PHASE II STORMWATER MS4 GENERAL PERMIT ANNAUL COMPLIANCE REPORT

ASHLAND/BOYD COUNTY

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2017 ANNUAL COMPLIANCE REPORT

Permitee: City of Ashland

Co-Permittees: City of Catlettsburg
Boyd County Fiscal Court

April 2018

KDOW AI#6690

Submittal by:
Mr. Ryan Eastwood, PE
reastwood@ashlandky.org
www.ashlandky.org
Director of Engineering and Utilities
1700 Greenup Avenue
Ashland, KY 41105
Phone: 606/327-2007

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Ashland
A Proud Past. A Bright Future.

CITY OF ASHLAND
Department of
Engineering & Utilities
P.O. Box 1839
1700 Greenup Ave, Room 408
Ashland, KY 41105-1839

April 14, 2018

Ms. Abigail Rains, MS4 Coordinator
Kentucky Division of Water, KPDES Branch
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601

Re: Ashland/Boyd County 2017 Annual Compliance Report
Permit No. KYG200002/AI#6690

Dear Ms. Rains:

Transmitted herewith is our Phase II Stormwater 2017 Annual Compliance Report for Ashland, City of Catlettsburg and Boyd County (MS4 Group). We are pleased to submit this report for your review and comment.

The MS4 Group continued to work together on various stormwater quality activities to educate and involve the citizens of Ashland and Boyd County. Because of retirements and turnover with external members the Stormwater Advisory Committee (SWAC) was not able to meet in 2017. Even with limited resources the MS4 Group was able to continue implementing stormwater pollution prevention BMPs, to protect and maintain the water quality in the local streams and rivers.

In 2017 local construction activities for new development and re-development work slowed down but we continued to local issue site disturbance permits and follow-up inspections to insure proper erosion and sediment controls are being installed.

Our partnership that we began with the Boyd County UK Horticulture Extension Office in 2016 continued in 2017. Because of budget cutbacks the number of water quality related activities were reduced. Our partnership will allow us to share resources and still meet the common goal of educating the public and improving water quality in the local streams and rivers

In 2018 we plan to become more active with the Extension Office, get the SWAC re-established, schedule SWAC meeting(s) to discuss stormwater quality BMPs and look for opportunities meet with neighboring MS4 Groups and share ideas and activities.

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. Should you have any questions or need additional information please give me a call at (606) 327-2008.

Sincerely,

Ryan Eastwood, PE
MS4 Coordinator/Director of Engineering and Utilities

Encl: Report (disk and hard copy)

Copy: Nickie Smith, Boyd County Economic Development Director

Phone: (606) 327-2008
Fax: (606) 327-2060
www.ashlandky.go

Kentucky Division of Water

2017 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, 3rd 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.**

REPORTING YEAR (Check one)

☐ 2016
☒ 2017
☐ 2018

PART A: GENERAL INFORMATION – MS4 OPERATOR

1. Report Completed By: Ryan Eastwood, City of Ashland
(MS4 Operator — i.e., name of permit holder)

2. Permit Number: K Y G 2 0 0 0

AI # 6690_____ 4. Population Urbanized area – 42,000_
City of Ashland – 21,700

5. Mailing Address: P.O. Box 1839
Street Address: 1700 Greenup Avenue

☒ City ☐ County ☐ 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

PART C: CONTROL MEASURE ACTIVITIES

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 2017:

1. KYTC Outreach Program

The City of Ashland continues to maintain the new website developed in 2016 under the Department of Public Works, 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.

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 2017. 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.

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. 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.

The 2017 summary of ad play is as follows:

71,876 radio Spots with a value of $1,524,704
10,232 television plays with a value of $531,202
TV and radio plays combined totaled 82,108 plays statewide for a total value of $2,055,906.

A website URL was secured and a new website prepared, in 2016 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.

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 liter. The Transportation Cabinet participates in Adopt-A-Highway meetings as agreed upon by the Local Community and KYTC. There are 674 groups that manage 1,367 miles of roads throughout the state.

2. University of Kentucky Horticulture Extension Outreach Program

Ashland/Boyd County in a combined effort with the University of Kentucky's Horticulture Extension office has hosted a Tree Giveaway. See **Appendix A** for specific information.

3. Public Notice/Advertisements in the Daily Independent

- An article was run in Daily Independent in April, 2017 describing the City's annual Arbor Day tree giveaway hosted by the Central Park tree board and the Extension Office.
- 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.

PART C: CONTROL MEASURE ACTIVITIES

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

Please attach documentation of any public education/outreach activities held in 2017:

B. Public Involvement and Participation:

Describe any events or activities facilitated by or sponsored by the MS4 in 2017:

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 the majority 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.

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. See Item #2 in the previous section on activities performed.

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 17, 2017 in Catlettsburg and Ashland. The river sweep site was along Catlettsburg City Park, The Old Boat Landing in South Shore, 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. Many people volunteered, collecting several tons of trash.

Advertisement for the Ohio River Sweep is provided in **Appendix A.**

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 2017.

The Fall cleanup was conducted in October of 2017. Waste collected included construction debris, household hazardous waste and electronic waste (TV's, computers, and phones).

From all clean up days 6,680 lbs of scrap metal was collected and the City/County received $548.80.

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 2017 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.

See **Appendix A** for Plant A Tree Project advertisements.

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.

See Civic Group presentation in **Appendix B**.

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.

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 SWQMP is easily accessed on the new Ashland and Boyd County Department website in the Storm Water Management Program page under the Public Works Department. 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.

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 2017.

C. Illicit Discharge Detection and Elimination:

Did you have any reported/discovered illicit discharges for 2017? 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 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 "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.

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 BCSD 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 already 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. They 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.
See **Appendix C** for updated LTCP Report.

Have you completed the mapping of major outfalls?

Ashland and Boyd County – Yes

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. 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, were obtained for outfall inspected 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 E.
- Ashland – conducted baseline sampling of four creeks – Keys, Brubaker, Long Branch and Little Hoods. Grab samples were taken and analyzed for ammonia, nitrogen, chlorine, conductivity, turbidity, pH, surfactants, metals and e-coli in 2016 and will review and update SWMP submitted in 2015. Any illicit discharges detected by public notification or other departments (utilities) will be addressed immediately.

PART C: CONTROL MEASURE ACTIVITIES

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

Please attach documentation of any illicit discharge detection and eliminations resolved in 2017.

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 2017?

Under the erosion and sediment control ordinance:

Boyd County issued Level 1 through 3 permits for all site disturbances per ordinance, inspections were provided on all permits activities.

Ashland did not issue any 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 2017 resulted in enforcement actions? Fines collected?

Describe any training given to operators/contractors in 2017?

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.

What is your budget for MCM #4? - $5,000

Please attach documentation of any construction site stormwater runoff events or outreach occurring in 2017.

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 2017.

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.

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 2017.

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 2017.

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 2017 the JD Byrider pervious pavement parking lot and bioswale project was completed. It is currently operating as anticipated and help drain and filter the first flush rain event into the ground. See **Appendix F** for project photographs. In 2018 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.

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.

PART C: CONTROL MEASURE ACTIVITIES

Ashland had approximately 1,248 gallons of used motor oil and 61 gallons of 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 over 700 tons of solid waste from combined street sweeping operations and cleanup days. Collected 10,044 tons household garbage and trash.

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 600 lf of storm pipe and re-graded approx. 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 2017.

We hope to re-visit existing plans and develop new SMOPs for City and County building, operation and maintenance facility sites 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 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 – 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 2017, 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 F**)

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 F**)

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

- 29th Street CSO Separation Project was started in 2017 and remains under construction.
- 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 2017**.

- The 29th Street CSO Separation Project was inspected in 2017.

s) **Number, type, and location of structural BMPs maintained, or improved in 2017**.

- No BMPs were improved in 2017.

t) Type and location of nonstructural BMPs utilized in 2017.

- 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 2017.

- 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 2017.

- 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 2017.

- Ashland – Vacuumed and jetted approximately 34,691 lf of main lines, repaired 31 lateral lines, 48 sewer mains, 20 manholes, 61 taps, and 80 cleanouts. They also installed 758 lf of new sewer main extensions, 128 lf of later pipe, 16 taps and 12 manholes. Replacements included 1,806 lf of sewer main, 496 lf of lateral pipe, and adjusted 18 manholes to grade; Catlettsburg – cleaned structures along 43 street; Boyd County – 2,500 lf

bb) **Estimated linear feet or percentage and location of roadside shoulders and ditches stabilized in 2017**.

- None

cc) Number and location of storm water outfall areas remediated from scouring conditions in 2017.

- None

dd) Number and location of de-icing salt and sand storage areas covered or otherwise improved to minimize storm water exposure in 2017.

- 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 2017.

120 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 2017.

- 1,500 tons

gg) Estimated amount of material collected from street sweeping in 2017.

700 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 out 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 2017.

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, 9 streams are listed on the 2014 Kentucky 303(d) List. These streams include: Big Sandy River 0 to 27.1, East Fork Little Sandy River 16.9 to 26.4, and 27.6 to 30.9, Ellingtons Bear Creek 0 to 1.5, Garner Creek 0 to 1.8, Hurricane Fork 0 to 2.2, Ice Dam Creek 0 to 2.7, Lockwood Creek 2.6 to 3.2, Paddle Creek 0.0 to 1.6, Williams Creek 0 to 2.9.

Impairments include: Biological Indicators of Nutrient/Eutrophication, Sedimentation, Specific Conductance, E. coli, Temperature, Nitrogen, TDS and Biological Indicators of Organic Enrichment.

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

No. All streams are Category 5 – Water is impaired and requires a TMDL

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

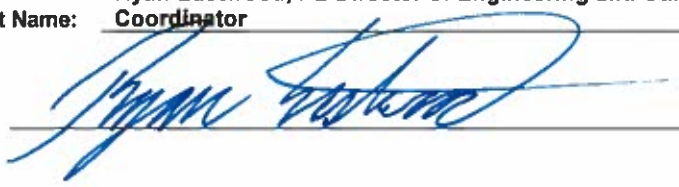
The quarterly Storm Water Association conferences are a great opportunity to obtain training and share information about MS4s. Our limited funding however has required cut backs on the amount of staff/employees sent to the conferences. We would like to see the KDOW conduct some workshops in the Boyd-Greenup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

PART E: CERTIFICATION AND SIGNATURE

► **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."

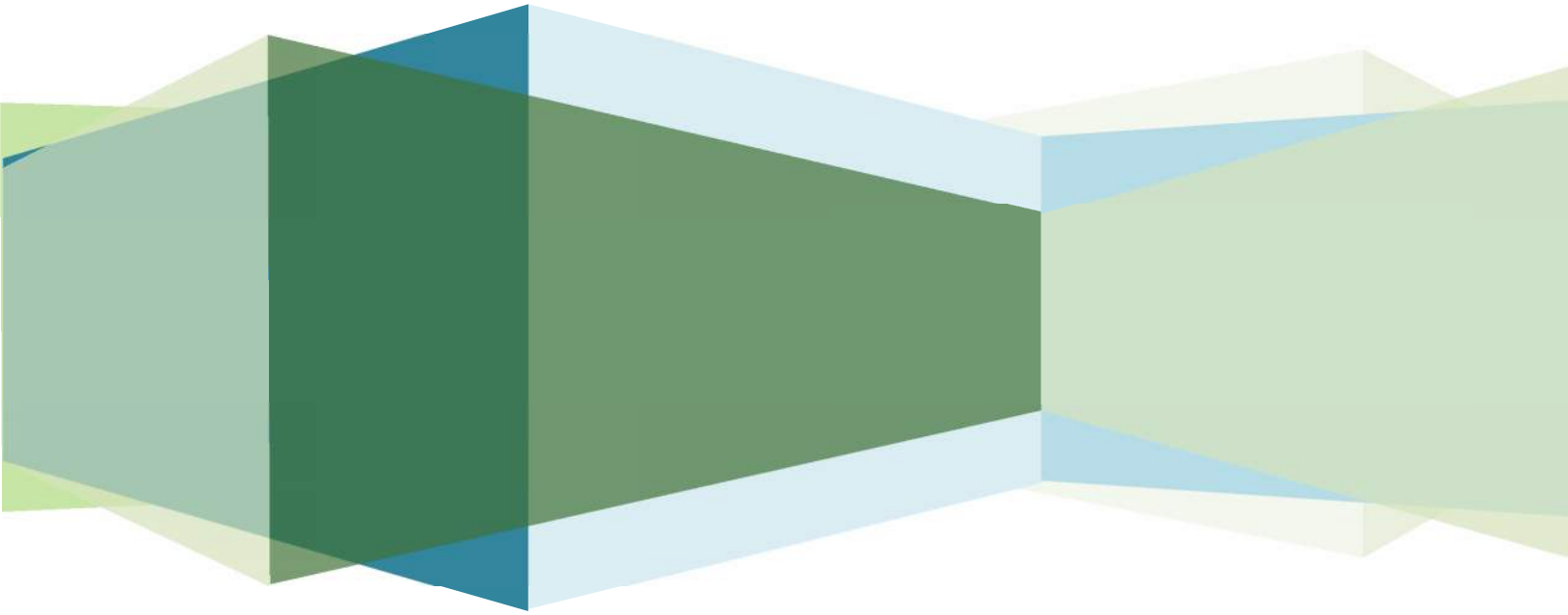
Type or Print Name: **Ryan Eastwood, PE Director of Engineering and Utilities, MS4 Coordinator**

Signature: 

Date: **04/13/2018**
(mm/dd/year)

Appendix "A"

- Public Notices
- Advertisements



Tree Seedling Giveaway

in celebration of National Arbor Day

When: Saturday, April 22, 2017

10 a.m. until seedlings are gone!

Where: Center of Ashland Central Park

Stop by during the day to choose a selection of **FREE** tree seedlings from a dozen varieties of large and small trees.

The annual Seedling Giveaway is sponsored by the City of Ashland in conjunction with the Ashland Tree Board. Ashland is a recognized as a Tree City USA by the National Arbor Foundation.

For additional information please contact the Parks and Recreation Department @ 606-327-2046.

TREE SEEDLING GIVEAWAY

in celebration of National Arbor Day

VARIETY OF SEEDLINGS

SATURDAY, APRIL 22, 2017

CENTRAL PARK

CONCESSION STAND
(CENTER OF THE PARK)

10:00a.m.

Until seedlings are gone!

Sponsored by:
CITY OF ASHLAND
&
THE ASHLAND PARK / TREE BOARD

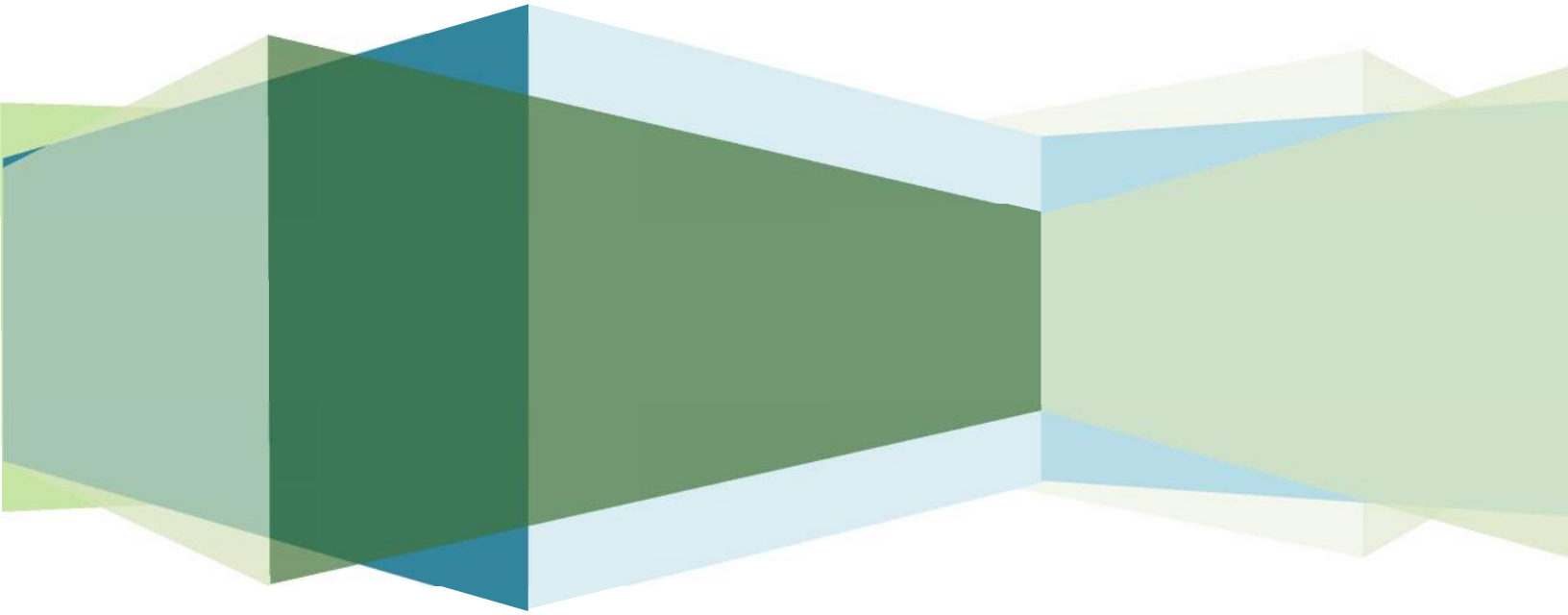
Ashland is recognized as a Tree City USA
by the National Arbor Foundation

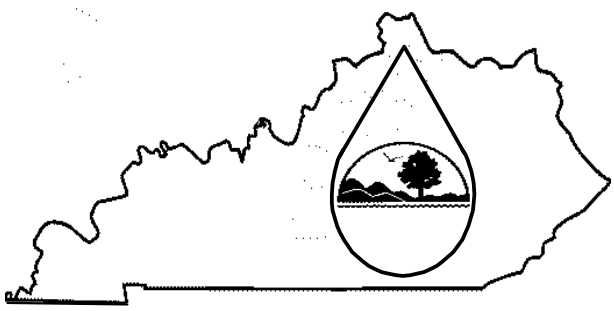
River Sweep Post Cards

Appendix "B"

Illicit Discharge & Elimination

- Combined Sewer Overflow
  - Report
    - SSO Overflows
    - Summary of CMOM
  - Compliance
    - Implementation Schedule
- 29th Street CSO Project Article





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 2017 Annual Report is for the entire 2017 calendar year (January 1 – December 31).

