Storm Water Quality Management Plan (SWQMP) 2018 – 2023

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Section I. Acronyms

1. “BMPs” is an acronym for Best Management Practices.
2. “CE” is an acronym for City Engineer.
3. “CFR” is an acronym for Code of Federal Regulations.
4. “CWA” is an acronym for Clean Water Act.
5. “EHS” is an acronym for Environmental Health and Safety.
6. “EPA” is an acronym for Environmental Protection Agency.
7. “GIS” is an acronym for Geographic Information System.
8. “IDDE” is an acronym for Illicit Discharge Detection and Elimination program element.
9. “KAR” is an acronym for Kentucky Administrative Regulations.
10. “KDOW” is an acronym for Kentucky Division of Water
11. “KPDES” is an acronym for Kentucky Pollutant Discharge Elimination System.
12. “KRS” is an acronym for Kentucky Revised Statutes.
13. “MEP” is an acronym for Maximum Extent Practicable.
14. “MG” is an acronym for Measurable Goal.
15. “MON” is an acronym for Water Quality Monitoring program event.
16. “MS4” is an acronym for Municipal Separate Storm Sewer System.
17. “NPDES” is an acronym for National Pollutant Discharge Elimination System.
18. “NPO” is an acronym for Non-Profit Organization.
19. “P&Z” is an acronym for Nicholasville City Commission.
20. “QA/QC” is an acronym for Quality Assurance and Quality Control.

21. “SWAC” is an acronym for Storm Water Advisory Committee.

22. “SWQMP” is an acronym for Storm Water Quality Management Program.

23. “SWPPP” is an acronym for Storm Water Pollution Prevention Plan.

24. “TMDL” is an acronym for Total Maximum Daily Load.

Section II. Community Background

The plans for the City were laid in the late 1700's by local Reverend John Metcalf. Founded in 1798, Nicholasville Kentucky was named in honor of Colonel George Nicholas, a father of the Kentucky Constitution in 1792.

Situated in the heart of Bluegrass Country, Nicholasville is a mid-sized City in central Kentucky located approximately six miles south of Fayette County, the home of Lexington, Kentucky's second largest City. Nicholasville serves as a commuter hub for employment and shopping between Lexington and the neighboring counties. The historic downtown and impressive horse farms in the surrounding countryside provide a delightful mix of city and county in and aesthetically pleasing manner. Art and culture is abundant in the area as it is home to the Kentucky Wine and Vine Fest.

The City has grown rapidly in recent years and is working diligently to accommodate the greater transportation needs. In 2010 the City's population was an impressive 28,015 and by the year 2017 had expanded to roughly 30,500 residents making Nicholasville one of the larger cities in the State.

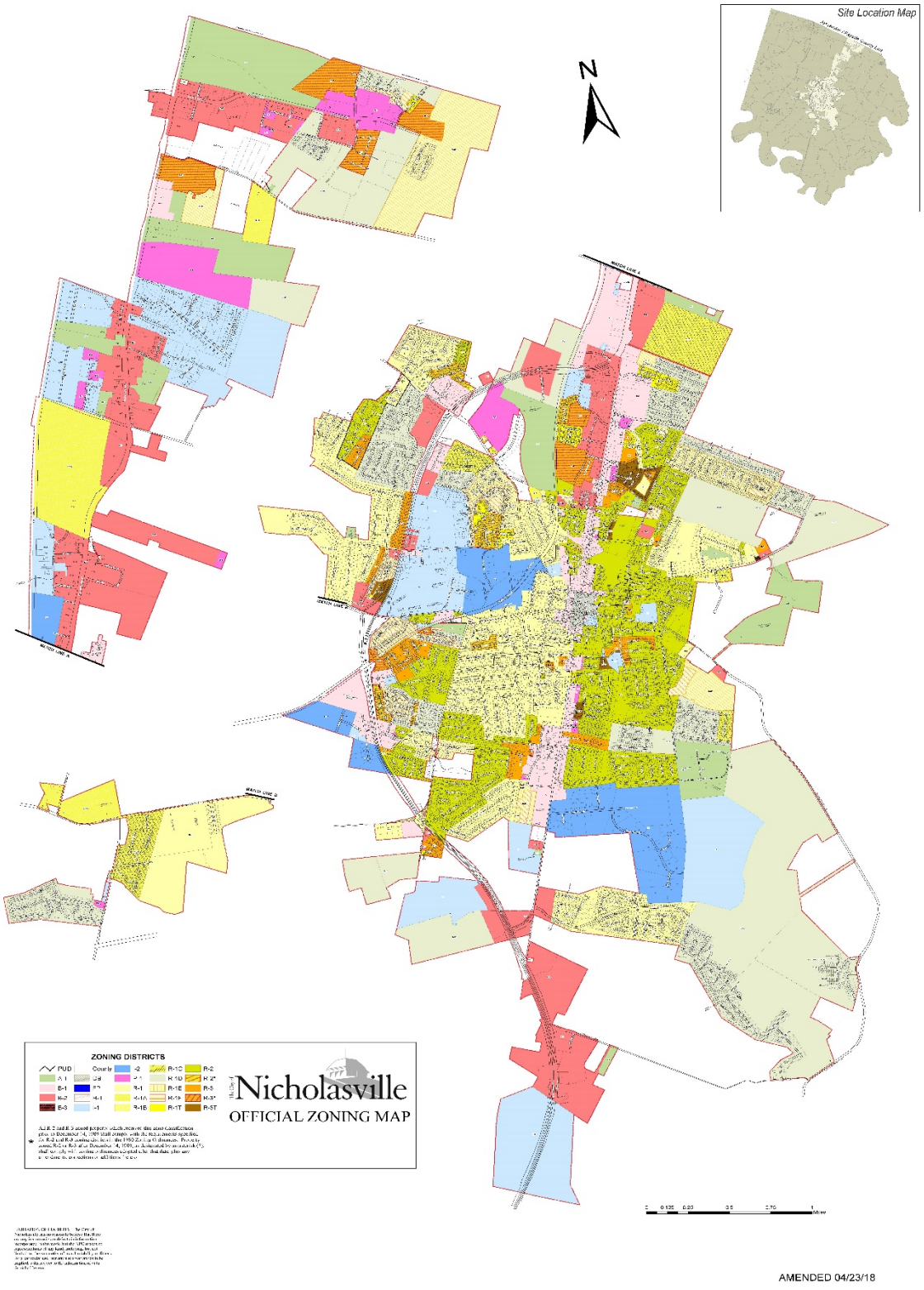
Section III. Local Water Resources

The City of Nicholasville's MS4 boundary drains to three primary waterways; Jessamine Creek, Town Branch (a tributary of Jessamine Creek) and West Hickman Creek. The Kentucky River is the receiving waters for all three of Nicholasville's watersheds. Jessamine Creek receives stormwater runoff from the west side of the community. The creek runs parallel to the western boundary of the MS4. A few sections of Jessamine Creek run through the MS4 boundary.

