



DRAFT Stormwater Master Plan



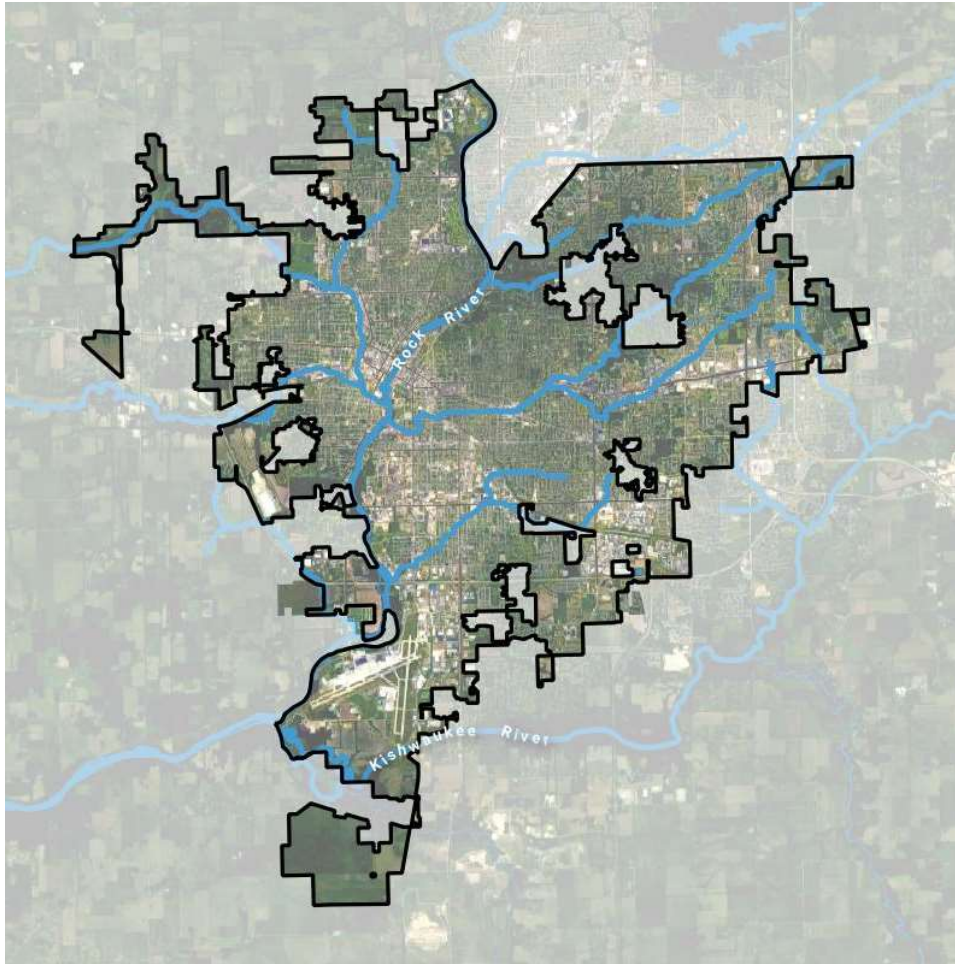
CITY OF ROCKFORD | JANUARY 2024

PREPARED BY:



1. INTRODUCTION

Planning Area



Source: HR Green; Google

Stormwater Planning Overview

Water that falls during rainstorms is also called stormwater. It soaks into the ground or runs off. Stormwater runoff travels through a series of storm sewers and drainageways on its way to local rivers and streams.

The City of Rockford operates and maintains a large network of drainage infrastructure, which includes inlets, catch basins, storm sewers, culverts, ditches, and streams. The city administers the stormwater program by complying with permits, managing assets, monitoring outcomes, and communicating with the public. The stormwater program includes the planning, design, and construction of drainage improvements.

The Stormwater Master Plan creates a framework for managing stormwater effectively and details the capital improvements most critical to program success.

The recommendations throughout the plan are aimed at protecting property from flood damages, providing adequate drainage, protecting water resources, and maximizing financial resources. The plan will support public works, engineering, and economic development as they manage the improvement and development of City infrastructure.

The City works diligently to provide a healthy and safe environment for all community members. This principle informs many of the goals and recommendations in the plan, which are aimed at providing equitable stormwater management service and investments to all neighborhoods in Rockford.



1. INTRODUCTION

Stormwater Program Outcomes by the Numbers

\$110 Million

Identified Capital Needs

9 Watersheds

with Projects

572 Buildings

with Reduced Flood Risk

400 Acres

of land restored to natural conditions
or reserved for public open space

\$30 Million

Identified grant fund sources



1. INTRODUCTION

Report Contents

- 1) Introduction
- 2) Community Engagement
- 3) Evaluating Rockford's Drainage System
- 4) Planning Drainage Improvements
- 5) Stormwater Cost of Service

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- A. MS4 Permit
- B. City of Rockford MS4 Permit Program
- C. Technical Report
- D. Standard Operating Procedures



1. INTRODUCTION

Stormwater Program Goals

The City has established several goals that guide the activities of the program. These goals promote effective and sustainable stormwater management.

- ▶ Reduce the potential for stormwater threats to public health, safety and property.
- ▶ Improve water quality and habitat conditions in the City's watersheds.
- ▶ Encourage site planning and stormwater techniques, such as low-impact development and green infrastructure, that best replicate pre-development hydrologic conditions.
- ▶ Comply with City, State and Federal regulations for stormwater, water quality and floodplain management.

The goals are implemented through the City's stormwater management program, standard operating procedures, best management practices, and capital improvement program. The Stormwater Management Program and Standard Operation Procedures are included in the appendices of this report.



2. Community Engagement

2. COMMUNITY ENGAGEMENT

Overview

Effective community engagement is critical to creating a stormwater management plan that best serves the residents of Rockford. The City relied on two methods to garner input from residents: a targeted period of community meetings and online engagement from September to November of 2023; and an ongoing stormwater reporting program where residents provide the City with information on local stormwater and flooding issues. The City used this feedback to develop overarching goals for the Stormwater Master Plan and to identify priority areas for drainage and stormwater improvements.

Rockford City Market



2. COMMUNITY ENGAGEMENT

Community Meetings

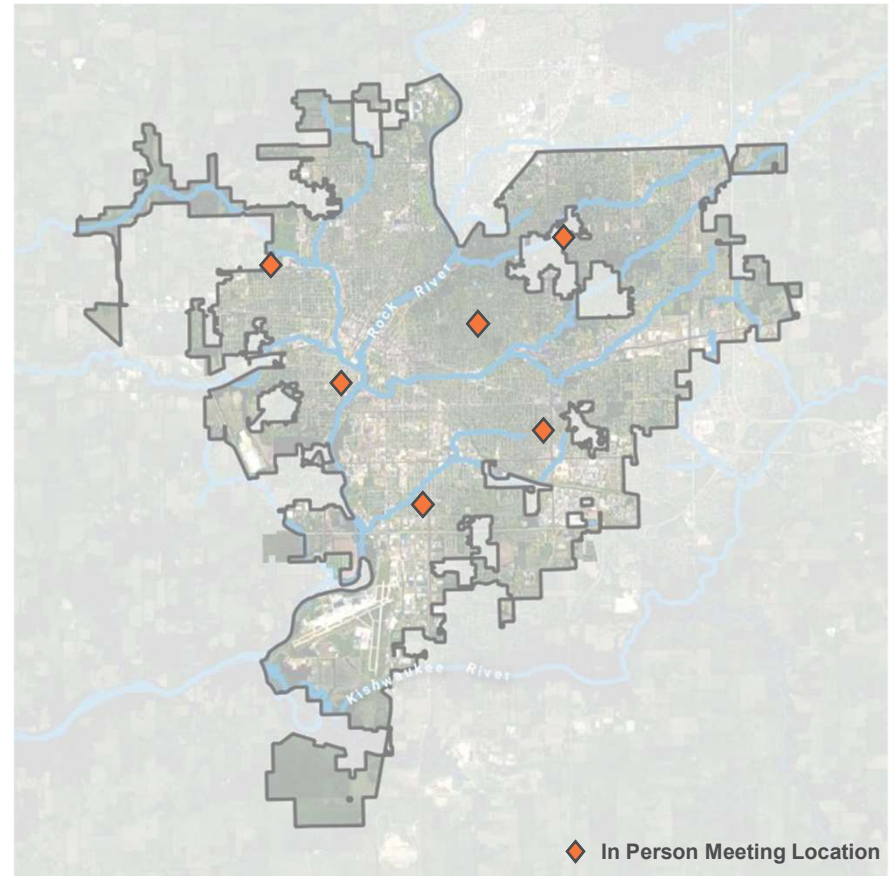
From September to November of 2023, the City hosted 6 in-person and one virtual community meeting to gather information from the public. Meeting locations were spread throughout Rockford to accommodate residents from all areas of Rockford. The purpose of the meetings was to provide residents and property owners with an overview of the stormwater planning and management process, and to allow them to share their stormwater concerns. Over 60 people participated in the meetings.

To collect feedback, the City distributed paper copies of surveys where residents could record how stormwater issues affect them and identify areas of concern. Several common themes were noted including concerns over clearing street inlets and flooding issues in neighborhoods.

Northwest Community Center Meeting



Meeting Locations



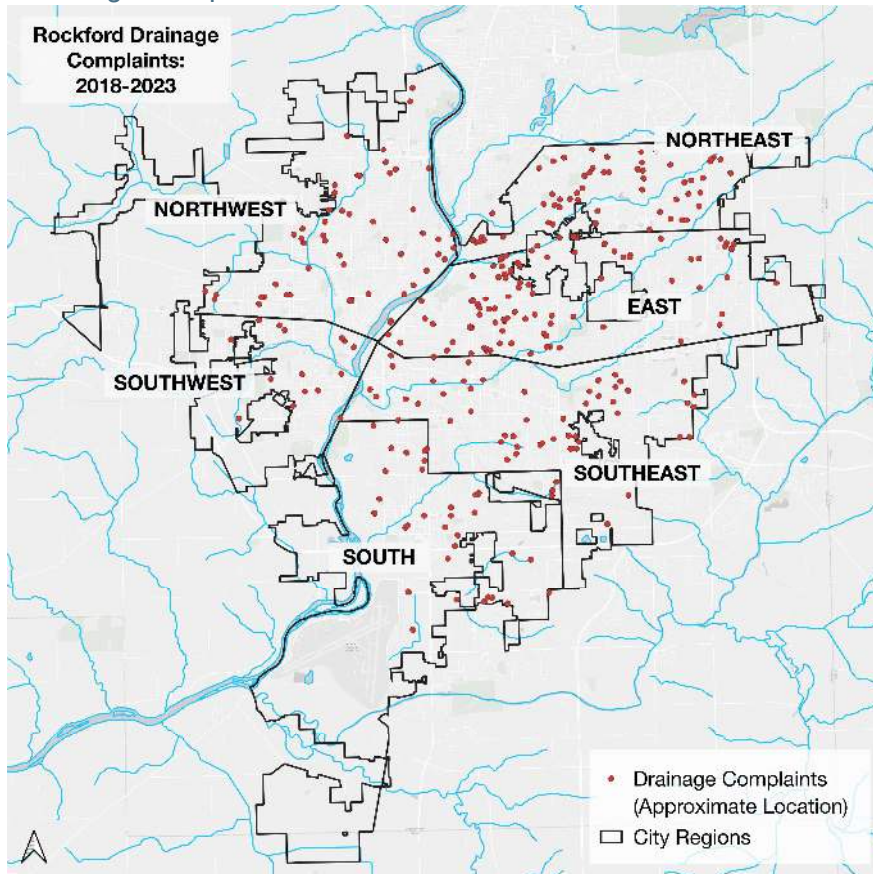
Source: HR Green; Google

2. COMMUNITY ENGAGEMENT

Drainage Complaint Program

In addition to targeted community engagement sessions, the City of Rockford routinely collects and processes feedback from residents regarding stormwater and flooding issues. Residents can call the City’s Street or Stormwater divisions to report any problems with drainage inlets, illicit waste disposal, or erosion and sedimentation from active construction.

Drainage Complaints: 2018-2023

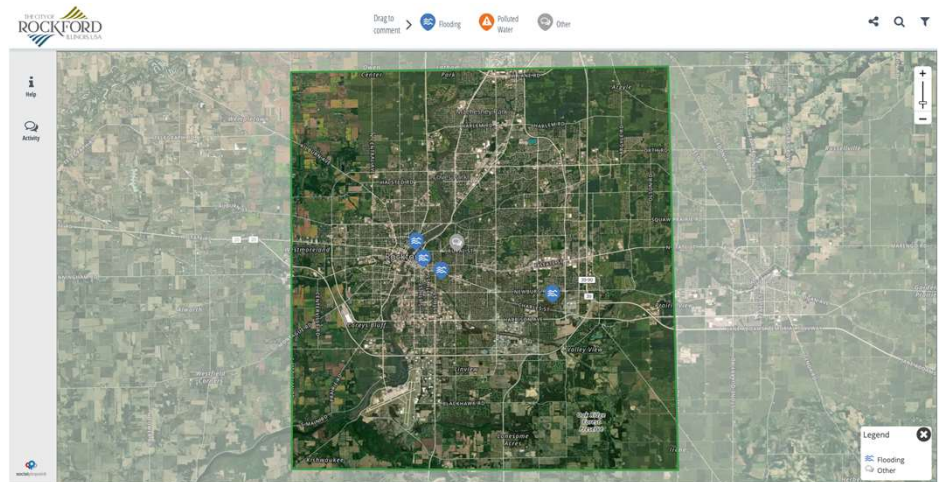


Source: City of Rockford, ESRI

Online Platform

Rockford also hosted an online comment mapping tool that allowed residents to interactively submit issues on the map. This provided another visual of where issues are taking place within Rockford.

City of Rockford Stormwater Map Tool



2. COMMUNITY ENGAGEMENT

Community Survey

Rockford distributed paper copies of surveys at each community meeting. The survey was also made available online. Questions focus on the occurrence of flooding and the impact to property owners' quality of life. The reported severity and frequency of flooding correlated with the level of concern. Some residents have frequent and severe flooding issues, and this greatly affects their quality of life. For people that do not experience the same level of flooding, it is not as much of a concern.

Residents from across the City filled out the survey and generally all people reporting issues could name at least one nearby area that floods during heavy rain events. Flooding is widespread across the city, but not everyone is impacted equally.

The most urgent concern for residents is the occurrence of flood waters entering their homes and damaging property. These people reported spending thousands of dollars on flood proofing systems and experiencing consistent fear during rain events. One resident shared that he does not go out of town during the summer because he is concerned that flooding will happen while he is gone.


Several quotes from the responses are shown here.

“My backyard and basement flood whenever we get more than 1” of rain”

“My house gets surrounded by water. It gets over ankle deep at the house.”

“I had a drain put in my backyard which helped. Despite sump pump, I get water in my basement, so I recently had water proofing done.”

Questionnaire of Property Owners

 **Help Us Understand Your Concerns:**
These questions give us insight on the severity of stormwater issues.

1. Have you observed flooding near your home/workplace?
 Yes
 No

2. What is the level of concern regarding the impact of flooding on your property or its value?
 Very worried
 Moderately worried
 Not at all worried

3. How much does heavy rainfall and flooding impact quality of life?
 A great deal
 A little
 Not at all

4. Any additional comments about your level of concern?

5. What region of Rockford do you live in? If the concern is about your workplace, what area is the workplace in?
4. Any additional comments about your level of concern?

5. What region of Rockford do you live in? If the concern is about your workplace, what area is the workplace in?
 Northwest
 Southwest
 Central
 South
 Southeast
 Northeast

6. Email:

Source: HR Green



2. COMMUNITY ENGAGEMENT

On-Going Community Engagement Strategies

The stormwater program has actively engaged with the community during the Master Plan process and provides on-call services to residents who have questions and issues on an ongoing basis. The following strategies will promote engagement for Rockford's stormwater education and outreach work.

ONLINE PRESENCE

- Strengthen the City's online and social media presence to foster greater community engagement. Utilize active engagement on platforms such as Facebook, Instagram, and LinkedIn, with a focus on frequent updates about upcoming events and social media campaigns addressing stormwater and public works issues.

ADVERTISE WITH MULTIPLE PLATFORMS FOR COMMUNITY EVENTS

- Explore alternative methods to advertise community engagement events, both in-person and virtual. Consider using mailers or direct calls ahead of events to increase awareness and attendance. Recognize that not all residents are comfortable with online platforms, necessitating a diverse range of advertising strategies.

COLLABORATE WITH CITY COUNCIL AND NEIGHBORHOOD LEADERS

- Work closely with City Council members and leaders of neighborhood associations to extend resources directly to residents. Empower these elected officials and community leaders to aid City staff in community engagement efforts. Provide physical resources like feedback surveys, informative brochures, and talking points for dissemination during community meetings.

ESTABLISH A ROCKFORD STORMWATER COMMISSION

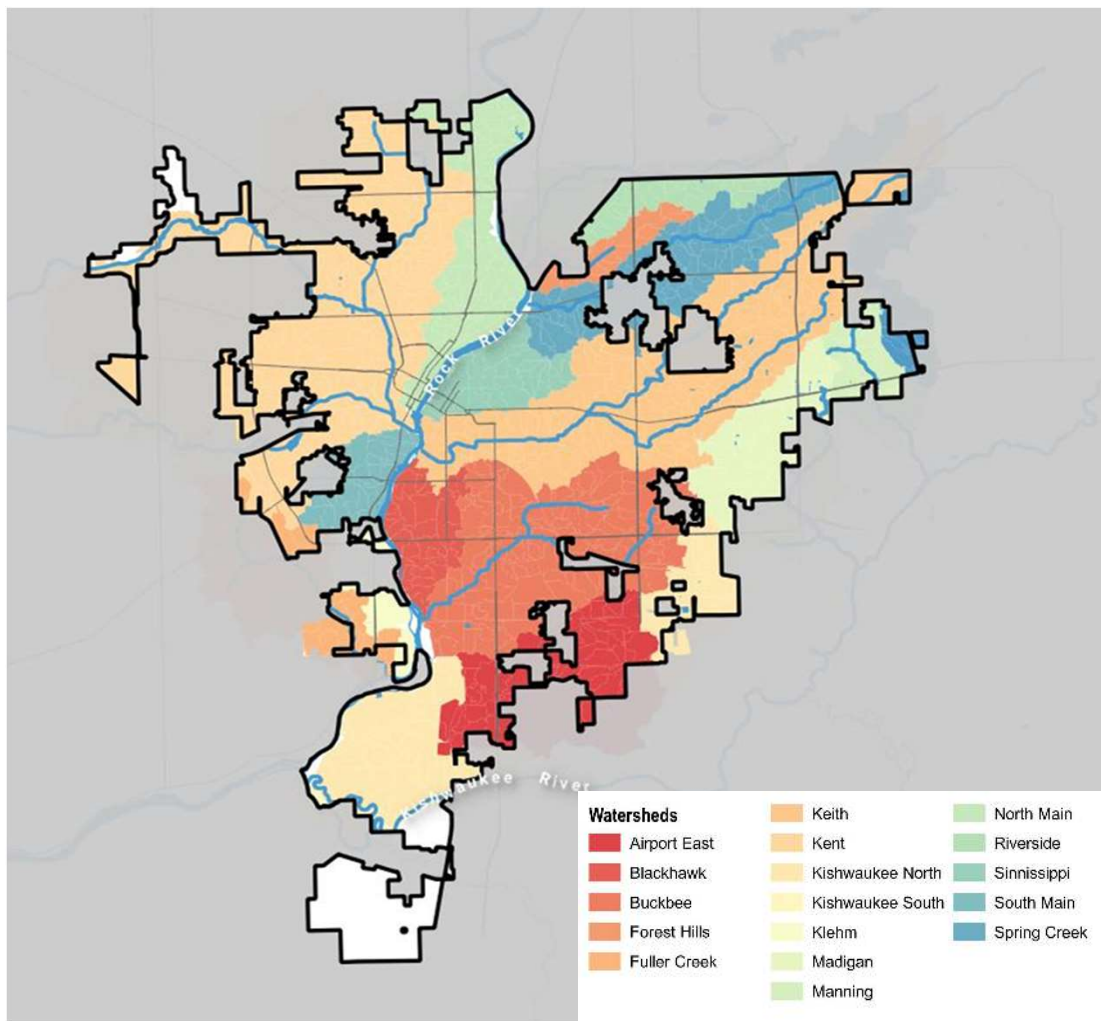
- Given the substantial time and effort required for effective community engagement, consider allocating official resources to create and evaluate stormwater-related community engagement efforts. Form a commission comprised of city staff and community leaders exclusively focused on stormwater management issues. Draw inspiration from existing commissions, such as the Traffic Commission, as a model for this strategic approach.



3. Evaluating Rockford's Drainage System

3. EVALUATING ROCKFORD'S DRAINAGE SYSTEM

Rockford Watersheds



Source: HR Green

City-Wide Drainage Network

The City of Rockford spans 65 square miles of land area. The land area can be broken up into watersheds defined by the stream to which the area drains. There are 17 distinct watersheds that have land area within Rockford. These include Keith Creek, Kent Creek, and Spring Creek.

Each watershed has a system of drainage infrastructure that guides stormwater from upland areas to receiving waters.

Within Rockford, there are:

- ▶ 579 miles of storm sewer,
- ▶ 69 miles of streams,
- ▶ 24,000 inlets,
- ▶ 1,036 outfalls,
- ▶ 500 detention basins,
- ▶ 4 dams,
- ▶ 1 levee.

Each neighborhood has its own drainage system that manages stormwater flows. The drainage system is designed to drain water away from buildings, roads, and parking areas as it travels downstream.

Major and Minor System

The drainage system can be broken into two systems. The minor system is the first path that water takes as it runs off. This is made up of storm sewers, ditches, and culverts that provide drainage for frequent and low intensity rainstorms. The major system is the backup to the minor system. It routes overflows from the minor system. It can include storm sewers and culverts, but it is much less formal. Flow is generally carried on the surface by roadways and grassed that allow flow to pass downstream without affecting buildings.



3. EVALUATING ROCKFORD'S DRAINAGE SYSTEM

Drainage Infrastructure Glossary

Street Inlet



Street inlets drain stormwater from roads.

Detention Pond



Detention ponds are depressed areas that are designed to temporarily hold water and slowly discharge waters from upstream urban areas.

Storm Sewer



Storm sewers are underground pipes that carry water from the surface to streams and rivers.

Ditch



Ditches are v-shaped or trapezoidal drainage channels that carry waters from relatively small areas before they reach streams and rivers.

Outfall



Outfalls are the discharge points of storm sewers. They connect the underground system with streams and river.

Culvert



Culverts are structures under roadways that pass water underground from an open channel to another drainageway. They can convey small ditches or large streams.

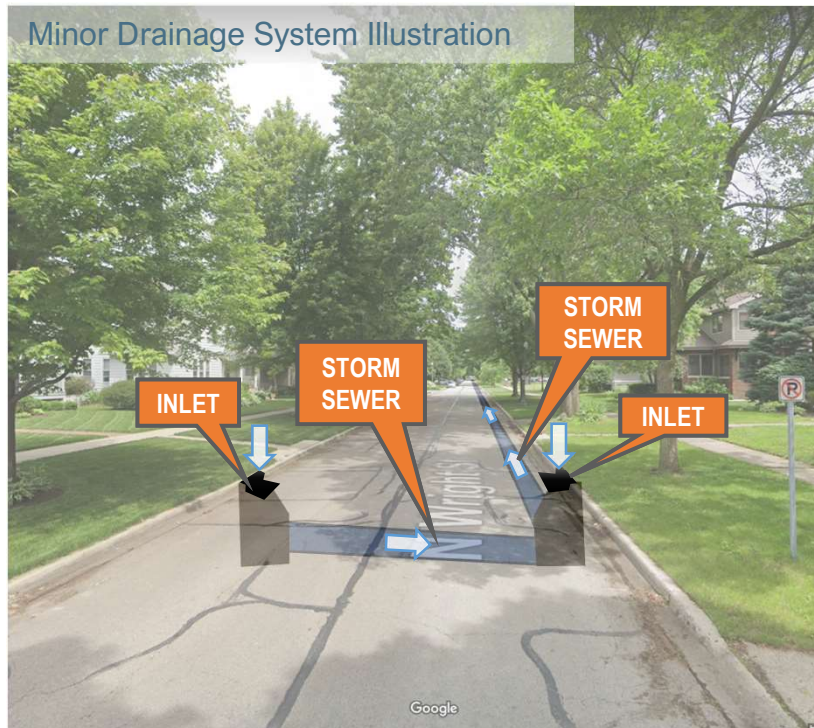
3. EVALUATING ROCKFORD'S DRAINAGE SYSTEM

Minor Drainage System

The minor drainage system drains stormwater from streets and parking areas. The streetview illustration of a typical urban storm system depicts the flow of water through the minor system.

The minor stormwater system conveys flows from frequent and low intensity rain storms. Rain water flows into an underground system via inlets and catch basins. Roadside ditches are also considered part of the minor drainage system.

For all **new** developments in Rockford, the minor system must have capacity to contain the **10-Year storm event** in the underground drainage network.

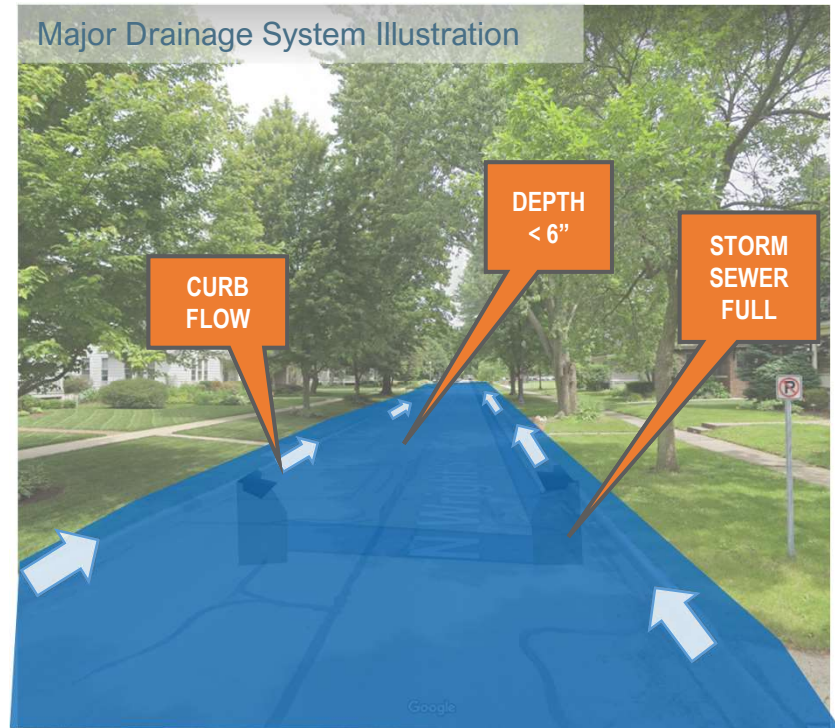


Major Drainage System

The major drainage system conveys flows from less frequent and larger rain events. It acts as a backup system for scenarios when the minor drainage system cannot handle flows. It can take the form of roadways, ditches, and side yard swales.

For all **new** developments in Rockford, the minor system must meet the following standards:

The **100-Year storm event** must be conveyed without touching homes and buildings. Streets can convey the 100-year flows, but the water depth cannot exceed 6" at the high point of the road.



3. EVALUATING ROCKFORD'S DRAINAGE SYSTEM

Mapping Flood Risk Areas

Rockford's public works department is dedicated to providing drainage service to all properties in the City. The City generated high-resolution maps of its urban drainage patterns from the latest available topography.

These maps allow the City to get a block-by-block understanding of how drainage flows through areas of the city without having to access old engineering plans or perform detailed studies of each area.

Typically, older neighborhoods have small minor drainage systems and undefined major drainage systems because they were developed before the current ordinance was put into practice. The maps were used as the first step in identifying areas with substandard drainage service. All buildings that are within 5 feet of a major overland flow route or a ponding area were mapped. The City also mapped all previous drainage complaints and observations that are on record. Finally, the areas with the most complaints and buildings with impacts from overland flow or ponding were circled and reviewed by the City.

Existing Drainage Problem Area Map



3. EVALUATING ROCKFORD'S DRAINAGE SYSTEM

Reviewing Major Historical Floods

Rockford has experienced significant flooding in the last twenty years. The most noteworthy are listed on this page, but flash flooding occurs almost every year. Flooding has major impacts to quality of life in Rockford.

Floods have caused extensive damage to homes and businesses in Rockford. These have produced life-threatening situations and numerous emergency water rescues.

These storms all exceed the capacity of the minor drainage system, which at most can handle a 10-year storm. Roads, parking areas, businesses, and homes had to rely on the major system to drain waters away safely. Dozens of areas lacked adequate major system facilities and flooded because of the severity of the storm. Previously flooded areas were noted and added to the list of drainage issues for the purpose of identifying flood prone areas in this Master Plan.



Source: Rockford Register Star

Summary of Recent Flood Events

2006 **Torrential Downpour on Labor Day**

- ▶ Intense rainfall at rates as high as 3 inches per hour
- ▶ Keith Creek overtopped banks and flood water inundated nearby homes and businesses
- ▶ The force of water caused basements to collapse
- ▶ Cars floated in the streets and residents were rescued by boats

2007 **Widespread Flooding on Southeast Side**

- ▶ Rainfall of 5 to 7 inches lead to flash flooding
- ▶ Widespread flooding of homes and businesses
- ▶ Keith Creek, the southeast side, and Cherry Valley were hit hardest by the flooding

2010 **Keith Creek Floods Again**

- ▶ Significant flooding reported near Keith Creek in the Churchill Park neighborhood

2018 **Flash Flood Inundates Rockford**

- ▶ 3 to 5 inches of rain fell in 4 hours
- ▶ Significant flash flooding with parts of numerous roads covered in several feet of water
- ▶ 15 water rescues from vehicles
- ▶ Multiple homes and buildings with flooding



4. Planning Drainage Improvements

4. PLANNING DRAINAGE IMPROVEMENTS

Designing System Retrofits

The City has many areas that do not meet current design standards since they were developed before the standards were in place. In order to improve drainage and not cause issues for other areas, three main elements are incorporated into retrofits of drainage systems.

- ▶ **Minor Drainage – Storm Sewers and Ditches**
- ▶ **Major Drainage - Overflow Routing**
- ▶ **Storage Basins**

Minor drainage improvements can be made in all retrofit scenarios. Providing new storm systems or upsizing drainage components to the 10-year service level is an achievable goal in almost all situations.

Major drainage improvements are more challenging because the topography of the area is already defined and cannot easily be modified to provide safe overflow routing. Ideally, a safe overland flow route can be graded to provide acceptable overflow conditions. But this process can require buy-outs of homes that are in the natural overflow path. Underground systems can also be sized to convey 100-year flows, but cost and available space can be a limiting factor.

Storage basins slow water down and store it temporarily, to limit the rate of water that drains downstream. This provides two benefits to drainage systems: managing water from upsized systems; and increasing minor or major system capacity by adding system volume.

DESIGN CRITERIA

- ✓ Provide Minor Drainage System
- ✓ Provide Major Drainage System
- ✓ Protect Buildings/Structures
- ✓ Do Not Worsen Flooding Elsewhere
- ✓ Minimize Street Ponding

LIMITING FACTORS

- Site topography may not accommodate overflows
- Property buy-outs may be required for overflows
- Underground routing of overflows is costly
- Lack of open space to create storage necessary for project
- Costs of implementing standards do not align with priority to provide equitable service across City

Areas with existing depressional areas that will be drained by proposed improvements typically require offsetting storage. When the volume is drained from that area it can increase flooding downstream. So constructing engineered storage basins becomes a critical part of improving the drainage system in many cases.

Due to the patterns of development and the highly urbanized nature of Rockford, many areas lack open space that could be used to create storage basins. This along with lack of suitable overland flowpaths are the major barriers to implementing the current design standards to previously developed areas.



4. PLANNING DRAINAGE IMPROVEMENTS

Stormwater Modeling

The design of stormwater improvements requires an analysis of the system before and after construction to confirm it meets the design criteria. The analysis is generally performed with stormwater modeling software.

Modeling provides detailed information not available from the drainage pattern mapping exhibits. This includes flood depths, flow rates, and performance of existing infrastructure.

For areas that were considered most severe during the evaluation of the existing drainage system, these additional parameters are computed. Models allow engineers to complete critical tasks during the design process.

- Compute system flow rates
- Analyze major and minor drainage system performance
- Review downstream and upstream system impacts
- Map flood depth and extent
- Identify impacted homes and structures
- Size improvements appropriately
- Confirm design meets standards

With a standard approach to modeling improvements, the cost and benefit of each project can be compared.

Stormwater Model Results Map



4. PLANNING DRAINAGE IMPROVEMENTS

Stormwater Program Priorities

The City has specific priorities for its stormwater management investments, so that projects can be evaluated and implemented in line with those priorities.

PROVIDE EQUITABLE SERVICE

- Areas without a drainage system are prioritized over areas that already have a drainage systems
- Provide improvements across city rather than higher protection in one or two areas
- Prioritize improvements in areas with disproportional populations of people with fewer resources to recover from flood damages. Vulnerability of those impacted is measured by the poverty rate and employment rate in project areas.

REDUCE RISK OF LOSS

- Projects that reduce structural flood damages to homes or buildings are prioritized over projects that reduce yard, street, or nuisance flooding.
- Multiple residents have attested to home damage, extensive financial resource expenditures on damage repair and flood readiness systems, and continual anxiety and lower quality of life because of past flood events.

MAXIMIZE FINANCIAL RESOURCES

- Grant or financial incentivized projects are prioritized over projects without such incentives
- Integrated planning with City and related entities' Capital Improvement Programs reduces costs by combining multiple improvements into one project.
- Cost effectiveness is measured by the cost to provide drainage service per property or cost to reduce structural flooding risk per building



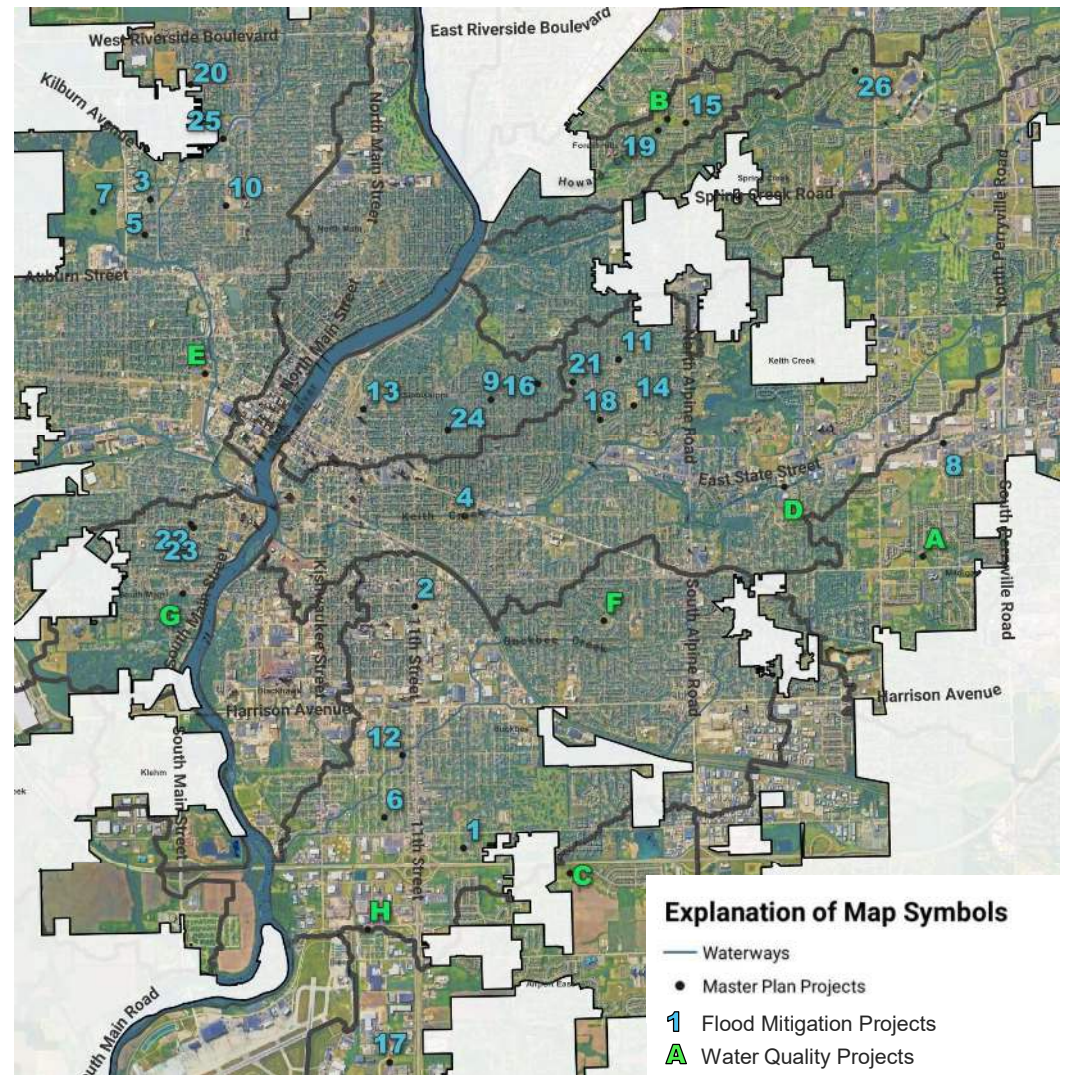
4. PLANNING DRAINAGE IMPROVEMENTS

Projects Included in this Plan

The City prioritizes improvements in its Capital Improvement Program annually. Areas with severe flooding and without a suitable project to reduce flood risk were modeled and evaluated. Dozens of projects were conceptualized within Rockford as a part of this analysis. The projects were reviewed and compared based on their cost effectiveness, constructability, potential for grant funding, effectiveness at reducing risk of flood damage to buildings, and the neighborhood's vulnerability to recover from flood damages.

The table on the following page lists all projects that were conceptualized during this Master Plan, their costs, and an estimated cost benefit ratio if applicable. Benefits were estimated based on number of homes or major roadways with reduced flood risk. Detailed modeling, survey of structures, damage estimation, and calculation of costs was not completed for this study and all figures are presented as a planning level estimate based on the information available and data generated within the scope of this project.

Stormwater Project Locations



4. PLANNING DRAINAGE IMPROVEMENTS

Projects with numbers are ranked by the estimated cost-benefit ratio based on the number of major roadways with reduced flooding and the number of homes/buildings with reduced flood risk. Projects with letters are primarily intended to improve water quality, so cost-ratios were not estimated.

