMPs that may be used to comply with this Minimum Control Measure.

The following key activities will be performed:

- Update major outfall mapping to include 12" diameter or equivalent outfalls for lands zoned for industrial activity
- Dry-weather screening of all known major outfalls over the 5-year permit cycle
- Develop a comprehensive storm sewer system map

#### ***MCM 4/Construction Site Runoff Controls***

1. The MS4 Group has developed an erosion control ordinance and subsequent program, and will continue to expand on this program that requires construction site operators to implement appropriate erosion and sediment control best management practices (BMPs) that, at a minimum, shall be as protective as Kentucky's General Permit for Stormwater Construction sites (KYR100000).
2. This program requires construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.
3. The erosion control ordinance requires a copy of a notice of intent for coverage under a stormwater construction general permit, an application for a stormwater construction individual permit, or the BMP plan of a KPDES permit for those sites one acre and greater.
4. The MS4 Group and representative thereof, have the authority to review site plans for compliance with the program.
5. The MS4 Group will carry out site inspections and enforcement of control measures. Factors such as the nature of construction activity, topography, and the characteristics of soils and receiving water quality will determine the frequency of inspection.
6. A permitting process has been developed by Ashland and Boyd County for plan reviews to affirm compliance with the erosion control ordinances, inspection, and enforcement capability for all site construction projects subject to this program.
7. Procedures have been developed for periodic inspections of all known permitted construction sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforcement will be conducted as appropriate based on the inspection.
8. All projects and sites will be inspected. Results of inspections, enforcement procedures taken, if any, will be tracked. A summary of inspection and enforcement activities that have been conducted will be included in the annual report.
9. Training will continue on the construction site stormwater runoff control

program for MS4 Group staff in the fundamentals of erosion prevention and sediment control and in how to review erosion and sediment control plans or Stormwater Pollution Prevention Plans.

10. Education and training measures will be provided for developers, site contractors and construction-site operators.
11. The MS4 Group will track activities relative to this program element as necessary to document compliance with permit requirements and prepare the annual system-wide report.
12. The MS4 Group will refer to DOW's Phase II SWQMP Preparation Guidance for specific BMPs that may be used to comply with this Minimum Control Measures.

The following key activities will be performed:

- Update checklist and forms for EPSC plan reviews and approvals
- Update inspection forms and checklist for staff and developers and contractors
- Provide education and training materials to developers, site contractors, and construction-site operators

#### ***MCM 5/Post-Construction Stormwater Management in New Development and Redevelopment***

1. Post-Construction Stormwater Management refers to the activities that take place after construction occurs, and includes structural and non-structural controls to obtain permanent stormwater management over the life of the property's use. Structural stormwater controls include, but are not limited to, grass swales, filter strips, infiltration basins, detention ponds, stormwater wetlands, natural filtration areas, sand filters and rain gardens. Non-structural BMPs incorporate site planning and design techniques including, but not limited to, open spaces, vegetated conveyances and buffers, natural infiltration and low impact development. Post-construction BMPs selected for each project will be appropriate for MS4 Group area. These BMPs will be selected to minimize water quality impacts, and attempt to maintain pre-development runoff conditions. Each new development and redevelopment will be evaluated to have a stormwater control component.
2. A post construction ordinance has been implemented that addresses stormwater runoff from new development and redevelopment projects that disturb at least one acre, and projects less than one acre that are part of a larger common plan of development or sale, located within the MS4. The MS4 Group will review and update, if necessary local requirements for post-construction controls for all new and redevelopment projects. The control requirements does include an on-site stormwater runoff quality treatment standard.

3. The MS4 Group will continue to implement project review, approval and enforcement procedures for new development and redevelopment projects that disturb greater than one acre, and projects less than one are that are part of a larger common plan of development or sale. The MS4 Group has will develop and implement written procedures for the site-plan review and approval process and a required e-approval process when changes to stormwater management measures are required. The MS4 Group will develop and implement written procedures for a post-construction process to demonstrate and document that post-construction stormwater have been installed per design specifications, which includes enforceable procedures for bringing noncompliant projects into compliance.
4. The MS4 Group post-construction storm water management ordinance requires BMPs owners of all new development or redevelopment to establish and enter into a long-term maintenance agreement.
5. The MS4 Group will verify all stormwater management practices are operating correctly and are properly maintained, the MS4 will established and implement written procedures for inspections of a representative number of installed BMPs annually, with the goal of completing an inspection of all BMPs within the MS4 during the permit cycle.
6. The MS4 Group will create a program to notify the BMP owner or operator of deficiencies during a maintenance inspection. The MS4 Group will conduct subsequent inspection to ensure completion of required repairs. If repairs are not made, the MS4 Group will enforce its corrective actions as outlined by the post-construction stormwater management ordinance.
7. A summary of management practice maintenance inspections conducted by the MS4 Group, including a summary of the number requiring maintenance or repair, and the number of enforcement actions taken, will be tracked and provided in the annual system-wide report.
8. The MS4 Group will track activities relative to this program element as necessary to document compliance with permit requirements and prepare the annual system-wide report.
9. The MS4 Group will refer to DOW's Phase II SWQMP Preparation Guidance for specific BMPs that may be used to comply with this Minimum Control Measures.

The following key activities will be performed:

- Develop long term maintenance agreements with property owners and operators ensure long term water quality BMPs for new development and re-development remain operational and effective
- Update site design manual that addresses water quantity and quality
- Inspect a representative number of post-construction BMPs annually with all inspected once during the 5-year permit cycle

***MCM 6/Pollution Prevention/Good Housekeeping for Municipal Operations***

1. The MS4 Group will develop and implement a written Operation and Maintenance (O & M) plan that includes a training component with the goal of preventing or reducing pollutant runoff from municipal operations.
2. The O & M plan will include employee training to prevent and reduce stormwater pollution resulting from activities such as parks and open space maintenance, fleet and building maintenance, new construction and land disturbances, stormwater system maintenance, and green infrastructure maintenance. MS4 Group will utilize training materials that are available from the EPA, the Kentucky Division of Water, and other organizations
3. The O & M plan will maintain an inventory of municipal facilities, maintenance activities, maintenance schedules, and ongoing written inspection procedures for structural and non-structural BMPs. These BMPs shall be designed to reduce floatables and other pollutants discharged from the separate storm sewers; provide controls for reducing the discharge of pollutants from municipally-owned and operated streets, roads, highways, municipal parking lots, maintenance and storage yards, and fleet and maintenance shops with outdoor storage areas. BMPs are needed to control runoff from salt/sand storage locations and snow disposal areas operated by the permittee(s), as well as waste transfer stations. The O & M plan will include procedures for properly disposing of waste (such as dredge spoil, accumulated sediments, floatables, and other debris) removed from the separate storm sewers and areas listed above.
4. The MS4 Group will track activities relative to this program element as necessary to document compliance with permit requirements and prepare the annual system-wide report.
5. The MS4 Group will refer to DOW's Phase II SWQMP Preparation Guidance for specific BMPs that may be used to comply with this Minimum Control Measures.

The following key activities will be performed:

- Develop and implement O & M plan for preventing or reducing pollutant runoff from municipal operations
- Continue employee training

**Reporting and Records Retention**

Summary reports demonstrating compliance status, program effectiveness, planned activities and program changes of the SWQMP will be submitted to KDOW annually via Phase II Stormwater MS4 General Permit Annual Compliance Report.

Records of all reports and SWQMP activities will be made available to the public and KDOW for a period of at least 3 years. Compliance reports are available on MS4

Group webpages.

Detailed activity descriptions, measurable goals/quantifiable products, targets and implementation timeframe to meet the requirements for each MCM are presented in each individual section that follows.

The objective of this measure is to inform the general public, residents, city and county staff, and construction site personnel within the MS4 area of the impacts that polluted storm water runoff have on water quality and ways they can minimize or reduce their impact on storm water quality.

The MS4 Group continues to provide the following activities:

- Distribute water quality brochures in water bills
- Provide NPDES Phase II storm water pamphlets and fliers at County Fair, Catlettsburg Labor Day Parade, and various civic groups
- Updates to storm water quality information webpages

This permit cycle the following activities and measurable goals have been identified:

- Re-establish Storm Water Advisory Committee (SWAC) and recruit new members
- Conduct biannual SWAC meetings to discuss SWQMP and related storm water issues
- Place four(4) waterway identification signs along local creeks (East Fork Little Sandy River, Williams Creek, Shoats Creek, White Creek, East Fork of Little Hood, Keys Creek, Bruebaker Creek and Long Branch)
- Present the SWQMP to one club per year with a target of 25 people per group; Present to the 4-H Club, Boy Scouts, Girl Scouts, Lyons Club, Build Ashland and other civic clubs
- Utilize the stormwater education toolkit for public outreach efforts

For list of BMPs, activity descriptions, measurable goals/quantifiable products, targets, responsible party and year of implementation for MCM 1 see Appendix "D".

The objective of this measure is to engage the public to play an active role in both the development and implementation of the program. The initial SWQMP was developed with input from the SWAC, which is made of up members of the community and city and county staff.

The MS4 Group continues to provide the following activities:

- Assist with FIVCO/ORSANCO Ohio Rive Sweep Program
- Household Hazardous Waste Clean-up
- Fall and Spring Clean-up
- US 23 Alliance Beautification Program
- Ashland Tree Board Program
- Participate in University of Kentucky Horticulture Extension Outreach Programs

Update storm water quality information webpages

This permit cycle the following activities and measurable goals have been identified:

- Re-establish Storm Water Advisory Committee (SWAC) and recruit new members
- Engage Build Ashland organization in stormwater related activities
- Conduct biannual SWAC meetings to discuss SWQMP and related storm water issues

For this permit cycle the MS4 Group will continue to enhance and build upon public involvement and participation initiatives and plans to utilize information provided in the stormwater education toolkit.

For list of BMPs, activity descriptions, measurable goals/quantifiable products, targets, responsible party and year of implementation for MCM 2 see Appendix "D".

The objective of this measure is to identify, map and become aware of the MS4 storm water conveyance system. This awareness will allow the MS4 operator to determine the types and sources of illicit discharges entering the MS4 conveyance system and establish the means to eliminate these illegal discharges.

In the MS4 Group area there are fourteen (14) segments of streams identified on the 303(d) list of impaired streams. These streams are: Big Sandy, East Fork Little Sandy River, Ellingtons Bear Creek, Garner Creek, Hood Creek, Hurricane Fork, Ice Dam Creek, Lockwood Creek, Paddle Creek, Savage Branch and Williams Creek.. These 303(d) streams have listed various impairments including sedimentation/siltation, water temperature, nutrients and pathogens.

The MS4 Group will focus and prioritize the mapping, visual screening and illegal discharge detection and elimination along these stream segments.

The MS4 Group plans to implement and continue to provide the following activities:

- Enforce the illegal discharge ordinance
- 
- Update major outfall MS4 mapping including 12" diameter discharges (or equivalent) in lands zoned for industrial activity
- Develop a comprehensive storm sewer system map including the MS4 Groups small MS4 systems
- Provide comment box on website for public reporting of illegal discharges and illegal dumping
- Continue dye and smoke testing and CCTV inspection of sanitary sewer systems
- Conduct dry-weather screening of known major outfalls in permit cycle

For this permit cycle the MS4 Group will continue dry-weather screening along streams and known major MS4 outfalls to detect and eliminate illegal discharges and connections.

For list of BMPs, activity descriptions, measurable goals/quantifiable products, targets, responsible party and year of implementation for MCM 3 see Appendix "D".

The objective of this measure is to reduce the impact of construction site runoff into MS4 conveyance system and waters of the Commonwealth by using BMPs (structural and non-structural) control erosion and sediment runoff. Sediment remains the primary cause of water quality impairments in Kentucky. Sources of sedimentation include agriculture, urban runoff, construction and forestry. Sediment runoff rates are much greater than agricultural and forest lands.

The MS4 Group continues to implement and enforce the ordinance to protect the each community from storm water pollution runoff during construction and land disturbance activities. The ordinance has four levels of control measure requirements that pertain to specific land disturbance activity. Each community has a permit process in-place for residents, businesses and developers to follow prior to beginning any land disturbance activity. This on-going program will help reduce and prevent sediment runoff and the negative impact on streams.

For list of BMPs, activity descriptions, measurable goals/quantifiable products, targets, responsible party and year of implementation for MCM 4 see Appendix "D".

For a map of MS4 outfalls identified in the 1<sup>st</sup> permit cycle see Appendix "E".

## MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

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Post-construction stormwater management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to impact waterbodies and streams.

The MS4 Group continues to implement and enforce the ordinance to protect the each community from post-construction storm water discharges. Each community has a project review process in place for business and developers to follow. This on-going program will help to improve post-construction controls for both storm water quantity and quality.

The MS4 Group plans to implement and continue to provide the following activities:

- Develop and implement long term maintenance agreements
- Update Stormwater Quality BMP Manual
- Inspect a representative number of post-construction BMPs annually

For list of BMPs, activity descriptions, measurable goals/quantifiable products, targets, responsible party and year of implementation for MCM 5 see Appendix "D".

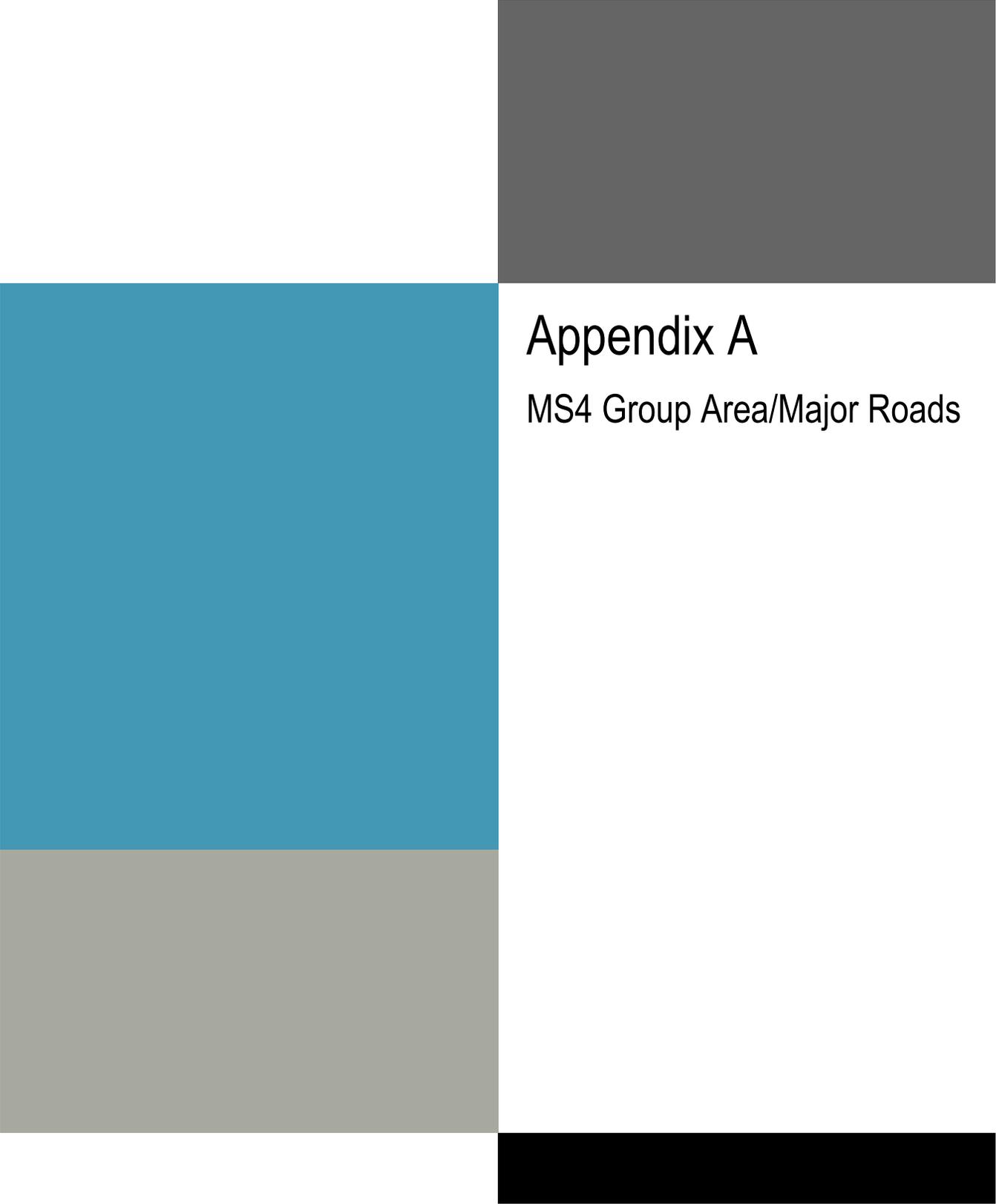
The intent of this control measure is to ensure that existing municipal or county operations are performed in ways that will minimize contamination of stormwater discharges.

The MS4 Group continues to implement a program and standard operating procedures at fleet garages to control the disposal of used fluids and preventing them from entering the storm sewer system.

The MS4 Group continues to train employees on the Phase II stormwater management program through workshops and KDOW seminars.

For the next permit cycle the MS4 Group will develop a written Operation and Maintenance plan with the goal of preventing or reducing pollutant runoff from municipal operations.

For list of BMPs, activity descriptions, measurable goals/quantifiable products, targets, responsible party and year of implementation for MCM 6 see Appendix "D".

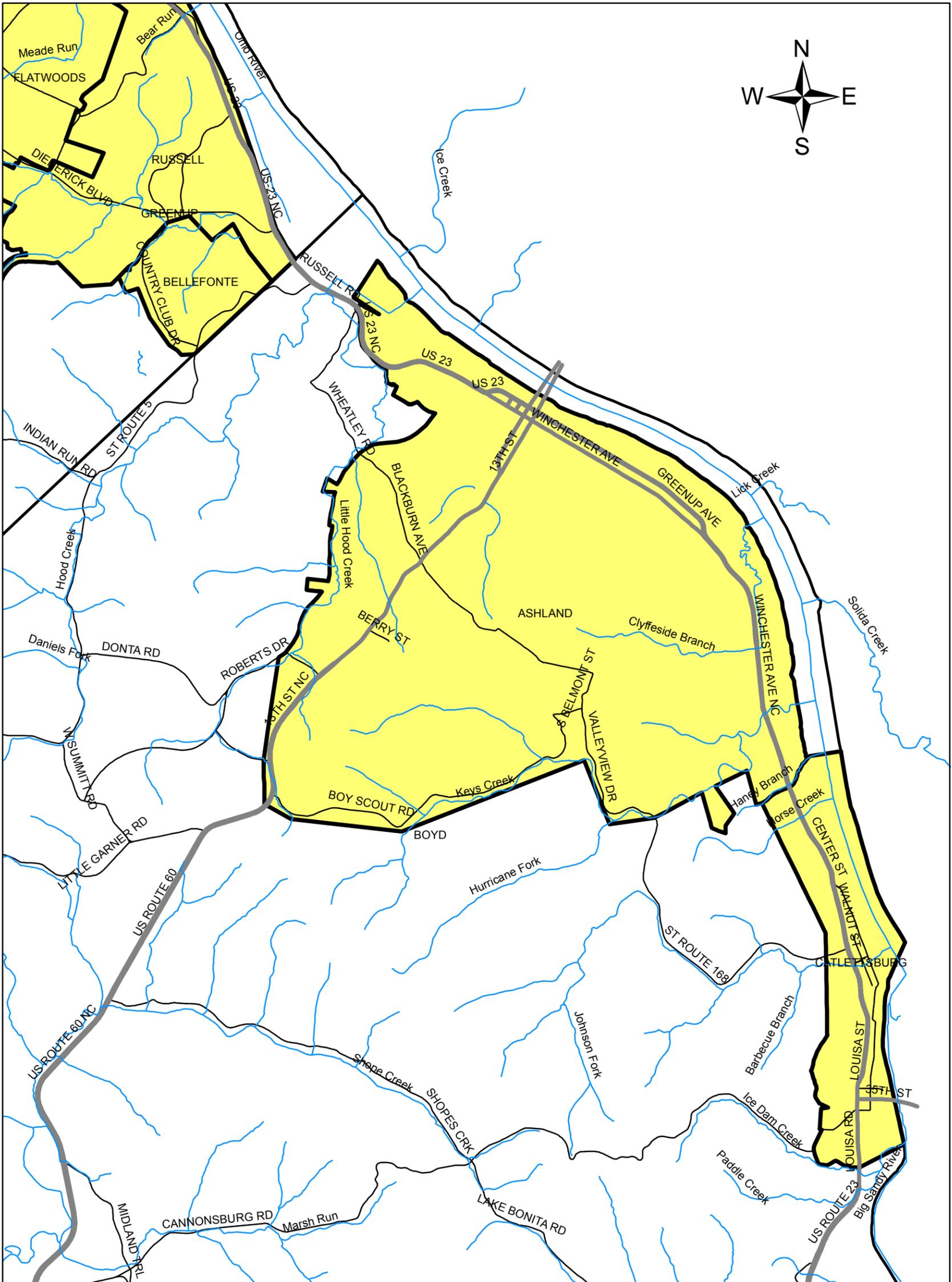


# Appendix A

MS4 Group Area/Major Roads



# Ashland and Catlettsburg, KY

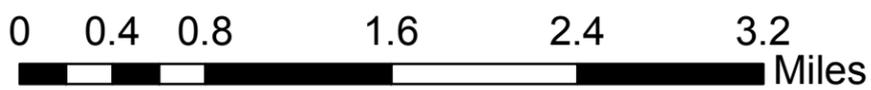


## Major Roads

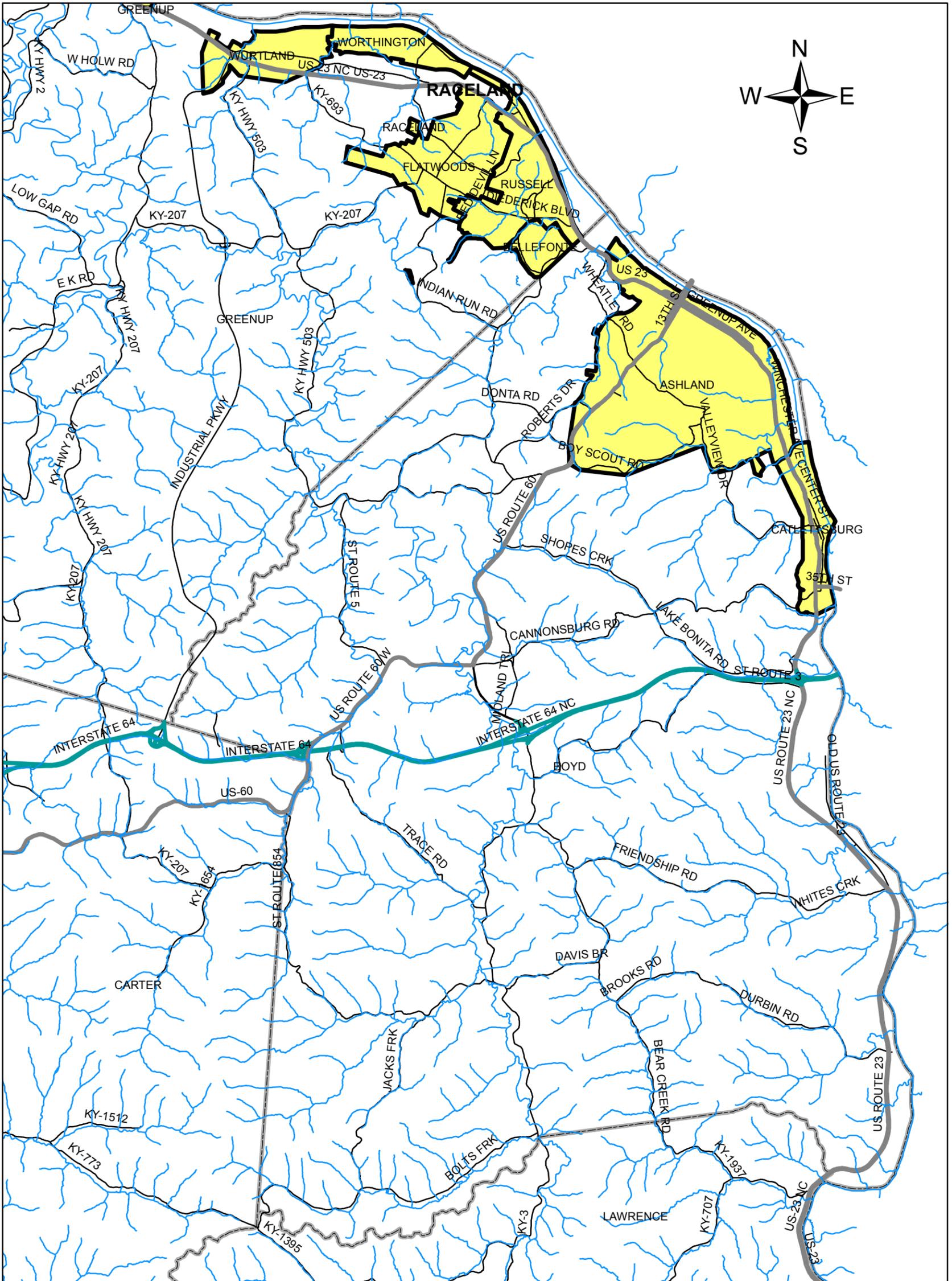
- Interstate
- Parkway
- US Road
- State Roads

