



## Stormwater Management Plan



Federal Permit No. KSR041005

Submitted in Compliance with Kansas Permit No. M-M034-SU01

Date: October 2, 2014

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## 1.1 INTRODUCTION

This document is a Stormwater Management Plan (SMP, or the “Plan”) created to help reduce the discharge of pollutants in stormwater runoff within regulated areas of Fairway, Kansas. It outlines stormwater program activities, monitoring requirements, reporting requirements, and responsible parties for implementing this work.

This plan was prepared in compliance with Kansas Permit Number: M-MO34-SU01

Effective Date: February 1, 2014

Expiration Date: January 31, 2019

Section 1.2 summarizes the basic requirements of the stormwater permitting program for the benefit of users of this document. Subsequent sections provide the details of the SMP itself.

## 1.2 OVERVIEW OF STORMWATER PERMIT REQUIREMENTS FOR MS4s

The Federal Water Pollution Control Act (also referred to as the Clean Water Act) requires permits of both municipal and industrial stormwater dischargers, developed under a program called the National Pollutant Discharge Elimination System (NPDES). Permits for stormwater discharges from municipal urbanized areas are regulated under the MS4 permitting program. The term MS4 is short for Municipal Separate Storm Sewer Systems. (These are urbanized areas that have stormwater drainage systems that are separate from sanitary sewer systems.)

The Kansas Department of Health and Environment (KDHE) has developed two general MS4 permits for small municipalities with separate storm sewer systems. One was written for entities receiving an MS4 permit for the first time and another written for entities receiving a re-issued permit.

The general permits establish standardized requirements for entities across the state engaged in similar activities and discharging stormwater of similar quality. Permits issued to regulated cities or counties may include added conditions in addition to the standardized requirements in the general permits. The following description of the MS4 permit program was compiled from KDHE fact sheets:

The small MS4 general permit program addresses MS4s that generally serve populations less than 100,000 in urbanized areas, plus those MS4s located outside of urbanized areas that have or may have the potential to negatively impact surface water quality as a result of their discharges.

A general permit requires the permittee to develop, implement, and enforce a Stormwater Management Plan (SMP) designed to reduce the discharge of pollutants from the MS4 to the maximum extent practical, to protect water quality, and to satisfy water quality requirements of the Clean Water Act and Kansas law.

The SMP must include six minimum stormwater control measures that are required of all plans. It is also required to address implementation of Best Management Practices (BMPs) for reducing pollutants in stormwater discharges from the municipality. Special emphasis is placed on drainage basins and stormwater pollutants that discharge to designated Total Maximum Daily Load (TMDL) streams and lakes within or immediately downstream of the municipality.

The SMP document must address the BMPs to be implemented by the permittee, provide measurable goals for the BMPs, designate the parties responsible for implementing the control

measures, provide appropriate maps and conduct stormwater/receiving stream sampling and testing based upon the TMDL impairments.

“Impaired Waters” are streams or lakes that do not attain or maintain minimum water quality standards. They may result from individual or multiple pollutants. As noted above, TMDL is an acronym for **T**otal **M**aximum **D**aily **L**oad, which is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. Impaired streams and lakes are also commonly referred to as TMDL water bodies.

TMDL water bodies and pollutants of concern are identified in permits issued for individual municipalities if impaired waters exist within or immediately downstream of that jurisdiction. Monitoring requirements and water quality protection initiatives may then focus especially on those pollutants.

**Note: The City of Fairway does not have any specific TMDL Requirements**

## **SECTION TWO**

### **Parties Responsible For Compliance With This Plan**

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Overall responsibility for coordination of activities outlined in this Plan, and for reporting will be by the Director of Public Works. Table 1 lists departments responsible for implementing the various provisions of the plan.

This section describes the six minimum water quality protection control measures that are required by all MS4 permits. They include the following:

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

For each of these control measures the following is provided in this section:

- A summary description of the control measure
- The benefits of the control measure
- A table listing Best Management Practices (BMPs), Measurable goals for the BMPs, and Responsible parties
- Program assessment activities for evaluating the success of the control measure

## 3.1 CONTROL MEASURE 1 - PUBLIC EDUCATION AND OUTREACH

### Description

This minimum control consists of implementing a public education program to inform individuals, businesses, and organizations about the impacts of stormwater discharges on surface water quality and how they can help reduce pollutants in stormwater runoff. This may include distribution of educational materials to the community and/or conducting outreach activities.

### Benefit

An informed public increases awareness of water quality issues in both residents and businesses, creates opportunities for the public to take direct action to improve the health and sustainability of their community, and builds support for program goals making initiatives more effective.

**BMPs, Goals, and Staff**

<b>Public Education and Outreach</b>				
<b>BMP</b>	<b>BMP Description</b>	<b>Measurable Goal</b>	<b>Lead Staff</b>	<b>Schedule</b>
1.1 <b>Develop stormwater related education and outreach materials</b>	Items may include articles or advertising in local newspapers, TV commercials, print/electronic newsletters, flyers, brochures, envelope stuffers, etc.	Estimated number of impressions/readership based on coverage /distribution.	JCSMP (Water Quality Specialist)*  City of Fairway Public Works Director	Annual
1.2 <b>Annual Program Review</b>	Assess Stormwater Management Program and revise as required	Annual Report and revised Stormwater Management Plan (if required)	City of Fairway	Annual

\* The city of Fairway is a member of the Johnson County Stormwater Management Council (SMAC) and as such partners with the Johnson County Stormwater Management Program (JCSMP) on various aspects of the six minimum controls measures. Many of the city's education and outreach efforts are accomplished through this partnership.

**Program Assessment**

The overall success of the Public Education and Outreach Program will be measured through the successful implementation of the components of the program. Program assessment will be reported with each annual NPDES report discussing the activities completed in this section for the previous program year. Success will also be measured specifically by the following:

- Number of outreach materials or activities distributed by the city and partner organizations.

**3.2 CONTROL MEASURE 2 - PUBLIC INVOLVEMENT AND PARTICIPATION**

**Description**

This minimum control consists of creating opportunities for individuals and organizations to provide public comment and recommendations regarding BMPs and measurable goals, and participate in the development and implementation of BMPs to reduce the contamination of stormwater. This program must also comply with state and local public notice requirements.

**Benefit**

The goal of the stormwater management plan is to improve water quality in local lakes and rivers, which provides benefits to the entire community. As such, the community deserves to have an opportunity to voice opinions on the content of the plan. Further, input into decisions builds support for and ownership in outcomes.

**BMPs, Goals, and Staff**

Public Involvement and Participation				
BMP	BMP Description	Measurable Goal	Lead Staff	Schedule
2.1 Promote Community Involvement	Assist with development, funding and/or promotion of watershed based clean-ups, rain barrel classes, storm drain stenciling programs, water quality expo's or other events focused on stormwater quality or watershed stewardship	List of watershed based clean-ups/events and other stormwater related activities; summary of accomplishments; number of attendees.	JCSMP (Water Quality Specialist)  City of Fairway	Annual
2.2 Mechanism for Citizen Participation	Provide mechanism on website for citizen comments on stormwater management program	Mechanism to provide comments on-line; log of comments and track responses and actions	City of Fairway	Annual
2.3 Comply with Public Notice Provisions	Advertise annual revisions for Stormwater Management Plan on city website to provide for the opportunity for public input and provide feedback to public comments	Revisions advertised, comments addressed	City of Fairway	Annual
2.4 Annual Program Review	Assess Stormwater Management Program and revise as required	Annual Report and revised Stormwater Management Plan (if required)	City of Fairway Public Works Dept.	Annual

\* The city of Fairway is a member of the Johnson County Stormwater Management Council (SMAC) and as such partners with the Johnson County Stormwater Management Program (JCSMP) on various aspects of the six minimum controls measures. Many of the city's public involvement and participation efforts are accomplished through this partnership.

**Program Assessment**

Similar to Public Education and Outreach, the overall success of the Public Involvement and Participation Program will be measured through the successful implementation of the components of the program. Program assessment will be reported with each annual NPDES report discussing the activities completed in this section for the previous program year. Success will also be measured specifically by the following:

- Number of community involvement events and participants
- Number of public notices issued and comments received

**3.3 CONTROL MEASURE 3 - ILLICIT DISCHARGE DETECTION AND ELIMINATION**

**Description**

This minimum control consists of developing, implementing, and enforcing a program to detect and eliminate illicit wastewater discharges or other non-stormwater discharges into the storm sewer system. KDHE requires this program to include, at a minimum:

- Developing a storm sewer system map of the permitted MS4 showing the location of all outfalls, either pipes or open channel drainage, and showing the names and locations of all streams or lakes that receive discharges from those outfalls.
- Enacting and enforcing an ordinance or resolutions to prohibit non-stormwater discharges into the storm sewer system.
- Informing public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
- Developing and implementing a plan to detect and address prohibited non-stormwater discharges.

**Benefit**

Direct discharges of waste streams can present significant localized impacts to both public health and the environment. Developing legal, technical, and educational means to eliminate illicit discharges provides direct benefits to water quality, the environment, and public health.