Town Branch is the major watershed/waterway in Nicholasville. The waterway receives the vast majority of urban stormwater from Nicholasville. Town Branch runs north to south through the center of the community. This waterway is heavily urbanized and has been severely altered by development over the past two centuries. Town Branch feeds into Jessamine Creek to the south of the MS4 boundary.

The last major waterway receiving urban stormwater runoff from the MS4 is West Hickman Creek. West Hickman Creek is located to the east of Nicholasville. The majority of the stormwater runoff reaching the West Hickman waterway is from the northern most section of the MS4 boundary near the Jessamine / Fayette County Line.

Section IV. Map of the Permit Area



Section V. Minimum Control Measures (MCM)

MCM 1 – Public Education and Outreach

During the 2010 – 2018 permit period, while a good deal of stormwater related programs, and activities occurred in Nicholasville, capturing education and outreach efforts were conducted in an ad hoc reactive manner. The public education and outreach tasks outlined in the 2010-2015 SWQMP were basically accomplished. A basic stormwater website, piggy backing on other education activities or events, and the basic education of staff, citizens, and contractors summarizes the general activities during the past permit. Many of the tasks associated with this MCM were assigned to a single department or an individual within that department. The goal of the future task efforts associated with public education and outreach will be to develop a more proactive program and coordinate education and outreach responsibilities with other public and private activities.

For this permit cycle, Nicholasville has outlined an enhanced public education and outreach program. Building upon previous efforts, an emphasis has been placed on engaging other departments within the city to assist or perform the BMP tasks associated with the educating/outreach of community, staff and contractors regarding storm water quality improvements.

MCMC 1 BMPs: The objective of this minimum control measure is to inform Nicholasville's MS4 community about their impact on water quality. The city has identified the following public education and outreach activities to be accomplished this permit cycle (i.e., within the first five years following the effective date of the MS4 permit).

1.A. – Public Outreach Framework

1.A.1 – Maintain Public Education Program

1.A.1.a – Establish Funding

Activity Owner: City Engineer, Mayor, City Commission
Schedule: Permit Year(s): 1, 2, 3, 4, and 5
Measurable Goal:

- Establish resources to fund public education activities.

Evidence of Completion:

- Meet the Stormwater Advisory Council (SWAC) to determine an appropriate percentage of the annual budget to delegate to MCM1.

1.A.1.b – Determine Annual Activity

Activity Owner: SWAC
Schedule: Permit Year(s): 1, 2, 3, 4, and 5
Measurable Goal:

- What are the planned activities for the permit year to reach target audiences and address target pollutants?

Evidence of Completion:

- Review fiscal and human resources to establish a workable schedule of activities outlined for the given year.
- Target three (3) activities per year.

1.A.1.c – Coordinate with KYTC & Other Public Agencies

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Incorporate assistance provided by KYTC/KEEC into public outreach strategy document as a cost savings method and to present a unified message for educating the public.

Evidence of Completion:

- Gain familiarity with the media outlets and messages being delivered.
- Establish a plan for collecting data related to message delivery.
- Create means to raise awareness of KYTC and other public activities.

1.A.1.d – Conduct Annual Review and Evaluation of Program

Activity Owner: City Engineer, SWAC, City Commission
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- The permittee will evaluate the Public Education's efforts from the previous year as part of the outreach strategy.

Evidence of Completion:

- Evaluate the ability to complete the previous year's activity given the staffing and financial resources.
- Evaluate the effectiveness of activities.
- Adjust strategy as needed.

1.A.1.e – Identify Parties Involved and/or Responsible for Public Education

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Determine people involved and level of involvement.

Evidence of Completion:

- Review all potential sources of assistance.
- Identify person(s) responsible for managing the tracking and reporting to establish the methods of communicating activities among involved parties.

1.A.1.f – Select Topics and Distribution Locations

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Select methods of distributing Public Education materials, select public education topics, and assign responsible parties for development and distribution.
- Determine the locations that will be most beneficial to each activity.

Evidence of Completion:

- Through discussion with SWAC, KSA, etc. Develop a priority list of target pollutants and audiences, then select the preferred or available delivery methods and locations.

1.A.2 – Conduct Public Outreach Activities

1.A.2a – Conduct SWAC Meetings

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop or maintain a SWAC to assist with development, implementation, and status of SWQMP.

Evidence of Completion:

- Hold regular SWAC meetings (minimum of two (2) times per year).

1.A.2.b – Participate in the KY Stormwater Association (KSA)

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Take advantage of opportunities for training and exchange of ideas to enhance MCM 1.

Evidence of Completion:

- Attend regular and/or subcommittee meetings for SW program material development, education benefit, and MS4 community collaboration.

1.A.2.c – Implement Public Outreach Strategy

Activity Owner: City Engineer, Public Works, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Conduct activities outlined in the outreach strategy for the given plan year.

Evidence of Completion:

- Schedule public education activities to minimize bunching and work overload. Choose times to conduct activities to coincide with events associated with the theme if possible (i.e. recycling during earth week).

1.A.2.d – Community Officials Activity

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Conduct at least one activity focused on updating and educating community officials to increase awareness and gain momentum for the stormwater program.

Evidence of Completion:

- Presentation, printed material handouts, quarterly reports or emails, and invitations to KSA or other MS4 events.

1.A.2.e – Activity Related to Target Audience or Target Pollutant

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Conduct at least one theme oriented activity specifically related to the target audience or target pollutant.

Evidence of Completion:

- Special events, invitation only workshops or presentations, focused materials printed for individuals, businesses, etc. that addresses an identified priority area.
- Determine annually the target audience and pollutant.

1.A.2.f – General Public Activity

Activity Owner: City Engineer, Public Works, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Conduct at least one activity associated with a mass distribution to all individuals in the jurisdictional limits.

Evidence of Completion:

- Develop an annual message for mass distribution using mailers, web, Facebook, handouts, newsletters, radio, TV, etc.

1.B – Guidance Materials

1.B.1 – Review of Available Guidance Materials

Activity Owner: City Engineer, City Attorney, City Commission, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Review available Stormwater Education materials from KYTC, EPA, and other available resources for content, cost and potential effectiveness.

Evidence of Completion:

- Annually select materials and delivery methods that will provide the best opportunity to meet the objective of the annual activities in a cost-effective manner.

1.B.2 – Utilize Available Guidance Materials

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop the means to utilize the preferred materials (purchase, customization, reproduction, media connection) to assure that the activities will be effectively carried out.