A typed and complete CSO Annual Report must be received by March 1, 2018. All entries must be filled out completely, or the report will be considered deficient. It may be submitted as one, single .pdf file through the CSO Section of the DEP/DOW ePortal at https://dep.gateway.ky.gov/ePortal/DesktopDefault.aspx. If you have any questions regarding submitting the report through the ePortal, send an email to the ePortal helpdesk at 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 Lynne Brosius at 502-782-6901 or lynne.brosius@ky.gov.

I. PERMITTEE INFORMATION

A. Name of Permittee:
City of Ashland

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

II. CSO PROGRAM CONTACT INFORMATION

A. Name: Mr. Ryan Eastwood, P.E.

B. Title: Director of Engineering and Utilities

C. Phone: 606-327-2008

D. E-mail Address: reastwood@ashlandky.org

E. Mailing Address:

1. Street: 1700 Greenup Avenue, Suite 408
2. City: Ashland
3. State: Kentucky
4. Zip Code: 41105

III. CSOs ACTIVE DURING THE REPORTING PERIOD

A. List all CSO[1] outfalls that were active[2] at any time during the reporting period. Say whether each outfall was active[2] or eliminated[3] at the beginning and at the end of the reporting period.

CSO No.[4]	*CSO Name*[5]	*Status on January 1*	*Status on December 31*	*Changes to CSO? (Y/N)*
002	26th Street	Active	Active	N
004	37th Street	Active	Active	N
006	34th Street	Active	Active	N
008	18th Street	Active	Active	N
009	15th Street	Active	Active	N
010	10th Street	Active	Active	N
012	6th Street	Active	Active	N
014	Roberts Drive	Active	Active	N

B. For each CSO listed above that has a different status at the beginning and the end of the reporting period, describe the changes to the CSO status below. Reference or attach supporting documentation such as permit applications, permits, or approval letters. If a *CSO Outfall Elimination Certification* form was submitted to DOW prior to the end of the reporting period, list the date it was submitted and the approval date, if approved by DOW.

C. For each CSO listed above that has changes to CSO, describe the changes to the CSO components or operation. Examples of changes are modifications or removal of regulators, storage facilities, screening facilities, disinfection facilities, devices to prevent intrusion of receiving water such as flapgates or tideflex valves, or monitoring equipment such as SCADA, real time control, and flowmeters.

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.
2. "Active" means that the CSO regulator and outfall were capable of discharging sanitary or combined sewage (whether or not any discharge occurred) and were not plugged or removed at any time during the reporting period. This does not include any CSO outfall that has been converted to discharge only separate storm water prior to the beginning of the reporting period. All CSOs are considered "active" until a CSO Outfall Elimination Certification form has been submitted to DOW and approved.
3. "Eliminated" means that the CSO regulator and outfall were physically incapable of discharging sanitary or combined sewage. This includes a CSO outfall that has been converted to discharge only municipal separate storm water prior to the beginning of the reporting period. All CSOs are considered "active" until a CSO Outfall Elimination Certification form has been submitted to DOW and approved.
4. "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.
5. "CSO Name" means CSO Name listed on the active KPDES permit for each Combined Sewer Overflow outfall and in EPA's ICIS program in the Permitted Feature Description or Limit Set Name.

Comments:

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.

Nine Minimum Control	*Activities Implemented During the Reporting Period*	*Descriptions of Benefits Achieved*
Proper Operation 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 CSS to increase in-system storage as part of the early action projects of the 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 restrict 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 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 flow before they reach the 18th Street and 19th street CSO regulators and overflow. Flow is conveyed to 26th Street 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.
No Dry Weather Overflows	City personnel visits 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 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).

LTCP Project ID and Name	*Approved Completion Date*	*Actions Taken During Reporting Period*	*Actions Planned During Next Reporting Period*	*Status at End of Reporting Period*
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 MGD PHF and Provide 3.5 MG of Wet Weather Storage	12/31/2025	None	None	Future
03220–10th Street PS Force Main Modification Project	12/31/2025	None	None	Future
03230–26th Street CSO Regulator Modifications Project	12/31/2025	None	None	Future
03230–26th Street PS Improvements Project	12/31/2025	None	None	Future

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

A. Annual Totals of CSO Discharges

List the totals for the reporting period for each CSO listed in section III.A of this report. These parameters are listed on your KPDES permit to be monitored for each permitted CSO, and are reported monthly in netDMR. In the last column, list all methods used for monitoring each parameter. If the monitoring was not continuous, provide the frequency that monitoring was done for each discharge event.

CSO No.[3]	*Occurrences (number per year)*	*Volume (million gallons per year)*	*Duration (hours per year)*	*Monitoring Method and Frequency*
002	45	25.02	1,992	Flow Meter–Continuous
004	36	50.53	1,536	Flow Meter–Continuous
006	9	0.16	264	Flow Meter–Continuous
008	48	25.38	2,040	Flow Meter–Continuous
009	51	7.36	1,680	Flow Meter–Continuous
010	26	12.86	1,032	Flow Meter–Continuous
012	14	5.14	576	Flow Meter–Continuous
014	63	2.87	4,248	Flow Meter–Continuous

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. Include only CSO discharges that occurred as a result of precipitation. Do not include dry weather overflows.
4. These totals should equal the sum of results reported on the 12 DMRs for the reporting period. If they do not match, explain in the Comments box.

Comments:

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

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.

CSO No.[3]	*Start and Stop Date/Time*	*Duration (hours:minutes)*	*Volume Discharged (million gallons)*	*Cause*
014	1/2/2017-1/4/2017	72:00	0.02	Rainfall Event
004	1/3/2017	24:00	0.61	Rainfall Event
008	1/3/2017	24:00	0.41	Rainfall Event
009	1/3/2017	24:00	0.10	Rainfall Event
002	1/3/2017-1/4/2017	48:00	1.02	Rainfall Event
014	1/10/2017-1/21/2017	288:00	0.11	Rainfall Event
009	1/11/2017-1/12/2017	48:00	0.03	Rainfall Event
002	1/11/2017-1/17/2017	168:00	2.73	Rainfall Event
008	1/11/2017-1/18/2017	192:00	2.65	Rainfall Event
004	1/12/2017-1/18/2017	168:00	7.53	Rainfall Event
009	1/14/2017-1/15/2017	48:00	0.002	Rainfall Event
010	1/14/2017-1/17/2017	96:00	0.42	Rainfall Event
009	1/17/2017	24:00	0.05	Rainfall Event
002	1/20/2017	24:00	0.54	Rainfall Event
004	1/20/2017	24:00	0.33	Rainfall Event
008	1/20/2017	24:00	0.11	Rainfall Event
009	1/20/2017	24:00	0.07	Rainfall Event
010	1/20/2017	24:00	0.04	Rainfall Event
004	1/23/2017	24:00	0.77	Rainfall Event
008	1/23/2017	24:00	0.003	Rainfall Event
009	1/23/2017	24:00	0.002	Rainfall Event
002	1/23/2017-1/24/2017	48:00	0.87	Rainfall Event
010	1/23/2017-1/24/2017	48:00	0.41	Rainfall Event
014	1/23/2017-1/25/2017	72:00	0.02	Rainfall Event
014	1/27/2017	24:00	0.0001	Rainfall Event
014	1/29/2017-1/30/2017	48:00	0.002	Rainfall Event
014	2/1/2017	24:00	0.0002	Rainfall Event
014	2/6/2017-2/9/2017	96:00	0.02	Rainfall Event
009	2/7/2017-2/8/2017	48:00	0.14	Rainfall Event
008	2/7/2017-2/9/2017	72:00	0.44	Rainfall Event
002	2/7/2017-2/9/2017	72:00	0.79	Rainfall Event
010	2/7/2017-2/9/2017	72:00	0.25	Rainfall Event
004	2/8/2017-2/9/2017	48:00	1.10	Rainfall Event
012	2/8/2017-2/9/2017	48:00	0.35	Rainfall Event
014	2/12/2017-2/13/2017	48:00	0.0003	Rainfall Event
014	2/18/2017-2/19/2017	48:00	0.01	Rainfall Event
002	2/22/2017	24:00	0.03	Rainfall Event
004	2/22/2017	24:00	0.37	Rainfall Event
009	2/22/2017	24:00	0.00002	Rainfall Event
014	2/22/2017	24:00	0.02	Rainfall Event
002	2/25/2017	24:00	0.40	Rainfall Event
008	2/25/2017	24:00	0.20	Rainfall Event
009	2/25/2017	24:00	0.02	Rainfall Event
010	2/25/2017	24:00	0.12	Rainfall Event
014	2/25/2017	24:00	0.01	Rainfall Event
014	2/27/2017-3/10/2017	288:00	0.86	Rainfall Event
012	2/28/2017	24:00	0.36	Rainfall Event
009	2/28/2017-3/1/2017	48:00	0.70	Rainfall Event
010	2/28/2017-3/1/2017	48:00	0.90	Rainfall Event
002	2/28/2017-3/2/2017	72:00	2.32	Rainfall Event
004	2/28/2017-3/2/2017	72:00	6.98	Rainfall Event
008	2/28/2017-3/2/2017	72:00	2.33	Rainfall Event
002	3/7/2017	24:00	0.17	Rainfall Event

008	3/7/2017	24:00	0.22	Rainfall Event
009	3/7/2017	24:00	0.004	Rainfall Event
004	3/7/2017-3/8/2017	48:00	1.94	Rainfall Event
014	3/13/2017-3/14/2017	48:00	0.001	Rainfall Event
002	3/17/2017	24:00	0.07	Rainfall Event
008	3/17/2017	24:00	0.10	Rainfall Event
009	3/17/2017	24:00	0.01	Rainfall Event
004	3/17/2017-3/18/2017	48:00	0.72	Rainfall Event
014	3/17/2017-3/18/2017	48:00	0.01	Rainfall Event
002	3/20/2017	24:00	0.06	Rainfall Event
008	3/20/2017	24:00	0.18	Rainfall Event
009	3/20/2017	24:00	0.04	Rainfall Event
004	3/20/2017-3/21/2017	48:00	0.72	Rainfall Event
014	3/20/2017-3/21/2017	48:00	0.005	Rainfall Event
009	3/26/2017-3/27/2017	48:00	0.11	Rainfall Event
010	3/26/2017-3/27/2017	48:00	0.16	Rainfall Event
002	3/26/2017-3/28/2017	72:00	0.40	Rainfall Event
004	3/26/2017-3/28/2017	72:00	1.85	Rainfall Event
008	3/26/2017-3/28/2017	72:00	0.60	Rainfall Event
012	3/26/2017-3/28/2017	72:00	0.85	Rainfall Event
014	3/26/2017-4/9/2017	360:00	0.11	Rainfall Event
008	3/31/2017	24:00	0.99	Rainfall Event
009	3/31/2017	24:00	0.49	Rainfall Event
010	3/31/2017	24:00	0.56	Rainfall Event
002	3/31/2017-4/1/2017	48:00	1.18	Rainfall Event
004	3/31/2017-4/1/2017	48:00	2.99	Rainfall Event
012	3/31/2017-4/1/2017	48:00	1.01	Rainfall Event
002	4/3/2017-4/6/2017	96:00	0.45	Rainfall Event
008	4/3/2017-4/6/2017	96:00	0.48	Rainfall Event
009	4/5/2017-4/6/2017	48:00	0.05	Rainfall Event
010	4/5/2017-4/6/2017	48:00	0.32	Rainfall Event
012	4/5/2017-4/6/2017	48:00	0.47	Rainfall Event
004	4/5/2017-4/7/2017	72:00	1.98	Rainfall Event
002	4/11/2017	24:00	0.13	Rainfall Event
008	4/11/2017	24:00	0.09	Rainfall Event
009	4/11/2017	24:00	0.04	Rainfall Event
014	4/11/2017	24:00	0.002	Rainfall Event
014	4/15/2017-4/16/2017	48:00	0.01	Rainfall Event
002	4/16/2017	24:00	0.02	Rainfall Event
008	4/16/2017	24:00	0.0004	Rainfall Event
009	4/19/2017	24:00	0.0001	Rainfall Event
014	4/19/2017	24:00	0.0001	Rainfall Event
002	4/21/2017-4/22/2017	48:00	0.14	Rainfall Event
008	4/21/2017-4/22/2017	48:00	0.06	Rainfall Event
009	4/21/2017-4/22/2017	48:00	0.001	Rainfall Event
014	4/21/2017-4/23/2017	72:00	0.01	Rainfall Event
002	4/29/2017	24:00	0.10	Rainfall Event
008	4/29/2017	24:00	0.04	Rainfall Event
009	4/29/2017	24:00	0.05	Rainfall Event
014	4/29/2017	24:00	0.01	Rainfall Event
002	5/1/2017	24:00	0.21	Rainfall Event
004	5/1/2017	24:00	0.44	Rainfall Event
009	5/1/2017	24:00	0.16	Rainfall Event
012	5/1/2017	24:00	0.33	Rainfall Event
014	5/1/2017	24:00	0.00	Rainfall Event
014	5/3/2017-5/6/2017	96:00	0.01	Rainfall Event
009	5/9/2017	24:00	0.05	Rainfall Event
004	5/9/2017-5/10/2017	48:00	1.05	Rainfall Event
002	5/9/2017-5/12/2017	96:00	0.90	Rainfall Event

008	5/9/2017-5/12/2017	96:00	0.60	Rainfall Event
014	5/9/2017-5/12/2017	96:00	0.05	Rainfall Event
004	5/12/2017	24:00	0.87	Rainfall Event
009	5/12/2017	24:00	0.03	Rainfall Event
002	5/18/2017-5/19/2017	48:00	0.19	Rainfall Event
008	5/18/2017-5/19/2017	48:00	0.13	Rainfall Event
009	5/19/2017	24:00	0.01	Rainfall Event
010	5/19/2017	24:00	0.10	Rainfall Event
004	5/19/2017-5/20/2017	48:00	0.10	Rainfall Event
012	5/19/2017-5/20/2017	48:00	0.11	Rainfall Event
014	5/19/2017-5/25/2017	168:00	0.04	Rainfall Event
002	5/21/2017-5/23/2017	72:00	0.37	Rainfall Event
008	5/21/2017-5/23/2017	72:00	0.23	Rainfall Event
009	5/23/2017	24:00	0.0001	Rainfall Event
002	5/25/2017	24:00	0.22	Rainfall Event
004	5/25/2017	24:00	0.54	Rainfall Event
008	5/25/2017	24:00	0.15	Rainfall Event
009	5/25/2017	24:00	0.001	Rainfall Event
002	5/27/2017	24:00	0.01	Rainfall Event
008	5/27/2017	24:00	0.01	Rainfall Event
014	5/27/2017	24:00	0.001	Rainfall Event
009	5/31/2017	24:00	0.00004	Rainfall Event
014	5/31/2017-6/1/2017	48:00	0.001	Rainfall Event
002	6/5/2017	24:00	0.05	Rainfall Event
008	6/5/2017	24:00	0.03	Rainfall Event
009	6/5/2017	24:00	0.0001	Rainfall Event
014	6/5/2017	24:00	0.01	Rainfall Event
014	6/15/2017-6/19/2017	120:00	0.03	Rainfall Event
008	6/16/2017	24:00	0.0001	Rainfall Event
006	6/18/2017	24:00	0.01	Rainfall Event
002	6/18/2017-6/19/2017	48:00	0.60	Rainfall Event
004	6/18/2017-6/19/2017	48:00	1.18	Rainfall Event
008	6/18/2017-6/19/2017	48:00	1.20	Rainfall Event
009	6/18/2017-6/19/2017	48:00	0.61	Rainfall Event
010	6/18/2017-6/19/2017	48:00	0.84	Rainfall Event
012	6/18/2017-6/19/2017	48:00	0.17	Rainfall Event
014	6/21/2017-6/24/2017	96:00	0.90	Rainfall Event
009	6/22/2017-6/23/2017	48:00	1.91	Rainfall Event
002	6/22/2017-6/24/2017	72:00	2.84	Rainfall Event
004	6/22/2017-6/24/2017	72:00	3.23	Rainfall Event
008	6/22/2017-6/24/2017	72:00	3.10	Rainfall Event
006	6/23/2017	24:00	0.11	Rainfall Event
010	6/23/2017-6/24/2017	48:00	2.30	Rainfall Event
012	6/23/2017-6/24/2017	48:00	0.24	Rainfall Event
009	6/29/2017	24:00	0.0001	Rainfall Event
014	6/29/2017	24:00	0.001	Rainfall Event
014	7/1/2017	24:00	0.0001	Rainfall Event
014	7/4/2017-7/7/2017	96:00	0.02	Rainfall Event
009	7/6/2017-7/7/2017	48:00	0.32	Rainfall Event
002	7/6/2017-7/8/2017	72:00	0.53	Rainfall Event
008	7/6/2017-7/8/2017	72:00	0.92	Rainfall Event
006	7/7/2017	24:00	0.001	Rainfall Event
004	7/7/2017-7/8/2017	48:00	0.88	Rainfall Event
010	7/7/2017-7/8/2017	48:00	0.24	Rainfall Event
012	7/7/2017-7/8/2017	48:00	0.10	Rainfall Event
009	7/10/2017	24:00	0.001	Rainfall Event
008	7/13/2017	24:00	0.05	Rainfall Event
002	7/13/2017-7/14/2017	48:00	0.05	Rainfall Event
009	7/13/2017-7/14/2017	48:00	0.001	Rainfall Event