The table below details all projects from the Master Plan and previous studies.

| Project No. | Region | Watershed | Project | Project Cost | Arterial Ponding Reduced | Road Benefit | Estimated Buildings w/ Reduced Flood Risk | Socioeconomic Factor | Building Benefit Amount | Cost Benefit Ratio |
|-------------|-----------|--------------|--|---------------|--------------------------|--------------|---|----------------------|-------------------------|--------------------|
| 1 | Southeast | Buckbee | Ed Vera Drive Overflow | \$ 23,400 | | | 3 | 1.0 | \$ 450,000.00 | 19.2 |
| 2 | Southeast | Buckbee | 11th Street and 21st Park Storage | \$ 1,051,440 | | | 30 | 2.2 | \$ 10,086,206.90 | 9.6 |
| 3 | Northwest | North Kent | Garfield and Belden Storm Sewer | \$ 596,700 | | | 15 | 2.6 | \$ 5,741,379.31 | 9.6 |
| 4 | East | Keith | Keith Creek Flood Mitigation | \$ 15,233,400 | | | 220 | 2.2 | \$ 71,689,655.17 | 4.7 |
| | | | Churchill Park Channel Improvements | \$ 4,001,400 | | | | | | |
| | | | Dahlquist Compensatory Storage | \$ 8,424,000 | | | | | | |
| | | | 9th St Culvert | \$ 1,872,000 | | | | | | |
| | | | 11th St Culvert | \$ 936,000 | | | | | | |
| 5 | Northwest | North Kent | Blackstone and Rockwell Storm Sewer | \$ 356,850 | | | 3 | 2.6 | \$ 1,148,275.86 | 3.2 |
| 6 | Southeast | Buckbee | Roosevelt and Sawyer Storm Sewer | \$ 1,365,000 | 1 | 150000 | 12 | 1.4 | \$ 2,482,758.62 | 1.9 |
| 7 | Northwest | North Kent | North Fork Kent Creek Reservoir | \$ 23,400,000 | | | 100 | 2.6 | \$ 38,275,862.07 | 1.6 |
| 8 | East | Madigan | State and Trainer Storm Sewer | \$ 115,830 | 1 | 150000 | 0 | 1.0 | \$ - | 1.3 |
| 9 | East | Sinnissippi | Sinnissippi Neighborhood Buy-Outs and Storage | \$ 5,028,972 | | | 35 | 1.2 | \$ 6,336,206.90 | 1.3 |
| | | | Rome and Greenwood | \$ 2,761,200 | | | 19 | 1.2 | \$ 3,439,655.17 | |
| | | | Bohm and Smith | \$ 871,260 | | | 7 | 1.2 | \$ 1,260,000.00 | |
| | | | Woodlane and Rural | \$ 1,396,512 | | | 9 | 1.2 | \$ 1,629,310.34 | |
| 10 | Northwest | North Kent | Rockton Ave Storage | \$ 3,847,000 | | | 9 | 2.6 | \$ 3,444,827.59 | 0.9 |
| 11 | East | Keith | Arden Court Basin and Storm Sewer - Alt A | \$ 3,112,200 | | | 16 | 1.0 | \$ 2,400,000.00 | 0.8 |
| 12 | Southeast | Buckbee | Buckbee Channel Replacement | \$ 25,740,000 | | | 60 | 2.2 | \$ 20,172,413.79 | 0.8 |
| 13 | East | Sinnissippi | Whitman Interchange and Greenwood Storm Sewer | \$ 3,744,390 | 1 | 150000 | 15 | 1.2 | \$ 2,700,000.00 | 0.8 |
| 14 | East | Keith | Arden Court Basin and Storm Sewer - Alt B | \$ 3,789,240 | | | 16 | 1.0 | \$ 2,400,000.00 | 0.6 |
| 15 | Northeast | Howard | Alpine and Pepper Storm Sewer | \$ 832,650 | | | 3 | 1.1 | \$ 481,034.48 | 0.6 |
| 16 | East | Sinnissippi | Woodlane and Rural Underground Storage | \$ 2,265,120 | | | 8 | 1.2 | \$ 1,448,275.86 | 0.6 |
| 17 | Southeast | Airport | Blackhawk Road Channel and Culvert Replacement | \$ 1,630,645 | | | 5 | 1.0 | \$ 750,000.00 | 0.5 |
| 18 | East | Keith | Fairview Boulevard Storm Sewer | \$ 1,526,070 | | | 5 | 1.0 | \$ 750,000.00 | 0.5 |
| 19 | Northeast | Howard | Tallwood Avenue Box Culvert | \$ 624,000 | | | 2 | 1.1 | \$ 320,689.66 | 0.5 |
| 20 | Northwest | North Kent | Halsted Drainage Improvements | \$ 1,271,400 | 1 | 150000 | 3 | 1.0 | \$ 450,000.00 | 0.5 |
| 21 | East | Keith | Roland Ave Storm Sewer | \$ 1,510,314 | | | 3 | 1.0 | \$ 450,000.00 | 0.3 |
| 22 | Southwest | South Main | Montague and West Storm Sewer | \$ 735,150 | 1 | 150000 | 0 | 2.2 | \$ - | 0.2 |
| 23 | Southwest | South Main | Montague and West Storage | \$ 653,250 | 1 | 150000 | 0 | 2.2 | \$ - | 0.2 |
| 24 | East | Sinnissippi | Gardner and Prospect Buy-Outs and Storage | \$ 1,359,072 | | | 2 | 1.0 | \$ 300,000.00 | 0.2 |
| 25 | Northwest | North Kent | North Fork Kent Creek Tributary Channel | \$ 12,074,400 | | | 7 | 2.0 | \$ 2,100,000.00 | 0.2 |
| 26 | Northeast | Spring Creek | Haddon and Lansdale Storm Sewer | \$ 404,820 | | | 0 | 1.1 | \$ - | 0.0 |
| A | East | Madigan | Madigan Creek Stabilization - Mulford to Trainer | \$ 2,496,000 | | | | | | * |
| B | Northeast | Howard | Howard Creek Stabilization - Gambino Park | \$ 499,200 | | | | | | * |
| C | Southeast | Airport | Scarlet Oak Drive Detention Expansion | \$ 1,271,400 | | | | | | * |
| D | East | Keith | Javelin Drive In-Line Detention | \$ 1,624,740 | | | | | | * |
| E | Northwest | North Kent | West State Police Station Naturalized Detention | \$ 66,300 | | | | | | * |
| F | Southeast | Buckbee | Harmon Park Naturalized Detention | \$ 101,400 | | | | | | * |
| G | Southwest | South Main | Marchesano Drive Naturalized Detention | \$ 18,720 | | | | | | * |
| H | Southeast | Buckbee | 39th Avenue Naturalized Detention | \$ 46,800 | | | | | | * |



4. PLANNING DRAINAGE IMPROVEMENTS

Study Considerations

Planned improvements presented in this study are based on modeling and simplified methods for estimating project benefits. The project areas were not surveyed in detail and modeling was performed in a manner consistent with master planning studies. **Referencing the graphic on this page, this Master Plan is a part of the feasibility study phase of the overall project life-cycle.** The intent is to provide planning level cost estimates and benefits of capital improvement projects. Additional analysis should be performed during preliminary design to confirm the feasibility of constructing improvements. Changes to conceptual improvement configurations such as storm sewer layout, storage locations, and overland flow routes may be required to meet performance goals of the City and feasibly construct the stormwater features.

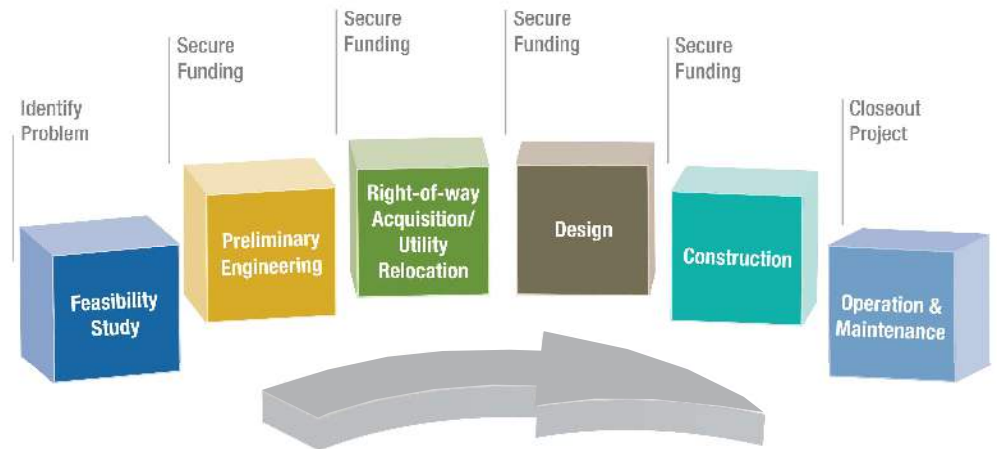
Costs were estimated using the quantities of major construction components, such as storm sewer length or storage volumes. Unit costs were generalized to cover related items that make up the entirety of the work that could be attributed to these base items. Construction contingencies, engineering, and legal were assumed as percentages of total project cost. This method gives a ballpark estimate of cost to complete a project in each area but were not refined to account for specific breakdowns of all construction line items and any economies of scale. Costs may change significantly as the design and implementation process progresses. Costs are in 2024 dollars.

Improvements included in this plan meet a minimum of 25-year storm protection. Certain areas were more easily configurable to provide higher protection levels. The City has yet to do an evaluation of the design criteria for their flood protection projects that includes detailed analysis of costs and benefits of differing levels of protection. Such analysis may change the scope and extent of proposed projects.

Some locations require acquisition of property not owned by the City. Locations shown on project maps may not be available or desirable. Relocation of these storage facilities may occur during the design phase as the project moves through phases of implementation.

Upstream and downstream impacts of project implementation were modeled in a manner consistent with master planning studies. Detailed modeling and permitting will be required for many, if not all, projects included in this Master Plan.

Flood Damage Reduction Project Lifecycle



5. Stormwater Program Cost of Service

5. COST OF SERVICE

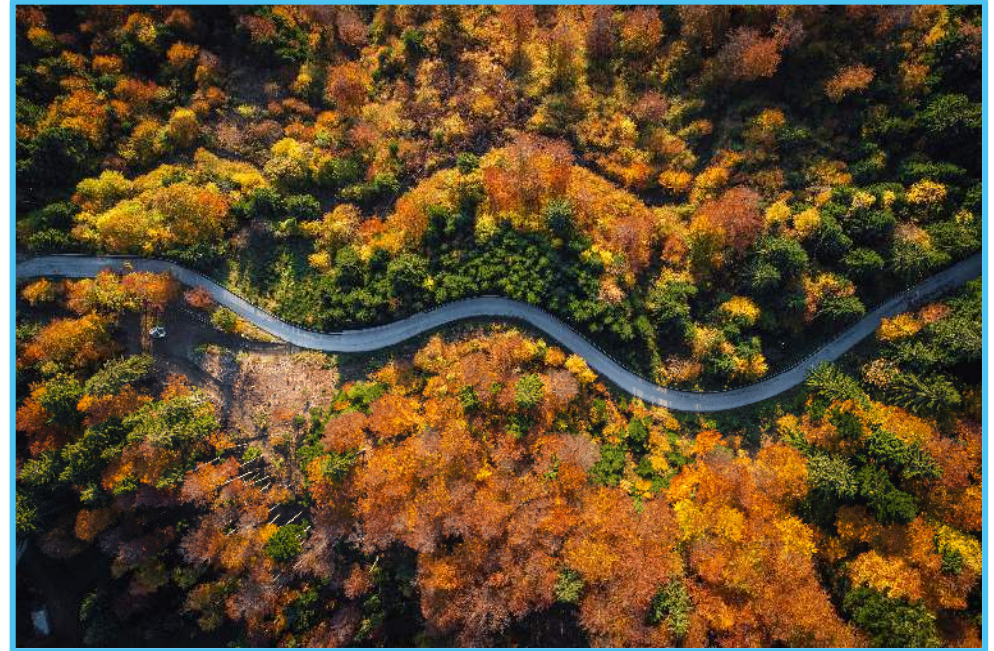
Operations and Maintenance

The City manages a large network of infrastructure that represents the drainage system. Management activities related to operations and maintenance include the following.

- ▶ Inlet Cleaning
- ▶ Sewer Repair
- ▶ Bridge, Dam, Ditch Maintenance
- ▶ Bank Stabilization

In order to complete tasks related to operations and maintenance, the City employs dedicated staff and owns and operates equipment. Equipment utilized by the stormwater program and shared with the public works department includes backhoes, wheel loaders, street sweepers, skid steer loaders, aerial bucket trucks, dump trucks, storm sewer vacuum truck, and trailers.

Expenditures for the last 6 years were reviewed to determine average expenditures as shown in the table on this page.



Average Operations and Maintenance Expenditures

| Item | Expenditure |
|---|---------------|
| Inlet Cleaning/Sewer Repair | \$700K |
| Bridge, Dam, Ditch Maintenance | \$150K |
| Bank Stabilization | \$450K |
| Staff | \$450K |
| Total Operations and Maintenance | \$1.8M |



5. COST OF SERVICE

MS4 Program Requirements

The City maintains a permit with the Illinois Environmental Protection Agency to discharge separate storm sewer flows. It is referred to as the MS4 permit, which stands for municipal separate storm sewer system. The permit requires detailed documentation of the City's efforts to maintain water quality throughout its watersheds. There are a variety of activities related to the MS4 permit that require staff time and additional equipment and services.

Rockford performs water quality tests within several watersheds to document the pollutants that are present within its storm sewers and waterways. The test results and recommendations are summarized by an engineering consultant and included in the annual MS4 report.

The City sweeps streets in the fall each year to reduce the amount of road debris in downstream waters. Roads accumulate leaves and sticks from yards, which are phosphorus rich materials that can contribute to stream impairments and algal growth. Rocks, sediment, and other inorganic particulates are also reduced with street sweeping.

The City inspects all its outfalls each year to check for illicit connections to the storm system. The staff also inspects a certain portion of detention basins each year. These annual undertakings are overseen and performed by City staff. The level of effort is estimated in the MS4 annual costs table on this page.

Average Annual MS4 Program Expenditures

| Item | Expenditure |
|--------------------------|---------------|
| Sampling and Testing | \$50K |
| Street Sweeping | \$600K |
| Annual Reporting | \$50K |
| Staff | \$100K |
| Total MS4 Program | \$0.8M |



5. COST OF SERVICE

Past Stormwater Capital Improvements

The City oversees the design and construction of stormwater projects that replace aging components and improve system capacity. The recently completed projects are shown on the map. The projects vary in size and complexity. Projects shown in orange are multi-year large scale investments in areas of high need. Projects in yellow are typically smaller and less costly. Capital expenditures vary from year to year, but the average amount is \$4 million per year. This spending includes drainage infrastructure for roadway projects, which accounts for \$2.8 million of the annual capital improvement spending.

Recent Capital Improvement Projects

| ID | Name |
|----|--|
| 1 | Keith Creek Flood Mitigation |
| 2 | Harmon Park Storage Basin and Drainage Improvements |
| 3 | Alpine Dam Repairs |
| 4 | Gregory Heights Drainage Improvements |
| 5 | Logistics Drive Extension and Drainage Improvements |
| 6 | Seminary Street Over Keith Creek Bridge Reconstruction |
| 7 | Yale Drive Culvert Replacement |
| 8 | Ed Vera Storm Sewer Replacement |
| 9 | Citadel Drive Drainage Improvements |
| 10 | Rural and Parkwood Storm Sewer |



5. COST OF SERVICE

Stormwater Program Annual Expenditures Today

In total, the City spends an average of \$6.6 million on their stormwater program. This funding is taken from several sources. Most of the funding, around \$3 million, comes from the General Fund. This is money that is shared between engineering and other city departments. An additional \$1 million comes from the infrastructure sales tax. On average \$1.2 million from MFT funding is spent by the street department as either maintenance activities or drainage portions of roadway projects. Finally, outside sources provide \$1.4 million on average, which is typically federal or state grants that pay for improvements on their roadways or contribute grant moneys to local projects.

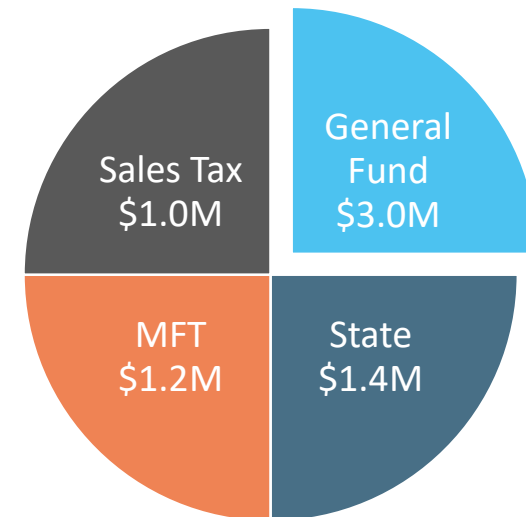
Alpine Dam Improvements



Total Average Annual Expenditures

| Item | Average Annual Expenditure |
|------------------------------|----------------------------|
| Operations and Maintenance | \$1.8M |
| MS4 Program | \$0.8M |
| Capital Improvements | \$4.0M* |
| Total Cost of Service | \$6.6M |

* Current budgeted capital improvement funds for stormwater specific projects is \$500,000 plus \$2.8 million for roadway drainage replacements.



Rockford Stormwater Funding Sources



5. COST OF SERVICE

Proposed Program Expenditures

The City has a lengthy list of capital needs, and the current budget would not provide adequate funding for funding roadway drainage projects, future capital needs not identified in this plan, and constructing the conceptualized projects within the next 30 years. This cycle forms the basis of the recommendations for additional funding needs. The following table provides a summary of the additional spending proposed as a part of this plan over the next 30 years. The budget shortfall is \$3.2M annually with this plan. Additional funding sources can be explored to reduce the impact to property owners and residents.

Cost of Service Summary

| Item | Current Spending | Identified Needs | Proposed Spending | Potential Grant/Loan Funding | Proposed Budget |
|------------------------------|------------------|------------------|-------------------|------------------------------|-----------------|
| Operations and Maintenance | \$1.8M | | \$1.8M | | \$1.8M |
| MS4 Program | \$0.8M | | \$0.8M | | \$0.8M |
| Capital Improvements: | | | | | |
| Roadway Infrastructure | \$2.8M | | \$2.8M | | \$2.8M |
| Stormwater Projects | \$0.5M | \$3.7M | \$3.7M | \$1.0M | \$2.7M |
| Total Cost of Service | \$5.9M | \$3.7M | \$9.1M | \$1.0M | \$8.1M |



5. COST OF SERVICE

Potential Grant and Loan Funding

The City has a lengthy list of capital needs. Active pursuit of grant and loan funding will be a critical component of minimizing the revenue sourced from tax-payers and property owners. Grants and loans applicable to the stormwater program goals are listed below and a 30-year estimate of funding amounts is assigned for each source. Available grants and loans could reduce the budget by \$1.0 million annually over the next 30 years if the City can leverage programs effectively. Stormwater utility fees or additional taxes are the most common sources of additional revenue to pay for the program.

A grant funding informational table is included in Appendix D: Technical Report that provides grant eligibility, timing, and program requirements for each of the grants listed on this page.

Potential Grant and Loan Funds – Next 30 Years

| Item | Potential 30-Year Funding |
|--------------------------------|---------------------------|
| TIF | \$4.0M |
| GIGO Grants | \$7.5M |
| Section 319 Grants | \$4.0M |
| BRIC Grants | \$5.0M |
| OSLAD Grants | \$2.0M |
| FEMA Buy-Out Grants | \$5.0M |
| IDNR Buy-Out Grants | \$3.0M |
| IEPA SRF Principal Forgiveness | \$2.25M |
| IEPA SRF Loans | \$15M |



Appendices

A. MS4 Permit



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

217/782-0610

May 5, 2021

City of Rockford
425 East State Street
Rockford, Illinois 61104

Re: City of Rockford Municipal Separate Storm Sewer System
NPDES Permit No. ILS000001
Bureau ID W2010300007
Modification of NPDES Permit (Without Public Notice)

Gentlemen:

The Illinois Environmental Protection Agency has modified of the above-referenced NPDES Permit. Our final determination is to modify the Permit as follows:

Part V.D.1 on page 12 of the permit was revised.

Enclosed is a copy of the modified Permit. Because the changes made in the Permit were minor, no formal Public Notice of the modification will be issued.

Should you have questions concerning the Permit, please contact Jaime Rabins at 217/782-0610.

Sincerely,

A handwritten signature in black ink, appearing to read "Brant D. Fleming".

Brant D. Fleming, P.E.
Manager, Municipal Unit, Permit Section
Division of Water Pollution Control

BDF:JAR:21050401

Attachments: Modified Permit

cc: Records Unit
Des Plaines FOS
Compliance Assurance Section
Billing
Brad.Holcomb@rockfordil.gov

NPDES Permit No. ILS000001

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

P.O. Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Modified (NPDES) Permit

Expiration Date: April 30, 2026

Issue Date: April 13, 2021

Effective Date: May 1, 2021

Modification Date: May 5, 2021

Name and Address of Discharger:

City of Rockford
425 East State Street
Rockford, Illinois 61104

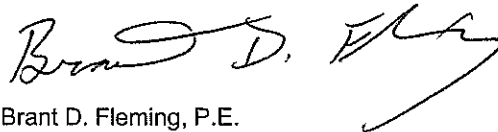
Name and Address of Facility:

City of Rockford
Storm Sewer Outfalls
(Winnebago County)

Receiving Water(s): Rock River, Kishwaukee River, Keith Creek, Kent Creek, Spring Creek and unnamed tributaries within the corporate boundaries of the City of Rockford.

In compliance with the provisions of the Illinois Environmental Protection Act, Subtitle C, Chapter I, and the Clean Water Act (CWA), 33 U.S.C. 1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act", the above-named Permittee is authorized to discharge, in accordance with the provisions set forth in Parts I-VII and standard conditions herein; from all portions of the City of Rockford's Municipal Separate Storm Sewer System (MS4) owned or operated by Permittee listed above, to Waters of the U.S.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the Permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.



Brant D. Fleming, P.E.
Manager, Municipal Unit, Permit Section
Division of Water Pollution Control

BDF:JAR:21050401

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Part VII. DEFINITIONS

PART I. DISCHARGES AUTHORIZED UNDER THIS PERMIT

- A. Permit Area. This permit covers all areas within the corporate boundary of the City of Rockford served by, or otherwise contributing to discharges from, municipal separate storm sewers owned or operated by the Permittee.
- B. Authorized Discharges. This permit authorizes all existing or new storm water point source discharges to waters of the U.S. from the Municipal Separate Storm Sewer System (MS4). This permit also authorizes the discharge of storm water commingled with flows contributed by process wastewater, non-process wastewater, or storm water associated with industrial activity provided such discharges are authorized under separate NPDES permits.
- C. Limitations on Coverage. The following discharges, whether discharged separately or commingled with municipal storm water, are not authorized by this permit:
1. *Non-Storm Water and Industrial Storm Water*: discharges of non-storm water or storm water associated with industrial activity except where such discharges are:
 - a. authorized and in compliance with a separate NPDES permit;
 - b. identified by and in compliance with Part II.A.6.a of this permit; or
 - c. a bypass in compliance with 40 CFR 122.41(m).

PART II. DISCHARGE LIMITATIONS AND STORM WATER MANAGEMENT PROGRAMS

The Permittee is required to limit, to the maximum extent practicable (MEP), the discharge of pollutants from the MS4, to protect water quality and to satisfy the appropriate water quality requirements of the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1) and the Clean Water Act. This shall include but not be limited to, compliance with the discharge limitations in Part II.A.

- A. Discharge Limitations The permittee must design, select, install, and implement storm water controls to comply with the following discharge limitations:
1. *Structural Controls*: The Permittee shall operate and maintain any storm water structural controls for which they are the owner or operator, in a manner so as to reduce the discharge of pollutants to the maximum extent possible.

The Permittee shall on an ongoing basis:

 - a. Conduct site visits and gather data for basins. Data collected and recorded shall include but not be limited to; estimates of the amount of sediments trapped in detention and retention basins, types of inlet structures, types of outlet structures and water depth at the outlet structure during dry weather as well as storm situations. This information shall be compiled into a database that will allow for analysis of different basin configurations and types of outlet structures to determine if certain basin design elements should be used for future basins, and/or used to improve existing basin configurations.
 - b. Monitor all basins on a periodic basis, including those not owned by the City of Rockford, to determine if present maintenance efforts need to be improved. Maintain a cleaning and maintenance schedule for the retention basins maintained by the Permittee. The basin cleaning and maintenance schedule shall be revised at least annually. The city shall work with owners of basins on a joint effort to improve basin maintenance.
 - c. Continue its existing maintenance program by periodic inspection and removal of floatables from the MS4 to the MEP.
 - d. Continue to identify stream channels within the Permittee's jurisdiction experiencing horizontal and/or vertical erosion, and develop a program to mitigate and stabilize excessive erosion conditions for Permittee owned channels, reduce sediment generation and the discharge of sediments and/or pollutants into downstream areas and/or into the municipal storm sewer system. The Permittee shall continue to work with property owners on the maintenance of privately owned portions of the stream channels.
 2. *Erosion and Sedimentation Control: Construction Site Runoff and Post Construction Storm Water Management Program*:
 - a. *Construction Site Runoff*: The Permittee shall implement a program to reduce the discharge of pollutants from construction sites.

The Permittee shall:

 - i. Continue to enforce ILR10 requirements as written.
 - ii. Continue to review erosion control plans and required Storm Water Pollution Prevention Plans (SWPPP) for new construction.
 - iii. Continue its inspection program of reviewing construction site conditions and records.

- iv. Continue to require erosion control plans to be sufficiently detailed over the life of the development so that erosion and sedimentation are minimized, and to allow inspectors to be aware of the types of control measures that should be in place at various times during development. Regulated construction sites must have a storm water pollution prevention plan that meets the requirements of Part IV of NPDES Permit No. ILR10 including management practices, controls and other provisions at least as protective as the requirements contained in the current version of the Illinois Urban Manual <https://illinoisurbanmanual.org/> or as amended including green infrastructure techniques where appropriate and practicable. Linear projects may adopt measures contained in the Illinois Department of Transportation Erosion and Sediment Control Field Guide for Construction Inspections.
 - v. Continue to require maintenance of appropriate structural and non structural best management practices to reduce pollutants discharged to the Municipal Separate Storm Sewer System during the time construction is underway.
 - vi. Review for approval, BMPs not included in the manuals specified in II.A.2.iv, at the contractor's request and submit such approvals to the Illinois Environmental Protection Agency.
 - vii. Use the Illinois Urban Manual and IDOT Erosion and Sediment Field Guide For Construction Inspections as field guides for inspection of construction site BMPs to complement the City's existing inspection checklist, establish minimum requirements for regular inspections of active and inactive construction sites subject to the terms of this permit and continue to inspect citizen complaints.
 - viii. Provide appropriate education and training measures for developers, development engineers and construction site operators, and continue to operate a hotline for citizen reporting of construction site erosion and sediment control complaints.
 - ix. Notify appropriate building permit applicants of their potential responsibilities under the NPDES permitting program for construction site runoff.
- b. **Post Construction Storm Water Management Program - Areas of New Development and Redevelopment:** The Permittee shall utilize a comprehensive master planning process to develop, implement, and enforce controls to minimize the discharge of pollutants from areas of development and redevelopment after construction is completed.

The Permittee shall:

- i. Use a master planning approach to identify storm water management issues on a watershed scale.
 - ii. Continue to require all regulated construction sites to have post construction management that meets or exceeds the requirements of Section IV(D)(2)(b) of NPDES Permit No. ILR10 including management practices, controls and other provisions at least as protective as the requirements contained in the current version of the Illinois Urban Manual <https://illinoisurbanmanual.org/>.
 - iii. Require developers to create and commit to long-term maintenance of privately owned permanent structural BMP's.
 - iv. Monitor facilities during dry weather, conduct field surveys to assess potential improvements to existing facilities, work with private owners of existing facilities and neighborhood associations to assess performance and recommend improvements.
3. **Roadways:** The Permittee shall operate and maintain public streets, roads, and highways under its jurisdiction in a manner so as to minimize the discharge of pollutants (including those related to deicing or sanding activities) to the MEP.

The Permittee shall:

- a. Continue its existing street sweeping and inlet cleaning programs, which include proper disposal of the street sweepings.
 - b. Evaluate different street sweeping and inlet cleaning frequencies to determine appropriate scheduling for such activities.
 - c. Store and cover deicing chemicals and review its current deicing practices, implementing changes where feasible to minimize the discharge of pollutants to the MS4.
 - d. Review its current street design, construction, and maintenance requirements in environmentally sensitive areas, such as those adjacent to streams, wetlands, other natural areas, and floodplains so as to incorporate BMPs and low-impact development designs to the MEP.
4. **Flood Control:** The Permittee shall ensure any flood management projects it undertakes assesses the impacts on the water quality of receiving waters.

The Permittee shall:

- a. At least once during the term of this permit, evaluate the feasibility of retrofitting the city owned existing flood control devices (dams, levees, basins) to provide additional pollutant removal from storm water quality controls.
 - b. Coordinate with state and local agencies in planning and implementing regional flood control and water quality improvement projects.
 - c. Investigate ways that both the permittee and the public can reduce nuisance flooding.
5. *Pesticide, Herbicide, and Fertilizer Application*: The Permittee shall implement controls to reduce the pollutants in discharges from the Permittee's MS4 associated with the application of pesticides, herbicides, and fertilizers (PHF).

The Permittee shall:

- a. Adhere to PHF label instructions for PHF application on public properties, including right-of-ways. At least once during the term of this permit, the Permittee will evaluate the reduction of PHF usage to determine the effectiveness and feasibility of application rates below the manufacturers recommended rates as described on labels.
 - b. Include PHF education in its storm water public education and outreach programming and promote the proper use, handling and storage of PHFs.
 - c. Cooperate with Illinois EPA and the Rock River Water Reclamation District to continue to provide access to the Household Hazardous Waste Disposal Program.
6. *Illicit Discharges and Improper Disposal*: The Permittee shall implement an ongoing program to detect and remove (or require the discharger to the MS4 to remove or obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.
- a. Unless identified by either the Permittee or the Agency as significant sources of pollutants to Waters of U.S, the following non-storm water discharges need not be prohibited from entering the MS4. As necessary, the Permittee may incorporate appropriate control measures in the SWMP to insure these discharges are not significant sources of pollutants to Waters of the U.S.
 - i. water line flushing;
 - ii. landscape irrigation;
 - iii. diverted stream flows;
 - iv. rising ground waters;
 - v. uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers;
 - vi. uncontaminated pumped ground water;
 - vii. discharges from potable water sources;
 - viii. foundation drains;
 - ix. air conditioning condensate;
 - x. irrigation water;
 - xi. springs;
 - xii. water from crawl space pumps;
 - xiii. footing drains;
 - xiv. lawn watering;
 - xv. individual residential car washing;
 - xvi. flows from riparian habitats and wetlands;
 - xvii. dechlorinated swimming pool discharges;
 - xviii. street wash waters; and
 - xix. discharges or flows from emergency fire fighting activities.

The Permittee shall adopt an ordinance to:

- b. Continue to prohibit non-storm water discharges to the MS4, other than those authorized under a separate NPDES permit.

The Permittee shall:

- c. Work with the Rock River Water Reclamation District to identify, track and eliminate unpermitted discharges of dry and/or wet weather overflows from sanitary sewers into the MS4.
- d. Continue its program to collect used motor vehicle fluids (including, at a minimum, oil and antifreeze), tires and hazardous materials (including paint, solvents, pesticides and herbicides) for recycle, reuse, and/or proper disposal. The program should continue to be readily available to all private residents. This program should be publicized and promoted on a regular basis (at least annually).

- e. Implement the following regarding illicit discharges within the term of this permit:
 - i. Review and evaluate existing legal authority and modify that authority based on experiences with the SWMP.
 - ii. Conduct field screening activities based upon citizens complaints and/or permittees awareness.
 - iii. Continue procedures for investigations of illicit connections and testing of suspected sources.
 - iv. Continue a public education program to encourage reporting of storm water pollution and to improve disposal of oil and toxic materials.
 - v. Continue to operate the hotline and online reporting tool for citizen complaints.
7. *Spill Prevention and Response:* The Permittee shall implement a program to prevent, contain, and respond to spills that may discharge into the Municipal Separate Storm Sewer System. The spill response program may include a combination of spill response actions by the Permittee (and/or another public or private entity), and legal requirements for private entities within the Permittee's municipal jurisdiction.

The Permittee shall:

- a. Provide a summary in the annual report of coordination of spill prevention activities with City of Rockford's Fire Department.
 - b. Develop and implement a GIS system and SIC code database for assistance with other governmental agencies spill prevention.
8. *Industrial and High Risk Runoff:* The Permittee shall implement a program to identify, monitor, and control pollutants in storm water discharges to the Municipal Separate Storm Sewer System from municipal landfills; hazardous waste treatment, storage, disposal and recovery facilities and facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the Permittee determines are contributing a substantial pollutant loading to the Municipal Separate Storm Sewer System.

The Permittee shall:

- a. Identify industries and high risk properties that discharge to the MS4, including where applicable:
 - i. Hazardous waste treatment, storage or disposal facilities;
 - ii. Industries listed on the Rock River Water Reclamation District pretreatment program;
 - iii. Industries subject to reporting requirements pursuant to SARA Title III Section 313 and are releasing over 10,000 pounds of waste materials to the environment; or
 - iv. Industrial facilities or high risk properties that the Permittee determines are contributing substantial loading of pollutants to the MS4.
 - b. Develop, improve and implement its existing inspection and monitoring program for those facilities identified in paragraph II.A.8.a. This program shall continue to include inspection and monitoring of a random select group of industries and high risk properties to verify that discharges of storm water to the Permittee's MS4 are complying with their NPDES storm water permits.
 - c. If necessary the Permittee will use enforcement procedures available pursuant to their legal authority if any industry is not providing a satisfactory response to elimination of the storm water pollutants.
9. *Public Education, Pollution Prevention and Good Housekeeping:* The Permittee shall implement a public education program designed to educate the public, promote pollution prevention and educate the public on good housekeeping measures. This program shall include any and all public education and public involvement addressed in this section as well as all other sections within this permit.

The Permittee shall continually develop and update this program which shall be designed to:

- a. Educate the public on green infrastructure strategies such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells and permeable pavement that mimic natural processes and direct storm water to areas where it can be infiltrated, evapotranspired or reused, discuss the benefits and costs of such strategies and provide guidance to the public on how to implement such measures.
- b. Promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials (e.g.

industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the Municipal Separate Storm Sewer System.

- c. Advise residents of preferred methods for proper disposal of all potential contaminants including but not limited to vehicle washing and disposal of all household and landscaping waste.
- d. Promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes.
- e. Promote, publicize, and facilitate the proper use, application, and disposal of pesticides, herbicides, and fertilizers by the public and commercial and private applicators and distributors.
- f. Where applicable and feasible, publicize those best management practices (including but not limited to the use of reformulated or redesigned products, substitution of less toxic materials, and improvements in housekeeping) used by the Permittee that facilitate better use, application, and/or disposal of materials identified in 9.b. and 9.c. of this section.

The Permittee shall continue to operate a hotline and online reporting tool for citizen complaints for:

- g. Citizen reporting of illicit discharge detection.
- h. Citizen reporting of construction site erosion and sediment control complaints.

The Permittee shall:

- i. Work with stakeholder groups, including representatives from developers, engineering, construction, contractor, and industrial communities, to draft ordinance(s) pertaining to storm water management.

B. Area-Specific Storm Water Management Program Requirements:

This permit may be modified, in accordance with Part VI of this permit, to incorporate additional area-specific requirements.

- C. Deadlines for Program Compliance: Except as provided in PART III, compliance with the storm water management program shall be required 90 days from the effective date of the permit.
- D. Legal Authority: The Permittee shall insure legal authority to control discharges to and from those portions of the Municipal Separate Storm Sewer System over which it has jurisdiction. This legal authority may be a combination of statute, ordinance, permit, contract, or an order to:
 - 1. Control the contribution of pollutants to the Municipal Separate Storm Sewer System;
 - 2. Prohibit illicit discharges to the Municipal Separate Storm Sewer System;
 - 3. Control the discharge of spills and the dumping or disposal of materials other than storm water (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the Municipal Separate Storm Sewer System;
 - 4. Control through interagency or inter jurisdictional agreements the contribution of pollutants from one portion of the Municipal Separate Storm Sewer System to another;
 - 5. Require compliance with conditions in ordinances, permits, contracts or orders; and
 - 6. Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with permit conditions.
- E. Storm Water Management Program Resources: The Permittee shall provide adequate finances, staff, equipment, and support capabilities to implement their storm water management program.
- F. Storm Water Management Program Development: The permittee shall maintain and update at least every 12 months a Storm Water Management Program (SWMP) that describes the controls necessary to reduce the discharge or pollutants to the MEP. The SWMP is available at the following website: <https://rockfordil.gov/city-departments/public-works/engineering-division/stormwater-environmental-team/>. Controls may consist of a combination of best management practices, control techniques, system design and engineering methods and other provisions that the Permittee or Agency determines appropriate. Controls and activities identified in the SWMP shall clearly identify areas on a system, jurisdiction, or specific area basis. The Permittee may implement the SWMP through participation with other public agencies or private entities. The SWMP shall be developed as a separate document which describes the selection, design, installation, and implementation of structural and non-structural controls to satisfy the requirements of Part II.A-E and Part II.G of this permit for all portions of the MS4 authorized to discharge storm water under this permit. Implementation of the discharge limitation shall be documented in Part III. The Agency may require modification of the SWMP as specified in Part II.G.3.

G. Storm Water Management Program Review and Modification:

The Permittee shall provide adequate public notice of the Storm Water Management Program.

1. *Program Review:* The Permittee shall participate in an annual review of the current Storm Water Management Program in conjunction with preparation of the annual report required under Part V.B. This annual review shall include:
 - a. A review of the status of program implementation and compliance (or non-compliance) with all schedules of compliance contained in this permit;
 - b. An assessment of the effectiveness of controls established by the Storm Water Management Program;
 - c. A review of monitoring data and any trends in estimated cumulative annual pollutant loadings;
 - d. An assessment of any Storm Water Management Program modifications needed to comply with the Clean Water Act and Title 35 Ill. Adm. Code Subtitle C;
 - e. Provide a minimum of one public meeting, annually for the public to provide input as to the adequacy of the permittee's MS4 program. This requirement may be met in conjunction with or as part of a regular council or board meeting and can be in-person or virtual meeting. Public comments may be obtained online; and
 - f. The permittee shall identify environmental justice areas within its jurisdiction and include appropriate public involvement/participation. Information on environmental justice concerns may be found at <https://www.epa.gov/environmentaljustice>. This requirement may be met in conjunction with or as part of a regular council or board meeting.
2. *Program modification:* Permittee may modify the Storm Water Management Program during the life of the permit in accordance with the following procedures:
 - a. The approved Storm Water Management Program may be modified by the Permittee(s) without the prior approval of the Agency. An itemized list of changes to the Storm Water Management Plan shall be included in the Annual Report required in Section V.B. of this permit.
 - b. Modifications adding (but not subtracting or replacing) components, controls, or requirements to the approved Storm Water Management Program may be made by the Permittee at any time.
 - c. Modifications replacing an ineffective or unfeasible BMP specifically identified in the Storm Water Management Program with an alternate BMP may be requested at any time. Unless denied by the Agency, the modification shall be deemed approved and may be implemented by the Permittee 60 days from submittal of the request. Such requests must include the following:
 - i. An analysis of why the BMP is ineffective or infeasible (including cost prohibitive);
 - ii. Expectations on the effectiveness of the replacement BMP; and
 - iii. An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.
 - d. Modification requests and/or notifications must be made in writing, signed in accordance with Attachment H, Standard Conditions, Item 11.
 - e. The SWMP required in Part II must be kept up-to-date, including all modifications required by the Agency pursuant to Part II.G.3.
3. *Modifications required by the Permitting Authority:* The permitting authority may require the Permittee to modify the Storm Water Management Program as needed to:
 - a. Address impacts on receiving water quality caused, or contributed to, by discharges from the Municipal Separate Storm Sewer System;
 - b. Include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements;
 - c. Include such other conditions deemed necessary by the Agency to comply with the goals and requirements of the Clean Water Act. Modifications requested by the Agency shall be made in writing and set forth the time schedule for the Permittee to develop the modification(s).