— Streams 24K NHD

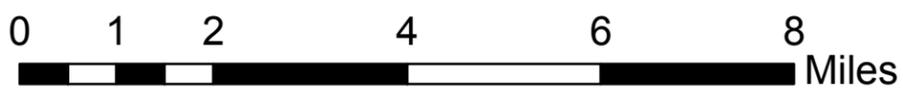
- County Boundaries
- County Boundaries

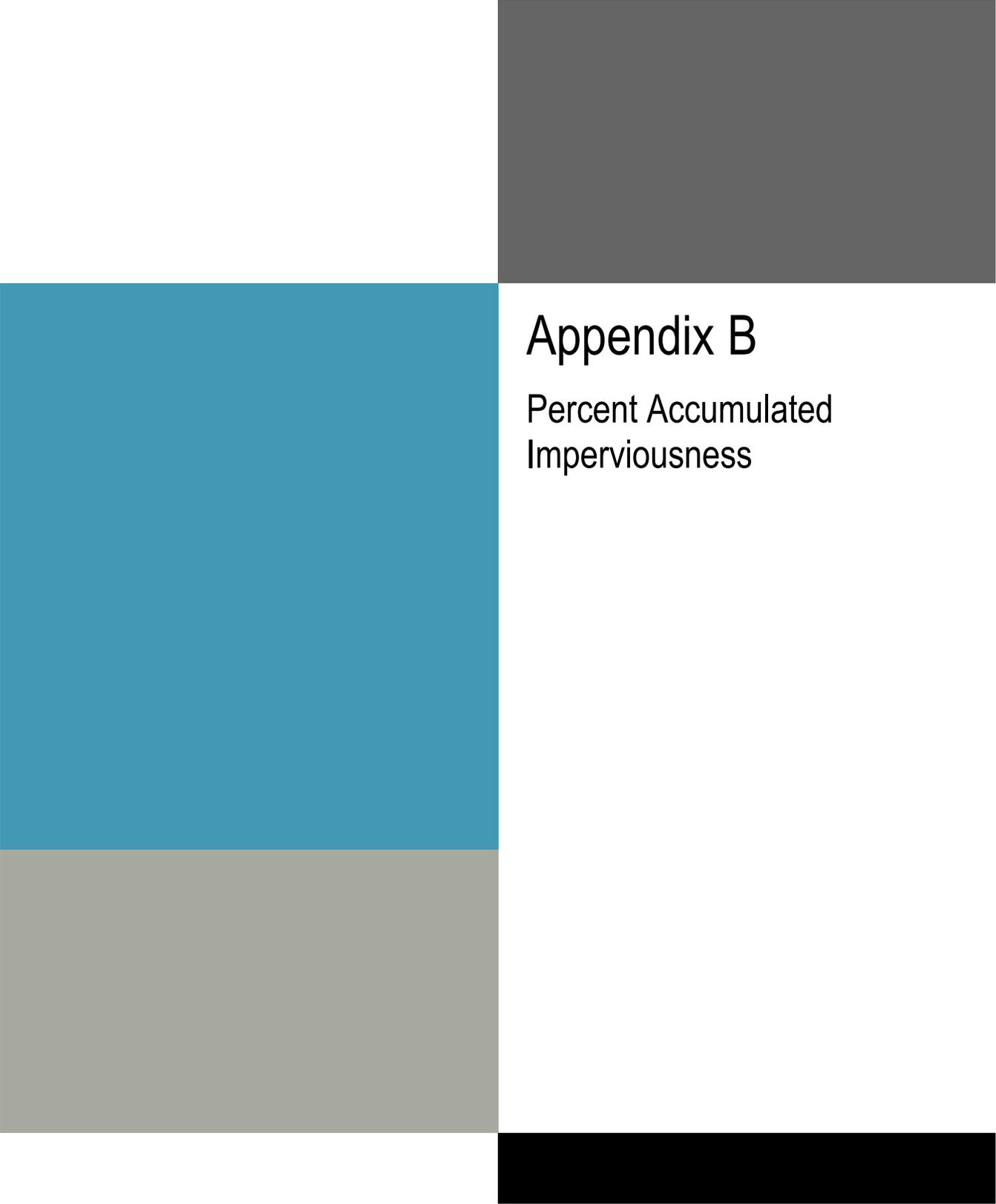


# Boyd County, KY



- |                    |                      |
|--------------------|----------------------|
| <b>Major Roads</b> | Streams 24K NHD      |
| Interstate         | Corporate Boundaries |
| Parkway            | County Boundaries    |
| US Road            |                      |
| State Roads        |                      |



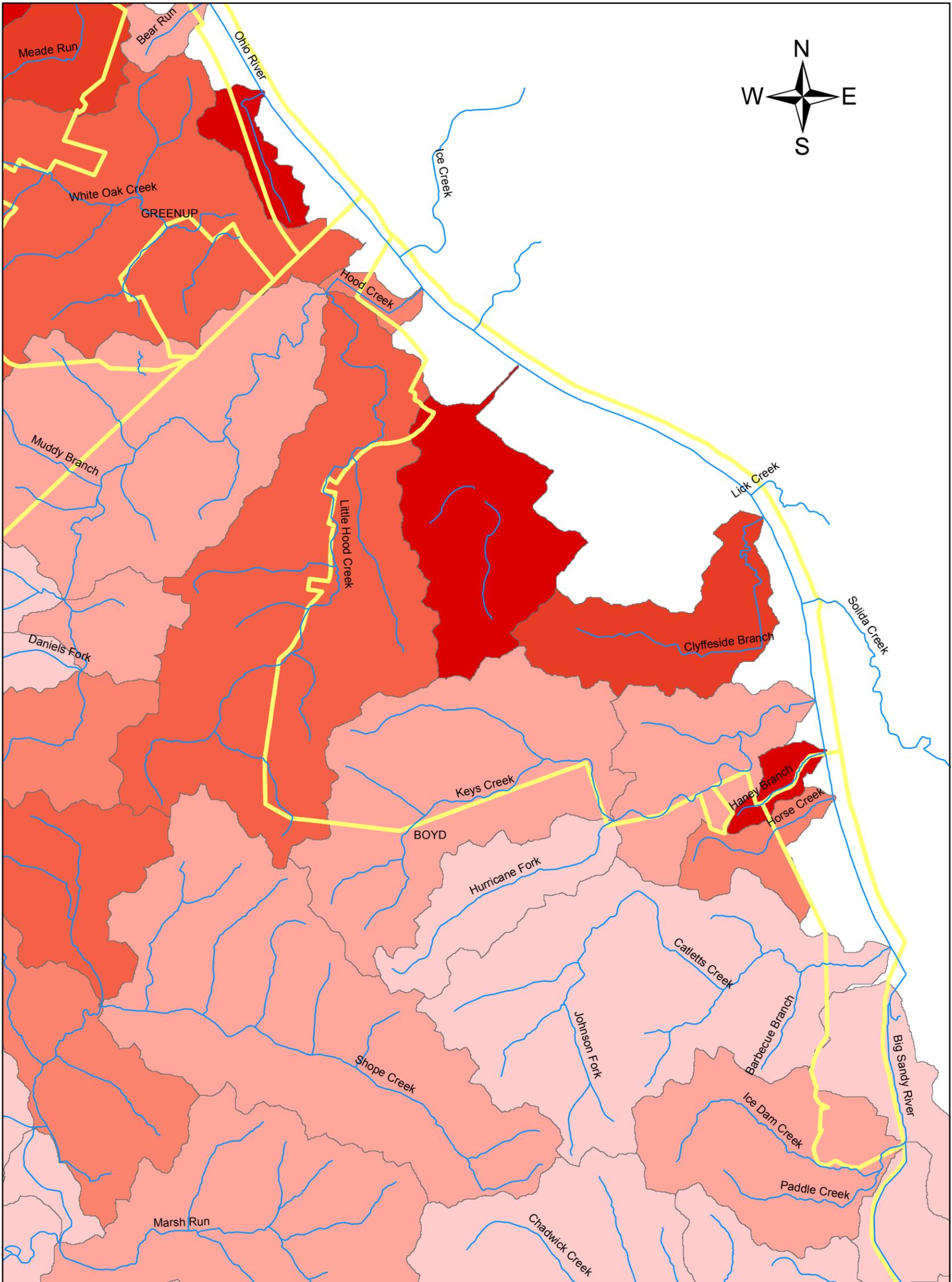


# Appendix B

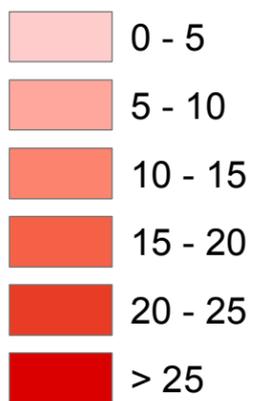
Percent Accumulated  
Imperviousness



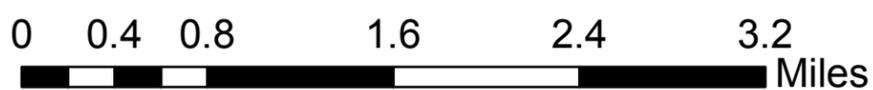
# Ashland and Catlettsburg, KY Percent Accumulated Imperviousness



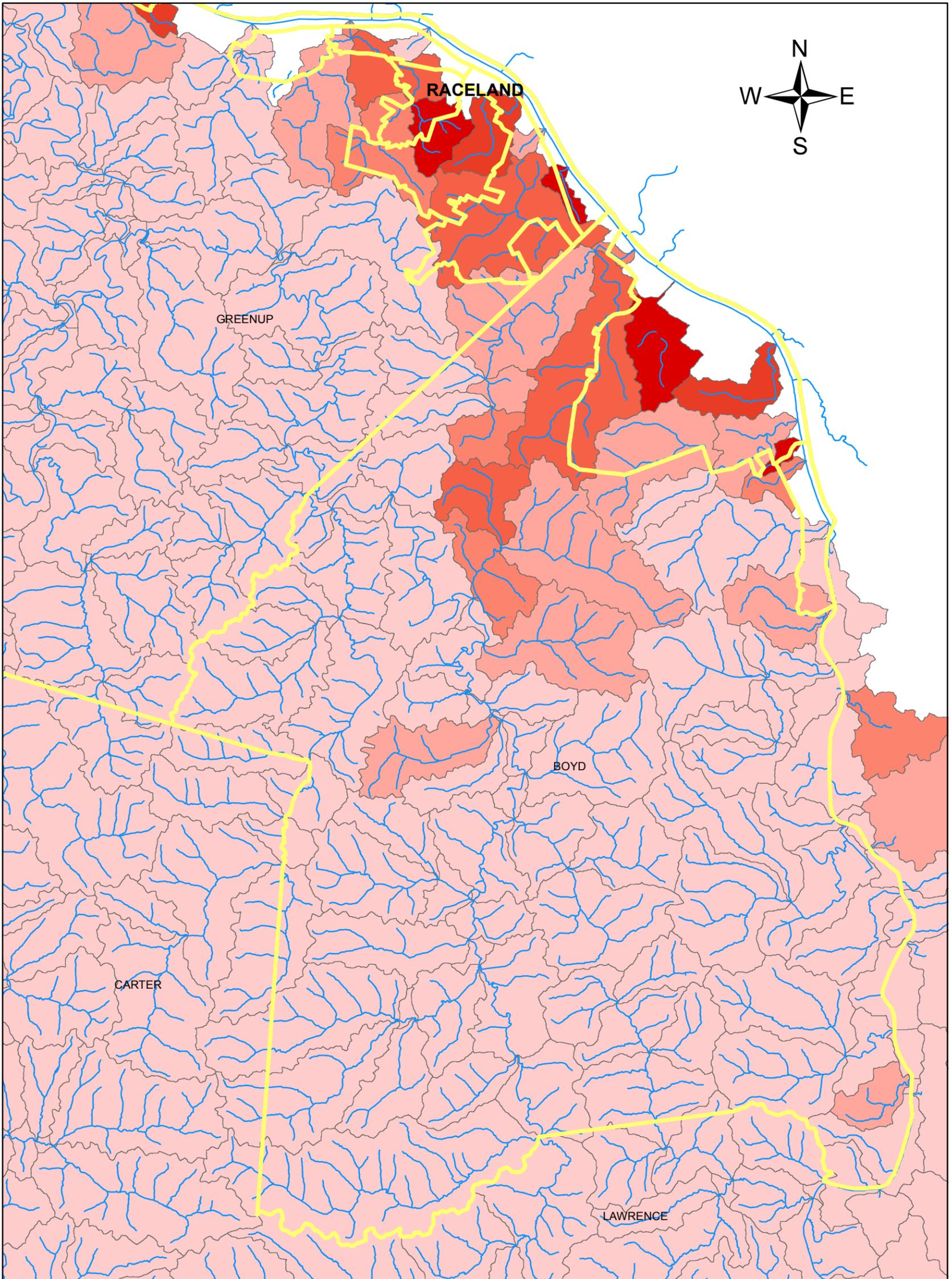
## Stream Reach Drainage Polygons (% ACC IMP)



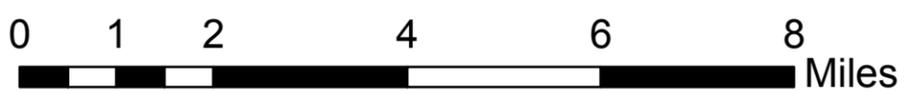
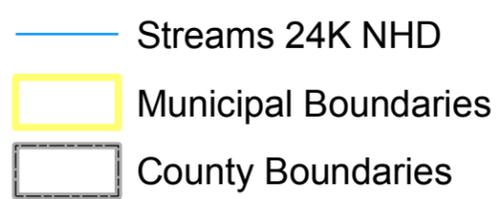
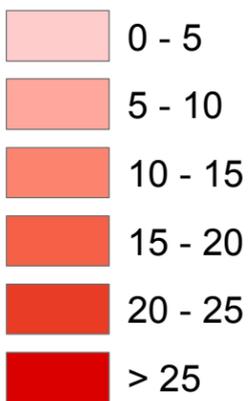
-  Streams 24K NHD
-  Municipal Boundaries
-  County Boundaries