**BMPs, Goals, and Staff**

Illicit Discharge Detection and Elimination				
BMP	BMP Description	Measurable Goal	Lead Staff	Schedule
3.1 Pollution Prevention Ordinance	Review and update the Stormwater Pollution Prevention Ordinance and enforcement procedures as needed	Ordinance reviewed and updated (if required)	City of Fairway Public Works	Ordinance #1384 is in-place. Update as-needed.
3.2 Pollution Prevention Hotline	Maintain phone hotline and online mechanism for reporting illicit discharges; conduct investigations and/or forward to appropriate cities/agencies	Number of calls/reports received, number of investigations completed, results/compliance actions taken.	JCSMP	On-line report mechanism is in-place.  Respond as-needed.
3.3 Implement a plan to detect and address illicit discharges	Continue response and investigation of potential illicit discharges.	Investigate illicit discharge complaints in Fairway, track the number of complaints received, the disposition of the problem found and conclusion to the case. Forward illicit discharge complaints to appropriate cities/agencies outside of Fairway.	City of Fairway Public Works	Respond to complaints as-needed.

# SECTION THREE

## Six Minimum Control Measures

Illicit Discharge Detection and Elimination				
BMP	BMP Description	Measurable Goal	Lead Staff	Schedule
	Continue isolating and eliminating Illicit discharges.	Evaluate annually, the reported stormwater cases, including response time, pollutants in watersheds, number of investigations, proper tracking, abatement, etc.	City of Fairway Public Works	Annual
	Conduct training for appropriate county staff on detecting and reporting ID.	Train appropriate staff in Public Works staff annually on reporting pollution or conducting investigations.	City of Fairway Public Works	Annual
<b>3.4 Storm sewer network and outfall mapping</b>	Maintain storm sewer network for Fairway maintain a map of outfall locations and make available to staff	Continue to maintain storm system map in and updates as necessary to show additional pipe network and outfalls.	City of Fairway Public Works	Annual
<b>3.5 Household Hazardous Waste (HHW) Program</b>	Provide Fairway residents the opportunity to properly dispose of HHW	Number of participants and summary of materials received	JCSMP	Annual

### Program Assessment

The overall success of the Illicit Discharge Detection and Elimination Program will be measured through the successful implementation and enforcement of the Stormwater Pollution Prevention Ordinance. Program assessment will be reported with each annual NPDES report discussing the activities completed in this section for the previous program year. Success will also be measured by the following:

- Number of public complaints addressed or problems discovered by City staff
- Number of inspections conducted
- Number of notices of violation or penalties issued

**3.4 CONTROL MEASURE 4 - CONSTRUCTION SITE STORMWATER RUNOFF CONTROL**

**Description**

This minimum control includes developing, implementing, and enforcing a program to reduce pollutants in any stormwater runoff to the MS4 for construction sites disturbing one acre or more, including areas that are less than one acre but are part of a larger common plan for development that disturbs one or more acre. KDHE requires this program to include:

- Where permittees have the authority to do so, ordinances or resolutions shall be enacted to require erosion and sediment controls, as well as sanctions to ensure compliance.
- Requirements for construction site owners or operators to implement erosion and sediment control BMPs.
- Requirements for construction site owners or operators to control wastes at the construction site that are likely to cause adverse impacts to water quality.
- Procedures for site plan review which incorporate consideration of potential water quality impacts.
- Procedures for receipt and consideration of information submitted by the public.
- Procedures for site inspection and enforcement of control measures.

**Benefit**

If uncontrolled, land disturbance activities can generate significant loads of sediment which can impact both adjoining properties and downstream water bodies. Fortunately, effective controls are easy and cost-effective to implement.

**BMPs, Goals, and Staff**

<b>Construction Site Stormwater Runoff Control</b>				
<b>BMP</b>	<b>BMP Description</b>	<b>Measurable Goal</b>	<b>Lead Staff</b>	<b>Schedule</b>
<b>4.1 Regulations and Standards</b>	Review and update Erosion and Sediment Control Ordinance adopted in 2007 as needed.	Review every 2 years and update as needed.	City of Fairway Public Works	Ordinance #1409 is in-place.  Review every 2 years.
<b>4.2 Site Plan Review</b>	Require an Erosion and Sediment Control Plan for any land disturbance activity equal to one acre or more.	Review all erosion and sediment control plans based on specifications and checklists.	City of Fairway Public Works	As-needed
	Hold pre-construction meetings to clarify erosion and sediment control BMPs for site.	Require meetings for all projects disturbing one acre or more.	City of Fairway Public Works	As-needed
	Require submittal of state NOI for Stormwater Construction Runoff.	Request copy of NOI and place in project file.	City of Fairway Public Works	As-needed
	Issue land disturbance permits	Issue permits prior to any land disturbance activities.	City of Fairway Building Inspections	As-needed

# SECTION THREE

## Six Minimum Control Measures

Construction Site Stormwater Runoff Control				
BMP	BMP Description	Measurable Goal	Lead Staff	Schedule
4.3 Site Inspection and Enforcement	Track construction site inspections, complaints, violations, and enforcement measures	Number of inspections, complaints, violations, enforcement measures	City of Fairway Public Works	Track as-needed. Report annually
4.4 Receipt of Public Information on Construction Site Compliance	Track information received from public	Summary of information received and actions taken.	City of Fairway Public Works	Track as-needed. Report annually
4.5 Annual Program Review	Assess Stormwater Management Program and revise as required	Annual Report and revised Stormwater Management Plan (if required)	City of Fairway Public Works	Annually

### Program Assessment

The overall success of the Construction Site Stormwater Runoff Control Program will be measured through the successful implementation and enforcement of the Erosion and Sedimentation Control Ordinance. Program assessment will be reported with each annual NPDES report discussing the activities completed in this section for the previous program year. Success will also be measured by the:

- Number of plans reviewed
- Number of inspections conducted
- Number of NOV's issued
- Number and amount of penalties issued

**3.5 CONTROL MEASURE 5 - POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

**Description**

This minimum control requires the development, implementation, and enforcement of a program to address post-construction stormwater runoff controls from both new development and redevelopment sites after development sites disturbing one acre or more, including projects that are less than one acre but are part of a larger common plan for development that disturbs one or more acre. KDHE requires the program to include:

- For permittees which have the authority, ordinances or resolutions to address post-construction runoff from new development and redevelopment projects to the extent allowable under state and local law.
- BMPs to prevent or minimize adverse water quality impacts.
- Strategies which include a combination of structural and/or non-structural BMPs appropriate for the municipality.
- Means to ensure adequate long-term operation and maintenance of BMPs.

**Benefit**

Conversion of native landscape to developed landscape increases both the volume of stormwater runoff and pollutant loads in stormwater. The consequences can include erosion, flooding, and pollution, impacting both downstream property owners and public infrastructure. Stormwater controls included in development sites can help reduce impacts and costs to both private property owners and the public.

**BMPs, Goals, and Staff**

<b>Post-Construction Stormwater Management in New Development and Redevelopment</b>				
<b>BMP</b>	<b>BMP Description</b>	<b>Measurable Goal</b>	<b>Lead Staff</b>	<b>Schedule</b>
<b>5.1 Regulations and Standards</b>	Review and update Post Construction Stormwater Management Ordinance #1409 adopted in 2007.	Review regulation and update as needed	City of Fairway Public Works	Target date: 2017
	Review and update Post Construction Stormwater Management design criteria adopted in 2007.	Review design criteria and update as needed.	City of Fairway Public Works	Target date: 2017
<b>5.2 Establish plan review procedures.</b>	Review and update Post Construction Stormwater Management Plan Review Checklists.	Review and update annually.	City of Fairway Public Works	Target date: 2017
<b>5.3 Site plan review</b>	Require a Stormwater Quality Management Plan (SWQMP) for any new development or re-development project that disturbs one acre or more of land and	Review all SWQMP's to determine compliance with design criteria and checklists.	City of Fairway Public Works	As-needed
	Issue Post Construction BMP permits	Permit to be issued after development has reached 90% completion and tributary area to BMP has	City of Fairway Public Works	As-needed

# SECTION THREE

## Six Minimum Control Measures

Post-Construction Stormwater Management in New Development and Redevelopment				
BMP	BMP Description	Measurable Goal	Lead Staff	Schedule
		been permanently stabilized		
	Require "as-built" inspections at the conclusion of a project to ensure that the BMP has been built as designed.	Develop a program to track design certifications	City of Fairway Public Works	As-needed
<b>5.4 Develop inspection procedures for completed projects.</b>	Require that the owner/operator of the facility inspect the BMP through maintenance agreements in perpetuity.	Develop a long-term maintenance program	City of Fairway Public Works	As-needed
	Require that the owner/operator provide documentation detailing inspection dates and maintenance performed one year after construction, and every three years thereafter.	Develop a long-term maintenance program	City of Fairway Public Works	As-needed
	Establish inspection and maintenance program for public projects.	Implement inspection program on publicly owned BMPs.	City of Fairway Public Works	Target date: 2018
	Establish inspection and maintenance program for private projects.	Implement inspection program on publicly owned BMPs.	City of Fairway Public Works	Target date: 2019
	Establish enforcement actions that require the owner/operator to perform necessary inspections and maintenance.	Review and update enforcement procedures	Legal	Target date: 2019
	<b>5.5 Establish enforcement procedures</b>	Include abatement provisions that allow the city to abate problem facilities if necessary.	Review and update abatement procedures	Legal
Maintain an inventory detailing the types and locations of planned and installed post-construction BMPs.		Develop and maintain a BMP tracking system	City of Fairway Public Works	Target date: 2019

**Program Assessment**

The overall success of the Post-Construction Stormwater Management Program will be measured through the successful implementation and enforcement of a Post-Construction Stormwater Management Ordinance. Program assessment will be reported with each annual NPDES report discussing the activities completed in this section for the previous program year. Success will also be measured by the following:

- Number of plans reviewed
- Ordinances updated and procedures enacted

**3.6 CONTROL MEASURE 6 - POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS**

**Description**

This minimum control measure requires the development and implementation of an operation and maintenance and training program to reduce and prevent stormwater pollution from public facility operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbance, and stormwater system maintenance.