PART III. SCHEDULES FOR IMPLEMENTATION AND COMPLIANCE

A. Implementation of Storm Water Management Program

STRUCTURAL CONTROLS

| <u>TASKS</u> | <u>ACTION DATE</u> |
|--|---------------------------|
| Evaluate detention and retention basin configurations, outlet structures, cleaning frequencies, water depth at the outlet structures, drainage facilities and stream channels experiencing erosion as detailed in Part II.A.1.a, b, c and d. | Continual |
| Report to IEPA status of compliance with Part II.A.1 and implementation of solutions. | As Part of Annual Report |

EROSION AND SEDIMENTATION CONTROL, CONSTRUCTION SITE RUNOFF AND POST-CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

| <u>TASKS</u> | <u>ACTION DATE</u> |
|---|---------------------------|
| Report on the compliance with all parts of Part II.A.2. | Continual |

ROADWAYS

| <u>TASKS</u> | <u>ACTION DATE</u> |
|--|---------------------------|
| Continue evaluation of roadway maintenance activities to minimize the discharge of pollutants to the MEP as detailed in Part II.A.3. | Continual |
| Documentation of compliance with Part II.A.3 and any changes in maintenance activities and/or procedures shall be detailed in the Annual Report. | As Part of Annual Report |

FLOOD CONTROL

| <u>TASKS</u> | <u>ACTION DATE</u> |
|--|---------------------------|
| Continue efforts to evaluate the feasibility of retrofitting existing flood control devices – Part II.A.4.a. | Continual |
| Documentation of compliance with items in Part II.A.4 shall be detailed in the Annual Report. | As Part of Annual Report |

PESTICIDE, HERBICIDE AND FERTILIZER APPLICATION

| <u>TASKS</u> | <u>ACTION DATE</u> |
|---|---------------------------|
| Evaluate current PHF application practices within City and revise as needed- Part II.A.5.a. | Continual |
| Implement a public education program in accordance with Part II.A.5.b. | Continual |
| Report to IEPA status of compliance with Part II.A.5. | As Part of Annual Report |

ILLICIT DISCHARGE AND IMPROPER DISPOSAL

| <u>TASKS</u> | <u>ACTION DATE</u> |
|---|---------------------------|
| Report progress in meeting requirements of Part II.A.6. | As Part of Annual Report |

SPILL PREVENTION AND RESPONSE

| <u>TASKS</u> | <u>ACTION DATE</u> |
|---|---------------------------|
| Report progress in meeting requirements of Part II.A.7. | As Part of Annual Report |

INDUSTRIAL AND HIGH RISK RUNOFF

| <u>TASKS</u> | <u>ACTION DATE</u> |
|---|---------------------------|
| Inspect and monitor select industries as described in Part II.A.8 to verify discharges to the MS4 are in compliance with their NPDES storm water permits. | Continual |
| Report to IEPA status of compliance with Part II.A.8. | As Part of Annual Report |

PUBLIC EDUCATION, POLLUTION PREVENTION AND GOOD HOUSEKEEPING

| <u>TASKS</u> | <u>ACTION DATE</u> |
|---------------------|---------------------------|
|---------------------|---------------------------|

Report to IEPA status of compliance with Part II.A.9.

Submit with Annual Report

Prepare annually a report on existing situation and make recommendations on future program goals. Include details on the distribution methods of information to industry, the general public and schools as well as a summary of the response from those receiving information and any positive actions arising as a result of the distribution of information and/or the education of the public on storm water issues and pollution prevention.

Submit with Annual Report

B. Compliance With Effluent Limitations

This permit may be modified, in accordance with Part VI of this permit, to include compliance with specific numerical limitations if deemed appropriate by the Agency.

PART IV. NUMERIC EFFLUENT LIMITATIONS

This permit may be modified, in accordance with Part VI of this permit, to include specific numerical limitations if deemed appropriate by the Agency.

PART V. MONITORING AND REPORTING REQUIREMENTS

- A. Storm Event Discharges. The Permittee shall implement a wet-weather monitoring program for the Municipal Separate Storm Sewer System to provide data necessary to assess the effectiveness and adequacy of control measures implemented under the Storm Water Management Program; estimate annual cumulative pollutant loadings from the Municipal Separate Storm Sewer System; estimate event mean concentrations and seasonal pollutants in discharges from major outfalls; identify and prioritize portions of the Municipal Separate Storm Sewer System requiring additional controls, and identify water quality improvements or degradation. The Permittee is responsible for conducting any additional monitoring necessary to accurately characterize the quality and quantity of pollutants discharged from the municipal separate storm sewer system. Improvement in the quality of discharges from the municipal separate storm sewer system will be assessed based on the monitoring information required by this section, plus any additional monitoring conducted by the Permittee(s).
1. *Representative Monitoring*: The Permittee shall monitor representative outfalls, internal sampling stations, and/or instream monitoring locations to characterize the quality of storm water discharges from the Municipal Separate Storm Sewer System.
 - a. Monitoring Requirements: (See Table V.A.1.a)
 - b. Outfall Descriptions: (See Table V.A.1.b)
 - c. Alternate or new representative monitoring locations may be substituted for just cause during the term of the permit. Requests for approval of alternate monitoring locations shall be made to the Agency in writing and include the rationale for the requested monitoring station relocation. Unless disapproved by the Agency, use of an alternate monitoring location may commence thirty days from the date of the request. Four samples shall be collected during the first year of monitoring at substitute outfalls.
 2. *Floatables Monitoring Program*: The permittee shall establish two monitoring locations for removal of floatable material in discharges to or from the MS4. Floatables material shall be collected at the frequency necessary for maintenance of the removal devices, but not less than twice per year. The amount of material collected shall be estimated (either volume or weight) and shall be reported in the Annual Report.
 3. *Storm Event Data*: For Part V.A.1 - Representative Monitoring only: quantitative data shall be collected to estimate pollutant loadings and event mean concentrations for each parameter sampled. In addition to the parameters listed below, the Permittee shall maintain records of the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff; the duration (in hours) between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.
 4. *Sample Type, Collection, and Analysis*: The following requirements apply only to samples collected for Part V.A.1 - Representative Monitoring.
 - a. For discharges from holding ponds or other impoundments with a retention period greater than 24 hours, (estimated by dividing the volume of the detention pond by the estimated volume of water discharged during the 24 hours previous to the time that the sample is collected) a minimum of one grab sample may be taken.
 - b. Samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Composite samples may be taken using continuous (automatic) samplers that will be triggered using either tipping bucket rain gauges programmed to initiate sampling after 0.1 inch of rain, or flow meters programmed to initiate sampling after 0.1 inches of

runoff. Sampling may also consist of 3 grab samples from an event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inches rainfall) storm event. The first grab sample shall be taken within 2 hours of the storm event. The second and third grab samples shall be taken at intervals of not less than 2 hours. Should the discharge cease before the 2nd and 3rd grab samples can be taken the permittee shall identify the approximate time that the discharge ceased. Additionally grab samples of storm water will be collected for analysis of fecal coliform. If possible, this grab sampling will take place during the same storm event, but if this cannot be performed, these samples will be taken from separate events.

- c. Analysis and collection of samples shall be done in accordance with the methods specified at 40 CFR Part 136. Where an approved Part 136 method does not exist, alternate available methods may be used.

Table V.A.1.a. Representative Monitoring Requirements for Outfalls 001, 002, 003, 004 and 005

| PARAMETER | MONITORING FREQUENCY | | | | |
|----------------------------------|----------------------|--------------|--------------|--------------|--------------|
| | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 |
| BOD ₅ (mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| COD (mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| TSS(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| TDS(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Nitrogen(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Kjeldahl Nitrogen(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Phosphorus (mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Fecal Coliform (per 100 mL) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Oil and Grease(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Cadmium(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Copper(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Lead(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Zinc(mg/L) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Total Mercury(ng/L)* | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| pH (S.U.) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Hardness (as CaCO ₃) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |
| Temperature (°C) | Twice / year | Twice / year | Twice / year | Twice / year | Twice / year |

Samples shall be collected during the spring and fall of each year. Results from samples collected as part of the Rock River Watershed Analysis-Quality Assurance Project Plan for Outfalls R1-R5 may be submitted to satisfy the above monitoring requirements.

*Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E. 1 ng/L = 1 part per trillion.

Table V.A.1.b Representative Monitoring Outfall Descriptions

| Outfall / Latitude & Longitude | Location | Description |
|--|---|--|
| Outfall 001 - Station R1 / N 42° 18.346' W 89° 5.772' | Paradise Boulevard Section 11,T44N,R1E | 225 Ac. Residential and Open Space |
| Outfall 002 - Station R2 / N 42° 16.214' W 89° 5.434' | Market Street and Water Street Section 23, T44N, R1E | 50 Ac. Commercial Offices, and Residential |
| Outfall 003 - Station R3 / N 42° 16.168' W 89° 2.616' | Fairview Boulevard and Crosby Street Section 19, T44N, R2E | 510 Ac. Residential |
| Outfall 004 - Station R4 / N 42° 14.049' W 89° 4.790' | Wills Avenue and 8th Street Section 36, T44N, R1E | 780 Ac. Industrial, Commercial, Residential |
| Outfall 005 - Station R5 / N 42° 13.956' W 89° 1.267' | Forest View Road and 28th Ave. Section 5, T43N, R2E | 80 Ac. Light Industrial |

5. *Sampling Waiver.* When a discharger is unable to collect samples required by Part V.A.1 (Representative Monitoring) due to adverse climatic conditions, the discharger must submit in lieu of sampling data a description of why samples could not be collected, including available documentation of the event. Adverse climatic conditions which may prohibit the collection of samples includes weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen

conditions, etc.).

B. Annual Report The Permittee shall prepare an annual system-wide report to be submitted by no later than April 1 of each year, in accordance with this permit. The report shall include a brief overview of the entire Municipal Separate Storm Sewer System and the following separate sections:

1. Status of implementing the storm water management program(s) -provide summaries for individual permit components as detailed in Part III – Schedules for implementation of, and compliance with, SWMP.
2. Proposed changes to the storm water management program(s).
3. Revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (d)(2)(v).
4. An overall summary of the data, including monitoring data, accumulated throughout the reporting year.
5. Annual expenditures for the reporting period, with a breakdown for the major elements of the storm water management program, and the budget for the year following each annual report.
6. A summary describing the number and nature of enforcement actions, inspections, and public education programs.
7. Identification of water quality improvements or degradation.
8. Provide the Latitude and Longitude of the Representative Monitoring Outfalls listed in Table V.A.1.b, along with a map identifying their locations within the city.
9. A brief summary of what the city has experienced and evaluated in the past year about its programs regarding storm water and pollution prevention, and a list of any proposed changes to their programs and/or additional actions they feel would be beneficial.
10. A summary of the effectiveness and accuracy of the monitoring results obtained as a result of the current requirements of the Permit. The Permittee should provide suggestions and justifications for any possible improvements to the current monitoring locations and/or frequency as well as information indicating reasons why certain monitoring requirements should be modified or eliminated.
11. Provide an annual evaluation of public involvement/participation BMPs and measurable goals.

C. Certification and Signature of Reports

All reports required by the permit and other information requested by the Agency shall be signed and certified in accordance with Attachment H, Standard Conditions, Item 11.

D. Reporting: Where and When to Submit.

1. Monitoring results obtained during the reporting period running from November 1st through April 30th and May 1st through October 31st shall be submitted semi-annually on electronic Discharge Monitoring Report (NetDMRs) no later than the 15th day of the following month. A separate Discharge Monitoring Report electronic form is required for each event monitored.
2. Signed copies of discharge monitoring reports required under Part V., the Annual Report required by Part V.B., and all other reports required herein shall be submitted electronically to EPA.PrmtSpecCondtns@illinois.gov with "ILS000001" as the subject of the email. Requests for Storm Water Management Program modification, or requests for changes in monitoring locations shall be submitted to:

Illinois Environmental Protection Agency
 Division of Water Pollution Control
 Attention: Permit Section, Mail Code #15
 P.O. Box 19276
 Springfield, Illinois 62794-9276

E. Retention of Records.

The Permittee shall retain the latest approved version of the Storm Water Management Program developed in accordance with Part II of this permit for at least three years after coverage under this permit terminates. The Permittee shall retain all records of all monitoring information, copies of all reports required by this permit, and records of all other data required by or used to demonstrate compliance with this permit, until at least three years after coverage under this permit terminates. This period may be explicitly modified by alternative provisions of this permit or extended by request of the Agency at any time.

PART VI. PERMIT MODIFICATIONS

- A. **Modification of the Permit:** The permit may be reopened and modified during the life of the permit to address:
1. Changes in the State's Water Quality Management Plan, including Water Quality Standards;
 2. Changes in State or Federal statutes or regulations;
 3. Add a new Permittee who is the owner or operator of a portion of the Municipal Separate Storm Sewer System;
 4. Changes in portions of the Storm Water Management Program that are consolidated permit conditions; or
 5. Other modifications deemed necessary by the Agency to meet the requirements of the Act.

All modifications to the permit will be made in accordance with 40 CFR 122.62, 122.63 and 124.5.

PART VII. DEFINITIONS

"Agency" means the Illinois Environmental Protection Agency

"Best Management Practices" (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the U.S. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"CWA" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 6-483 and Pub. L. 97117, 33 U.S.C. 1251 et seq.

"Co-Permittee" means a Permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

"Core municipality" means, for the purpose of this permit, the municipality whose corporate boundary (unincorporated area for counties) defines the municipal separate storm sewer system.

"Discharge" for the purpose of this permit, unless indicated otherwise, refers to discharges from the Municipal Separate Storm Sewer System (MS4).

"Flow-weighted composite sample" means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge at the time the aliquot is collected.

"Green Infrastructure" means wet weather management approaches and technologies that utilize, enhance or mimic the natural hydrologic cycle processes of infiltration evapotranspiration and reuse. Green infrastructure approaches currently in use include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, porous and permeable pavements, porous piping systems, dry wells, vegetated median strips, reforestation/revegetation, rain barrels and cisterns and protection and enhancement of riparian buffers and floodplains.

"Individual Residence" refers, for the purposes of this permit, to single or multi-family residences. (e.g. single family homes and duplexes, townhomes, apartments, etc.)

"Illicit connection" means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

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

"Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

"Land application unit" means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

"Large or medium municipal separate storm sewer system" means all municipal separate storm sewers that are either:

- (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 CFR Part 122) or
- (ii) located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 CFR Part 122); or
- (iii) owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Agency as part of the large or medium municipal separate storm sewer system.

"MEP" is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for Municipal Separate Storm Sewer Systems established by CWA Section 402(p), 33 U.S.C § 1342(p).

"MS4" is an acronym for "municipal separate storm sewer system" and is used to refer to either a Large or Medium Municipal Separate Storm Sewer System.

"Municipal Separate Storm Sewer" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State Law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian Tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to Waters of the U.S. (ii) designed or used for collecting or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

"Permittee" refers to any "person," as defined at 40 CFR 122.2, authorized by this NPDES permit to discharge to Waters of the U.S.

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

"Process wastewater" means any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.

"Storm Sewer" unless otherwise indicated, refers to a municipal separate storm sewer.

"Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"SWMP" is an acronym for "Storm Water Management Program."

"Time-weighted composite" means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

"Waters of the State" is defined as: All accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon the State of Illinois.

"Waters of the United States" is defined at 40 CFR 122.2.

Attachment H
Standard Conditions
Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L. 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

- (1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- (2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.
- (3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- (5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- (7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
- (8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.
- (9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:
 - (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records

- must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.
- (10) **Monitoring and records.**
- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
 - (c) Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
 - (d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.
- (11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.
- (a) **Application.** All permit applications shall be signed as follows:
 - (1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;
 - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
 - (b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described in paragraph (a); and
 - (2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
 - (3) The written authorization is submitted to the Agency.
 - (c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
 - (d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
- (12) **Reporting requirements.**
- (a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
 - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
 - (b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
 - (c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.
 - (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
 - (e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

- (2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.
- (f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:
- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - (2) Any upset which exceeds any effluent limitation in the permit.
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.
- The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.
- (g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).
- (h) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.
- (13) **Bypass.**
- (a) Definitions.
 - (1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
 - (2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - (b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).
 - (c) Notice.
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
 - (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).
 - (d) Prohibition of bypass.
 - (1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:
 - (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (iii) The permittee submitted notices as required under paragraph (13)(c).
 - (2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).
- (14) **Upset.**
- (a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
 - (b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - (c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated; and
 - (3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
 - (4) The permittee complied with any remedial measures required under paragraph (4).
 - (d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

- (15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:
- (a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
- (b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:
- (1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
 - (2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
 - (3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.
- (16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
- (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
 - (4) The level established by the Agency in this permit.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.
- (17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
- (a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
 - (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- (18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
- (a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
 - (b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
 - (c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.
- (19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.
- (20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.
- (21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.
- (22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both.
- Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).
- (23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
- (24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
- (25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.
- (26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.
- (27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.
- (28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

B. City of Rockford MS4 Permit Program

City of Rockford

Stormwater Management Program

Draft: October 2023



Introduction

The City began operating under its current Municipal Separate Storm Sewer System (MS4) permit on May 1, 2021. This document describes the controls necessary to reduce the discharge of pollutants to the maximum extent practicable. The purpose and need of this document is described in Part II. F. of the MS4 permit. This document only describes activities and planning of the program and does not include information for permit sections that are state permit requirements without instructions to develop actionable goals, such as “Discharges Authorized Under this Permit”.

The permit sections are as follows and can be referenced as such. The stormwater management program will be described in the order of this outline.

- I Discharges Authorized Under this Permit
- II Discharge Limitations and Stormwater Management Programs
 - A Discharge Limitations
 - 1 Structural Controls
 - 2 Erosion & Sedimentation Controls, Construction Site Runoff and Post-Construction Stormwater Management Program
 - 3 Roadways
 - 4 Flood Control
 - 5 Pesticide, Herbicide and Fertilizer Application
 - 6 Illicit Discharge and Improper Disposal
 - 7 Spill Prevention and Response
 - 8 Industrial and High Risk Runoff
 - 9 Public Education, Pollution Prevention and Good Housekeeping
 - B Area-Specific Stormwater Management Program Requirements
 - C Deadline for Program Compliance
 - D Legal Authority
 - E Stormwater Management Program Resources
 - F Stormwater Program Development
 - G Program Review and Modification
- III Schedules for implementation and Compliance
- IV Numeric Effluent Limitations
- V Monitoring and Reporting Requirements
- VI Permit Modifications
- VII Definitions



Structural Controls

Per the permit, the City must operate and maintain any stormwater structural controls for which they are the owner or operator in a manner to reduce the discharge of pollutant loading to the maximum extent practicable. In compliance with the permit, the City of Rockford monitors all stormwater infrastructure, conducts basin site visits, has regularly scheduled monitoring and maintenance for basins, maintains detailed records of stormwater infrastructure, coordinates with private basin owners, identifies stream channels with eroded streambanks, and has developed a program to mitigate streambank erosion, and coordinates with private property owners that have streams within their lots in need of maintenance. The Standard Operating Procedures contain information about City-owned or City-operated stormwater control basins and structures including an update of recent maintenance activities and improvements.

APPLICABLE STANDARD OPERATING PROCEDURES

- ▶ D-1 Detention Basins
- ▶ D-4 ROW and Drainageway Inspection and Maintenance

Stormwater Infrastructure Monitoring

The City regularly evaluates the storm sewer system for opportunities to improve water quality and quantity concerns of the system. The requests are broken out to show the number of requests generated by citizens (reactive) and requests generated by City staff (proactive) as they are in the area for other duties or as part of the regularly scheduled maintenance. The service requests include inlet and pipe cleaning or repairs, missing manhole covers, trash rack cleaning, detention basin maintenance as well as other various storm system maintenance.

The City purchased a CCTV Camera System from CUES, Inc. in March 2017 and implemented it in June 2017. The GraniteNet software used with the TV Camera in combination with Geographic Information System (GIS) mapping allows the Stormwater team to identify problematic areas, including sediment build up, view videos and create reports based on the operator's inspections.

Storage Basin Monitoring

Per Permit Parts II.A.1.a-b and Part II.A.2.b.iii-iv, the City must establish and implement a program to monitor basins on a periodic basis to assess maintenance efforts. This program is detailed in the Detention Basin Standard Operating Procedures. The City initiated detention basin inspection and maintenance program in 2011 and completed inspections for all known basins.

All privately owned detention basins are inspected during odd years, and all publicly owned and private basins that are high priorities are inspected annually as well as following a specified rain event. Any private basins requiring maintenance are given 90 days to either complete or to contact the City regarding scheduling for completion. In any given year, if there is a rain event of 6" in 24 Hours or greater (Per Rockford Airport Rain Gauge) then event inspections will be completed on all privately owned basins.

Basins are inspected to ensure they are operating as close to design specifications as possible and to determine any maintenance needs. Owners are then notified of the maintenance requirements, and follow-ups are completed to ensure it was done. Maintenance records are kept in a database and can be referenced by the City as future development requirements are considered.



Monitoring Streambank Erosion

Part II.A.1.d of the permit requires the City to identify eroding stream channels in its jurisdiction and remediate them. Per the City’s Standard Operating Procedures, creeks walks will take place in conjunction with outfall inspections during even years. The City stabilizes streambanks each year as a part of its maintenance program and budget is set aside for this activity specifically.

Monitoring Database

The City regularly updates its spatial and tabular databases that record inspections, complaints and maintenance items, master planning, and compliance with NPDES permit conditions. Details from a January 2022 overview of the most important databases for structural controls are shown in Table 1.

| TABLE 1 CITY OF ROCKFORD STORM SEWER INFORMATION SYSTEM | | |
|---|---|---|
| Theme | Database Fields / Features | Comment |
| Detention Basin Structure | Detention structure No., Location, date, last rainfall, sediment present, floatables present, water present, ID link to inspections | 495 detention structures all but 24 of which are privately owned (see Appendix C) |
| Culvert | Location, material type, ID, shape, length, upstream and downstream invert elevations, size, other | 864 records (note: previous years data showed number of culverts county-wide versus City of Rockford) |
| Storm Sewer | Location, ID, shape, size | 34,408 records (3,387 Private) |
| Manholes | Installation date, diameter, frame material, condition, inspection date, inspector | 10,929 records (1,344 Private) |
| Inlets | Installation date, type, inspection date, inspector | 23,959 records (1,909 Private) |
| Outfalls | Size, material, end structure, drainageway | 1,306 records |
| Storm Camera CCTV | Preventative Maintenance, Condition of Pipe | Pipe televising |



Erosion and Sedimentation Control

This section addresses Part II.A.2 and III.A of the permit. The city carries out this program in accordance with its applicable Standard Operating Procedures shown here.

APPLICABLE STANDARD OPERATING PROCEDURES

- ▶ D-1 Detention Basins
- ▶ D-2 Erosion & Sediment Control Plan Review & Regulatory Inspections
- ▶ D-3 Erosion & Sediment Control Guidance Manual for City of Rockford Projects

The City performs erosion and sediment control inspections (Pre-Grading, Drive-through and Full reviews). Drive-thru inspections are visual assessments of a construction site and takes into account site cleanliness and condition of in-place BMP's. An erosion and sediment control inspection is a review of the SWPPP, erosion and sediment control plan, inspection records, as well as site conditions. These inspections are performed in compliance with Permit Parts II.A.3.a.iii.

Permit Parts II.A.2.a.vi and a.vii requires the City to adopt existing field guides for inspection of construction site BMPs and to establish minimum requirements for regulatory inspections. The City references the Illinois Urban Manual as well as IDOT's Erosion and Sediment Control Field Guide for Construction Inspections, as their primary field guides for doing inspections.

The City has also developed Standard Operating Procedures for performing regulatory inspections, which has been incorporated into the Stormwater Master Plan (SWMP). The SWMP was developed and approved in 2015 as well as encompasses the entire City of Rockford Stormwater Program. This plan is reviewed and updated annually. A record of updates is kept with the document.

The City hosts meetings for contractors, consultants and City staff which included City of Rockford requirements when working in the Right-of-Way as well as reviewing erosion and sediment control requirements. City staff participate in a limited number of stormwater related training opportunities. This demonstrates the City's compliance with Permit Part II.A.2.a.viii.

The City is also required by the permit to respond to citizen complaints. The home page for the City's stormwater program includes contact information for sending feedback. Feedback is followed up with a site visit if deemed appropriate.

The City closely monitors IEPA's permitting page (<https://permitsearch.epa.gov/epermit-search/ui/search>) to make sure all projects requiring IEPA permitting receive proper City permitting as well. In addition, since IEPA does not review SWPPP's and Erosion Control Plans, the City does as a part of their review process.

City uses a comprehensive master planning approach to minimize the discharge of pollutants from areas of development and redevelopment after construction is completed and to identify stormwater management issues on a watershed scale. The City has developed a stormwater master plan that meets this criteria and updates it every five to ten years.

The City monitors facilities during dry weather, conducts field surveys, as well as works with private owners of existing facilities and neighborhood organizations to assess performance. The City performs dry weather inspections as described in its Standard Operating Procedures.



Roadways

This addresses Parts II.A.3 and III.A of the Permit. The city carries out this program in accordance with its applicable Standard Operating Procedures shown here.

APPLICABLE STANDARD OPERATING PROCEDURES

► D-4 ROW and Drainageway Inspection and Maintenance

Street sweeping has gone through an evolution of practices over the past 25 years to include once or twice a year sweeping to a continuous citywide street sweeping operation throughout the warm weather season. The current practice described in the Street Sweeping SOP evolved as a compromise between the various extremes in order to suit both budget and lower staffing issues.

Prior to 2012, all street sweeping activities within the City of Rockford were performed internally. During this period, the City owned and maintained seven street sweepers at all times, although it was an aging fleet in need of replacement. In the four years prior to 2012, the annual cost to the City for personnel, equipment and disposal was \$850,000 to \$950,000 per year. In August of 2011, it was decided to outsource street sweeping to a contractor in an effort to realize a savings in overall annual costs for this City service, while at the same time reassigning labor resources to the Forestry Section of the Street Division. As a result, City street sweeping costs were reduced to \$560,000 for the year 2012, and all sweeping cycles were completed.

The contractor sweeps the Central Business District (CBD) twice a month and maintains a clean environment downtown. The Standard Operating Procedures are evaluated and revised to reflect changes to sweeping frequency.

Each year, prior to and through the winter season, the City analyzes its salt supply and the rate it is being applied during the operations. If needed, the amount of salt ordered, used and applied is adjusted. The City chooses to use salt for de-icing operations since using sand is harsh on the street sweepers and spreaders. Since the City is responsible for keeping the gutters, storm structures and ditches clean, using sand for de-icing operations puts undue burden on the City staff, budget and equipment as well as is counter-productive to stormwater management. Salt shortages may force the City to use sand but this is a last resort option. The City is also reviewing options for upgrades at the City Yards which will include relocation of the spoil pile to a more suitable location and better protection for salt storage.

City street design, construction, and maintenance requirements are detailed in its subdivision ordinance and stormwater management ordinance. These include detailed regulations for special management areas such as streams, wetlands, and natural areas. The ordinance is reviewed semi-annually to continually refine requirements in order to mitigate impacts to the maximum extent practicable.



Flood Control

This section addresses Parts II.A.1.d and II.A.5 III.A of the Permit. This includes the evaluation of water quality retrofits within City owned facilities, planning flood control and water quality projects, and evaluating strategies to reduce nuisance flooding.

APPLICABLE STANDARD OPERATING PROCEDURES

- ▶ D-1 Detention Basins
- ▶ D-4 Right-of-way and Drainageway Inspection & Maintenance

In the aftermath of flooding events in recent years, the City has planned and began building multi-stage flood control structures in neighborhoods. The City has an ongoing drainage improvement program as part of its Capital Improvement Program (CIP). The City incorporates stormwater requirements within its Subdivision Ordinance and Stormwater Management Ordinance.

The City also continued utilizing staff and resources to improve local drainage by clearing channels of debris and accumulated silt that were known to restrict conveyance. Staff from the stormwater team investigates all drainage complaints though most complaints were the responsibility of the property owner to address.

Permit Part II.A.4.a requires the City to evaluate the feasibility of retrofitting the City's existing flood control devices to provide additional pollutant removal. The Stormwater Master Plan details potential retrofits to improve water quality as required by the permit.

The permit condition at Part II.A.4.b requires the City to coordinate regional flood control planning with surrounding communities. A regional detention facility, the I-90/Riverside detention pond, was constructed in 2011 through a public-private partnership led by the Village of Loves Park, but also included the City of Rockford, Winnebago County, Boone County, and Rockford Memorial Hospital. Regional detention has been constructed during the construction of Mercy Rockford Health System's east side campus as well as Mercy Way. The Winnebago County Watershed Improvement Plan Steering Committee (WCWIPSC) is a consortium of municipalities, including the City of Rockford, whose goal is to reduce nonpoint source pollution inputs in the watershed, attain water quality standards, improve habitat and engage a wide range of audiences in their efforts. WCWIPSC has completed a study of the Buckbee and Madigan Creek watersheds, with an aim of preparing an action plan for nonpoint source pollution control. Although Cherry Valley and Rockford Township each completed improvements projects in those watersheds, the committee continues to seek ways to obtain funding to complete projects.

Though not a surrounding community but a City partner, the Rockford Park District aided in the construction of a new regional detention facility in the southeast/Buckbee Creek Watershed (Harmon Park Detention Basin Phase 2). In another regional effort, FEMA funded a hydrologic and hydraulic study to update flood maps of the lower Rock River including large portions of the City's MS4 area. Revised floodplain maps resulting from this study were approved in February of 2016. The Illinois State Water Survey is presently completing a floodplain study of the Kishwaukee River Watershed.

The City continues to work with the School District to address any flooding issues as they renovate and/or build new facilities.



Permit Part II.A.4.c requires the City to investigate ways to significantly reduce “nuisance” flooding. Under the Inlet Reconstruction Program, City crews and contractors continued to reconstruct problem inlets. The City also repairs and replaces inlets and manholes under the Capital Improvement Program. Additionally, catch basins and laterals are regularly deducted. The City continues to clear creek channels and drainageways. Over the years channel clearing activities have taken place in the following creeks and drainageways: Keith Creek, Northwest Drainage Ditch, Kent Creek, South Diversion Channel, Spring Creek, Buckbee Creek, Manning Creek, Logistics Park Drainageway and Blackhawk Airport East and Riverside watersheds. The City believes that partially due to the improvements to inspection and maintenance requirements, nuisance drainage complaints have been reduced.

A separate jurisdictional body, the Rockford Park District has a sustainability approach to stormwater management in its development, construction, operation, and repair as well as replacement of parks and facilities.



Pesticide, Herbicide, and Fertilizer

This section addresses Parts II.A.5 and III.A of the Permit, which are intended to minimize negative impacts due to usage of pesticide, herbicide, and fertilizer to the maximum extent practicable.

APPLICABLE STANDARD OPERATING PROCEDURES

► D-6 Pesticide, Herbicide, and Fertilizer Applications

On October 31, 2011, the City of Rockford was issued an NPDES Permit for pesticide use (ILG870147). This permit is issued to operators who discharge to waters of the State from the application of biological pesticides that leave a residue. The City's activities in the areas of weed control, mosquito control, and other areas are subject to the limitation in this permit. The City of Rockford has sent letters to area applicators informing them of their obligations to comply with this regulation. This permit was renewed in 2016 and, though the City has requested renewal of this permit in 2021, IEPA has informed us they are working with USEPA regarding permit updates and we are to continue operating under our current permit.

The City monitors the use and application of PHF through the Public Works Department and its contractors. The City also monitors its stormwater and streams for nutrients and the aquatic effects thereof. Consistent with State regulations and label instructions, only City personnel that are licensed by the State are permitted to apply PHF. Outside contractors for the Streets Division apply much of the herbicides used on City facilities. All herbicides and pesticides are mixed and applied at a rate not to exceed the recommended amounts on the Safety Data Sheets.

The City has printed and continues to distribute an educational brochure on PHF use around water bodies. The brochures are available to the public in the lobby of City Hall, the Department of Public Works and at special events.

The City, in cooperation with the Illinois EPA and Rock River Water Reclamation District, collects household hazardous wastes (HHW) as well as pesticides, herbicide, fertilizer, used tires and used motor oil. Aerosols, corrosives, oxidizers, solvents, oil-based paints, latex paints, waste oils, pesticides, batteries, fluorescent lamps and insulin disposal service are all accepted. Radioactive wastes, compressed gases and explosives are not accepted. The collection program is available to all city residents and is publicized on the Illinois EPA's website (<https://knib.org/recycling/green-guide/household-hazardous-waste-site>).



Illicit Discharges and Improper Disposal

This section addresses Parts II.A.6 and III.A of the Permit, which monitors and responds to illicit discharges within the City.

APPLICABLE STANDARD OPERATING PROCEDURES

► D-7 Illicit Discharge Detection and Elimination Program

In 2015, the Rockford City Council approved its Stormwater Management Ordinance (Ord. # 2015-093-O) which includes requirements to prevent, control and reduce stormwater pollutants by the use of best management practices. This revised ordinance demonstrates compliance with Part II.A.7 of the permit.

Public Works staff regularly performs inspections for illicit discharges and improper disposal. The stormwater team educates residents on the adverse effects this has within our storm systems and requests compliance, but some cases are sent through the code enforcement process. Supplemental dry weather inspections are performed on all outfalls during even years and as needed if stormwater quality monitoring indicates a need for further evaluation.

With every new cycle of outfall inspections, the City reviews and updates the data. In addition to updating the creek outfall data, the Stormwater Staff utilize Rockford Fire Department boats to inspect and collect data for the outfalls along the Rock River.

As mentioned in the previous section, the city publicizes and coordinates with Illinois EPA, Four Rivers Sanitary Authority, and Keep Northern Illinois Beautiful to ensure residents are aware of disposal services for hazardous materials.



Spill Prevention and Response

Part II.A.7 of the Permit requires the City to implement a program to prevent, contain and respond to spills that may discharge into the MS4. The Rockford Fire Department is the “First Emergency Responder” in the City.

APPLICABLE STANDARD OPERATING PROCEDURES

► D-8 Spill Prevention and Response

In compliance with Part II.A.7.a, the City annually reviews Rockford Fire Department records for all incidents of a material spill that may have entered the storm sewer system within the MS4 service area (personal communication, Captain Erik Meyer, Rockford Fire Department). In 2014, the Fire Department updated the Hazardous Materials Standard Operating Procedures within the 2014 Emergency Operations Plan.

Permit Part II.A.7.b requires the City to include a summary of spill prevention activities in the Annual Report. Currently, most industries are responsible for their own training and education. Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training is required by most industries, and spill containment/prevention procedures have been developed by most industries. The Fire Department visits industrial facilities to develop a Pre-fire Plan Survey which includes information such as egress/ingress routes, location and types of chemicals on-site, combustible and flammable materials, special hazards, fire suppression methods, facility maps, emergency contact information, etc. The City has an active recycling campaign, thereby indirectly removing possible spill material from the environment.

City staff also serves on the Winnebago County Local Emergency Planning Committee (LEPC), which is made up of local officials who are required to develop a local chemical emergency response plan and to provide public education and information.



Industrial High Risk Runoff

This section addresses Parts II.A.8 and III.A of the permit. This program is detailed in the Industrial High Risk Runoff Program Standard Operating Procedures located in Part D-9 of the City's Stormwater Master Plan.

APPLICABLE STANDARD OPERATING PROCEDURES

► D-9 Industrial High Risk Runoff Program

The City of Rockford continued its Industrial and High Risk Runoff Facility Inspection Program (IHRRF). The City made a concerted effort to broaden the database to assure better representation of the locations of industries and other potential high-risk runoff facilities within City limits. These databases provide likely locations for industrial as well as high-risk runoff and are currently the basis for future inspections. The City then prioritized these facilities based on potential for stormwater pollution.

The City has a database of almost 4,800 industrial and commercial facilities, restaurants, fueling stations and businesses. The City reviews and reprioritizes these facilities annually and is committed to inspecting all high priority facilities and 50% of the medium priority facilities each permit term. Low priority facilities are only inspected when complaints are submitted. Inspections can also be triggered by citizen complaints, City crew field reports, stormwater monitoring data reviews or other information suggesting a need for inspections or monitoring.

The permit requires the City to review and evaluate industries to ensure they do not have unpermitted discharges entering the City's storm system.

The Illinois EPA is responsible for implementing industrial stormwater permitting and for compliance with the associated SWPPPs. No SWPPPs are sent to the City for review by the permittees. However, during inspections the City staff request to see any SWPPPs, and records whether a SWPPP is present or missing from each facility.



Public Education and Good Housekeeping

This section addresses Parts II.A.9 and III.A of the permit, which includes public education, good housekeeping, and standard practices for limiting pollutant discharges from municipal operations.

APPLICABLE STANDARD OPERATING PROCEDURES

► D-10 Stormwater & Environmental Education

The City of Rockford continues to expand programs on public education, pollution prevention and good housekeeping. The City currently advertises these through brochures, workshops, speaking events, newspaper inserts and its website. Stormwater staff did review the stormwater program with the entire engineering division of public works.

Annually the City distributes hundreds of pamphlets or brochures, which includes the following titles:

- Yard Waste
- Pesticide, Herbicide & Fertilizer
- Friendly Landscaping
- Fats, Oils & Grease
- Recycling
- Erosion and Sediment Control
- Rockford's Stormwater Management Program
- Residential Deicing
- Concrete Waste
- Pet Waste
- Stream Corridor Protection and Maintenance
- Illicit Discharge
- Rain Barrels
- Hazardous Material

All of these brochures focus on protection of water quality and are available to the public.

In 2014, the City also purchased two Enviroscape models to provide further education throughout the City. One depicts the cause and effect on non-point source pollution runoff; the other is for point source pollution runoff.