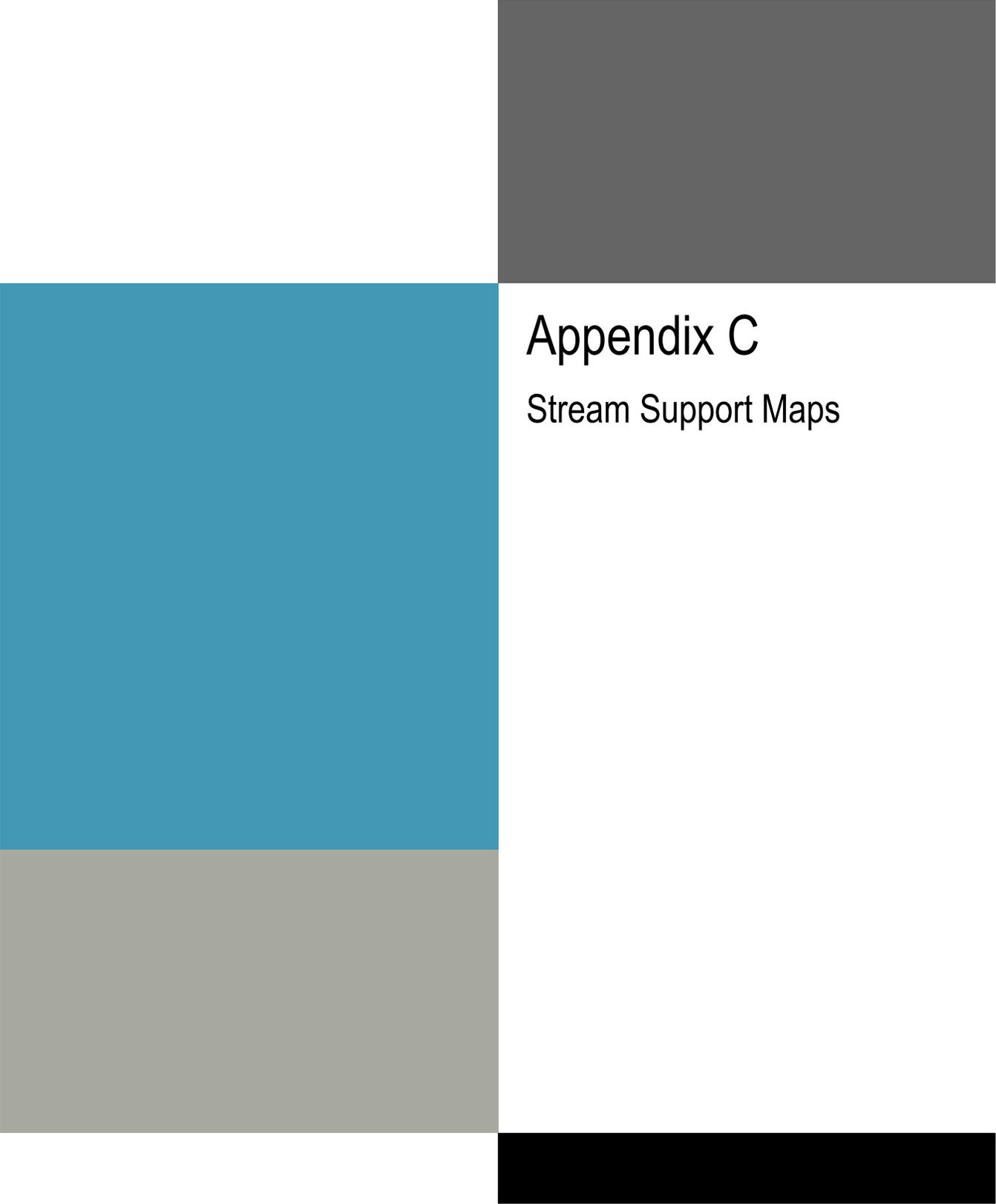


# Boyd County Percent Accumulated Imperviousness



## Stream Reach Drainage Polygons (% ACC IMP)



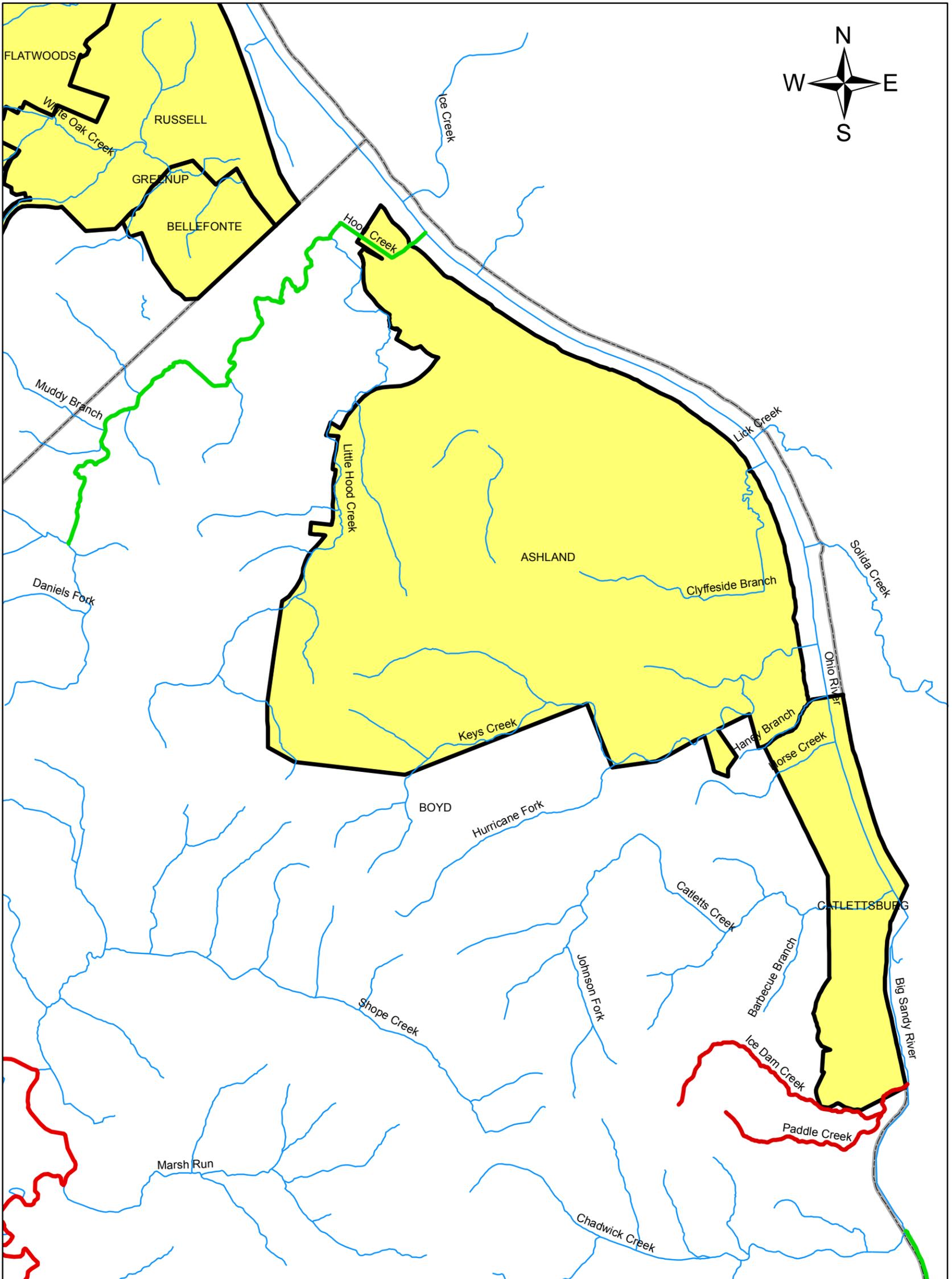


# Appendix C

## Stream Support Maps



# Ashland & Catlettsburg Aquatic Life Support



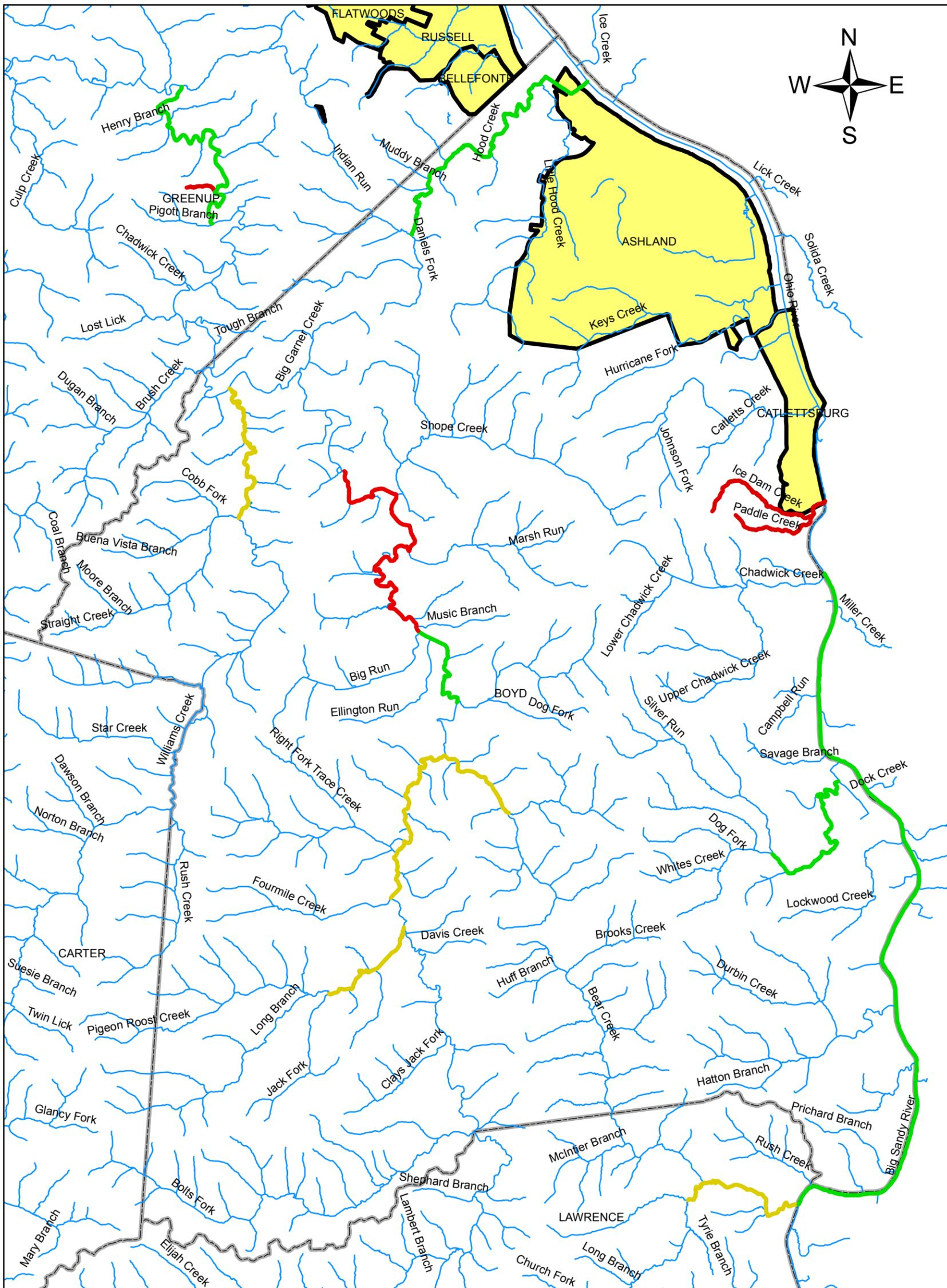
## DOW 305b 1998-2004 Aquatic Life

- Fully
- Not supporting
- Partial
- Threatened

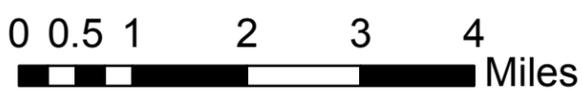
- Streams (unassessed)
- Corporate Boundaries
- County Boundaries

0 0.25 0.5 1 1.5 2 Miles

# Boyd County, KY Aquatic Life Support

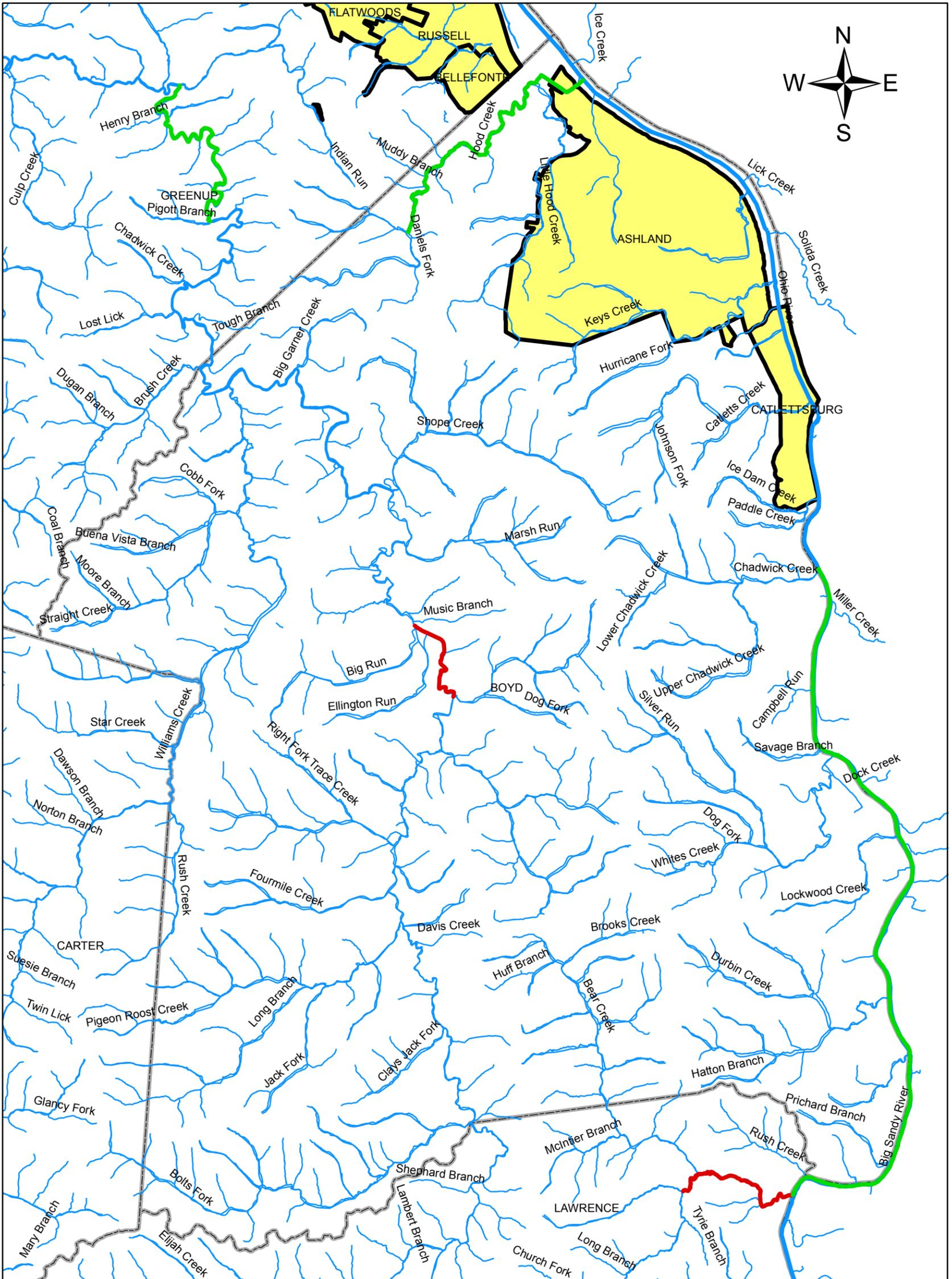


- DOW 305b 1998-2004 Aquatic Life**
- Fully
  - Not supporting
  - Partial
  - Threatened
  - Streams (unassessed)
  - Corporate Boundaries
  - County Boundaries

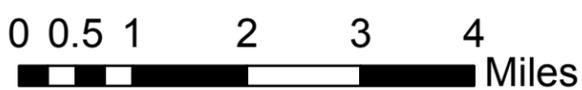


# Boyd County, KY

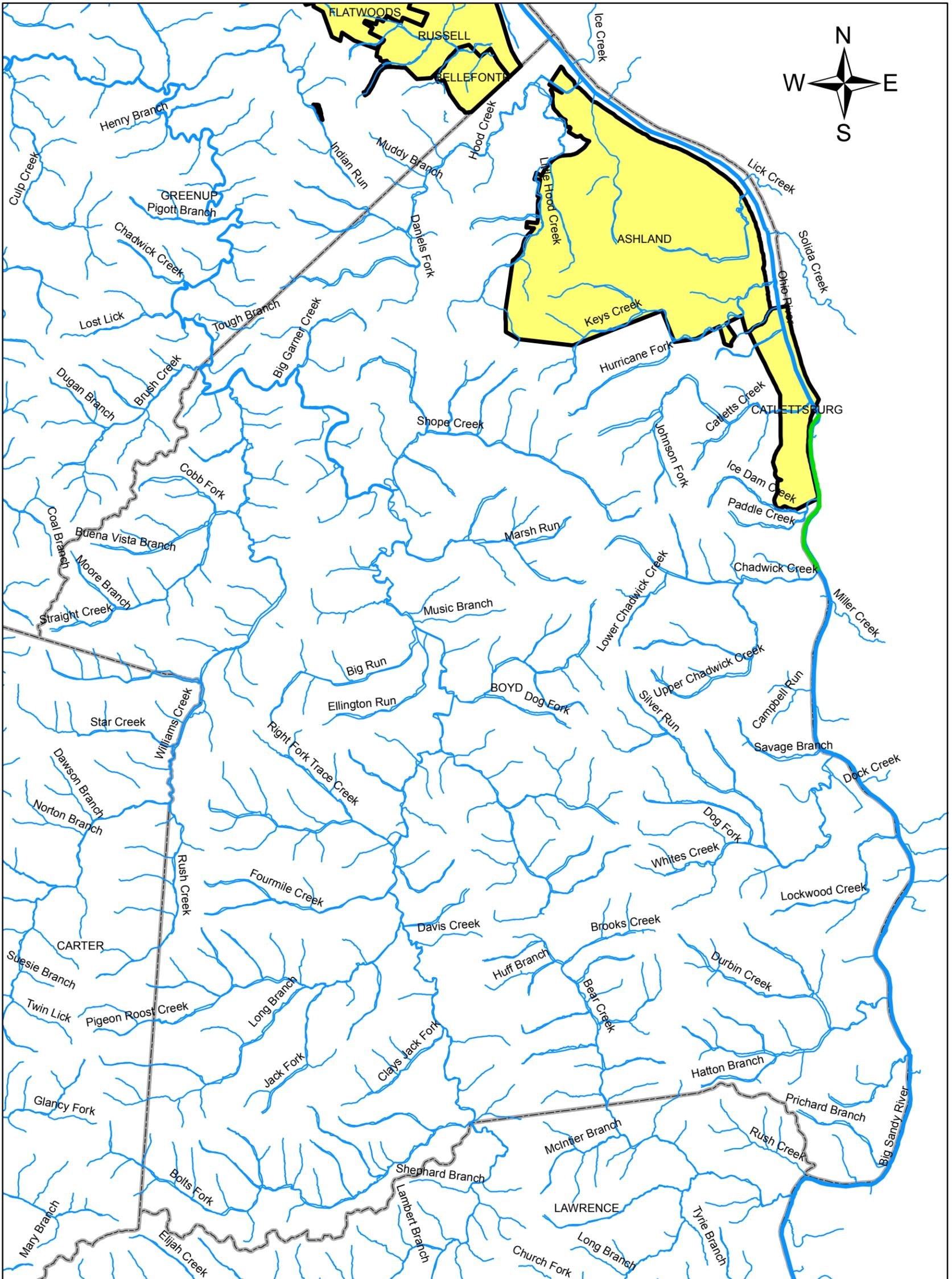
## Primary Contact Recreation Support



- DOW 305b 1998-2004 Swimming**
- Fully
  - Not supporting
  - Partial
  - Threatened
  - Streams (unassessed)
  - Corporate Boundaries
  - County Boundaries



# Boyd County, KY Fish Tissue Consumption Support

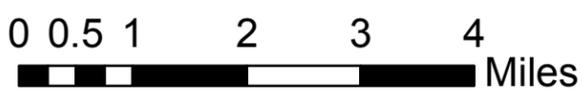


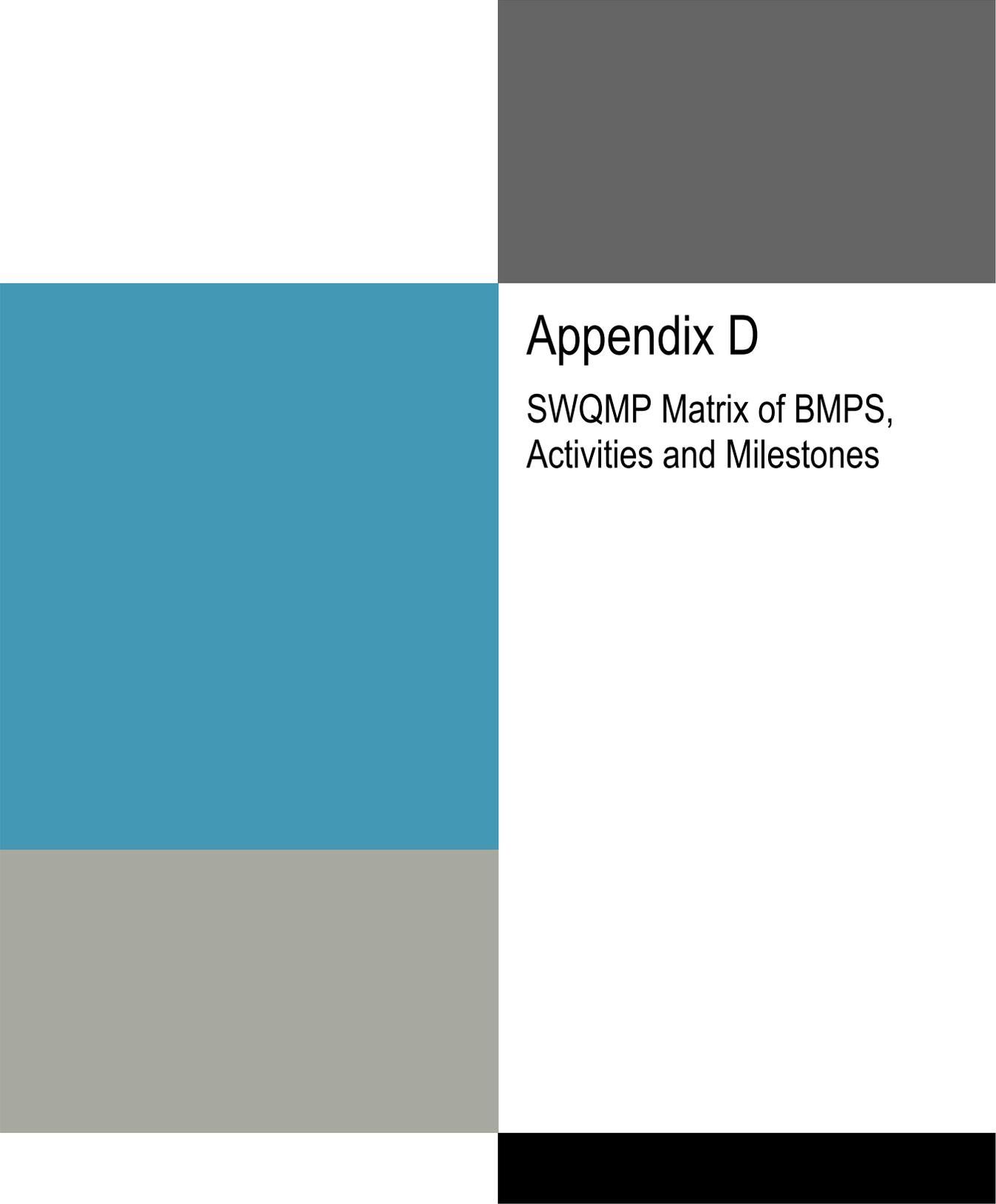
## DOW 305b 1998-2004 Fish Tissue Consumption

- Fully
- Not supporting
- Partial
- Threatened

— Streams (unassessed)

- Corporate Boundaries
- County Boundaries





# Appendix D

SWQMP Matrix of BMPS,  
Activities and Milestones



1. PUBLIC EDUCATION AND OUTREACH				Implementation Plan and Targets/Measures of Success				
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>A Educate the general public and stakeholders</b>								
1	Develop plan to educate the general public and stakeholders	See Activities Below	See activities below	--	--	--	--	--
a	Expand Storm water Advisory Committee (SWAC) to more people; Discuss storm water quality issues with opportunity for general public comments	Quarterly meetings are conducted to discuss storm water quality issues of the community;	SWAC with support City/County staff	Quarterly committee meetings	Quarterly committee meetings	Quarterly committee meetings	Quarterly committee meetings	Quarterly committee meetings
b	Update Phase II web-site	Multiple pages with information on program objectives and SWMP status	City and County	Evaluate public response; Reevaluate topics and format; Make changes to web site if necessary	--	Evaluate public response; Reevaluate topics and format; Make changes to web site if necessary	--	Evaluate public response; Reevaluate topics and format; Make changes to web site if necessary
c	Place waterway identification signage	Signs developed and placed publicly visible areas for waterways; Place 4 signs per year	City and County	Place 2 signs each at East Fork & Williams Creek	Place 2 signs each at Shoats Creek & White Creek	Place 2 signs each at Hoods Creek & East Fork of Little Hood	Place 2 signs each at Keys Creek and Bruebaker Creek	Place 2 signs each at Long Branch and a creek TBD
<b>B Develop public distribution materials</b>								
1	Develop plan to educate the public through general distribution materials	See Activities Below	See activities below	--	--	--	--	--
a	Water quality issues flyer (insert)	Distribute at least one WQ flyer to the general public through water bill insert and newspaper advertisement. Topics may include composting, pesticides/herbicides, fact sheets on 6 min. controls, illicit connections, dumping, complaint and reporting opportunities	City and County	Advertise Twice/year in Big Sandy and Daily Independent; Circulation 19,000	Provide WQ insert in water bill; 15,000 inserts	Advertise Twice/year in Big Sandy and Daily Independent; Circulation 19,000	Provide WQ insert in water bill; 15,000 inserts	Advertise Twice/year in Big Sandy and Daily Independent; Circulation 19,000
b	Recycling Program	Provide information sheet on recycling program and positive impacts on water quality; Target - Distribute 1,000 fact sheets	City and County	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets
c	Herbicides, pesticides, fertilizers; Dumpster and grease traps	Distribute materials towards public employees, businesses and general public regarding illicit discharges and dumping; Part of pretreatment program	City and County	Material distributed via WQ flyer (task 1.B.1.b)	Material distributed via WQ flyer (task 1.B.1.b)	Material distributed via WQ flyer (task 1.B.1.b)	Material distributed via WQ flyer (task 1.B.1.b)	Material distributed via WQ flyer (task 1.B.1.b)
<b>C Develop other public outreach efforts</b>								
1	Develop public outreach plan	See Activities Below	See activities below	--	--	--	--	--
a	County Fair and Catlettsburg Labor Day Parade	Provide brochures and flyers on storm water quality program at booths	City and County	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)
b	Big Sandy water basin video	Make video available for inclusion with elementary/middle school(s) curriculum	City and County	Make video available to elementary/middle schools	Make video available to elementary/middle schools	Make video available to elementary/middle schools	Make video available to elementary/middle schools	Make video available to elementary/middle schools
c	SCS, Watershed Watch and ORSANCO stream monitoring and testing program	Post results of stream testing program and clean-up to FIVCO and City/County websites	County	Post program results to web-site	Post program results to web-site	Post program results to web-site	Post program results to web-site	Post program results to web-site
d	Water and wastewater tour	Provide tour to elementary/middle school students discussing the importance of water quality	City and County	Provide tours upon request	Provide tours upon request	Provide tours upon request	Provide tours upon request	Provide tours upon request
e	4-H Club, Boy Scouts, Girl Scouts, and Civic Clubs	Make presentation on storm water quality program	City and County	Make presentation (Target 25 people per group)	Make presentation (Target 25 people per group)	Make presentation (Target 25 people per group)	Make presentation (Target 25 people per group)	Make presentation (Target 25 people per group)
<b>D KTC public distribution materials and outreach efforts</b>								
1	Survey, WQ related materials and other public outreach tasks.	Conduct Phase II/WQ survey statewide, develop distribution materials and other outreach efforts TBD	KTC	Phone/Mail Survey	TBD	TBD	TBD	Phone/Mail Survey