004	7/14/2017	24:00	0.03	Rainfall Event
014	7/21/2017	24:00	0.001	Rainfall Event
002	7/22/2017-7/23/2017	48:00	0.90	Rainfall Event
004	7/22/2017-7/23/2017	48:00	2.07	Rainfall Event
006	7/22/2017-7/23/2017	48:00	0.004	Rainfall Event
008	7/22/2017-7/23/2017	48:00	1.27	Rainfall Event
009	7/22/2017-7/23/2017	48:00	0.19	Rainfall Event
010	7/22/2017-7/23/2017	48:00	0.72	Rainfall Event
014	7/23/2017	24:00	0.02	Rainfall Event
002	7/27/2017-7/28/2017	48:00	1.50	Rainfall Event
004	7/27/2017-7/28/2017	48:00	1.19	Rainfall Event
006	7/27/2017-7/28/2017	48:00	0.02	Rainfall Event
008	7/27/2017-7/28/2017	48:00	2.31	Rainfall Event
009	7/27/2017-7/28/2017	48:00	0.98	Rainfall Event
010	7/27/2017-7/28/2017	48:00	1.34	Rainfall Event
014	7/27/2017-7/28/2017	48:00	0.01	Rainfall Event
012	7/28/2017	24:00	0.07	Rainfall Event
014	7/31/2017-8/1/2017	48:00	0.003	Rainfall Event
002	8/3/2017	24:00	0.14	Rainfall Event
006	8/3/2017	24:00	0.003	Rainfall Event
008	8/3/2017	24:00	0.07	Rainfall Event
002	8/7/2017	24:00	0.15	Rainfall Event
008	8/7/2017	24:00	0.09	Rainfall Event
009	8/7/2017	24:00	0.00	Rainfall Event
002	8/10/2017	24:00	0.22	Rainfall Event
008	8/10/2017	24:00	0.17	Rainfall Event
009	8/10/2017	24:00	0.001	Rainfall Event
010	8/10/2017	24:00	0.04	Rainfall Event
014	8/18/2017	24:00	0.002	Rainfall Event
014	8/21/2017-8/24/2017	96:00	0.01	Rainfall Event
002	8/22/2017-8/23/2017	48:00	0.17	Rainfall Event
008	8/22/2017-8/23/2017	48:00	0.17	Rainfall Event
010	8/23/2017	24:00	0.002	Rainfall Event
014	8/27/2017-8/30/2017	96:00	0.02	Rainfall Event
002	8/28/2017	24:00	0.62	Rainfall Event
004	8/28/2017	24:00	0.73	Rainfall Event
006	8/28/2017	24:00	0.02	Rainfall Event
008	8/28/2017	24:00	0.76	Rainfall Event
009	8/28/2017	24:00	0.12	Rainfall Event
010	8/28/2017	24:00	0.34	Rainfall Event
012	8/28/2017	24:00	0.31	Rainfall Event
002	9/1/2017-9/2/2017	48:00	0.93	Rainfall Event
004	9/1/2017-9/2/2017	48:00	3.04	Rainfall Event
008	9/1/2017-9/2/2017	48:00	0.74	Rainfall Event
009	9/1/2017-9/2/2017	48:00	0.27	Rainfall Event
010	9/1/2017-9/2/2017	48:00	0.73	Rainfall Event
014	9/1/2017-9/2/2017	48:00	0.01	Rainfall Event
002	9/5/2017	24:00	0.04	Rainfall Event
008	9/5/2017	24:00	0.04	Rainfall Event
009	9/5/2017	24:00	0.0001	Rainfall Event
014	9/5/2017	24:00	0.001	Rainfall Event
002	9/12/2017	24:00	0.39	Rainfall Event
004	9/12/2017	24:00	0.12	Rainfall Event
008	9/12/2017	24:00	0.30	Rainfall Event
009	9/12/2017	24:00	0.06	Rainfall Event
010	9/12/2017	24:00	0.31	Rainfall Event
014	9/12/2017-9/13/2017	48:00	0.01	Rainfall Event
014	9/15/2017-9/16/2017	48:00	0.001	Rainfall Event
014	9/19/2017-9/21/2017	72:00	0.003	Rainfall Event

002	9/20/2017	24:00	0.05	Rainfall Event
008	9/20/2017	24:00	0.06	Rainfall Event
009	9/20/2017	24:00	0.004	Rainfall Event
002	10/8/2017	96:00	1.24	Rainfall Event
006	10/8/2017	24:00	0.002	Rainfall Event
004	10/8/2017-10/9/2017	48:00	2.91	Rainfall Event
010	10/8/2017-10/9/2017	48:00	1.37	Rainfall Event
012	10/8/2017-10/9/2017	48:00	0.38	Rainfall Event
008	10/8/2017-10/11/2017	96:00	1.51	Rainfall Event
009	10/8/2017-10/11/2017	96:00	0.35	Rainfall Event
014	10/8/2017-10/11/2017	96:00	0.16	Rainfall Event
008	10/15/2017	24:00	0.04	Rainfall Event
014	10/15/2017	24:00	0.004	Rainfall Event
006	10/23/2017	24:00	0.004	Rainfall Event
009	10/23/2017	24:00	0.09	Rainfall Event
014	10/23/2017	24:00	0.03	Rainfall Event
004	10/23/2017-10/24/2017	48:00	1.18	Rainfall Event
008	10/23/2017-10/24/2017	48:00	0.59	Rainfall Event
010	10/23/2017-10/24/2017	48:00	0.45	Rainfall Event
014	10/25/2017	24:00	0.0002	Rainfall Event
004	10/26/2017	24:00	0.0002	Rainfall Event
004	10/28/2017	24:00	0.35	Rainfall Event
008	10/28/2017	24:00	0.05	Rainfall Event
009	10/28/2017	24:00	0.0003	Rainfall Event
010	10/28/2017	24:00	0.01	Rainfall Event
014	10/28/2017	24:00	0.08	Rainfall Event
008	10/30/2017	24:00	0.0004	Rainfall Event
014	11/1/2017-11/2/2017	48:00	0.01	Rainfall Event
014	11/5/2017-11/7/2017	72:00	0.06	Rainfall Event
008	11/6/2017-11/7/2017	48:00	0.37	Rainfall Event
009	11/6/2017-11/7/2017	48:00	0.09	Rainfall Event
004	11/7/2017	24:00	0.81	Rainfall Event
010	11/7/2017	24:00	0.01	Rainfall Event
014	11/13/2017	24:00	0.01	Rainfall Event
002	11/15/2017	24:00	0.002	Rainfall Event
009	11/15/2017	24:00	0.00003	Rainfall Event
014	11/15/2017	24:00	0.001	Rainfall Event
002	11/18/2017	24:00	0.07	Rainfall Event
008	11/18/2017	24:00	0.16	Rainfall Event
009	11/18/2017	24:00	0.04	Rainfall Event
014	11/18/2017-11/19/2017	48:00	0.01	Rainfall Event
004	12/4/2017	24:00	0.0002	Rainfall Event
002	12/5/2017	24:00	0.25	Rainfall Event
008	12/5/2017	24:00	0.30	Rainfall Event
009	12/5/2017	24:00	0.05	Rainfall Event
010	12/5/2017	24:00	0.002	Rainfall Event
014	12/5/2017	24:00	0.01	Rainfall Event
014	12/17/2017	24:00	0.001	Rainfall Event
009	12/22/2017-12/23/2017	48:00	0.11	Rainfall Event
014	12/22/2017-12/24/2017	72:00	0.07	Rainfall Event
002	12/23/2017	24:00	0.97	Rainfall Event
004	12/23/2017	24:00	1.89	Rainfall Event
008	12/23/2017	24:00	1.07	Rainfall Event
010	12/23/2017	24:00	0.89	Rainfall Event
012	12/23/2017	24:00	0.39	Rainfall 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.

VI. CSO DISCHARGES

C. 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.

CSO No.[3]	*Start and Stop Date/Time*	*Duration (hours:minutes)*	*Volume Discharged (million gallons)*	*Cause*
014	2/3/2017	24:00	0.0003	Screens or possible false reads
014	4/26/2017	24:00	0.0002	Screens or possible false reads
014	7/10/2017-7/18/2017	216:00	0.04	Trace rain. Possible screens
014	8/7/2017-8/16/2017	240:00	0.02	Trace rain. Possible screens
014	11/9/2017	24:00	0.001	Screens or possible false reads
004	11/10/2017	24:00	0.001	Possible false reads
004	12/15/2017	24:00	0.0002	Possible false reads

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 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) **38.20**

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.

Start and Stop Date/Time	*Duration (hours:minutes)*	*Rainfall Depth (inches)*	*Source*
1/1/2017-1/4/2017	96:00	0.67	WWTP Rain Gauge
1/10/2017-1/17/2017	192:00	2.03	WWTP Rain Gauge
1/20/2017	24:00	0.42	WWTP Rain Gauge
1/23/2017-1/25/2017	72:00	0.42	WWTP Rain Gauge
1/29/2017-1/30/2017	48:00	0.05	WWTP Rain Gauge
2/7/2017-2/8/2017	48:00	0.81	WWTP Rain Gauge
2/12/2017	24:00	0.03	WWTP Rain Gauge
2/18/2017-2/19/2017	48:00	0.13	WWTP Rain Gauge
2/22/2017	24:00	0.26	WWTP Rain Gauge
2/25/2017	24:00	0.36	WWTP Rain Gauge
2/27/2017-3/1/2017	96:00	2.58	WWTP Rain Gauge
3/6/2017-3/8/2017	72:00	0.48	WWTP Rain Gauge
3/10/2017	24:00	0.05	WWTP Rain Gauge
3/13/2017	24:00	0.01	WWTP Rain Gauge
3/17/2017-3/18/2017	48:00	0.25	WWTP Rain Gauge
3/20/2017	24:00	0.28	WWTP Rain Gauge
3/26/2017-3/28/2017	72:00	0.95	WWTP Rain Gauge
3/31/2017	24:00	1.2	WWTP Rain Gauge
4/3/2017-4/7/2017	120:00	0.87	WWTP Rain Gauge
4/11/2017	24:00	0.28	WWTP Rain Gauge
4/16/2017-4/17/2017	48:00	0.14	WWTP Rain Gauge
4/19/2017-4/23/2017	120:00	0.48	WWTP Rain Gauge
4/29/2017	24:00	0.24	WWTP Rain Gauge
5/1/2017	24:00	0.43	WWTP Rain Gauge
5/4/2017-5/6/2017	72:00	0.16	WWTP Rain Gauge
5/9/2017-5/12/2017	96:00	1.34	WWTP Rain Gauge
5/19/2017-5/28/2017	240:00	0.87	WWTP Rain Gauge
5/31/2017	24:00	0.01	WWTP Rain Gauge
6/5/2017-6/6/2017	48:00	0.2	WWTP Rain Gauge
6/14/2017	24:00	0.01	WWTP Rain Gauge
6/16/2017	24:00	0.07	WWTP Rain Gauge
6/18/2017-6/19/2017	48:00	1.56	WWTP Rain Gauge
6/22/2017-6/24/2017	72:00	2.93	WWTP Rain Gauge
6/27/2017	24:00	0.01	WWTP Rain Gauge
6/29/2017	24:00	0.06	WWTP Rain Gauge
7/1/2017	24:00	0.06	WWTP Rain Gauge
7/4/2017	24:00	0.04	WWTP Rain Gauge
7/6/2017-7/8/2017	72:00	1.28	WWTP Rain Gauge
7/13/2017-7/15/2017	72:00	0.28	WWTP Rain Gauge
7/22/2017-7/23/2017	48:00	1.51	WWTP Rain Gauge
7/27/2017-7/28/2017	48:00	2.42	WWTP Rain Gauge
8/2/2017-8/3/2017	48:00	0.54	WWTP Rain Gauge
8/6/2017-8/7/2017	48:00	0.38	WWTP Rain Gauge
8/10/2017	24:00	0.4	WWTP Rain Gauge
8/14/2017	24:00	0.05	WWTP Rain Gauge
8/17/2017-8/18/2017	48:00	0.09	WWTP Rain Gauge
8/22/2017	24:00	0.39	WWTP Rain Gauge
8/28/2017	24:00	1.4	WWTP Rain Gauge

9/1/2017-9/2/2017	48:00	1.13	WWTP Rain Gauge
9/5/2017	24:00	0.16	WWTP Rain Gauge
9/12/2017-9/14/2017	72:00	0.78	WWTP Rain Gauge
9/20/2017	24:00	0.12	WWTP Rain Gauge
10/4/2017	24:00	0.01	WWTP Rain Gauge
10/8/2017-10/11/2017	96:00	2.43	WWTP Rain Gauge
10/15/2017	24:00	0.02	WWTP Rain Gauge
10/20/2017	24:00	0.01	WWTP Rain Gauge
10/23/2017-10/25/2017	72:00	0.91	WWTP Rain Gauge
10/28/2017	24:00	0.43	WWTP Rain Gauge
11/1/2017-11/3/2017	72:00	0.07	WWTP Rain Gauge
11/6/2017-11/8/2017	72:00	0.63	WWTP Rain Gauge
11/12/2017-11/13/2017	48:00	0.03	WWTP Rain Gauge
11/15/2017	24:00	0.1	WWTP Rain Gauge
11/18/2017-11/19/2017	48:00	0.26	WWTP Rain Gauge
12/2/2017	24:00	0.01	WWTP Rain Gauge
12/5/2017	24:00	0.44	WWTP Rain Gauge
12/17/2017	24:00	0.02	WWTP Rain Gauge
12/22/2017-12/24/2017	72:00	1.16	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[1]

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.
B. Title: Director of Engineering and Utilities
C. Phone: 606-327-2008
D. Email: reastwood@ashlandky.org
E. Mailing Address:
1. Street: 1700 Greenup Avenue, Suite 408
2. City: Ashland 3. State: Kentucky 4. Zip Code: 41105

F. Signature[2] G. Date: 2-28-18

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
SUMMARY OF SANITARY SEWER OVERFLOWS

This section provides an account of the number of occurrences of overflows including unauthorized discharges from the combined and separate sewer systems. Paragraph CJ-21B of the Consent Decree requests information on these discharges for the reporting period of 2017. Volume estimating methods for SSOs remained consistent with historical reporting methods for the duration of this reporting period.

Table A-1 presents the individual occurrences of SSOs during the current reporting period. When available, referenced photo (including those made available by Louisville-Jefferson County Metropolitan Sewer District for estimating overflow rates from manholes) were used to provide an approximate flow rate. This flow rate was used with the known duration of the overflow to provide a volume estimate for several overflows. In other instances, this method was not appropriate and a description of the overflow or approximation based on response staff experience has been provided.

Table A-2 lists all backups attributed to private property lateral issues. The City of Ashland (City) often responds to homeowner complaints of a backup; however, the problem is often not in the City's sewer system. These private property backups are not considered SSOs.

Several private lateral overflows and SSOs were the result of repairs or projects completed to repair or upgrade portions of the system.

Based on the City's records, there were seven locations where overflows occurred at least twice in a 12-month period. The corrective actions column in Table A-1 describes the unique circumstances of these overflows and justifies why they are not "recurring" SSOs. The City has taken proactive steps to address each location and reduce the likelihood of any additional overflows. In 2016, the City continued to cut the roots out in the remaining section of the 39th Street sewer in order to get a camera in to determine whether replacement was necessary or if point repairs would suffice. The City budgeted a capital project for further trunk replacement and completed construction in early 2017. Since the City is addressing these overflows, an SSOP is not deemed necessary and is not planned.