The City of Rockford continues to provide information on the Stormwater and Environmental webpage on the City of Rockford website. This information can be found at: <https://rockfordil.gov/city-departments/public-works/engineering-division/stormwater-environmental-team/>. This Stormwater page provides stormwater education on a variety of topics including, but not limited to:

- Stormwater Master Plan Erosion and Sediment Control Industrial High Risk Runoff
- Illicit Discharge Detection and Elimination Minimizing Pollution Around Your Home Watershed Assessment Data
- Reporting links for complaints
- Information about your property (floodplain, soils types, wetlands, etc.)

These demonstrate the City's compliance with the permit condition to publicize, promote and facilitate improved stormwater management in Rockford.

The City continues to work with the Rockford School District to develop a stormwater education program to meet the District's curriculum requirements.



Because of regulations banning all electronic waste (E-Waste) from landfills, the City had an agreement with an e-waste hauler, but because the state no longer funds that program the contract was terminated. Presently the City has an agreement with Keep Northern Illinois Beautiful, 4665 Hydraulic Road in Rockford, to have E-Waste dropped off at their location during their business hours. The City also allows residents to place electronic devices smaller than 2 feet by 2 feet in the recycle bins plus there is an E-Waste bin at the City Yards for staff use. As mentioned earlier, the City cooperates with the Illinois EPA for the collection of household hazardous wastes (HHW), as well. The City has renewed this service with Clean Harbors to continue for the next several years.

Staff from the stormwater team organize community cleanups in targeted areas. This is also an opportunity to educate residents about the importance to clean up. Winnebago County Inmate Work Crews also assist with these cleanups. In 2022, Rockford's Mayor started a program called Neighborhood Improvement Initiative. This program chose five underserved neighborhoods where community clean ups we done, assisted by City staff, City of Rockford department and other community resources are available to answer questions and assist residents.



Monitoring

This section addresses Part V of the permit, which includes details of the monitoring of stormwater quality.

APPLICABLE STANDARD OPERATING PROCEDURES

► D-11 Monitoring and Sampling Program

The City collects a minimum of two (2) samples for analyses from the five (5) identified storm sewer monitoring locations (R1-R5) during wet weather conditions. In addition, four (4) sets of samples were collected from the five (5) tributary sample locations (T1-T5) during base flow conditions. The storm sewer samples are analyzed for fifteen (15) parameters and the tributary samples are analyzed for eighteen (18) parameters.

A map is attached showing the locations of the five (5) storm sewer and five (5) tributary stream sample locations. A description of each sampling location is also provided.

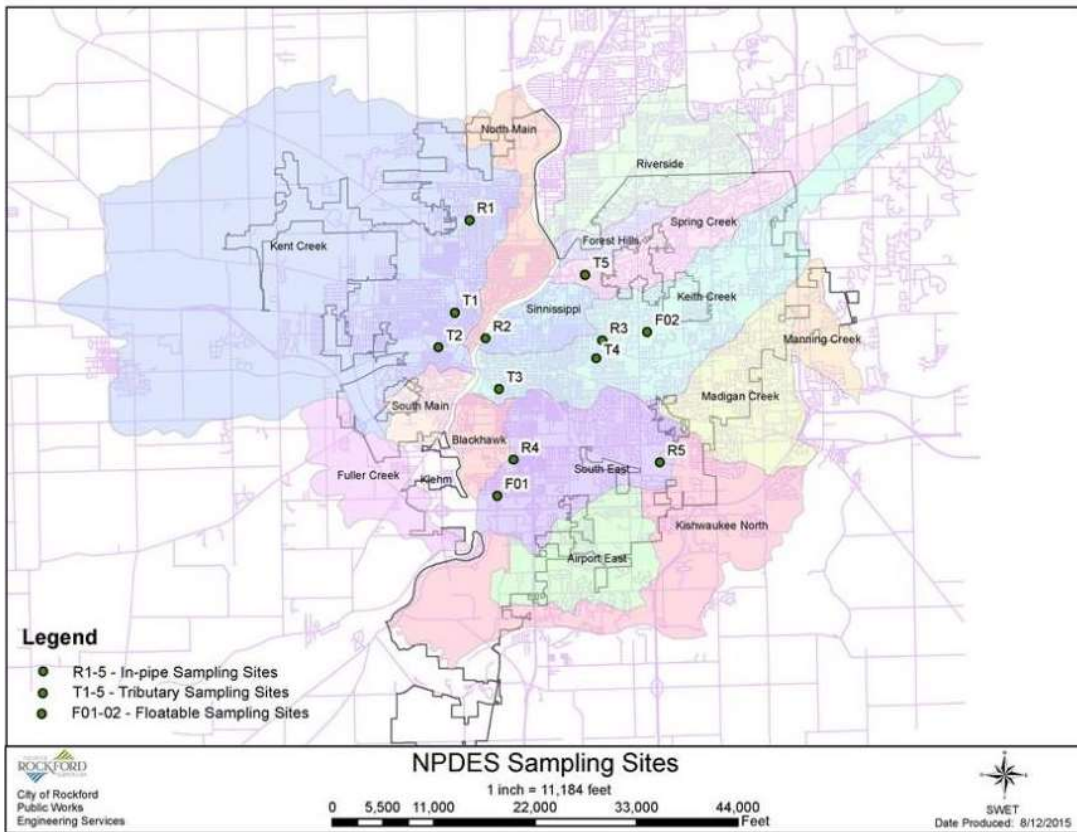
The City of Rockford's NPDES Storm Water Permit cites the five (5) locations for monitoring the storm sewer. These locations installed automatic samplers and rain gauges to provide ongoing sampling. Monitoring parameters are defined in the permit.

| Table 2 Storm Water Monitoring Locations | | | | |
|--|----------|----------|---|--|
| Outfall | Lat. | Long. | Location | Watershed Description |
| R1 (001) | 42.30576 | 89.09617 | Paradise Boulevard Section 11, T44N, R1E | 225-ac residential and open space |
| R2 (002) | 42.27045 | 89.09043 | Market St. & North First Section 23, T44N, R1E | 50-ac commercial, offices, and residential |
| R3 (003) | 42.26955 | 89.04381 | Fairview Blvd & Crosby St. Section 19, T44N, R2E | 510-ac residential |
| R4 (004) | 42.23405 | 89.07985 | 8th St. & Willis St. Section 36, T44N, R1E | 780-ac industrial, commercial, and resident. |
| R5 (005) | 42.23266 | 89.02128 | Forest View Rd. & 28th Ave. Section 5, T43N, R2E | 80-ac light industrial |



Table 3 Stream Monitoring Locations

| Station ID | Stream and Location |
|------------|---|
| T1 | North Kent Creek at Fairgrounds |
| T2 | South Kent Creek near intersection of Tay and Corbin Street |
| T3 | Keith Creek at Tenth Avenue Park |
| T4 | Keith Creek at Dahlquist Park |
| T5 | Spring Creek at Starkweather Avenue |



C. Technical Report

Provided under a separate cover

D. Standard Operating Procedures



DETENTION BASINS
STANDARD OPERATING PROCEDURE

January 2022

1.0 General

The purpose of this standard operating procedure for the detention basin monitoring program is to comply with Part II, A.2 of the City of Rockford's NPDES Storm Water Permit (ILS000001). This document addresses the process to perform detention basin inspections on public and privately owned detention basins.

2.0 Legal Authority

All properties with detention basins have drainage and detention easements on the recorded plats which allow the City to access the property to check the basins for maintenance needs.

If it is determined that a detention basin has maintenance issues the property owner will be notified to make the necessary repairs. Failure to properly maintain a detention basin can result in violations on municipal code Chapter 109, Article 6, as well as violations of the easement provisions.

3.0 Documentation and Record Management

All detention basin locations and ID numbers are mapped on the City of Rockford's GIS database and are hyperlinked to files with all data pertaining to that basin. A spreadsheet of basin inspections has been developed to indicate maintenance categorization following inspections and to track maintenance performed on the detention basins. The data shall be updated

continuously as new information is gathered for the basins.

To access the detention basin database perform the following:

- 1) Open the Stormwater Drive (note: this drive has limited access for people who perform duties directly related to the City's stormwater program),
- 2) Open the Inspections and Investigations folder
- 3) Open the Detention Basins folder,
- 4) Open Basin Inspection folder to access basin database
- 5) All basins have number Id's which is how they are categorized in the folder.

Basin folders include the following data: past inspection reports & photos, recorded plat (indicating maintenance responsibility) property owner(s). Other data can be added to the files as it becomes available (i.e. correspondence, engineering plans, etc.)

4.0 Staffing and Equipment

Positions of the City of Rockford's Stormwater Environmental Team (SWET) include: Stormwater Manager, Asst. Stormwater Manager, Stormwater Coordinator and designated project managers and Engineering Technicians.

Inspections for the detention basins will be performed by the Public Works Engineering Division utilizing the following staff positions: Stormwater Manager, Asst. Stormwater Manager, Stormwater Coordinator, and Sr. Engineering Technicians. These positions shall be trained to perform these

inspections according to the Standard Operating Procedures for Stormwater and Environmental Education and be familiar with this document. If event inspections are required additional project managers, coordinators and Sr. Engineering Technicians may be trained to assist in inspections.

Equipment to perform the inspection should include: the Detention Basin Inspection Form (Attachment B) or Field Observation Form (Attachment C), safety vest, work boots (possibly rubber boots or hip waders), camera, tape measure, and rain gear. It is also recommended the inspector review previous reports prior to completing the inspection.

5.0 Detention Basin Monitoring

The detention basins within the City of Rockford limits have been broken down into three (3) categories:

5.1 Public Detention Basins

These basins are owned, operated and maintained by the City of Rockford. These basins are listed as part of Attachment A.

5.2 Private Detention Basins

These are detention basins owned, operated and maintained by private citizens or homeowner associations that have not been designated as Private Priority Detention Basins. The majority of the detention basins within the City of Rockford limits fall under this

category.

5.3 Private Priority Detention Basins

These are private basins that have been given a Private Priority Basin designation based on previous inspections & observations. These designated basins will be inspected or observed more frequently than other privately owned basins. These basins are listed as part of Attachment A.

The following criteria shall be considered to add or remove private basins from the Priority Basin List:

- History of overtopping
- Owner lack of maintenance
- Significant collection of debris or floatables
- Basin failure
- Downstream flooding
- Significant grading or maintenance work has been completed recently
- Redesign or retrofit has been completed
- Large regional basin
- Newly constructed basin

6.0 Detention Basin Inspection Frequency

All detention basins within the City of Rockford limits shall be inspected based on scheduled Dry Weather inspections and Storm Event inspections.

6.1 Dry Weather Basin Inspection Frequency

Public & Private Priority Basins

All public and private priority detention basins shall be inspected annually utilizing the Detention Basin Inspection Form (Attachment B). Maintenance of the detention basins and stormwater systems shall be based on the basins ability to function as close to design standards as possible.

Private Basins

All private detention basins shall be inspected no less frequently than every two years and as needed in response to a public complaint or a concern identified by the City. Maintenance of the detention basins and stormwater systems shall be based on the basins ability to function as close to design standards as possible.

Any detention basins that were not previously located shall be inspected in the year the City became aware of their presence.

6.2 Storm Event Basin Inspection Frequency

The source for weather observation data to be used by Staff is from the National Weather Service website (<http://w1.weather.gov/data/obhistory/KRFD.html>) which reports the past 72 hours of weather data (including hourly rainfall data) from the Chicago Rockford International Airport.

In addition, the following factors shall be utilized to determine inspection frequency:

- Intensity of rainfall
- Duration
- Previous weather conditions, (i.e. soil moisture content, frost depth, time since previous event)

Public and Private Priority Basins

All public and private priority detention basins will be inspected within 72 hours following a 4 inch or greater, 24 hour storm event.

Non-Priority Private Basins

All non-priority private detention basins will be inspected within one (1) month of a 6 inch or greater, 24 hour storm event.

7.0 Performing Basin Inspections

7.1 Dry Weather Basin Inspection

The attached detention basin inspection form (Attachment B) shall be used when performing inspections. Number, type and size of inlet and outlet structures will not need to be recorded unless there was a change in design or it wasn't previously recorded. Photos will be taken to show basin conditions and to indicate items of concern. It is recommended the inspector review previous reports prior to completing the inspection.

Reasons for follow-up can include but not be limited to:

- Structural failure (berms, pipes, etc.)
- Poor seeding establishment
- Blockages in or around the inlet and outlet structures
- Obstructions in the basins.
- No maintenance is being completed. (mowing, debris removal, etc.)

7.2 Storm Event Basin Inspection

During event inspections the Field Observation Form (Attachment C) shall be utilized and the basins will be visually inspected for:

- Structural integrity
- Debris and floatable build up at outflow or other locations
- Potential or active flooding concerns
- Potential or active property damage

Inspectors must be aware of their surroundings when performing inspections during and after storm events.

7.3 Concern for Public Safety during Basin Inspections

If during a basin inspection, there are concerns about public safety due to the structural integrity of the basin, the inspector shall immediately contact the Stormwater Manager(s) and the City Engineer (See Attachment E for Emergency Contact Phone Numbers). The City

Engineer, or their designee, will assess the basin for further action.

If the inspector determines there are urgent concerns for the health and safety of the public, the inspector shall call 911 to notify the Rockford Fire Department. The inspector shall then immediately inform the Stormwater Manager(s) and City Engineer of the current situation.

8.0 Basin Maintenance Notifications

8.1 Private and Private Priority Basins

1. Inspections shall be reviewed by the Public Works, Engineering Division to determine the type of maintenance needed. Basin maintenance will be categorized as:
 - a. None – no additional maintenance required
 - b. Minor – No immediate concerns. Minor maintenance (mowing, removal of debris) is needed. Flows are not compromised
 - c. Intermediate – minimal or no maintenance is being performed and basin's ability to function will be compromised if maintenance doesn't commence.
 - d. Major – Basin needs significant maintenance and/or repairs.
2. For basins categorized as having Intermediate and Major maintenance needs:

- a. Owners shall be sent letters detailing needed repairs. This shall be completed within one (1) week for dry weather inspections and within two (2) weeks of storm event inspections.
 - b. Owners shall be given 90 days to complete the maintenance or will be instructed to contact the City regarding a maintenance timetable. Depending on the extent of the repairs and the history of the property or owner the owner may be sent through the code enforcement hearing process.
 - c. The city will request basin owners to send in the attached maintenance confirmation form (Attachment D) upon completion of maintenance items as directed in the letter. Staff will review the maintenance to confirm it has been completed.
 - d. As maintenance is reported as completed on basins in the Intermediate and Major categories it will be indicated on the spreadsheet. Failure of an owner of such a basin to notify the City within the 90 day timeframe will result in an additional inspection to assess compliance.
3. All other basin owners will receive a form letter reminding them of their maintenance responsibilities.
 4. Since all basins are inspected at least biennially, only basins with “Major” maintenance designations shall

have maintenance notices sent to property owner(s) during event inspections. All others will receive required maintenance notices as detailed under dry weather inspections.(8.1, 2-3)

5. All basin owners will receive the Detention Basin Maintenance Guide included as Attachment F.
6. All detention basins and their maintenance category will be tracked on an Excel spreadsheet.

8.2 Public Basins

The Public Works Street Division performs and tracks routine maintenance (mowing, sediment removal, etc.) on public basins according to the Right-of-Way and Drainageway Standard Operating Procedure document. The Stormwater Environmental Team shall notify the Street Division within 48 hours of the inspection of the maintenance issues on City owned basins.

9.0 Enforcement

All recorded plats indicate provisions of the drainage and detention easements and most identifies the property owner's responsibilities. If there is confusion in the plat regarding maintenance responsibilities then Chapter 109, Article 6 of the City of Rockford Code of Ordinances shall be referenced. Violations of these requirements will make the responsible party subject to enforcement as outlined in Chapter 109,

Article 13 of the City of Rockford Code of Ordinances and the Enforcement Response Plan.

Attachment A

Public Basin & Private Priority Basin List

The following are detention basins where the City of Rockford has maintenance responsibilities or are considered private priority basins.

| Public Basins, Basin ID | Private Priority Basins, Basin ID |
|--|--|
| Lowes Distribution Center #288, #289 (Structural Only) | Harrison Park, #225 |
| Elliot Golf Course, #286 (Structural Only) | Turnberry Ridge, 20 th & Windrush, #321 |
| Arden Court, #302 | Linden Pointe, #232 (City responsible for structural issues) |
| Greater Rockford Industrial Park, #287 | Colony Bay, #273 |
| 1004 39 th Ave., (Airport & Assembly), #469 | Leland Place (NE Rote & Divine), 75 |
| Harmon Park Regional Detention Pond, #471 (Structural Only) | Mill & Highgrove, #283 |
| New Towne Dr. & Javelin Dr., #486 | |
| Mulford Village Pond X (west), #91 | |
| 802 Marchesano Dr. (Fire Station #3), #403 | |
| 227 Avon St. (Police Station District 1), #483 | |
| 557 S. New Towne Dr. (Police Station District 3), #392 | |
| 4401 Pepper Dr. (Gambino Park), #470 (Structural Only) | |
| Pepper & Burning Tree, #265 (behind wellhouse) | |
| Blackhawk & Falcon, #320 (NE Corner) | |
| Harmon Park, 550 Colorado, #544 | |
| Harmon Park, 1731 MacAurthur, #551 | |
| Harmon Park, 1724 MacAurthur, #552 | |
| Harmon Park, 1715 Sexton, #553 | |
| Harmon Park, 3522 West Gate, #554 | |
| Harmon Park, 1822 Nebraska, #555 | |
| Harmon Park, 3533 Louisiana, #556 | |
| Gregory Heights, NW Geneva & Newburg, #544 | |
| Gregory Heights, 1405 Geneva, #545 | |
| Gregory Heights, 1218 Esmond, #547 | |
| Gregory Heights, 5111 Carter, #548 | |
| Gregory Heights, 1214 Fieldcrest, #549 | |

Attachment B
City of Rockford
Detention Basin Inspection Form
(If yes is checked take a picture and make comment)

Basin ID _____ Inspector(s) _____

Inspection Date: _____ Basin Type: ___ Dry ___ Wet

Was there rain in the last 24 hours? Yes ___ No ___ 10 yr. /24 hr. Event yes ___ No ___

Rainfall Amount _____

1. Does basin have sediment deposits? Yes ___ No ___ If Yes, estimated Quantity _____

2. Is there standing water in the basin? Yes ___ No ___ If Yes, water depth at outlet structure _____

3. Is there debris in the basin? Yes ___ No ___ Depth of Debris Line _____

Is there garbage or debris obstructing the structures? Yes ___ No ___

4. Inlet/Outlet Conditions

Is there erosion or undercutting at the inlets/outlets? Yes ___ No ___

Has the rip rap or other material been displaced/moved from around the inlet/outlet?

Yes ___ No ___ N/A _____

5. Are there bare spots in the basin that need to be stabilized? Yes ___ No ___

6. Are there trees, shrubs, or cattails in the basin that need to be removed? Yes ___ No ___

7. Embankment/Bottom Conditions

Are there any indications of erosion or sloughing? Yes ___ No ___

8. Downstream conditions (100 ft. downstream of the outfall)

Are there indications of excessive erosion downstream of the primary outlet structure?

Yes ___ No ___ N/A _____

Check if further follow-up is needed _____

Comments/Other Maintenance: _____

Note: If this is a new installation include the number, type and size of inlet and outlet structures.

Inspector Signature: _____ Date: _____

Attachment C

City of Rockford Field Observation

1. Person Making Observation: _____ Date: _____

2. Type of Observation (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> Drainageway | <input type="checkbox"/> Creek |
| <input type="checkbox"/> Citizen Complaint | <input type="checkbox"/> Industrial/Commercial Site |
| <input type="checkbox"/> Detention Basin | <input type="checkbox"/> Outfall Monitoring |
| <input type="checkbox"/> Construction Site | <input type="checkbox"/> Illicit Discharge (If the Illicit Discharge is active contact Brad Holcomb or Jeremy Mitchell immediately) |
| <input type="checkbox"/> Inlet | <input type="checkbox"/> Other _____ |

3. Location/Project Name: _____

4. Is this a post rain event observation? Yes No

5. If yes: Date of Rainfall _____ Rainfall amount (inches) _____

6. Is there standing water in the basin? Yes No If Yes, water depth at outlet structure _____

7. Is a follow-up inspection required? Yes No

8. Is maintenance needed? Yes No

9. Comments (please be detailed and supply photos if necessary): _____

Inspector Signature: _____ Date: _____

Provide Copies to one of the following:

- Brad Holcomb, Stormwater Manager – Cell # 815-218-7343, brad.holcomb@rockfordil.gov,
- Jeremy Mitchell, Asst. Stormwater Manager, Cell # 779-200-1413, Jeremy.mitchell@rockfordil.gov
- Samantha Futrell, Stormwater Coordinator, Cell # 779-207-5799, Samantha.futrell@rockfordil.gov

DETENTION BASIN MAINTENANCE CONFIRMATION

Please fill out and return to the above address when all maintenance is completed

BASIN ID # _____

NAME: _____ PHONE: _____

ADDRESS: _____ EMAIL: _____

LOCATION OF DETENTION BASIN: _____

MAINTENANCE START DATE: _____ MAINTENANCE END DATE: _____

ARE YOU PERFORMING THE MAINTENANCE? YES: _____ NO: _____

TYPE OF MAINTENANCE PERFORMED: _____

CONTRACTORS (IF APPLICABLE): _____

CONTACT: _____

ADDRESS: _____

PHONE/FAX: _____ EMAIL: _____

ENGINEERING COMPANY (IF APPLICABLE): _____

CONTACT: _____

ADDRESS: _____

PHONE/FAX: _____ EMAIL: _____

NOTE: Any grading or change in design may require additional City of Rockford permitting and approvals. Contact the City of Rockford Public Works Department (779-348-7300) to determine permitting requirements.

SIGNATURE: _____ DATE: _____

| FOR OFFICE USE ONLY | |
|--|------------------|
| DATE OF FOLLOW-UP INSPECTION: _____ | INSPECTOR: _____ |
| MAINTENANCE APPROVED: YES: _____ NO: _____ IF NO, WHY? _____ | |
| COMMENTS: _____ | |
| _____ | |

Attachment E

Emergency Contact List

Emergency – 911

| Position | Name | Cell Phone # | Email |
|---|-----------------------|---------------------|--|
| Public Works Director | Kyle Saunders | 815-262-6733 | kyle.saunders@rockfordil.gov |
| Emergency Operations Division Fire Chief | Tim O'Keefe | 779-500-6529 | Tim.okeefe@rockfordil.gov |
| City Engineer | Tim Hinkens | 815-218-2413 | Timothy.hinkens@rockfordil.gov |
| Street and Transportation Superintendent | Mitch Leatherby | 815-980-2062 | Mitchell.Leatherby@rockfordil.gov |
| Stormwater Manager | Brad Holcomb | 815-218-7343 | Brad.Holcomb@rockfordil.gov |
| Assistant Stormwater Manager | Jeremy Mitchell | 779-200-1413 | Jeremy.mitchell@rockfordil.gov |
| Stormwater Coordinator | Samantha Futrell | 779-207-5799 | Samantha.futrell@rockfordil.gov |
| Street Maintenance Supervisor | Harry Noble | 815-218-0843 | Harry.noble@rockfordil.gov |
| Forestry Supervisor | Taylor Hennelly | 779-970-1360 | Taylor.Hennelly@rockfordil.gov |
| Hazardous Materials District Chief | Captain Erik Meyer | 815-289-8351 | erik.meyer@Rockfordil.gov |



(Insert Date)

*(Insert name & address
of responsible party)*

Re. Detention Basin Maintenance at (insert plat name) (Basin ID #)

Dear Mr./Ms.

Storm water detention basins are a best management practice designed to reduce the impacts of pollution and increased velocity of storm water runoff caused by developments. They are an essential part of the City of Rockford’s efforts to improve the quality of our streams, rivers and ponds. Once a detention basin fails, or if it is not adequately maintained, it will no longer perform its intended function and is often very expensive to replace.

By performing routine maintenance on storm water detention basins those responsible for them can reduce potential costly repairs, not only to the basin themselves but downstream as well. On *(insert date)* the City of Rockford inspected the above referenced detention basin to determine if maintenance is needed to keep the basin functioning as originally designed.

An inspection on the above referenced detention basin was completed and the inspection identified the following item requiring maintenance:

- 1.
- 2.

According to the recorded plat, you are responsible for the maintenance of the portion of the basin on your property. If you fail to maintain it as required and it results in a failure you could be found liable for all resulting damage. In addition, failure to properly maintain the basin will result in violations to Chapter 109, Article 6 of the City of Rockford’s code of ordinances.

Please fill out the attached maintenance permit once all maintenance items are completed or contact the City of Rockford within 90 days to discuss a timetable to complete the required maintenance.

If you have any questions regarding this maintenance, please contact *(Insert: Name, Title, Phone #, Email address)*.

Sincerely,

Name
Title
City of Rockford
Public Works Department
425 E. State Street
Rockford, IL 61104

Enc. photo documentation, recorded plat, maintenance guide, maintenance confirmation



Public Works Department

| | |
|---------------------|-------------------------|
| Photo # | Address: |
| Taken By: | Date: |
| Description: | Place Photo Here |

| | |
|---------------------|-------------------------|
| Photo # | Address: |
| Taken By: | Date: |
| Description: | Place Photo Here |

Note: the attached photos indicate examples of corrective actions observed on this detention basin. When performing maintenance as indicated in the photos, check the entire site for other areas with similar maintenance needs.



**EROSION & SEDIMENT CONTROL
PLAN REVIEW
AND
REGULATORY INSPECTIONS
STANDARD OPERATING
PROCEDURES**

January 2022

1.0 General

The purpose of this Standard Operating Procedure (SOP) for plan review and erosion and sediment control regulatory inspections is to comply with Part II, A.3 of the City of Rockford's NPDES Stormwater Permit (ILS000001). This document addresses the City's procedures for reviewing erosion and sediment control plans; Stormwater Pollution Prevention Plans (SWPPP) and performing regulatory site inspections.

2.0 Legal Authority

Legal authority for the City's Erosion and Sediment Control Program is found in the City's Code of Ordinances Chapter 109. This City of Rockford Code provides City staff the authority to access properties for inspections. Chapter 109, the Stormwater Technical Manual and the ILR10 Permit provides specific erosion and sediment control requirements.

3.0 Staffing

Staff from the Department of Public Works shall conduct the reviews of the erosion and sediment controls (ESC) plans and SWPPPs. The primary public works staff that will be trained in plan review include the following positions: Stormwater Manager, the Assistant Stormwater Manager or other properly trained stormwater staff. Training shall be from in-house and external training sources as approved by the Stormwater Program Manager.

Staff from the Department of Public Works, Engineering Division shall be responsible for completing permit compliance inspections. The primary public works staff that will be trained to perform full site inspections will be the following positions: Stormwater Manager, Assistant Stormwater Manager, Stormwater Coordinator and designated Senior Engineering Techs. Each team member shall be trained to perform the inspections as referenced in the ILR10 construction permit and shall be familiar with this document. Training shall be from in-house and external training sources as approved by the Stormwater Manager. Project Managers and Engineering Technicians can perform inspections provided they have the above training and are approved to perform inspections by the Stormwater Manager.

All training shall be in accordance with the Standard Operating Procedures for Stormwater and Environmental Education.

The following equipment shall be utilized when performing inspections: a copy of the SWPPP and erosion and sediment control plans, clipboard, inspection form, camera, personal protection equipment. Personal protection equipment shall include:

- Hard hats – required on all sites with equipment running overhead or as required by the contractor.
- Safety vests – required on all sites.
- Work boots, rubber boots or hip waders (depending on

site conditions).

Safety while doing any inspection is a top priority. Staff should always be aware of their surroundings as well as the location of equipment operating in the area.

4.0 Review and Approval of Erosion and Sediment Control Plans and Stormwater Pollution Prevention Plans

Pursuant to Article 5 of the City's Stormwater Management Ordinance and the City's Subdivision and Site Plan Review Processes, the Stormwater Manager, or their designee will review Stormwater Pollution Prevention Plans (SWPPPs) and erosion and sediment control (ESC) plans for compliance with Articles 3, 5 and 6 of the City's Code of Ordinances Chapter 109 and with the requirements of ILR10, the *IL Urban Manual* and the City's Stormwater Technical Manual. This review, which is one component of the overall plan review process conducted by the City, covers both construction and post-construction stormwater controls. Construction shall not commence on a project until the City has completed this review and has issued its approval of the SWPPP and ESC plan through issuance of a Grading and Stormwater Discharge Permit or through issuance of a Building Permit.

This SOP applies to all construction projects involving one acre or more of land disturbance or involving less than one acre of land disturbance but that are part of a larger common unit of development, including municipal projects. All such

projects are required to obtain and comply with the IEPA Construction General Permit (ILR10) and have the SWPPP and ESC plan reviewed and approved by the City of Rockford Department of Public Works. As part of the review process, all project applicants must submit a Grading and Stormwater Discharge Application which identifies the parties responsible for both the temporary stormwater controls utilized during construction and the parties responsible for ongoing operation and maintenance of post-construction stormwater controls. The SWPPP and ESC plan review checklist (Attachment A) and the City's Stormwater Technical Manual will be used by the Department's Stormwater Manager and staff to review all projects requiring an IEPA construction general permit. The project owners, or their consultants, are required to submit ESC plans and SWPPPs to IEPA and to the City for review and approval as part of the City's process for issuing a Grading and Stormwater Discharge Permit. Work at the site is prohibited until it has obtained permit coverage and is authorized to discharge stormwater under ILR10 and until the City has provided its approval through issuance of a Grading and Stormwater Discharge Permit or the Building Permit. Submittals to IEPA will be verified on the website referenced in Section 5.0.

Subsequent revisions to construction plans after initial City approval must be reviewed and approved by the Traffic Engineer, who is also the Development Engineer, or designee in accordance with the process described above. The Traffic Engineer will conduct his/her review pursuant to the

ordinance requirements in place at the time of the new review. If the Stormwater Manager determines that the revised plans are in compliance, an amended Grading and Stormwater Discharge Permit may be issued.

Plan submittal, review and approval will be tracked by the Public Works Department – Engineering Division (PWE) and the Community & Economic Development Department – Construction & Development Services Division (CDS) using the Hansen tracking system. PWE and CDS manage this tracking system and will enter all new projects into the tracking system in accordance with the City’s Plan Review Process. The project’s status is updated in the system as each review is completed and approved. The Engineering Division, also, utilizes Excel to track plan submittals, reviews and approvals.

5.0 Inspections

The City's oversight inspection program consists of pre-construction inspections where applicable, field inspections and drive-thru inspections. Many active construction sites are viewed by staff while driving to other appointments. Any active construction site that is believed not to have the necessary IEPA or City of Rockford approvals will be inspected for compliance.

If a construction site is found not to have the necessary IEPA or City of Rockford permits a stop work order shall be issued until the proper documents are submitted and approved.

Any milling of parking lots or road projects that are larger than one acre shall be considered maintenance and no IEPA construction permit is required. Any parking lot or road projects larger than one acre that are having material removed down to the sub-base also do not require IEPA construction permitting provided there is less than one acre of disturbance to the subsoil and the adjacent area. (These requirements will be revised as necessary to be consistent with any revisions to the IEPA construction general permit.) These sites shall also have erosion and sediment control measures (BMP's) in place as needed to reduce and/or eliminate sediment runoff.

The Illinois Environmental Protection Agency (IEPA) issues NPDES permits to construction sites and maintains information on permitted sites on their website. The City will work with the Illinois Environmental Protection Agency to

review its list of permitted sites. The City shall also utilize the website below to make sure all NPDES permitted sites have obtained the proper City of Rockford approvals.

(<https://permitsearch.epa.gov/epermit-search/ui/search>)

Sites with less than one acre of disturbance or do not require NPDES permitting shall have erosion and sediment control measures in place as needed to reduce and/or eliminate sediment runoff. These sites shall be inspected at the City's discretion based on the proximity of environmentally sensitive areas, citizen complaints and past contractor compliance issues.

5.1 NPDES Permitted Facilities

All Construction sites regulated under IEPA general construction permit (ILR10) shall be inspected by the City's Public Works – Engineering Division. Sites that have not begun construction activity or are inactive (no construction activity) and have been temporarily stabilized shall receive drive thru inspections only (Section 6.3) until such time as construction begins or recommences. Sites that have been final stabilized as defined in the ILR10 permit are not required to be inspected and the Engineering Division's Excel tracking system will indicate that final stabilization has been achieved.

5.2 City of Rockford Projects

Any City of Rockford project of 1 acre or more in land

disturbance or with less than one acre of land disturbance but that is part of a larger common unit of development shall comply with the requirements of the NPDES (ILR10) general construction permit. These projects are subject to the same inspection requirements as a private property project.

5.3 Citizenry Complaints and Past Known Noncompliance Record

The City has a citizen complaint program which includes a hotline (779-348-7300) for phone calls and the City's website (www.rockfordil.gov). Complaints from the public are recorded and investigated. Every citizenry complaint will be followed up with a field inspection by City staff within three business days.

Monthly inspections shall be completed for construction companies, property owners and/or developers that have had an administrative order issued within the past year. If an additional administrative order has not been issued within a year from the last administrative order issuance then the City will return to the normal inspection process. If non-compliance continues then additional enforcement procedures will take place (see Section 8.0).

6.0 Field Inspection Program

This section describes the procedures for performing field inspections of construction sites. These inspections are a critical component of this program.

6.1 Inspection Priority and Frequency

Field inspections may be scheduled in advance with the contractor though the preference is to perform inspections without prior notice. Field inspections will be prioritized at the City's discretion. Factors for prioritization will be based on: citizen complaints, proximity to environmentally sensitive areas, date construction commenced, previous noncompliance of the owner, contractor or consultant or random site visits.

All NPDES permitted construction sites on which construction has commenced shall have a full erosion and sediment control inspection completed a minimum of two (2) times during the construction season (May 1st – November 30); provided, however, that sites for which an alternate inspection frequency is specified by Section 5.1 or Section 5.3 of this SOP shall be inspected as stated in that Section. The first full erosion and sediment control inspection for each site will be conducted within the first two weeks of the date construction is known to have begun. In the situation where construction continues beyond the season additional inspections shall be completed a minimum of once every three months.

Sites/contractors with past compliance issues will be inspected monthly in accordance with Section 5.3. In lieu of full inspections, drive thru inspections (Sec. 6.3) shall be completed on sites that are inactive (no construction activity) and have been temporarily stabilized. Sites that have been final stabilized as defined in the ILR10 general construction permit are not required to be inspected under this SOP.

6.2 Pre-Construction Inspections

When a project is adjacent to an environmentally sensitive area a pre-construction inspection shall be completed to confirm all necessary BMP's are in place prior to the commencement of any land disturbing activity other than those associated with BMP placement.

Environmentally sensitive areas are areas such as wetlands, creeks, rivers, drainageways, IEPA designated superfund sites, site with endangered species and areas with steep slopes (6% or greater).

Attachment B is a copy of the Pre-Construction Checklist.

6.3 Drive Thru Inspections

Drive thru inspections shall be utilized to document visits to sites that do not constitute a full erosion and sediment

control site inspection. A drive thru inspection does not replace a full erosion and sediment control site inspection; it is an assessment of the site conditions to determine if a more detailed inspection is required. Drive thru inspections may be scheduled or may be conducted on an ad hoc basis as City inspectors drive by or through a site during the course of other routine business. Drive thru inspection reviews include: cleanliness of the site and the condition of in-place BMP's. A copy of the Drive Thru Inspection Checklist, which will be completed during the inspection, is included as Attachment C of this document. If there are no deficiencies noted during the drive thru then no follow-up action is required. If there are minor deficiencies the site supervisor or owner shall be notified at the time of the inspection via an on-site meeting, phone call or email to make the necessary corrective actions. If the deficiencies have not been addressed in a timely manner or the construction site has major deficiencies, a full erosion and sediment control site inspection shall be completed within 3 business days of the drive thru inspection. Major deficiencies include overall poor site conditions; poorly installed BMP's, failure of BMP's, evidence of sediment leaving the site or great potential that sediment can leave the site. Major deficiencies do not include routine maintenance of structural controls where the site is generally in good condition and there is no evidence that routine maintenance is not conducted in a timely manner. The drive thru inspections results shall

be documented according to Section 9.0.

6.4 Full Erosion and Sediment Control Site Inspection

The full Erosion and Sediment Control Site Inspection Form (Attachment D) shall be completed during the inspection and any deficiencies will be reviewed with the site supervisor, if available. A letter (Attachment E) describing the inspection report results will be sent to all responsible parties as detailed on the ILR10 Notice of Intent, typically the owner and/or contractor. When deemed applicable, pictures shall be taken to document site conditions.

The inspection form primarily focuses on site conditions including but not limited to: discharge points, disturbed areas that have not been final stabilized, structural control measures, locations where vehicles enter and exit the site, evidence of discharges to Waters of the State and Best Management Practices (BMPs) effectiveness and condition. The SWPPP and inspection records will be reviewed if accessible. If the SWPPP is not accessible a follow up appointment will be scheduled to review the document.

The primary manuals the City will utilize for BMP installations and maintenance will be the Illinois Urban Manual and the IDOT Erosion and Sediment Control Field Guide for Construction Inspections. Other manuals

may be utilized if approved by the City of Rockford.

The City shall confirm that corrective actions for major deficiencies identified during field inspections are completed in a timely manner either through certification provided by the site owner and/or operator or through follow-up inspections by the City. Major deficiencies include overall poor site conditions; ineffective or inappropriate BMPs; missing BMPs (i.e., BMPs required by the SWPPP but not installed or implemented); BMPs that were not installed or constructed correctly, and in accordance with good engineering practices and the Stormwater Technical Manual and the Illinois Urban Manual; and poorly maintained or implemented BMPs. Major deficiencies do not include routine maintenance of structural controls where the site is generally in good condition and there is no evidence that routine maintenance is not conducted in a timely manner. If the site owner/operator does not provide certification of all required corrective actions for major deficiencies within one week following the inspection, the City will issue a stop work order until such time as the deficiencies have been addressed and certified to the City. Deficiencies not addressed shall follow the enforcement procedures in Section 8.0. Status of corrective actions will be noted in the inspection and sampling log.

7.0 Termination of NPDES permits

Construction sites that meet the termination requirements in the ILR10 permit shall be listed as inactive and will no longer be inspected. Prior to termination, sites shall be reviewed to confirm final stabilization as detailed in the ILR10 General Construction Permit and construction best management practices have been removed. This review shall consist of a final inspection, which could be a field inspection or a drive thru inspection if appropriate, or certification by the construction site owner/operator.

8.0 Enforcement

Enforcement measures will be in accordance with Chapter 109 Article 13 of the City of Rockford City of Rockford Code of Ordinances and the Stormwater Division Enforcement Response Plan for corrective actions not remedied within the required timeframe.