Evidence of Completion:

- Determine where materials will come from, what needs to be done to make them useful for the MS4, who will do the work to customize (if needed) and distribute the selected materials.

1.C – Measure Public Education and Outreach Efforts

1.C.1 – Establish Means to Track Education Outreach

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Determine methods to measure public education activities.

Evidence of Completion:

- Utilize a data management system, to document activities and outcomes to meet compliance and annual reporting needs. Gain familiarity of data management system capabilities with regard to data collection and reporting. Utilize the software to effectively track MCM 1.

1.D. – Track MCM 1 Activities for Permit Compliance

1.D.1 – Maintain Public Education Activities

Activity Owner: City Engineer, NPO
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Track public education activities by creating “Activity Records”.

Evidence of Completion:

- Utilize data management software to effectively track MCM 1.

1.D.2 – Evaluate Effectiveness of Program for MCM 1

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Review activities conducted for completion and their benefit to the community to determine if the objectives are being met.

Evidence of Completion:

- Assess whether activities were conducted, was it sufficient, was the message delivered and received successfully, what changes may need to be made, etc.

MCM 2 – Public Involvement and Participation

An assessment of this MCM during the past permit cycle paralleled that of MCM 1, a reactive approach with responsibility relying upon one individual or department. Several lessons have been learned regarding the best methodologies to accomplish student, faculty, and staff involvement and participating regarding water quality. For the 2018-2023 permit, tasks and responsibilities will be assigned primarily to TFISE and performed in conjunction with MCM 1. A more active approach will be taken.

For the 2018-2023 permit, the SWQMP has delineated additional BMP tasks and in combination with MCM 1, the goal will be to partner with additional non-profit organizations to enhance public awareness.

MCM 2 BMPs: The objective of this MCM is to engage the community in an active role in both the development and implementation of Nicholasville's stormwater management program. The community will be able to provide valuable input into stormwater management activities which will be integral to the overall success of the program because of the additional support, expertise and resources brought to bear.

2.A – Implement a Public Involvement/Participating Program

2.A.1 – Develop Potential List of Public Involvement Activities

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Public involvement activities list shall include events in which community groups, individuals, MS4 staff, and community officials can participate to address the water quality concerns of the MS4.

2.A.2 – Conduct Annual Public Involvement Activities

Activity Owner: City Engineer, NPO
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- From the potential list, determine the annual activities and schedule accordingly.

Evidence of Completion:

- Evaluate staff, budget, and timing of public involvement and establish a plan to provide opportunities for at least two (2) public involvement activities.
- Provide public notice for all public involvement activities.

2.A.3 – Establish a Stormwater Advisory Committee (SWAC)

Activity Owner: City Engineer, Mayor, City Commission
Schedule: Permit Year(s) 1
Measurable Goal:

- Solicit volunteers from key community stakeholders to serve on a SWAC for the purpose of guiding the stormwater program.

Evidence of Completion:

- SWAC members should provide input from a variety of perspectives relative to their involvement with the community, which will help the program gain community consensus of the program needs, goals, BMPs, and activities.

2.A.4 – Hold SWAC Meetings

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Conduct regular SWAC meetings and provide Public Notice of meetings.

Evidence of Completion:

- Minimum of two (2) per year.

2.B. – Facilitate Opportunities for Volunteers

2.B.1 – Develop List of Possible Volunteer Activities

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Determine what activities volunteers could do that would have the most benefit to the MS4?

Evidence of Completion:

- Select actions that may be completed by volunteers based on complexity, safety, cost, available materials, skill sets, and staff support.

2.B.2 – Identify Potential Sources of Volunteers

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Initiate involvement with local civic groups to cultivate volunteering opportunities.

Evidence of Completion:

- Establish a list, and contact people.

2.C. – Advertising Public Involvement Activities

2.C.1 – Develop Public Notice Protocol

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1
Measurable Goal:

- Develop or identify Standard Operating Procedure (SOP) for Public Notice.

Evidence of Completion:

- If no official SOP is in place, review KRS requirements and establish SOP to meet or exceed KRS.

2.C.2 – Implement Public Notice Protocol

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1
Measurable Goal:

- Make all municipal employees participating in public involvement activities aware of the SOP.

Evidence of Completion:

- For all MCM 2 activities, take measures such as utilizing planners, electronic calendars etc. to assure that Public Notice is provided on or before the stated deadline in the SOP.

2.C.3 – Provide Public Notice for MCM 2 Activities

Activity Owner: City Engineer
Schedule: Permit Year(s) 1
Measurable Goal:

- Utilize a Public Notice SOP for all MCM 2 activities.

Evidence of Completion:

- Schedule MCM 2 activities and establish reminders to post Public Notice.
- Document activities and date of Public Notice.

2.D – Measure Activities Relative to this MCM for Permit Compliance

2.D.1 – Establish Means to Measure Public Involvement Activities

Activity Owner: SWAC
Schedule: Permit Year(s) 1
Measurable Goal:

- Use data management software as a means to provide measurable results that can identify trends and behavioral change.

Evidence of Completion:

- Post surveys, etc. that can identify learning outcomes (improved, neutral, or lessened understanding), changes in behavior (less liter, debris, less violations, more volunteers, etc.) and participating/interest in water quality.

2.E – Track Activities Relative to this MCM for Permit Compliance

2.E.1 – Track Public Involvement Activities

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Use data management software to input data and track activities.

Evidence of Completion:

- Gain familiarity with data management software capabilities with regard to data collection and reporting.
- Utilize the software to effectively track MCM 2.

2.E.2 – Evaluate Effectiveness of Program for MCM 2

Activity Owner: SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Review activities completed and benefit provided to community. Then determine if objectives are being met.

Evidence of Completion:

- Assess whether activities were conducted, was it sufficient, was the participation as expected, and what changes may need to be made etc.

MCM 3 – Illicit Discharge Detection and Elimination

During the 2010-2018 permit, most IDDE tasks were completed. Dry weather outfall inspection, IDDE ordinance and mapping of major structures highlighted the many activities during the past permit period.

While regulatory processes were in place during the previous permit, along with an IDDE manual, procedures need to be updated, streamlined, and consolidated during the new permit cycle. The City Engineer with input and support from other departments plans to develop a standard operating procedural manual and guidance documents to address the variety of potential illicit discharges from the various sources on campus. The development of a comprehensive Operations Manual has been identified as a priority for this MCM.

MCM 3 BMPs: The objective of this measure is to ensure that the City of Nicholasville has a thorough awareness of illicit discharges and their impact to water quality. Proactive investigation, identification, and elimination of illicit discharges, development of standard operating procedures, and applicable training will be a part of this MCM.