TABLE A-1

SUMMARY OF SSOs IN 2017

Date	Location, Including Source		Time and Date Respondent Became Aware	Time and Date Crew Responded	Time and Date SSO Ceased, If Any	Time and Date Corrective Action was Complete	Estimated SSO Volume	Ultimate Destination of Overflow (water body, storm drain, dry land, building)	Cause (grease, roots, other blockage, wet weather, loss of power, pump failure)	How Was It Reported?	Description of Corrective Actions Taken to Stop SSO	Description of Corrective Actions Taken to Prevent This or Similar SSOs in Future	Is This A Recurring SSO?
February 3, 2017		East side of 13th Street Across from ACC 8-inch main	2/3/17 11:50 AM	2/3/17 11:50 AM	2/3/17 12:25 PM	2/3/17 12:25 PM	Not available	Long Branch	Broken pipe	Electronic Submittal	Repaired pipe		**No**
February 4, 2017	2320	Crooks Street	2/4/17 12:48 PM	2/4/17 12:48 PM	2/4/17 2:16 PM	2/4/17 2:16 PM	Not available	Basement	Root blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date	**No**
February 13, 2017		13th Street Across from ACC 6-inch main	2/13/17 9:20 AM	2/13/17 9:20 AM	2/13/17 10:30 AM	2/13/17 10:30 AM	Not available	Long Branch	Broken pipe	Electronic Submittal	Replaced broken section of pipe		**No**
February 13, 2017		13th Street Across from ACC 6-inch main	2/13/17 11:00 AM	2/13/17 11:00 AM	2/21/17 9:30 AM	2/21/17 9:30 AM	Not available	Long Branch	Broken pipe	Electronic Submittal	Replaced broken section of pipe	Not a capacity issue, SSO was a result of maintenance	**Yes**
February 23, 2017	525	Muncy Street	2/23/17 8:57 AM	2/23/17 8:57 AM	2/23/17 3:55 PM	2/23/17 3:55 PM	Manhole overflowing	Keys Creek	Unknown cause	Electronic Submittal	Camera line, ran jet truck to open blockage, and put lime in line		**No**
March 14, 2017		13th Street Across from ACC 6-inch main	3/14/17 1:47 PM	3/14/17 1:47 PM	3/14/17 3:00 PM	3/14/17 3:00 PM	Not available	Long Branch	Broken pipe	Electronic Submittal	Repaired pipe	Not a capacity issue, SSO was a result of maintenance	**Yes**
March 18, 2017	3451	Thompson Drive	3/18/17 1:00 PM	3/18/17 1:00 PM	3/18/17 1:15 PM	3/18/17 1:15 PM	Manhole overflowing	Keys Creek	Debris blockage	Electronic Submittal	Ran jet truck to open blockage		**No**
March 20, 2017	812	16th Street	3/20/17 4:54 PM	3/20/17 4:54 PM	3/20/17 5:45 PM	3/20/17 5:45 PM	Not available	Basement	Unknown blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date	**No**
April 11, 2017	1808	Englewood Avenue 6-inch main	4/11/17 8:24 AM	4/11/17 8:24 AM	4/11/17 11:37 AM	4/11/17 11:37 AM	Not available	Long Branch	Storm line under sewer line broke and caused sewer pipe to fail	Electronic Submittal	Replaced broken section of pipe		**No**
April 24, 2017		Belmont Street and Simpson Road	4/24/17 3:30 PM	4/24/17 3:30 PM	4/24/17 8:30 PM	4/24/17 8:30 PM	Manhole overflowing	Ohio River	Rags blockage	Electronic Submittal	Ran jet truck to open blockage		**No**
April 25, 2017	813	17th Street 8-inch main	4/25/17 8:30 AM	4/25/17 8:30 AM	4/25/17 9:20 PM	4/25/17 9:20 PM	Not available	Long Branch	Collapsing pipe	Electronic Submittal	Replaced broken section of pipe		**No**
April 26, 2017	2317	Griffith Street 8-inch main	4/26/17 9:00 AM	4/26/17 9:00 AM	4/26/17 9:30 AM	4/26/17 9:30 AM	Not available	Long Branch	Broken pipe	Electronic Submittal	Replaced broken section of pipe		**No**
April 27, 2017	516	Bartlett Street	4/27/17 8:00 AM	4/27/17 8:00 AM	4/27/17 9:30 AM	4/27/17 9:30 AM	Not available	Little Hood Creek	Collapsing pipe	Electronic Submittal	Replaced broken section of pipe		**No**
April 27, 2017	5000	Blackburn Avenue 6-inch main	4/27/17 11:49 AM	4/27/17 11:49 AM	4/27/17 2:15 PM	4/27/17 2:15 PM	Manhole overflowing	Little Hood Creek	Tree roots caused pipe to break and become blocked	Electronic Submittal	Ran jet truck to open blockage	Replace broken pipe at a later date	**No**
May 1, 2017		29th Street Stormwater Seperation	5/1/17 8:00 AM	5/1/17 8:00 AM	12/29/17 4:00 PM	12/29/17 4:00 PM	Not available	Ohio River	Seperating storm water from sewer	Electronic Submittal	Finish laying new storm sewer line		**No**
May 3, 2017	5000	Blackburn Avenue 6-inch main	5/3/17 7:30 AM	5/3/17 7:30 AM	5/3/17 8:30 AM	5/3/17 8:30 AM	Not available	Little Hood Creek	Tree roots caused pipe to break	Electronic Submittal	Replaced broken section of pipe	Not a capacity issue, SSO was a result of maintenance	**Yes**
May 15, 2017		39th Street 18-inch main	5/15/17 12:30 PM	5/15/17 12:30 PM	5/15/17 3:00 PM	5/15/17 3:00 PM	Not available	Clyffeside Branch	Tie-in new sewer main to manhole	Electronic Submittal	Sealed pipe in manhole		**No**
May 16, 2017		39th Street 18-inch main	5/16/17 12:15 PM	5/16/17 12:15 PM	5/16/17 2:10 PM	5/16/17 2:10 PM	Not available	Clyffeside Branch	Tie-in new sewer main	Electronic Submittal	Sealed pipe	Not a capacity issue, SSO was a result of tying in new line	**Yes**
May 19, 2017	512	10th Street 6-inch main	5/19/17 8:45 AM	5/19/17 8:45 AM	5/19/17 9:45 AM	5/19/17 9:45 AM	Not available	Ohio River	Broken pipe	Electronic Submittal	Replaced broken section of pipe		**No**
May 20, 2017	1300	Greenup Avenue (under bridge) 12-inch main	5/19/17 2:30 PM	5/19/17 2:30 PM	7/19/17 1:30 PM	7/19/17 1:30 PM	Not available	Ohio River	Gas Company placed two mains through the sewer main	Electronic Submittal	Replaced broken section of pipe after gas line repair		**No**
May 22, 2017		26th Street	5/22/17 6:34 AM	5/22/17 6:34 AM	5/22/17 9:05 AM	5/22/17 9:05 AM	Not available	Ohio River	Drive failed at Pump Station resulting in shut down	Electronic Submittal	Replace drive at Pump Station		**No**
May 31, 2017	2107	Hyman Avenue 6-inch main	5/31/17 3:30 PM	5/31/17 3:30 PM	5/31/17 9:18 PM	5/31/17 9:18 PM	Not available	Long Branch	Water main leak caused pipe to break	Electronic Submittal	Replaced broken section of pipe after water main repair		**No**
June 1, 2017		Kirk Street and Morgan Avenue	6/1/17 8:24 AM	6/1/17 8:24 AM	6/1/17 10:10 AM	6/1/17 10:10 AM	Manhole overflowing	Little Hood Creek	Unknown blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date	**No**
June 7, 2017	2008	Lexington Avenue in alley behind address 8-inch	6/7/17 3:45 PM	6/7/17 3:45 PM	6/7/17 4:15 PM	6/7/17 4:15 PM	Not available	Long Branch	Gas Company removed gas line from sewer main	Electronic Submittal	Repaired pipe		**No**
June 14, 2017	1200	Long Street 8-inch main	6/14/17 9:30 AM	6/14/17 9:30 AM	6/14/17 12:25 PM	6/14/17 12:25 PM	Manhole overflowing	Long Branch	Unknown blockage	Electronic Submittal	Ran jet truck to open blockage		**No**
June 14, 2017	4823	Crittenden Drive	6/14/17 3:00 PM	6/14/17 3:00 PM	6/15/17 9:35 AM	6/15/17 9:35 AM	Not available	Keys Creek	Unknown blockage caused overflow from top of main	Electronic Submittal	Ran jet truck to open blockage	Will get locates and repair holes in top of main	**No**
June 20, 2017	4823	Crittenden Drive	6/20/17 8:30 AM	6/20/17 8:30 AM	6/20/17 2:30 PM	6/20/17 2:30 PM	Not available	Keys Creek	Pipe replacement	Electronic Submittal	Replaced pipe	Not a capacity issue, SSO was a result of maintenance	**Yes**
August 11, 2017	2652	Iroquois Avenue 6-inch main	8/11/17 11:30 AM	8/11/17 11:30 AM	8/11/17 2:00 PM	8/11/17 2:00 PM	Not available	Basement	Collapsing pipe	Electronic Submittal	Replaced broken section of pipe		**No**
September 18, 2017	1200	Long Street 8-inch main	9/18/17 9:30 AM	9/18/17 9:30 AM	9/19/17 1:30 PM	9/19/17 1:30 PM	Not available	Long Branch Creek	Broken pipe in creek	Electronic Submittal	Replaced broken section of pipe	Not a capacity issue, SSO was a result of maintenance	**Yes**
September 26, 2017	409	Lewis Avenue	9/26/17 8:45 AM	9/26/17 8:45 AM	9/26/17 11:15 AM	9/26/17 11:15 AM	Not available	Little Hood Creek	Broken pipe in creek	Electronic Submittal	Replaced broken section of pipe		**No**

TABLE A-1 (Cont'd)

SUMMARY OF SSOs IN 2017

Date	Location, Including Source		Time and Date Respondent Became Aware	Time and Date Crew Responded	Time and Date SSO Ceased, If Any	Time and Date Corrective Action was Complete	Estimated SSO Volume	Ultimate Destination of Overflow (water body, storm drain, dry land, building)	Cause (grease, roots, other blockage, wet weather, loss of power, pump failure)	How Was It Reported?	Description of Corrective Actions Taken to Stop SSO	Description of Corrective Actions Taken to Prevent This or Similar SSOs in Future	Is This A Recurring SSO?
October 3, 2017	833	McCullough Street 15-inch main	10/3/17 8:00 AM	10/3/17 8:00 AM	10/3/17 12:04 PM	10/3/17 12:04 PM	Not available	Little Hood Creek	Joint Leak	Electronic Submittal	Temporarily fix joint until part is available		**No**
October 5, 2017	833	McCullough Street 15-inch main	10/5/17 9:20 AM	10/5/17 9:20 AM	10/5/17 4:39 PM	10/5/17 4:39 PM	Not available	Little Hood Creek	Pipe repair	Electronic Submittal	Replaced pipe	Not a capacity issue, SSO was a result of maintenance	**Yes**
October 15, 2017		8th Street and Greenup Avenue 15-inch main	10/15/17 10:37 AM	10/15/17 10:37 AM	10/17/17 2:10 PM	10/17/17 2:10 PM	Not available	Ohio River	Broken pipe	Electronic Submittal	Replaced pipe		**No**
November 8, 2017	2501	Woodland Avenue 6-inch main	11/8/17 8:15 AM	11/8/17 8:15 AM	11/8/17 8:35 AM	11/8/17 8:35 AM	Not available	Long Branch	Broken pipe	Electronic Submittal	Replace broken section of pipe		**No**
November 14, 2017		10th Street and Greenup Avenue	11/14/17 10:50 AM	11/14/17 10:50 AM	11/14/17 10:55 AM	11/14/17 10:55 AM	Not available	Ohio River	Spill from discharging into manhole with jet truck	Electronic Submittal	Clean up and reported		**No**
November 23, 2017	2526	Elm Street 6-inch main	11/23/17 12:00 AM	11/23/17 12:00 AM	11/23/17 2:29 AM	11/23/17 2:29 AM	Not available	Ohio River/	Water Department broke sewer main repairing water main	Electronic Submittal	Replaced pipe		**No**
November 27, 2017	2625	Iroquois Avenue	11/27/17 12:57 PM	11/27/17 12:57 PM	11/27/07 1:20 PM	11/27/07 1:20 PM	Not available	Basement	Rags blockage	Electronic Submittal	Ran jet truck to open blockage		**No**
November 28, 2017	1543	Beverly Boulevard behind house	11/28/17 2:40 PM	11/28/17 2:40 PM	11/29/17 8:16 AM	11/29/17 8:16 AM	Not available	Long Branch	Manhole blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date	**No**
December 3, 2017	3209 / 3210	Floyd Street	12/3/17 12:25 PM	12/3/17 12:25 PM	12/3/17 12:36 PM	12/3/17 12:36 PM	Not available	Basement	Unknown blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date	**Yes**
December 15, 2017	2338	Dixon Street	12/15/17 9:44 AM	12/15/17 9:44 AM	12/15/17 10:30 AM	12/15/17 10:30 AM	Not available	Long Branch	Rags blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date	**No**
December 15, 2017	3807	Cactus Street	12/15/17 8:44 AM	12/15/17 8:44 AM	12/18/17 12:04 PM	12/18/17 12:04 PM	Not available	Clyffeside Branch	Pipe leak	Electronic Submittal	Replace pipe		**No**
December 20, 2017	916	Kilgore Drive	12/20/17 9:35 AM	12/20/17 9:35 AM	12/20/17 2:20 PM	12/20/17 2:20 PM	Not available	Ohio River	Broken pipe	Electronic Submittal	Replaced broken section of pipe		**No**
December 20, 2017	2323	Eltura Street in creek	12/20/17 3:00 PM	12/20/17 3:00 PM	12/21/17 9:30 AM	12/21/17 9:30 AM	Not available	Long Branch	Broken pipe	Electronic Submittal	Replaced broken section of pipe		**No**
December 23, 2017	3713	Greenbrier Road 8-inch main	12/23/17 8:30 AM	12/23/17 8:30 AM	12/23/17 11:00 AM	12/23/17 11:00 AM	Not available	Keys Creek	Unknown blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date	**No**
December 27, 2017	3713	Greenbriar Road 8-inch main	12/27/17 11:04 AM	12/27/17 11:04 AM	12/27/17 2:30 PM	12/27/17 2:30 PM	Not available	Keys Creek	Broke pipe to remove roots	Electronic Submittal	Replaced pipe	Not a capacity issue, SSO was a result of maintenance	**Yes**

Total SSO occurrences in 2017: 45.
Total volume of SSOs: Not available in 45 occurrences.
If information is not available, please explain why: The City did not collect or record this type of information on the daily worksheets or on the Damage/Loss Reports.

TABLE A-2

SUMMARY OF DOCUMENTED LATERAL ISSUES IN 2017

Date		Location, including source	Time and Date Respondent Became Aware	Time and Date Crew Responded	Time and Date SSO Ceased, If Any	Time and Date Corrective Action Was Complete	Estimated SSO Volume	Ultimate Destination of Overflow (water body, storm drain, dry land, building, etc)	Cause (grease, roots, other blockage, wet weather, loss of power, pump failure)	How Was It Reported?	Description of Corrective Actions Taken	Description of Corrective Actions Taken to Prevent This or Similar In Future
February 13, 2017		13th Street Across from ACC 4-inch lateral	2/13/17 10:00 AM	2/13/17 10:00 AM	2/21/17 9:30 AM	2/21/17 9:30 AM	Not available	Long Branch	Broken pipe	Electronic Submittal	Replaced broken section of pipe	
March 14, 2017		13th Street Across from ACC 4-inch main	3/14/17 8:30 AM	3/14/17 8:30 AM	3/14/17 9:30 AM	3/14/17 9:30 AM	Not available	Long Branch	Broken pipe, rubber boot slipped off	Electronic Submittal	Put rubber boot back on	
March 17, 2017		13th Street Across from ACC 6-inch lateral	3/17/17 8:30 AM	3/17/17 8:30 AM	3/17/17 9:10 AM	3/17/17 9:10 AM	Not available	Long Branch	Lateral connection repair	Electronic Submittal	Connect lateral to main line	
March 17, 2017	3548	South 29th Street lateral	3/17/17 1:12 PM	3/17/17 1:12 PM	3/17/17 1:18 PM	3/17/17 1:18 PM	Not available	Keys Creek	Cleanout overflowing due to running jet truck to open blockage	Electronic Submittal	Opened blockage	Camera line at a later date
May 18, 2017	2249	Smith Street 4-inch lateral	5/18/17 9:07 AM	5/18/17 9:07 AM	5/18/17 10:00 AM	5/18/17 10:00 AM	Not available	Clyffeside Branch	Broken pipe	Electronic Submittal	Replaced broken section of pipe	
June 30, 2017	1326	29th Street 6-inch lateral	6/30/17 8:43 AM	6/30/17 8:43 AM	6/30/17 10:50 AM	6/30/17 10:50 AM	Not available	Ohio River	Broken pipe	Electronic Submittal	Replaced broken section of pipe	
July 3, 2017	1817	Beech Street 6-inch lateral	7/3/17 8:30 AM	7/3/17 8:30 AM	7/3/17 8:53 AM	7/3/17 8:53 AM	Not available	Basement	Unknown blockage	Electronic Submittal	Ran jet truck to open blockage	Camera line at a later date
September 25, 2017	207	16th Street 6-inch lateral	9/25/17 8:00 AM	9/25/17 8:00 AM	9/25/17 10:15 AM	9/25/17 10:15 AM	Not available	Ohio River	Broken pipe	Electronic Submittal	Replaced pipe	
October 17, 2017	1560	Prospect Place lateral	10/17/17 9:30 AM	10/17/17 9:30 AM	10/17/17 10:45 AM	10/17/17 10:45 AM	Not available	Ohio River	Pipe repair	Electronic Submittal	Install clean out and replaced pipe	
October 27, 2017		28th Street and Central Avenue lateral	10/27/17 12:30 PM	10/27/17 12:30 PM	10/27/17 1:00 PM	10/27/17 1:00 PM	Not available	Ohio River	Installing tap	Electronic Submittal	Sealed tap	
December 7, 2017	3433	Blackburn Avenue lateral	12/7/17 8:30 AM	12/7/17 8:30 AM	12/7/17 9:45 AM	12/7/17 9:45 AM	Not available	Clyffeside Branch	Top of lateral missing, pipe broke during repair	Electronic Submittal	Replaced pipe	
December 26, 2017	1317	Montgomery Avenue 4-inch lateral	12/26/17 10:50 AM	12/26/17 10:50 AM	12/26/17 9:00 PM	12/26/17 9:00 PM	Not available	Long Branch	Debris blockage	Electronic Submittal	Repaired pipe and cleaned out debris	

Total lateral backup occurrences (non-SSOs) in 2017: 12. Total volume of non-SSOs: Not available in 12 occurrences.
If information is not available, please explain why: The City did not collect nor record this type of information on the daily worksheets or on the Damage/Loss Reports.