9.0 Documentation and Record Management

In an effort to reduce paper no hard copies of site data (inspection reports and letters) will be kept. All site records will be in a digitized form in the Stormwater Drive on the City of Rockford computer system. Digitized information may include: SWPPP, inspection reports/checklists, letters, photos, correspondence, etc. These files will be saved as follows:

- 1) Open the Stormwater Drive (note: this drive has limited access for people who perform duties directly related to the City's stormwater program),
- 2) Open the Inspections & Investigations Folder
- 3) Open the Construction folder,
- 4) Open the COR Inspection folder,
- 5) Open the inspection folder for the current year,
- 6) If a folder for a site is already created open it and save the data. Inspection reports should be saved by date. If it is a new site create a new folder.

Any construction site where inspections carry over to the next year shall have the entire digitized inspection folder copied and pasted to the next year.

An excel spreadsheet for all inspections has also been created. This spreadsheet can be found in the Stormwater Drive in the folder entitled *Inspection and Sampling Logs*. All spreadsheets are saved by year for easy tracking. Data includes: date, construction site name, type of inspection, NPDES permit # (if applicable), type of follow-up needed, date of follow-up and whether corrective actions have been addressed. Notes about the inspection can also be included.

Attachment A

SWPPP/ESC Plan review Checklist

Note: the SWPPP template IEPA references is the USEPA template. After reviewing the IEPA ILR10 permit and the USEPA SWPPP template the following items are required in all SWPPP:

Site Name: _____

To be used on construction sites that require an IEPA NPDES stormwater permit (ILR10)

| SWPPP Content | Yes | NO | NA | Comments |
|---|-----|----|----|----------|
| Contact Information/Responsible parties | | | | |
| Project Owner & contact information | | | | |
| SWPPP Preparer Contact Information | | | | |
| Site Information | | | | |
| Project Name & Address | | | | |
| Latitude & Longitude (NOI is acceptable) | | | | |
| Discharge Information | | | | |
| Is project discharging to the City of Rockford's MS4? | | | | |
| Name of closest receiving waters | | | | |
| Runoff Coefficients after construction | | | | |
| Nature of Construction Activity | | | | |
| Description of Project | | | | |
| Size of project (total size & area to be disturbed) | | | | |
| Sequence of Construction (major soil disturbing) | | | | |
| Allowable Non-stormwater Discharges | | | | |
| Site Maps | | | | |
| Drainage patterns before and after major grading activities | | | | |
| Vehicle entrance & exit locations plus controls to prevent offsite tracking | | | | |
| Total site areas and areas of soil disturbance | | | | |
| Location and types of all structural and non-structural controls | | | | |
| Areas where stabilization practices are to occur | | | | |
| Material and equipment storage areas | | | | |
| Stockpile locations | | | | |
| Locations of surface waters and wetlands | | | | |
| Location(s) where storm water discharges from site | | | | |
| Inspections & Maintenance | | | | |
| Inspection Schedule & procedures | | | | |
| Procedures for corrective actions | | | | |
| Person(s) responsible for corrective actions | | | | |

Standard Operating Procedures for Erosion and Sediment Control Regulatory Inspections

City of Rockford

| SWPPP Content | Yes | No | Na | Comments |
|--|-----|----|----|----------|
| Documentation requirements | | | | |
| Endangered species (NOI is acceptable) | | | | |
| Historic Preservation (NOI is acceptable) | | | | |
| Other required permitting (if applicable) | | | | |
| Does the SWPPP address protection of endangered species or historic preservation? (if applicable) | | | | |
| Erosion & Sediment Controls - Should include specifications and location on maps (Illinois Urban Manual to be used for guidance) | | | | |
| Note: these are common controls used onsite in the area. | | | | |
| Other BMP's may be necessary or more effective | | | | |
| Perimeter controls | | | | |
| Sediment Trackout Controls | | | | |
| Stockpile Controls | | | | |
| Inlet Protection Controls | | | | |
| Stabilization Practices | | | | |
| Concrete washout | | | | |
| Other Controls | | | | |
| Post Construction Runoff | | | | |
| Are post construction runoff measures included to minimize pollutants after construction is completed? | | | | |

SWPPP & ESC Plan Reviewer _____

Date of Plan Review _____

Attachment B

Pre-Construction Checklist

The pre-grading checklist shall be completed when a project is adjacent to an environmentally sensitive area.

Date: _____

Project Name: _____

Inspector: _____

1. Are all required certifications signed and included in the SWPPP?
Yes _____ No _____

2. Is the SWPPP located onsite? Yes _____ No _____

Location of the SWPPP: _____

3. Has the SWPPP manager and Inspector been identified? Yes ___ No ___

4. Has the primary contractors been identified and the NOI updated (if necessary) Yes ___ No _____

5. Are all required BMP's (inlet protection, perimeter controls, stabilized construction entrance, etc.) installed? Yes _____ No _____

Any question answered "NO" must be corrected prior to the start of grading.

Comments: _____

Inspector Signature: _____ Date: _____

Attachment C

Drive Thru Inspection Checklist

A Windshield inspection is a windshield survey of site conditions at a construction site. A windshield inspection will be acceptable for sites with no visible corrective actions or with minor maintenance issues provided the site supervisor is contacted and the maintenance items are addressed. A follow-up must be completed to confirm maintenance has been completed. Sites with significant maintenance needs will have a stormwater construction site inspection completed (see Standard operating Procedure for Regulatory Erosion and Sediment Control Inspections Section 5.3 & 5.4).

Construction Site Name: _____

Date: _____

Inspector: _____

Site Conditions:

1. Site is clean and well maintained (trash and debris picked up, streets clean, no spills, etc.)

Yes _____ No _____

2. All visible BMP's are maintained and there are no corrective actions needed.

Yes ___ No ___ NA _____

3. Minor BMP maintenance is needed and the Site Manager has been contacted.

Yes _____ No _____ NA _____

4. Name of Site Contact: _____

5. Phone # _____

- 6. Date of Follow-up (if necessary): _____
- 7. All maintenance items addressed: Yes _____ No _____
- 8. If maintenance items were not addressed or additional maintenance is noted during the follow-up visit a stormwater construction site inspection will be done.
- 9. Is there evidence of sediment leaving the site? Yes _____ No _____
- 10. Is a Stormwater Construction Site Inspection Needed? Yes _____
No _____

Comments:

Inspector Signature: _____ Date: _____

Attachment D

City of Rockford

Erosion and Sediment Control Site Inspection Report

| General Information | | | |
|---|--|--|--|
| Project Name | | | |
| NPDES Tracking No. | | Location | |
| Date of Inspection | | Start/End Time | |
| Inspector's Name(s) | | | |
| Inspector's Title(s) | | | |
| Inspector's Contact Information | | | |
| Describe present phase of construction | | | |
| Inspection Type: | | | |
| Random Site Visit ___ Citizen Complaint ___ Date Received _____ Time Received _____ | | | |
| Weather at time of this inspection? | | | |
| <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: | | | |
| Temperature: _____ | | Date of last Rain Event (> 0.5") _____ | |
| Have all discharge points been inspected? <input type="checkbox"/> Yes <input type="checkbox"/> No Are there any discharges at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: | | | |
| Was the SWPPP onsite and available for review? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Onsite but not Accessible/Reviewed | | | |

Site-specific BMPs

- Utilize the SWPPP and the erosion and sediment control plans (if accessible) to determine types and locations of BMP's for the site.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

| | BMP | BMP Installed? | BMP Maintenance Required? | Corrective Action Needed and Notes |
|---|----------------------------------|---|---|------------------------------------|
| 1 | Perimeter Protection | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 2 | Inlet Protection | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 3 | Stabilized Construction Entrance | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

| | BMP | BMP Installed? | BMP Maintenance Required? | Corrective Action Needed and Notes |
|----|------------------|---|---|---|
| 4 | Concrete Washout | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 5 | Check Dam | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 6 | Other BMP | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 7 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 8 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 9 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 10 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

| | BMP/activity | Implemented | Maint. Required | Corrective Action Needed and Notes |
|---|---|---|--|---|
| 1 | Are all slopes and disturbed areas not actively being worked properly stabilized? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 2 | Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 3 | Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 4 | Are discharge points and receiving waters free of any sediment deposits? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

| | BMP/activity | Implemented | Maint. Required | Corrective Action Needed and Notes |
|----|--|---|--|---|
| 5 | Are storm drain inlets properly protected? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 6 | Is the construction exit preventing sediment from being tracked into the street? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 7 | Is trash/litter from work areas collected and placed in covered dumpsters? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 8 | Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 9 | Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 10 | Are materials that are potential stormwater contaminants stored inside or under cover? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 11 | Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 12 | (Other) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

General Comments

Inspector Signature: _____ Date: _____

Attachment E



Insert Date

*(Insert Name & Address
of permit holder)*

RE: Erosion Control Inspection at *(insert name of facility)* (ILR10 *insert permit #*)

Dear Mr. / Ms.

A soil erosion and sediment control inspection was completed on *(insert date)* by the City of Rockford. The purpose of the inspection was to determine the effectiveness of soil erosion and sediment control measures in preventing water pollution.

The site inspection identified the following items needing your attention to meet the requirements of your NPDES permit as well as the City of Rockford Code of Ordinances:

- 1.
- 2.
- 3.

Under the Illinois Construction General Permit (ILR10), all corrective actions must be completed in a timely manner. Please provide a response to this letter within 7 days certifying all corrective actions have been completed or provide an estimate for completion along with an explanation for the delay. Failure to do so will result in enforcement measures as indicated in Chapter 109 of the City of Rockford's Code of Ordinances.

If you have any questions regarding this inspection, please contact (Insert: Name, Title, Phone #, Email address).

Sincerely,

Name

Title

City of Rockford
Public Works Department
425 E. State Street
Rockford, IL 61104

Cc.



| | |
|---------------------|-------------------------|
| Photo # | Address: |
| Taken By: | Date: |
| Description: | Place Photo Here |

| | |
|---------------------|-------------------------|
| Photo # | Address: |
| Taken By: | Date: |
| Description: | Place Photo Here |

Note: the attached photos indicate examples of corrective actions observed on this construction site. When performing maintenance as indicated in the photos, check the entire site for other areas with similar maintenance needs.



**EROSION AND SEDIMENT CONTROL
GUIDANCE MANUAL FOR CITY OF
ROCKFORD PROJECTS
STANDARD OPERATING
PROCEDURES**

January 2024

1.0 General

An important component of any stormwater management program is the reduction of pollutants from construction sites that may discharge to the municipal separate storm sewer system or waters of the state. A proactive program to identify and inspect all permitted construction sites can significantly reduce pollutants entering the municipal storm drainage system.

The following program and procedures shall be followed by City of Rockford's Public Works Engineering Division when managing municipal construction projects. This guidance applies to the Project Managers and stormwater compliance inspectors who oversee the City's construction projects. Project Managers are located in the City's Public Works Engineering Division and their responsibilities include overseeing City construction projects. The stormwater compliance inspectors are generally the projects consultant or contractor and they conduct the stormwater compliance inspections required by the ILR10 or an individual NPDES permit, where appropriate. The inspectors are responsible for ensuring that the project is in compliance with the ILR10 and the SWPPP, that corrective actions are identified and corrected in a timely manner, and that all BMPs are being properly operated and maintained.

In addition, a member of Stormwater & Environmental Team (SWET) from the Public Works, Engineering Division shall conduct compliance oversight inspections as addressed by the

City's Standard Operating Procedures for Erosion and Sediment Control Plan Review and Regulatory Inspections.

All Project Managers and stormwater compliance inspectors, as well as erosion and sediment control plan reviewers, must be knowledgeable in the principles and practices of erosion and sediment control measures, the requirements of the ILR10, the Illinois Urban Manual and the City's stormwater technical manual, and be trained annually pursuant to the City's Standard Operating Procedure for Stormwater and Environmental Education. Consultants and contractors, supply documentation of training in lieu of participating in City sponsored training events.

Questions regarding this document or the IEPA General Construction permit should be directed to a member of the Stormwater & Environmental Team (SWET).

2.0 Plan Reviews

Any construction project managed by the City of Rockford, regardless of size, will be required to have erosion and sediment control measures that meet the requirements of Articles 3, 5 and 6 of the City's Code of Ordinances Chapter 109, the standards in the Illinois Urban Manual and the City's stormwater technical manual. These erosion and sediment control plans must be approved by a member of SWET in the Public Works, Engineering Division, specifically by a person knowledgeable in the principles and practices of erosion and sediment control measures and trained annually pursuant to

the City's Standard Operating Procedure for Stormwater and Environmental Education. In addition, any construction project managed by the City of Rockford that disturbs more than 1 acre or are part of a larger common unit of development shall comply with the IEPA General Construction Permit (ILR10) which includes developing a Stormwater Pollution Prevention Plan (SWPPP) and erosion and sediment control plans. These plans must also be approved as indicated above, and pursuant to the City's Standard Operating Procedures for Erosion and Sediment Control Plan Review and Regulatory Inspections as part of the plan review process.

3.0 Project Managers/Inspectors Responsibilities

As the owners of an IEPA permitted construction project the City is responsible for assuring the SWPPP and erosion and sediment control plans are implemented and maintained. The goal of any SWPPP is to keep pollutants from leaving the site, including infiltration. As the project managers for the City of Rockford you are responsible for ensuring the day-to-day activities are followed in a compliant manner and to assure the SWPPP is being implemented and maintained.

NOTE: Most regulatory inspections are initiated by a drive thru or citizen complaint. First impressions for a regulatory inspector are important. If a drive thru shows a site is clean, organized with all BMP's maintained that inspector may decide to drive to the next site. If a site is messy, unorganized with poorly maintained BMP's regulatory inspections will happen often.

4.0 Permitting Requirements

4.1 Construction Projects Less than 1 Acre, Parking Lots and Road Projects

Though IEPA permitting is not required, unless items a & b apply in section 4.2, sites less than one acre shall have erosion and sediment control measures (BMP's) in place as required to reduce and/or eliminate sediment runoff.

Any milling of parking lots or road projects that are larger than one acre shall be considered maintenance and no IEPA construction permit is required. Any parking lot or road projects larger than one acre that are having material removed down to the sub-base material also do not require IEPA construction permitting provided there is less than one acre of disturbance to the subsoil and the adjacent area. These sites shall also have erosion and sediment control measures (BMP's) in place as required in order to reduce and/or eliminate sediment runoff.

The drive thru inspection form (attachment A) shall be used to by technicians, coordinators and managers in the Public Works Engineering Division to ensure BMP's are in place and functional. These positions shall be trained as indicated in the Stormwater & Environmental Education Standard Operating Procedures. This inspection shall be done throughout the project with copies provided to the Stormwater & Environmental team for review.

Contractors not addressing erosion and sediment control concerns shall be reported to the Stormwater and Environmental Team who shall perform a full erosion and sediment control inspection.

4.1 NPDES Construction Permits

An IEPA General Construction Permits Notice of Intent (NOI) must be submitted by the project manager or a member of SWET when:

- a. There is more than 1 acre of land disturbance (clearing, grading, and excavation of land),
- b. When a site less than 1 acre is part of a larger common plan of development,
- c. When there is potential for contributing to a violation of water quality standards or significant contribution of pollutants to waters of the state.

ALL NOI's must be submitted on the City of Rockford's IEPA construction website. For log information see a member of SWET. Coverage under the ILR10 requires submittal of the SWPPP in addition to the NOI. An electronic version of the SWPPP must be sent to IEPA by email at the following address: epa.constilr10@illinois.gov. Construction can start 30 days after NOI and SWPPP submittal and following the issuance of the City Grading and Stormwater Discharge Permit or the Building Permit. .

All SWPPP documents, including the inspections and erosion

control plan should be kept onsite in one location, preferably a 3-ring binder. The permit and notice of intent should be posted.

The SWPPP is a living document and should be updated as the project progresses (see attachment D).

The following is a summary of the requirements of the ILR10 General Construction Permit. City of Rockford project managers, inspectors, technicians, consultants and contactors should be familiar with the contents of the permit as well as this document. Any questions should be directed to a member of the Stormwater and Environmental Team.

5.0 SWPPP Content

The SWPPP is a site specific document and will vary for each project. The following are items that shall be included in the SWPPP, see Section 2.0 for SWPPP and erosion and sediment control plan review requirements which must take place prior to the start of construction. All SWPPP's must be kept current in accordance with ILR10 permit requirements.

Components of the Plan: Each storm water plan must include a site map and a description of the measures and controls that will be used to prevent and/or minimize pollution of storm water. The site description must include:

- **Topographic Map:** Maps must extend one-fourth mile beyond the property line, showing the facility, surface water

bodies, wells, seepage pits, infiltration ponds, storm water discharge points;

- **A Site Map:** Maps should include all outfalls and storm water discharges, drainage areas of each storm water outfall, structural storm water pollution control measures (i.e. retention ponds, vegetation swales, sediment traps), name of receiving water/separate municipal storm sewer system, locations of exposed significant materials, location of past spills/leaks, location of high risk/waste-generating areas and activities;
- **Narrative Description:**
 - Include the activities (industrial) occurring at the facility, significant materials that are treated, stored or disposed of in a manner to allow exposure with storm water;
 - Materials, equipment and vehicle maintenance practices employed to minimize contact of significant materials to storm water;
 - Existing structural and non-structural control measures employed to reduce pollutants in storm water discharges;
 - Industrial storm water discharge treatment facilities;
 - Methods of on-site storage and disposal of significant materials;
- **Material Inventory:** A list of all materials, used, stored, or produced on site with emphasis on those materials that are exposed to storm water and have the potential of polluting storm water runoff;
- **List All Significant Spills or Leaks:** Include all spills and

leaks that occurred during the past three years;

- **Storm Water Management Controls:**
 - Include all methods that will be utilized to control significant pollutants in storm water runoff;
 - Identify storm water pollution prevention plan personnel who will be responsible for developing, implementing and revising the plan;
 - Procedures for the inspection and maintenance of storm water conveyance system devices;
 - Good housekeeping policies and procedures;
 - Identify areas where significant spills may occur that would affect storm water discharges, as well as procedures for handling such events;
- **Storm Water Management Practices:** List all measures to remove significant pollutants from the storm water (i.e. containment devices, oil-grease separators, debris and sediment controls, waste chemical disposal);
- **Sediment and Erosion Prevention:** Identify topographic areas that have a high potential for erosion of soil and the methods to be employed to reduce such erosion;
- **Employee Training:** Periodic training of all employees at all levels of responsibility should be conducted in the storm water pollution prevention plan. Topics should include spill response, materials/equipment handling procedures, and good housekeeping strategies;
- **Inspection Procedures:** Qualified plant personnel should conduct periodic inspections, documenting such inspections and any corrective action to be initiated;
- **Non-Storm Water Discharges:** A qualified plant

employee should conduct a visual inspection of storm water to assure that non-storm water discharges are not entering the storm water (i.e. oil sheen). In addition, an inspection of procedures/equipment for the discharge on non-storm water should be conducted when appropriate. Laboratory testing is not required but should be conducted if reason exists to believe that significant pollutants are present in the storm water discharges;

- **Annual Inspection:** An annual inspection is required that includes a review of the storm water pollution prevention plan, as well as the facility to assure all measures and controls are operating properly. The annual report should be submitted to the Agency as outlined in this permit;
- **Other Program Requirements:** The plan shall include a description and records for additional federal and/or local programs that may affect storm water discharges (i.e. Spill Prevention Control and Countermeasures-SPCC);
- **Signature Requirements:** The signature of the person responsible for the preparation of the initial plan and all subsequent amendments to the plan should be included.
- **Stormwater Pollution Prevention Plans for Construction Activities.**

SWPPP must be retained at the job site from the date of project initiation to the date of final stabilization.

6.0 Field Inspections

This section describes the procedures for performing field inspections of construction sites. These inspections are a critical component of this program.

6.1 Pre-Construction Inspections

When a project is adjacent to an environmentally sensitive area a pre-construction inspection shall be completed to confirm all necessary BMP's are in place prior to the commencement of any land disturbing activity other than those associated with BMP placement.

Environmentally sensitive areas are areas such as wetlands, creeks, rivers, drainageways, IEPA designated superfund sites, site with endangered species and areas with steep slopes (6% or greater).

Attachment B is a copy of the Pre-Construction Checklist.

6.2 ILR10 Inspections

Generally, project consultants or contractors perform stormwater compliance inspections as required in the ILR10 permit. When conducting these inspections, it is preferable, though not required, that the same person performs weekly and rain event inspections. This is because of their familiarity with the project area. The inspector should also be knowledgeable in the principles and practices of erosion and sediment control measures as addressed in Section 1.0, and meet the criteria for "Qualified Personnel" as defined in ILR10.

When stormwater compliance inspections are to be conducted by City staff the project manager shall consult with a member of SWET to ensure the inspector meets the qualifications as defined in the ILR10 permit and has received the training as detailed in the Stormwater & Environmental Education Standard Operating Procedures.

Inspections must be done at least once every seven calendar days and within 24 hours of the end of a storm or by the end of the following business or work day that is 0.5 inches or greater. Every inspection report should indicate what type of inspection is being done. Weather data should be included. (Attachment C - sample inspection report)

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

Inspectors should verify previous weeks maintenance items have been addressed. The following items should be inspected:

- All disturbed areas,
- Equipment and material storage areas,
- Onsite BMP's, these should be checked for maintenance,

proper installs and that they are functioning properly,

- Discharge locations,
- Locations where vehicles enter and exit.
- The entire site must be monitored to assure no potential pollutants enter the City of Rockford's storm system or leaves the site.

Based on the results of the inspection, the description of potential pollutant sources identified in the SWPPP shall be revised as appropriate as soon as practicable after such inspection to minimize the potential for such discharges.

Such modifications shall provide for timely implementation of any changes to the plan and pollution prevention control measures within 7 calendar days following the inspection.

The inspection report shall either indicate when maintenance was completed or a maintenance log shall be included.

6.3 Regulatory Inspection

City projects can be inspected anytime by authorized representatives of the Illinois or U.S. EPA. In addition, all City projects requiring an ILR10 permit shall be inspected by SWET in the Public Works Engineering Division at least twice during the construction season (May 1st - November 30) pursuant to the City's Standard Operating Procedures for

Erosion and Sediment Control Plan Review and Regulatory Inspections. The inspector shall review the inspection result with the project manager to initiate corrective actions.

7.0 Non-Stormwater Discharges

Non-Stormwater is discharges not composed entirely of rain. The following non-stormwater discharges are authorized under the ILR10 permit providing they do not contain pollutants:

- Firefighting activities
- Fire hydrant flushing's
- Waters used for dust control
- Water used to wash vehicles where detergents are not used
- Potable water sources including uncontaminated waterline flushing
- Landscape irrigation drainages
- Routine external building wash down which does not use detergents
- Pavement wash waters which does not use detergents and where spills or leaks of toxic or hazardous materials have not occurred,
- Uncontaminated air conditioning condensate
- Uncontaminated springs or groundwater
- Foundation footing drains where flows are not contaminated.

All other discharges (i.e. concrete or paint waste) must be

managed as part of the SWPPP.

8.0 Incidence of Non-Compliance

Permit Language:

Erosion and Sediment Control Guidance Manual for' City of Rockford Projects

The permittee shall notify the appropriate Agency Field Operations Section office by email, telephone or fax within 24 hours of any incidence of noncompliance for any violation of the stormwater pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. The Permittee shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the stormwater pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. Submission shall be on forms provided by the Agency and include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. Corrective actions must be undertaken immediately to address the identified noncompliance issue(s).

If you or your contractor believes there is cause for an incidence of non-compliance submittal contact the Stormwater & Environmental Team (SWET) immediately for

guidance. A member of SWET shall notify the local IEPA office within 24 hours after an incident and submit a report within 5 days.

Corrective actions must be initiated immediately.

9.0 Permit Termination

Where a site has completed final stabilization and all stormwater discharges from construction activities that are authorized by this permit are eliminated, the permittee must submit a completed Notice of Termination.

- Talk to members of the Stormwater & Environmental Team regarding terminating a permit.
- All SWPPP records and inspections must continue to be current until permit is terminated.
- Records must be kept for three years after termination.

Attachment A**Drive Thru Inspection Checklist**

A Windshield inspection is a windshield survey of site conditions at a construction site. A windshield inspection will be acceptable for sites with no visible corrective actions or with minor maintenance issues provided the site supervisor is contacted and the maintenance items are addressed. A follow-up must be completed to confirm maintenance has been completed. Sites with significant maintenance needs will have a stormwater construction site inspection completed (see Standard operating Procedure for Regulatory Erosion and Sediment Control Inspections Section 5.3 & 5.4).

Construction Site Name: _____

Date: _____

Inspector: _____

Site Conditions:

1. Site is clean and well maintained (trash and debris picked up, streets clean, no spills, etc.)

Yes _____ No _____

2. All visible BMP's are maintained and there are no corrective actions needed.

Yes ___ No ___ NA _____

3. Minor BMP maintenance is needed and the Site Manager has been contacted.

Yes _____ No _____ NA _____

4. Name of Site Contact: _____

5. Phone # _____

6. Date of Follow-up (if necessary): _____

7. All maintenance items addressed: Yes _____ No _____

8. If maintenance items were not addressed or additional maintenance is noted during the follow-up visit a stormwater construction site inspection will be done.

9. Is there evidence of sediment leaving the site? Yes _____ No _____

10. Is a Stormwater Construction Site Inspection Needed? Yes _____
No _____

Comments:

Inspector Signature: _____ Date: _____

Attachment B

Pre-Grading Checklist

The pre-grading checklist shall be completed when a project is adjacent to an environmentally sensitive area.

Date: _____

Project Name: _____

Inspector: _____

1. Are all required certifications signed and included in the SWPPP?
Yes _____ No _____

2. Is the SWPPP located onsite? Yes _____ No _____

Location of the SWPPP: _____

3. Has the SWPPP manager and Inspector been identified? Yes ___ No ___

4. Has the primary contractors been identified and the NOI updated (if necessary) Yes ___ No _____

5. Are all required BMP's (inlet protection, perimeter controls, stabilized construction entrance, etc.) installed? Yes _____ No _____

Any question answered "NO" must be corrected prior to the start of grading.

Comments: _____

Inspector Signature: _____ Date: _____

Attachment C

City of Rockford

Erosion and Sediment Control Site Inspection Report

| General Information | | | |
|---|--|--|--|
| Project Name | | | |
| NPDES Tracking No. | | Location | |
| Date of Inspection | | Start/End Time | |
| Inspector's Name(s) | | | |
| Inspector's Title(s) | | | |
| Inspector's Contact Information | | | |
| Describe present phase of construction | | | |
| Inspection Type: | | | |
| Random Site Visit ___ Citizen Complaint ___ Date Received _____ Time Received _____ | | | |
| Weather at time of this inspection? | | | |
| <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: | | | |
| Temperature: _____ | | Date of last Rain Event (> 0.5") _____ | |
| Have all discharge points been inspected? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Are there any discharges at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| If yes, describe: | | | |
| Was the SWPPP onsite and available for review? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Onsite but not Accessible/Reviewed | | | |

Site-specific BMPs

- Utilize the SWPPP and the erosion and sediment control plans (if accessible) to determine types and locations of BMP's for the site.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

| | BMP | BMP Installed? | BMP Maintenance Required? | Corrective Action Needed and Notes |
|---|----------------------------------|---|---|------------------------------------|
| 1 | Perimeter Protection | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 2 | Inlet Protection | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 3 | Stabilized Construction Entrance | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

| | BMP | BMP Installed? | BMP Maintenance Required? | Corrective Action Needed and Notes |
|----|------------------|---|---|---|
| 4 | Concrete Washout | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 5 | Check Dam | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 6 | Other BMP | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 7 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 8 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 9 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 10 | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

| | BMP/activity | Implemented | Maint. Required | Corrective Action Needed and Notes |
|---|---|---|--|---|
| 1 | Are all slopes and disturbed areas not actively being worked properly stabilized? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 2 | Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 3 | Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 4 | Are discharge points and receiving waters free of any sediment deposits? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

| | BMP/activity | Implemented | Maint. Required | Corrective Action Needed and Notes |
|----|--|---|--|---|
| 5 | Are storm drain inlets properly protected? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 6 | Is the construction exit preventing sediment from being tracked into the street? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 7 | Is trash/litter from work areas collected and placed in covered dumpsters? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 8 | Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 9 | Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 10 | Are materials that are potential stormwater contaminants stored inside or under cover? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 11 | Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |
| 12 | (Other) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |

General Comments

Inspector Signature: _____ Date: _____



RIGHT-OF-WAY & DRAINAGEWAY INSPECTION & MAINTENANCE

STANDARD OPERATING PROCEDURES

January 2022

1.0 General

It is the responsibility of the City of Rockford Public Works Department to ensure the proper operation and maintenance of the MS4, including city-owned and timely enforcement of privately-owned stormwater structures. The City shall inspect, maintain, clean, and repair all city owned components of the MS4 including storm inlets, pipes, culverts, manholes, detention ponds, drainageways and all other stormwater structures to the maximum extent practicable. The City shall inspect, track and take necessary action to require that privately-owned stormwater structures are adequately maintained.

2.0 Personnel

2.1 Inspections

1. Storm Inlets/Manholes/Pipes – Street Maintenance Workers, Stormwater Staff, Engineering Project Managers, Engineering Technicians
2. Creek/Drainageway inspections – The Stormwater Staff of the Engineering Division and the Street Supervisors

2.2 Maintenance

Street Supervisors, Equipment Operators, Maintenance Workers, External Contractors

3.0 Equipment

3.1 Inspection

1. Clip Board with pen or pencil
2. Work boots or appropriate foot wear
3. Tape measure
4. Camera
5. Safety vest
6. Hard hats when around heavy equipment

3.2 Maintenance

1. Jet/Vac sewer cleaning vehicles (i.e. Vactor)
2. Light duty pickup trucks equipped with traffic control “arrow-board”
3. Backhoe
4. Heavy duty pickup with utility box
5. Skid-steer loader with bucket and breaker attachment
6. Heavy duty flatbed truck with cement mixer
7. Lawn mower(s)
8. Dump trucks

4.0 Material Disposal

All waste material generated by the inlet cleaning operation shall be emptied from the jet/vac vehicles at an approved dumping station and immediately loaded onto dump trucks and deposited in a licensed landfill facility. All sediment and debris removed from all

cleaning operations shall be deposited in a licensed landfill facility.

5.0 Storm Inlets/Manholes/Pipes

5.1 Inspection

The City has over 34,000 known storm structures within its right-of-way and easements. Inspections are completed under two different processes.

1. Reactive:

As citizens or city staff notify the Street Division of blocked inlets or pipes, sunken/broken structures or broken pipes. These inspections are completed by the Street Supervisors or the Stormwater Staff and tracked through the Infor (Hansen) Service Request System. Notification can be in the form of phone calls, emails, website requests or Hansen requests. A work order is generated by the Street Division and scheduled for inspection based on severity. Clogged inlets causing nuisance flooding are inspected within 24 hours and cleaned within one week. Sunken structures are inspected immediately and barricade placed same day or within 24 hrs. Repairs are completed as part of the Yearly

Inlet Package. All other requests are inspected within 1 week.

2. Proactive:

As the Engineering Division performs street inspections for the Annual Capital Improvement Program projects or when the State performs resurfacing or reconstruction on State Highways within the City's jurisdiction. These inspections are completed by Engineering Project Managers or Engineering Technicians.

5.2 Maintenance

1. Inlet & Pipe Cleaning – Storm structure cleaning shall begin following the winter season with the initial focus on known problem areas that are susceptible to sediment and debris accumulation or flooding. List of known problem areas are kept at the Street Division and reviewed annually to determine if areas should be added or deleted from the list. Subsequent inlet cleaning shall be based on the citizen requests/complaints and as needed based on the reactive and proactive inspections of the Street Supervisors, Stormwater Staff and Engineering Division. Frequency associated with known problem areas is dependent on

weather conditions (i.e. A heavy winter as in the 2013/2014 winter season causes more debris to accumulate in the gutters and inlets requiring more frequent inlet cleaning and street sweeping.). Inlet cleaning shall also be completed as part of City road construction projects, as needed.

2. Inlet & Pipe Repairs – Storm structures, mains & laterals found to be substandard or failing shall be rebuilt or repaired in a timely manner dependent on weather conditions, with the largest percentage of the repairs being performed by an external contractor. Internal staffing will address moderate repairs as scheduling will allow. Inlets found to be in disrepair during the inspections as part of the Capital Improvement Program shall be repaired as part of the roadway project.

5.3 Documentation

Record of all storm structures / storm pipes inspected to include date, type of structure, size of each pipe, exact location (intersection, address, etc.), physical condition at time of inspection, sand/silt or debris present and recommended resolution to any of the above listed defects. If location, type and size of inlet vary from the GIS map system then the inlet data shall be given to

the Facilities Management Section so the GIS maps can be updated.

Record of all structures/pipes cleaned to include date, type of structure, location (address or intersection), type and approximate amount of debris deducted, and number of feet of laterals or mains cleaned. Documentation shall be kept by the Street Division for the entire year and a summary of structures cleaned and the amount of material deducted shall be given to the Stormwater Section by the end of February of each for inclusion in the Annual Report.

Record of all structures repaired/replaced to include date, type of structure, address or intersection, nature of repair and cost of repair. For structures repaired by the Street Division the documentation shall be kept by the Street Division for the entire year and a summary of the number of inlets repaired shall be given to the Stormwater Section by end of February each year to include in the Annual Report. For inlets repaired as part of the Capital Improvement Program the documentation shall be kept by the project managers for the entire year and provide a summary of the number of structures repaired/replaced to the Stormwater Section by

the end of February each year for inclusion in the Annual Report.

6.0 Drainageways

The City does not own or maintain all of these drainageways and creeks. Maintenance of private drainage systems shall be the responsibility of the property owner(s). The following is a list of drainageways within the City:

- Southeast Drainage Ditch/Buckbee Creek (Paved)
- Northwest Drainage Ditch (Paved)
- Airport East Watershed Creek
- Kent Creek
- Keith Creek
- Madigan Creek
- Manning Creek
- Fuller Creek
- Spring Creek
- Forest Hills Watershed Creek

6.1 Inspection

The City inspects all publicly and privately maintained creeks concrete channels. The City continues to assess the number of miles of paved and unpaved channels and creeks within its jurisdiction. As this is evaluated, revisions to the total mileage to be inspected will be included in the annual report. If during an off inspection year the City determines there are additional drainageways to be inspected then it shall be documented in the annual report and included in the required inspections for following year.

These inspections are completed by the Stormwater Staff during the even years. This may be completed while performing the outfall inspections for illicit discharge. Inspections are to be performed during low flow conditions. Inspections of non-paved ditches/creeks shall be in accordance with Appendix A, Chapter 4 of Center for Watershed Protection Manual 10 “Unified Stream Assessment - A User’s Manual.” Inspections for paved ditches shall be in accordance with Appendix A, Chapter 4 and Appendix B, Chapter 9 of Center for Watershed Protection Manual 10 “Unified Stream Assessment - A User’s Manual.”

Results of the inspections shall be reviewed by the Stormwater Staff.

1. Maintenance will be categorized as:
 - i. Low Priority – Minimal or no maintenance needed.
 - ii. Major – Flows are compromised. Severe erosion noted. Needs significant maintenance and/or repairs.
 - iii. Life Safety

6.2 Maintenance

Privately Maintained Ditches/Creeks

Maintenance Notifications

1. For Life Safety concerns

The property owner shall be immediately notified by phone, if possible. Otherwise the notification shall be provided through an in-person visit to the property-owner's residence. In all cases, the property owner shall also receive written notification. The written notification shall specify the required corrective actions, require the property-owner to commence corrective actions within 7 days, provide instructions

and a deadline for certifying the completion of those corrective actions, provide a contact for the property-owner to obtain additional information, and identify consequences for noncompliance including follow-up action by the City. If a property-owner fails to certify completion of the required corrective actions, the City will enter the property 10 days from the date of the notification to make the necessary improvements and the property owner will be responsible for all improvement costs and any associated fees, including attorney fees. Notification shall, also, include contacting the Stormwater Staff prior to commencing work in ensure proper remediation.

2. For Major maintenance needs:

- a. Owners shall be sent letters detailing needed repairs. This shall be completed within one (1) week of the inspection. Notification shall include the property owner scheduling a meeting with the Stormwater Staff to review remediation measures and to determine if work would require permitting through the IDNR or ACOE.

- b. If no permit is required property owners shall be given 90 days to complete the maintenance. If additional time is needed the property owner shall request an extension which will be reviewed by the Stormwater Staff. Depending on the extent of the repairs and the history of the property or owner the owner, may be sent through the code enforcement hearing process.
- c. The city will request property owners to send in the attached maintenance confirmation form upon completion of maintenance items as directed in the letter. Staff will review the maintenance to confirm it has been completed.
- d. As maintenance is reported as completed on the ditches/creeks in the Intermediate and Major categories it will be indicated on the spreadsheet. Failure of an owner of such a ditch/creek to notify the City within the 90 day timeframe will result in an additional inspection to assess compliance.

3. Only creeks with excessive erosion or with life safety issue will be tracked on an Excel spreadsheet.

Publicly Maintained Ditches/Creeks

Life Safety repairs shall be completed as soon as possible, with the understanding that temporary measures shall occur immediately to allow time for the Engineering Division, Street Superintendent and contractor to determine the best course of action for the remediation.

Major repairs to the City-owned paved and unpaved drainage systems/channels will be initiated by the Public Works Engineering Division and shall be prioritized based on the extent of the flow obstruction and erosion concerns. Analysis will begin within 30 days of the inspection and design solutions will begin. Construction timeframes vary due to weather, contractor availability and funding source determination. Temporary stabilization may be required to prevent additional erosion while the project is under design. This work may be completed by the Street Division or by a contractor.

Intermediate and Minor repairs shall be completed on a priority basis either internally by the Street Division or externally by contractors as required. In some cases the Engineering Division may complete the repairs as part of the Capital Improvement Program and shall be consistent with the Stormwater Management Plan.

Maintenance activities occasionally require equipment or personnel to enter a stream, river, channel, wetland or other water body. Cleanup/Repair, Drainage Ditch and Channel Maintenance and Bridge Repairs are among that maintenance work items that can require work in or near a water body. Maintenance equipment should not enter a water body without the required regulatory permits (e.g., Army Corps of Engineers Clean Water Act Section 404 permit, State Illinois Department of Natural Resources). The Floodplain Manager should be contacted to identify the appropriate permits.

Stream channelization or channel deepening as part of cleanup operations is prohibited and avoid placing equipment in-stream, whenever possible. Work is to be performed during low-flow conditions whenever possible and disturbance to existing stream bank vegetation is not to occur

"unless absolutely necessary." Removed material must not be placed on the streambanks or in the floodway, and disturbed areas must be seeded and mulched.

6.3 Documentation

Inspection documents completed by consultants (IDNR), ACOE and the Stormwater staff shall be maintained in the Stormwater Share drive.

Maintenance work performed or managed by the Engineering Division the Engineering Project Managers shall document all maintenance work performed by its contractors, including date, type of activity, nature of debris removal or bank stabilization performed and the approximate amount of debris removed (tons or cubic yards). Maintenance work completed on privately owned systems will be documented as noted above and shall be tracked on a Time and Materials basis in accordance with the latest edition of the Illinois Department of Transportation Specifications for city staff. Contractor costs shall be tracked based on contract agreement. The Engineering Division shall maintain this documentation for the entire year and provide the data to the Stormwater Section by the end of February each year for inclusion in the Annual Report.