**Benefit**

Leading by example on public facilities and projects provides an opportunity to demonstrate and teach proper techniques to other landowners, and it is available on a routine and ongoing basis.

**BMPs, Goals, and Staff**

<b>Pollution Prevention/Good Housekeeping for Municipal Operations</b>				
<b>BMP</b>	<b>BMP Description</b>	<b>Measurable Goal</b>	<b>Lead Staff</b>	<b>Schedule</b>
<b>6.1 Implement practices to reduce pollution from the O&amp;M of Police, Parks and Rec, and Public Works facilities.</b>	Design a comprehensive O&M pollutant reduction program. Examples include snow and ice removal, lawn care, vehicle maintenance and storage, toxic materials handling and transfer, and vehicle fueling stations.	Develop a watershed and pollutant based plan that reduces identified pollutants from activities.	City of Fairway Public Works	Target date: 2016
	Implement a comprehensive O&M operations pollutant reduction program. Examples include snow and ice removal, lawn care, vehicle maintenance and storage, toxic materials handling and transfer, and vehicle fueling stations.	Implement plan to reduce pollutant loads. Example: reduced chloride concentrations in stormwater runoff by utilizing alternative de-icing products, reduced application rates, and other emerging technologies.	City of Fairway Public Works	Target date: 2018
<b>6.2 Conduct staff training.</b>	Design educational sessions to ensure staff is proficient in minimizing stormwater pollution from daily operations.	Organize annual training sessions for all staff involved with operations and Public Works, Parks, and Recreation Services staff annually.	City of Fairway Public Works	Annual

**Program Assessment**

The overall success of the Pollution Prevention/Good Housekeeping Program will be measured through the successful implementation of facility SWPPPs, employee training and facility inspections conducted as part of the program. Program assessment will be reported with each annual NPDES report discussing the activities completed in this section for the previous program year. In addition, success will also be measured by:

- The number of inspections conducted
- The number of problems discovered and resolved
- Training classes conducted

**TMDL Pollutants**

TMDL regulated pollutants and impaired streams identified in the city’s 2014 permit are listed below:

Impaired Stream	TMDL Regulated Pollutant		
	Bacteria	Nutrients	Sediment
N/A			

**Best Management Practices (BMPs)**

All six of the minimum control measures are designed to reduce pollutants in stormwater runoff. Those BMPs especially targeting bacteria, nutrients, and sediment, the most common TMDL pollutants in urbanized Johnson County, include the following:

Bacteria

- Public Education and Outreach: The Pet Waste Pickup Campaign, supported through funding of the Mid-America Regional Council (MARC) Water Quality Education Committee, directly addresses this pollutant
- Illicit Discharge Detection and Elimination Program
- Post-Construction Runoff Controls requiring the implementation of post-construction BMPs

Nutrients

- Public Education and Outreach: Programs conducted by Johnson County Stormwater Management Program on behalf of the cities include the Water Quality Education Grant Program; Homeowner BMP Cost Share Program; K-State Extension Water Quality Partnership
- Post-Construction Runoff Controls requiring the implementation of post-construction BMPs

Sediment

- Erosion & Sediment Control at Construction Sites: Permitting and inspection program
- Post-Construction Runoff Controls requiring the implementation of post-construction BMPs

**Pollutant Reduction Goals**

Success in achieving reductions in bacteria, nutrients, and sediment will be assessed by directly monitoring in-stream concentrations and evaluating pollutant concentration trends across the permit period. The monitoring program is being conducted by the Johnson County Stormwater Management Program on behalf of the cities in the county.

**Mapping**

A map of the permit area is included as Attachment 1.

An in-stream monitoring program targeting impaired streams and TMDL pollutants throughout Johnson County is being undertaken by the Johnson County Stormwater Management Program in conjunction with the USGS Cooperative Water Program. This program is being conducted on behalf of the cities in the county. Annual results of the monitoring program will be provided to the cities as well as the KDHE.

The monitoring program will include:

1. A network of 25 sites where discrete samples will be collected with passive samplers. Sample locations are located where streams generally enter and leave jurisdictional boundaries in impaired watersheds.
2. Targeted analytes include nutrients, suspended sediment, and *Escherichia coli* bacteria.
3. Four samples will be collected at each site annually (environmental conditions permitting, with a minimum of two samples collected in calendar year 2014).
4. Samples will be collected from storm events of at least 0.5 inches in 24-hours and samples will be collected during the rising limb of the storm events.
5. USGS is also including additional sampling techniques and added parameters at selected locations to help assess the effectiveness of the overall monitoring program.
6. Data will be compiled and reviewed on a routine basis and an annual summary of results provided.

A map of TMDL monitoring locations is included as Attachment 2.

**Permit Compliance Schedule**

Part IV of the 2014 permit includes the following compliance schedule requirements:

- **Year 2014:** Complete inventory and maps of outfalls, streams, and lakes in targeted areas; drainage basins for structural and non-structural BMPs; Select and initiate or continue effective plans for source control programs targeted to TMDL pollutants.
- **February 28, 2015:** Submit a copy of this updated SMP to KDHE.
- **Year 2015:** Continue source control programs and monitoring program.
- **Year 2016:** Continue source control programs and monitoring programs.
- **July 1, 2016:** Select, design, and initiate installation of appropriate structural BMPs.
- **Year 2017:** Continue source control programs and monitoring program.
- **Year 2018:** Continue source control programs and monitoring program.
- **February 28, 2019:** Provide a final report on the effectiveness of source controls and structural BMPs to achieve the measurable goals and summarize water quality data from selected sites.

**Annual Reporting**

A calendar year annual report will be submitted to KDHE by February 28 of each year. The report will cover activities conducted during the prior calendar year and will include the following:

- Summary of compliance activities associated with the permit
- A review of the appropriateness of BMPs and progress towards achieving water quality goals
- Results of information collected and analyzed, if any, including monitoring data
- Summary and status of stormwater activities conducted during the previous year
- Summary of stormwater activities scheduled to take place during next reporting cycle (including schedule)
- Map showing changes in jurisdictional permit area, if appropriate
- Description of significant changes in any BMPs, including the six minimum control measures
- Copies of updated ordinances or resolutions associated with this SMP or the six minimum control measures
- Updated list of other parties which will be responsible for implementing program areas of this SMP, as required

This SMP will be evaluated annually and modifications to the Plan, if any, will be submitted with the annual report.

Minor modifications to BMPs listed in this plan, if needed to meet program objectives, will be made within 60 days determination by the permittee or written notification from KDHE.

Major modifications to BMPs listed in this plan, if needed to meet program objectives, will be proposed in a written plan to KDHE, within 60 days determination by the permittee or written notification from KDHE.

## Tables

**Table 1  
Responsibilities for SMP Implementation**

**Public Works Department**  
Collects data from all departments and compiles Annual Report. Signs Annual Report and submits to KDHE.