ATTACHMENT B
SUMMARY OF COMPLIANCE, MANAGEMENT, OPERATIONS, AND MAINTENANCE (CMOM) IMPLEMENTATION

SUMMARY OF CMOM IMPLEMENTATION

Paragraph CJ-16C requires the development of a CMOM program. This program was developed and submitted within the deadline of nine months after the entry of the Consent Judgment or June 5, 2008.

The City received comments on the CMOM report on June 5, 2009, and submitted a response to KDOW's comments on August 3, 2009. The City's CMOM was approved by the Kentucky Department for Environmental Protection in a letter dated March 28, 2013.

The City began tracking CMOM-related activities in 2009. See Table B-1 for CMOM-related activities in 2017.

Description	Number
SSOs	57
After-Hour Emergencies	77
New Sewer Main Extensions (ft)	758
Sewer Main Replacements (ft)	1,806
Sewer Main Repairs	48
New Lateral Pipe Installations (ft)	128
Lateral Pipe Replacements(ft)	496
Lateral Pipe Repairs	31
New Taps	16
Renewed or Repaired Taps	61
Clean Outs-Installed/Repaired/Sized	80
New Manhole Installations	12
Manhole Repairs	20
Manhole Adjustments to Grade	18
Manhole Inspection	73
Main Line(s) Flushes (ft)	34,691
Camera Truck-Inspection (ft)	21,073
Smoke Tests	45
Dye Tests	44
Grease Trap Checks	427
Mains - Cut Roots (ft)	4,516

Table B-1 CMOM-Related Activities in 2017

ATTACHMENT C
RECOMMENDED PLAN IMPLEMENTATION SCHEDULE

Figure 9.02-2 Recommended LTCP Implementation Schedule

Project ID	Subtask	Funding Status	Opinion of Total Capital Cost
Recommended Plan Projects			
03050	Roberts Dr and 6th St PS Improvement	Funded (SRF)	6.8M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
03050	10th Street Regulator Modifications	Funded(SRF)	0.2M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
03060	37th St PS Improvements	Funded (SRF)	2.95M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
	34th Street Regulator Modifications	Funded (SRF)	0.05M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
	Greenup Ave Interceptor Manholes	City	0.22M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		

2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025

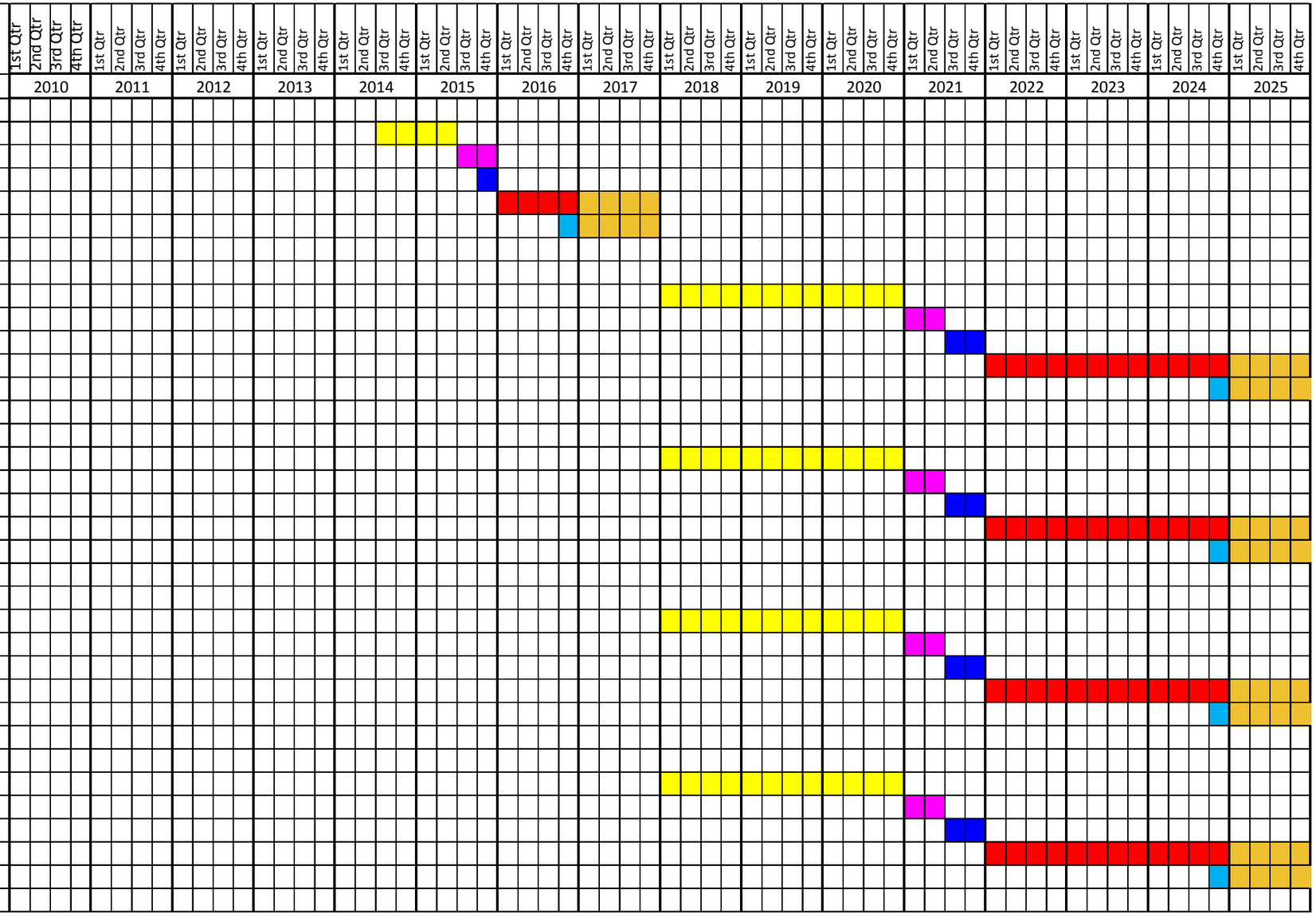
1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr

Legend

- Design (1)
- Approvals (2)
- Bidding (3)
- Construction
- Commission (4)
- Float (5)

1. Includes easements and land acquisition
2. Includes submitting documents and plans for required approvals from KDOW
3. Includes advertisement for bids and award of contract
4. includes placing in operation
5. Project may extend beyond the stipulated time

Project ID	Subtask	Funding Status	Opinion of Total Capital Cost
	29th Street Separation Project	Future	3.2M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
	Expand WWTP to treat 40 mgd PHF	Future	30M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
	10th Street PS Improvements	Future	0.1M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
	26th Street Regulator Modifications	Future	0.06M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		
	26th Street PS Improvements	Future	$0.55M
	Design		
	Approval		
	Bidding		
	Construction		
	Commission		



City hires contractor for 29th Street CSO project

BY ANDREW ADKINS
THE DAILY INDEPENDENT

ASHLAND The Ashland Board of City Commissioners on Thursday approved a $2.9 million contract with a construction company to complete a storm water separation project on 29th Street.

Tribute Contracting & Construction, based in South Point, offered the low bid and is poised to undertake the long-discussed Combined Sewer Overflow project if the commission grants final approval in a second reading on March 23.

The project is designed to redirect storm water from the sewer plant to the Ohio River by installing 5-foot drain pipes. It could reduce the overall flow to the sewer by 10 percent, according to Interim City Manager Steve Corbitt.

MARK MAYNARD | THE DAILY INDEPENDENT

Mayor Steve Gilmore, City Attorney John Vincent and Commissioner Matt Perkins talk before Thursday's meeting in commision chambers at the city building.

SEE **CITY** | A8

> through the faculty ranks and as provost at Murray State University, and through his experience on the Council on Postsecondary Education."
>
> **Paul Goodpaster,** MSU board chairman

Council on Postsecondary Education," Goodpaster said.

Morgan served at Murray State University in a number of roles, including provost and vice president for academic affairs, associate provost for graduate education and research, graduate program coordinator, and professor. He began teaching at Murray State in 1997 in the Hutson School of Agriculture.

At the CPE, Morgan provides leadership for statewide academic affairs, curriculum and programming, academic strategic planning, academic legislative and policy development, admission and enrollment requirements, diversity programming, student success/college readiness initiatives, e-learning, competency-based education, program evaluation and assessment, professional school contract placement, research and innovation, and federal and state grant administration.

SEE **MSU** | A8

First Friday exploring option of having beer garden

BY ANDREW ADKINS
THE DAILY INDEPENDENT

ASHLAND Ashland in Motion wants to add a beer garden to First Friday, its signature monthly event in downtown Ashland, but city officials want to take precautions before greenlighting the proposal.

> "The timing just seemed right. We've been successful with Firkin Fest (an annual craft beer festival) for two consecutive years, and **have proven we have the ability to host an event like this responsibly. Any time you can bring more people downtown, it increases the patronage.** As a nonprofit, if we can raise funds to support our mission, that's a good thing."
>
> **Whitney Lowe,** AIM director

First Friday, a six-month series of community events designed to promote downtown Ashland and its businesses, takes place once a month in a blocked-off section of Winchester Avenue. The event coincides with Downtown Live and has historically featured live music, classic car shows, inflatables and other family activities.

In an effort to increase attendance and promote local restaurants, AIM director Whitney Lowe asked the commis-

SEE **BEER** | A8

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TODAY'S WEATHER
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LOW **19**
FULL FORECAST, **PAGE A8**

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If all goes well, Morgan would be president June 1

fect across the state and particularly in post-secondary education," Goodpaster said. "We are staring in the face of a university funding model based on performance.

he will be well-versed on what Morehead State needs to access as much funding as possible based on that model."

If negotiations go smooth-

Current President Wayne D. Andrews is retiring, effective June 30.

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Pick 3 Midday:
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CITY:

From Page A1

Operational costs at plant will be reduced by treating both

"This will reduce our operational costs at the plant, because we're wasting resources by treating a large amount of rain water the same as we would treat wastewater," said City Engineer Ryan Eastwood. "It will also help our sewer plant meet the demands of what's already coming to it."

When the city is hit by heavy rainfall, the city has to shut off some pumps to keep from overwhelming the treatment plant, Eastwood added.

The city budgeted $4 million for the project and put it out for bid during the current fiscal year. But before receiving any offers, the city halted the bid process because Kentucky repealed its prevailing wage law in January. The law had guaranteed construction workers would be paid wages set by unions in the region for most public works projects, and its swift repeal was met with sharp union criticism.

Corbitt said the city likely saved "hundreds of thousands of dollars" by readvertising the bid after the law was repealed. The engineering estimate for the project when prevailing wage was in place was $3.5 million, Corbitt said, noting bids could've come in lower than the estimate regardless of the repeal.

Tribute Contracting will likely break ground on the project in late May or early June, Eastwood said. Constuction will impact two blocks along 29th Street, from the J.R. Food Mart area to Lexington Avenue, and could stretch as far as Forest Avenue.

Businesses near the job site will not be forced to close their doors during the construction process, which will take at least six months.

"It's going to be a tough project for a little while," Eastwood said. "We do ask that the public has patience with us. We're going to do our best to make sure everyone knows in advance of any traffic control situations."

Eastwood said advanced traffic updates will be shared through Facebook and the city's traffic and emergency alert system, AlertSense.

City manager

Ashland's city manager search has narrowed to two, according to city officials.

Members of the city manager search committee interviewed the two candidates, who are from Ohio and Virginia, last week. Commissioners met in executive session to continue their discussion of the candidates. Commissioner Amanda Clark said both candidates appear to be "competent in their ability to lead and hold people accountable."

Interim City Manager Steve Corbitt said an announcement could come in early April.

New business

Commissioner Marshall Steen, who is battling serious health issues, returned to his seat after missing all but one meeting this year. Steen and the rest of the commission approved a slew of payments on Thursday.

■ Paid $79,484.40 to Distel Construction Inc. for work on the Mill Street project. The total cost of the project, which will provide a new home to the city's water distribution and wastewater collection departments, is $1.54 million.

■ Awarded a roughly $139,620 bid to Morris Contracting Inc. for the installation of up to 100 blow-offs/flushing hydrants within the city water system.

■ Awarded a $106,197.40 bid for the Floyd Street and Skyline Drive Waterline Project to Morris Contracting Inc. Corbitt said after the meeting the current waterline was built in the 1950s. Since then, an increase in customers resulted in more pressure placed on the current water line, creating a need for a larger diameter pipe to help deliver water to the tower.

■ Purchased a low-floor ramp equipped front wheel drive van from American Bus through a state-approved bid. The vehicle cost $37,809, and the city will pay 10 percent of it through a Kentucky Public Transit Association program.

■ Approved a request by the Karen W. Frailie Christian Education Fund to place a decorative heart, white in color and attached to a stem, at the grave of each baby in the baby section of Ashland Cemetery on Memorial Day each year. The hearts will be placed and removed by Ashland Middle School students.

The city also approved a request by the fund to provide a suitable stone marker for each unmarked baby's grave in the baby section of the cemetery.

Appointments

Timothy Berry and Andrew Wheeler were appointed to the Ashland Planning Commission.

The city commission is slated to reconvene on March 23, but that meeting will be pushed back to 6 p.m. Members of the commission plan to attend a ceremony hosted by Safe Harbor that will honor the Ashland Police and Fire departments at noon. The commission plans to comply with a city ordinance by opening the meeting at its regular time of noon, but immediately recess it to 6 p.m.

(606) 326-2651 | aadkins@dailyindependent.com

BEER:

From Page A1

Fat Patty's would sponsor beer garden, if it is possible

sion to approve beer sales in a controlled environment, such as a beer garden, during First Friday.

"The timing just seemed right. We've been successful with Firkin Fest (an annual craft beer festival) for two consecutive years, and have proven we have the ability to host an event like this responsibly," Lowe told *The Daily Independent*. "Any time you can bring more people downtown, it increases the patronage. As a nonprofit, if we can raise funds to support our mission, that's a good thing."

If the city approves the request, AIM wants Fat Patty's Restaurant to work the beer garden and be its sponsoring business, Lowe said. Whoever sells beer at First Friday would need to obtain a temporary event license through the state Alcoholic Beverage Control, or ABC, department.

Clint Artrip, owner of Fat Patty's, spoke before the Ashland Board of City Commissioners on Thursday and said he'd like his business to sponsor the beer garden, but has one concern.

"(First Friday) is great. I always love it, it's a great opportunity," said Artrip. "As far as the beer tent, we're all about that. … Only concern, does it open a floodgate for other businesses to come in?"

Artrip said he spoke with a representative of the ABC and learned that other businesses could seek and get the temporary license.

Mayor Steve Gilmore told Artrip he believes he and the commissioners are all in support of a beer garden at First Friday, but "the legal part hasn't been worked out."

Gilmore said the city needs City Attorney John Vincent to "work with AIM to hammer out how it should work."

"We want it to be right, be smooth," said Gilmore. "We have plenty of time to hammer out legally what we can do and then how do we keep it from getting out of hand."

"That was my concern," said Artrip.

"Ours, too," said Commissioner Amanda Clark, who is also an AIM board member.

Lowe said Artrip's "concerns are our concerns as well."

"We are glad that the commission is taking these steps to check the legality of it and make sure we do it right," she said.

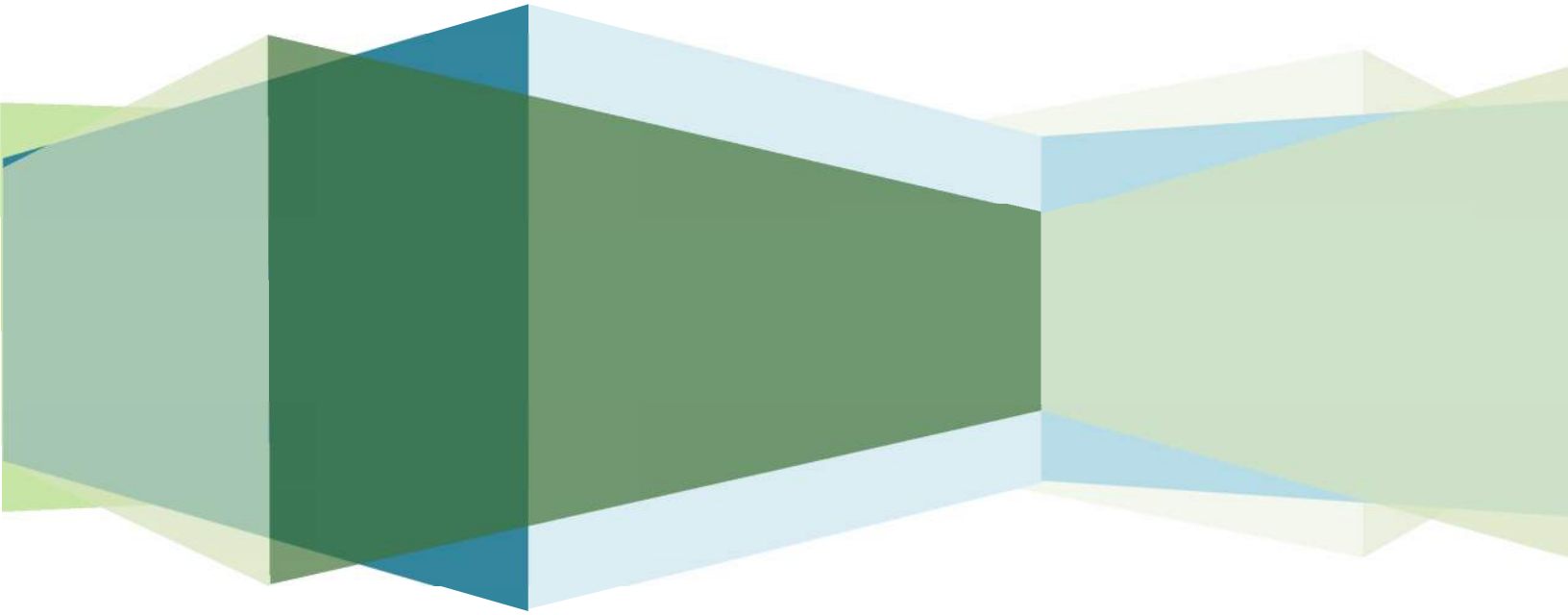
The first beer garden at First Friday would not be offered until May. The event kicks off April 7 and runs through October, with the exception of July.