2. PUBLIC INVOLVEMENT AND PARTICIPATION			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>A</b>	<b>Involve the general public</b>							
1	Comply with state and local public notice requirements	Ongoing	All departments					
2	Develop public involvement and participation plan	See activities below	See activities below	--	--	--	--	--
3	Develop mechanism/procedure to receive and consider information from public on water quality	See activities below	See activities below	--	--	--	--	--
a	Expand SWAC members; Discuss storm water quality issues with opportunity for general public comments	Meeting(s) discussing storm water quality issues of the community	SWAC with support City/County staff	Quarterly committee meetings				
c	FIVCO/ORSANCO Ohio River Sweep Program (June)	Assist and participate in river clean-up and water quality activities	Sponsored by FIVCO/ORSANCO	Target: 25 volunteers, 100 hrs of service				
d	Household Hazardous Waste Clean-up (Fall & Spring)	Collect pesticides and household chemicals; Twice per year	City and County	Target: 2,000 gallons of liquid waste				
e	Fall and Spring Clean-up	Collect and clean-up house and yard waste; Twice per year	City and County	Target: 20 tons				
f	US 23 Alliance Beautification Program (Spring)	Clean up trash and debris along right-of-way from refinery through Greenup County	Sponsored by Marathon Petroleum	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash
g	Ashland Tree Board Program (April)	Hand out seedlings and provide trees for memorial tree plantings; plant along streams	City and County	Distribute 6,000+ seedlings				
<b>B</b>	<b>KTC public involvement</b>							
1	Involve general public and students	Involve general public and students with Phase II/WQ survey and other participation activities TBD	Kentucky Transportation Cabinet	Phone/Mail Survey	TBD	TBD	TBD	Phone/Mail Survey

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Milestone Products	Resp. Party	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>A</b>	<b>Make Illicit Discharges Illegal</b>							
	<b>1</b> Prohibit, through regulatory mechanism, non-storm water discharges into the MS4 and implement enforcement procedures and actions	Ordinance or other regulatory measure described below making illicit discharges illegal	City and County			Enforce IDDE Ordinance		
	<b>a</b> Ordinance in place to address dumping trash and other debris into the MS4	Modify ordinance(s) as necessary to fully address storm water needs	City and County	--		Review existing ordinances and modify if necessary	--	--
	<b>b</b> Ordinance in place to eliminate connection of integrated sump pumps (connected to washing machine) to the MS4	Modify ordinance(s) as necessary to fully address storm water needs - Wastewater Regulations	City and County	--		Review existing ordinances and modify if necessary	--	--
	<b>c</b> Ordinance in place with procedures for issuing (on-site) citations and/or enforcement mechanisms for illicit discharges	Modify ordinance(s) as necessary to fully address storm water needs - Wastewater Regulations	City and County	--		Review existing ordinances and modify if necessary	--	--
	<b>d</b> Ordinance in place with procedures for issuing (on-site) citations and/or enforcement mechanisms for illegal dumping	Modify ordinance(s) as necessary to fully address storm water needs	City and County	--		Review existing ordinances and modify if necessary	--	--
<b>B</b>	<b>Identify MS4 outfalls to "Waters of the State"</b>							
	<b>1</b> Continue developing map identifying MS4 outfalls and public surface systems	Review map layers and features; perform inventory of MS4 drainage system; plot maps	City and County	Start Full-inventory (20% complete)		Continue Full-inventory (60% complete)		Complete Full-Inventory (100% complete)
<b>C</b>	<b>Detect Illicit Discharges</b>							
	<b>1</b> Develop and implement plan to identify illicit discharges and dumping and inform employees and public about hazards associated with illegal discharges and improper waste disposal and where to report them	Plan developed and being implemented; See activities below	See activities below	--	--	--	--	--
	<b>a</b> Comment box added to web-site for public reporting of illicit discharges and illegal dumping	System developed that collects and tracks reports from public	City and County	--	--	- Evaluate public response - Reevaluate format - Make changes to web site	--	- Evaluate public response - Reevaluate format - Make changes to web site
	<b>b</b> Perform sanitary sewer system, monitoring and/or inspections to identify existing and potential overflows	Potential Sanitary Sewer Overflows (SSOs) and Combined Sewer Overflows (CSOs) are identified to support plan for eliminating them	City and County Sewer Districts	Track number of inspections	Track number of inspections	Track number of inspections	Track number of inspections	Track number of inspections
	<b>c</b> Perform dye and smoke testing and TV for sanitary sewer system	Performed in areas of potential or probable illicit connections	City and County Sewer Districts	Track footage of sewers inspected	Track footage of sewers inspected	Track footage of sewers inspected	Track footage of sewers inspected	Track footage of sewers inspected
	<b>d</b> Develop screening program for storm water outfalls; define method of detection; conduct visual dry-weather field screening	Perform visual screening of public surface systems leading to impaired streams; Perform video inspections; Target: Ashland - Keys Creek and Long Branch; Boyd County - East Fork, Hood Creek, Paddle Creek and other creeks on 303(d) list	City and County	40% visual screening of impaired streams completed	--	60% visual screening of impaired streams completed	--	100% visual screening of impaired streams completed
	<b>e</b> Develop electronic file for tracking potential illicit discharges/dumping and TV/sewer inspections	File that documents activities (reporting, inspections, illicit discharges/dumping, visual screening, etc.) is maintained for trend analyses and activity demonstration	City and County	--	Develop file format	--	Populate with tracking data	Modify file format if necessary

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Milestone Products	Resp. Party	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>D</b>	<b>Eliminate Illicit Discharges</b>							
<b>1</b>	Procedures for removing illicit discharges in place	Implement plan described below for eliminating illicit discharges and illegal dumping to the MS4	See activities below	--	--	--	--	--
<b>a</b>	Implement citation and/or other enforcement mechanisms penalizing people/entities responsible for illicit discharges and/or illegal dumping	If needed, provide means for sufficient field staff to support enforcement need	City and County	--	Determine need to revise existing regulation	Investigate need for additional field staff	Add staff if needed	Add staff if needed
<b>b</b>	Perform follow-up inspections at locations of prior illicit discharges and/or illegal dumping to ensure issues are resolved	Start performing follow-up inspections for priority and/or high risk illicit connections	City and County	Perform follow-up inspection of corrective action				
<b>c</b>	Develop electronic file for tracking illicit discharges and illegal dumping	File that documents the location of illicit discharges detected/eliminated is developed	City and County	--	--	Develop file format	Populate with tracking data	Modify file format if necessary

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL				Implementation Plan and Targets/Measures of Success				
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Party	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>A Regulatory Basis - Ordinances</b>								
1	Requirements for construction site water quality issues including sanctions for non-compliance	See activity below		Enforce Site Disturbance Ordinance				
a	Ordinance in place addressing construction site storm water runoff control and site waste control and inspection and enforcement;	Ordinance requiring BMPs for new developments and redevelopments in place and being applied; Modify as needed to address issues	City and County	--	--	Modify ordinance as needed	--	--
<b>B Erosion Prevention and Sediment Control (EPSC) and Site Waste Control</b>								
1	Requirements and Best Management Practices (BMP) for EPSC and Site Waste Control for:	See below		--	--	--	--	--
	Phased disturbance site development	The following guidance manuals for BMPs for EPSC and Site Waste Control have been adopted and are made available to developers, engineers and contractors:  BMP Manual for Erosion Protection & Sediment Control  Kentucky Transportation Cabinet Field Inspector's Guide  KDOW BMP Manual (when final version is approved and published by state)	City and County	Develop Stormwater Design Manual/BMPs (Including Local WQ Treatment Standard)		Modify requirements as needed		
	Up-gradient perimeter erosion prevention							
	Down-gradient perimeter sediment controls (sediment traps/basins, inlet protection, stabilized construction entrance, barriers, silt fence)							
	Site-wide erosion prevention (temporary seeding, sodding, surface roughening, mulching, geotextile, terraces, fill area stabilization, stockpile protection)							
	Channel stabilization controls (check dams, rip rap)							
	trash and debris management (concrete truck wash out, dumpster maintenance, storage of liquids, trash disposal)							
	air quality management (dust control, etc.)							
	sanitary waste management (portable toilet maintenance)							
	materials management (storage, containment)							
	a Spill Prevention Control and Countermeasures (SPCC) plan							
2	EPSC Permit	EPSC permit (Type I, II, III and IV) is required and being applied for construction sites	City (Public Services Dept) County (Road Dept)			Modify permit requirements as needed		
<b>C EPSC Plan Review for Water Quality</b>								
1	Requirements for plan review for potential water quality impacts	See activities below						
a	Include EPSC Plan with construction drawings	EPSC plan submittal is required for larger developments projects per ordinance	Reviewed by: City (Public Services Dept) County (Consultant)	--	--	Modify process as needed	--	--
b	Checklists and forms for EPSC plan preparer and reviewers covering erosion prevention, sediment control and waste control practices	Develop checklist and forms for EPSC plan reviews and approvals	City and County	Develop checklists/forms	--	Modify checklists/forms as needed	--	--

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Party	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>D</b>	<b>Inspection and Enforcement</b>							
	<b>1</b> Site inspection and enforcement control measures	See activities below	See activities below	--	--	--		--
	<b>a</b> Perform scheduled and surprise inspections	Develop process for carrying out inspections	City and County	Develop flowchart	--	Perform Inspections	Perform Inspections	Perform Inspections
	<b>b</b> Checklists for inspection considerations covering erosion prevention, sediment control and waste control practices	Develop inspection form(s) and checklist(s) for staff and developers/contractors	City and County	Develop forms & checklists	--	--	--	Modify forms & checklists if needed
	<b>c</b> Authorize: "warning" enforcement actions (may include: notice of violation, permit probation, etc.) "prohibitive" enforcement actions (may include: stop work orders, cease and desist, permit revocation, etc.) "compulsory" enforcement actions (may include: compliance order, consent order, clean and abate order, etc.) "disciplinary" enforcement actions (may include: fines, fees, bond forfeiture, utility credit revocation, cost recovery, injunctions, property lien, imprisonment, etc.) enforcement actions appeal process (may include: elected official review, review by appointed board, environmental court, etc.)	Develop procedures and protocol for enforcement actions	City and County		Review existing procedures	Finalize procedures/ protocol	Add staff (inspector) If needed	--

5. POST-CONSTRUCTION STORM WATER MANAGEMENT				Implementation Plan and Targets/Measures of Success				
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>A</b>	<b>Regulatory Basis</b>							
1	Develop program to address long-term water quality	Program as described below, ensuring controls are in place that prevent or minimize water quality impacts, developed, implemented and enforced	Sec activities below	--	--	--	--	--
2	Require new and redevelopment actions to address long-term water quality	Ordinance or other regulatory mechanism in place as described below	See activities below	--	--	--	--	--
a	Evaluate ordinance: requiring (or encouraging) structural water quality practices be applied at all new developments requiring (or encouraging) participation in regional water quality facilities requiring (or encouraging) landscape provisions to be integrated with water quality management practices defining redevelopment conditions or threshold at which water quality measures must be applied requiring plans for long-term maintenance of structural water quality practices be reviewed and approved prior to construction requiring and/or encouraging greenways and other conservation practices through transfer of land development rights, tax incentives, land trusts, etc. defining sensitive areas (or districts) to be preserved and/or protected permitting the use of Planned Urban Developments (PUDs) requiring covenant agreements for long-term maintenance of structural water quality practices be accepted prior to construction defining cities roles and responsibilities for the long-term maintenance of structural water quality practices	If deemed effective and acceptable, then regulatory measure in place and being applied through a new ordinance	City and County	Enforce Post-Construction SW Management Ordinance	--	--	--	--

5. POST-CONSTRUCTION STORM WATER MANAGEMENT				Implementation Plan and Targets/Measures of Success				
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>B</b>	<b>BMP Strategies and Design Manual</b>							
1	Develop and implement structural and non-structural management strategies appropriate for the community	See activities below	See activities below	--	--	--	--	--
a	Identify, select and customize appropriate structural and non-structural management practices	Plan developed and used as basis for management of new and redevelopment	City and County			ID Basin(s)	Complete Watershed Planning Report	
	Evaluate requirements for: on-site source control management practices (may include: infiltration practices, directly connected impervious area minimization, materials storage and separation, etc.) on-site treatment and attenuation management practices (may include: dry ponds, wet ponds, bio-filters, constructed wetlands, baffle boxes, water quality inlets, media filters, oil-water separators, etc.) on-site non-structural management practices (may include: buffers, landscaping, cluster development, low impact development strategies, open space requirements, education, etc.)	If deemed effective and acceptable, then regulatory measure in place and being applied through modification or new ordinances, watershed planning document given authority by ordinances	City and County	Develop SW Design Manual/BMPs (Including Local WQ Treatment Standard)	Implement and Educate Developers, Contractors, Engineers	Update SW Design Manual/BMPs	--	--
b	Develop design manual to guide and direct selection and design of management practices	Develop a site design manual for new development or re-development projects	City and County				--	--
c	Hilton Area Drainage Improvements	Reduce I/I to wastewater plant	City	Complete Construction				
d	Implement two (2) BMP projects; potential BMPs may be first flush basins, wet ponds, dry ponds, buffer strips, greenways, streambank stabilization, porous pavement or other BMP that may be deemed appropriate	Two (2) BMPs identified and implemented	City and County	--	--	Implement BMP	Implement BMP	Implement BMP
<b>C</b>	<b>Long-term Operation and Maintenance</b>							
1	Ensure long-term operation and maintenance of management practice	See activities below	See activities below	--	--	--	--	--
a	Leaf & brush collection	Develop and implement plan for curbside collecting leaf and woody debris	City and County	#Bags collected	#Bags collected	#Bags collected	#Bags collected	#Bags collected
b	Street sweeping	Ashland uses TYMCO and Elgin "regenerative air system"; Ashland and Catlettsburg providing street cleaning in selected areas of curb and gutter system	City	Track sweep time and lineal footage of roadways cleaned each year				
d	Culvert and channel maintenance	As needed - Excess in-channel sediment removed	City and County	Track # catch basins cleaned or repaired, footage of culverts and channels cleaned each year				
c	Easements and Maintenance Agreements of detention basins and other BMP facilities	Establish requirements for requiring easements and maintenance agreements for SW facilities	City and County			Develop maintenance and easement agreements		
2	Develop electronic file for tracking O & M activities	File that documents the location and quantity of work completed is developed	City and County	Develop file format	--	--	--	Modify file format if necessary

6. POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS				Implementation Plan and Targets/Measures of Success				
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Product	Resp. Party	PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
<b>A</b>	<b>Operation and Maintenance Program</b>	See activities below						
	1 Operation and maintenance program having the ultimate goal of preventing or reducing pollutant runoff from municipal operations	Program developed and implemented.	City and County					
	a Municipal operations	One assessment of facility operations relative to water quality protection performed each year; Facilities/operations include sites at City Garage, Street Dept., Water & Wastewater Distribution, WTP, WWTP and Park Maintenance	City and County	Street Dept.	City Garage	TBD	TBD	TBD
	b Paved Parking Lot Sweeping	Municipal owned paved parking lots are swept and cleaned weekly/monthly. For Ashland parking lots see below.	City and County	Total pvmt area cleaned	Total pvmt area cleaned	Total pvmt area cleaned	Total pvmt area cleaned	Total pvmt area cleaned
	c Road salt storage evaluation	Develop and implement action items that reduce potential for release of chemicals to environment	City and County	--	--	--	--	--
	d Herbicides storage and use	Herbicides stored at Street Dept.; Four persons are licensed to mix and apply	City and County	--	--	--	--	--
<b>B</b>	<b>Employee Training</b>							
	1 Training program to prevent and reduce storm water pollution from municipal activities	Program identified below implemented targeted towards identified audiences using materials	See activities below					
	a Use materials readily available from EPA, state or other organizations	Materials used to educate employees about their role in operating/performing stormwater management program	City and County	Compile and/or develop materials	Perform training as needed	Perform training as needed	Perform training	Perform training as needed
	b New employee training	Attend workshops, seminars sponsored by KDOW nad EPA, internal workshops via webcast; As Needed	City and County					
	c Refresher training	Develop program materials for periodical review of stormwater for existing employees	City and County	--	Perform training	--	Perform training	--
	d Inspector training	City has five qualified storm water inspectors and six public service citation officers	City	--	--	Renew qualifications	--	--

The following paved parking lots are maintained, swept and cleaned by Ashland on a regular basis:

1) City Building employee and adjacent parking lot	5) Transportation Center parking lot
2) Greenup & 15th parking lot( between Price and Stars Bldg.	6) Central Park parking lot
3) 14th Street & Winchester parking lot	7) 21st Street parking lot (rock salt storage)
4) Dawson Park parking lot	8) WWTP parking lot (26th and River)

9) WTP parking lot (40th & Winchester)
10) Central Garage/42nd Street (fleet maintenance) lot
11) AK Sports parking lot

7. Reporting and Records Retention		Implementation Plan and Targets/Measures of Success				
		PY 1 2010 - 2011	PY 2 2011 - 2012	PY 3 2011 - 2012	PY 4 2012 - 2013	PY 5 2013 - 2014
Task Title – Activity Description	BMP - Activity Description	Resp. Party	Milestone Date			
<b>A Annual Report</b>						
Summary reports demonstrating compliance status, program effectiveness, analytical data, planned activities, program changes and cooperative agreements with other entities.	Report submitted annually	City and County	Annually	Develop and file report	Develop and file report	Develop and file report
2 Progress tracking database	Tool developed to semi-automatically develop reporting materials	City and County	Annually	Update database	Update database	Update database
3 Program audit / assessment	Information gathered from various departments and other entities to determine compliance with permit conditions	City and County	Annually	--	--	--
<b>B Records Retention</b>						
1 Retain annual reports and other records	Records available to public and regulators for a period of at least three years	City and County	Annually	Maintain on file	Maintain on file	Maintain on file

National Pollutant Discharge Elimination System (NPDES)  
Small Municipal Separate Storm Sewer System (sMS4) (Phase II)  
General Permit Application

**Best Management Practices/Minimum Control Measures Plan**

**Co-Permittees: City of Ashland, City of Catlettsburg and Boyd County, Kentucky**

This report identifies and describes the management practices already implemented or scheduled to be implemented to meet the minimum control measures. Each activity has a milestone product indicating the anticipated measurable outcome.

Each milestone date indicates the permit year(s) by which the activity shall be completed. In example, “PY 2” indicates that the activity will be completed by the end of permit year two (2). Multiple permit years designate that the milestone product will be completed / performed multiple times and by the end of the indicated years. In example, “PY 1 & 3” indicates that milestone products must be completed / performed at least one by the end of permit year one (1) and again by the end of permit year three (3). The following calendar dates will be assumed for the permit term.

Each activity is assigned to a department, agency, person, etc. “who” is responsible for executing the milestone product. This may represent “who” is coordinating the work rather than performing the activity.

<u>Permit Year</u>	<u>Calendar (end date)</u>
Notice of Intent (NOI) Due	1-May-18
PY 1	30-Apr-19
PY 2	30-Apr-20
PY 3	30-Apr-21
PY 4	30-Apr-22
PY 5	30-Apr-23

Each minimum control measure control (1, 2, 3, etc.) contains a series of required tasks. Each task (1A, 1B, 1C, etc.) must be addressed by at least one activity (1.A.1, 1.A.2, 1.A.3, etc.). Shaded and automatically checked (1.☐) activities are those that must be performed. All other activities may be performed in support of the required task.

1. PUBLIC EDUCATION AND OUTREACH			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>A</b>	<b>Educate the general public and stakeholders</b>							
<b>1</b>	Develop plan to educate the general public and stakeholders	See Activities Below	See activities below	--	--	--	--	--
<b>a</b>	Reestablish Storm Water Advisory Committee (SWAC); Discuss storm water quantity and quality issues with opportunity for general public comments	Biannual meetings are to be conducted to discuss storm water quality issues of the community;	SWAC with support City/County staff	Reestablish SWAC; Recruit New Members	Biannual committee meetings	Biannual committee meetings	Biannual committee meetings	Biannual committee meetings
<b>b</b>	Update Phase II web-sites	Multiple pages with information on program objectives, SWMP status, and related documents	Cities and County	Evaluate public response; Reevaluate topics and format; Make changes to website if necessary	--	Evaluate public response; Reevaluate topics and format; Make changes to website if necessary	--	Evaluate public response; Reevaluate topics and format; Make changes to website if necessary
<b>c</b>	Place waterway identification signage	Signs developed and placed in publicly visible areas for waterways; Place 4 signs per year	Cities and County	Place 2 signs each at East Fork & Williams Creek	Place 2 signs each at Shoats Creek & White Creek	Place 2 signs each at Hoods Creek & East Fork of Little Hood	Place 2 signs each at Keys Creek & Bruebaker Creek	Place 2 signs each at Long Branch & a creek TBD
<b>B</b>	<b>Develop public distribution materials</b>							
<b>1</b>	Develop plan to educate the public through general distribution materials	See Activities Below	See activities below	--	--	--	--	--
<b>a</b>	Water quality issues flyer (insert)	Distribute at least one WQ flyer to the general public through water bill insert. Topics may include composting, pesticides/herbicides, fact sheets on 6 min. controls, illicit connections, dumping, complaint and reporting opportunities	Cities and County	Provide WQ insert in water bill; 15,000 inserts	Provide WQ insert in water bill; 15,000 inserts	Provide WQ insert in water bill; 15,000 inserts	Provide WQ insert in water bill; 15,000 inserts	Provide WQ insert in water bill; 15,000 inserts
<b>b</b>	Social Media	Utilize social medial accounts to distribute a post minimally biannually. Topics may include composting, pesticides/herbicides, fact sheets on 6 min. controls, illicit connections, dumping, complaint and reporting opportunities. Distribute a questionnaire post to measure public understanding	Ashland and Boyd Co.	Provide biannual social media posts	Provide biannual social medial posts	Provide biannual social media posts	Provide biannual social media posts	Provide biannual social medial posts
<b>c</b>	Recycling Program	Provide information sheet on recycling program and positive impacts on water quality; Target - Distribute 1,000 fact sheets	Ashland and Boyd Co.	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets	Distribute 1,000 fact sheets
<b>d</b>	Herbicides, pesticides, fertilizers; Dumpster and grease traps	Distribute materials towards public employees, businesses and general public regarding illicit discharges and dumping; Part of pretreatment program	Cities and County	Material distributed via WQ flyer (task 1.B.1.a)	Material distributed via WQ flyer (task 1.B.1.a)	Material distributed via WQ flyer (task 1.B.1.a)	Material distributed via WQ flyer (task 1.B.1.a)	Material distributed via WQ flyer (task 1.B.1.a)