The Street Division shall document all maintenance work performed by the Street Division and its contractors, including date, type of activity, nature of debris removal or bank stabilization performed and the approximate amount of debris removed (tons or cubic yards). The Street Division shall maintain this documentation for the entire year and provide the data to the Stormwater Section by the end of February each year for inclusion in the Annual Report.

The Stormwater Section shall maintain the maintenance documentation in the Stormwater Share Drive.

7.0 Dams & Levees

The City operates and maintains 3 dams (Alpine Dam, Page Park Dam, and Levings Lake Dam) and 1 levee (Kent Creek South Diversion Channel Levee) within its jurisdiction.

7.1 Inspections

Page Park Dam, Alpine Dam and Levings Lake Dam are required to be inspected annually by the City to meet the Illinois Department of Natural Resources (IDNR) compliance. The City retains

a consultant to complete the annual inspections along with City staff. A report is completed by the consultant and submitted to the IDNR and the City. Traditionally, the Army Corp of Engineers completes periodic inspections of these dams and supplies a report to the City. For Kent Creek South Diversion Channel the Army Corp of Engineers completes an inspection of the diversion channel and levee and supplies the City with a report. When informed the City staff shall accompany the ACOE staff during the inspections.

7.2 Maintenance

Alpine Dam shall be operated and maintained in accordance with the Alpine Dam Operations and Maintenance Manual kept on file with the Engineering Division. Page Park Dam, Levings Lake Dam and Kent Creek South Diversion Channel shall be operated and maintained in accordance with the its Operation and Maintenance Manual kept on file in the Street Division and the Engineering Division. The City has agreements with the Rockford Park District for various maintenance tasks at Alpine Dam, Page Park Dam and Levings Lake but, ultimately, it's the City's responsibility to ensure the maintenance tasks are completed.

8.0 Publicly – Owned Detention Ponds

The City owns several detention ponds within its jurisdiction. Those ponds are listed in Appendix A of the Detention Basins Standard Operating Procedures.

8.1 Inspection

Inspections are to be performed in accordance with the Detention Pond Inspection Standard Operating Procedures.

8.2 Maintenance

- Ponds shall be mowed a minimum of twice per year.
- Pond mowing and cleaning work shall be scheduled when dry weather is expected.
- Remove sediment & trash from grates, placing it in a truck for disposal.
- Do a visual inspection to make sure any grates, structures, manholes, boxes and pipes are in good working order.
- Provide outlet protection where feasible to minimize the amount of debris that might leave the basin during the cleaning process.
- Remove sediment and debris from the pond bottom.

- Clean structures and pond bottom by vactor truck, sweeping or shoveling when needed.
- All material is to be disposed into a dump truck and deposited in a licensed landfill.

8.3 Documentation

The Street Division shall document when maintenance was completed, type of maintenance completed and the amount of sediment and debris removed. Documentation shall be maintained by the Street Division for the year and by the end of February each year shall provide a summary of the work completed to the Stormwater Section for inclusion in the annual report. If the detention ponds require repairs then the Stormwater Section shall be notified. The Stormwater Staff and the Street Supervisors will determine the appropriate course of action for the repairs and which Division will be responsible for the repairs. Priority of repairs shall be based on life safety, potential pond failure and funding available.

9.0 Bridges & Box Culverts

9.1 Inspection

The Engineering Division hires a consultant that is certified to completed bridge and box culvert inspections. Per State requirement, this is

completed every two years and a report is generated of all bridges and box culverts including inspection results, structural integrity, pictures and recommended maintenance. Prior to and after a major rainstorm event the bridges & box culverts along Keith Creek in high flood areas shall be checked by the Street Supervisors or Stormwater Staff to determine if any debris is obstructing the natural flow through these structures. If any cleanout is needed a work order will be generated through the Hansen system which shall also serve as the inspection. The amount and type of debris shall be documented.

9.2 Maintenance

Debris removal from the structures shall be completed at the earliest possible time by the Street Division staff or external contractors. Structural maintenance is completed by the Engineering Division through contracted projects. Major repairs shall be prioritized by the Engineering Division based on life safety and funding available.

9.3 Documentation

The Biennial Bridge Inspection Report shall be kept by the Engineering Division. Inspections made before and after major storm events shall be

kept by the Stormwater Section. If maintenance is completed by the Street Division then the Street Division shall maintain the documentation and provide a summary of the maintenance to the Stormwater Section by the end of February each year for inclusion in the Annual Report. If maintenance is completed by the Engineering Division then the Project Managers shall maintain the documentation and provide a summary of the maintenance to the Stormwater Section by the end of February each year for inclusion in the Annual Report

10.0 Publicly Owned Trash Racks

10.1 Inspection

Trash racks shall be checked by the Street Supervisors or Stormwater Staff prior to and following a major rainstorm event (4 inches or greater in 24 hours) to document any debris and floatables obstructing the natural flow through these structures. If any cleanout is needed a work order will be generated through the Hansen system which shall also serve as the inspection. The City-owned trash rack locations are:

- Alpine Dam (floatable site per NPDES permit)
- Page Park

- Kishwaukee & Sandy Hollow (floatable site per NPDES permit)
- Arden Ct.
- Blackhawk Rd @ Falcon Rd

Section V of the permit requires the City to establish two monitoring points (identified above) for removal of floatables, to collect floatables material at the frequency necessary to prevent flow obstruction but at a minimum of twice each year, to estimate by volume or weight the amount collected, and to report the total each year in the annual report.

Locations not required under the NPDES permit will be inspected a minimum of once per year with debris removal as needed to prevent flow obstruction.

10.2 Maintenance

Prior to the storm event the debris and floatables shall be removed from the trash racks by either the Street Division or Stormwater Staff. The amount and type of debris/floatables removed shall be documented by weight. If debris/floatables accumulated after the storm then the debris/floatables will be removed at the earliest

possible time by Street Division staff or external contractors.

10.3 Documentation

Documentation of the inspection, repair or debris/floatable removal from City-owned trash racks shall include date, type and amount (weight) of debris/floatables removed and any repairs needed and/or required or completed. Documentation shall be kept by the Street division with a summary provided to the Stormwater Section for inclusion in the Annual Report.

11.0 Snow & De-Icing Operations

The Street Division is responsible for all snow and de-icing operations. Preparation for the winter season begins in August and the Street Superintendent shall be responsible for all coordination and documentation of the snow and de-icing operations. Each year the Street Superintendent shall meet with the Rockford Township Street Superintendent to coordinate efforts and improve efficiency of jointly owned streets. The Street and Water Divisions' staff perform the snow and de-icing operations of the City's arterial and collector level streets and perform the de-icing operations for residential streets and city-owned parking lots. A contractor is used to perform the snow removal operations on residential level streets and City owned parking lots. Each year the Street Superintendent shall review which operations should be completed by a Contractor to provide a more efficient or improved level of service. All documentation related to the snow and de-icing operations is retained by the Street Superintendent. Each year prior to and through the winter season the Street Superintendent shall analyze its salt supply and the rate it is being applied during the operations. If needed the amount of salt ordered, used and applied shall be adjusted this determination is made by the street superintendent and is based on ensuring safe roads for the public to utilize. Annual application

rates are included in the Annual Report. Salt storage and loading operations shall be in accordance with the City Yards Stormwater Pollution Plan. Brine and sand solutions shall be evaluated yearly for possible de-icing operations. If the Street Superintendent chooses to use sand for de-icing operations then additional street sweeping and inlet cleaning operations shall be evaluated. The Street Superintendent shall track the salt/sand/brine usage for each event and provide a monthly total to the Stormwater Staff by the end of February each year for inclusion in the Annual Report.

12.0 Right-of Way and City-Owned Property Maintenance

12.1 Maintenance

In the City of Rockford property owners are responsible for mowing the right-of-way adjacent to their properties. Since the City owns approximately 900 properties the Street Division and the Community & Economic Development Department are responsible for maintaining these properties and their adjacent right-of-way. There are, also, various sections of right-of-way on arterial and collector level roads that the City is responsible for regardless of adjacent property ownership. The City contracts out the maintenance of these properties. Specifications

for these contracts are available with the Street Superintendent.

12.2 Documentation

The Street Division shall randomly inspect the contractors' performance and document whether the contractor is meeting the requirements of the specifications. The Street Superintendent or the Street Supervisors shall determine if the lack of performance is addressed by verbal or written communication and whether its' severity warrants a deduction from the contractor's pay request.

APPENDIX A

Chapter 4: Severe Erosion (ER)



The USA assesses the most severe eroding banks along the survey reach, particularly at places where valuable infrastructure is threatened. Specifically, you will look for potential stream repair or restoration opportunities such as bank stabilization or grade control.

4.1 About Erosion

Stream erosion reflects the natural process of channel migration and adjustment, whereby streams continuously meander, widen and narrow in an attempt to reach a stable equilibrium. The balance between sediment load and discharge can be disrupted by urbanization. Severe erosion can occur when a stream's current velocity exceeds stability thresholds for bank materials at channel boundaries. Reduced bank stability caused by increased bankfull flooding can lead to rapid and excessive bank erosion as the stream adjusts to the changing hydrologic conditions.

The process of channel widening or downcutting can worsen as streams become progressively disconnected from their flood plain. Nick points occur where significant changes in streambed elevation are caused by channel incision, and are indicators of dynamic channel processes at work. Eroding banks can cause loss of property, destroy in-stream habitat, and contribute significant sediment loads downstream. Trimble (1997) estimated that more than half of the sediment loads from highly urban watersheds were derived from eroded stream banks. Figure 19 shows various examples of stream erosion you may encounter while conducting an ER assessment.

Extensive bank erosion and channel headcuts should be expected in urban subwatersheds. The ER form only collects information on localized nick points and banks where erosion greatly exceeds average reach conditions. Broader bank stability conditions are assessed as part of the overall RCH assessment (Chapter 11).

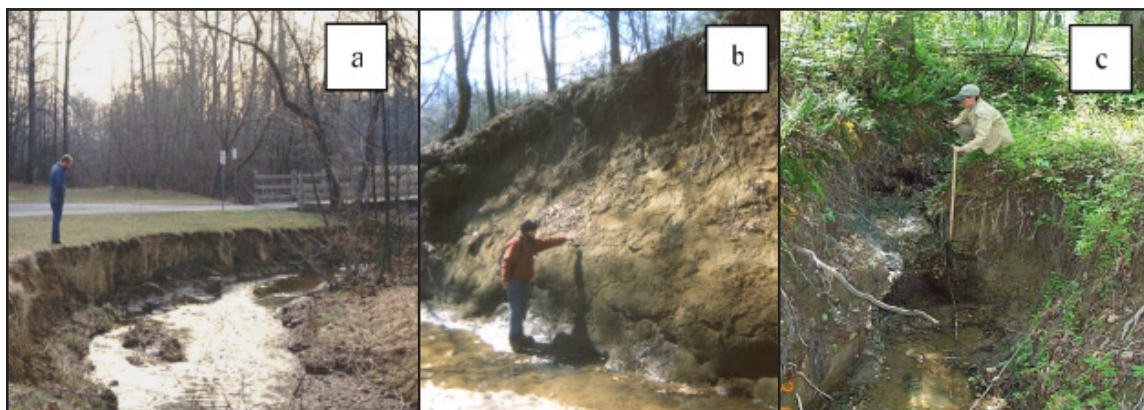


Figure 19: Types of Stream Erosion

Active bank erosion you can expect along meander bends in urban settings (Panel A), extreme erosion events that contribute significant sediment loads to receiving waters (Panel B), and in-stream nick points indicating channel erosion occurring in an upstream direction (Panel C) are examples of severe erosion you will want to record on ER forms.

Questions to ask when assessing eroded banks:

Is this area more severe than the rest of the survey reach?

Is infrastructure or property threatened?

What appears to be the cause of the erosion?

Are the banks actively contributing sediment to the stream?

Is this site a candidate for bank stabilization or grade control?

Severely eroded banks are evaluated during the USA for several reasons:

- *Nature and type of channel erosion:* Knowing the nature and type of erosion within urban streams can help determine how eroding areas are influencing upstream and downstream reaches. The dominant channel erosion process in an urban stream often dictates which types of stream repair and restoration practices should be applied, if any (Manual 4). Locating nick points or headcuts can indicate where upstream erosion problems may occur in the future given current hydrologic conditions. A quantitative estimate of bank erosion can be used to model subwatershed sediment loadings.
- *Severity of bank erosion:* While most urban streams exhibit some evidence of past or current bank erosion, the ER helps identify the most severe locations for potential bank stabilization or restoration (although they may not always be practical or feasible given overall subwatershed restoration goals).
- *Threatened infrastructure:* Excessive erosion may expose or undermine existing infrastructure such as outfalls, sewer lines, telephone polls, bridge abutments, roads, parking lots, or other structures built too close to the stream. In some cases, it may be critical to repair or stabilize eroding areas to prevent future damage to valuable infrastructure.

4.2 Introduction to the ER Form

This section introduces the severe erosion impact form (ER) that assesses individual locations of eroded stream banks encountered during your stream walk. You are asked to record basic data on the location of erosion sites, estimate current channel dynamics and dimensions, and identify potential bank stabilization opportunities at each problem site. This section describes each part of the ER form, and provides guidance on how to complete it. Appendix A contains a blank copy of the ER impact form. A completed example ER form is included at the end of this chapter in Section 4.6, along with detailed explanations to help clarify how the field crew filled out each section of the form.

The first part of the ER form contains general header information common to all impact forms, and is self-explanatory.

You may want to modify the header section to reflect your reach and site labeling system, and whether you are using GPS units to fix locations. If you are using GPS units, record the beginning and end coordinates for each site, the **GPS unit ID #** and an **LMK** number. If the eroded bank is less than 100 feet long, GPS cannot calculate an accurate length, and you should measure it by pacing or with a tape measure.

The next part of the ER form asks you to describe the general channel processes that affect the eroding bank or stream channel. You should note the location and dimensions of the eroding area, as well as the ownership of the adjacent stream corridor.

You are asked to determine the overall **channel process** affecting the erosion site (e.g., is it aggrading or degrading), and to characterize how the channel process exerts itself on the stream (e.g., scour, slope failure, etc.). Of significant interest are headcuts and **nick points**, which are locations where active channel erosion is migrating in an upstream direction. Nick points are excellent indicators of the active channel erosion dynamics and directly affect the design of stream restoration projects. **Headcuts** observed on the side of a stream may also indicate the presence of an outfall discharging to the flood plain or side slope. You should trace these headcuts to their source. **Scour** is the process of removing bed or bank material through the erosive action of flowing water. **Bank failure** occurs when the toe of the stream bank is eroded beyond the point of bank support. **Slope failure** is often used describe the failure at steep bank slopes.

While not everyone has a full understanding of urban stream geomorphology, Table 13 gives some tips on how to determine the dominant channel processes in the stream. Table 14 also illustrates what many of these channel processes look like in the stream. If you feel uncomfortable about describing the channel process, simply check the **currently unknown** box.

Each eroded bank section should be recorded as either left, right, or both banks, and whether it occurs on a bend in the stream, or along a relatively straight section. Headcuts branching off the stream should also be recorded as either left or right bank, while nick points are, by definition, located within the stream channel itself. Bank erosion is typically found along meander bends and may be enhanced if the bend occurs against a steep slope.

Table 13: Features Used to Determine Current Channel Process

| Process | Definition | Geomorphic Evidence |
|---------------------------|--|--|
| Aggradation | The geologic process by which a streambed is raised in elevation by the deposition of additional material transported from upstream (opposite of degradation)* | Mid-channel bars Embedded riffles Siltation in pools Accretion on point bars Deposition in the overbank zone |
| Degradation | The removal of streambed materials caused by the erosional force of water flow that results in a lowering of the bed elevation throughout the reach (opposite of downcutting)* | Deepened or "entrenched" stream bed Cut face on bar forms Headcutting and nickpoint migration Suspended armor layer in bank Terrace cut through older bar material Exposed sanitary or storm sewers |
| Downcutting (or incision) | Deepening of stream channel cross section resulting from process of degradation* | Tall banks (may see stratification) Disconnection from flood plain May occur if widening prohibited |
| Headcutting | The erosion of the channel bed, progressing in an upstream direction* | Nickpoints Small drops in elevation (mini waterfalls) Abnormally steeped channel segments |
| Widening | Increased width of stream channel cross section resulting from degradation process | Falling/leaning trees Scour on both banks through riffle Exposed tree roots; Fracture lines along top of bank Exposed infrastructure |
| Stable | Channel in balance between aggrading and degrading forces | Water reaches toe of each bank Moss on rocks or extending down into bottom of bank Banks are stable; connected to flood plain Erosion is slight and limited to meander bends |

* Definitions from the Washington State Aquatic Habitat Guidelines Program (2002)

The ER form also asks for some basic channel and bank dimensions. Figure 20 provides guidance on how to measure the cross-sectional area of a stream channel. **Bank height** is typically the distance from top of water to top of bank. At streamside headcuts, be sure to estimate the length of active erosion, as well as its potential distance if the headcut has not migrated all the way to its source. For nick points, record the height and distance to the next upstream grade control structure such as a road crossing or channelized section. Alternatively, you can simply note the location

of the next grade control structure and calculate the length back in the office.

The last part of the ER form allows you to recommend any potential restoration practices that may be appropriate for the eroded bank (Box 6). Envisioning stream restoration potential can seem difficult at first, but can be acquired with a little study and a lot of practice. Some practices to consider include bank stabilization, grade control, or other stream restoration techniques. **Rigid bank stabilization** includes such things as boulder

| Table 14: Erosion Characteristics to Note During Site Assessment | | |
|--|--|---|
|  <p>Stable reach, with low banks, stream still has access to flood plain at high flows.</p> |  <p>Aggrading reach with obvious formation of mid channel bars.</p> |  <p>Signs of degradation include visible stratification lines in stream bank</p> |
|  <p>Downcutting reach with tall banks on either side</p> |  <p>Presence of manhole stack in stream is evidence of stream widening process</p> |  <p>Moss covered banks are indicators that banks have since stabilized</p> |
|  <p>Extreme erosion can occur when streams cut into steep slopes. Check level of soil consolidation in these areas to see if actively eroding</p> |  <p>Below this eroded bench is a stabilized stream bank. This should not be considered as active bank erosion.</p> |  <p>Headcut rapidly migrating upwards towards an outfall. Note collapse of adjacent vegetation</p> |

revetments, root wads, rip rap, or other relatively hard structures. **Soft bank stabilization** practices include coir fiber logs, live fascines, brush mattresses, or other bioengineering techniques that use vegetation to protect the banks (Figure 21). **Grade control** techniques refer to step pools, rock vanes, or log drops that prevent the migration of headcuts (Figure 22). These and other stream repair practices are described in more detail in Manual 4.

The **erosion severity score** rates the extent of erosion on a five-point scale, where five is the most severe. You should also check to see if access is available to get heavy equipment to the site. Erosion severity and access scores should be marked on the ER form to identify the most severe and accessible eroded banks in the subwatershed.

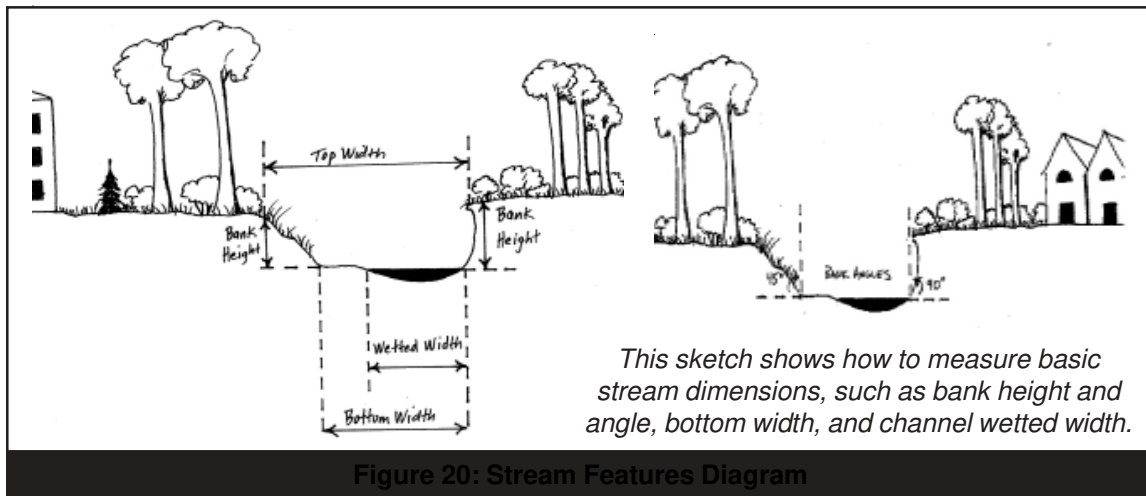


Figure 20: Stream Features Diagram



Figure 21: Example Hard and Soft Bank Stabilization Practices

Panel A illustrates the use of rip rap to restore an eroded section of stream; Panel B shows the mixed use of coir fiber logs and riprap to stabilize outfall and repair adjacent stream bank.

4.3 Which Eroded Banks Should I Record?

Some bank erosion should be expected in most urban streams, and it is unrealistic to have field crews GPS and assess every foot of eroded bank if restoration is not practical. Therefore, slope failures, bank sloughing, incision, or channel enlargement should only be recorded for banks that are noticeably worse than the “average” eroded bank along the survey reach (Figure 23). Sites with average bank erosion should only be counted if adjacent infrastructure is threatened or significant property loss is evident. Streamside headcuts and channel nick points with elevation changes of at least two feet should always be recorded, since they signal that active channel erosion is migrating upstream.

4.4 Field Assessment Tips

This list provides some quick tips for assessing stream erosion:

- Track all headcuts to their source, even if they are lateral to the stream.
- Only include channel nick points if the vertical change in stream elevation is more than a foot.
- Look for root hairs on stream banks to determine active erosion.
- Look for signs of major sediment deposition to determine channel degradation.
- Stratified layers in the bank may be a clue that the stream is downcutting.
- Banks composed of unconsolidated materials such as gravel, sand, or silt are often more unstable than those of compacted clay.
- If bedrock is present, then stream widening may be the dominant channel process. In this case, bank height may not be greater than average reach conditions, but the increase in cross sectional area may be greater.
- Make sure to look behind overhanging vegetation to determine extent of bank erosion and vegetative cover.



Figure 22: Example Grade Control Practice

Steps pools can be used as grade control.



Figure 23: Expected Levels of Urban Bank Erosion

In highly urban settings, three- to four-foot eroded banks are probably the norm. This condition should be noted on the RCH form; however, impact assessments should be limited to the severely eroded sites.

- Be sure not to confuse historic channel migration features with newly formed, actively eroding benches.
- Don't worry if you can't envision stream restoration. Take a look at Manual 4, and tour some local stream restoration projects prior to performing the ER.

| Table 15: How ER Data Can Be Used | |
|---|---|
| Problem Assessed | Nature and type of channel erosion Severity of bank erosion Threatened infrastructure |
| Potential Restoration Practice <i>(Manual profile sheets)</i> | Potential sites for bank stabilization (R-3, R-15) Grade control (R-18 to R-21) |
| Stream Corridor Metric | # of severe bank erosion sites Estimated bank erosion sediment load |
| Output for Planning | Map of erosion sites |
| <i>*The code in parentheses refers to the appropriate restoration profile sheet in the Restoration Manual Series. R- sheets can be found in Manual 4: Stream Repair Practices</i> | |

4.5 Using ER Data in Subwatershed Restoration

Severe erosion data can be used to identify eroded banks, generate a list of potential stream repair practices, develop stream erosion metrics, and generate planning maps (Table 15). This information can show the degree to which channel erosion poses a significant threat in the stream corridor and how important stream stabilization and repair projects will be in the overall restoration plan.

4.6 Example ER Form

The severe erosion impact form (ER) assesses individual locations of eroded stream banks encountered during your stream walk. You are asked to record basic data on the location of erosion sites, estimate current channel

dynamics and dimensions, and identify potential bank stabilization opportunities at each problem site. A detailed explanation of how the field crew filled out each section of this example form is included on the next page.

Severe Bank Erosion ER

| | | | | | |
|---|--|---|--|---|--|
| A. | WATERSHED/SUBSHED: <u>SMILEY RUN</u> | | DATE: <u>3/10/03</u> | ASSESSED BY: <u>ADK, GUR</u> | |
| | SURVEY REACH: <u>102-1</u> | | TIME: <u>9:45</u> AM/PM | PHOTO ID (CAMERA-PIC #): <u>A # 03-04</u> | |
| | SITE ID: (Condition-#) | START LAT ° ' " LONG ° ' " | LMK | GPS: (Unit ID) | |
| B. | ER- <u>1</u> | END LAT ° ' " LONG ° ' " | LMK | | |
| | PROCESS: <input type="checkbox"/> Currently unknown <input type="checkbox"/> Downcutting <input type="checkbox"/> Bed scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Bank failure <input type="checkbox"/> Headcutting <input type="checkbox"/> Bank scour <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Slope failure <input type="checkbox"/> Sed. deposition <input type="checkbox"/> Channelized | | BANK OF CONCERN: <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Both (<i>looking downstream</i>) LOCATION: <input type="checkbox"/> Meander bend <input type="checkbox"/> Straight section <input checked="" type="checkbox"/> Steep slope/valley wall <input type="checkbox"/> Other: <i>TALL EMBANKMENT</i> | | |
| | DIMENSIONS: Length (if no GPS) LT <u> </u> ft and/or RT <u>100</u> ft Bottom width <u>10</u> ft Bank Ht LT <u> </u> ft and/or RT <u>8.5</u> ft Top width <u>15</u> ft Bank Angle LT <u> </u> ° and/or RT <u>90</u> ° Wetted Width <u>7.5</u> ft | | | | |
| LAND OWNERSHIP: <input checked="" type="checkbox"/> Private <input type="checkbox"/> Public <input type="checkbox"/> Unknown | | LAND COVER: <input type="checkbox"/> Forest <input type="checkbox"/> Field/Ag <input type="checkbox"/> Developed: | | | |
| C. | POTENTIAL RESTORATION CANDIDATE: <input type="checkbox"/> Grade control <input checked="" type="checkbox"/> Bank stabilization <input type="checkbox"/> No <input type="checkbox"/> Other: | | | | |
| | THREAT TO PROPERTY/INFRASTRUCTURE: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Describe): <u>SEWER LINE</u> | | | | |
| | EXISTING RIPARIAN WIDTH: <input type="checkbox"/> ≤25 ft <input checked="" type="checkbox"/> 25-50 ft <input type="checkbox"/> 50-75ft <input type="checkbox"/> 75-100ft <input type="checkbox"/> >100ft | | | | |
| | EROSION SEVERITY (circle#) Channelized= <input type="checkbox"/> 1 | Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure. | Pat downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure | Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use. | |
| | ACCESS: | Good access: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails. | Fair access: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream. | Difficult access. Must cross wetland, steep slope or other sensitive areas to access stream. Minimal/stockpile areas available and/or located a great distance from stream section. Specialized heavy equipment required. | |
| NOTES/CROSS SECTION SKETCH: | | | | | |
| <p><i>BIG MESS!!</i> JUST UPSTREAM OF GROCERY STORE, BANK ACTIVELY ERODING, HEAVY SEDIMENT DEPOSITION IN STREAM, SEWER LINE EXPOSED.</p> | | | | | |
| REPORTED TO AUTHORITIES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | | | |

How the Example ER Form Was Completed

Part A

The field crews in this example assessed an eroded bank in the Smiley Run subwatershed in survey reach 102-1. They took two photos at this location that also happened to be the first excessively eroded site they encountered in the reach.

Part B

In this part of the ER form, the eroded bank extended about 100 feet along the right bank and appeared to be threatening an embankment. Measured bank height was almost nine feet.

Part C

Here the field crew identified an eroded bank as a potential candidate for bank stabilization due to an exposed sewer line. Because of the immediate threat to infrastructure, the crew rated the bank erosion as a “5” for severity. Site access was considered good, although the best access was across private property.

APPENDIX B

Chapter 9: Channel Modification (CM)



This part of the USA examines the extent to which stream channels are modified within the urban stream corridor. Examples of channel modifications include channelization, bank armoring, channel lining, and flood plain encroachment. During the channel modification (CM) assessment, you will be specifically looking for channel segments that may need structural repair or present opportunities for a more natural stream channel design.

9.1 About Channel Modification

Many urban stream segments have been historically modified to safely convey floodwaters, maintain a stable channel, restrict channel migration, or realign channels around property or infrastructure. The basic engineering approach is to “design” a new channel or flood plain with less roughness (e.g., boulders, vegetation, large woody debris, meander bends), greater slope, and expanded cross-sectional area to pass floodwaters more quickly and efficiently. As a consequence, some urban streams are converted into straight channels that are often lined with concrete to reduce roughness. In other streams with little

room for channel migration, banks are often fixed in place by armoring them with rip-rap and rock. In other situations, the capacity of the flood plain to accommodate floodwaters has been structurally altered by filling, dikes, or other measures.

In the most extreme instances, streams are entirely enclosed in underground pipes or extended culverts (note: this category of channel modification is already assessed in the USA by the SC form). Both stream and riparian habitat can be degraded or eliminated by channel modifications, and in some cases, fish passage may also be prevented. Newer, more environmentally-sensitive channel design may be a viable option to restore some natural features within modified channels. Figure 38 illustrates some of the typical channel modifications you may encounter during the USA.

Channel modifications are included in the USA survey for several reasons:

- *Stream Interruption*: An understanding of channel modification gives you a sense of the degree of stream interruption in your subwatershed. This factor is extremely



Figure 38: Types of Channel Modifications You May Encounter

Various types of modified streams include a concrete channel and flood plain (Panel A), a concrete-lined channel (Panel B), and a straightened, armored stream segment (Panel C).

Questions to ask when assessing channel modifications:

How severely is this modification affecting stream corridor habitat?

What is the length and purpose of the modification?

Can softer bank stabilization methods be used?

Can more natural channel design be employed?

important to determine where stream restoration projects make sense across the entire stream corridor.

- *Channelization:* In some instances, channelized segments of the stream network are candidates for restoration using techniques such as de-channelization, natural channel design, and baseflow channel creation. Also, if the CM form suggests armoring or other stabilization techniques are failing, it may be a good opportunity to replace them with bioengineering techniques (Manual 4).
- *Habitat Degradation:* The CM form quickly identifies the portion of the urban stream network where stream or riparian habitat has been degraded or eliminated by channel modification.
- *Tracking Stream Bank Armoring:* While some communities have been stabilizing banks for decades, institutional knowledge of these project locations may have been lost. The CM form can help generate a map of these repair/restoration locations.

9.2 Introduction to the CM Form

This section introduces you to the channel modification (CM) assessment form. The form asks you to record basic data on the length and nature of the channel modification, and determine whether it might be a candidate for possible restoration. This section describes the four parts of the CM form, and provides guidance on how to complete each one. Appendix A provides a blank version of the CM form. A completed example CM form is included at the end of this chapter in Section 9.6,

along with detailed explanations to help clarify how the field crew filled out each section of the form.

The first part of the CM form contains general header information that locates where the modified channel section is in the survey reach.

As always, the header should be modified to reflect your reach and site labeling system. If you are using a GPS unit, record the beginning and ending coordinates for each channel segment, and remember to note the **GPS unit ID #** and an **LMK** number. If the modified section is shorter than 50 feet long, GPS units cannot calculate an accurate length. Instead, measure these sections by pacing or with a tape measure. Depending on how extensively channels have been modified in the subwatershed, you may want to skip these short sections altogether.

The next part of the CM form asks you to describe the type of channel modification and the dominant material that comprises it.

Four basic options are available.

Channelization refers to a channel that has been excavated and straightened to eliminate natural meanders and bends. **Bank armoring** consists of an extended length of bank protected by hard stabilization measures, such as rip-rap, gabions, rock, or retaining walls. Armoring can occur on one or both banks and should only be recorded if it extends more than 50 feet. **Concrete channels** should be checked on the CM form if the natural stream or banks have been replaced with concrete lining that extends more than 50 feet. Lastly, **flood plain encroachment** should be checked if you see obvious signs of earth fill, levees, or dikes in










the flood plain or stream corridor. Note that more than one type of channel modification can occur in each segment. If only one bank is affected by the modification, indicate this in the notes section on the CM form. Table 23 illustrates a number of common channel modifications you may encounter in the field.

Next, assess the condition of the channel, and note any perennial flow, sediment deposition, vegetative growth, or apparent connection with the flood plain. Each of these conditions provides useful clues about sediment and flow dynamics through the modified channel. You should also measure the basic dimensions of

the channel modification, take a photo, and draw a rough sketch.

The next part of the CM form asks you to assess the nature of the stream corridor adjacent to the channel modification and the current baseflow channel segment. Both factors are crucial to determine if natural channel design may be suitable for the channel segment.

You should estimate the “**available**” width of the adjacent stream corridor on both sides of the channel. Available means open ground, with no obvious structures or utilities present.

| Table 23: Channel Modifications to Note During Site Assessment | | |
|--|---|---|
|  <p>At crossings, only record on CM form if modification extends at least 100 feet up or downstream.</p> |  <p>Measure the width of the channel bottom. If there is perennial flow, measure the water depth.</p> |  <p>Channelized and concrete-lined segment that maintains good connectivity with the flood plain.</p> |
|  <p>Sediment deposits and algal growth on bottom of a concrete-lined channel.</p> |  <p>Rock revetments should be recorded as bank armoring.</p> |  <p>Imbricated rip-rap used for bank stabilization; Record if 50 feet or longer.</p> |
|  <p>Gabion baskets used to stabilize a stream bank.</p> |  <p>Highly urban subwatersheds frequently have most of their surface streams piped.</p> |  <p>Exposed portion of an enclosed stream in a commercial area.</p> |

Also, note if any earthen fill, dikes, or levees occur in the adjacent stream corridor, which could constrain flood plain capacity. Lastly, you should examine the **baseflow channel**, noting the average depth of flow, and the fraction of the channel bottom over which it flows. Check to see if there is a defined low-flow channel, and record its average depth of flow.

The last part of the CM form asks you to recommend whether the modified channel might be a candidate for structural repair, more natural channel design, or fish barrier removal. Consult profile sheets R-5 to R-15, R-25, R-30, S-32, and S-33 in Manual 4 to familiarize yourself with these stream restoration techniques. If you don't feel comfortable making a restoration recommendation, simply check the "Can't tell" box. The CM form provides some guidance on how to score the overall **severity** of channel modification on a scale of one to five (five being the most severe). Figure 39 illustrates modified channel segments that should be considered restoration candidates.

9.3 Which Modified Channels Should I Record?

Most urban streams are extensively modified over much of their length, so only record "hard" channel modifications longer than 50 feet. Do not record channel modifications that

are immediately associated with structured stream crossings unless they extend 100 feet above or below the crossing. "Soft" bank stabilization practices should not be counted.

9.4 Field Assessment Tips

Some quick tips for evaluating channel modifications in the field are provided below:

- To reduce the number of forms you will need to complete, only record channel modifications that are at least 50 feet long.
- Also, you only need to record channel modifications associated with stream crossings if they extend at least 100 feet upstream or downstream of the crossing.
- Keep in mind that channel modifications can occur on the bed, banks, and flood plain of the stream corridor.
- If a channel modification extends on both sides of a road crossing that is used as a survey reach boundary, make sure to extend the survey reach to include the entire modified channel.
- Enclosed sections or extended culverts are picked up on the SC form and should not be recorded on the CM form.



Figure 39: Restoration of Channelized Stream Segments
Candidate site for structural repair (Panel A) and natural channel restoration (Panel B).

| Table 24: How CM Data Can Be Used | |
|---|---|
| Problem Assessed | Stream interruption Channelization Habitat degradation |
| Potential Restoration Practice <i>(Manual Profile sheets)</i> | Baseflow channel creation (R-25) Natural channel design (S-32) De-channelization (S-33) |
| Stream Corridor Metric | Channelized length Channelized length per stream mile |
| Output for Planning | Map of potential fish barriers Map of channelized sections Map of potential de-channelization projects Map of grade control structures |
| *The code in parentheses refers to the appropriate restoration profile sheet in the Restoration Manual Series. R- and S- sheets can be found in Manual 4: Stream Repair Practices | |

9.5 Using CM Data in Subwatershed Restoration

Channel modification (CM) data can be used in several ways for restoration planning. CM data can be used to measure stream interruption, generate a list of stream restoration practices, develop stream channelization and habitat metrics, and generate planning maps (Table 24). CM data can help you decide whether channel modifications are a significant problem in the subwatershed and how important channel restoration should be in the overall restoration plan.

9.6 Example CM Form

The CM form asks you to record basic data on the length and nature of the channel modification, and determine whether it might be a candidate for possible restoration. A

detailed explanation of how the field crew filled out each section of this example form is included on the next page.

Channel Modification: CM

| | | | | | | |
|---|---|--|--|---|---|----------------|
| A. | WATERSHED/SUBSHED: <u>SMILEY RUN</u> | | DATE: <u>2/10/93</u> | | ASSESSED BY: <u>ACE, SWC</u> | |
| | SURVEY REACH ID: <u>102-1</u> | | TIME: <u>10:25 AM</u> | | PHOTO ID: (Camera-Pic #) <u>A</u> # <u>08</u> | |
| SITE ID: (Condition #) CM: <u>1</u> | | START LAT: ° ' " _____ | LONG: ° ' " _____ | LMK: _____ | | GPS: (Unit ID) |
| | | END LAT: ° ' " _____ | LONG: ° ' " _____ | LMK: _____ | | |
| B. | TYPE: <input checked="" type="checkbox"/> Channelization <input checked="" type="checkbox"/> Bank armoring <input type="checkbox"/> concrete channel <input type="checkbox"/> Floodplain encroachment <input type="checkbox"/> Other: | | | | | |
| | MATERIAL: | | Does channel have perennial flow? | | DIMENSIONS: | |
| | <input type="checkbox"/> Concrete <input type="checkbox"/> Gabion | | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | Height: <u>6.5</u> (ft) | |
| | <input checked="" type="checkbox"/> Rip Rap <input type="checkbox"/> Earthen | | Is there evidence of sediment deposition? | | Bottom Width: <u>8.0</u> (ft) | |
| <input type="checkbox"/> Metal | | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | Top Width: <u>15.0</u> (ft) | | |
| <input type="checkbox"/> Other: | | Is channel connected to floodplain? | | Length: <u>150</u> (ft) | | |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | |
| C. | BASE FLOW CHANNEL | | | ADJACENT STREAM CORRIDOR | | |
| | Depth of flow: <u>10</u> (in) | | | Available width: LT <u>50</u> (ft) RT <u>100</u> (ft) | | |
| Defined low flow channel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | Utilities Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| % of channel bottom: <u>70</u> % | | | Fill in floodplain? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | |
| D. | POTENTIAL RESTORATION CANDIDATE <input type="checkbox"/> Structural repair <input type="checkbox"/> Base flow channel creation <input type="checkbox"/> Natural channel design <input type="checkbox"/> Can't tell | | | | | |
| | <input checked="" type="checkbox"/> no <input type="checkbox"/> De-channelization <input type="checkbox"/> Fish barrier removal <input type="checkbox"/> Bioengineering | | | | | |
| | CHANNELIZATION SEVERITY: (Circle #) | A long section of concrete stream (>500') channel where water is very shallow (<1' deep) with no natural sediments present in the channel. | A moderate length (>200') but channel stabilized and beginning to function as a natural stream channel. Vegetated bars may have formed in channel. | An earthen channel less than 100 ft with good water depth, a natural sediment bottom, and size and shape similar to the unchanneled stream reaches above and below impacted area. | | |
| | 5 | 4 | 3 | (2) 1 | | |
| NOTES: <u>BOTTOM OF CHANNEL IS NATURAL - JUST BANKS HAVE BEEN STRAIGHTENED AND ARMORED DOWNSTREAM OF ROAD CROSSING - SEEMS A BIT EXCESSIVE - NOT MUCH REST. POTENTIAL</u> | | | | | | |

How the Example CM Form Was Completed

Part A

In this example, the field crew assessed an armored stream section in the Smiley Run subwatershed in survey reach 102-1, and took a single photo at this location.