(606) 326-2651 | aadkins@dailyindependent.com

Appendix "C"

Phase II Stormwater Monitoring Program

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



Phase II Stormwater Monitoring Program

for

City of Ashland
Kentucky

March 2015

Table of Contents – Stormwater Monitoring Program

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 Davison 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 biennnually. 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 pollutant 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.
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Beaver, WV 25813
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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

REI Consultants, Inc. - Case Narrative

WO#: 1408Q73

Date Reported: 9/5/2014

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.

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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 consider 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

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

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

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

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

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

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

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

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

City of Ashland

403837

CHAIN OF COUSTODY RECORD

REIC

Research Environmental & Industrial Consultants, Inc.

MAIN LABORATORY & CORPORATE HEADQUARTERS:
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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

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

SAMPLE LOG & ANALYSIS REQUEST

TURNAROUND TIME

☐ NORMAL

RUSH TURNAROUND: ☐ 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
- ~~Fecal~~ 8/21/14 QR /ecoli (ecoli: MPN) KY-EC-L-MPN Run in Ashland

	SAMPLE ID	No. & Type of Containers	Sampling Date/Time	Matrix	Sample Comp/Grab	Ammonia (3)	Chlorine (0)	Cond, Turb (0)	PH (0)	MBAS (0)	K (2)	ecoli (4)		
1	Keys		8/21/14 12:28p	L	G	✓	✓	✓	✓	✓	✓	✓		
2	Brubaker		8/21/14 1:16p	L	G	✓	✓	✓	✓	✓	✓	✓		
3	Long Branch		8/21/14 12:43p	L	G	✓	✓	✓	✓	✓	✓	✓		
4	Little Hoods		8/21/14 12:56p	L	G	✓		✓	✓	✓	✓	✓		

ENTER PRESERVATIVE CODE: Not on ice >15°C
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:

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

Temperature at arrival: 10°C ICED? Y ✓ N___

Containers provided by: [ ] REIC [ ] Client

1	Relinquished by (signature): [signature]	Date/Time: 8/21/14 1:30p	2	Relinquished by (signature)	Date/Time
	Received by (signature): [signature]	Date/Time: 8-21-14 1:30		Received by (signature)	Date/Time