1. PUBLIC EDUCATION AND OUTREACH			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>C</b>	<b>Develop other public outreach efforts</b>							
<b>1</b>	Develop public outreach plan	See Activities Below	See activities below	--	--	--	--	--
<b>a</b>	County Fair and Catlettsburg Labor Day Parade	Provide brochures and flyers on storm water quality program at booths	Cities and County	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)	Present and provide information (Target 100 people at each event)
<b>b</b>	University of Kentucky Horticulture Extension Outreach Program	Aid and participate in outreach activities with UK Extension Program	Cities and County	Participation in one activity minimally	Participate in one activity minimally	Participate in one activity minimally	Participate in one activity minimally	Participate in one activity minimally
<b>c</b>	Build Ashland	Engage and partner with Build Ashland in outreach activities and public education	Ashland	Engage Build Ashland	Participate in one activity minimally			
<b>d</b>	SCS, Watershed Watch and ORSANCO stream monitoring and testing program	Post results of stream testing program and clean-up to FIVCO and City/County websites	County	Post program results to websites				
<b>e</b>	Water and wastewater tour	Provide tour to elementary/middle school students discussing the importance of water quality	Cities	Provide tours upon request				
<b>f</b>	4-H Club, Boy Scouts, Girl Scouts, and Civic Clubs	Make presentation on storm water quality program	City	Make presentation (Target 25 people per group)				
<b>D</b>	<b>KYTC public distribution materials and outreach efforts</b>							
<b>1</b>	Survey , WQ related materials and other public outreach tasks,	Conduct Phase II/WQ survey statewide, develop distribution materials and other outreach efforts TBD	KYTC	Phone/Mail Survey	TBD	TBD	TBD	Phone/Mail Survey

2. PUBLIC INVOLVEMENT AND PARTICIPATION			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>A</b>	<b>Involve the general public</b>							
1	Comply with state and local public notice requirements	Ongoing	All departments					
2	Develop public involvement and participation plan	See activities below	See activities below	--	--	--	--	--
3	Develop mechanism/procedure to receive and consider information from public on water quality	See activities below	See activities below	--	--	--	--	--
a	Reestablish Storm Water Advisory Committee (SWAC); Discuss storm water quantity and quality issues with opportunity for general public comments	Biannual meetings are to be conducted to discuss storm water quality issues of the community;	SWAC with support City/County staff	Reestablish SWAC; Recruit New Members	Biannual committee meetings	Biannual committee meetings	Biannual committee meetings	Biannual committee meetings
b	University of Kentucky Horticulture Extension Outreach Program	Aid and participate in outreach activities with UK Extension Program	Cities and County	Participation in one activity minimally	Participate in one activity minimally	Participate in one activity minimally	Participate in one activity minimally	Participate in one activity minimally
c	FIVCO/ORSANCO Ohio River Sweep Program (June)	Assist and participate in river clean-up and water quality activities	Sponsored by FIVCO/ORSANCO	Target: 25 volunteers, 100 hrs of service				
d	Household Hazardous Waste Clean-up (Fall & Spring)	Collect pesticides and household chemicals; Twice per year	Cities and County	Target: 2,000 gallons of liquid waste				
e	Fall and Spring Clean-up	Collect and clean-up house and yard waste; Twice per year	Cities and County	Target: 20 tons				
f	US 23 Alliance Beautification Program (Spring)	Clean up trash and debris along right-of-way from refinery through Greenup County	Sponsored by Marathon Petroleum	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash	Target: 60 volunteers, 120 hrs of service, 500 bags of trash
g	Ashland Tree Board Program (April)	Hand out seedlings and provide trees for memorial tree plantings; plant along streams	Ashland and Boyd Co.	Distribute 6,000+ seedlings				
<b>B</b>	<b>KYTC public involvement</b>							
1	Involve general public and students	Involve general public and students with Phase II/WQ survey and other participation activities TBD	Kentucky Transportation Cabinet	Phone/Mail Survey	TBD	TBD	TBD	Phone/Mail Survey

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Milestone Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>A</b>	<b>Illicit Discharges Enforcement</b>							
1	Prohibit, through regulatory mechanism, non-storm water discharges into the MS4 and implement enforcement procedures and actions	Ordinance or other regulatory measure described below making illicit discharges illegal	Cities and County	Enforce IDDE Ordinance				
<b>B</b>	<b>Identify MS4 outfalls to "Waters of the State"</b>							
1	Continue identifying and updating mapping for MS4 major outfalls	Review mapped outfalls; perform inventory update for industrial areas	Cities and County	Review mapped outfalls	Industrial area inventory update (30% complete)	Industrial area inventory update (65% complete)	Industrial area inventory update (100% complete)	Review inventory and mapping
2	Develop and maintain comprehensive storm sewer system map	Perform inventory of MS4 system; develop maps	Cities and County	Start Full-inventory (20% complete)	Continue Full-inventory (40% complete)	Continue Full-inventory (60% complete)	Continue Full-inventory (80% complete)	Complete Full-inventory (100% complete)
a	Mark catch basins and storm sewer inlets "No Dumping Drains To River"	Mark catch basins and storm sewer inlets	Cities and County	50 markings	50 markings	50 markings	50 markings	50 markings
<b>C</b>	<b>Detect Illicit Discharges</b>							
1	Develop and implement plan to identify illicit discharges and dumping and inform employees and public about hazards associated with illegal discharges and improper waste disposal and where to report them	Update and implement revised IDDE Plan; See activities below	See activities below	--	--	--	--	--
a	Comment box added to website for public reporting of illicit discharges and illegal dumping	System developed that collects and tracks reports from public	Ashland	Implement comment box on Ashland website	--	Evaluate public response; Reevaluate format; Make changes to website	--	Evaluate public response; Reevaluate format; Make changes to website
b	Perform sanitary sewer system, monitoring and/or inspections to identify existing and potential overflows	Potential Sanitary Sewer Overflows (SSOs) and Combined Sewer Overflows (CSOs) are identified to support plan for eliminating them	Cities and County Sewer Districts	Track number of inspections	Track number of inspections	Track number of inspections	Track number of inspections	Track number of inspections
c	Perform dye and smoke testing and TV for sanitary sewer system	Performed in areas of potential or probable illicit connections	Cities and County Sewer Districts	Track footage of sewers inspected	Track footage of sewers inspected	Track footage of sewers inspected	Track footage of sewers inspected	Track footage of sewers inspected
d	Continue screening program for storm water outfalls; conduct visual dry-weather field screening	Perform dry-weather field screening on all known major outfalls	Cities and County	20% dry-weather of all major outfalls	40% dry-weather of all major outfalls	60% dry-weather of all major outfalls	80% dry-weather of all major outfalls	100% dry-weather of all major outfalls
e	Develop and implement electronic file for tracking potential illicit discharges/dumping and TV/sewer inspections	File that documents activities (reporting, inspections, illicit discharges/dumping, visual screening, etc.) is maintained for trend analyses and activity demonstration	Cities and County	Develop electronic filing method	Continue updating filing	Continue updating filing	Continue updating filing	Modify file format if necessary

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Milestone Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>D</b>	<b>Eliminate Illicit Discharges</b>							
<b>1</b>	Procedures for removing illicit discharges in place	Implement plan described below for eliminating illicit discharges and illegal dumping to the MS4	See activities below	--	--	--	--	--
<b>a</b>	Continue citation and/or other enforcement mechanisms penalizing people/entities responsible for illicit discharges and/or illegal dumping	If needed, provide means for sufficient field staff to support enforcement need	Cities and County	--	Review existing regulation and policies	--	Review existing regulation and policies	--
<b>b</b>	Perform follow-up inspections at locations of prior illicit discharges and/or illegal dumping to ensure issues are resolved	Continue performing follow-up inspections for priority and/or high risk illicit connections	Cities and County	Perform follow-up inspection of corrective action				
<b>c</b>	Develop electronic file for tracking illicit discharges and illegal dumping	File that documents the location of illicit discharges detected/eliminated is developed	Cities and County	--	Develop file format	Populate with tracking data	Populate with tracking data	Modify file format if necessary

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>A Regulatory Basis - Ordinances</b>								
1	Requirements for construction site water quality issues including sanctions for non-compliance	See activity below		Enforce Site Disturbance Ordinance				
a	Ordinance in place addressing construction site storm water runoff control and site waste control and inspection and enforcement;	Ordinance requiring BMPs for new developments and redevelopments in place and being applied; Modify as needed to address issues	Cities and County	--	--	Modify ordinance as needed	--	--
<b>B Erosion Prevention and Sediment Control (EPSC) and Site Waste Control Requirements</b>								
1	Requirements and Best Management Practices (BMP) for EPSC and Site Waste Control for: Phased disturbance site development Up-gradient perimeter erosion prevention Down-gradient perimeter sediment controls (sediment traps/basins, inlet protection, stabilized construction entrance, barriers, silt fence) Site-wide erosion prevention (temporary seeding, sodding, surface roughening, mulching, geotextile, terraces, fill area stabilization, stockpile protection) Channel stabilization controls (check dams, rip rap) trash and debris management (concrete truck wash out, dumpster maintenance, storage of liquids, trash disposal) air quality management (dust control, etc.) sanitary waste management (portable toilet maintenance) materials management (storage, containment) a Spill Prevention Control and Countermeasures (SPCC) plan	See below  The following guidance manuals for BMPs for EPSC and Site Waste Control have been adopted and are made available to developers, engineers and contractors: BMP Manual for Erosion Protection & Sediment Control Kentucky Transportation Cabinet Field Inspector's Guide KDOW BMP Manual (when final version is approved and published by state)	Cities and County	--	--	Review Stormwater Design Manual/BMPs (Including Local WQ Treatment Standard)	Modify requirements as needed	--
2	EPSC Permit	EPSC permit (Type I, II, III and IV) is required and being applied for construction sites	Ashland (Engineering Dept.) & Boyd Co. (Code Enforcement)	--	--		Modify permit requirements as needed	--
<b>C EPSC Plan Review for Water Quality</b>								
1	Requirements for plan review for potential water quality impacts	See activities below						
a	Include EPSC Plan with construction drawings	EPSC plan submittal is required for larger developments projects per ordinance	Reviewed by: Ashland (Engineering Dept.) & Boyd Co. (Code Enforcement)	--	--		Modify process as needed	--
b	Checklists and forms for EPSC plan preparer and reviewers covering erosion prevention, sediment control and waste control practices	Develop checklist and forms for EPSC plan reviews and approvals	Cities and County	Develop checklists/forms	--		Modify checklists/forms as needed	--

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>D</b>	<b>Inspection and Enforcement</b>							
<b>1</b>	Site inspection and enforcement control measures	See activities below	See activities below	--	--	--		--
<b>a</b>	Perform scheduled and surprise inspections	Continue process for carrying out EPSC inspections	Cities and County	Develop tracking format	Perform Inspections	Perform Inspections	Perform Inspections	Perform Inspections
<b>b</b>	Checklists for inspection considerations covering erosion prevention, sediment control and waste control practices	Review inspection form(s) and checklist(s) for staff and developers/contractors	Cities and County	Update forms & checklists	--	--	--	Modify forms & checklists if needed
<b>c</b>	Conduct enforcement actions as necessary including disciplinary enforcement actions and appeal process	Continue procedures and protocols for enforcement actions	Cities and County	--	--	Modify process as needed	--	--

5. POST-CONSTRUCTION STORM WATER MANAGEMENT			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>A Regulatory Basis</b>								
	<b>1</b> Continue program to address long-term water quality	Program as described below, ensuring controls are in place that prevent or minimize water quality impacts, developed, implemented and enforced	See activities below	--	--	--	--	--
	<b>a</b> Ordinance in place addressing post-construction storm water management and inspection and enforcement;	Ordinance requiring BMPs for new developments and redevelopments in place and being applied; Modify as needed to address issues	Cities and County	--	--	Modify ordinance as needed	--	--
<b>B BMP Strategies and Design Manual</b>								
	<b>1</b> Continued implementation of structural and non-structural management strategies appropriate for the community	See activities below	See activities below	--	--	--	--	--
	<b>a</b> Identify, select and customize appropriate structural and non-structural management practices	Plan developed and used as basis for management of new and redevelopment	Cities and County	Review allowable post-construction BMPs and customize allowable BMPs as necessary	--	--	Review allowable post-construction BMPs and customize allowable BMPs as necessary	--
	Evaluate requirements for:	If deemed effective and acceptable, then regulatory measure in place and being applied through modification or new ordinances, watershed planning document given authority by ordinances						
	on-site source control management practices (may include: infiltration practices, directly connected impervious area minimization, materials storage and separation, etc.)							
	on-site treatment and attenuation management practices (may include: dry ponds, wet ponds, bio-filters, constructed wetlands, baffle boxes, water quality inlets, media filters, oil-water separators, etc.)							
	on-site non-structural management practices (may include: buffers, landscaping, cluster development, low impact development strategies, open space requirements, education, etc.)							
	<b>b</b> Update design manual to guide and direct selection and design of management practices	Develop a site design manual for new development or re-development projects	City and County	Update SW Design Manual	--	--	Update SW Design Manual	--

5. POST-CONSTRUCTION STORM WATER MANAGEMENT			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Products	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>C</b>	<b>Long-term Operation and Maintenance</b>							
<b>1</b>	Ensure long-term operation and maintenance of management practice	See activities below	See activities below	--	--	--	--	--
<b>a</b>	Leaf & brush collection	Develop and implement plan for curbside collecting leaf and woody debris	City and County	#Bags collected	#Bags collected	#Bags collected	#Bags collected	#Bags collected
<b>b</b>	Street sweeping	Ashland uses TYMCO and Elgin "regenerative air system" ; Ashland and Catlettsburg providing street cleaning in selected areas of curb and gutter system	City	Track sweep time and lineal footage of roadways cleaned each year				
<b>d</b>	Culvert and channel maintenance	As needed - Excess in-channel sediment removed	City and County	Track # catch basins cleaned or repaired, footage of culverts and channels cleaned each year				
<b>e</b>	Easements and Maintenance Agreements of detention basins and other BMP facilities	Establish requirements for requiring easements and maintenance agreements for SW facilities	Cities and County	Develop and implement maintenance agreements	--	--	Modify maintenance agreements as necessary	--
<b>2</b>	Continue post-construction BMP program including representative number of inspections, enforcement actions and follow-up inspections	Conduct BMP inspections and enforcement actions as necessary	Cities and County	20% post-construction BMPs	40% post-construction BMPs	60% post-construction BMPs	80% post-construction BMPs	100% post construction BMPs
<b>3</b>	Develop electronic file for tracking O & M activities	File that documents the location and quantity of work completed is developed	Cities and County	Develop file format	--	--	--	Modify file format if necessary

6. POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS			Implementation Plan and Targets/Measures of Success					
Task	BMP - Activity Description	Measurable Goal/ Quantifiable Product	Resp. Parties	PY 1 2018 - 2019	PY 2 2019 - 2020	PY 3 2020 - 2021	PY 4 2021 - 2022	PY 5 2022 - 2023
<b>A</b>	<b>Operation and Maintenance Program</b>	See activities below						
<b>1</b>	Operation and maintenance program having the ultimate goal of preventing or reducing pollutant runoff from municipal operations	Program developed and implemented.	Cities and County					
<b>a</b>	Operation and Maintenance (O&M) Plan	Develop and implement written O&M plan with the goal of preventing or reducing pollutant runoff from municipal operations	Cities and County	Develop O&M plan	--	Review O&M plan, update as necessary	--	Review O&M plan, update as necessary
<b>b</b>	Municipal Facilities Inventory	Develop and map an inventory of municipal facilities	Cities and County	Develop inventory	Map municipal facilities	--	Update inventory & mapping	--
<b>c</b>	Inspect and maintain municipal operations stormwater BMPs	Inspect and provide maintenance as required to ensure BMP operation	Cities and County	Inspect & maintain BMPS	Inspect & maintain BMPs	Inspect & maintain BMPs	Inspect & maintain BMPs	Inspect & maintain BMPs
<b>B</b>	<b>Employee Training</b>							
<b>1</b>	Training program to prevent and reduce storm water pollution from municipal activities	Program identified below implemented targeted towards identified audiences using materials	See activities below					
<b>a</b>	Use materials readily available from EPA, state or other organizations	Materials used to educate employees about their role in operating/performing stormwater management program	Cities and County	Compile and/or develop training materials	Perform training as needed	Perform training as needed	Update training materials, perform training as needed	Perform training as needed
<b>b</b>	New employee training	Attend workshops, seminars sponsored by KDOW and EPA, internal workshops via webcast; As Needed	Cities and County	--	--	--	--	--
<b>c</b>	Refresher training	Develop program materials for periodical review of stormwater for existing employees	Cities and County	Develop training materials	Perform training	Update training materials	Perform training	Update training materials
<b>d</b>	Inspector training	Provide training to appropriate employees to ensure adequate staffing for inspections	Cities and County	Renew qualifications	--	--	Renew qualifications-	--

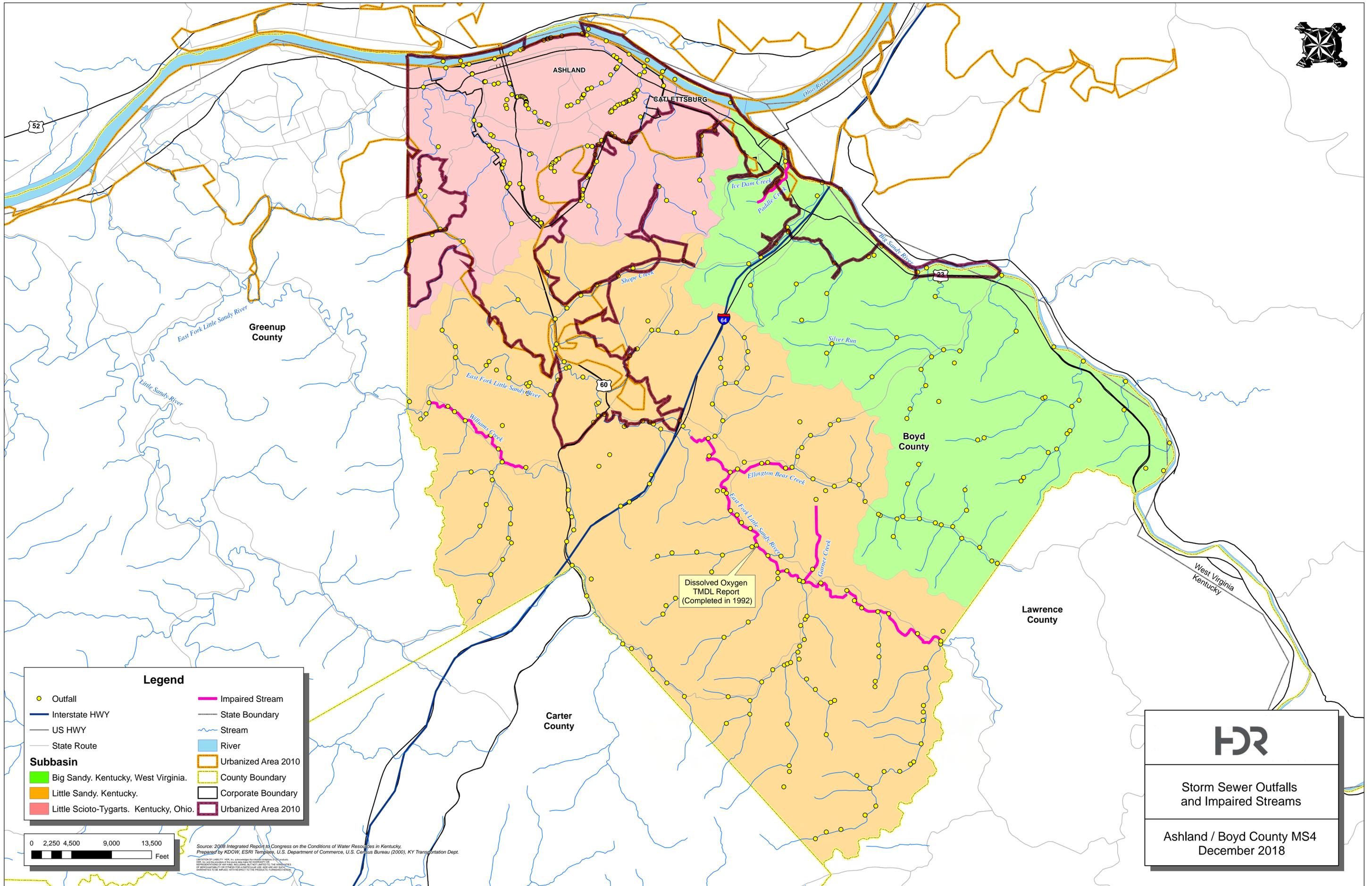




# Appendix E

## MS4 Outfalls





**Legend**

- Outfall
- Interstate HWY
- US HWY
- State Route
- Impaired Stream
- State Boundary
- Stream
- River
- Urbanized Area 2010
- County Boundary
- Corporate Boundary
- Urbanized Area 2010

**Subbasin**

- Big Sandy, Kentucky, West Virginia.
- Little Sandy, Kentucky.
- Little Scioto-Tygarts, Kentucky, Ohio.



Source: 2008 Integrated Report to Congress on the Conditions of Water Resources in Kentucky. Prepared by KDOH, ESRI Template, U.S. Department of Commerce, U.S. Census Bureau (2000), KY Transportation Dept.

**HR**

Storm Sewer Outfalls  
and Impaired Streams

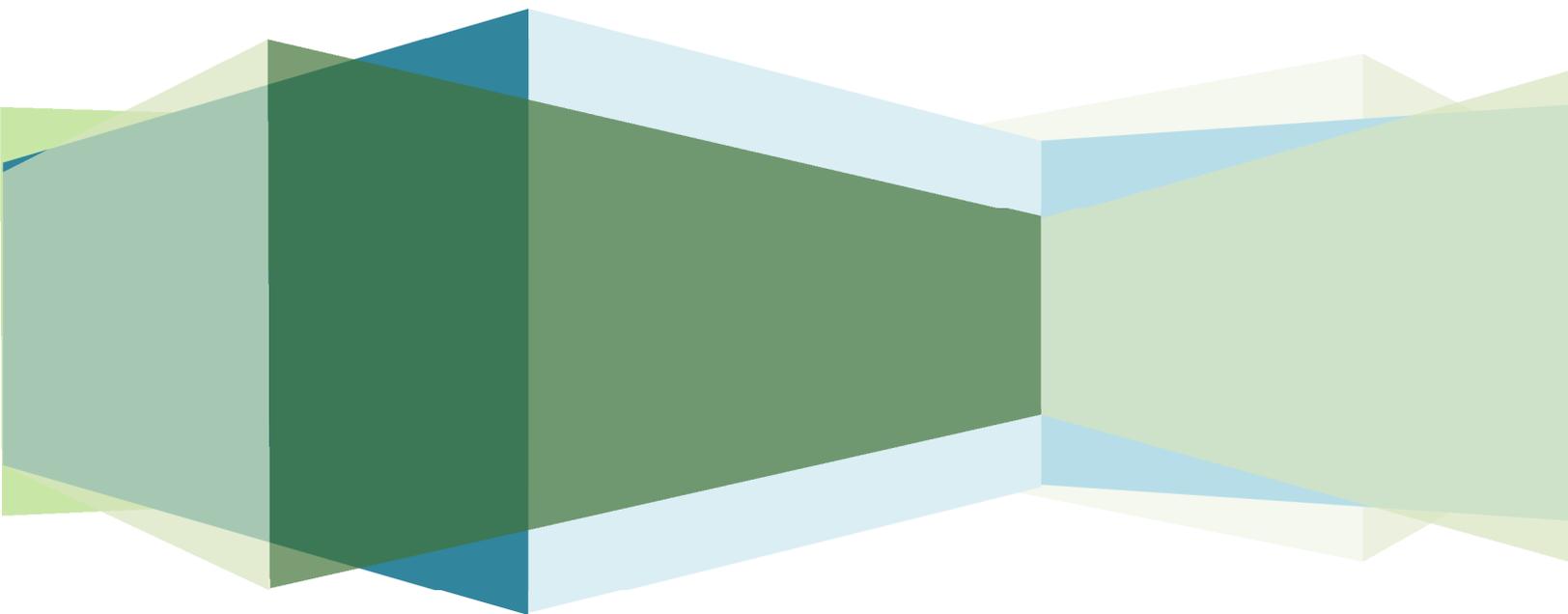
Ashland / Boyd County MS4  
December 2018



# Appendix “C”

## Phase II Stormwater Monitoring Program

- Plan
- 2014 Baseline Sampling
- Outfall Map and Monitoring Data





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# Phase II Stormwater Monitoring Program

for

City of Ashland  
Kentucky



March 2015





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## Introduction

The current Phase II Permit, KYG20, includes a requirement for the permittee to develop an appropriate monitoring program that evaluates the effectiveness of the MS4 program.