3.A – Illicit Discharge Ordinance

3.A.1 – Develop or Revise Illicit Discharge Ordinance

Activity Owner: City Engineer, City Commission, Code Enforcement, City Attorney
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Develop or revise existing illicit discharge ordinance.

Evidence of Completion:

- Revised ordinance shall provide a definition of illicit discharge, prohibit illicit discharges, assign an authority to regulate illicit discharges, and define enforcement actions for an illicit discharge.
- Requirements for removal of illicit discharges shall also be defined.

3.A.2 – Implement Illicit Discharge Ordinance

Activity Owner: City Engineer, City Commission, Code Enforcement, City Attorney
Schedule: Permit Year(s) 2
Measurable Goal:

- Get the revised illicit discharge ordinance accepted.

Evidence of Completion:

- Complete the steps necessary for the new or revised illicit discharge ordinance to become effective within the community.

3.B. – IDDE Program

3.B.1 – Field Assessments of Priority Areas

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop a timeline for completing field assessments or priority areas that will dictate the order of mapping and outfall screening.

Evidence of Completion:

- Establish a schedule for completing the inventory and assessment of all outfalls over the five (5) year permit term.
- Base schedule on availability of staff, finances, and equipment.

3.B.2 – Source Tracing Protocol

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Develop a procedure for tracing an illicit discharge that includes a visual inspection, contributing network analysis and troubleshooting, tracking of known hotspots, and collection and analysis of water samples.
- Other detailed inspection procedures shall be identified and completed as needed.

Evidence of Completion:

- Consider available manpower, equipment and sample testing capacity in developing this protocol.
- Evaluate extent of mapping – is more needed to effectively trace sources?

3.B.3 – Illicit Discharge Source Removal Procedures

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Develop or modify procedures for removing an illicit discharge.

Evidence of Completion:

- Procedures shall include:
  - Notification of appropriate authorities;
  - Notification of property owners;
  - Technical assistance for eliminating the discharge;
  - Follow-up inspections; and
  - Enforcement actions

3.B.4 – Illicit Discharge Assessment Procedure

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Develop a procedure to assess identified illicit discharges for pollutant and degree of risk/severity.
- If Water Quality impairment is determined severe or urgent, refer the incident to Department for Environmental Protection's Environmental Emergency 24-hour hotline (502-564-2390) or (800-928-2380).

Evidence of Completion:

- Include steps for sensory (sight, smell) inspection, sampling, and other detailed inspection procedures identified as needed if water quality impairment is determined.

3.B.6 – Establish Response Time Frames

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Establish time frames for completing the response to a reported spill, assessment, source training, and removal procedures.

Evidence of Completion:

- Time frames will provide structure to the program, impose deadlines for action, and show the community that action is being undertaken in an expedient manner.
- Consider the case of the most complex system to trace when establishing time frames.

3.C – Provide Training for Municipal Field Staff

3.C.1 – Staff Trainings

Activity Owner: City Engineer, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Provide at least two (2) trainings per year to field an associated staff on the components of the IDDE program.

Evidence of Completion:

- Potential topics include receipt and response spills, outfall investigations, sample acquisition and testing, trace sources, removal mechanisms, and the use of data management software for data tracking, etc.

3.D. – Develop and Maintain A Storm Sewer System Map

3.D.1 – Develop and Maintain Map in Acceptable Formats

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- System maps shall be developed and maintained in electronic (GIS and/or CAD) format.
- Paper maps may be used in addition.

Evidence of Completion:

- Electronic GIS format mapping is preferred and can be incorporated into data management software for daily use and reporting needs.
- A hard copy in the form of a book map is a useful tool for field staff and field investigation where laptops or portable GPS/GIS is unavailable.

3.D.2 – MS4 Boundary Layer

Activity Owner: City Engineer
Schedule: Permit Year(s) 1
Measurable Goal:

- Include the MS4 jurisdictional boundary in the base map.
- Update as needed.

Evidence of Completion:

- Boundary delineation provides a quick reference to the area of interest and assignment of responsibility.

3.D.3 – Waters of the Commonwealth

Activity Owner: City Engineer
Schedule: Permit Year(s) 1
Measurable Goal:

- Include waters of the Commonwealth in the base map and their contributing watersheds.

Evidence of Completion:

- Protection of receiving waters is a key component of the MS4 program, so it is essential that the MS4 know the locations and areas contributing to these waters (watershed delineation).

3.D.4 – Major Outfall Locations

Activity Owner: City Engineer
Schedule: Permit Year(s) 1
Measurable Goal:

- Include the location of major outfalls and their contributing outfall-shed in the base map.
- Update as needed.

Evidence of Completion:

- Source tracking and removal is facilitated by good mapping and awareness of the system to an outfall.

3.E. – Location of Major Outfalls

3.E.1 – Update Location of Major Outfalls

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, and 3
Measurable Goal:

- Perform a review of the storm sewer network and identify all major outfalls.

Evidence of Completion:

- Assess available mapping for adequacy.
- Perform additional survey as needed to locate outfalls
- Focus attention first on identified priority areas.

3.E.2 – Update Outfall in Inventory

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, and 3
Measurable Goal:

- Update mapping and database annually to include new or modified outfalls resulting from new development, capital projects, etc.

Evidence of Completion:

- Assign roles for updating the inventory and mapping.

3.F. – Dry Weather Screenings of Outfalls

3.F.1 – Location of Pollutants during Outfall Inspection

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- If pollutants/discharges are indicated during screening, develop an action plan to determine the likely source(s).

Evidence of Completion:

- An action plan should be based on known hot spots, HAZMATS stored within the outfall-shed, past history, and characteristics of the discharge indicators.

3.F.2 – Visual Inspection of Outfalls

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop a visual inspection checklist for indicators of pollutants including odor, oil sheens, discoloration, high degrees of siltation, and excessive aquatic plant growth to use during outfall inspections.

Evidence of Completion:

- Develop checklist and complete as part of inspection procedure.

3.F.3 – Schedule of Screening for Major Outfalls

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- All major outfalls shall have a visual screening within the permit cycle.

Evidence of Completion:

- Target inspection 20% of outfalls annually and focus attention first on areas deemed a priority from the field assessment.

3.G – Public Reporting of Spill and other Discharges

3.G.1 – Spill Reports Received and Actions Taken

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Keep a record of all spill reports received and actions taken.

Evidence of Completion:

- Include spill records and actions taken in annual report.

3.G.2 – Public Reporting of Spills and other Discharges

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Determine, develop, and implement appropriate mechanism for public reporting of spills and other discharges.

Evidence of Completion:

- The mechanism should be relatively easy to use on both the reporting and receipt of the report, and easily recorded for tracking and reporting purposes.
- Consider available manpower, information technology, systems in place (work order, hotline, web, etc.) in establishing the mechanism.