FAX RESULTS ☐ EMAIL RESULTS ☑

SHIPMENT ___ Hand Delivered ✓ Courier ___ UPS ___ FEDEX ___ USPS ___ OTHER

COC-NCR-050213

Outfall ID	Photo_ID	Date	Temperature	Rainfall 24_Inch	Rainfall 48_Inch	Receiving Stream	Conditions	Description	Material	Shape	Depth_FT	Top_Width	Bottom_Width	In_Water	In_Sediment	Flow	Flow Description	Odor	Odor Description	Odor_Index	Color Description	Color_Index	Turbidity	Turbidity Index	Floatables	Floatable Description	Floatable Severity	Outfall Damage	Damage Description	Deposits/ Stains	Deposits Description	Vegetation	Vegetation Description	Poor Pool Quality	Pool Description	Benthic Growth	Benthic Description	Erosion	Erosion Description	Action Recommended	Outfall_Ch	Illicit Discharge	pH	Water Temperature	Ammonia	Comments	GPS_Height	Northing	Easting
0	0726	7/8/2014	0	na	na	Long Branch	Overcast	Open Ditch	CMP	Circular	6	24	24	No	No	No	Trickle	Yes	Rancid-Sour	Faint	Brown	Faint	No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	8.1	21.2	0		535.006	363246.692	2097086.915
1	0932-0934	12/9/2014	39			Long Branch	Overcast	Pipe	Steel	Circular	0	0	0	Fully	Partially	No		No					No		No			Yes	Cracking	No		No		No		No		No		Repair	No Evidence					Extremely exposed piping; heavy debris on top	516.022	363254.351	2097049.206
2	0725	7/8/2014	81	na	na	Long Branch	Sunny	Pipe	CMP	Circular	4	24	24	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely					540.702	363209.862	2097094.545
3	0727	7/8/2014	81	n\a	n\a	Long Branch	Overcast	Open Ditch	CMP	Box	15	6	6	Partially	No	Yes	Moderate	No			Clear		No		No			No		No		Yes	Excessive	No	Other	No		Yes	Moderate	No Action	Potential	Unlikely	7.7	21.7	0		518.317	363259.532	2097031.145
4	0728	7/8/2014	0	na	na	Long Branch	Overcast	Pipe	Steel	Circular	1	9	9	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	n/a	n/a	n/a		536.631	361633.884	2097397.595
5	0729	7/8/2014	0	na	na	Long Branch	Overcast	Pipe	Steel	Circular	2	36	36	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	n\a	n\a	n\a		528.355	361628.79	2097393.682
6	0735	7/8/2014	81	na	na	Long Branch	Overcast	Open Ditch	Steel	Circular	8	24	24	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence		na	na	na	na	535.542	361625.641	2097352.078
7	0738	7/8/2014	81	na	na	Long Branch	Overcast	Pipe	Steel	Circular	2	10	10	Partially	Partially	Yes	Moderate	No			Green	Visible - Outfall	Yes	Cloudy	Yes	Other	Slight	No		Yes	Siltation	Yes	Inhibited	No	Oil Sheen	No	Brown	No		No Action	No Evidence	Unlikely	7.9	22.9 c	10		525.911	361636.192	2097368.809
8	0737	7/8/2014	81	na	na	Long Branch	Overcast	Pipe	Steel	Circular	10	12	12	No	No	Yes	Moderate	No			Clear	Faint	No		No			Yes	Corrosion	Yes	Paint	Yes	Inhibited	No	Algae	No		Yes	Minimal	No Action	No Evidence	Unlikely	7.8	20.2	0		525.684	361619.788	2097364.925
9	0741	7/9/2014	69	na	na	Long Branch	Sunny	Pipe	CMP	Circular	1	8	8	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	na	n/a	n/a		540.917	361572.726	2097423.668
10	0963	12/30/2014	38			Long Branch	Partly Cloudy	Open Ditch	PVC	Circular	0	0	0	Fully	No	No		No					No		No			No		Yes	Flow Line	No		No		No		Yes	Moderate	Debris Removed	No Evidence						543.025	360733.002	2098063.662
11	0759	7/10/2014	0	na	na	Long Branch	Sunny	Pipe	Steel	Circular	1	12	12	No	No	Yes	Trickle	No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	7.5	17.8	0		565.023	360346.453	2098337.858
12	0745	7/9/2014	0	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	2	12	12	No	No	No		No					No		No			No		No		Yes	Excessive	No		No		No		No Action	No Evidence	Unlikely	na	na	n\a		531.745	359453.169	2099140.998
13	0746	7/9/2014	0	nA	NA	Long Branch	Sunny	Pipe	Steel	Circular	4	9	9	No	No	No		No					No		No			No		No		No		No	Colors	No		No		No Action	No Evidence	Unlikely	7.5	28`øc	0		535.76	359408.159	2099123.914
14	0812	7/21/2014	67	0	1	Long Branch	Sunny	Open Ditch	Steel	Circular	0.05	24	24	Partially	Partially	Yes	Moderate	Yes	Sewage	Easily Detected	Clear	Visible - Outfall	No		No			No		Yes	Flow Line	No		No		No		No		Debris Removed	No Evidence	Unlikely	8.2	21.2øc	0		563.772	358441.831	2097607.357
15	0813	7/21/2014	68		1	Long Branch	Sunny	Pipe	Steel	Circular	3	2	2	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		568.493	358076.006	2097010.871
16	0814	7/21/2014	68		1	Long Branch	Sunny	Open Ditch	Steel	Circular	1	24	24	Partially	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		Yes	Flow Line	No		No		No		No		No Action	No Evidence	Unlikely	8	20.2øc	0		582.265	357843.556	2096795.035
17	0747	7/9/2014	80	na	na	Long Branch	Sunny	Pipe	Steel	Circular	8	12	12	No	No	No		No					No		No			No		Yes	Other	No		No		Yes	Brown	No		No Action	No Evidence	Unlikely	na	na	na		550.901	357768.76	2098565.688
18	0748	7/9/2014	80	na	na	Long Branch	Sunny	Pipe	Steel	Circular	2	12	12	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	7.5	28.2øc	0		550.157	357740.309	2098581.71
19	0750	7/9/2014	80	n\a	n\a	Long Branch	Sunny	Open Ditch	RCP	Circular	2	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		548.534	357736.803	2098612.766
20	0751	7/9/2014	0	na	na	Long Branch	Sunny	Pipe	Steel	Circular	3	12	12	No	No	No		No					No		No			Yes	Deformation	No		No		No		No		Yes	Moderate	Repair	No Evidence	Unlikely	na	na	na		546.18	357517.935	2098878.561
21	0752	7/10/2014	65	na	na	Long Branch	Sunny	Pipe	HDPE	Circular	1	12	12	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence		na	na	na		554.76	357517.96	2098924.712
22	0753	7/9/2014	0	na	na	Long Branch	Sunny	Pipe	HDPE	Circular	1	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		544.2	357393.299	2099004.789
23	0754	7/9/2014	0	nA	NA	Long Branch	Sunny	Pipe	HDPE	Circular	1	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		nA	NA	Na		549.065	357293.137	2099069.281
24	0755	7/9/2014	0	na	na	Long Branch	Sunny	Open Ditch	Steel	Circular	5	24	24	No	No	Yes	Moderate	No	Rancid-Sour	Faint	Clear	Visible - Outfall	No		No			No		No		Yes	Inhibited	No	Suds	No		No		No Action	No Evidence	Unlikely	7.9	28.7øc	10		547.606	357144.84	2099081.167
25	0756	7/9/2014	0	nA	Na	Long Branch	Sunny	Open Ditch	CMP	Circular	2	12	12	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		Yes	Minimal	No Action	No Evidence	Unlikely	na	na	na		550.399	357010.291	2099074.811
26	0757	7/9/2014	0	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	No		No					No		No			No		No		Yes	Excessive	No		No		No		No Action	No Evidence		na	na	na		556.235	356873.242	2099049.777
27	0763	7/10/2014	65	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	2	12	12	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	na	na	na		556.474	356690.406	2098911.311
28	0767	7/10/2014	80	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	nA	NA	NA		559.06	356678.836	2098878.443
29-A	0758	7/9/2014	0	na		Long Branch	Sunny	Open Ditch	CMP	Circular	2	36	36	Partially	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence		7.5	25.1øc	0		554.033	356633.352	2098890.512
29-B	0764	7/10/2014	65	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	1	36	36	Partially	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		Yes	Inhibited	No	Algae	Yes	Brown	No		No Action	No Evidence	Unlikely	7.5	20.4øc	0		559.805	356627.677	2098882.395
29-C	0766	7/10/2014	65	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	1	36	36	Partially	Partially	Yes	Moderate	No			Clear	Visible - Outfall	Yes	Slight	Yes	Other	Slight	No		No	Oily	Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	8.1	27.7øc	10		555.032	356623.164	2098877.371
30	0769	7/10/2014	0	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		561.816	356602.123	2098855.208
31	0768	7/10/2014	0	NA	na	Long Branch	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	No		No					No		No			No		No		No	Inhibited	No		No		No		No Action	No Evidence		na	na	na		560.497	356594.015	2098816.013
32	0957	12/29/2014	35			Long Branch	Overcast	Pipe	RCP	Circular	0.5	0	0	No	Partially	No		No					No		No			No		Yes	Flow Line	No		No		No		No		Sediment Removed	No Evidence						551.971	356592.599	2098815.794
33	0770	7/10/2014	80	na	na	Long Branch	Sunny	Pipe	Steel	Circular	3	12	12	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		Yes	Flow Line	No		No		No		No		No Action	No Evidence	Unlikely	8.2	22.2øc	0		563.206	356489.299	2098626.315
34	0771	7/10/2014	0	na	na	Long Branch	Sunny	Open Ditch	CMP	Circular	2	12	12	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No	Minimal	No Action	No Evidence	Unlikely	na	na	na		564.065	356486.08	2098598.988
35	0772	7/10/2014	80	na	na	Long Branch	Sunny	Pipe	Steel	Circular	2	24	24		No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		No	Inhibited	No		No		No		No Action	No Evidence	Unlikely	8	24øc	0		564.841	356417.286	2098594.722
36	0773	7/10/2014	80			Long Branch	Sunny	Pipe	Steel	Circular	1	12	12	No	No	No		No					No		No			No		No		Yes	Excessive	No		No		No		No Action	No Evidence	Unlikely	na	na	na		570.235	355926.079	2098488.079
37	0775	7/10/2014	0		na	Long Branch	Partly Cloudy		Steel	Circular	4	24	24	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		Yes	Suds	Slight	Yes	Deformation	No		Yes	Inhibited	No	Suds	Yes	Brown	Yes	Moderate	Debris Removed	No Evidence	Unlikely	7.7	22.5øc	10		581.293	355143.418	2098668.185
38	0924	11/26/2014	40			Long Branch	Sunny	Pipe	RCP	Circular	4	0	0	No	No	No		No					No		No			No		Yes	Flow Line	No		No		No		No		Debris Removed	No Evidence						597.233	354071.555	2098301.108
39	0776	7/10/2014	80	na	na	Long Branch	Partly Cloudy	Open Ditch	Steel	Circular	15	4	4	No	No	No		No					No		No			Yes	Cracking	No		Yes	Inhibited	No		No		No		No Action	No Evidence		na	na	na		587.318	353916.992	2098357.153
40-A	0778	7/16/2014	52	0	1	Long Branch	Sunny	Open Ditch	RCP	Circular	3	12	12	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		609.692	353295.252	2098661.876
40-B	0779	7/16/2014	0	0	1	Long Branch	Sunny	Open Ditch	RCP	Circular	3	12	12	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		618.912	353248.623	2098729.279
41	0780	7/16/2014	0			Long Branch	Sunny	Pipe	Steel	Circular	1	12	12	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence		na	na	na		636.984	353127.092	2098697.274
42	0781	7/16/2014	52	0	1	Long Branch	Sunny	Open Ditch	CMP	Circular	6	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		618.507	353080.07	2098748.054
43	0790	7/16/2014	70	0	1	L. Hoods Ck.	Partly Cloudy	Open Ditch	Steel	Circular	2	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		652.246	347133.498	2089934.998
43	0927	11/26/2014	45			Keys Creek	Partly Cloudy	Pipe	CMP	Circular	0	0	0	No	No	No		No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		Yes	Moderate	Debris Removed	No Evidence					covered with fallen branches	727.213	349075.203	2095253.046
44	0931	11/26/2014	45			Keys Creek	Partly Cloudy	Pipe	CMP	Circular	0.5	0	0	No	No	No		No					No		No			Yes	Corrosion	No		Yes	Inhibited	No		No		No		Debris Removed	No Evidence					Severe leaf litter	644.402	349801.407	2095650.322
45	0929	11/26/2014	45			Keys Creek	Partly Cloudy	Pipe	CMP	Circular	0.5	0	0	No	No	No		No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		No		Debris Removed	No Evidence					Severe leaf litter	670.798	349745.412	2095516.698
46	0928	11/26/2014	45			Keys Creek	Partly Cloudy	Pipe	CMP	Circular	0.5	0	0	No	No	No		No					No		No			No		Yes	Flow Line	No		No		No		Yes	Minimal	Debris Removed	No Evidence						674.081	349586.641	2095307.456
47	0787	7/16/2014	70	0	1	Keys Creek	Sunny	Open Ditch	PVC	Circular	1	5	5	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence		na	na	na		664.917	349822.108	2095906.916
48	0925	11/26/2014	43			Keys Creek	Partly Cloudy	Pipe	HDPE	Circular	5	0	0	No	No	No		No					No		No			Yes	Deformation	Yes	Siltation	No		No		No		Yes	Minimal	Repair	No Evidence						641.422	349693.292	2096114.715
49	0926	11/26/2014	43			Keys Creek	Partly Cloudy	Pipe	CMP	Circular	0	0	0	No	Fully	No		No					No		No			Yes	Corrosion	Yes	Siltation	No		No		No		No		Replaced	No Evidence					severe corrosion	613.97	349723.817	2096481.995
50	0783	7/16/2014	55		1	Keys Creek	Sunny	Pipe	CMP	Circular	0	12	12	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		No		Replaced	No Evidence	Unlikely	na	na	na		624.618	349684.294	2096477.133
51	0784	7/16/2014	55	0	1	Keys Creek	Sunny		Steel	Circular	1	12	12	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	na	na	na	has hdpe pipe running out of it	637.475	349656.448	2096582.656
52	0786	7/16/2014	55	0	1	Keys Creek	Sunny	Open Ditch	RCP	Circular	1	8	8	No	No	No	Trickle	No			Clear	Visible - Outfall	No		No			Yes	Corrosion	Yes	Flow Line	Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	7.9	23.5	0		607.19	349652.201	2096609.875
53	0782	7/16/2014	0	0	1	Keys Creek	Sunny	Pipe	HDPE	Circular	4	5	5	No	No	No		No	Rancid-Sour	Faint			No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		629.634	349741.248	2096372.951
54	0833	7/22/2014	0			Keys Creek	Sunny	Open Ditch	PVC	Circular	1	8	8	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			Yes	Corrosion	No	Flow Line	No		No		Yes	Green	No		No Action	No Evidence	Unlikely	7.7	20.5øc	0		571.075	348235.386	2099877.296
55	0831	7/22/2014	67			Keys Creek	Sunny	Open Ditch	Steel	Circular	1	6	6	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		582.717	347781.854	2100245.014
56	0832	7/22/2014	67			Keys Creek	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		569.632	347821.937	2100215.959
57	0788	7/16/2014	70	0	1	L. Hoods Ck.	Partly Cloudy		PVC	Circular	1	12	12	No	No	No		No					No		No			No		Yes	Flow Line	Yes	Inhibited	No		No		Yes	Minimal	No Action	No Evidence	Unlikely	na	na	na		853.942	348074.239	2092166.526
58	0815	7/21/2014	70	0	1	Keys Creek	Sunny	Open Ditch	Steel	Circular	3	24	24	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			Yes	Corrosion	Yes	Flow Line	Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	7.8	23øc	0		630.175	344637.903	2094942.942
59	0816	7/21/2014	70		1	Keys Creek	Sunny	Pipe	HDPE	Circular	1	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		642.082	344724.725	2095213.788
60	0818	7/21/2014	70		1	Keys Creek	Sunny	Pipe	HDPE	Circular	2	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		619.802	344944.369	2095454.096
61	0821	7/21/2014	75			Keys Creek	Sunny	Open Ditch	HDPE	Circular	1	6	6	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		606.858	345891.447	2097300.169
62	0822	7/21/2014	75		1	Keys Creek	Sunny	Open Ditch	Steel	Circular	1	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		602.389	345864.143	2097519.859
63	0823	7/21/2014	75		1	Keys Creek	Sunny	Open Ditch	HDPE	Circular	2	5	5	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		596.688	345859.004	2097661.613
64	0824	7/21/2014	70			Keys Creek	Sunny	Open Ditch	CMP	Circular	0	0	0	No	No	Yes	Moderate	No			Gray	Visible - Outfall	Yes	Cloudy	No	Other	Origin suggested	No		Yes	Flow Line	No		No	Colors	Yes	Other	No		No Action	Obvious	Suspect	3.2	22.3	25		574.016	346326.512	2098985.715
65	0825	7/21/2014	75		1	Keys Creek	Sunny	Pipe	HDPE	Circular	1	4	4	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		577.912	346321.15	2098914.683
66	0826	7/21/2014	75		1	Keys Creek	Sunny	Pipe	Steel	Circular	6	12	12	No	No	Yes	Trickle	No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	7.9	23.4	0		571.16	346311.117	2099319.512
67	0827	7/21/2014	75			Keys Creek	Sunny	Open Ditch	CMP	Circular	1	6	6	No	Partially	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		583.988	346941.427	2099764.191
68	0880	11/26/2014	37			Keys Creek	Overcast	Pipe	Steel	Circular	0	20	20	No	No	No		No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		No		No Action	No Evidence		7.6	48.7øF	0 mg/L		554.499	347475.469	2101435.384
69	0829	7/21/2014	83			Keys Creek	Sunny	Open Ditch	HDPE	Circular	1	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		545.119	347474.77	2101438.146
70	0839	7/22/2014	77			Keys Creek	Sunny	Open Ditch	CMP	Circular	2	12	12	No	Partially	No		No					No		No			No		No		Yes	Inhibited	No		No		No		Sediment Removed	No Evidence	Unlikely	na	na	na		554.582	347147.221	2102740.044
71	0838	7/22/2014	77			Keys Creek	Sunny	Open Ditch	Steel	Circular	5	8	8	No	Partially	No		No					No		No			No		No		Yes	Excessive	No		No		No		No Action	No Evidence		na	na	na		561.316	346683.143	2102718.98
72	0837	7/22/2014	67			Keys Creek	Sunny	Open Ditch	CMP	Circular	3	5	5	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	na	na	na		550.742	345670.496	2102974.949
73	0834	7/22/2014	67			Keys Creek	Sunny	Open Ditch	Steel	Circular	1	6	6	No	No	No		No					No		No			Yes		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	na	na	na		543.831	345039.018	2103405.543
74	0836	7/22/2014	67			Keys Creek	Sunny	Pipe	Steel	Circular	1	6	6	No	No	No		No					No		No			Yes	Deformation	No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		574.785	344967.655	2103555.897
75	0840	7/22/2014	0			Keys Creek	Sunny	Open Ditch	CMP	Circular	15	6	6	No	No	No		No					No		No			Yes	Corrosion	No		Yes	Excessive	No		No		No		No Action	No Evidence		na	na	na	orange tape on tree for marker	562.644	346060.885	2106342.914
76	0904	11/12/2014	41	0	0	Keys Creek	Overcast	Pipe	RCP	Circular	1	0	0	No	No	No		No					No		No			Yes	Cracking	Yes	Flow Line	Yes	Excessive	No		No		Yes	Moderate	Repair	No Evidence						528.082	348295.805	2108041.138
77	0843	7/22/2014	0			Keys Creek	Sunny	Open Ditch	CMP	Circular	20	9	9	No	Partially	No		No					No		No			Yes	Corrosion	No		Yes	Excessive	No		No		Yes	Moderate	Repair	No Evidence	Unlikely	na	na	na		559.052	348295.1	2107787.037
78	0841	7/22/2014	77			Keys Creek	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	8	25.7	0		556.737	348110.527	2107661.03
79	0842	7/22/2014	83			Keys Creek	Sunny	Open Ditch	CMP	Circular	1	12	12	No	Partially	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		560.711	348025.392	2107547.38
80	0844	7/23/2014	71			Keys Creek	Overcast	Pipe	HDPE	Circular	1	12	12	No	No	Yes		No			Clear		No		No			No		No		No		No		No		No		No Action	No Evidence		8	25.3ø	0		574.55	348025.581	2107187.804
81	0855	7/23/2014	73			Keys Creek	Sunny	Open Ditch	HDPE	Circular	3	12	12	No	No	No		No					No		No			No		No		Yes	Excessive	No		No		No		No Action	No Evidence		na	na	na		557.317	348064.16	2107132.353
82	0845	7/23/2014	73			Keys Creek	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	Yes	Trickle	No			Clear	Visible - Outfall	No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	7.8	24.4	0		569.692	348225.57	2106835.271
83	0846	7/23/2014	73			Keys Creek	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	No		No					No		No			Yes	Deformation	No		No		No		No		Yes	Moderate	Repair	No Evidence		na	na	na		568.353	348205.597	2106811.042
84	0907	11/12/2014	39	0	0	Keys Creek	Overcast	Pipe	RCP	Circular	4	0	0	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		Debris Removed	No Evidence						581.029	348342.188	2106501.584
85	0905	11/12/2014	41	0	0	Keys Creek	Overcast	Pipe	RCP	Elliptical	0	0	0	No	Partially	No		No					No		No			Yes	Corrosion	Yes	Siltation	No		No		No		Yes	Minimal	Debris Removed	No Evidence						579.304	348413.651	2106424.12
86	0849	7/23/2014	73			Keys Creek	Overcast	Open Ditch	CMP	Circular	1	24	24	No	Partially	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		565.177	348432.287	2106307.596
87	0851	7/23/2014	0			Keys Creek	Sunny	Open Ditch	CMP	Circular	2	12	12	Partially	Partially	No		No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	7.7	24.6øc	0		587.118	348474.629	2106157.401
88	0852	7/23/2014	0			Keys Creek	Sunny	Open Ditch	RCP	Circular	2	6	6	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na	under bridge	586.595	348489.891	2106156.194
89	0908	11/12/2014	0	0	0	Keys Creek	Overcast	Pipe	CMP	Elliptical	0	0	0	Fully	Fully	No		No					No		Yes	Other		Yes	Corrosion	Yes	Siltation	No		Yes	Colors	No		No		Sediment Removed	No Evidence					floatables are copper-colored precipitates	586.185	348721.771	2105772.312
90	0854	7/23/2014	73			Keys Creek	Sunny	Pipe	HDPE	Circular	2	4	4	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		596.958	348855.151	2105519.714
91	0915-0916	11/19/2014	43			Keys Creek	Partly Cloudy	Pipe	Clay	Circular	1	0	0	No	No	No		No					No		No			Yes	Cracking	Yes	Siltation	No		No		No		Yes	Minimal	Replaced	No Evidence					outfall mouth appears to be broken off	559.937	348819.991	2105257.523
92	0913	11/19/2014	30			Keys Creek	Partly Cloudy	Pipe	HDPE	Circular	1	0	0	No	No	No		No					No		No			No		No		No		No		No		Yes	Minimal	No Action	No Evidence						616.693	348918.685	2104708.942
93	0914	11/19/2014	30			Keys Creek	Partly Cloudy	Pipe	CMP	Circular	0.5	0	0	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		Yes	Minimal	Repair	No Evidence						618.964	348916.332	2104712.344
94	0909	11/19/2014	25			Keys Creek	Partly Cloudy	Pipe	Other	Circular	0	0	0	No	No	No		No					No		No			Yes	Cracking	No		No		No		No		No		No Action	No Evidence					pipe spliced with CMP and HDPE; not an outfall	623.241	348902.528	2104394.431
95	0910	11/19/2014	25			Keys Creek	Sunny	Pipe	RCP	Circular	0	0	0	No	No	No		No					No		No			Yes	Other	No		No		No		No		No		Replaced	No Evidence					broken in half	635.073	348845.411	2104593.734
96	0857	7/23/2014	0			Keys Creek	Sunny	Open Ditch	CMP	Circular	2	12	12	Fully	Fully	No		No					No		No			No	Deformation	No		Yes	Excessive	No		No		No		Replaced	No Evidence	Unlikely	na	na	na		516.84	349107.965	2110335.707
97	0856	7/23/2014	0			Keys Creek	Sunny	Open Ditch	CMP	Circular	3	48	48	Partially	Partially	No	Substantial	No			Green	Faint	No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	8	26	0		505.442	349306.926	2109679.91
98	0903	11/12/2014	0	0	0	Brubaker	Overcast	Pipe	CMP	Circular	0	0	0	No	No	Yes	Trickle	No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		Yes	Green	Yes	Minimal	Debris Removed	No Evidence		7.7	48.1øF	0 mg/L		608.466	352915.235	2101656.298
99	0902	11/12/2014	39	0	0	Brubaker	Overcast	Pipe	HDPE	Circular	0	0	0	No	Partially	Yes	Trickle	No					No		No			No		Yes	Siltation	No		No		No		Yes	Minimal	Sediment Removed	No Evidence		7.8	51.6øF	0 mg/L		602.786	352924.279	2101661.389
100	0898	11/12/2014	39	0	0	Brubaker	Overcast	Pipe	CMP	Circular	0	0	0	No	No	Yes	Moderate	No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		Yes	Moderate	Repair	No Evidence		8.1	52.7øF	0 mg/L		595.176	352707.467	2102022.52
101	0872	7/25/2014	0			Brubaker	Sunny	Pipe	CMP	Circular	1	12	12	No	No	No		No					No		No			No		Yes	Flow Line	Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	na	na	na		594.22	352341.77	2102846.794
102	0873	7/25/2014	70			Brubaker	Sunny	Pipe	HDPE	Circular	1	6	6	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	7.7	22.5øc	0		581.108	352315.296	2103457.476
103	0894	11/4/2014	66	0	0	Brubaker	Partly Cloudy	Pipe	Clay	Circular	10	5	5	No	No	No		No					No		No			Yes	Other	Yes	Siltation	No		No		No		Yes	Minimal	Debris Removed	No Evidence						584.213	352435.68	2103814.156
104	0893	11/4/2014	66	0	0	Brubaker	Partly Cloudy	Pipe	Clay	Circular	10	0	0	No	No	No		No					No		No			Yes	Deformation	No		No		No		No		Yes	Minimal	Repair	No Evidence					Inside of pipe is not level with pipe exit	586.869	352424.356	2103803.46
105	0869	7/25/2014	70			Brubaker	Sunny	Open Ditch	CMP	Circular	1	9	9	No	No	No							No		No			Yes	Corrosion	No		Yes	Inhibited	No		No		No		Replaced	No Evidence	Unlikely	na	na	na		573.672	352426.249	2103870.576
106	0868	7/25/2014	0			Brubaker	Sunny	Open Ditch	RCP	Circular	1	6	6	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		564.987	352534.455	2104600.573
107	0891	11/4/2014	0	0	0	Brubaker	Partly Cloudy	Pipe	Clay	Circular	1.75	0	0	No	No	No		No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		Yes	Green	Yes	Minimal	No Action	No Evidence						557.969	352515.521	2104629.221
108	0889	11/4/2014	67	0	0	Brubaker	Partly Cloudy	Pipe	Clay	Circular	4.5	0	0	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		Yes	Moderate	Repair	No Evidence					Outfall angled toward ground	557.992	352275.523	2104987.053
109	0887	11/4/2014	67	0	0	Brubaker	Partly Cloudy	Pipe	RCP	Circular	4	0	0	No	No	Yes	Trickle	No					No		Yes	Suds	Slight	No		No		No		No	Suds	Yes	Green	Yes	Minimal	No Action	No Evidence		7.8	54.1øF	0 mg/L		557.095	352272.651	2104994.02
110	0886	11/4/2014	64	0	0	Brubaker	Partly Cloudy	Open Ditch	PVC	Circular	2.5	0	0	No	No	No		No					No		No			Yes	Cracking	No		No		No		No		No		Repair	No Evidence					Across from one green pipe and one PVC pipe	572.113	351811.076	2106143.485
111-A	0883	11/4/2014	48	0	0	Brubaker	Partly Cloudy	Pipe	HDPE	Circular	4	0	0	No	No	No		No					No		Yes	Petroleum	Slight	No		No		No		No	Oil Sheen	No		No		No Action	No Evidence					Pool sheen may be due to intake in church lot	537.907	351691.495	2107526.732
111-B	0884	11/4/2014	64	0	0	Brubaker	Partly Cloudy	Open Ditch	HDPE	Circular	6	0	0	No	No	No		No					No		No			No		No		No		No		No		Yes	Minimal	No Action	No Evidence						534.042	351687.633	2107516.994
112	0882	11/4/2014	48	0	0	Brubaker	Partly Cloudy	Pipe	PVC	Circular	1.5	3	3	No	No	No		No					No		No			No		Yes	Siltation	No		No		Yes	Green	No		Sediment Removed	No Evidence					pipe slightly above creek	528.698	351690.533	2108411.083
113	0860	7/25/2014	63			Brubaker	Sunny	Pipe	CMP	Circular	2	6	6	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		537.741	351683.288	2108505.277
114	0859	7/24/2014	63			Brubaker	Overcast	Open Ditch	HDPE	Circular	1	12	12	No	No	Yes	Trickle	No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	7.7	22.2	0		539.479	351747.555	2108668.309
115-A	0919	11/19/2014	48			Brubaker	Partly Cloudy	Pipe	HDPE	Circular	0	0	0	No	No	No		No					No		No			No		Yes	Flow Line	Yes	Excessive	No		No		No		No Action	No Evidence					next to 115B	529.907	352869.652	2109366.041
115-B	0920-0921	11/19/2014	48			Brubaker	Partly Cloudy	Open Ditch	CMP	Circular	0	0	0	No	No	No		No					No		No			Yes	Cracking	Yes	Siltation	Yes	Inhibited	No		No		No		Replaced	No Evidence					next to 115A; may not be active	525.774	352878.174	2109358.299
116	0918	11/19/2014	48			Brubaker	Partly Cloudy	Pipe	Steel	Circular	4	0	0	No	No	Yes	Trickle	No					No		No			Yes	Cracking	Yes	Flow Line	No		No		No		Yes	Minimal	Repair	No Evidence		7.9	51.3øF	0 mg/L		546.764	352505.059	2109406.339
117	0917	11/19/2014	43			Brubaker	Sunny	Pipe	Steel	Circular	3	0	0	No	No	Yes	Trickle	No					No		No			Yes	Cracking	Yes	Flow Line	Yes	Excessive	No		No		Yes	Minimal	Repair	No Evidence		8.1	45.5	0 mg/L	Mouth badly damaged	530.202	351967.249	2109428.474
118	0956	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	RCP	Circular	0	36	36	No	No	Yes	Trickle	No					No		No			No		No		No		No		No		No		No Action	No Evidence		7.2	53.3	0		512.901	361607.057	2101591.041
119	0966	12/31/2014	30	No	No	Ohio River	Partly Cloudy	Pipe	CMP	Circular	0	0	0	Partially	No	Yes		No					No		No			No				No				No		No		No Action	No Evidence						520.904	365875.77	2095558.618
120	0967	12/31/2014	30	No	No	Ohio River	Partly Cloudy		CMP	Circular	0	0	0	Partially	No	Yes		No					No		No			No				No				No		No		No Action	No Evidence						519.355	364607.946	2097045.403
121	0968	12/31/2014	30	No	No	Ohio River	Partly Cloudy		CMP	Circular	0	0	0	No	No	No		No					No		No			No				No				No		No		No Action	No Evidence						510.749	364221.717	2097625.997
122	0954	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	20	36	36	No	No	Yes	Trickle	No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	7.4	566	0		515.879	362490.948	2100022.558
123	0953	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	0	36	36	No	No	Yes	Moderate	No					No		No			Yes	Deformation	No		No		No		No		No		Repair	No Evidence		7	59	0	pipe end cap and wall removed	510.854	361047.487	2102731.433
125	0948	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	10	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence						527.808	359856.449	2105287.786
126	0949	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	RCP	Circular	20	60	60	No	Partially	Yes	Moderate	No			Clear		No		No			No		No		No		No		No		No		No Action	No Evidence		7.2		0		510.867	359652.789	2105675.884
127	0947	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	20	48	48	Partially	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence						518.859	359608.129	2105760.068
128	0945	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	20	24	24	No	No	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence						511.422	359469.655	2105985.907
129	0946	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	15	48	48	No	No	Yes	Substantial	Yes	Rancid-Sour	Easily Detected	Clear		No		No			No		No		No		No		Yes	Green	No		No Action	No Evidence	Unlikely	7.4	55	25		510.098	359432.576	2106065.917
130	0944	12/16/2014	0	yes	no	Ohio River	Sunny	Open Ditch	CMP	Circular	0	24	24	No	No	Yes	Trickle	No			Clear		No		No			Yes	Corrosion	No		No		No		No		No		Replaced	No Evidence				0		524.443	358661.912	2107039.356
131-A	0941+0943	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	10	36	36	No	No	Yes	Moderate	No			Clear		No		No			Yes	Corrosion	No		No		No		No		No		Replaced	No Evidence	Unlikely	7	69.3	10	CMP inside RCP needs replaced	503.014	357131.219	2108732.393
131-B	0942-0943	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	RCP	Circular	10	24	24	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence						509.538	357129.717	2108731.352
133	0939	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	RCP	Circular	20	24	24	No	No	Yes	Substantial	Yes	Petroleum-Gas	Noticable Distance	Clear		Yes	Slight	No			Yes	Cracking	Yes	Flow Line	No		No		Yes	Other	No		Repair	Suspect		6.7	66.7	10		515.184	354648.329	2109981.262
134	0938	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	RCP	Circular	10	36	36	No	No	No		No					No		No			No		No		No		No		No		Yes	Minimal	No Action	No Evidence						524.296	351735.331	2110604.699
136	0922	11/26/2014	34			un-named	Overcast	Pipe	CMP	Circular	0	0	0	Partially	No	No		Yes	Sewage	Easily Detected			No		Yes	Petroleum	Origin suggested	Yes	Corrosion	Yes	Flow Line	No		Yes	Oil Sheen	No		No		Repair	Potential					located near railroad and housing; tires on banks	530.369	346484.45	2110683.439
138	0794	7/17/2014	57				Sunny	Open Ditch	CMP	Box	5	36	36	Partially	Partially	Yes	Moderate	No			Clear	Visible - Outfall	Yes	Cloudy	Yes	Other	Slight	No		No		Yes	Inhibited	No		Yes	Brown	No		No Action	No Evidence	Unlikely	7	17øc	0		680.153	346073.265	2090010.437
140	0793	7/17/2014	57			L. Hoods Ck.	Sunny	Open Ditch	CMP	Circular	4	12	12	No	No	No		No					No		No			Yes	Cracking	No		Yes	Excessive	No		Yes	Green	No		Debris Removed	No Evidence	Unlikely	na	na	na		690.145	346259.479	2089940.12
141	0791	7/16/2014	70	0	1	L. Hoods Ck.	Partly Cloudy	Open Ditch	CMP	Circular	3	12	12	No	No	No		No					No		No			No		No		Yes	Excessive	No		No		No		No Action	No Evidence	Unlikely	na	na	na		658.395	346778.869	2089973.462
144	0789	7/16/2014	70	0	1	L. Hoods Ck.	Partly Cloudy	Open Ditch	PVC	Circular	3	2	2	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence		7	2.7øc	0		643.96	347238.757	2089903.822
145	0795	7/17/2014	57			L. Hoods Ck.	Sunny		Steel	Circular	3	24	24	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No			Flow Line	Yes	Inhibited			No		No		No Action	No Evidence						638.426	350368.015	2091454.562
146	0959	12/29/2014	40			L. Hoods Ck.	Overcast	Pipe	RCP	Circular	0	0	0	Partially	No	No		No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		No		No Action	No Evidence						637.112	350472.055	2091515.263
147	0798	7/17/2014	68			L. Hoods Ck.	Sunny	Open Ditch	CMP	Circular	1	12	12	No	No	No		No					No		No			No		No		Yes	Excessive	No		No		No		No Action	No Evidence	Unlikely	na	na	na		624.997	350997.607	2091666.838