This section summarizes Ashland's proposed monitoring program and method to measure effectiveness, and provides a mechanism to obtain feedback for Ashland to change or improve the stormwater quality program appropriately.

The monitoring plan is divided into the following sections:

- Background
- Dry Weather Visual Screening
- Review of 2012 Integrated Report (IR) 303(d) List of Streams
- Monitoring Program

## Background

The City of Ashland, which has a population of 21,684 according to the 2010 Census, is permitted under KYG20 to discharge pollutants in stormwater discharges associated with small municipal storm sewer systems into waters of the Commonwealth.

160 square miles encompasses Ashland, Catlettsburg and Boyd County urbanized area and is part of the Big Sandy River Basin. The Big Sandy River flows along the eastern border of the Commonwealth of Kentucky and West Virginia and empties into the Ohio River. The major subbasins within the river basin are Big Sandy (KY-WV), Little Sandy (KY) and Little Scioto-Tygarts (KY/OH).

As required by KYG20 the City of Ashland has developed and continues to maintain a storm sewer map showing the location of all known major outfalls. The storm sewer map is included in the Annual Compliance Report submitted to Kentucky Division of Water.

In KYG20 a major outfall is defined as follows:

- A pipe (or closed conveyance) system with a cross-sectional area equal to or greater than 7.07 square feet (e.g., a single circular pipe system, with an

inside diameter of 36 inches or greater); and

- A single conveyance other than a pipe, such as an open channel ditch, which is associated with a drainage area of more than 50 acres.

Over the past four (4) years Ashland has located over 200 minor and major outfalls (minor and major) in the Little Scioto-Tygarts subbasin.

A map showing these outfalls and stream names are provided in the appendix.

## **Review of 2012 IR - List of 303(d) Streams**

The Clean Water Act requires States to assess and report current water quality conditions biennially. The Kentucky Division of Water (KDOW) is responsible for Section 305(b) and Section 303(d) reporting requirements for surface waters. The 2012 Integrated Report (IR) prepared by KDOW replaces the 2010 IR.

Section 305(b) lists all water quality assessment results for surface waters (streams, spring, ponds and reservoirs) in Kentucky. The 303(d) list of streams is a subset of the 305(b) list including all water streams not supporting one or more designated uses and requiring the development of a total maximum daily load (TMDL).

The 2012 IR – 303(d) list of streams was reviewed for Little Scioto-Tygarts subbasin within the City of Ashland and there is currently no impaired streams identified or TMDL monitoring planned.

## Dry Weather Visual Screening

In the summer and fall of 2014 the City of Ashland conducted dry weather inspections on over 200 outfalls (minor and major). The inspections included the following information:

- Outfall ID
- Northing, Easting and Elevation
- Photograph(s)
- Temperature
- Weather Condition
- Notation of Rainfall in the previous 24- and 48-hour period
- Type of Outfall (Ditch, Pipe, etc.)
- Size of Outfall
- Receiving stream
- Condition at Outfall
- Flow Observation
- Color Observation
- Turbidity and Floatables Observation
- Vegetation and Erosion Observation
- pH, Water Temperature and Ammonia Reading
- Illicit Discharge Determination
- Comments

Results of the dry weather screening results are provided on the attached spreadsheet. Approximately 16 sites indicated abnormal color, floatables, algae and oil sheen where there could be potential for illicit discharge. Some outfall sites show soil erosion around piped outfalls. Ashland is addressing these sites.

Screening parameters for the visual inspection of the outfalls were programmed in the geographical information system (GIS). The screening information was entered into the GPS handheld instrument during the screening of each outfall.

## **Monitoring Program**

Since there are no impaired streams identified in the 2012 IR 303(d) list or known water quality concerns, Ashland's proposed monitoring program will include conducting dry weather screening of minor and major outfalls once every permit cycle. The dry weather screening inspection may include some water sampling.

By including all outfalls land uses that include high density residential, commercial and industrial sites are included in the monitoring program.

If feedback on the detriment of a stream/outfall area or particular land use site is obtained from the public or observed through municipal operations more frequent visual inspections and possible sampling at major outfalls will be conducted on a case by case basis.

The core of Ashland's SWQMP will be to continue implementing structural and non-structural best management practices that address and mitigate pollutants in stormwater runoff associated with urbanization. These pollutants include sedimentation from construction sites, nutrient runoff (phosphorus and nitrogen) and metals, and oils and greases from vehicle traffic and parking lots.

Ashland's SWQMP will be revised if necessary based on the results of the monitoring program to make the overall program more effective in reducing or eliminating stormwater pollution.

## Glossary of Terms

“Best Management Practices” or “BMPs” means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control stormwater runoff.

“Illicit connection” means any connection to the municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to a KPDES permit, other than the KPDES permit for discharges from the municipal separate storm sewer, and discharges resulting from fire fighting activities.

“Illicit discharge” means any discharge to the municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a KPDES permit (other than the KPDES permit for discharges from the municipal separate storm sewer and discharges resulting from fire fighting activities).

“Municipal Separate Storm Sewer System” means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains): owned or operated by a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian Tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to waters of the United States.

“Point Source” means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agricultural lands or agricultural stormwater runoff.

“Stormwater” means stormwater runoff, snowmelt runoff, surface runoff and drainage.

“Stormwater Quality Management Plan” or “SWQMP” is the written plan that details the “Stormwater Quality Management Program”. The “Plan” is considered a single document, even though it actually consists of the six minimum control measures of the MS4 programs.

TMDL” is an acronym for “Total Maximum Daily Load”, a federally mandated program for impaired waters of the Commonwealth to determine the maximum assimilative capacity of a water for a specified pollutant and to allocate allowable pollutant loads to sources in the watershed.

“Waters of the Commonwealth” means and includes any and all rivers, streams, creeks, lakes, ponds, impounding reservoirs, springs, wells, marshes, and all other bodies of surface or underground water, natural or artificial, situated wholly or partly within or bordering upon the Commonwealth or within its

jurisdiction.

"Wet weather conveyances" are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality and for which channels are above the groundwater table and which do not support fish and aquatic life and are not suitable for drinking water supplies.



REI Consultants, Inc.  
PO Box 286  
Beaver, WV 25813  
TEL: 304.255.2500  
Website: www.reiclabs.com

**Improving the environment, one client at a time...**

3029-C Peters Creek Road  
Roanoke, VA 24019  
TEL: 540.777.1276

101 17th Street  
Ashland, KY 41101  
TEL: 606.393.5027

1557 Commerce Road, Suite 201  
Verona, VA 24482  
TEL: 540.248.0183

16 Commerce Drive  
Westover, WV 26501  
TEL: 304.241.5861

Friday, September 05, 2014

MR. MARION RUSSELL  
CITY OF ASHLAND  
PO BOX 1839  
ASHLAND, KY 41105-1839

TEL: (606) 327-2060  
FAX: (606) 327-2007

RE: STREAMS

Work Order #: 1408Q73

Dear MR. MARION RUSSELL:

REI Consultants, Inc. received 4 sample(s) on 8/22/2014 for the analyses presented in the following report.

Sincerely,

Joy Castle

Project Manager



---

**Client:** CITY OF ASHLAND

**Project:** STREAMS

---

The analytical results presented in this report were produced using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. Verification of required sample preservation (as required) is recorded on associated laboratory logs. Any deviation from compliance or method modification is identified within the body of this report by a qualifier footnote which is defined at the bottom of this page.

All sample results for solid samples are reported on an "as-received" wet weight basis unless otherwise noted.

Results reported for sums of individual parameters, such as TTHM and HAA5, may vary slightly from the sum of the individual parameter results, due to rounding of individual results, as required by EPA.

The test results in this report meet all NELAP (and/or VELAP) requirements for parameters except as noted in this report.

Please note if the sample collection time is not provided on the Chain of Custody, the default recording will be 0:00:00. This may cause some tests to be apparently analyzed out of hold.

All tests performed by REIC Service Centers are designated by an annotation on the test code. All other tests were performed by REIC's Main Laboratory in Beaver, WV.

This report may not be reproduced, except in full, without the written approval of REIC.

**DEFINITIONS:**

MCL: Maximum Contaminant Level

MDL: Method Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Mg/Kg or mg/L: Units of part per million (PPM) - milligram per Kilogram (weight/weight) or milligram per Liter (weight/volume).

NA: Not Applicable

ND: Not Detected at the PQL or MDL

PQL: Practical Quantitation Limit; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below PQL are reported either as ND or as a number with a "J" qualifier.

Qual: Qualifier that applies to the analyte reported.

TIC: Tentatively Identified Compound, Estimated Concentration denoted by "J" qualifier.

Ug/Kg or ug/L: Units of part per billion (PPB) - microgram per kilogram (weight/weight) or microgram per liter (weight/volume).

**QUALIFIERS:**

X: Reported value exceeds required MCL

B: Analyte detected in the associated Method Blank at a concentration > 1/2 the PQL

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H: Holding time for preparation or analysis has been exceeded.

J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the MDL. The result reported is an estimate.

S: % REC (% recovery) exceeds control limits

**CERTIFICATIONS:**

Beaver, WV: WVDHHR 00412CM, WVDEP 060, VADCLS 00281, KYDEP 90039, TNDEQ TN02926, NCDWQ 466, PADEP 68-00839, VADCLS (VELAP) 460148

Bioassay (Beaver, WV): WVDEP 060, VADCLS(VELAP) 460148, PADEP 68-00839

Roanoke, VA: VADCLS(VELAP) 460150

Verona, VA: VADCLS(VELAP) 460151

Ashland, KY: KYDEP 00094, WVDEP 389

Morgantown, WV: WVDHHR 003112M, WVDEP 387

# REI Consultants, Inc. - Analytical Report

WO#: 1408Q73

Date Reported: 9/5/2014

<b>Client:</b>	CITY OF ASHLAND	<b>Collection Date:</b>	8/21/2014 12:28:00 PM
<b>Project:</b>	STREAMS	<b>Date Received:</b>	8/22/2014
<b>Lab ID:</b>	1408Q73-01A	<b>Matrix:</b>	Liquid
<b>Client Sample ID:</b>	1 KEYS	<b>Site ID:</b>	

Analysis	Result	MDL	PQL	MCL	Qual	Units	Date Analyzed	NELAP
<b>E-COLI BY MPN-ASHLAND</b>			<b>Method: COLILERT 18</b>			<b>Analyst: AR</b>		
E-Coli	365.4	NA	1	NA		MPN/100mL	8/22/2014 10:13 AM	
<b>METALS BY ICP</b>			<b>Method: EPA 200.7 Rev. 4.4 (1994)</b>			<b>Analyst: CGW</b>		
Potassium	5.57	0.050	0.500	NA		mg/L	9/3/2014 6:33 PM	PA/VA
<b>RESIDUAL CHLORINE - Lab Test, Hold Time Expired</b>			<b>Method: SM4500-CI-G-2000</b>			<b>Analyst: JH</b>		
Chlorine, Total Residual	157	40	100	NA		µg/L	8/26/2014 1:00 PM	PA
<b>SURFACTANTS</b>			<b>Method: SM5540 C-2000</b>			<b>Analyst: CC</b>		
MBAS (calibrated on MW340 LAS)	ND	0.0250	0.0625	NA		mg/L	8/22/2014 6:44 PM	PA/VA
<b>TURBIDITY</b>			<b>Method: EPA 180.1, Rev. 2.0 (1993)</b>			<b>Analyst: CC</b>		
Turbidity	1.92	0.20	0.50	NA		NTU	8/22/2014 5:57 PM	PA/VA
<b>AMMONIA NITROGEN</b>			<b>Method: EPA 350.1, Rev.2. (1993)</b>			<b>Analyst: BS</b>		
Nitrogen, Ammonia (As N)	0.16	0.04	0.10	NA		mg/L	8/25/2014 11:49 AM	PA/VA
<b>CONDUCTIVITY</b>			<b>Method: SM2510 B - 1997</b>			<b>Analyst: SF</b>		
Specific Conductivity	559	NA	NA	NA		µmhos/cm	8/23/2014 10:30 AM	PA/VA
<b>pH - LAB TEST, HOLD TIME EXPIRED</b>			<b>Method: SM4500-H+-B-2000</b>			<b>Analyst: DSD</b>		
pH	7.46	NA	NA	NA		SU	8/27/2014 9:30 AM	PA

# REI Consultants, Inc. - Analytical Report

WO#: 1408Q73

Date Reported: 9/5/2014

<b>Client:</b>	CITY OF ASHLAND	<b>Collection Date:</b>	8/21/2014 1:16:00 PM
<b>Project:</b>	STREAMS	<b>Date Received:</b>	8/22/2014
<b>Lab ID:</b>	1408Q73-02A	<b>Matrix:</b>	Liquid
<b>Client Sample ID:</b>	2 BRUBAKER	<b>Site ID:</b>	

Analysis	Result	MDL	PQL	MCL	Qual	Units	Date Analyzed	NELAP
<b>E-COLI BY MPN-ASHLAND</b>			<b>Method: COLILERT 18</b>			<b>Analyst: AR</b>		
E-Coli	686.7	NA	1	NA		MPN/100mL	8/22/2014 10:13 AM	
<b>METALS BY ICP</b>			<b>Method: EPA 200.7 Rev. 4.4 (1994)</b>			<b>Analyst: CGW</b>		
Potassium	4.18	0.050	0.500	NA		mg/L	9/3/2014 6:36 PM	PA/VA
<b>RESIDUAL CHLORINE - Lab Test, Hold Time Expired</b>			<b>Method: SM4500-CI-G-2000</b>			<b>Analyst: JH</b>		
Chlorine, Total Residual	ND	40	100	NA		µg/L	8/26/2014 1:00 PM	PA
<b>SURFACTANTS</b>			<b>Method: SM5540 C-2000</b>			<b>Analyst: CC</b>		
MBAS (calibrated on MW340 LAS)	ND	0.0250	0.0625	NA		mg/L	8/22/2014 6:44 PM	PA/VA
<b>TURBIDITY</b>			<b>Method: EPA 180.1, Rev. 2.0 (1993)</b>			<b>Analyst: CC</b>		
Turbidity	2.17	0.20	0.50	NA		NTU	8/22/2014 5:57 PM	PA/VA
<b>AMMONIA NITROGEN</b>			<b>Method: EPA 350.1, Rev.2. (1993)</b>			<b>Analyst: BS</b>		
Nitrogen, Ammonia (As N)	ND	0.04	0.10	NA		mg/L	8/25/2014 11:50 AM	PA/VA
<b>CONDUCTIVITY</b>			<b>Method: SM2510 B - 1997</b>			<b>Analyst: SF</b>		
Specific Conductivity	375	NA	NA	NA		µmhos/cm	8/23/2014 10:30 AM	PA/VA
<b>pH - LAB TEST, HOLD TIME EXPIRED</b>			<b>Method: SM4500-H+-B-2000</b>			<b>Analyst: DSD</b>		
pH	8.11	NA	NA	NA		SU	8/27/2014 9:30 AM	PA

# REI Consultants, Inc. - Analytical Report

WO#: 1408Q73

Date Reported: 9/5/2014

<b>Client:</b>	CITY OF ASHLAND	<b>Collection Date:</b>	8/21/2014 12:43:00 PM
<b>Project:</b>	STREAMS	<b>Date Received:</b>	8/22/2014
<b>Lab ID:</b>	1408Q73-03A	<b>Matrix:</b>	Liquid
<b>Client Sample ID:</b>	3 LONG BRANCH	<b>Site ID:</b>	

Analysis	Result	MDL	PQL	MCL	Qual	Units	Date Analyzed	NELAP
<b>E-COLI BY MPN-ASHLAND</b>			<b>Method: COLILERT 18</b>			<b>Analyst: AR</b>		
E-Coli	461.1	NA	1	NA		MPN/100mL	8/22/2014 10:13 AM	
<b>METALS BY ICP</b>			<b>Method: EPA 200.7 Rev. 4.4 (1994)</b>			<b>Analyst: CGW</b>		
Potassium	4.49	0.050	0.500	NA		mg/L	9/3/2014 6:39 PM	PAVA
<b>RESIDUAL CHLORINE - Lab Test, Hold Time Expired</b>			<b>Method: SM4500-CI-G-2000</b>			<b>Analyst: JH</b>		
Chlorine, Total Residual	48	40	100	NA	J	µg/L	8/26/2014 1:00 PM	PA
<b>SURFACTANTS</b>			<b>Method: SM5540 C-2000</b>			<b>Analyst: CC</b>		
MBAS (calibrated on MW340 LAS)	ND	0.0250	0.0625	NA		mg/L	8/22/2014 6:44 PM	PAVA
<b>TURBIDITY</b>			<b>Method: EPA 180.1, Rev. 2.0 (1993)</b>			<b>Analyst: CC</b>		
Turbidity	3.58	0.20	0.50	NA		NTU	8/22/2014 5:57 PM	PAVA
<b>AMMONIA NITROGEN</b>			<b>Method: EPA 350.1, Rev.2. (1993)</b>			<b>Analyst: BS</b>		
Nitrogen, Ammonia (As N)	ND	0.04	0.10	NA		mg/L	8/25/2014 11:50 AM	PAVA
<b>CONDUCTIVITY</b>			<b>Method: SM2510 B - 1997</b>			<b>Analyst: SF</b>		
Specific Conductivity	540	NA	NA	NA		µmhos/cm	8/23/2014 10:30 AM	PAVA
<b>pH - LAB TEST, HOLD TIME EXPIRED</b>			<b>Method: SM4500-H+-B-2000</b>			<b>Analyst: DSD</b>		
pH	7.71	NA	NA	NA		SU	8/27/2014 9:30 AM	PA

# REI Consultants, Inc. - Analytical Report

WO#: 1408Q73

Date Reported: 9/5/2014

<b>Client:</b>	CITY OF ASHLAND	<b>Collection Date:</b>	8/21/2014 12:56:00 PM
<b>Project:</b>	STREAMS	<b>Date Received:</b>	8/22/2014
<b>Lab ID:</b>	1408Q73-04A	<b>Matrix:</b>	Liquid
<b>Client Sample ID:</b>	4 LITTLE HOODS	<b>Site ID:</b>	

Analysis	Result	MDL	PQL	MCL	Qual	Units	Date Analyzed	NELAP
<b>E-COLI BY MPN-ASHLAND</b>			<b>Method: COLILERT 18</b>			<b>Analyst: AR</b>		
E-Coli	193.5	NA	1	NA		MPN/100mL	8/22/2014 10:13 AM	
<b>METALS BY ICP</b>			<b>Method: EPA 200.7 Rev. 4.4 (1994)</b>			<b>Analyst: CGW</b>		
Potassium	5.66	0.050	0.500	NA		mg/L	9/3/2014 6:43 PM	PAVA
<b>RESIDUAL CHLORINE - Lab Test, Hold Time Expired</b>			<b>Method: SM4500-CI-G-2000</b>			<b>Analyst: JH</b>		
Chlorine, Total Residual	295	200	500	NA	J	µg/L	8/26/2014 1:00 PM	PA
<b>SURFACTANTS</b>			<b>Method: SM5540 C-2000</b>			<b>Analyst: CC</b>		
MBAS (calibrated on MW340 LAS)	ND	0.0250	0.0625	NA		mg/L	8/22/2014 6:44 PM	PAVA
<b>TURBIDITY</b>			<b>Method: EPA 180.1, Rev. 2.0 (1993)</b>			<b>Analyst: CC</b>		
Turbidity	5.57	0.20	0.50	NA		NTU	8/22/2014 5:57 PM	PAVA
<b>AMMONIA NITROGEN</b>			<b>Method: EPA 350.1, Rev.2. (1993)</b>			<b>Analyst: BS</b>		
Nitrogen, Ammonia (As N)	ND	0.04	0.10	NA		mg/L	8/25/2014 11:53 AM	PAVA
<b>CONDUCTIVITY</b>			<b>Method: SM2510 B - 1997</b>			<b>Analyst: SF</b>		
Specific Conductivity	818	NA	NA	NA		µmhos/cm	8/23/2014 10:30 AM	PAVA
<b>pH - LAB TEST, HOLD TIME EXPIRED</b>			<b>Method: SM4500-H+-B-2000</b>			<b>Analyst: DSD</b>		
pH	8.05	NA	NA	NA		SU	8/27/2014 9:30 AM	PA

# CHAIN OF CUSTODY RECORD



**Research Environmental & Industrial Consultants, Inc.**

**MAIN LABORATORY & CORPORATE HEADQUARTERS:**

P.O. Box 286 • 225 Industrial Park Rd, Beaver, WV 25813  
800-999-0105 • 304-255-2500 • www.reiclabs.com

**MID-OHIO VALLEY Service Center**

101 17th Street  
Ashland, KY 41101  
606-393-5027

**SHENANDOAH Service Center**

1557 Commerce Rd., Ste 201  
Verona, VA 24482  
540-248-0183

**ROANOKE Service Center**

3029-C Peters Creek Rd  
Roanoke, VA 24019  
540-777-1276

**MORGANTOWN Service Center**

16 Commerce Drive  
Westover, WV 26501  
304-241-5861

## SAMPLE LOG & ANALYSIS REQUEST

### TURNAROUND TIME

NORMAL

5 DAY

3 DAY

2 DAY

1 DAY

\*Rush work needs prior laboratory approval and will incur additional charges

### ANALYSIS & METHOD REQUESTED

Ammonia  
Chlorine  
Cond. Turb  
PH  
MBAS  
K Spect lecoli (ecdi. MPN)  
8/21/14  
Run in Ashland

SAMPLE ID	No. & Type of Containers	Sampling Date/Time	Matrix	Sample Comp/Grab	ICED?	Y	N
1 Keys	8/21/14 12:38p	L	GA	3	0	0	2
2 Brubaker	8/21/14 1:16p	L	GA	--	--	--	--
3 Long Branch	8/21/14 12:43p	L	GA	--	--	--	--
4 Little Hoods	8/21/14 12:56p	L	GA	--	--	--	--

ENTER PRESERVATIVE CODE:  
 0 None  
 1 Hydrochloric Acid  
 2 Nitric Acid  
 3 Sulfuric Acid  
 4 Sodium Thiosulfate  
 5 Sodium Hydroxide  
 6 Zinc Acetate  
 7 EDTA  
 8 Ascorbic Acid

### COMMENTS:

KY-EC-L-MPN  
 8/21/14  
 Run in Ashland

All analytical requests are subject to REIC's Standard Terms and Conditions.