Part B

The field crew evaluated a channel segment armored with 150 feet of rip-rap on both banks as part of a past bank stabilization project. The channel had perennial flow, but showed no signs of deposition or vegetative growth in the channel, which also did not appear to be connected to the flood plain.

Part C

In this part of the form, the field crew observed a defined low flow channel. Flow was approximately 10 inches deep and took up most of the width of the channel. Exploring the adjacent flood plain area, the field crew observed no fill or excavation activities, though utilities did interrupt the stream corridor on the left bank.

Part D

The field crew assigned this segment a low severity rating due to its natural channel bottom and relatively short distance of modification. They were unable to envision a particular type of restoration at the site.

APPENDIX C

Guidelines for Creek/Ditch Maintenance by Creekside Property Owners

Creeks carry direct runoff from creekside properties and through linkage with manmade storm drains which carry runoff from the rest of the City's land area. This interconnected system is the means by which stormwater runoff is contained to minimize flooding. Maintenance of the creeks is the responsibility of the owner whose property includes/abuts a creek (typically property line is to the centerline of a creek). When the creek area is not properly maintained, the resulting obstructions can lead to increased flooding, changes in the course of the creek and increased erosion of the obstructed property or downstream of the property. When maintained properly, creeks are a natural resource that provide habitat for wildlife and provide aesthetic benefits that can increase the value of creekside properties. The purpose of this guide is to provide you, the creekside property owner, with practical information for the proper care and preventative maintenance of the creek as a part of your property.

The City of Rockford requires the following guidelines for maintaining the creek on your property:



- **Remove all debris and garbage:** This may include bottles and cans, broken concrete, tires, fallen fences, appliances or any other man-made objects. This also includes wood and fallen trees or tree limbs. This is the property owner's responsibility even if the object has washed down from upstream. It is recommended that all stored material on your property be placed a minimum of 10 feet away from the top of the bank to avoid material washing away into the creek during heavy storms. Sheds and minor structures should be anchored to the ground if closer than 10 feet.

- **Remove vegetation except low ground cover from the bottom of the stream channel up to the top of the bank (flood line):** This includes shrubs, tulle, pampas grass, cattails and bamboo. Leave all root systems in place to help with erosion prevention. Remove hanging vines that may create an obstruction to the natural flow of the water in the creek. Berry vines should be trimmed back to the bank.

- **Remove tree limbs within or hanging over the creek to within 2 feet of the top of the creek bank:** Any single tree of 2 inch diameter or greater which is living and not leaning toward the creek may remain. Trim any trees growing in clusters, trees with multiple trunks or trees within the stream channel that may cause an obstruction to the flow of water, but leaving the root system in place.

- **Do not clear-cut the creek slope:** Leave ground cover such as low grasses or vines. Trees should be cut at ground level with roots left in the ground.

- **Keep slope stabilization measures in good condition:** If you have existing slope stabilization measures such as rip-rap (rock, concrete, etc.) a

retaining wall, or jute covering, keep these measures in good condition. If these measures require any repair or if you want to install a measure to stabilize a slope, you must first contact the jurisdictional agencies to determine if a permit will be necessary. If any work is done to alter the creek including widening, filling, dredging/altering the natural creek flow, an Army Corps of Engineers and Illinois Department of Natural Resources permit may be required.

Ditch Maintenance: You may have a ditch or drainage swale on your property that is there to convey stormwater either to the rear or front of your property or from one side of your property to the other. These ditches/swales shall be mowed regularly, kept clear of obstruction and shall not be filled with dirt or mulch. Lack of proper maintenance may cause flooding in and around your property.

For assistance, please contact the Stormwater & Environmental Team by calling 815-987-5570, Mon.-Fri. between 8am-5pm.

April, 2014

APPENDIX D

Appendix D

City-Wide Grounds Maintenance

1.0 Specific Requirements

- 1.1 Seasonal Work. The vendor shall remove all leaves and winter debris or trash from beds, turf and non-turf areas twice a year, once in the spring and once in the fall.
- 1.2 On-site preparation and cleanup. Prior to each mowing occurrence the vendor shall pick clean the entire site, removing all litter, trash, branches, glass, and debris. The first cycle of mowing will generally entail an increased amount of litter picking over subsequent cycles. The vendor will not be paid additional any amount over and above what is bid for each site, therefore should consider this in their overall bid submittal. The vendor shall notify the City Representative of excessive litter, illegal dumping or large tree limbs. If this condition exists, it will be addressed by the City upon inspection and approval of the City Representative. Paper, cups and other litter must not be mowed so as not to detract from the sites' appearance. When mowing along roadways, the first two (2) swaths cuts along the curb or roadway edge shall be made in such a direction that all clippings discharged from mowers shall be away from the curb or roadway edge. If the Vendor is determined by the City Representative to be in violation of the aforementioned standards, said Vendor shall be subject to liquidated damages as outlined in paragraph 4.10. and any additional cost to the City for cleanup shall be deducted from subsequent invoices submitted by the Vendor.
- 1.3 Trimming. Final trimming around permanent objects such as trees, posts, shrubs, fences, guard rails, signs, curbsides, and roadway edges, will be accomplished with suitable mechanical equipment at the same cutting height as the rest of the turf so as not to detract from the appearance of the site. Trimmings are to be cleaned from all hard surfaces (sidewalks, curbs, driveways, and streets).
- 1.4 Labor, Tools, and Equipment. The vendor agrees to furnish all necessary labor, tools and equipment in connection with the grounds maintenance of the specified locations. Vendor shall provide a list of available staffing to be used in his operation.
- 1.5 Equipment. Mowing equipment can include riding mowers, walk behind mowers, nylon line trimmers and hand clipping, where necessary. Mowing equipment shall be kept in good, safe operating condition with sharp blades so that the grass is cut properly and in such a condition that oil and gasoline are not leaked. Vendor shall submit a list of equipment and indicate the age of said equipment to be used for mowing.
- 1.6 Equipment/safety. The vendor shall remove equipment at the completion of the workday. The City of Rockford does not assume any responsibility, at any time, for the protection of or loss of equipment or supplies either at the work site or elsewhere.

- 1.7 Fueling and Oiling. Spilled gasoline and oil kills grass. Mowers will not be fueled and oiled in grass areas: they should be moved to paved areas for this function.
- 1.8 Scheduling. The vendor will perform the work in accordance with the schedule provided or the instructions received from the City representative. Generally, the work may be performed between the hours of 7:00 a.m. and 6:00 p.m. and on any day or days of the week in accordance with the City's noise ordinance (see section 2.2). If special circumstances require different hours the vendor shall seek approval for such a change from the City. The City reserves the right to add additional sites during the mowing season under the terms of this contract. Contractor quotes for any additional sites shall be consistent with other sites of similar size and difficulty currently included in this contract. The City also reserves the right to adjust the frequency of the mowing cycle based on need, or request site specific mowing on demand. The respective City representative shall be notified within 24 hours upon completion of a scheduled mowing cycle. All invoices shall be submitted to City representative within 10 days of completing a mowing cycle and must include a valid invoice number, the specific cycle for which the invoice is presented, the group or Block of sites, and the correct date. Do not submit invoices directly to the City Finance Department. They will not be paid until validated by respective City representative(s).
- 1.9 Liquidated Damages. The Vendor is responsible to remove trash & debris prior to each mowing occurrence, and is also responsible for the removal of grass clippings from all adjacent hard surfaces subsequent to mowing each site as outlined in paragraph 4.2. If the Vendor fails to effectively remove trash, debris and clippings based on the observance of the Designated City of Rockford representative, the City will notify him of default. In the event of default, the City will either use City staff or a third party to complete clean-up and any *additional cost to the City shall be deducted from subsequent payment(s) owed the Vendor.*

2.0 Detailed Specifications

2.1 Public Works Division – Right of Ways and Properties

- 2.1.1 Maintenance. Mow lawn as instructed by schedule provided by the City representative. Mowing should be done from the street curb inward, using cement property markers, utility poles, fences, bushes and tree lines, and farm fields to determine the right-of-way boundary width. When mowing along roadways, the first two (2) swath cuts shall be made in such a manner as to discharge all clippings away from the roadway edge or curb.
- 2.1.2 Height of Grass/Height of Cut. Grass should never exceed six inches in height. Grass when cut should be 2" in height and no windrows of grass shall remain.
- 2.1.3 Weeds. Removal of weeds growing from along curb lines, roadway edges or sidewalks and drive approaches, so as not to detract from the appearance of the site, are the responsibility of the vendor. Weeds shall be

defined as all grasses, annual plants, and vegetation overgrowth and underbrush other than trees or shrubs provided.

2.1.4 Inaccessible areas. All areas too wet, too steep or otherwise inaccessible for use of standard mowers shall be line trimmed at the same frequency as the mowing schedule.

2.1.5 Frequency. Each location has listed an estimated amount of cuts during the contract period and is no guarantee of work to be performed under this contract. The total number of cuts is an estimate based on previous years. The City representative will establish and provide the vendor with a final schedule of mowing dates that is appropriate for each block of sites.

2.1.6 Locations. The City breaks out the maintenance of properties into packages to allow multiple vendors to complete the tasks as outlined above. The packages are broken down by Block and are shown in the next several tables.

| Block A – Weekly Mow | |
|-----------------------------|--|
| Site # | Location |
| A-1 | Whitman St. & Ridge Ave. – Grant Ave. Cul-De-Sac Greenspace [<i>approx .18 acres</i>] |
| A-2 | Fairview Blvd. (middle island Blvd. from Morsay Dr north) Bag clippings [<i>approx .16 acres</i>] |
| A-3 | Morsay Dr. from NEX Fairview to Lynmar Ct. [<i>approx .3 acres</i>] |
| A-4 | Arden Ct. Detention Pond Drainage Area – If conditions are too wet to mow bottom, must string trim all. [<i>approx. 1 acre</i>] |
| A-5 | Midway Theater Lot – East side of building. [<i>approx. .75 acres</i>] |
| A-6 | Charles St. & 7th St – NW & SE Corner landscape areas. [<i>approx. .07 acres</i>] |

| Block B – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| B-1 | 1000 Block, W State St. - as listed – [approx .24 acres each – approx. 2.8 acres total] Includes 1019, 1025, 1040, 1045, 1046, 1049, 1050, 1053, 1055, 1057, 1059, 1061, & 1062. |
| B-2 | 1100 Block, W State St. - as listed – [approx .43 acres each – approx. .85 acres total] Includes 1101, 1119, 1121, 1125, 1133, & 1137 |
| B-3 | 1200 Block, W State St. - as listed – [approx .14 acres each – approx. .82 acres total] Includes 1211, 1215, 1225, 1233, 1237, & 1239 |
| B-4 | 1300 Block, W State St. - as listed – [approx .13 acres each – approx. 1.63 acres total] Includes 1304, 1305, 1307, 1308, 1311, 1312, 1315, 1316, 1319, 1322, 1323, 1326, 1332, & 1336 |
| B-5 | 1400 Block, W State St., - as listed – [approx .27 acres each – approx. 1.9 acres total] Includes 1412, 1416, 1420, 1424, 1430, 1434, & 1455 |
| B-6 | 1500 Block, W State St. - as listed – [approx .14 acres each – approx. .43 acres total] Includes 1503, 1505, & 1509 |
| B-7 | 1600 thru 2000 Blocks, W State St. - as listed – [approx .19 acres each – approx. 2.24 acres total] Includes 1601, 1605, 1625, 1701, 1711, 1719, 1804, 1807, 1810, 1821, 1916, 1923, 2003, & 2007 |
| B-8 | 2100 thru 2500 Blocks, W State St. - as listed – [approx .17 acres each – approx. 2.4 acres total] Includes 2104, 2108, 2123, 21XX, 2201, 2202, 2205, 2228, 2304, 2307, 2317, 2412, 2505, & 2510 |
| B-9 | 2600 thru 2700 Blocks, W State St. - as listed – [approx .19 acres each – approx. 1.9 acres total] Includes 2601, 2607, 2710, 2716, & 2717 |
| B-10 | 113 Carson Ct. – Lot behind 2223 W. State St. [approx .22 acres] |
| B-11 | Forest Ave, 109, 113 & 125 – [approx .1 acres each – approx .3 acres total] |
| B-12 | 112 Lakin Terrace – [approx .1 acre] |
| B-13 | Mulberry St. – 1010, 1042, 1050, 1056, 1060 & 1510 – [approx .2 acres each – approx. 1.2 acre total] |
| B-14 | N. Avon St – 111 & 119 – [approx .33 acres total] |
| B-15 | N. Central Ave – 120, 124 & 128 (3 Adjacent Lots)– [approx .51 acres total] |
| B-16 | S. Avon St – 107, 109 & 113 – [approx .14 acres total] |
| B-17 | 114 Oakley Ave. – [approx .07 acre] |
| B-18 | Oakwood Ave. – 106 & 109 – [approx .05 acres total] |
| B-19 | 117 S. Independence Ave. – [approx .04 acre] |
| B-20 | 110 S. Johnston – [approx .04 acre] |
| B-21 | 115 N Day Ave - [approx .09 acres] |
| B-22 | Irving Ave - 119, 122, & 129 - [approx .15 acres total] |

| Block C – Weekly Mow | |
|-----------------------------|--|
| Site # | Location |
| C-1 | 1740 Colorado – Drainage Area [<i>approx .14 acres</i>] If unable to mow due to being wet, need to string trim |
| C-2 | 2208 & 2211 Colorado – Drainage Areas [<i>approx .5 acres</i>] If unable to mow due to being wet, need to string trim |
| C-3 | 1620 Log Cabin - Vacant Lot [<i>approx .27 acres</i>] |
| C-4 | 1623 & 1649 Log Cabin – Vacant lots and part of this is a Drainage Area [<i>approx .39 acres</i>] - If unable to mow due to being wet, need to string trim |
| C-5 | 1822 Nebraska - Vacant Lot [<i>approx .21 acres</i>] |
| C-6 | 1827 Nebraska – Vacant Lot [<i>approx .13 acres</i>] |
| C-7 | 3533 Louisiana – Vacant Lot [<i>approx .28 acres</i>] |
| C-8 | 1727 MacArthur – Vacant Lot [<i>approx .19 acres</i>] |
| C-9 | 1731 MacArthur - Vacant Lot [<i>approx .19 acres</i>] |
| C-10 | 1716 Sexton - Vacant Lot [<i>approx .20 acres</i>] |
| C-11 | 2003 Montana – Drainage Area [<i>approx .19 acres</i>] If unable to mow due to being wet, need to string trim |
| C-12 | 3522 Westgate Pkwy – Vacant Lot [<i>approx .12 acres</i>] |
| C-13 | WESLEYAN ST. DRAINAGE AREA (Flats Only) – From 20th St. to East of Ohio Pkwy. [<i>approx. 8.25 acres</i>] |
| C-14 | 20th ST. VIADUCT – South of Wesleyan North of Viaduct – Open Lot and Right of Way on both sides of 20 th St. South of viaduct litter pick & string trim both sides of road railroad tracks. [<i>approx.75 acres</i>] |

| Block D – Mow Every 2 Weeks | |
|------------------------------------|--|
| Site # | Location |
| D-1 | 1200/ 1300 Block 6th Ave – City Lots as listed – [<i>approx. 1 acre total</i>] 1241, 1303, 1307, 1311, 1317, 1321, 1325, 1329, 1335, 1339, 1343, 1349, 1353, 1357 |
| D-2 | 1400 Block 6th Ave & 700 Block 11th St – City Lots as listed – [approx. 1.38 acres total] 1403, 1407, 1411, 1417, 1424, 1427, 1429, 1435, 1439, ALSO 701 & 705 11th St |
| D-3 | 1500 Block 6th Ave – City Lots as listed – [approx. .82 acres total] 1501, 1507, 1515, 1519, 1525 |
| D-4 | 1600 Block 6th Ave & 700 Block of 13th St – City Lots as listed – [approx. 2.5 acres total] 1601, 1602, 1609, 1611, 1615, 1621, 1625, 1629, 1633, 1637, 1641, 1645, 1649, 1653, 1657, 1659 ALSO 702 & 710 13th St |
| D-5 | 1300-1500 Blocks 7th Ave - 700 Block 9th St & 11th St– City Lots as listed – [approx. .98 acres total] 1310, 1316, 1320, 1324, 1340, 1342, 1346, 1352, 1358, 1408, 1414, 1420, 1430, 1444, 1450, 1502, 1506, 1510, 1514, 1516, 1522, ALSO 718, 724 & 726 9th St & 721 11th St |
| D-6 | 1600-1700 Blocks 7th Ave – City Lots as listed – [approx. 1.9 acres total] 1602, 1606, 1614, 1616, 1620, 1621, 1624, 1628, 1634 1650, 1658, 1662 |
| D-7 | 700 – 900 Blocks 13th St & 700 Block of 7th Ave, City Lots as listed – [approx. .96 acres total] 800, 807, 811/ 813, 816, 817, 818, 901, 902, 913, 914 ALSO 1718 & 1724 (2 small lots) 7th Ave |
| D-8 | 800-1000 Blocks 14th St, City Lots as Listed – [approx. 1.2 acres total] 804, 808, 815, 816, 821, 825, 913, 917, 1009, 1015 |
| D-9 | 800-900 Blocks 15th St, City Lots as Listed – [approx .65 acres total] 809, 815, 819, 919 |

| Block E – Mow Every 2 Weeks | |
|------------------------------------|--|
| Site # | Location |
| E-1 | NW corner of N Main St and Vernon St - See Map, L Shaped Vacant Lot |
| E-2 | SW corner of N Main St and Vernon St - See Map, Vacant Lot |
| E-3 | SE corner of Auburn St and N Main St - See Map, Large Triangular Vacant Lot |
| E-4 | NE corner of Myott Ave and N Main St - See Map, Large Vacant Lot |
| E-5 | 1430 N Court St - Parcel # 11-14-402-014 (approx. 0.11 acres) |
| E-6 | CAMPUS HILLS BLVD. – West of N. Main. (Island) [<i>approx 0.12 acres</i>] |
| E-7 | RIVERSIDE ST. – Between Halsted Rd. & Belmont St. to RR Tracks. [<i>approx. 1.0 acres</i>] |
| E-8 | MERRIOTT CLOSE - Island [<i>approx 0.9 acres</i>] |
| E-9 | RIVERSIDE BLVD -N. Rockton Av. to Central Av/Owens Center Rd. (south side of road) [<i>approx 2.2 acres</i>] (north side of road) [<i>approx 2.2 acres</i>] |
| E-10 | NW DRAINAGE DITCH Belmont Blvd. to Riverside Blvd. (<i>access from Grouse Ct</i>) [<i>approx 4.6 acres</i> } (<i>Both sides of ditch</i>) |
| E-11 | RIVERSIDE BLVD -N. Main St to N. Rockton Ave (southside of road) [<i>approx 1.6 acres</i>] (north side of road) [<i>approx 1.5 acres</i>] |
| E-12 | N. ROCKTON AV. - Embury to Elmwood Rd. (east side of road) [<i>approx 1.2 acres</i>] (west side of road) [<i>approx .7 acres</i>] |
| E-13 | ROCKTON AVE. & HALSTED RD. Lot on the south east corner next to Fire Station [<i>approx .3 acres</i>] |
| E-14 | RIDGE & CUSTER – NW Corner & area West of RR. Tracks on south side of Custer Ave. [<i>approx .2 acres</i>] |
| E-15 | HALSTED RD -Hazel St. to Searles Av. (south side of road) [<i>approx .14 acres</i>] |
| E-16 | HALSTED RD. – Hazel to Central (north side) [<i>approx 1 acres</i>] |
| E-17 | AUBURN & HORSMAN - NW Corner Mow between RR track and Auburn St [<i>approx 0.9 acres</i>] |
| E-18 | ROW - Between Ridge Ave. & Huffman Blvd., RR Tracks to Adolphson St. [<i>approx. .8 acres</i>] |
| E-19 | COUNTRY CLUB TERRACE – Mow Island (eastside of road) [<i>approx .25 acres</i>] |
| E-20 | COUNTRY CLUB TERRACE @ WILLOUGHBY – Northwest corner west to Edson St.. { <i>approx .1 acres</i> } |
| E-21 | 4608 AUBURN ST. – City Lot [<i>approx. .5 acres</i>] |
| E-22 | AUBURN ST. - From 3916 Auburn St to Johnston Ave (south side road) [<i>approx 1.6 acres</i>] |
| E-23 | AUBURN ST. – South side of Auburn St. from Auburn High School to Springfield Ave. [<i>approx. .5 acres</i>] |
| E-24 | GRACE ST. DEAD END – West of 2323 Grace St. & 1722 Tacoma to RR Tracks. [<i>approx. .3 acres</i>] |
| E-25 | CENTRAL AV -Auburn St. to Kent Creek (eastside of road) [<i>approx 1.2 acres</i>] |

| Block F – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| | 3300 thru 3400 Blocks, W State St.- as listed – [approx .19 acres each – approx. 1.9 acres total] |
| F-1 | Includes 33xx, 3320, 3330, 34xx, & 3410 |
| F-2 | Kilburn Ave, 111 & 125 – [approx. .57 acres] |
| F-3 | 112 Carbaugh Ave - [approx .16 acres] |
| F-4 | 302 & 234 N Hinkley Ave - Parcel # 11-22-106-032, 11-22-109-016 (approx. 0.33 acres) |
| F-5 | 118, 122, 124, 126 Concord Ave - Parcel # 11-20-277-002, 007, 008, 009, 010 (approx. 0.82 acres) |
| F-6 | 3xx Concord Ave - Parcel # 11-20-281-005 (approx. 0.10 acres) |
| F-7 | 430 Concord Ave - Parcel # 11-20-426-007 (approx. 0.19 acres) |
| F-8 | 3417 Green St - Parcel # 11-20-281-007 (approx. 0.08 acres) |
| F-9 | 130 Lexington Ave - Parcel # 11-20-278-011 (approx. 0.18 acres) |
| F-10 | 316 Lexington Ave - Parcel # 11-20-282-004 (approx. 0.18 acres) |
| F-11 | 3417 Chestnut St - Parcel # 11-20-279-013 (approx. 0.07 acres) |
| F-12 | 409, 411 S Horace Ave - Parcel # 11-21-306-026, 027 (approx. 0.37 acres) |
| F-13 | 5xx S Horace Ave - Parcel # 11-21-326-012 (approx. 0.12 acres) |
| F-14 | 3915 Delaware St - Parcel # 11-20-402-014 (approx. 0.17 acres) |
| F-15 | 520 Hartford Ave - Parcel # 11-20-429-012 (approx. 0.12 acres) |
| F-16 | 418 Albert Ave - Parcel # 11-21-226-011 (approx. 0.09 acres) |
| F-17 | 1130 Andrews St - Parcel # 11-22-131-010 (approx. 0.23 acres) |
| F-18 | 1131 Andrews St - Parcel # 11-22-128-014 (approx. 0.07 acres) |
| F-19 | 1402 Andrews & 330 N Hinkley Ave - Parcel # 11-22-106-024, 025 (approx. 0.16 acres) |
| F-20 | 452 N Avon St - Parcel # 11-22-128-017 (approx. 0.13 acres) |
| F-21 | 614 N Avon St - Parcel # 11-15-379-057 (approx. 0.27 acres) |
| F-22 | 715 Bluefield St - Parcel # 11-15-378-010 (approx. 0.11 acres) |
| F-23 | 17xx Chestnut St & 218 S Independence Ave - Parcel # 11-21-285-009, 004 (approx. 0.24 acres) |
| F-24 | 1918 Elm St - Parcel # 11-21-284-001 (approx. 0.09 acres) |
| F-25 | 1417 Mulberry St - Parcel # 11-22-109-032 (approx. 0.14 acres) |
| F-26 | 1435 Mulberry St - Parcel # 11-22-109-026 (approx. 0.15 acres) |
| F-27 | 1329 School St - Parcel # 11-15-380-038 (approx. 0.18 acres) |
| F-28 | 1502 School St - Parcel # 11-22-102-006 (approx. 0.11 acres) |
| F-29 | 210 Tay St - Parcel # 11-22-183-002 (approx. 0.06 acres) |
| F-30 | 211, 213, 219, 227 N Avon St, 2xx, 220, 226, 228 Ogden Ave, 10xx, 1045, 1047, 1051, 1055, 1061, 1067 Mulberry St & 10xx, 1036, 1044, 1050, 1056, 1060 W Jefferson St - Parcel # 11-22-251-001, 003, 004, 005, 016, 017, 018, 019, 020, 021, 037, 031, 030, 029, 028, 036, 010, 009, 008, 007, 006 (approx. 5.12 acres) |
| F-31 | 416 Underwood St - Parcel # 11-22-202-015 (approx. 0.14 acres) |
| F-32 | 436 & 440 Underwood St - Parcel # 11-22-202-008, 007 (approx. 0.28 acres) |
| F-33 | 450 Underwood St - Parcel # 11-22-202-005 (approx. 0.02 acres) |
| F-34 | 219 N Johnston Ave - Parcel # 11-21-209-005 (approx. 0.16 acres) |

| | |
|------|---|
| F-35 | 617 Greenview Ave - Parcel # 11-16-377-001 (approx. 0.14 acres) |
| F-36 | 1535 Andrews St (neighborhood park) - Parcel # 11-22-102-023 (approx. 0.09 acres) |
| F-37 | 8xx & 824 Lee St - Parcel # 11-22-205-004, 003 (approx. 0.016 acres) |
| F-38 | 1027 Woodlawn Ave - Parcel # 11-14-352-007 (approx. 0.11 acres) |
| F-39 | 729 & 733 N Rockton Ave - Parcel # 11-23-103-002, 001 (approx. 0.09 acres) |
| F-40 | 713 Locust St - Parcel # 11-22-234-012 (approx. 0.07 acres) |
| F-41 | 903 Acorn St - Parcel # 11-22-229-022 (approx. 0.05 acres) |
| F-42 | 309 Horsman St - Parcel # 11-22-280-004 (approx. 0.24 acres) |
| F-43 | W. STATE & CHESTNUT CROSSOVER – SWX & Triangle Island [approx. .6 acres] |
| F-44 | W. State & Kilburn Ave – NEX, City Lot [approx. .6 acres] |
| F-45 | HORSMAN ST. – Along Old Quarry & City Lots South of Quarry. [approx. .5 acres] |
| F-46 | WHITMAN ST -Horsman St. to N. Rockton Av. (south side of road) [approx 1.2 acres] |
| F-47 | W. JEFFERSON ST/MULBERRY ST. - Kilburn Av. (south side of road) [approx .26 acres] |
| F-48 | OGDEN ST. – City Lot @ Mulberry St. & W. Jefferson between Ogden St. & RR Tracks. [approx. .4 acres] |
| F-49 | CITY LOTS – West side of Kent Creek from Mulberry St. to South of Elm St.. [approx. 2.4 acres] |
| F-50 | Island at FISHER AV. & HASKELL AV. [approx .09 acres] |
| F-51 | ROCKTON & CHERRY – East Side from street to south end of parking area. [approx .09 acres] |
| F-52 | Triangle Lot at PRESTON ST, at Howard Av, and Anderson St. [approx .06 acres] |
| F-53 | S. PIERPONT & PRESTON ST. – NWX, City Lot [approx .4 acres] |
| F-54 | N. PIERPONT AV. -W. State St. to School St. (west side of road). [approx .6 acres] Mow back to edge of farm field or tree line |
| F-55 | SCHOOL ST. -N. Pierpont Av. to Springfield Av. (both sides of road) [approx 1.2 acres] Mow back to edge of farm field or tree line |
| F-56 | W. STATE ST. -Daisyfield Rd. to Springfield Ave (south side of rd.) Between W. State & Service Rd. [approx 1 acre] |
| F-57 | W. STATE ST. – From Fire Station # 6 west to Springfield Ave (north side of road) Mow back to edge of farm field or tree line. [approx 1.2 acres] |
| F-58 | 1326 Chestnut St - Parcel # 11-22-326-004 (approx. 0.18 acres) |

| Block G – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| G-1 | CURVE ST. -S. Avon St. to Corbin St. (Road north - both sides of RR tracks plus vacant lot on SW corner of Selden and Avon St) [<i>approx 1.3 acres</i>] |
| G-2 | 523 CENTRAL AVE – Chip lot & Hill, both sides of fence and weed whip along guardrail. Mow south to southernmost RR Tracks. [<i>approx 3.8 acres</i>] |
| G-3 | PIERPONT & LEXINGTON – Drainage Area, East and West side of Pierpont St. [<i>approx .5 acres</i>] |
| G-4 | E. SIDE OF HORACE AVE. @ HUDSON ST. – City Lot [<i>approx. 6.4 acres</i>] |
| G-5 | TAY ST. -Cedar St. to Curve St. (both sides of road, and along RR Tracks) [<i>approx .1 acres</i>] |
| G-6 | CENTRAL AV. -Cunningham St. to City Yards Entrance (2 triangle lots, one on each side of the road and ROW on both sides) [<i>approx 1.9 acres</i>] |
| G-7 | CUNNINGHAM ST. -1521 Cunningham St to Morgan St. (north side of road) and; |
| G-8 | MORGAN ST. – Cunningham St to Central Ave. (south side of road) [<i>approx 1.6 acres</i>] |
| G-9 | MARYLAND & HUDSON – City Right of Way [<i>approx .9 acres</i>] |
| G-10 | 1026 S. MAIN – City lot [<i>approx. .1 acres</i>] |
| G-11 | 700/800 S Main – Old Train Depot (See Map) [<i>approx.4.75 acres</i>] |
| G-12 | 1101 S. Church St. – [<i>approx .12 acres</i>] |
| G-13 | 525 S Main St (actually two lots) - Parcel # 11-22-489-002 & 11-22-489-001 (approx. 0.75 acres) |
| G-14 | 609 S Main St - Parcel # 11-27-226-010 (approx. 1.08 acres) |
| G-15 | 616 Newport Ave - Parcel # 11-20-454-006 (approx. 0.11 acres) |
| G-16 | 636 Hartford Ave - Parcel # 11-20-477-013 (approx. 0.13 acres) |
| G-17 | 4xx Short Horsman St - Parcel # 11-22-405-018 (approx. 0.31 acres) |
| G-18 | 201 Kent St - Parcel # 11-27-282-002 (approx. 0.31 acres) |

| Block H – Mow Every 2 Weeks | |
|------------------------------------|--|
| Site # | Location |
| H-1 | 206, 210, 214 Lane St - Parcel # 11-27-429-008, 007, 006 (approx. 0.38 acres) |
| H-2 | 430 Knowlton St - Parcel # 11-27-405-001 (approx. 0.20 acres) |
| H-3 | 325 Salter Ave - Parcel # 11-27-405-020 (approx. 0.17 acres) |
| H-4 | ARAGONA & REGINA – City Right of Way between Dead Ends. [<i>approx .2 acres</i>] |
| H-5 | MONTAGUE RD. -Pierpont Av. to Montague St. – intermittent as indicated. Mow to edge of farm field, pole line or tree line. [<i>approx 1 acres</i>] |
| H-6 | S. MAIN ST. & MARCHESANO DR. (northeast corner lot) Street east to tree line, fence north to bookstore. [<i>approx .2 acres</i>] Southeast corner south to House. [<i>approx. .1 acres</i>] |
| H-7 | FORSYTHIA DR. – Drainage area from fence on east end of property to tree line on west side of Forsythia. Includes waterway. [<i>approx. 1.7 acres</i>] (Must string trim anywhere mowers can't be used) |
| H-8 | SAUK DR. – City Right of way, North and South sides, wherever property is undeveloped. [<i>approx. .7 acres</i>] |
| H-9 | SIMPSON RD. – Right of Way adjacent to cul-de-sac near S. Main St. [<i>approx. .2 acres</i>] |
| H-10 | PRAIRIE RD. & S. MAIN ST. – Right of Way along S. Main and Prairie Rd. and open lot on NW corner [<i>approx. 3.2 acres</i>] |
| H-11 | S MAIN ST & HARRISON AVE., North and south side of Harrison -S. Main St. to the River, Mow from street curb in, using utility poles, fence, bush & tree lines to determine right of way boundary width. Trim along all guardrails. Wrap both corners of Harrison & S. Main about 100 yards on Main St for visibility. [<i>approx 1.5 acres</i>] |

| Block I – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| I-1 | MILFORD AV -11th St to 9th St. (north side of road) (Must trim around guardrail) [<i>approx .6 acres</i>] |
| I-2 | NEW MILFORD SCHOOL RD -1968 New Milford School Rd to Falcon Rd. (north side of road) [<i>approx .6 acres</i>] |
| I-3 | LINDEN RD -S. Alpine Rd. to 35th St. (north side of road) [<i>approx .3 acres</i>] (south side of road) [<i>approx .2 acres</i>] |
| I-4 | 35TH ST -Linden Rd. to Bonanza Way (east side of road) [<i>approx 1.1 acres</i>] (west side of road) [<i>approx .7 acres</i>] |
| I-5 | SAMUELSON RD -S. Alpine Rd. to 11th St. (south side of road) [<i>approx 3.6</i> <i>acres</i>] (north side of road) [<i>approx 3.6 acres</i>] |
| I-6 | SAMUELSON RD -11th St. to Falcon Rd. (north side of road) [<i>approx .1 acres</i>] (south side of road) [<i>approx .1 acres</i>] |
| I-7 | EASY ST. – Boulevard between Easy St. & 6 th St. [<i>approx. 1.5 acres</i>] |
| I-8 | AIRPORT DR. & S. 6TH ST. – City Lot between 39 th Ave & Airport Dr. from S. 6 th St. to S. 9 th St. [<i>approx.3.6 acres</i>] |
| I-9 | RESEARCH PKWY. – City Right of Way in front of Retention Pond. [<i>approx. .4</i> <i>acres</i>] |
| I-10 | 20TH ST. RIGHT OF WAY – Bypass 20 to Samuelson Rd. (both sides of road, where residents don't mow) [<i>approx. .6 acres</i>] |

| Block J – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| J-1 | HARRISON AV. -From the River to Kishwaukee St. Mow from street curb in using utility poles, fence, bush & tree lines to determine right of way boundary width. Trim along all guardrails Cut back to fenceline on the NE corner of Harrison and Seminary. (south side of road) [<i>approx 2 acres</i>] (north side of road) [<i>approx 2 acres</i>] |
| J-2 | SEMINARY ST. -Harrison Ave to Blackhawk Park Ave. Also mow triangle lots at Seminary & Magnolia. (west side of road) [<i>approx 1.0 acres</i>] (east side of road) [<i>approx 1.0 acres</i>] |
| J-3 | SANER RD. – Along RR Tracks between Kishwaukee St. & S. 4 th St. [<i>approx.1.6 acres</i>] |
| J-4 | REED AVE. & HORTON ST. – Large City Lot on South side of Reed Ave. [<i>approx. 3.8 acres</i>] |
| J-5 | HARRISON AVE. -11th St. to Alpine Rd. Trim along all guardrails. Mow from street curb to drainage ditch. Wrap NW corner of Harrison & 20th for visibility. Mow back to private fenceline on south side, west of Ohio Pkwy. Include landscaped terrace in front of Duplex' in 3600 block. (south side of road) [<i>approx 2 acres</i>] (north side of road) [<i>approx 2.2 acres</i>] |
| J-6 | 25th ST. DEAD END - See map, Vacant Lots and ROW, String trim around guardrail. [<i>approx .25 acres</i>] |
| J-7 | 1604 6th St - Parcel # 11-35-229-001 (approx. 0.11 acres) |
| J-8 | 2614 10TH St - Parcel # 15-01-103-017 (approx. 0.15 acres) |
| J-9 | S. ALPINE & GRINNELL – SWX, Right of Way. [<i>approx. .1 acres</i>] |
| J-10 | S. ALPINE & O'CONNELL – SW Quadrant behind homes SEE MAP (Utility Easement). [<i>approx. 3 acres</i>] |
| J-11 | MANCHESTER DR. -Harrison Av. to Middlebury Ave. Steep slope must be string trimmed if unable to mow. (westside of road) [<i>approx 1.2 acres</i>] |
| J-12 | 18th ST SOUTH OF BROADWAY – West side of street along RR Tracks. [<i>approx. .3 acres</i>] |
| J-13 | 22ND AVE BOULEVARD – Between Kishwaukee St. & 7 th St. [<i>approx .7 acres</i>] |
| J-14 | Island at APPLE ORCHARD LA. [<i>approx .08 acres</i>] |
| J-15 | S. ALPINE RD. -Longmeadow La. to Apple Orchard La. (eastside of road) [<i>approx .3 acres</i>] |