3.H. – Community Outreach Regarding the Hazards Associated with Illegal Discharges

3.H.1 – Employee Training

Activity Owner: City Engineer, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Hold one (1) employee training on the hazards associated with illegal discharges and improper disposal of waste.

Evidence of Completion:

- Obtain or develop presentation and provide training.

3.I – Inform KDOW of any Illicit Discharges

3.I.1 – Inform KDOW of any IDDEs

Activity Owner: City Engineer, Mayor, City Commission
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- If an illicit discharge is detected contact KDOW.

Evidence of Completion:

- Know contact information at KDOW relating to any illicit discharges.

3.I.2 – Develop Remediation Activities

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Remediation activities shall be initiated ASAP, according to the magnitude of the illicit discharge.

Evidence of Completion:

- Be familiar with remediation activities and procedures such as spill response, cleanup, public notification, evacuation routes traffic control, available equipment and response agencies.

3.I.3 – Employ Corrective Action Plan to Adjust SOP as Needed

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Evaluate the cause of the discharge for potential prevention, and the response plan for potential areas of improvement.

Evidence of Completion:

- Perform post-response and remediation review to determine if issues were preventable, if response was effective, where improvements could be made etc. (Review local Sanitary Overflow Plan as a potential model to follow).

3.J. – Procedures for Illicit Discharge Program Evaluation and Assessment

3.J.1 – Develop Procedural Review Process for IDDE Program

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Use data management system as a means to provide measureable results that can identify trends and behavioral change.

Evidence of Completion:

- Review the components of the IDDE program for compliance with SWQMP, effectiveness, and ability to complete the BMPs.

3.J.2 – Revise and Implement updated IDDE Program

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Based on any areas of deficiency in the program review, revise the IDDE program and implement the new procedures.

Evidence of Completion:

- Consider educating staff and associated parties of new changes in the training for the following year.
- Document the need for change and potential need for additional resources to manage the revised program and the impacts that may result from doing nothing.

3.K – Track MCM Measures to meet Permit and Annual Reporting Requirements

3.K.1 – Track Annual Activities

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Maintain a record of all activities in data management software related to this MCM to track activities.

Evidence of Completion:

- Input MS4 activities into data management software for tracking and reporting.

3.K.2 – Evaluate Effectiveness of Program for MCM 3

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Review activities conducted for completion and benefit to community, then determine if objectives are being met.

Evidence of Completion:

- Assess whether activities were conducted, was it sufficient, was the participation as expected, what changes may need to be made, etc.

MCM 4 – Construction Site Stormwater Runoff Control

The City of Nicholasville has undergone a major physical transformation since 2010 with a number of city annexations. During this time, the city has managed its site stormwater runoff process with minor issues. The issues that did exist involved the transition from construction to post-construction operations and a weak enforcement policy for those rare occasions of violation. Tasks under this MCM were until recently assigned to planning and zoning department. In 2016 a new position of City Engineer was created with responsibility for administering the MS4 program. In addition to the City Engineer, a resident inspector position was added.

The basic management of this MCM was sound, meeting the intent of the SWQMP. Recommendations identified by the SWAC Committee to strengthen and improve task activities under this permit include: strengthening the project review and approval process, updating contract language to provide for better enforcement, developing a through training program for contractors, updating and strengthening policies/procedures, and the development of formal policies for small construction project stormwater (<1 acre).

MCM 4 BMPs: The objective of this measure is to reduce the impact of construction site runoff on the waters of the Commonwealth, by using best management practices (BMPs), both structural and non-structural, to prevent construction site pollutants from negatively impacting other MS4s and streams.

4.A. – Ordinance Update

4.A.1 – Site Plan Review Authority

Activity Owner: City Engineer, Public Works, Planning & Zoning
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Review existing ordinance and adjust as necessary to meet the requirements of the current KYR10 and dKYG20 permits and address deficiencies identified in the first permit term.

- Additionally, ordinance or other regulatory mechanism shall establish authority for site plan review to affirm compliance with local ordinances and the current version of KYR10.

Evidence of Completion:

- Determine who has or should have legal authority in MS4 for plan review and adjust as needed to assure that view control is appropriately authorized and delegated.
- Particular attention should be placed on closing loopholes, especially enforcement authority for individual lots, an escalating enforcement program, and plan review procedures.

4.A.2 – Site Inspection Authority

Activity Owner: City Engineer, City Commission
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Updated ordinance shall establish an authority for site inspections and enforcement of control measures for both public and private facilities.

Evidence of Completion:

- Determine who has or should have legal authority in MS4 for site inspections and adjust as needed to assure that review control is appropriately authorized and delegated.

4.A.3 – Public Information

Activity Owner: City Engineer, City Commission
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Updated ordinance shall establish procedures for the receipt and consideration of information submitted by the public.

Evidence of Completion:

- Include language related to the identified mechanism(s) for public reporting of construction site issues.

4.A.4 – NOI Submittal

Activity Owner: City Engineer, City Commission
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Updated ordinance shall include requirements for demonstration that an eNOI for coverage under a Stormwater Construction individual permit or KPDES permit (KYR10) has been submitted.

Evidence of Completion:

- KY DCA currently notifies the MS4 that an eNOI has been approved; however, the SWPPP associated with the eNOI should be provided and reviewed.

4.A.5 – Construction Waste and Material Storage Facilities

Activity Owner: City Engineer, City Commission, City Attorney
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Update ordinance to include requirements for construction site operators to control construction waste and demonstrate protective measures for storage of hazardous materials such as petroleum products, chemicals, etc.

Evidence of Completion:

- Provision and maintenance of waste receptacles, concrete washouts, and secondary containment systems.

4.A.6 – Establish Acceptable Erosion and Sediment Control Measures

Activity Owner: City Engineer, City Commission
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Update / develop requirements for construction site operators to implement appropriate erosion and sediment control best management practices that are as proactive as Kentucky's General Permit – KYR10.

Evidence of Completion:

- Include acceptable training for qualified inspectors.
- Consider referring to the KY Field Guide and associated BMPs for controlling erosion, sediment, and pollutant Runoff from Construction Sites as the guiding document.

4.A.7 – In-Stream Water Uses

Activity Owner: City Engineer, City Commission, City Attorney
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Updated ordinance shall require that discharges from construction sites to High Quality waters will protect existing in-stream water uses consistent with KYR10.

Evidence of Completion:

- Repeat or mimic language from KYR10 for inclusion in local ordinance or reference current version of KYR10.

4.B – Construction Site RW Runoff Program Elements

4.B.1 – Training – MS4 Staff

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Implement a training program for MS4 staff in the fundamentals of erosion prevention and sediment control and how to review erosion and sediment control plans for Storm Water Pollution Prevention Plans (SWPPP).