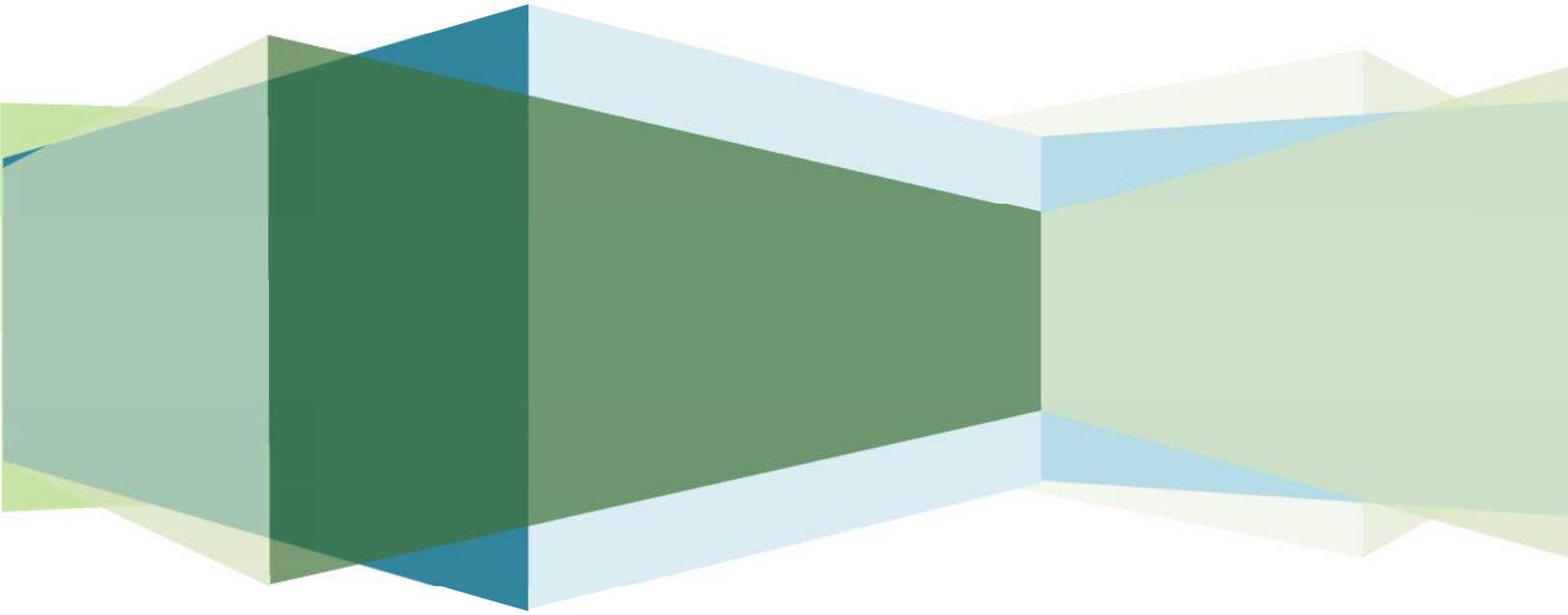
148	0958	12/29/2014	37			L. Hoods Ck.	Overcast	Pipe	RCP	Circular	0	0	0	Fully	No	No		No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		No		No Action	No Evidence						615.911	350941.086	2091631.175
149	0960	12/29/2014	35			L. Hoods Ck.	Overcast	Pipe	CMP	Circular	0	0	0	No	No	No		No					No		No			Yes	Other	No		No		Yes	Colors	No		No		Repair	No Evidence					Outfall buried under rocks; orange stuff on bank	564.767	351798.931	2090555.992
150	0796	7/17/2014	68			L. Hoods Ck.	Partly Cloudy	Open Ditch	Steel	Circular	3	24	24	No	Partially	No		No					No		No			No		No		Yes	Inhibited	No		No		No		No Action	No Evidence		na	na	na		581.225	351781.945	2090373.22
151	0808	7/18/2014	57			L. Hoods Ck.	Sunny	Pipe	PVC	Circular	0.08	5	5	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		569.19	353910.972	2091948.85
152	0807	7/18/2014	57			L. Hoods Ck.	Sunny	Pipe	PVC	Circular	2	3	3	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence						567.543	353924.149	2091985.113
153	0961	12/29/2014	40			L. Hoods Ck.	Overcast	Pipe	PVC	Circular	0	0	0	No	No	No		No					No		No			No		Yes	Siltation	No		No		No		No		No Action	No Evidence						550.107	353819.755	2091981.303
154	0850	7/18/2014	57			L. Hoods Ck.	Sunny	Pipe	PVC	Circular	1	0	0	No	No	Yes	Moderate	No					No		No			Yes	Corrosion	No		Yes	Inhibited	No		No		Yes	Excessive	Replaced	No Evidence	Unlikely	8	20øc	0		554.235	354095.363	2092289.36
155	0803	7/18/2014	62			L. Hoods Ck.	Sunny	Pipe	Steel	Circular	1	24	24	Partially	Partially	No		Yes	Rancid-Sour	Faint	Clear	Visible - Outfall	Yes	Cloudy	No			No		Yes	Flow Line	Yes	Inhibited	No		Yes	Brown	No		No Action	No Evidence	Unlikely	7.8	18.4øc	0		539.92	355687.963	2092482.943
156	0809	7/18/2014	62			L. Hoods Ck.	Overcast	Pipe	HDPE	Circular	0	12	12	No	No	No		No					No		No	Other	Slight	No		Yes	Flow Line	No		No	Floatables	Yes	Green	No		No Action	No Evidence		na	na	na		550.901	356031.694	2092391.469
157	0810	7/18/2014	62			L. Hoods Ck.	Sunny	Pipe	HDPE	Circular	1	3	3	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		554.556	356343.217	2092449.462
158	0817	7/18/2014	62			L. Hoods Ck.	Partly Cloudy	Open Ditch	Steel	Circular	2	3	3	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		551.529	356421.698	2092467.782
159	0935	12/9/2014	43			L. Hoods Ck.	Overcast	Pipe	CMP	Circular	2	0	0	No	No	Yes	Substantial	No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		Yes	Minimal	No Action	No Evidence		8.2	47.4øF	0 mg/L		560.201	356795.513	2093501.394
160	0936-0937	12/9/2014	39			L. Hoods Ck.	Overcast	Pipe	CMP	Circular	0	0	0	No	No	No		No					No		No			Yes	Corrosion	No		No		No		No		Yes	Moderate	Repair	No Evidence						566.575	357124.687	2093454.286
161	0804	7/18/2014	0			L. Hoods Ck.	Overcast	Open Ditch	PVC	Circular	2	8	8	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		547.791	358689.238	2093447.758
162	0805	7/18/2014	71			L. Hoods Ck.	Overcast	Open Ditch	PVC	Circular	5	6	6	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		552.266	358739.033	2093437.923
163	0806	7/18/2014	0			L. Hoods Ck.	Overcast	Pipe	PVC	Circular	0	4	4	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence		na	na	na		551.264	358813.016	2093414.49
164	0800	7/17/2014	0			L. Hoods Ck.	Sunny	Open Ditch	Steel	Circular	0	3	3	Partially	Partially	Yes	Moderate	No			Brown	Visible - Outfall	Yes	Opaque	Yes	Other	Origin suggested	No		Yes	Siltation	No		Yes	Colors	No		No		No Action	Suspect	Potential	7.3	17.7øc	10		624.152	352362.987	2094916.105
165	0799	7/17/2014	73			L. Hoods Ck.	Sunny	Pipe	Steel	Circular	10	3	3	No	No	Yes	Moderate	No			Brown	Visible - Outfall	Yes	Cloudy	No			No		Yes	Flow Line	Yes	Inhibited	No	Colors	Yes	Brown	No		No Action	No Evidence	Unlikely	7.7	20.3øc	0		647.225	352330.496	2094966.634
165	0801	7/17/2014	73			L. Hoods Ck.	Sunny	Open Ditch	Steel	Circular	0	12	12	No	No	Yes	Moderate	No			Clear	Faint	No		No			Yes	Deformation	Yes	Siltation	No		No		Yes	Brown	No		No Action	No Evidence	Unlikely	7.5	18.5øc	10		636.391	352415.196	2094798.521
167	0835	7/22/2014	67			Keys Creek	Sunny	Pipe	HDPE	Circular	12	3	3	No	Fully	No		No					No		No			No		No		No		No		No		No		Sediment Removed	No Evidence	Unlikely	na	na	na		550.742	345006.81	2103472.101
168	0820	7/21/2014	0		1	Keys Creek	Sunny	Pipe	HDPE	Circular	2	3	3	Fully	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	8	22.6øc	0		612.54	345501.778	2096021.846
169	0828	7/21/2014	83			Keys Creek	Sunny	Open Ditch	Steel	Circular	1	12	12	No	No	Yes		No					No		No			No		Yes	Siltation	Yes	Inhibited	No		No		No		No Action	No Evidence	Unlikely	6.3	20øc	0		533.74	347382.555	2100885.802
173	0797	7/17/2014	68			L. Hoods Ck.	Sunny	Open Ditch	Steel	Circular	3	3	3	No	No	Yes	Moderate	No			Clear	Visible - Outfall	No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	8.2	20.3øc	0		586.599	351624.051	2091035.836
175	0962	12/29/2014	0			L. Hoods Ck.	Overcast	Pipe	Clay	Circular	0	0	0	No	Fully	No		No					No		No			Yes	Other	No		No		No		No		No		Debris Removed	No Evidence						588.233	355464.623	2092738.491
177	0811	7/21/2014	67	0	1	Long Branch	Sunny	Open Ditch	CMP	Box	1	6	6	Partially	Partially	Yes	Substantial	No			Clear	Visible - Outfall	No		Yes	Suds	Slight	No		No		Yes	Inhibited	No	Suds	No		No		No Action	No Evidence		7.9	20.2øc	0		549.847	358406.935	2098502.919
181	0777	7/10/2014	80	na	na	Long Branch	Partly Cloudy	Open Ditch	RCP	Circular	3	12	12	No	No	No		No					No		No			No		No		No	Inhibited	No		No		Yes	Minimal	No Action	No Evidence	Unlikely	na	na	na		614.397	353354.954	2098590.723
182	0830	7/21/2014	0			Keys Creek	Sunny	Open Ditch	CMP	Circular	3	2	2	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		553.54	347480.394	2101455.096
183	0858	7/24/2014	0			Brubaker	Overcast	Pipe	HDPE	Circular	1	6	6	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence	Unlikely	na	na	na		542.054	351730.295	2108720.382
199	0950	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	5	24	24	No	No	Yes	Trickle	Yes	Rancid-Sour	Faint	Clear		No		No			Yes	Corrosion	No		No		No		No		No		Replaced	No Evidence		6.4	59	0		531.562	360080.921	2104911.555
200	0951	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	5	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence						533.685	360323.67	2104452.274
201	0952	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	5	8	8	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence					may not be storm. stuffed with material	535.745	360799.744	2103382.111
202	0955	12/16/2014	0	yes	no	Ohio River	Overcast	Pipe	CMP	Circular	5	12	12	No	No	No		No					No		No			No		No		No		No		No		No		No Action	No Evidence						522.279	363460.368	2098710.203
203	0890	11/4/2014	67	0	0	Ohio River	Partly Cloudy	Pipe	PVC	Circular	0.75	0	0	No	No	No		No					No		No			No		Yes	Flow Line	No		No		Yes	Green	No		No Action	No Evidence						558.851	352480.985	2104665.939
204	0965	12/31/2014	30			Ohio River	Partly Cloudy	Open Ditch	Steel	Circular	0	0	0	No	No	No		No					No		No			Yes	Corrosion	Yes	Flow Line	No		No		No		Yes	Minimal	No Action	No Evidence						523.039	360937.363	2103031.424


Storm System
Outfall
Streams
Ashland Roads
N
Ohio River
Little Hoods Cr.
Long Branch
Keys Cr.
Bruhaker Creek
Horse Branch
Haney Branch

Appendix "D"

Pollution Prevention and Good Housekeeping

- Post Construction Stormwater Management Structural BMPs - JD Byrider Pictures
- Storm Sewer Outfall Map



JD Byrider

Porous Pavement Project


Grease Traps


Bioswale


WE FINANCE!
Bioswale


Bioswale

ASHLAND
CATLETTSBURG
Ohio River
52
Greenup County
East Fork Little Sandy River
Little Sandy River
Ice Dam Creek
Paddle Creek
Big Sandy River
23
Shope Creek
64
Silver Run
East Fork Little Sandy River
60
Williams Creek
Boyd County
Ellington Bear Creek
East Fork Little Sandy River
Garner Creek
Dissolved Oxygen TMDL Report (Completed in 1992)
Lawrence County
West Virginia
Kentucky
Carter County
Legend
Outfall
Interstate HWY
US HWY
State Route
Impaired Stream
State Boundary
Stream
River
Urbanized Area
County Boundary
Corporate Boundary
Subbasin
Big Sandy. Kentucky, West Virginia.
Little Sandy. Kentucky.
Little Scioto-Tygarts. Kentucky, Ohio.
0 2,250 4,500 9,000 13,500
Feet
Source: 2008 Integrated Report to Congress on the Conditions of Water Resources in Kentucky,
Prepared by KDOW, ESRI Template, U.S. Department of Commerce, U.S. Census Bureau (2000), KY Transportation Dept.
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Storm Sewer Outfalls and Impaired Streams
Ashland / Boyd County MS4
April 2010