Temperature at arrival: 10°C

Containers provided by: [ ] REIC [ ] Client

FAX RESULTS  EMAIL RESULTS

SHIPMENT  Hand Delivered  Carrier  UPS  FEDEX  USPS  OTHER

Relinquished by (signature): *[Signature]* Date/Time: 8/21/14 1:32

Received by (signature): *[Signature]* Date/Time: 8-21-14 1:30

403837

City of Ashland

Client: \_\_\_\_\_ PO # \_\_\_\_\_  
 Contact Person: W. Russell Phone \_\_\_\_\_  
 QUOTE # \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_  
 Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Billing Address (if different) \_\_\_\_\_  
 Site ID & State \_\_\_\_\_ Project ID \_\_\_\_\_ Sampler COA







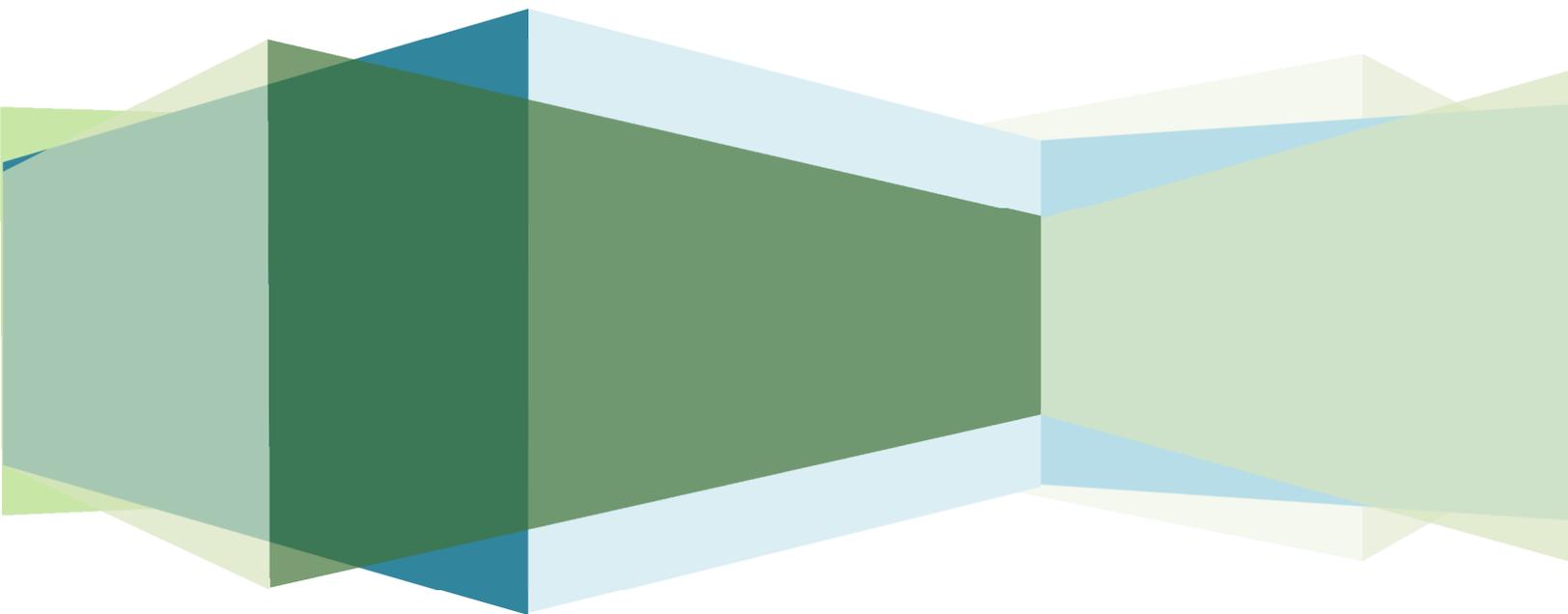




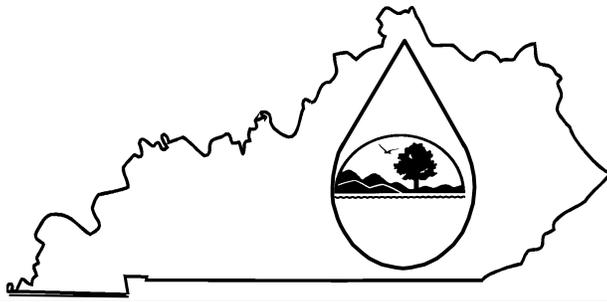
# Appendix “D”

## Illicit Discharge & Elimination

- KPDES CSO Annual Report for Publically Owned Treatment Works







# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

## Combined Sewer Overflow (CSO) Annual Report For Publicly Owned Treatment Works

Submission of a Combined Sewer Overflow (CSO) Annual Report is a required condition of your Kentucky Pollutant Discharge Elimination System (KPDES) permit(s). The 2018 Annual Report is for the entire 2018 calendar year (January 1 – December 31).

A typed and complete CSO Annual Report must be received by March 1, 2019. All entries must be filled out completely, or the report will be considered deficient. It may be submitted as a single .pdf file through the DEP/DOW ePortal at <https://dep.gateway.ky.gov/ePortal/DesktopDefault.aspx> as submittal type of “DOW CSO Annual Report”. If you have any questions regarding submitting the report through the ePortal, send an email to the ePortal helpdesk at [DEPTempoSA@ky.gov](mailto:DEPTempoSA@ky.gov). A paper report may also be submitted to:

Division of Water  
Surface Water Permits  
300 Sower Blvd.  
Frankfort, KY 40601

Failure to submit the report by the deadline may result in enforcement action, and the control authority may be considered to be in significant noncompliance.

Should you have any questions, contact Todd Powers at 502-782-6434 or [todd.powers@ky.gov](mailto:todd.powers@ky.gov).

### I. PERMITTEE INFORMATION

A. Name of Permittee:  
City of Ashland

B. Wastewater Treatment Plant Name:	KPDES Number:	County:
Ashland Wastewater Treatment Plant	KY0022373	Boyd

### II. CSO PROGRAM CONTACT INFORMATION

A. Name: Mr. Ryan Eastwood, P.E, LEED® AP

B. Title: City Engineer & Capital Programs Director

C. Phone: 606-327-2008

D. E-mail Address: [reastwood@ashlandky.gov](mailto:reastwood@ashlandky.gov)

E. Mailing Address:

1. Street: 1700 Greenup Avenue, Suite 408

2. City: Ashland

3. State: KY

4. Zip Code: 41105



#### IV. NINE MINIMUM CONTROLS

A. For each Nine Minimum Control, list all of the activities that were implemented during the reporting period. Describe the benefits achieved by implementing each activity for specific CSOs and/or system-wide.

<i>Nine Minimum Control</i>	<i>Activities Implemented During the Reporting Period</i>	<i>Descriptions of Benefits Achieved</i>
Proper Operation (O&M) and Maintenance Programs	Continued to train new employees and retrain existing employees on the already developed O&M manuals, operation procedures, and documents.	Helped reduce the magnitude, frequency, and duration of CSOs as this has allowed the system to perform as effectively as possible.
Maximize Use of Collection System for Storage	City has already made minor modifications to the combined sewer system (CSS) to increase in-system storage as part of the early action projects of the Long-Term Control Plan (LTCP). City personnel continued to look for opportunities to make minor modifications to the CSS to maximize in-system storage. The City's maintenance activities included the removal and prevention of accumulations of debris and sediment that restricts flow.	These activities have helped in the reduction of the magnitude, frequency, and duration of CSOs that flow untreated into receiving waters from the City's CSS.
Pretreatment Program to Minimize CSO Impacts	The City no longer receives hauled waste during wet weather.	This has freed up capacity at the City's wastewater treatment plant (WWTP) to treat more flows during wet weather events.
Maximize Flow to WWTP for Treatment	The City has already installed three new manholes on Greenup Avenue trunk sewer to intercept flows before they reach the 18th Street and 19th street CSO regulators and overflow. Flow is conveyed to 26th Street Pump Station (PS) and is pumped directly to the WWTP. LTCP CSO abatement projects are designed to maximize flow to the WWTP.	The installation of the manholes has been very beneficial, especially during low-intensity rainfall events when there is capacity available in the Greenup Avenue interceptor but that the regulators limit the flow that can be discharged from these trunk sewers to the Greenup Avenue interceptor. By intercepting these flows, the City is maximizing flow to the WWTP. In addition, all the completed CSO LTCP projects have maximized flow to the WWTP allowing the City to capture over 90 percent of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis for most years.
No Dry Weather Overflows	City personnel visit all CSO regulator sites daily to identify dry weather overflows (DWOs). Data collected by CSO flow meters are also reviewed to identify DWOs. Any DWOs identified are corrected and Kentucky Division of Water (KDOW) is notified of the overflow and the corrective action taken.	These steps have helped the City ensure that the CSS does not overflow during dry weather and, if it does, it is identified and corrected promptly.
Control of Solids and Floatables in CSO Discharges	The City's street sweeping routes have been modified to focus more on the CSS. The City also continues to use sewer bill inserts to educate the public on CSOs.	This action has helped reduce visible floatables and solids that discharge to the Ohio River through the City's CSS.
Pollution Prevention to Minimize CSO Impacts	The City's street sweeping routes and solid waste collection have been modified to focus more on the CSS.	This has helped the City minimize the opportunity of contaminants from entering the CSS and thus the Ohio River via CSOs.
Public Notification of CSO Occurrences and Impacts	City-maintained warning signs installed on all outfalls. Used sewer bill inserts to educate the public on CSOs.	City has been able to educate the public on the possible health and environmental effects of CSOs. This has also helped the City in gaining buy-in from the public when it came to rate increases to fund the LTCP projects.

Monitoring for CSO Impacts and Performance of CSO Controls	City has already installed flow meters on all CSO outfalls and rain gauges at three strategic locations within the collection system. The City continued to use data collected by the flow meters to document CSO discharge information.	The CSO data being collected by the flow meters continuously has helped the City measure the effectiveness of the CSO control projects already completed by the City as part of the CSO LTCP.
B. For any activities in the approved NMC Compliance Report that were not implemented during the reporting period, please explain why the activities were not implemented.		
C. Provide additional details of any activities listed in the table that were not in the approved NMC Compliance Report.		

**Notes:**

1. "CSO" means a Combined Sewer Overflow that is a permitted outfall listed on the active KPDES permit and in EPA's ICIS program as a Permitted Feature.

**Comments:**

**V. LONG-TERM CONTROL PLAN (LTCP)**

A. For each CSO control project included in the approved Long Term Control Plan (and any subsequent modifications to the LTCP), list the project name and ID number and completion date as listed in the approved LTCP, actions on the project during the reporting period, actions planned to be taken on the project during the next reporting period, and status of the project at the end of the reporting period (for example, Future, Design, Construction, Completed with completion date).

<i>LTCP Project ID and Name</i>	<i>Approved Completion Date</i>	<i>Actions Taken During Reporting Period</i>	<i>Actions Planned During Next Reporting Period</i>	<i>Status at End of Reporting Period</i>
03050–Roberts Drive and 6th Street PS and Force Main Improvements	12/31/2012	None	None	Completed
03050–Tenth Street CSO Regulator Modifications	12/31/2012	None	None	Completed
03060–37th Street PS and Force Main Improvements and 34th Street CSO Regulator Modifications Project	12/31/2014	None	None	Completed
03070–Greenup Avenue Interceptor Manholes	12/31/2014	None	None	Completed
03200–Tannery Line and 29th Street Stormwater Separation	12/31/2017	Construction	Completion	Construction
03210–Improve WWTP to Treat 22 million gallons per day (MGD) peak hourly flow (PHF) and Provide 3.5 million gallons (MG) of Wet Weather Storage	12/31/2025	Started Engineer Procurement Process	Design	Engineer Procurement Process On-going
03220–10th Street PS Force Main Modification Project	12/31/2025	Started Engineer Procurement Process	Design	Engineer Procurement Process On-going
03230–26th Street CSO Regulator Modifications Project	12/31/2025	Started Engineer Procurement Process	Design	Engineer Procurement Process On-going
03230–26th Street PS Improvements Project	12/31/2025	Started Engineer Procurement Process	Design	Engineer Procurement Process On-going

B. Describe any changes in the project name, description, scope, or completion date from the approved LTCP. Changes to the project from what is in the approved LTCP and modifications require written notification to KDEP, and may require written approval.

C. Attach a copy of the project table and Gantt chart, if available, from the approved LTCP.

**Notes:**

1. “CSO” means a Combined Sewer Overflow that is a permitted outfall listed on the active KPDES permit and in EPA’s ICIS program as a Permitted Feature.

**Comments:**

A copy of the project table from the approved LTCP is attached.



## VI. CSO DISCHARGES

### B. Individual CSO Discharge Events

List each discharge event that occurred during the reporting period for each CSO listed in section III.A of this report. Include all discharges that occurred as a result of precipitation events.

<i>CSO No.<sup>3</sup></i>	<i>Start and Stop Date/Time</i>	<i>Duration (hours:minutes)</i>	<i>Volume Discharged (gallons or million gallons)</i>	<i>Cause</i>
008	1/8/2018	24	11,971	Rain Event
002	1/8/2018	24	54,793	Rain Event
010	01/12/2018	24	106,136	Rain Event
009	1/12/2018	24	1,548	Rain Event
008	01/11/2018 - 01/12/2018	48	1,057,368	Rain Event
002	1/11/2018 - 1/13/2018	72	890,520	Rain Event
004	01/12/2018 - 01/13/2018	48	1,772,331	Rain Event
014	01/08/2018 - 01/13/2018	144	15,573	Rain Event
008	1/20/2018	24	1,524	Rain Event
002	1/20/2018	24	17,073	Rain Event
009	1/23/2018	24	76,139	Rain Event
008	1/23/2018	24	252,019	Rain Event
002	1/23/2018	24	239,234	Rain Event
004	1/23/2018	24	728,703	Rain Event
014	01/19/2018 - 01/23/2018	120	46,964	Rain Event
014	1/25/2018	24	136	Rain Event
014	1/27/2018	24	15,381	Rain Event
010	01/28/2018	24	503,673	Rain Event
009	01/27/2018 - 01/28/2018	48	248,240	Rain Event
008	01/27/2018 - 01/28/2018	48	1,252,631	Rain Event
002	01/27/2018 - 01/28/2018	48	888,225	Rain Event
004	01/28/2018 - 01/29/2018	48	3,951,560	Rain Event
008	02/01/2018	24	1,327	Rain Event
002	02/01/2018	24	96,086	Rain Event
008	02/01/2018 - 02/02/2018	48	34,773	Rain Event
014	02/01/2018 - 02/02/2018	48	19,689	Rain Event
012	2/4/2018	24	98,852	Rain Event
009	2/4/2018	24	16	Rain Event
008	2/4/2018	24	79,473	Rain Event
004	2/4/2018	24	163,016	Rain Event
002	02/04/2018 - 02/05/2018	48	155,596	Rain Event
014	02/04/2018 - 02/05/2018	48	15,044	Rain Event
012	2/7/2018	24	16,592	Rain Event
010	2/7/2018	24	1,096,391	Rain Event
009	2/7/2018	24	310,746	Rain Event
008	2/7/2018	24	2,087,392	Rain Event
002	2/7/2018	24	1,275,238	Rain Event
014	02/07/2018 - 02/08/2018	48	57,440	Rain Event
004	02/07/2018 - 02/09/2018	72	6,508,651	Rain Event
012	2/11/2018	24	45,013	Rain Event
009	2/11/2018	24	14,148	Rain Event
010	02/11/2018 - 02/12/2018	48	570,003	Rain Event
008	02/11/2018 - 02/12/2018	48	37,096	Rain Event
014	02/10/2018 - 02/12/2018	72	93,960	Rain Event
008	2/14/2018	24	15,405	Rain Event
012	02/16/2018 - 02/18/2018	72	605,347	Rain Event
009	02/16/2018 - 02/22/2018	168	521,932	Rain Event
002	02/10/2018 - 02/22/2018	312	7,434,682	Rain Event
012	02/24/2018 - 02/25/2018	48	1,443,000	Rain Event
010	02/16/2018 - 02/27/2018	288	5,425,480	Rain Event
009	2/24/2018	144	74,781	Rain Event
008	02/16/2018 - 03/02/2018	360	5,745,035	Rain Event
002	02/24/2018 - 03/02/2018	168	5,500,888	Rain Event

004	02/11/2018 - 03/05/2018	552	48,278,883	Rain Event
014	02/14/2018 - 03/08/2018	552	2,537,669	Rain Event
010	3/1/2018	24	205,599	Rain Event
008	3/10/2018	24	1,479	Rain Event
002	3/10/2018	24	2,770	Rain Event
014	3/10/2018	24	10,036	Rain Event
008	3/13/2018	24	734	Rain Event
014	03/12/2018 - 03/13/2018	48	3,308	Rain Event
009	3/17/2018	24	133	Rain Event
008	3/17/2018	24	59,896	Rain Event
002	3/17/2018	24	42,496	Rain Event
014	3/17/2018	24	2,804	Rain Event
009	3/20/2018	24	104	Rain Event
010	03/21/2018 - 03/22/2018	48	85,194	Rain Event
008	03/19/2018 - 03/22/2018	96	182,963	Rain Event
002	03/19/2018 - 03/22/2018	96	385,400	Rain Event
014	03/19/2018 - 03/22/2018	96	10,382	Rain Event
008	3/24/2018	24	3,149	Rain Event
002	3/24/2018	24	12,641	Rain Event
014	03/24/2018 - 03/25/2018	48	4,849	Rain Event
012	3/29/2018	24	283,318	Rain Event
010	03/28/2018 - 03/30/2018	72	1,704,808	Rain Event
009	03/27/2018 - 03/30/2018	96	100,522	Rain Event
008	03/27/2018 - 03/30/2018	96	726,592	Rain Event
002	03/27/2018 - 03/30/2018	96	2,434,749	Rain Event
014	03/27/2018 - 03/31/2018	216	83,992	Rain Event
004	03/28/2018 - 03/31/2018	96	10,090,356	Rain Event
009	04/01/2018 - 04/02/2018	48	90,304	Rain Event
009	4/4/2018	24	6,609	Rain Event
012	4/5/2018	24	8,287	Rain Event
010	04/01/2018 - 04/05/2018	120	898,222	Rain Event
008	04/01/2018 - 04/05/2018	120	764,615	Rain Event
010	4/7/2018	24	128	Rain Event
009	4/7/2018	24	1,596	Rain Event
008	4/8/2018	24	19,479	Rain Event
002	04/01/2018 - 04/08/2018	192	2,076,337	Rain Event
004	04/02/2018 - 04/09/2018	192	16,477,462	Rain Event
014	04/06/2018 - 04/10/2018	120	11,852	Rain Event
009	4/15/2018	24	88,895	Rain Event
008	4/15/2018	24	738,193	Rain Event
008	4/15/2018	24	110,995	Rain Event
012	04/15/2018 - 04/16/2018	48	10,288	Rain Event
014	04/14/2018 - 04/16/2018	72	46,278	Rain Event
010	04/15/2018 - 04/17/2018	72	931,764	Rain Event
008	4/17/2018	24	521	Rain Event
002	04/15/2018 - 04/17/2018	72	876,537	Rain Event
010	4/19/2018	24	917	Rain Event
009	04/18/2018 - 04/19/2018	48	1,076	Rain Event
002	4/19/2018	24	1,693	Rain Event
014	04/18/2018 - 04/19/2018	48	346	Rain Event
008	04/19/2018 - 04/20/2018	48	27,304	Rain Event
004	04/15/2018 - 04/20/2018	144	10,718,960	Rain Event
009	4/24/2018	24	111	Rain Event
010	04/24/2018 - 04/25/2018	48	131,749	Rain Event
008	04/24/2018 - 04/25/2018	48	40,380	Rain Event
008	04/24/2018 - 04/25/2018	48	1,995	Rain Event
002	04/24/2018 - 04/25/2018	48	284,958	Rain Event
004	04/24/2018 - 04/25/2018	48	1,090,913	Rain Event
014	04/23/2018 - 04/25/2018	72	42,901	Rain Event

009	5/4/2018	24	1,007	Rain Event
008	5/4/2018	24	7,997	Rain Event
012	05/05/2018 - 05/06/2018	48	258,312	Rain Event
009	5/6/2018	24	551,227	Rain Event
008	05/04/2018 - 05/06/2018	72	1,966,517	Rain Event
008	5/6/2018	24	229,801	Rain Event
006	5/6/2018	24	8,134	Rain Event
010	05/04/2018 - 05/07/2018	96	1,869,691	Rain Event
002	05/04/2018 - 05/07/2018	96	1,011,231	Rain Event
004	05/05/2018 - 05/07/2018	72	5,726,777	Rain Event
014	05/04/2018 - 05/07/2018	96	123,130	Rain Event
008	5/10/2018	24	142,231	Rain Event
008	5/10/2018	24	1,081	Rain Event
002	5/10/2018	24	99,957	Rain Event
006	5/10/2018	24	7,782	Rain Event
014	5/10/2018	24	3,452	Rain Event
009	5/19/2018	24	16,914	Rain Event
008	5/19/2018	24	144,630	Rain Event
008	5/19/2018	24	19,181	Rain Event
009	05/21/2018 - 05/22/2018	48	69,954	Rain Event
008	05/21/2018 - 05/22/2018	48	191,332	Rain Event
008	05/21/2018 - 05/22/2018	48	125,870	Rain Event
010	05/19/2018 - 05/23/2018	120	446,371	Rain Event
002	05/19/2018 - 05/23/2018	120	541,585	Rain Event
014	05/18/2018 - 05/23/2018	144	39,061	Rain Event
009	5/28/2018	24	344	Rain Event
008	5/28/2018	24	36,911	Rain Event
008	5/28/2018	24	5,817	Rain Event
006	5/28/2018	24	2,151	Rain Event
012	05/28/2018 - 05/31/2018	96	426,443	Rain Event
010	05/27/2018 - 05/31/2018	120	603,107	Rain Event
009	05/30/2018 - 05/31/2018	48	67,407	Rain Event
008	05/30/2018 - 05/31/2018	48	326,667	Rain Event
008	05/30/2018 - 05/31/2018	48	116,830	Rain Event
002	05/27/2018 - 05/31/2018	120	878,223	Rain Event
004	05/28/2018 - 05/31/2018	96	1,439,901	Rain Event
010	6/1/2018	24	173,437	Rain Event
009	6/1/2018	24	3,334	Rain Event
008	6/1/2018	24	115,538	Rain Event
008	6/1/2018	24	1,217	Rain Event
002	6/1/2018	24	109,987	Rain Event
009	6/12/2018	24	94,957	Rain Event
008	06/11/2018 - 06/12/2018	48	405,247	Rain Event
008	6/12/2018	24	55,738	Rain Event
014	6/12/2018	24	19,472	Rain Event
010	06/12/2018 - 06/13/2018	48	301,092	Rain Event
002	06/12/2018 - 06/13/2018	48	369,507	Rain Event
004	06/12/2018 - 06/13/2018	48	840,672	Rain Event
010	6/19/2018	24	98,438	Rain Event
009	6/19/2018	24	228,124	Rain Event
008	6/19/2018	24	219,127	Rain Event
008	6/19/2018	24	142,160	Rain Event
002	6/19/2018	24	99,105	Rain Event
014	06/17/2018 - 06/19/2018	72	7,385	Rain Event
010	06/21/2018 - 06/22/2018	48	268,043	Rain Event
009	06/21/2018 - 06/22/2018	48	60,880	Rain Event
008	06/21/2018 - 06/22/2018	48	591,467	Rain Event
008	06/21/2018 - 06/22/2018	48	119,182	Rain Event
002	06/21/2018 - 06/22/2018	48	470,852	Rain Event