Stormwater Minimum Control Measures (MCMs)						TMDLs
MCM 1	MCM 2	MCM 3	MCM 4	MCM 5	MCM 6	
Public Education and Outreach	Public Participation and Involvement	Illicit Discharge Detection and Elimination	Erosion & Sediment Control at Construction Sites	Post Construction Runoff Controls	Pollution Prevention and Good Housekeeping	Conduct County Wide Monitoring Program; Implement BMPs to address TMDL pollutants
Participate in various activities and provide funds on behalf of all MS4 permit holders in Johnson County; description of education and outreach measures and distributed materials	Assist with development, funding and/or promotion of watershed based clean-ups, rain barrel classes, storm drain stenciling programs, water quality expo's or other events focused on stormwater quality or watershed stewardship on behalf of all MS4 permit holders	Assist with efforts to detect and eliminate illicit discharges to the storm sewer system on behalf of all MS4 permit holders in Johnson County. Activities may include funding household hazardous waste collection events, maintaining countywide pollution hotline and online reporting system.	Plan review	Plan Review	Implement good housekeeping BMPs for City Facilities/Operations	Conduct TMDL monitoring in streams, on behalf of all MS4 permit holders in Johnson County.
	Provide a mechanism for public comment and input on Stormwater Mangement Plan.	Provide mechanism for residents to report illicit discharges	Private Project Inspections/Enforcement	Private Project Inspections/Enforcement	Annual employee training on good housekeeping measures	Develop and Implement BMPs to abate TMDL Pollutants of concern. (sediment, nutrients, bacteria)
		Investigate reports of illicit discharge	Public Project Inspections/Enforcement	Public Project Inspections/Enforcement		
				Ensure Long Term Maint of Private BMPs		
				Ensure Long Term Maint of Public BMPs		

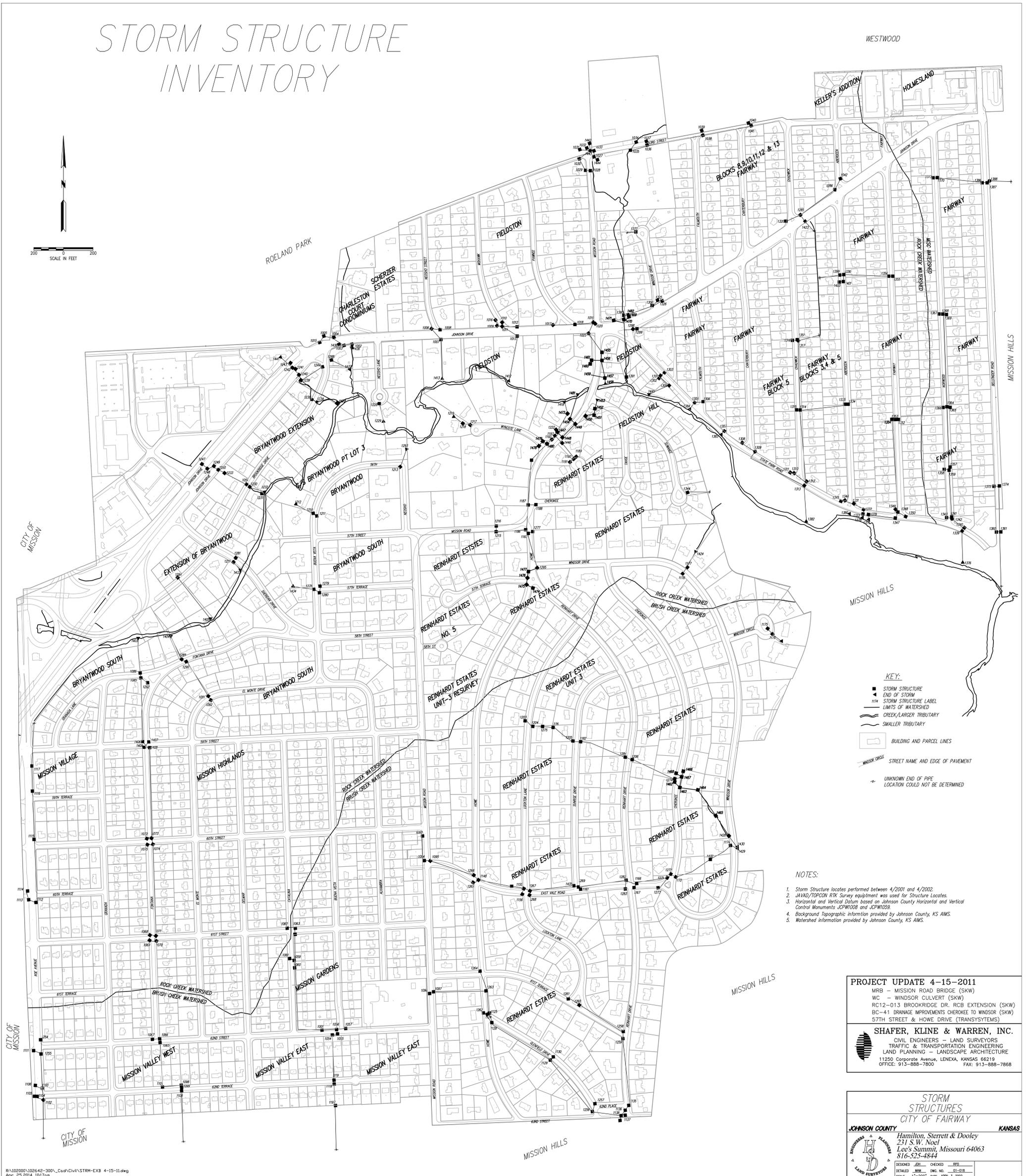
Lead Department						
Johnson County Stormwater Mangement Program*	Johnson County Stormwater Mangement Program*	Johnson County Stormwater Mangement Program*	Public Works Dept Asst. Director of PW	Public Works Dept Director of PW	Public Works Dept Director of Public Works	Stormwater Management Program*
	Public Works Dept Director of Public Works	Public Works Dept Director of Public Works	Public Works Dept Asst. Director of PW	Public Works Dept Director of PW		Public Works Dept Director of Public Works

\* Subject To funding approval by Johnson County Stormwater Management Advisory Council (SMAC) and the Board of County Commissioners (BOCC)

## Maps

# Attachment 1

## STORM STRUCTURE INVENTORY



**KEY:**

- STORM STRUCTURE
- ◄ END OF STORM
- 1714 STORM STRUCTURE LABEL
- LIMITS OF WATERSHED
- CREEK/LARGER TRIBUTARY
- SMALLER TRIBUTARY
- ▭ BUILDING AND PARCEL LINES
- STREET NAME AND EDGE OF PAVEMENT
- UNKNOWN END OF PIPE LOCATION COULD NOT BE DETERMINED

- NOTES:**
1. Storm Structure locates performed between 4/2001 and 4/2002.
  2. JAVAD/TOPCON RTK Survey equipment was used for Structure Locates.
  3. Horizontal and Vertical Datum based on Johnson County Horizontal and Vertical Control Monuments (CPW1008 and CPW1058).
  4. Background Topographic information provided by Johnson County, KS AIMS.
  5. Watershed information provided by Johnson County, KS AIMS.

**PROJECT UPDATE 4-15-2011**  
 MRB - MISSION ROAD BRIDGE (SKW)  
 WC - WINDSOR CULVERT (SKW)  
 RC12-013 BROOKRIDGE DR. RCB EXTENSION (SKW)  
 BC-41 DRAINAGE IMPROVEMENTS CHEROKEE TO WINDSOR (SKW)  
 57TH STREET & HOWE DRIVE (TRANSYSTEMS)

**SHAFFER, KLINE & WARREN, INC.**  
 CIVIL ENGINEERS - LAND SURVEYORS  
 TRAFFIC & TRANSPORTATION ENGINEERING  
 LAND PLANNING - LANDSCAPE ARCHITECTURE  
 11250 Corporate Avenue, LENEXA, KANSAS 66219  
 OFFICE: 913-888-7800 FAX: 913-888-7868