Evidence of Completion:

- Piggyback erosion prevention and sediment control training for MCM 6 as applicable. Consider sending staff to training course (KEPSC, CPESC, or other) to obtain qualification/certification. 12 hours per year.

4.B.2 – Training – Operators

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Establish procedures for providing educational and training measures for construction-site operators.

Evidence of Completion:

- Identity approved courses (KEPSC, CPESC, or other) and/or require attendance at local educational workshop to provide the information and training necessary to conduct construction operations within the MS4 jurisdiction.
- Consider pre-construction meetings on-site as a means to train operators on MS4 expectations.

4.B.3 – Site Inspections

Activity Owner: City Engineer, Public Works
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop procedures for periodic inspections of all known permitted construction sites during construction to verify proper installation and maintenance of required E&SC measures.

Evidence of Completion:

- Base procedures on approved training, developed inspection checklists, and past experience.

4.B.4 – Plan Review

Activity Owner: City Engineer, Planning & Zoning
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Incorporate plan review in the permitting process to affirm compliance with local ordinance, inspection, and enforcement capability.
- Review shall consider water-quality impacts for both private and public facilities.

Evidence of Completion:

- Utilize checklists.

4.B.5 – Inventory of Construction Sites

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Develop a procedure to inventory projects and prioritize sites for inspection.

- The inventory shall track results of inspections, enforcement procedures taken, and include a summary of actions in the annual report.

Evidence of Completion:

- Utilize a data management software to document sites and activities.

4.B.6 – Enforcement Protocol

Activity Owner: City Engineer, City Commission
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Update / develop and implement an enforcement strategy that includes escalating enforcement remedies to respond to the issues of non-compliance.

Evidence of Completion:

- Document all actions, including verbal, and maintain consistency with enforcement actions.

4.C. – Measures Activities Related to this MCM

4.C.1 – Procedural Review Process – Construction Site SW Runoff

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Evaluate the work flow from the previous year(s) and identify areas of deficiency to develop a review process for construction sites.

Evidence of Completion:

- Review components of the MCM 4 program for compliance with the SWQMP, effectiveness, and ability to complete the BMPs.

4.C.2 – Revise and Implement Construction Site SW Runoff Program

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Based on any areas of deficiency in the program review and revise the program, then implement the new procedures.

Evidence of Completion:

- Consider educating staff and associated parties of new changes in the training for the following year.
- Document the need for change and potential need for additional resources to manage the revised program and the impacts that may result from doing nothing.

4.D. – Track Activities Related to this MCM to meet Permit and Annual Reporting Requirements

4.D.1 – Track Activities for MCM 4

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Use a data management software to input data and track activities.

Evidence of Completion:

- Input MS4 activities into a data management software for tracking and reporting.

4.D.2 – Evaluate Effectiveness of Program for MCM 4

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Review activities conducted for completion and benefit to community.
- Then determine if objectives are being met.

Evidence of Completion:

- Assess whether activities were conducted, was it sufficient, was the participating as expected, what changes may need to be made, etc.

MCM 5 – Post Construction Stormwater Management

Most of the task goals for MCM 5 were completed over the course of the permit. With the formation of a City Engineer position and the addition of support staff during the past permit period, the city has made a significant commitment to support the MS4 program. While tasks were generally accomplished, some areas for improvement include the need to clarify and update the post construction stormwater requirements in the cities design and construction standards, the need to create and refine checklists for plan review, and the need for specialized BMP specific maintenance. Managing the maintenance, operations, and inspection of these BMPs will be the challenge to meet during this next permit.

With community growth ongoing, the inspection, operation and maintenance of the many BMPs installed will play a critical role during this next permit cycle. The SWQMP identifies additional support to assist with the demanding responsibility of maintaining this significant infrastructure addressing water quality.

MCM 5 BMPs: The object of this measure is to positively impact the chemical, biological and overall health of the Commonwealth's streams, rivers and lakes by reducing the rate and volume and improving the quality of stormwater runoff from the MS4 after construction has been completed.

5.A – Establish and Enforce SW Management Ordinance and Program

5.A.1 – Ordinance for Post Construction SW Management

Activity Owner: City Engineer, City Commission, Code Enforcement, City Attorney
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Updated post construction SW ordinance shall be developed, if it does not exist, or revised and maintained.

Evidence of Completion:

- Develop ordinance or review existing ordinance that is compliant with the requirements of KYG20.

5.A.2 – Enforce Post-Construction SW Ordinance

Activity Owner: City Engineer, SWAC, City Commission, Code Enforcement
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Updated enforcement measures shall be outlined within the Post-Construction SW ordinance.

Evidence of Completion:

- Determine enforcement measures and draft into ordinance.
- Utilize an escalating enforcement process and the right to reimbursement for maintenance activities provided by the MS4 resulting from non-compliance of the responsible party within a prescribed time to address deficiencies.

5.A.3 – Define Public and Private Ownership

Activity Owner: City Engineer, City Commission
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Review ordinance. Public and private ownership shall be defined and maintenance responsibilities established.

Evidence of Completion:

- Determine what the maintenance responsibilities are for post-construction BMPs and who the responsible parties are.

5.A.4 – MS4 Staff Training

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Train MS4 staff of fundamentals of long-term stormwater quality treatment practices, how to review such practices on construction plans, and how to inspect practices for long-term protection, operation and maintenance.

Evidence of Completion:

- Training provided by CDP or through attendance of KSA or other stormwater workshops, conferences, webinars.

5.B – Develop an On-Site Water Quality Treatment Standard

5.B.1 – On-Site Stormwater Runoff WQ Treatment Standard

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Review and update on-site stormwater runoff water quality treatment standards. It shall be based on an analysis of precipitation records to determine the equivalent surface depth (i.e. inches) of runoff produced from an 80th percentile precipitation runoff.

Evidence of Completion:

- Research available precipitation records for the MS4 and surrounding communities to develop the depth for the 80th percentile event.
- Establish the level of treatment required (WQ Standard) for the specified rainfall depth.
- Consider % removal of TSS, minimum particle size to be removed, other pollutant limits (N, P, metals, VOCs, karst conditions) in determining the WQ standard.

5.B.2 – Include Standards in Ordinance

Activity Owner: City Engineer, City Commission, City Attorney
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Update on-site stormwater quality runoff treatment standards in Post-Construction Stormwater runoff ordinance through reference to MS4 Stormwater Manual.

Evidence of Completion:

- Provide details associated with technical design and numerical limits in a stormwater manual or design standards document and provide reference to this document in the ordinance, which allows for periodic updates to technical design without ordinance modification.