004	06/21/2018 - 06/22/2018	48	705,387	Rain Event
008	6/24/2018	24	3,009	Rain Event
009	06/24/2018 - 06/25/2018	48	97,333	Rain Event
012	6/27/2018	24	2,818	Rain Event
010	06/24/2018 - 06/27/2018	96	189,110	Rain Event
008	6/27/2018	24	131,141	Rain Event
002	06/24/2018 - 06/27/2018	96	219,470	Rain Event
006	06/26/2018 - 06/27/2018	48	4,412	Rain Event
009	06/27/2018 - 06/28/2018	48	189,486	Rain Event
008	06/24/2018 - 06/28/2018	120	393,300	Rain Event
014	06/21/2018 - 06/28/2018	192	34,686	Rain Event
009	7/1/2018	24	57,834	Rain Event
008	06/30/2018 - 07/01/2018	48	208,208	Rain Event
010	7/6/2018	24	972,329	Rain Event
009	7/6/2018	24	455,849	Rain Event
008	7/6/2018	24	571,070	Rain Event
008	7/6/2018	24	300,508	Rain Event
002	7/6/2018	24	17,568	Rain Event
004	7/6/2018	24	647,947	Rain Event
014	07/01/2018 - 07/07/2018	168	15,634	Rain Event
009	7/16/2018	24	11,720	Rain Event
008	07/16/2018 - 07/17/2018	48	28,193	Rain Event
009	7/20/2018	24	77,459	Rain Event
008	7/20/2018	24	364,929	Rain Event
008	7/20/2018	24	124,205	Rain Event
012	7/22/2018	24	1,604	Rain Event
008	7/22/2018	24	464,738	Rain Event
008	7/22/2018	24	192,650	Rain Event
006	7/22/2018	24	4,426	Rain Event
010	07/20/2018 - 07/23/2018	96	1,546,017	Rain Event
004	07/20/2018 - 07/23/2018	96	5,269,053	Rain Event
009	07/22/2018 - 07/24/2018	72	484,320	Rain Event
008	7/24/2018	24	3,705	Rain Event
002	07/20/2018 - 07/24/2018	120	1,217,901	Rain Event
012	7/27/2018	24	66,385	Rain Event
009	7/27/2018	24	242	Rain Event
012	7/31/2018	24	14,552	Rain Event
008	7/31/2018	24	154,100	Rain Event
002	7/31/2018	24	311,413	Rain Event
009	8/1/2018	24	172,152	Rain Event
008	8/1/2018	24	1,161,002	Rain Event
008	8/1/2018	24	217,010	Rain Event
006	8/1/2018	24	19,309	Rain Event
004	8/1/2018	24	1,111,160	Rain Event
010	08/01/2018 - 08/02/2018	48	666,964	Rain Event
002	08/01/2018 - 08/02/2018	48	1,938,644	Rain Event
002	8/4/2018	24	3,255	Rain Event
012	08/06/2018 - 08/07/2018	48	92,176	Rain Event
009	08/06/2018 - 08/07/2018	48	566,417	Rain Event
008	08/06/2018 - 08/07/2018	48	3,033,531	Rain Event
008	08/06/2018 - 08/07/2018	48	567,015	Rain Event
006	08/06/2018 - 08/07/2018	48	23,465	Rain Event
010	08/06/2018 - 08/08/2018	72	953,473	Rain Event
002	08/06/2018 - 08/08/2018	72	1,384,331	Rain Event
004	08/06/2018 - 08/08/2018	72	2,489,771	Rain Event
009	08/16/2018 - 08/17/2018	48	61,233	Rain Event
008	8/17/2018	24	131,578	Rain Event
008	8/17/2018	24	41,101	Rain Event
014	07/15/2018 - 08/18/2018	840	561,802	Rain Event

010	08/17/2018 - 08/19/2018	72	297,777	Rain Event
002	08/17/2018 - 08/19/2018	72	241,842	Rain Event
012	8/21/2018	24	16,103	Rain Event
009	8/21/2018	24	371,689	Rain Event
008	8/21/2018	24	390,596	Rain Event
008	8/21/2018	24	314,408	Rain Event
006	8/21/2018	24	8,297	Rain Event
010	08/21/2018 - 08/22/2018	48	454,243	Rain Event
002	08/21/2018 - 08/22/2018	48	544,666	Rain Event
009	9/2/2018	24	124	Rain Event
008	9/2/2018	24	9,724	Rain Event
002	9/2/2018	24	27,616	Rain Event
010	09/09/2018 - 09/10/2018	48	3,736,185	Rain Event
009	09/07/2018 - 09/10/2018	96	1,571,999	Rain Event
008	09/07/2018 - 09/10/2018	96	2,412,880	Rain Event
008	09/07/2018 - 09/10/2018	96	1,107,352	Rain Event
002	09/08/2018 - 09/10/2018	72	1,936,587	Rain Event
006	9/10/2018	24	17,514	Rain Event
012	09/10/2018 - 09/11/2018	48	311,450	Rain Event
004	09/09/2018 - 09/14/2018	144	10,109,354	Rain Event
009	9/17/2018	24	520,761	Rain Event
008	9/17/2018	24	480,578	Rain Event
008	9/17/2018	24	338,303	Rain Event
012	9/18/2018	24	16,971	Rain Event
010	09/17/2018 - 09/18/2018	48	29,961	Rain Event
002	09/17/2018 - 09/18/2018	48	420,322	Rain Event
004	09/17/2018 - 09/18/2018	48	1,316,574	Rain Event
014	09/17/2018 - 09/18/2018	48	6,004	Rain Event
008	09/23/2018 - 01/00/1900	48	82,944	Rain Event
009	09/22/2018 - 09/27/2018	144	191,480	Rain Event
008	09/23/2018 - 09/27/2018	120	960,373	Rain Event
004	09/23/2018 - 09/28/2018	144	7,163,263	Rain Event
010	09/21/2018 - 09/29/2018	216	872,766	Rain Event
002	09/21/2018 - 09/29/2018	216	1,254,054	Rain Event
014	09/21/2018 - 09/29/2018	216	174,903	Rain Event
002	10/4/2018	24	10,431	Rain Event
014	10/4/2018	24	1,454	Rain Event
010	10/11/2018	24	7,691	Rain Event
009	10/10/2018 - 10/11/2018	48	186	Rain Event
002	10/10/2018 - 10/11/2018	48	19,769	Rain Event
014	10/10/2018 - 10/11/2018	48	2,756	Rain Event
009	10/14/2018 - 10/15/2018	48	595	Rain Event
008	10/15/2018	24	19,063	Rain Event
008	10/15/2018	24	2,356	Rain Event
002	10/13/2018 - 10/15/2018	72	259,398	Rain Event
014	10/13/2018 - 10/15/2018	72	36,163	Rain Event
010	10/15/2018 - 10/16/2018	48	250,870	Rain Event
002	10/19/2018 - 10/20/2018	48	9,522	Rain Event
014	10/19/2018 - 10/20/2018	48	1,328	Rain Event
009	10/26/2018	24	36	Rain Event
002	10/26/2018 - 10/28/2018	72	104,581	Rain Event
014	10/26/2018 - 10/28/2018	72	14,580	Rain Event
010	10/27/2018 - 10/29/2018	72	619,898	Rain Event
004	10/26/2018 - 10/29/2018	96	2,187,336	Rain Event
009	10/31/2018	24	11,669	Rain Event
008	10/31/2018	24	4,586	Rain Event
002	10/31/2018	24	185,329	Rain Event
014	10/31/2018	24	25,837	Rain Event
009	11/1/2018	24	306	Rain Event

010	11/01/2018 - 11/02/2018	48	347,075	Rain Event
008	11/01/2018 - 11/02/2018	48	107,974	Rain Event
008	11/01/2018 - 11/02/2018	48	26,977	Rain Event
004	11/01/2018 - 11/02/2018	48	830,831	Rain Event
002	10/31/2018 - 11/03/2018	96	233,601	Rain Event
014	10/31/2018 - 11/03/2018	96	32,566	Rain Event
010	11/6/2018	24	244,812	Rain Event
009	11/6/2018	24	10,671	Rain Event
008	11/6/2018	24	226,412	Rain Event
008	11/6/2018	24	45,560	Rain Event
002	11/05/2018 - 11/06/2018	48	252,949	Rain Event
004	11/05/2018 - 11/06/2018	48	546,238	Rain Event
014	11/05/2018 - 11/06/2018	48	35,264	Rain Event
009	11/9/2018	24	1,939	Rain Event
008	11/9/2018	24	352,584	Rain Event
008	11/9/2018	24	76,048	Rain Event
002	11/9/2018	24	22,088	Rain Event
014	11/9/2018	24	3,079	Rain Event
010	11/09/2018 - 11/10/2018	48	601,495	Rain Event
004	11/09/2018 - 11/10/2018	48	1,881,325	Rain Event
002	11/13/2018	24	34,926	Rain Event
014	11/13/2018	24	4,869	Rain Event
009	11/15/2018	24	9,380	Rain Event
008	11/15/2018	24	627,238	Rain Event
008	11/15/2018	24	198,957	Rain Event
002	11/15/2018 - 11/16/2018	48	96,243	Rain Event
014	11/15/2018 - 11/16/2018	48	13,417	Rain Event
010	11/15/2018 - 11/18/2018	96	1,709,195	Rain Event
004	11/15/2018 - 11/18/2018	96	5,576,335	Rain Event
009	11/24/2018	24	543	Rain Event
008	11/24/2018	24	121,638	Rain Event
008	11/24/2018	24	21,747	Rain Event
002	11/24/2018	24	85,391	Rain Event
004	11/24/2018	24	1,582,415	Rain Event
014	11/24/2018	24	11,904	Rain Event
002	11/26/2018 - 11/27/2018	48	67,936	Rain Event
014	11/26/2018 - 11/27/2018	48	9,471	Rain Event
002	11/30/2018	24	20,761	Rain Event
014	11/30/2018	24	2,894	Rain Event
009	11/30/2018 - 12/01/2018	48	642,213	Rain Event
008	11/30/2018 - 12/01/2018	48	47,378	Rain Event
010	12/01/2018 - 12/02/2018	48	798,701	Rain Event
008	12/01/2018 - 12/02/2018	48	62,050	Rain Event
004	12/01/2018 - 12/02/2018	48	2,938,317	Rain Event
002	12/01/2018 - 12/05/2018	120	908,708	Rain Event
014	12/01/2018 - 12/05/2018	120	126,684	Rain Event
006	12/15/2018	24	175	Rain Event
012	12/15/2018 - 12/16/2018	48	76,907	Rain Event
010	12/15/2018 - 12/16/2018	48	1,033,635	Rain Event
009	12/15/2018 - 12/16/2018	48	116,362	Rain Event
008	12/15/2018 - 12/16/2018	48	262,374	Rain Event
008	12/15/2018 - 12/16/2018	48	51,240	Rain Event
002	12/15/2018 - 12/16/2018	48	1,255,771	Rain Event
004	12/15/2018 - 12/16/2018	48	5,241,472	Rain Event
014	12/14/2018 - 12/18/2018	120	128,344	Rain Event
012	12/20/2018	24	140,819	Rain Event
009	12/20/2018	24	643,120	Rain Event
006	12/20/2018	24	1,101	Rain Event
012	12/23/2018	24	18,479	Rain Event

002	12/20/2018 - 12/23/2018	96	2,358,610	Rain Event
009	12/23/2018 - 12/24/2018	48	6,302	Rain Event
008	12/20/2018 - 12/24/2018	120	598,311	Rain Event
010	12/20/2018 - 12/26/2018	168	2,405,351	Rain Event
002	12/25/2018 - 12/26/2018	48	271,464	Rain Event
004	12/20/2018 - 12/27/2018	192	18,327,781	Rain Event
009	12/27/2018 - 12/28/2018	48	5,091	Rain Event
008	12/27/2018 - 12/28/2018	48	50,607	Rain Event
010	12/28/2018 - 12/29/2018	48	375,751	Rain Event
014	12/20/2018 - 12/29/2018	240	1,184,279	Rain Event
014	12/31/2018	24	6,669	Rain Event
010	12/31/2018	24	640,398	Rain Event
009	12/31/2018	24	19,337	Rain Event
008	12/31/2018	24	67,890	Rain Event
004	12/31/2018	24	1,967,582	Rain Event

**Notes:**

1. This form must be completed even if information has been submitted to meet other KPDES permit requirements.
2. "CSO No." means the KPDES CSO No. listed on the active KPDES permit for each Combined Sewer Overflow outfall and in EPA's ICIS program as a Permitted Feature.
3. Discharge events should be listed in chronological order. For discharges from multiple CSOs that occurred at the same time, list the CSOs in order by CSO No. for each date/time.

**Comments:**

All discharge events were assumed to have a duration of 24 hours per day for every day they were active.

Excess CSO flows in February were due to flooding of the Ohio River and tributaries. Manholes and pump stations were underwater. Rainfall amounts were over 6 inches.

## VI. CSO DISCHARGES

### A. Dry Weather Overflow Events

List each discharge event that occurred during the reporting period for each CSO listed in section III.A of this report during dry weather or not as a result of a precipitation event.

<i>CSO No.<sup>3</sup></i>	<i>Start and Stop Date/Time</i>	<i>Duration (hours:minutes)</i>	<i>Volume Discharged (gallons or million gallons)</i>	<i>Cause</i>
009	01/06/2018	24	44	Possible false reads.
014	07/11/2018 - 07/12/2018	48	7,096	Possible wet weather event. Rain gauges malfunction may be the reason for no recorded rainfall during this event.
002	09/12/2018 - 09/14/2018	72	242,888	Possible wet weather event. Rain gauges malfunction may be the reason for no recorded rainfall during this event.
010	09/14/2018	24	19,968	Possible wet weather event. Rain gauges malfunction may be the reason for no recorded rainfall during this event.
002	10/23/2018	24	2,391	Possible wet weather event. Rain gauges malfunction may be the reason for no recorded rainfall during this event.
014	10/23/2018	24	333	Possible false reads.

#### Notes:

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2. "CSO No." means the KPDES CSO No. listed on the active KPDES permit for each Combined Sewer Overflow outfall and in EPA's ICIS program as a Permitted Feature.
3. Discharge events should be listed in chronological order. For discharges from multiple CSOs that occurred at the same time, list the CSOs in order by CSO No. for each date/time.

#### Comments:

All overflow events were assumed to have a duration of 24 hours per day for every day they were active.

"False Reads" are suspected flow metering equipment erroneous readings

"Screens" are when the manually raked bar screen may have been blinded.

## VII. PRECIPITATION

### A. Annual Total Precipitation

List the totals for precipitation for the reporting period.

Total number of precipitation events 67      Total depth of precipitation (inches) 46.18

### B. Precipitation Events

List each precipitation event that may have impacted the combined sewer system during the reporting period.  
Provide the location of each rain gauge or describe the source of the precipitation information.

<i>Start and Stop Date/Time</i>	<i>Duration (hours:minutes)</i>	<i>Rainfall Depth (inches)</i>	<i>Source</i>
1/8/2018	24.00	0.18	WWTP Rain Gauge
01/11/2018 - 01/12/2018	48.00	0.77	WWTP Rain Gauge
1/15/2018	24.00	0.01	WWTP Rain Gauge
1/19/2018	24.00	0.02	WWTP Rain Gauge
01/22/2018 - 01/23/2018	48.00	0.28	WWTP Rain Gauge
01/27/2018 - 01/28/2018	48.00	1.16	WWTP Rain Gauge
2/1/2018	24.00	0.24	WWTP Rain Gauge
2/4/2018	24.00	0.25	WWTP Rain Gauge
2/7/2018	24.00	1.30	WWTP Rain Gauge
02/10/2018 - 02/12/2018	72.00	0.86	WWTP Rain Gauge
01/11/2018 - 01/12/2018	96.00	1.97	WWTP Rain Gauge
2/19/2018	24.00	0.06	WWTP Rain Gauge
02/21/2018 - 02/22/2018	48.00	0.27	WWTP Rain Gauge
02/24/2018 - 02/25/2018	48.00	1.36	WWTP Rain Gauge
02/28/2018 - 03/01/2018	72.00	0.40	Roberts Drive Rain Gauge
03/06/2018 - 03/07/2018	48.00	0.06	Roberts Drive Rain Gauge
3/10/2018	24.00	0.17	Roberts Drive Rain Gauge
03/12/2018 - 03/13/2018	48.00	0.07	Roberts Drive Rain Gauge
3/15/2018	24.00	0.02	Roberts Drive Rain Gauge
3/17/2018	24.00	0.20	Roberts Drive Rain Gauge
03/19/2018 - 03/22/2018	96.00	0.65	Roberts Drive Rain Gauge
03/24/2018	24.00	0.19	Roberts Drive Rain Gauge
03/27/2018 - 03/30/2018	96.00	1.51	Roberts Drive Rain Gauge
04/01/2018 - 04/04/2018	96.00	0.97	WWTP Rain Gauge
4/9/2018	24.00	0.08	WWTP Rain Gauge
04/14/2018 - 04/16/2018	72.00	0.88	WWTP Rain Gauge
04/18/2018 - 04/19/2018	48.00	0.05	WWTP Rain Gauge
04/23/2018 - 04/25/2018	72.00	0.39	WWTP Rain Gauge
05/04/2018 - 05/06/2018	72.00	2.01	WWTP Rain Gauge
05/09/2018 - 05/10/2018	48.00	0.21	WWTP Rain Gauge
05/17/2018	24.00	0.01	WWTP Rain Gauge
05/19/2018	24.00	0.27	WWTP Rain Gauge
05/21/2018 - 05/23/2018	72.00	0.50	WWTP Rain Gauge
05/25/2018 - 05/26/2018	48.00	0.10	WWTP Rain Gauge
05/28/2018	24.00	0.35	WWTP Rain Gauge
05/30/2018 - 06/01/2018	72.00	0.58	WWTP Rain Gauge
06/10/2018 - 06/13/2018	96.00	0.92	WWTP Rain Gauge
6/19/2018	24.00	0.53	WWTP Rain Gauge
06/22/2018 - 06/28/2018	168.00	1.41	WWTP Rain Gauge
07/01/2018 - 07/02/2018	48.00	1.63	WWTP Rain Gauge
07/05/2018 - 07/06/2018	48.00	0.32	WWTP Rain Gauge
07/16/2018 - 07/17/2018	48.00	0.47	WWTP Rain Gauge
07/20/2018 - 07/25/2018	144.00	2.96	WWTP Rain Gauge
7/27/2018	24.00	0.13	WWTP Rain Gauge
07/30/2018 - 07/31/2018	48.00	1.11	WWTP Rain Gauge
8/6/2018	24.00	0.05	WWTP Rain Gauge
08/16/2018 - 08/19/2018	96.00	0.19	WWTP Rain Gauge
08/21/2018 - 08/22/2018	48.00	1.26	WWTP Rain Gauge

08/30/2018	24.00	0.01	WWTP Rain Gauge
09/01/2018 - 09/02/2018	48.00	0.21	WWTP Rain Gauge
09/06/2018 - 09/10/2018	120.00	4.14	WWTP Rain Gauge
09/17/2018	24.00	1.69	WWTP Rain Gauge
09/22/2018 - 09/28/2018	168.00	2.47	WWTP Rain Gauge
10/4/2018	24.00	0.03	WWTP Rain Gauge
10/10/2018 - 10/11/2018	48.00	0.27	WWTP Rain Gauge
10/13/2018 - 10/15/2018	72.00	0.51	WWTP Rain Gauge
10/19/2018 - 10/20/2018	48.00	0.12	WWTP Rain Gauge
10/26/2018 - 10/27/2018	48.00	0.43	WWTP Rain Gauge
10/31/2018 - 11/03/2018	96.00	0.58	WWTP Rain Gauge
11/05/2018 - 11/06/2018	48.00	0.45	WWTP Rain Gauge
11/9/2018	24.00	0.59	WWTP Rain Gauge
11/12/2018 - 11/16/2018	120.00	1.27	WWTP Rain Gauge
11/19/2018 - 11/20/2018	48.00	0.02	WWTP Rain Gauge
11/24/2018 - 11/27/2018	96.00	0.40	WWTP Rain Gauge
11/29/2018 - 12/06/2018	192.00	0.66	WWTP Rain Gauge
12/14/2018 - 12/17/2018	96.00	1.00	WWTP Rain Gauge
12/20/2018 - 12/31/2018	96.00	1.95	WWTP Rain Gauge

**Notes:**

1. This form must be completed even if information has been submitted to meet other KPDES permit requirements.
2. Precipitation events should be listed in chronological order.

**Comments:**

All rain events were assumed to have a duration of 24 hours per day for every day they were active.

### VIII. CERTIFICATION STATEMENT<sup>1</sup>

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name:

Mr.  Ms.  Ryan Eastwood, P.E., LEED® AP

B. Title: Director of Engineering and Utilities

C. Phone: 606-327-2008

D. Email: reastwood@ashlandky.gov

E. Mailing Address:

1. Street: 1700 Greenup Avenue, Suite 408

2. City: Ashland

3. State: Kentucky

4. Zip Code: 41105

F. Signature<sup>2</sup>:



G. Date:

2-27-19

#### Notes:

1. Federal and state statutes provide for severe penalties for submitting false information in this report. Federal and state regulations require this report to be signed by a principal executive officer, ranking elected official or other duly authorized employee. The duly authorized employee must be an individual or position having responsibility for the overall operation of the combined sewer system, collection system or wastewater treatment plant.
2. Either a hand signed or electronically signed form will be considered acceptable.

**ATTACHMENT A**  
**RECOMMENDED PLAN IMPLEMENTATION SCHEDULE**

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