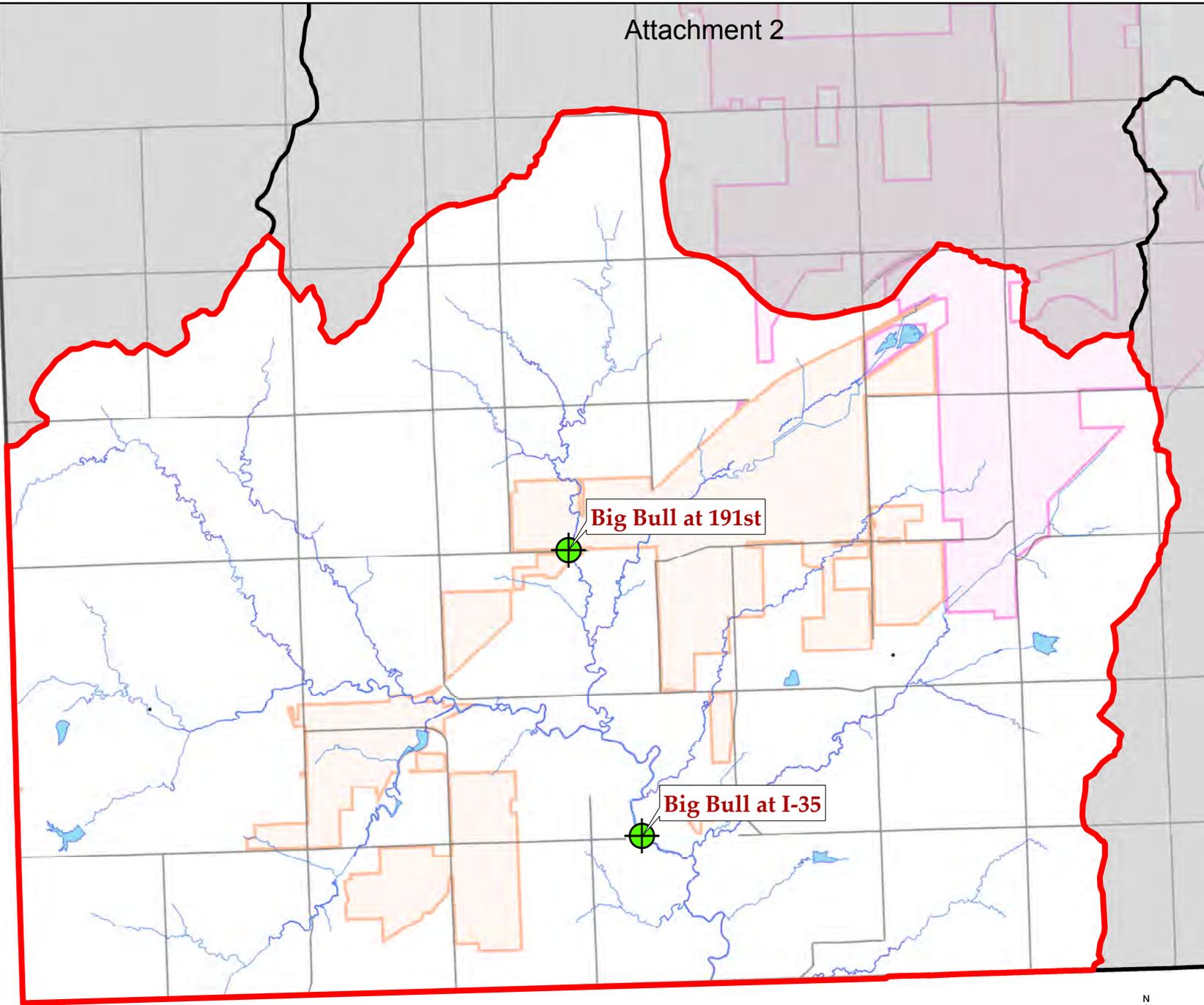
**STORM STRUCTURES**  
**CITY OF FAIRWAY**

**JOHNSON COUNTY KANSAS**

Hamilton, Sterrett & Dooley  
 231 S.W. Noel  
 Lee's Summit, Missouri 64063  
 816-525-4844

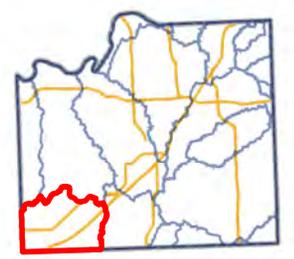
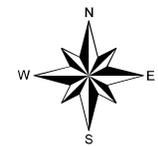
DESIGNED	JRL	CHECKED	SPD
REVISED	JMM	DATE	01-15-10
SCALE	1"=200'	DATE	APRIL 3, 2002