5.B.3 – Submit to KDOW

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Submit established on-site stormwater quality treatment standard to KDOW.

Evidence of Completion:

- Submit in annual report.

5.B.4 – Conditions for Discharge to High Quality Water

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- If any new or expanded discharges result from areas of new or expanded development and enter into high quality waters (HQW), the ordinance shall include standards for run-off control.

Evidence of Completion:

- Define a HQW and determine if any are within the MS4 permit area.
- Determine what would be appropriate standards to sufficiently protect existing in-stream water uses.
- Implement into ordinance as needed.

5.B.5 – Mitigation for Water-Quality Treatment Standard

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Update the requirements if the water-quality treatment standards cannot be met, determine appropriate mitigation measures.

Evidence of Completion:

- Select acceptable options (if any) from the following:
  - Off-site mitigation – infiltration / evapotranspiration / reuse measures somewhere else in the watershed.
  - In-lieu fee – payment to the permittee in-lieu of implementing post-construction BMPs.
- Permittee must ensure the proper legal authority and develop appropriate institutional standards to value, evaluate and track transactions.

5.C – Evaluation of Municipal Policies

5.C.1 – Review Municipal Policies

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Review existing local policies that may impede the use of green infrastructure within development and new development areas.

Evidence of Completion:

- Find policies and review.
- Potential sources may include the subdivision regulations, zoning ordinances, comprehensive plans, or building codes.
- Determine the rationale behind the impediments (purposeful or inadvertent).

5.C.2 – Summarize Findings

Activity Owner: City Engineer, SWAC, City Commission
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Summarize findings of review of policy impediments to the use of Green infrastructure.
- Present findings to SWAC, and appropriate governmental bodies (P&Z, elected officials) for consideration of revision.

Evidence of Completion:

- Support from elected officials, P&Z, and SWAC is essential to gain buy in for policy revision.
- SWAC must provide convincing argument justifying the need to revise long standing policies and/or resistance from proponents of conventional methods.

5.C.3 – Revise Policies

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Revise and adopt the policies that have been approved by SWAC and local officials for modifications.

Evidence of Completion:

- Consider a phased approach to revisions and adaption.
- Utilize the outreach program to disseminate information of the changes and opportunities the revisions provide.

5.D – Project Review, Approval, and Enforcement Procedures

5.D.1 – Site Plan Review for Post-Construction BMPs

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Update procedures for Site Plan review and approval process.
- Also, develop a required re-approval process when changes to stormwater management measures are required.

Evidence of Completion:

- Develop a standard Site Plan Review checklist.
- Determine approval process for Site Plan review.
- Determine re-approval process.

5.D.2 – Develop Enforcement Procedures

Activity Owner: City Engineer, Code Enforcement, City Attorney, SWAC
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Update develop and implement an enforcement strategy that includes escalating enforcement remedies to respond to the issues of non-compliance.

Evidence of Completion:

- Document all actions, including verbal, and maintain consistency with enforcement actions.

5.D.3 – Implement Review, Approval, & Enforcement Procedures

Activity Owner: City Engineer, SWAC, City Commission
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Review and update the program for post-construction review, approval and enforcement.

Evidence of Completion:

- Procedures and authority should be incorporated into the ordinance.

5.D.4 – Post-Construction Inspection

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Review procedures for post-construction inspections that demonstrate and document installation of BMPs.

Evidence of Completion:

- Utilize an inspection checklist for approval or rejection of installation and protections of BMPs, and the enforcement procedures to assure compliance actions are undertaken.

5.E – Maintenance of BMPs

5.E.1 – Establish Long-Term Maintenance Agreements

Activity Owner: City Engineer, City Attorney
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Review & update long-term maintenance requirements for all structural and non-structural BMPs.
- Agreement shall allow permittee to perform necessary maintenance due to neglect of the owner/operator at the expense of the owner/operator.

Evidence of Completion:

- Agreements shall identify responsible parties, carry responsibility with the deed, and require maintenance program and/or the location and history of the BMP.

5.F. – BMP Inspection Program

5.F.1 – Inspection Frequency

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Establish inspection frequency of post-construction BMPs and implement the program.

Evidence of Completion:

- Annual inspections, unless otherwise dictated by the BMP recommended a maintenance program and/or the location and history of the BMP with 90% inspection per year**.**

5.F.2 – Notice of Deficiencies and Corrective Actions

Activity Owner: City Engineer, City Attorney
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Review and update a procedure for notifying the BMP owner or operator of deficiencies discovered during maintenance inspections, and the intent of the MS4 to apply corrective actions if the responsible party fails to address deficiencies in the allotted time.

Evidence of Completion:

- Utilize email and other methods (US mail, phone) to communicate deficiencies.
- Notice needs to be documented.

5.G. – Measure effectiveness of MCM 5

5.G.1 – Review process for Post-Construction SW Management Program

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Review the process to evaluate the work flow from the previous year(s) and identify areas of deficiency.

Evidence of Completion:

- Review components of the MCM 5 program for compliance with SWQMP, effectiveness, and ability to complete the BMPs.

5.G.2 – Revise and Implement Post-Construction SW Management Program

Activity Owner: City Engineer, SWAC
Schedule: Permit Year(s) 1, and 2
Measurable Goal:

- Based on any areas of deficiency in the program, review and revise the program to implement the new procedures.

Evidence of Completion:

- Consider educating staff and associated parties of the new changes in training for the following year.
- Document the need for change and potential need for additional resources to manage the revised program and the impacts that may result from doing nothing.

5.H. – Track MCM Measures for Annual Reporting

5.H.1 – Track Maintenance Inspections

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Use a data management software to track activities.

Evidence of Completion:

- Input MS4 activities into data management software for tracking and reporting (number of inspections, maintenance reports received, enforcement actions, corrective actions, etc.)

5.H.2 – Changes made to Accommodate Green Infrastructure Alternates

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Provide a summary of changes made to local ordinances to accommodate green infrastructure alternatives.

Evidence of Completion:

- Submit in annual report.

5.H.3 – Track Annual Activities Related to MCM

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Maintain a record of all activities related to this MCM and established BMPs and milestones.

Evidence of Completion:

- Utilize data management software to document sites and activities.

MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations

During the previous permit cycle, the city's main goal was to identify operations and develop procedures to minimize the impact to stormwater quality. As a result, multiple policies and procedure manuals were created. Training was also developed and conducted to relay these policies and the need to protect stormwater to staff. Due to the number of policies and procedures created, it has become evident that the information needs to be consolidated into one easily accessible location. Also, due to the rapid period of infrastructure growth over the last several years and the vast number of new post construction BMP's being installed, the need to maintain these devices has become a priority.