TMDL Storm Event  
Monitoring Locations  
*Big Bull Creek*

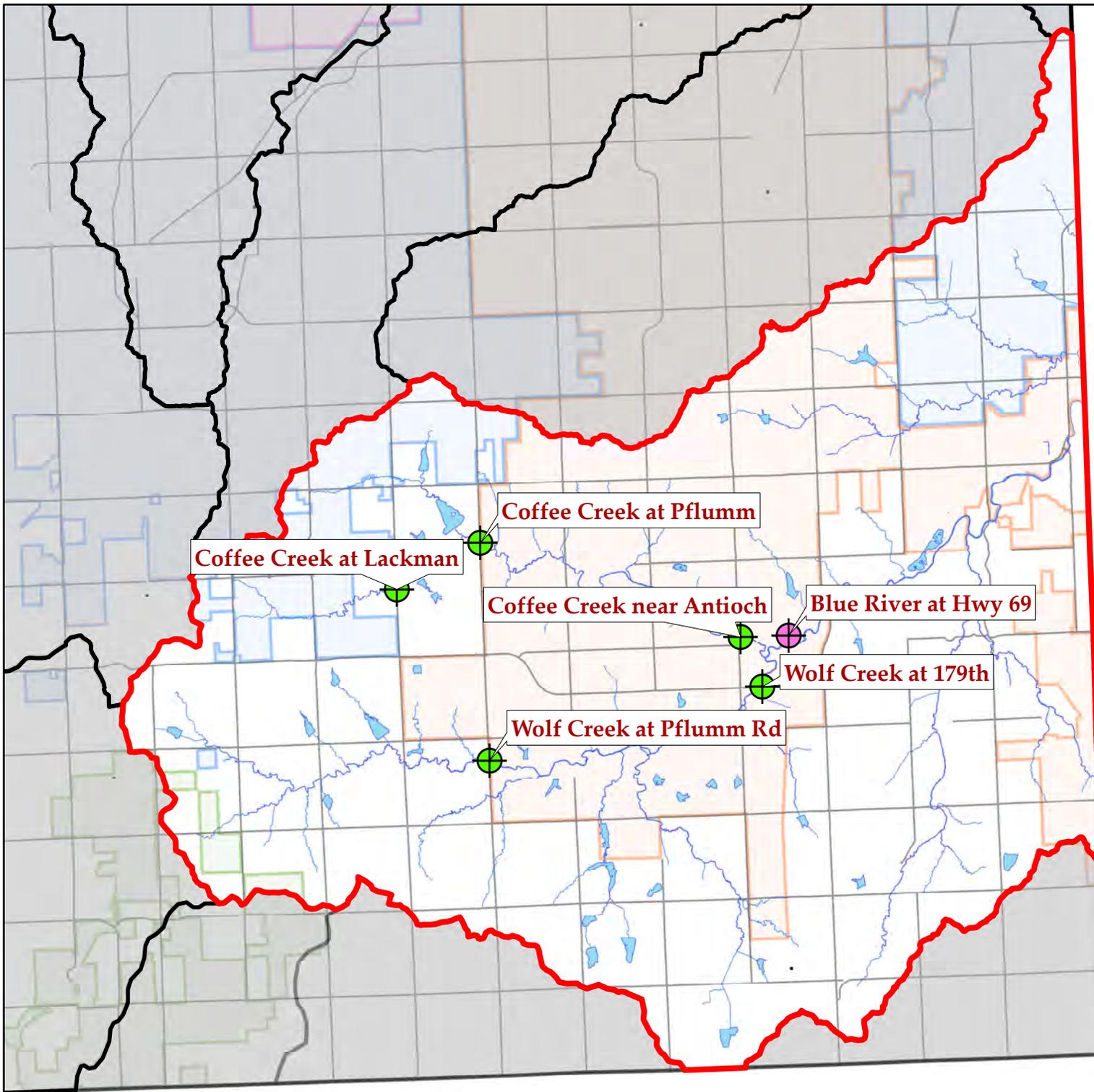


**Legend**

-  Required Monitoring
-  Additional Monitoring



TMDL Storm Event  
Monitoring Locations  
*Blue River*

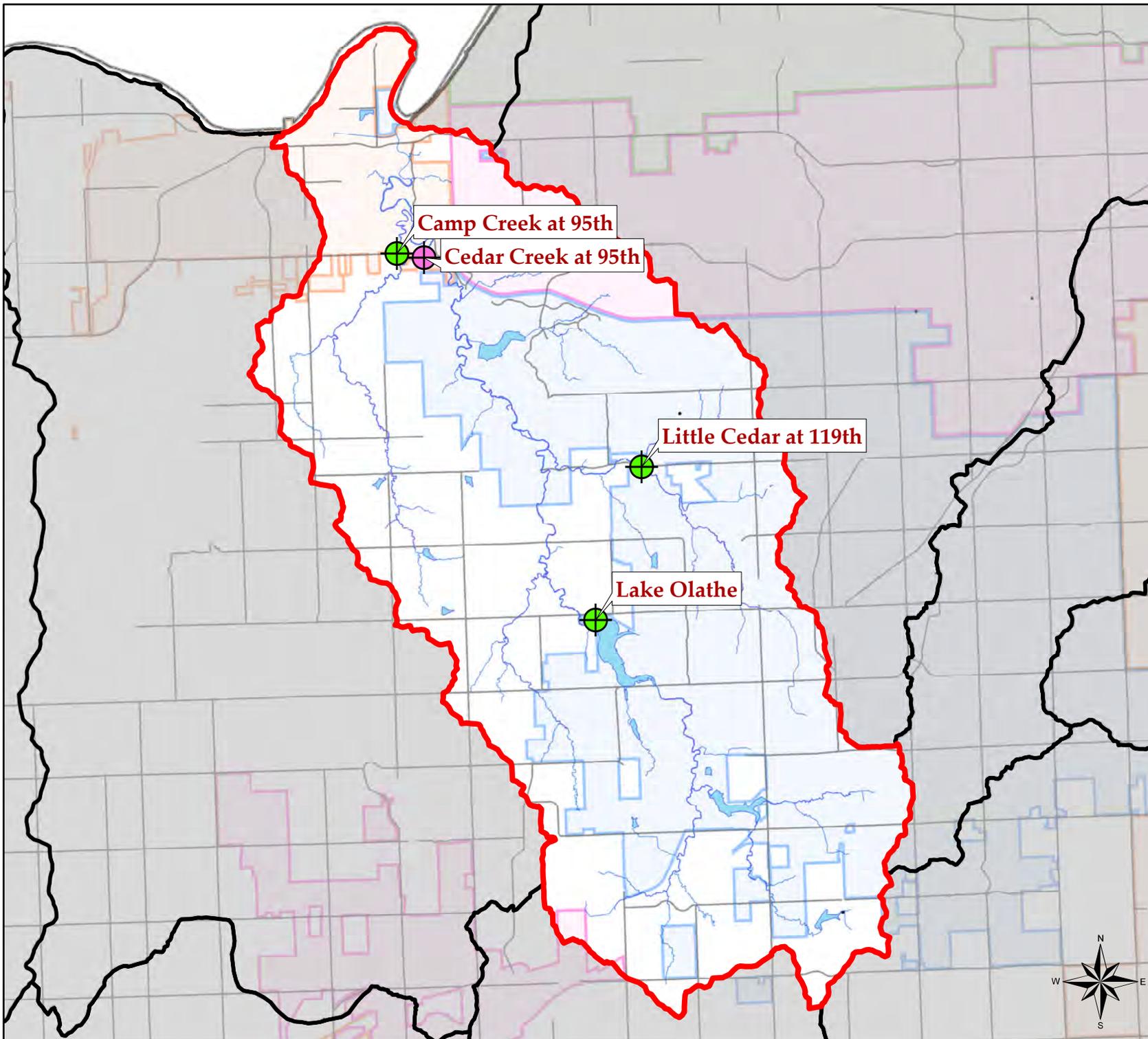


Legend

-  Required Monitoring
-  Additional Monitoring



TMDL Storm Event  
Monitoring Locations  
*Cedar Creek*

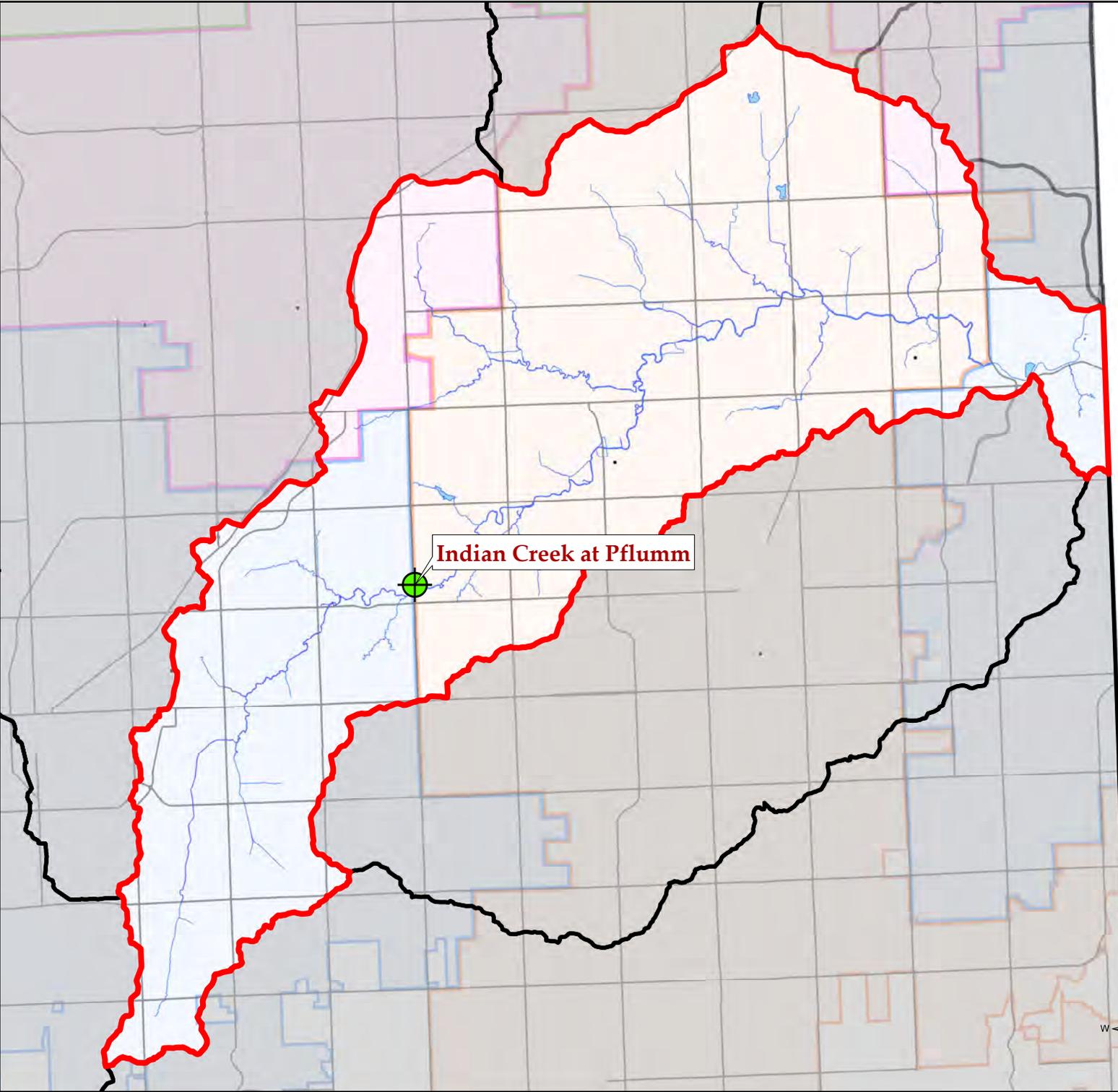


Legend

-  Required Monitoring
-  Additional Monitoring



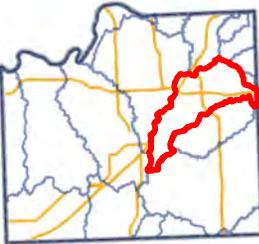
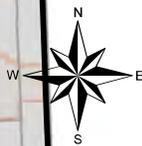
TMDL Storm Event  
Monitoring Locations  
*Indian Creek*



Indian Creek at Pflumm

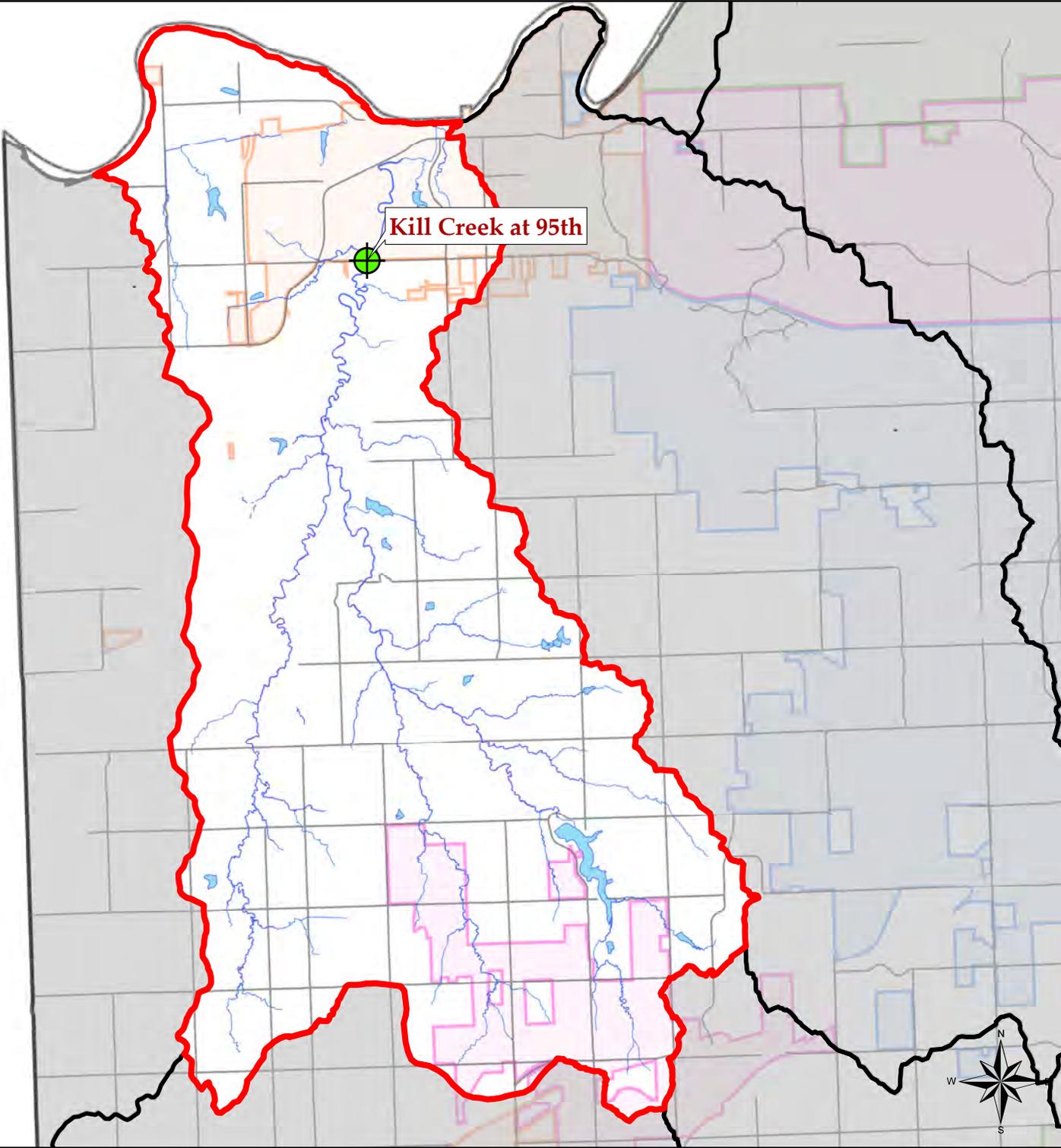
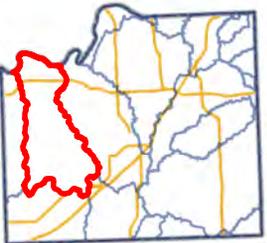
Legend

-  Required Monitoring
-  Additional Monitoring



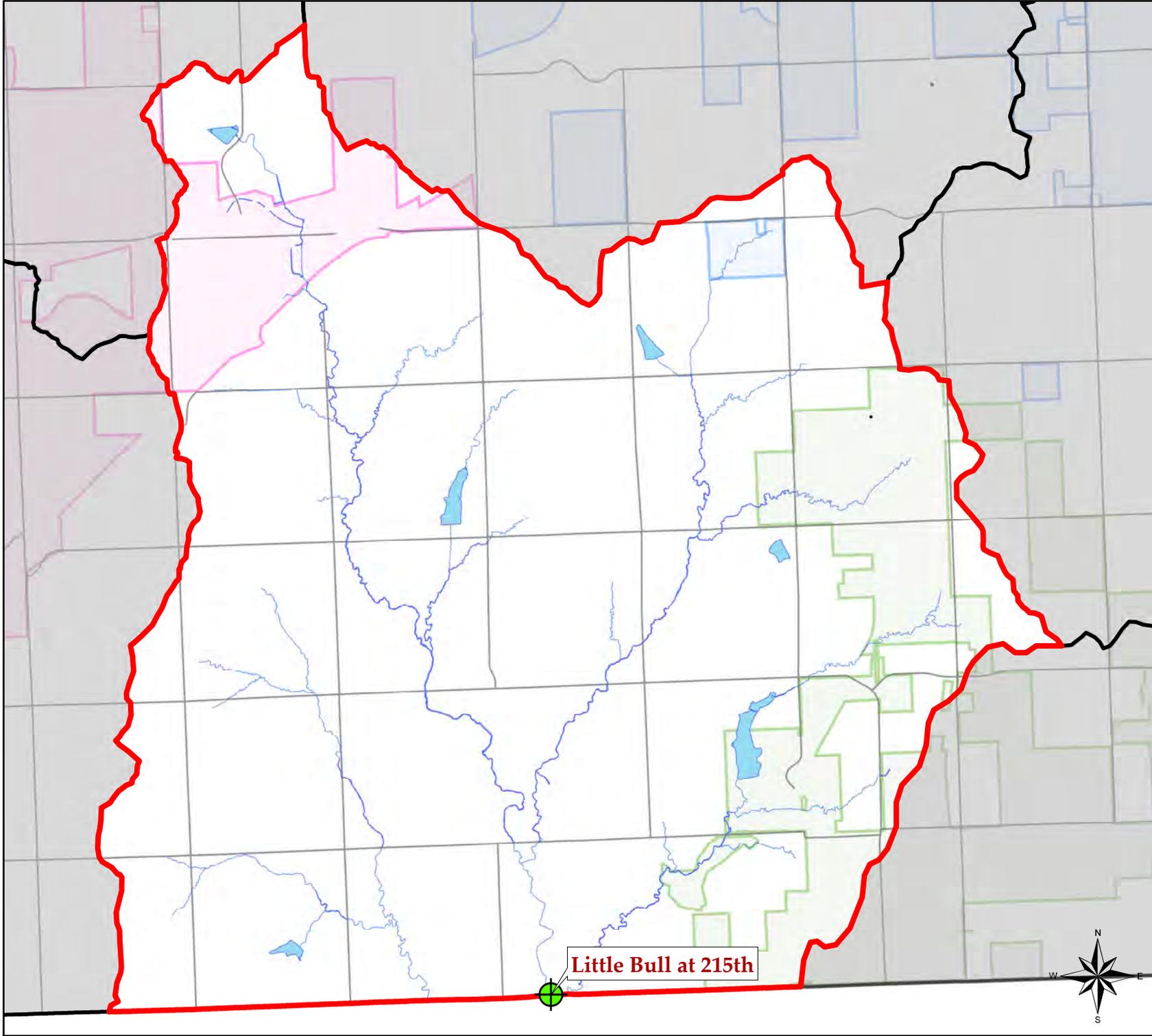
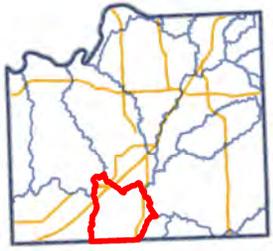
TMDL Storm Event  
Monitoring Locations  
*Kill Creek*

- Legend**
-  Required Monitoring
  -  Additional Monitoring



TMDL Storm Event  
Monitoring Locations  
*Little Bull Creek*

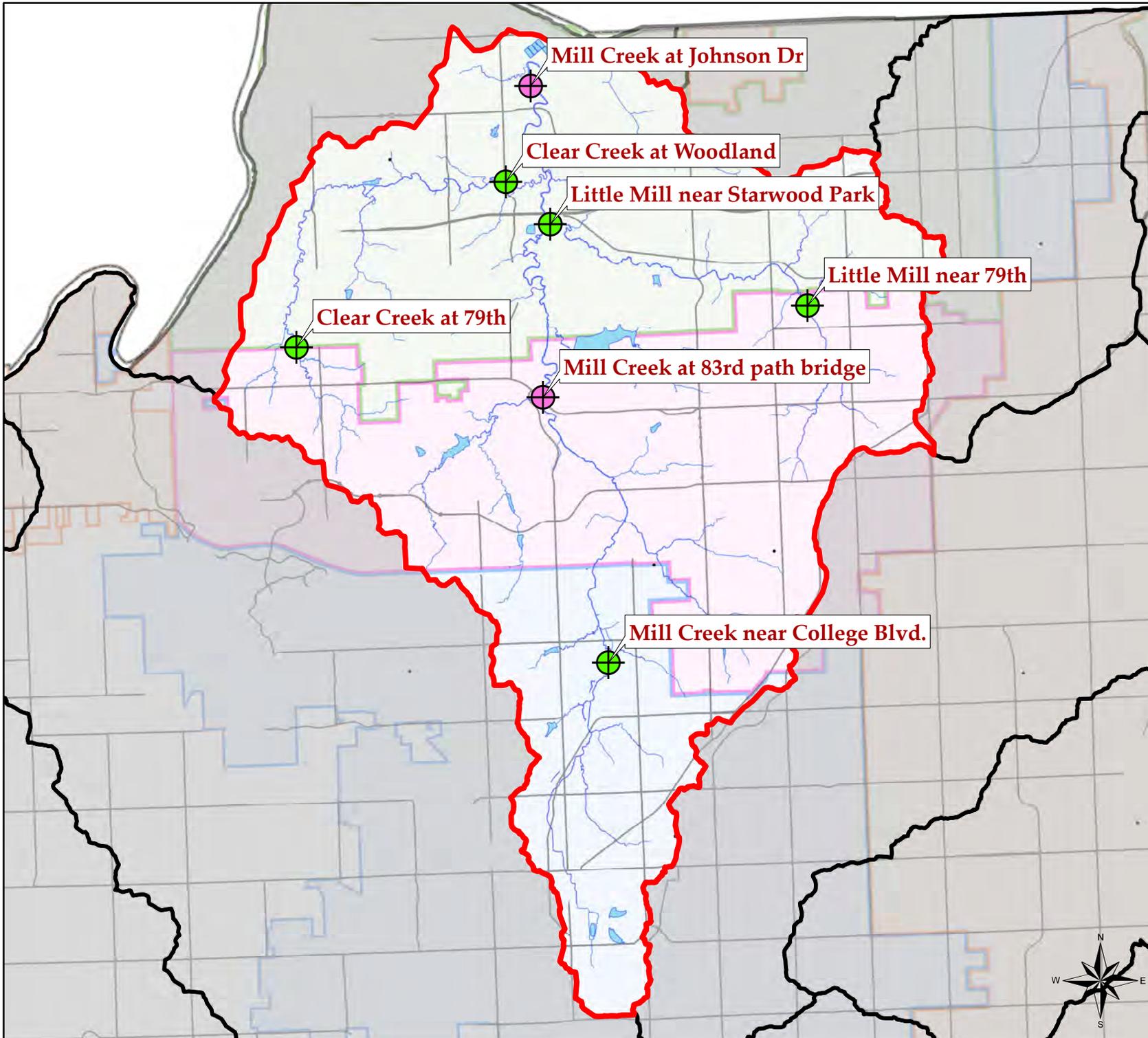
- Legend**
-  Required Monitoring
  -  Additional Monitoring