The need to consolidate and improve stormwater procedures throughout the city's operations has led to the desire to develop a Stormwater Procedure Manual. This will be all-inclusive SOP

that will house all policies, procedures, and BMP's utilized by the City to meet permit requirements. This manual will also include a detailed structural BMP specific O&M Manual for the operation and maintenance of each BMP. Along with this manual, a preventative maintenance program will be put in place for all structural BMP's. With these changes, it will be imperative that employee training be updated and conducted to educate those employees responsible for performing stormwater related tasks.

MCM 6 BMPs: The objective to this measure is to ensure that City of Nicholasville operations (i.e., open space maintenance, fleet management, building maintenance, utility line construction, etc.) are performed in ways that will minimize the impact to stormwater quality.

6.A. – Develop and Implement an O&M Program

6.A.1 – Update an O&M Program for Municipal Facilities

Activity Owner: City Engineer, Public Works, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Update an O&M program that incorporates activities associated with municipal facilities, municipal operations, and employee training.

Evidence of Completion:

- Updated an Operations and Maintenance program for municipal facilities and staff will be developed that will include training for municipal employees.
- A manual developed as part of the program will incorporate procedures for properly disposing of wastes, and an inventory of municipal facilities and associated management practices to be undertaken to minimize generation of pollutants being discharged into the MS4.

6.A.2 – Implement the O&M Program

Activity Owner: All Departments, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Once developed, put the procedures and practices into effect and document activity.

Evidence of Completion:

- Provide copies of the manual and related policy to municipal employees and local officials and inform them that the manual and program elements defined within, are the new SOPs.

6.A.3 – Develop Training Topics and Materials for Municipal Employees

Activity Owner: City Engineer, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Determine the most effective means to train employees of proper SOPs to protect water quality.

Evidence of Completion:

- Evaluate locations where employees work (field, office, garage, etc.) and tailor messages and delivery methods for maximum effectiveness (i.e. field staff may be best suited for hands on training in the field regarding EPSC and pollutant management during infrastructure repair and maintenance activities).

6.B – O&M Employee Training

6.B.1 – Employee Training Schedule

Activity Owner: City Engineer, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Schedule annual training dates and attendance requirements.

Evidence of Completion:

- From the topics identified, select dates and employees required to attend the identified sessions.

6.B.2 – Conduct Employee Training

Activity Owner: City Engineer, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Conduct training session such that employees involved in MS4 activities receive a minimum of one training per year.

Evidence of Completion:

- Rotate attendees as needed, provide new topics annually, conduct pre- and post-training surveys to gauge effectiveness and understanding of content.

6.C. – O&M Inventory

6.C.1 – Municipal Facility Inventory

Activity Owner: City Engineer, Public Works, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Inventory and conduct an inspection of municipal facilities and operations to identify risks associated with pollutant exposure or introduction into the storm sewer system.

Evidence of Completion:

- In the manual, include the results of the inspection including site description, materials stored on site, pollutant exposure or introduction risks, maintenance actions, corrective measures and ongoing inspection schedules for structural and non-structural BMPs located within the facilities of within MS4 owned property.
- Record findings in data management software.

6.D. – Review and Implementation of O&M Program

6.D.1 – Develop Procedural Review Process for the O&M Program

Activity Owner: City Engineer, SWAC, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Evaluate the work flow from the previous year(s) and identify areas of deficiency.

Evidence of Completion:

- Review components of the MCM 6 program for compliance with SWQMP, effectiveness, and ability to complete the BMPs.

6.D.2 – Revise and Implement Updated O&M Program

Activity Owner: City Engineer, SWAC, Safety Manager
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Based on any areas of deficiency in the program, review and revise the program, then implement the new procedures.

Evidence of Completion:

- Consider educating staff and associated parties of new changes in the training for the following year.
- Document need for change and potential need for additional resources to manage the revised program and impacts that may result from doing nothing.

6.E – Track MCM measures to meet Permit and Annual Reporting

6.E.1 – Track Annual Activities

Activity Owner: City Engineer
Schedule: Permit Year(s)
Measurable Goal:

- Maintain a record of all activities related to this MCM and established BMPs and milestones.

Evidence of Completion:

- Utilize data management software to document sites and activities.

MCM 7 – SWQMP Funding

7.A. – Establish the Means to Fund the Stormwater Program

7.A.1 – Determine Annual need for Minimum Compliance with MCM 1-7

Activity Owner: City Engineer, Mayor, City Commission, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Establish dollar figures associated with expenses and staff to meet compliance with the MCMs on an annual basis.

Evidence of Completion:

- Adjust activities as needed to arrive at a relatively consistent annual budget amount.

7.A.2 – Determine need for Maintenance of MS4 Infrastructure

Activity Owner: City Engineer, Mayor, City Commission, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop a list of capital projects, their projected costs, and determine annual costs of maintenance and repair.

Evidence of Completion:

- Distribute capital project costs over a number of years to establish a consistent line item amount for capital projects and maintenance and repair.

7.A.3 – Determine O&M of Equipment Dedicated to MS4 Operations

Activity Owner: City Engineer, Mayor, City Commission, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop a list of equipment dedicated (in full or in part) to the SWQMP, their projected costs for maintenance and replacement and determine annual costs of maintenance and/or replacement.

Evidence of Completion:

- Distribute equipment maintenance and replacement costs over a number of years to establish a consistent line item amount for equipment.

7.A.4 – Develop Annual Budget Extended over Permit Term

Activity Owner: City Engineer, Mayor, City Commission, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Combine the previous milestones to determine the annual costs associated with stormwater management.

Evidence of Completion:

- Plan out a balance, recurring expenses with capital projects, equipment needs etc. to arrive at a consistent annual budget amount.

7.A.5 – Request Obligation of Funds from Community to Fund Program

Activity Owner: City Engineer, Mayor, City Commission, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Present budget analysis to community leaders and request full funding to meet the identified fiscal obligation.

Evidence of Completion:

- Suggest options for meeting the budget needs and sources of revenue (general fund, bonds, user fee).

7.A.6 – Encourage Establishment of Dedicated Funding Mechanism

Activity Owner: City Engineer, Mayor, City Commission, SWAC
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Develop a unit cost or flat rate method for collecting stormwater fees to cover the annual expenses derived for the MS4 and suggest implementation of a system to collect said fees.

Evidence of Completion:

- Develop user fee alternatives that result in the securing of funding to cover the expenses of the MCMs, and MCMs with any combination of capital projects, maintenance and repair, and equipment needs.

7.A.7 – Track Annual Activities

Activity Owner: City Engineer
Schedule: Permit Year(s) 1, 2, 3, 4, and 5
Measurable Goal:

- Maintain a record of all activities related to this MCM and established milestones.

Evidence of Completion:

- Utilize data management software to document activities.