Little Bull at 215th

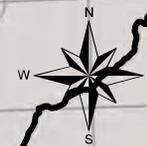


TMDL Storm Event  
Monitoring Locations  
*Mill Creek*

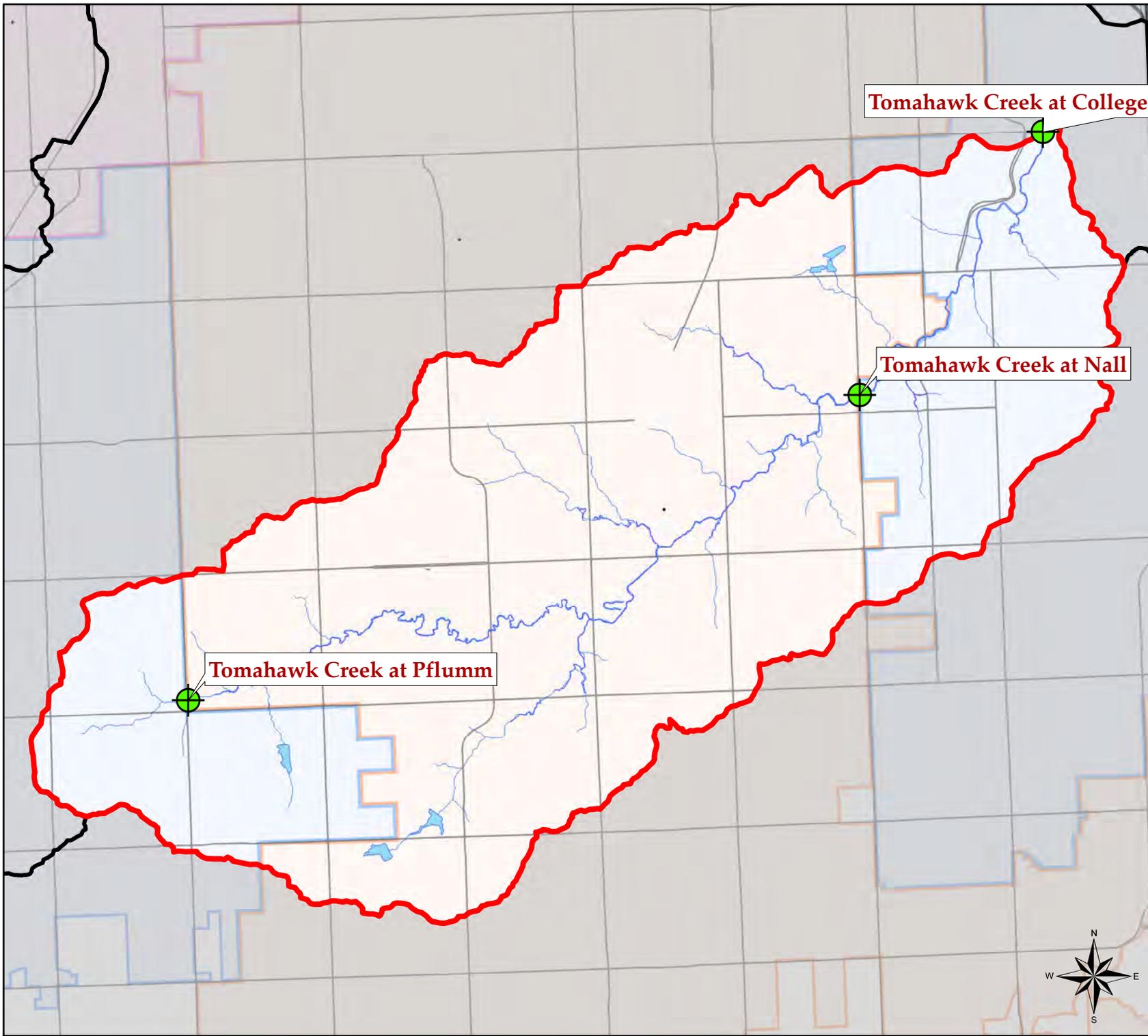


Legend

-  Required Monitoring
-  Additional Monitoring



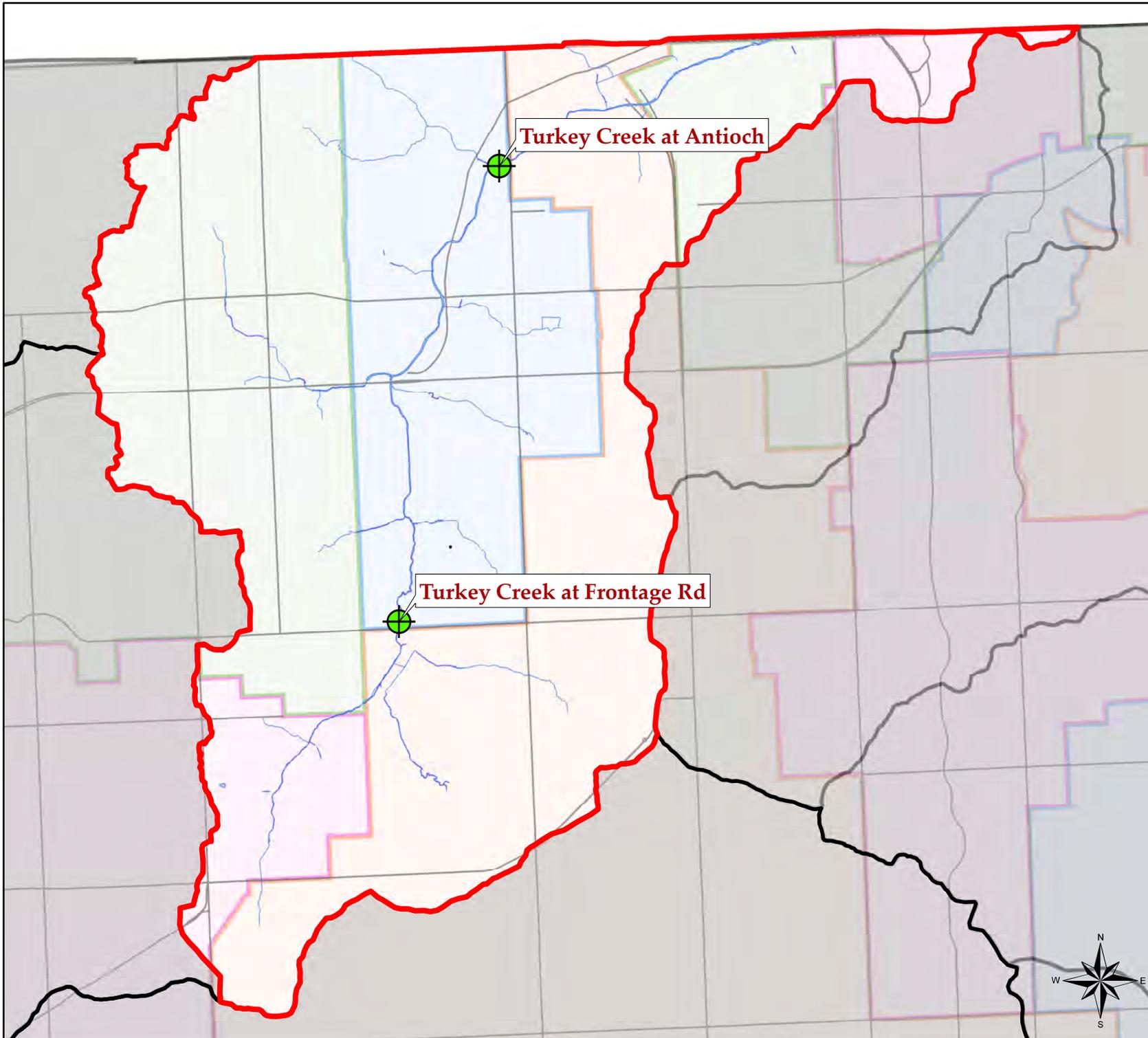
TMDL Storm Event  
Monitoring Locations  
*Tomahawk Creek*



Legend

-  Required Monitoring
-  Additional Monitoring





Turkey Creek at Antioch

Turkey Creek at Frontage Rd

TMDL Storm Event  
Monitoring Locations  
*Turkey Creek*

- Legend**
- Required Monitoring
  - Additional Monitoring