| Block K – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| K-1 | S. ALPINE RD. -Larson Ave. to E. State. St. String trim along both sides of guardrail (west side of road) [<i>approx 1 acre</i>] |
| K-2 | BROADWAY/WOODRUFF VIADUCT (See Map, ROW and about two passes behind sidewalks on both sides of Broadway) [<i>approx .1 acres</i>] |
| K-3 | WOODRUFF AVE. -Broadway to 9th Street. Mow from pavement edge to railroad tracks or tree line. Steep slope must be string trimmed if unable to mow. (south side of road) [<i>approx 2 acres</i>] |
| K-4 | 100 Blk even side of Fairview Ave on southside of creek - mow from Fairview back east to tree line, from creek south to parking lot |
| K-5 | 100 Blk odd side of Fairview Ave on northside of creek - Weed whip/ mow from Fairview west for about 200' on both sides of guardrail and down into creek about 8' |
| K-6 | NW corner of S 6th St and 11th Ave - SEE MAP, actually two triangle city lots |
| K-7 | Oak Grove – City Lot [<i>approx 1 acre</i>] |
| K-8 | 7th Avenue & 5th Street – SW Corner Trim both sides of guardrail all the way west to first driveway [<i>approx .25 acres</i>] |
| K-9 | 712 4th Ave (L shaped lot) - Parcel # 11-26-251-009 (approx. 0.14 acres) |
| K-10 | 521 College Ave - Parcel # 11-26-179-005 (approx. 0.28 acres) |
| K-11 | 724 7th Ave - Parcel # 11-26-401-003 (approx. 0.07 acres) |
| K-12 | 715 7th Ave - Parcel # 11-26-404-006 (approx. 0.14 acres) |
| K-13 | 702 S 3rd St - Parcel # 11-26-108-001 (approx. 0.14 acres) |
| K-14 | 312 Penfield Pl - Parcel # 11-26-159-016 (approx. 0.17 acres) |
| K-15 | 325 Penfield Pl - Parcel # 11-26-160-006 (approx. 0.17 acres) |
| K-16 | 819 Seminary St - (approx. 0.15 acres) |
| K-17 | Windpoint Deadend - 600/ 700 blk of Parkside Dr, large vacant lot |
| K-18 | Island at GROVE ST. & KISHWAUKEE ST. [<i>approx .02 acres</i>] |
| K-19 | Oak Grove at Glendale – City ROW [<i>approx .1 acres</i>] |
| K-20 | 326 Bremer St. – [<i>approx .11 acres</i>] |
| K-21 | 805 S. 5th St. – this needs to be mowed all the way south to the alley [<i>approx .34 acres</i>] |
| K-22 | 5TH AV. between KISHWAUKEE ST TO 4TH ST (south side of street) [<i>approx .1 acres</i>] |
| K-23 | 5TH AV. : RR crossing-Kishwaukee-4th St (north side of street) including slopes of overpass [<i>approx .03 acres</i>] |
| K-24 | SW Triangle Lot: 5th Av-5th St-RR tracks [<i>approx .1 acres</i>] |
| K-25 | NE Triangle Lot: 5 th Av-4th St-RR tracks [<i>approx .1 acres</i>] |
| K-26 | Island on CENTER TERR. between Point Av. and Coco Joes, (south side of the road) [<i>approx .1 acres</i>] |
| K-27 | N. ALPINE RD -Maray Dr. to north side of creek. (westside of road) [<i>approx .07 acres</i>] |
| K-28 | N. ALPINE RD -from Seventh Day Adventist Church to Aldeen Park property line (eastside of road) [<i>approx .14 acres</i>] |
| K-29 | 426 N. 3rd St. – City Lot, L shaped lot [<i>approx .2 acres</i>] |
| K-30 | Island at REVELL AV. & 9TH ST. (north east side) [<i>approx .09 acres</i>] |

| | |
|-------------|--|
| K-31 | Island between HALL ST. & 6TH ST. & JEFFERSON ST. (north east corner) [<i>approx .1 acres</i>] |
| K-32 | Island at JEFFERSON ST. & 6TH ST. & 5TH ST. (south west corner -by Uncle Nick's) [<i>approx .09 acres</i>] |
| K-33 | 11TH ST & CHARLES ST. – SE corner right of way by Marie's Pizza. Includes lot next to house on 11 th St. side. [<i>approx .1 acres</i>] |
| K-34 | 1006 Kishwaukee St. – [<i>approx .17 acres</i>] |
| K-35 | 1310 Kishwaukee St. & ROW across Lorden Ct along concrete wall – [<i>approx .30 acres</i>] |
| K-36 | 808 & 812 10th Ave – [<i>approx .34 acres</i>] |
| K-37 | 7xx Kishwaukee Ct. – (3 lots combined) [<i>approx. 1.4 acres</i>] |
| K-38 | 735 8th Ave – [<i>approx .24 acres</i>] |
| K-39 | 807 8th Ave – [<i>approx .06 acres</i>] |
| K-40 | 802 – 804 S. 5th St. – [<i>approx .53 acres</i>] |
| K-41 | 8xx S. 6th St. – [<i>approx .48 acres</i>] |
| K-42 | Island on SKYLARK DRIVE between Crosby St and Fairview Blvd. [<i>approx .1 acres</i>] |

| Block L – Mow Every 2 Weeks | |
|------------------------------------|--|
| Site # | Location |
| L-1 | City Lot – Between Highcrest Rd. & Parkview Dr. – South side of Springcreek Rd., and: |
| L-2 | City Right of Way – North side of Springcreek Rd. from Stoneridge east to end of wooded area. [<i>approx. 1.25 acres</i>] |
| L-3 | Island at end of ALPINE CT. [<i>approx .46 acres</i>] |
| L-4 | Island at GREENWOOD AV. & SKYLARK DR. [<i>approx .4 acres</i>] |
| L-5 | Island at 2000 BIRCHWOOD DR. (south side of street) [<i>approx .02 acres</i>] |
| L-6 | EDGEWOOD DR. – Along Golf Course from Forest Hills Rd. East to where Edgewood turns South (mostly string trim). [<i>approx. .3 acres</i>] |
| L-7 | N. ALPINE & BROOKVIEW RD. – NWX on Alpine. [<i>approx. .2 acres</i>] |
| L-8 | N. ALPINE RD - Olde Lyme Dr. to Innsbruck Dr. (eastside of road) [<i>approx 1.9 acres</i>] |

| Block M – Mow Every 2 Weeks | |
|------------------------------------|--|
| Site # | Location |
| M-1 | SPRING CREEK RD -Shaw Woods Dr. to Dior Dr. (south side of road) [<i>approx .4 acres</i>] |
| M-2 | SHAW WOODS DR -Spring Creek Rd. to Spring Brook Rd. (west side of road) [<i>approx .9 acres</i>] |
| M-3 | SPRING BROOK RD –Woodhill to Mulford Rd. (south side of road, includes drainage area west of Applewood Ln <i>THIS MUST BE WEED WHIPPED</i>) [<i>approx .8 acres</i>] SPRING BROOK RD -Spring Lake Dr to Mulford Rd. (north side of road) [<i>approx .2 acres</i>] NWX(mow 100' North), SWX, SEX (Mow 100' South), of Spring Brook & Mulford (right of ways only – includes string trimming around all guard rails). |
| M-4 | REID FARM & TRAINER RD. – City Right of way (see map). [<i>approx .2 acres</i>] |
| M-5 | REID FARM RD -Olde Creek Rd to Barrick Dr. (eastside of road) [<i>approx .55 acres</i>] |
| M-6 | OLDE CREEK RD (<i>old Spring Creek Rd</i>) -Perryville Rd. to Reid Farm Rd. (south side of road) [<i>approx .73 acres</i>] |
| M-7 | BELL SCHOOL RD. - Spring Creek Rd. to Spring Brook Rd, both sides of street except where landscaped. [<i>approx 1 acre</i>] |
| M-8 | ROTH RD. – Old Creek Rd. North to Dead End, both sides. East side only mow ½. Remainder is County Highway property. [<i>approx. 2 acres</i>] |
| M-9 | Springwheat Dr - Large vacant lot [<i>approx. 12 acres</i>] - mow from roads edge north to approx creek line. Starting at the property line of 3688 Springwheat mow east to tree line just before Bell School Rd. Also at north east corner there is a small area that needs to be mowed all the way to the edge of Bell School. |

| Block N – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| N-1 | 49xx Guilford Rd - ONLY mow from edge of road to tree line |
| N-2 | EASTLAWN DR. , South of CREEKVIEW RD. Weed whip along guardrail and south end of creek wall. [<i>approx .46 acres</i>] |
| N-3 | NEWBURG RD. & S. MULFORD RD. – City Lot, NWX. [<i>approx. .3 acres</i>] |
| N-4 | NEW TOWNE & JAVELIN – NWX, Drainage area. [<i>approx. 1 acres</i>] |
| N-5 | ROTE RD. – Lyford Rd. to Bell School Rd., both sides & trim along guardrails. [<i>approx. 1 acre</i>] |
| N-6 | LYFORD RD. – Rote Rd. to E. State St. Right of Way. [<i>approx. 1.8 acres</i>] |
| N-7 | LYFORD RD. – City Lot (see map) [<i>approx. 10.2 acres</i>] |
| N-8 | N. MULFORD RD -680 N. Mulford Rd. to Garrett La. (west side of road) [<i>approx .1 acres</i>] |

| Block O – Mow Every 2 Weeks | |
|------------------------------------|---|
| Site # | Location |
| O-1 | MULFORD RD. -Harrison Ave. to Charles St. (east side of road) [<i>approx .4 acres</i>] (west side of road) [<i>approx .5 acres</i>] |
| O-2 | SANDY HOLLOW RD - Mulford Rd to S Alpine Rd (northside of road) [<i>approx 2.7 acres</i>] (south side of road) [<i>approx 2.3 acres</i>] |
| O-3 | SANDY HOLLOW RD -11th St. to S. Alpine Rd. (north side of road) [<i>approx .6 acres</i>] (south side of road) [<i>approx 1.1 acres</i>] |
| O-4 | SANDY HOLLOW RD -Kishwaukee St. to 11th St. (north side of road) [<i>approx .6 acres</i>] (south side of road) [<i>approx .2 acres</i>] (Must string trim anywhere mowers can't be used including all of ditches along here) |

| Properties & Complexes | |
|-----------------------------------|--|
| Site # | Location |
| PC-1 | 1200 Rock St. (Barber Coleman Complex) |
| PC-2 | 1200 & 1300 S. Main St (Barber Coleman out lots) |
| PC-3 | 301 S. Water St. (Ingersoll) * HILLS MUST BE WEED WHIPPED ONCE A MONTH * |
| PC-4 | 1419 Blaisdell (Church School) |
| PC-5 | 615 Furman St. (CD Lot) |
| PC-6 | 605 N Main St (Armory) |
| PC-7 | 302 S. Main St (Brown Lot) |
| PC-8 | 523 S Central Ave (City Yards) SEE MAP |

APPENDIX E

Appendix E

City Streets - Tree, & Landscaping Maintenance

1.0 General Scope

- 1.1 Scope of Work Adjustment. The City representative retains the right to adjust the scope of work at each site location. The vendor will provide a written proposal for any cost adjustment to the City representative prior to performing any additional work over and above the specifications listed in this document.
- 1.2 On-site preparation work. Prior to each mowing occurrence the vendor shall pick clean the entire site, removing all litter, trash, branches, glass, and debris. Paper, cups and other litter must not be mowed so as to detract from the sites' appearance.
- 1.3 Trimming. Final trimming around permanent objects such as trees, posts, shrubs, fences, guard rails, signs, curbsides, and roadway edges, will be accomplished with suitable mechanical equipment at the same cutting height as the rest of the turf so as not to detract from the appearance of the site. Trimmings are to be cleaned from all hard surfaces (sidewalks, curbs, driveways, and streets).
- 1.4 Labor, Tools, and Equipment. The vendor agrees to furnish all necessary labor, tools and equipment in connection with the grounds maintenance of the specified locations. Vendor shall provide a list of available staffing to be used in his operation.
- 1.5 Equipment. Mowing equipment can include riding mowers, walk behind mowers, nylon line trimmers and hand clipping, where necessary. Mowing equipment shall be kept in good, safe operating condition with sharp blades so that the grass is cut properly and in such a condition that oil and gasoline are not leaked. Vendor shall submit a list of equipment and indicate the age of said equipment to be used for mowing.
- 1.6 Equipment/safety. The vendor shall remove equipment at the completion of the workday. The City of Rockford does not assume any responsibility, at any time, for the protection of or loss of equipment or supplies either at the work site or elsewhere.
- 1.7 Fueling. All equipment shall be fueled on paved surfaces and the vendor shall be responsible for any cleanup necessary due to spillage.
- 1.8 Scheduling. The vendor will perform the work in accordance with the schedule provided or the instructions received from the City representative. Generally, the work may be performed between the hours of 6:00 a.m. and 6:00 p.m. and on any day or days of the week in accordance with the City's noise ordinance (see section 2.3). If special circumstances require different hours the vendor shall seek approval for such a change from the City. The City reserves the right to add additional mowing cycles or site specific mowing. The City may also determine that a scheduled mowing cycle is unnecessary due to dry weather conditions. The respective City Representative shall be notified within 24 hours upon completion of a scheduled mowing cycle. All invoices shall be submitted to the City Representative within 10 days of completing a mowing

cycle and must include a valid invoice number, the specific cycle for which the invoice is presented, the group or Block of sites, and the correct date. Do not submit invoices directly to the City Finance Dept. They will not be paid until validated by respective City Representative(s).

1.9 Site Locations. The sites that are included in this bid specification are as follows:

Harrison Ave. - Between Alpine Rd. & Mulford Rd., along both sides of the right of way and the center parkway area. Includes Forestview & Eastrock Boulevards only.

Kishwaukee Berm – Between Chestnut St. and East State St. along the east side of S. Third St.

South Second Street- There are four berm areas. Two of them are on each side of S. Second St, after you cross the bridge going south. The third berm is over next to the railroad tracks on the south side of South Third St. at the north end of South Third St. where it dead ends above the railroad tracks. The fourth berm is located on the north side of South Third St. where it dead ends above the railroad tracks.

Spring Creek Road Area- The area on both the north and south sides of Spring Creek Road between McFarland Rd. & Bell School Rd.

Auburn St. & N. Main St. Roundabout Area – This area includes the actual roundabout, and all grass and planting areas on medians, parkways and the city parking lot on the southwest corner of the intersection as highlighted on the attached aerial map.

Morgan Street Bridge Area – This area includes all grass and planting areas on College Ave. / Morgan St. from S. 3rd St. to Kent St. as highlighted on the attached aerial map.

The City of Rockford reserves the right to add additional sites to the contract subsequent to award as new construction projects are completed or other properties are acquired by the City.

2.0 Scope of work

2.1 Harrison Ave. The vendor shall perform the following services at this location:

- 2.1.1 As soon as weather is cooperative or at direction of City Representative in late March or April, contractor shall remove all leaves and winter debris from beds, trees, shrubs, turf and non-turf areas.
- 2.1.2 In early April, the vendor shall cut down all ornamental grasses left up over the winter, to within 2” of ground and remove clippings from site. Vendor shall examine all trees and shrubs in parkway and right of way areas for damage from

winter season. Vendor shall note in writing to City of Rockford Arborist any damaged trees, shrubs and their location.

- 2.1.3 In early April, vendor shall “work up” mulch areas around all trees, shrubs and planting areas and install new “chocolate” mulch 1” thick around all plants, shrubs and trees in right of way and parkway areas.
- 2.1.4 In middle of April and once a month there after until the end of October the vendor shall spread 10-10-10 granular plant and tree fertilizer around all trees, shrubs and in all planting beds. The vendor shall spread the fertilizer with suitable spreader type equipment for this application. The City of Rockford Arborist will instruct the vendor on the type and amount of fertilizer to use.
- 2.1.5 In July, or at the first appearance of the Japanese beetles, the vendor shall spray, or use an injected treatment around all plants, trees and shrubs that are affected by the Japanese beetles. This treatment shall be performed twice a week until the Japanese beetles have disappeared for the season at the direction of City of Rockford Arborist. The frequency the treatment is applied shall be adjusted, if needed, by the City of Rockford Arborist.
- 2.1.6 All tree and shrub pruning is under the direction of the City of Rockford Arborist. The arborist will instruct the vendor on how and when to prune all shrubs and trees which is typically once a year.
- 2.1.7 All ground mowing areas shall receive a suitable fertilizer for that season. All grass areas shall receive one application of granular fertilizer in early April and one more application in early October. The City of Rockford Arborist shall instruct the vendor on what type and brand of granular fertilizer to use. The fertilizer shall be spread with suitable spreader type equipment. The vendor shall take precautionary measures to make sure that the fertilizer for the grass does not become deposited in the mulch areas around the trees, shrubs and planting beds.
- 2.1.8 As grass begins growing and is suitable for mowing, in April, all right of way and parkway areas shall be mowed once a week to a height of 1 ½ inches. All grass clippings that enter the roadway areas, shall be swept up and removed after each mowing. In addition, all areas not accessible with mowing equipment shall be trimmed using string fed trimming equipment to the same height of the grass. This includes all shrub, tree and planting bed areas. Care shall be taken as not to cause any damage to any shrubs, trees, and planting beds from the use of string trimming equipment. Any damage must be immediately reported to The City of Rockford Arborist no later than the same day of occurrence.
- 2.1.9 Beginning in late April all weeds should be removed from planting beds, shrubs and trees areas. Weeding shall be performed first before each mowing cycle is performed weekly.
- 2.1.10 Beginning the first week in October and continuing until the middle of November, the vendor will use leaf vacuum equipment to remove leaves from all parkway and right of way areas, once a week, in addition to mowing until grass stops growing.

2.1.11 All Pest control and weed spraying shall be performed under the direction of the City of Rockford Arborist. All vendor pesticide applicators and their equipment must have prior approval of the City of Rockford Arborist before performing this operation.

2.2 Kishwaukee Berm. The vendor shall perform the following services at this location:

2.2.1 As soon as weather is cooperative in late March or April, contractor shall remove all leaves and winter debris from beds, turf and non-turf areas.

2.2.2 In early April, the vendor shall cut down all ornamental grasses left up over the winter to within 2" of ground and remove clippings from site. Vendor shall examine all trees and shrubs in parkway and right of way areas for damage from winter season. The vendor shall note in writing to City of Rockford Arborist any damaged trees, shrubs and their location.

2.2.3 In early April, vendor shall "work up" mulch areas around all trees, shrubs and planting areas and install new "chocolate" mulch 1" thick around all plants, shrubs and trees in right of way and parkway areas.

2.2.4 In middle of April and once a month there after until the end of October the vendor shall spread 10-10-10 granular plant and tree fertilizer around all trees, shrubs and in all planting beds. The vendor shall spread the fertilizer with suitable spreader type equipment for this application. The City of Rockford Arborist will instruct the vendor on the type and amount of fertilizer to use.

2.2.5 In July, or at the first appearance of the Japanese beetles, the vendor shall spray all plants, trees and shrubs that are affected by the Japanese beetles twice a week until the Japanese beetle has disappeared for the season.

2.2.6 All tree and shrub pruning is under the direction of the City of Rockford Arborist. Arborist will instruct the vendor on how and when to prune all shrubs and trees.

2.2.7 All mowing areas shall receive a suitable fertilizer for that season. All grass areas shall receive one application of granular fertilizer in early April and one more application in early October. The City of Rockford Arborist shall instruct the vendor on what type and brand of granular fertilizer to use. The fertilizer shall be spread with suitable spreader type equipment. The vendor shall take precautionary measures to make sure that the fertilizer for the grass does not become deposited in the mulch areas around the trees, shrubs and planting beds.

2.2.8 As soon as grass begins growing and is suitable for mowing, all right of way and parkway areas shall be mowed once a week to a height of 1 ½ inches. All grass clippings that enter the roadway areas, shall be swept up and removed after each mowing. In addition, all areas not accessible with mowing equipment shall be trimmed using string fed trimming equipment to the same height of the grass. This includes all shrub, tree and planting bed areas. Care shall be taken as not to cause any damage to any shrubs, trees, and planting beds from the use of string

trimming equipment. Any damage must be immediately reported to The City of Rockford Arborist no later than the same day of occurrence.

- 2.2.9 Beginning in late April all weeds shall be removed from planting beds, shrubs and tree areas. Weeding shall be performed first before each mowing cycle is performed weekly.
 - 2.2.10 Beginning the first week in October and continuing until the middle of November, the vendor will use leaf vacuum equipment to remove leaves and debris from all parkway and right of way areas once a week in addition to mowing until grass stops growing.
 - 2.2.11 All Pest control and weed spraying shall be performed under the direction of the City of Rockford Arborist. All vendor pesticide applicators and their equipment must have prior approval of the City of Rockford Arborist before performing this operation.
- 2.3 South Second Street. The vendor shall perform the following services at this location:
- 2.3.1 As soon as weather is cooperative in late March or April, contractor shall remove all leaves and winter debris from beds, turf and non-turf areas.
 - 2.3.2 In early April, the vendor shall cut down all ornamental grasses left up over the winter to within 2" of ground and remove clippings from site. Vendor shall examine all trees and shrubs in parkway and right of way areas for damage from winter season. The vendor shall note in writing to City of Rockford Arborist any damaged trees, shrubs and their location.
 - 2.3.3 In early April, vendor shall "work up" mulch areas around all trees, shrubs and planting areas and install new "chocolate" mulch 1" thick around all plants, shrubs and trees in right of way and parkway areas.
 - 2.3.4 In middle of April and once a month there after until the end of Oct. the vendor shall spread 10-10-10 granular plant and tree fertilizer around all trees, shrubs and in all planting beds. The vendor shall spread the fertilizer with suitable spreader type equipment for this application. The City of Rockford Arborist will instruct the vendor on the type and amount of fertilizer to use.
 - 2.3.5 In July, or at the appearance of the Japanese beetles, the vendor shall spray all plants, trees and shrubs that are affected by the Japanese beetles twice a week until the Japanese beetle has disappeared for the season.
 - 2.3.6 All tree and shrub pruning is under the direction of the City of Rockford Arborist. He will instruct the vendor on how and when to prune all shrubs and trees.
 - 2.3.7 All mowing areas shall receive a suitable fertilizer for that season. All grass areas shall receive one application of granular fertilizer in early April and one more application in early October. The City of Rockford Arborist shall instruct the vendor on what type and brand of granular fertilizer to use. The fertilizer shall be spread with suitable spreader type equipment. The vendor shall take precautionary

measures to make sure that the fertilizer for the grass does not become deposited in the mulch areas around the trees, shrubs and planting beds.

- 2.3.8 As soon as grass begins growing and is suitable for mowing, all right of way and parkway areas shall be mowed once a week to a height of 1 ½ inches. All grass clippings that enter the roadway areas, shall be swept up and removed after each mowing. In addition, all areas not accessible with mowing equipment shall be trimmed using string fed trimming equipment to the same height of the grass. This includes all shrub, tree and planting bed areas. Care shall be taken as not to cause any damage to any shrubs, trees, and planting beds from the use of string trimming equipment. Any damage must be immediately reported to The City of Rockford Arborist no later than the same day of occurrence. Failure to do so will subject the vendor to a violation of their contract with the City of Rockford.
 - 2.3.9 Beginning in late April all planting beds, shrubs and trees areas shall be weeded and removed from site. Weeding shall be performed first before each mowing cycle is performed. (Once a week)
 - 2.3.10 Beginning the first week in October and continuing until the middle of November, the vendor will use leaf vacuum equipment to remove leaves and debris from all parkway and right of way areas, once a week, and in addition to mowing until grass stops growing.
 - 2.3.11 All Pest control and weed spraying shall be performed under the direction of the City of Rockford Arborist. All vendor pesticide applicators and their equipment must have prior approval of the City of Rockford Arborist before performing this operation.
- 2.4 Spring Creek Road Area. The vendor shall perform the following services at this location:
- 2.4.1 In early April, vendor shall “work up” mulch areas around all trees, and install new “chocolate” mulch 1” thick around all trees located on the south side of Spring Creek. These trees are located approximately 10ft. from the sidewalk that runs from McFarland Rd. to Bell School Rd.
 - 2.4.2 In middle of April and once a month there after until the end of Oct. the vendor shall spread 10-10-10 granular plant and tree fertilizer around all trees located on the south side of Spring Creek located 10 ft. in from the sidewalk. The vendor shall spread the fertilizer with suitable spreader type equipment for this application. The City of Rockford Arborist will instruct the vendor on the type and amount of fertilizer to use.
 - 2.4.3 In July, or at the appearance of the Japanese beetles, the vendor shall spray all trees that are affected by the Japanese beetles twice a week until the Japanese beetle has disappeared for the season.
 - 2.4.4 All tree pruning shall be performed in accordance with ISA standards (International Society of Arboriculture) and under the direction of the City of

Rockford Arborist. This person will instruct the vendor on how and when to prune all shrubs and trees.

- 2.4.5 All mowing areas shall receive a suitable fertilizer for that season. All grass areas shall receive one application of granular fertilizer in early April and one more application in early October. The City of Rockford Arborist shall instruct the vendor on what type and brand of granular fertilizer to use. The fertilizer shall be spread with suitable spreader type equipment. The vendor shall take precautionary measures to make sure that the fertilizer for the grass does not become deposited in the mulch areas around the trees, shrubs and planting beds.
 - 2.4.6 As soon as grass begins growing and is suitable for mowing, all right of way and areas shall be mowed once a week to a height of 1 ½ inches. The north side of the road between McFarland and Bell School Rd. shall be mowed from the road to the fence. The south side of the road shall be mowed from the sidewalk out to the road, just in the right of way area. All grass clippings that enter the roadway areas, shall be swept up and removed after each mowing. In addition, all areas not accessible with mowing equipment shall be trimmed using string fed trimming equipment to the same height of the grass. This includes all tree and areas. Care shall be taken as not to cause any damage to any trees from the use of string trimming equipment. Any damage must be immediately reported to The City of Rockford Arborist no later than the same day of occurrence. Failure to do so will subject the vendor to a violation of their contract with the City of Rockford.
 - 2.4.7 Beginning in late April all tree areas shall be weeded and removed from site. Weeding shall be performed first before each mowing cycle is performed. (Once a week)
 - 2.4.8 All Pest control and weed spraying shall be performed under the direction of the City of Rockford Arborist. All vendor pesticide applicators and their equipment must have prior approval of the City of Rockford Arborist before performing this operation.
- 2.5 N. Main & Auburn Roundabout. The vendor shall perform the following services at this location:
- 2.5.1 As soon as weather is cooperative in late March or April, contractor shall remove all leaves and winter debris from beds, turf and non-turf areas.
 - 2.5.2 In early April, the vendor shall cut down all ornamental grasses left up over the winter to within 2" of ground and remove clippings from site. Vendor shall examine all trees and shrubs in parkway and right of way areas for damage from winter season. The vendor shall note in writing to City of Rockford Arborist any damaged trees, shrubs and their location.
 - 2.5.3 In early April, vendor shall "work up" mulch areas around all trees, shrubs and planting areas and install new "chocolate" mulch 1" thick around all plants, shrubs and trees in right of way and parkway areas.

- 2.5.4 In middle of April and once a month there after until the end of Oct. the vendor shall spread 10-10-10 granular plant and tree fertilizer around all trees, shrubs and in all planting beds. The vendor shall spread the fertilizer with suitable spreader type equipment for this application. The City of Rockford Arborist will instruct the vendor on the type and amount of fertilizer to use.
- 2.5.5 In July, or at the appearance of the Japanese beetles, the vendor shall spray all plants, trees and shrubs that are affected by the Japanese beetles twice a week until the Japanese beetle has disappeared for the season.
- 2.5.6 All tree and shrub pruning is under the direction of the City of Rockford Arborist. He will instruct the vendor on how and when to prune all shrubs and trees.
- 2.5.7 All mowing areas shall receive a suitable fertilizer for that season. All grass areas shall receive one application of granular fertilizer in early April and one more application in early October. The City of Rockford Arborist shall instruct the vendor on what type and brand of granular fertilizer to use. The fertilizer shall be spread with suitable spreader type equipment. The vendor shall take precautionary measures to make sure that the fertilizer for the grass does not become deposited in the mulch areas around the trees, shrubs and planting beds.
- 2.5.8 As soon as grass begins growing and is suitable for mowing, all right of way and parkway areas shall be mowed once a week to a height of 1 ½ inches. All grass clippings that enter the roadway areas, shall be swept up and removed after each mowing. In addition, all areas not accessible with mowing equipment shall be trimmed using string fed trimming equipment to the same height of the grass. This includes all shrub, tree and planting bed areas. Care shall be taken as not to cause any damage to any shrubs, trees, and planting beds from the use of string trimming equipment. Any damage must be immediately reported to The City of Rockford Arborist no later than the same day of occurrence. Failure to do so will subject the vendor to a violation of their contract with the City of Rockford.
- 2.5.9 Beginning in late April all planting beds, shrubs and trees areas shall be weeded and removed from site. Weeding shall be performed first before each mowing cycle is performed. (Once a week)
- 2.5.10 Beginning the first week in October and continuing until the middle of November, the vendor will use leaf vacuum equipment to remove leaves and debris from all parkway and right of way areas, once a week, and in addition to mowing until grass stops growing.
- 2.5.11 All Pest control and weed spraying shall be performed under the direction of the City of Rockford Arborist. All vendor pesticide applicators and their equipment must have prior approval of the City of Rockford Arborist before performing this operation.
- 2.6 Morgan St. Bridge. The vendor shall perform the following services at this location:
 - 2.6.1 As soon as weather is cooperative in late March or April, contractor shall remove all leaves and winter debris from beds, turf and non-turf areas.

- 2.6.2 In early April, the vendor shall cut down all ornamental grasses left up over the winter to within 2" of ground and remove clippings from site. Vendor shall examine all trees and shrubs in parkway and right of way areas for damage from winter season. The vendor shall note in writing to City of Rockford Arborist any damaged trees, shrubs and their location.
- 2.6.3 In early April, vendor shall "work up" mulch areas around all trees, shrubs and planting areas and install new "chocolate" mulch 1" thick around all plants, shrubs and trees in right of way and parkway areas.
- 2.6.4 In middle of April and once a month there after until the end of Oct. the vendor shall spread 10-10-10 granular plant and tree fertilizer around all trees, shrubs and in all planting beds. The vendor shall spread the fertilizer with suitable spreader type equipment for this application. The City of Rockford Arborist will instruct the vendor on the type and amount of fertilizer to use.
- 2.6.5 In July, or at the appearance of the Japanese beetles, the vendor shall spray all plants, trees and shrubs that are affected by the Japanese beetles twice a week until the Japanese beetle has disappeared for the season.
- 2.6.6 All tree and shrub pruning is under the direction of the City of Rockford Arborist. He will instruct the vendor on how and when to prune all shrubs and trees.
- 2.6.7 All mowing areas shall receive a suitable fertilizer for that season. All grass areas shall receive one application of granular fertilizer in early April and one more application in early October. The City of Rockford Arborist shall instruct the vendor on what type and brand of granular fertilizer to use. The fertilizer shall be spread with suitable spreader type equipment. The vendor shall take precautionary measures to make sure that the fertilizer for the grass does not become deposited in the mulch areas around the trees, shrubs and planting beds.
- 2.6.8 As soon as grass begins growing and is suitable for mowing, all right of way and parkway areas shall be mowed once a week to a height of 1 ½ inches. All grass clippings that enter the roadway areas, shall be swept up and removed after each mowing. In addition, all areas not accessible with mowing equipment shall be trimmed using string fed trimming equipment to the same height of the grass. This includes all shrub, tree and planting bed areas. Care shall be taken as not to cause any damage to any shrubs, trees, and planting beds from the use of string trimming equipment. Any damage must be immediately reported to The City of Rockford Arborist no later than the same day of occurrence. Failure to do so will subject the vendor to a violation of their contract with the City of Rockford.
- 2.6.9 Beginning in late April all planting beds, shrubs and trees areas shall be weeded and removed from site. Weeding shall be performed first before each mowing cycle is performed. (Once a week)
- 2.6.10 Beginning the first week in October and continuing until the middle of November, the vendor will use leaf vacuum equipment to remove leaves and debris from all

parkway and right of way areas, once a week, and in addition to mowing until grass stops growing.

2.6.11 All Pest control and weed spraying shall be performed under the direction of the City of Rockford Arborist. All vendor pesticide applicators and their equipment must have prior approval of the City of Rockford Arborist before performing this operation.

3.0 Liquidated Damages. The Vendor is responsible to remove trash and debris prior to each mowing occurrence. If the Vendor fails to effectively remove trash and debris based on the observance of the Designated City of Rockford representative or his designee, the City will notify him of default. The City will assess liquidated damages against the Vendor in the amount of 50% per site, per mowing occurrence. This amount may be deducted from any payments due the Vendor by the City.



**STREET SWEEPING
STANDARD OPERATING PROCEDURES**

January 2022

1.0 General

It is the responsibility of the City of Rockford to provide street sweeping services to its citizens in an effort to enhance the overall stormwater quality, health and aesthetic beauty of the City. This process shall begin in the spring season, as weather conditions allow and continue in various cycles thru the autumn season. The protocol for street sweeping activities is as follows:

2.0 Equipment

1. Contracted – City contractor shall provide an adequate number of street sweepers to complete all route as contracted. Street Sweepers shall comprised of both mechanical or vacuum models for Arterial, Residential, Central Business District and municipal parking lot sweeping.
2. Dump Trucks – City shall have equipment available removal of street sweepings to an appropriate landfill site.

2.0 Personnel

1. The Street Superintendent will oversee street sweeping operations at the administrative level and will assign 2 field supervisors, one as primary and

one secondary, to manage day to day sweeping operations. The primary field supervisor is responsible for managing and scheduling the city's sweeping contractor as well as overseeing any internal sweeping activities. Field supervisors shall inspect and approve all street sweeping activities to ascertain the quality of work meets City standards. The secondary supervisor will oversee operations in the absence of the primary supervisor.

2. The City sweeping contractor shall provide sufficient staffing to complete their various cycles within a time frame that is acceptable to the City.
 - a. The City contractor shall be responsible for the training of their staff and maintaining records.

4.0 Material Disposal

The City and/or its contractor shall dispose of all street sweepings at a licensed landfill facility. Street sweepings shall not be utilized for general backfill under any circumstances. The cost for disposal shall be the responsibility of the entity or vendor generating the material at a price negotiated prior to beginning seasonal sweeping operations.

5.0 Scheduling

The following street sweeping schedule is weather dependent and will begin subsequent to each winter season and continue thru late November. If the fall sweeping cycle isn't completed before winter conditions preclude it then sweeping will be taken up again in the spring when conditions allow. The schedule should be re-evaluated annually and adjusted based on weather conditions.

1. Arterial Streets – Arterial streets will be swept 3 times by the City's contractor beginning with the first cycle in April, the second in late June or early July, and the third cycle in September. Median tops are to be cleaned in conjunction with the first and third cycle of arterial street sweeping.
2. Central Business District – What is considered the Central Business District will be swept by the City's contractor twice a month beginning in April and ending late November, between the hours of midnight and 7 AM for a total of 14 to 16 cycles.
3. Municipal Parking Lots – The 40 municipal surface lots owned by the City of Rockford will be swept by the City's contractor once a month beginning in

April and ending late November for a total of 7 to 8 cycles.

4. Residential Streets – Residential streets shall be swept by the City’s contractor twice a year; once in the spring beginning in late April continuing for approximately six to eight weeks until completion. The second residential sweeping cycle will begin late September / early October continuing for approximately 8 to 10 weeks as weather will allow.
5. Special Events – The frequency of Special Events street sweeping is dependent on the number of scheduled events and their potential to produce litter and debris. On average, there are four to six of these functions annually. Special events can include but not be limited to:
 - a. Memorial Day Parade
 - b. St. Patrick’s Day Parade
 - c. Fourth of July Parade & Fireworks
 - d. Labor Day Parade
 - e. Annual Holiday Stroll (beginning in 2013)

6.0 Documentation and Record Management

The Street Superintendent and Field Supervisors shall be responsible for the collection and reporting of the following data:

1. Curb miles swept shall be recorded on a daily basis (internal & external).
 - a. Contractor shall track curb miles they have swept and provide to the City by December 31st of each year.
 - b. All records of miles swept shall be maintained electronically within the Street Division share drive.

2. Daily street sweeping tonnage (internal & external).
 - a. Contactor shall track daily tonnage they have collected and provide to the City by December 31st of each year.
 - b. All records of tonnage swept shall be kept electronically within the Street Division share drive.

3. Regular & overtime man-hours (internal only).
 - a. Hours worked shall be tracked within the City's timekeeping system and the Street Division share drive.

4. Log of all special events or emergency street sweeping shall include location/area, man-hours, tonnage and type of material removed.
 - a. Records of special events sweeping shall be logged and kept within the Street Division share drive. Emergency street sweeping records shall be recorded within the Hansen request for service program.

5. Street sweeping mileage shall be evaluated as noted above and the mileage determination shall be documented along with the mileage that was actually completed.



**PESTICIDE, HERBICIDE AND FERTILIZER
APPLICATIONS
STANDARD OPERATING PROCEDURES FOR CITY OF ROCKFORD**

January 2022

1.0 GENERAL

The purpose of this standard operating procedure is to comply with Part II, A, 6, a of the City of Rockford's NPDES Stormwater Permit (ILS000001). This document addresses City of Rockford procedures when applying pesticides, herbicides and fertilizers on City owned properties.

2.0 LICENSING/PERMITTING

The City of Rockford has submitted and received the IEPA General NPDES Permit for Pesticide Application Point Source Discharges (ILG870147). The City is a Level 1 applicator based on IEPA's designations and shall base their application procedures on those requirements. In addition, City of Rockford employees who apply pesticides, herbicides & fertilizers shall be trained and licensed through the Illinois Department of Agriculture's (IDOA), Pesticides Use and Regulation Program (<http://www.agr.state.il.us/Environment/Pesticide/usereg.html>)

. As licensed employees are within the street division all training and management of licensing shall be tracked by the Forestry Supervisor.

The City requires all contracted applicators to comply with these and any other applicable requirements. Proof of Licensing shall be provided to the City prior to execution of City contracts.

3.0 PROCEDURES

3.1 General

Staff applying chemicals shall wear all appropriate personal protective equipment and fully understand their rights to know what chemicals they are applying through the availability of on-site Material Safety Data Sheets.

- a. Though the City does not presently apply fertilizers, future applications will be based on soil test results prior to application to avoid the economic and environmental costs that can be incurred with excess fertilizer use.
- b. Staff and contractors will follow label directions when storing, handling, mixing, recycling, and disposing of chemicals and empty containers.
- c. Applicators shall make every effort not to transfer, pour or dispose of chemicals indoors. When those activities occur outdoors, handling of chemicals shall be a minimum of fifty (50) feet from storm drains, or drainageways.
- d. Staff and contractors will have spill cleanup materials available in case of a spill and clean up chemical spills promptly with dry methods, if possible. All spills shall be reported to their supervisor immediately and documented. Report shall indicate: location, chemical spilled, approximate quantity, and how it was cleaned up. The Stormwater and Environmental Team (SWET) shall be notified within 24 hours of the spill and shall initiate an illicit discharge investigation as

detailed in the Illicit Discharge Detection and Elimination Program Standard Operating Procedures. The Fire Department Hazardous Material Team or 911 Emergency shall be notified for any spill that exceeds the threshold quantity as noted on its Safety Data Sheet.

- e. Spill Kits are located in the chemical storage room at the City Yards.

3.2 Application

- a. All pesticides, herbicides and fertilizers shall be used strictly in accordance with their labels, ILG87 and all applicable federal, state, and local laws, regulations, and ordinances, as applicable.
- b. Always follow the manufacturer's recommendation on handling and applying the chemicals.
 - 1. Chemicals should not be applied during rain storms, within 24 hours of a forecast rain storm or while the area is being irrigated.
 - 2. Chemicals should not be applied right before or during high-wind events nor should any chemical susceptible to drift be applied if wind conditions are likely to exceed 5 MPH.
 - 3. Apply only the recommended amounts of chemicals. Chemical application in excess of the manufacturers label is not an environmentally responsible practice and could promote excessive runoff or soil leaching.
- c. Use caution not to overspray (applying in an undesired location) the chemicals onto an impervious surface, such

- as a sidewalk or roadway and clean up all over-sprayed chemicals.
- d. Do not apply landscape chemicals to frozen ground or during snow melt.
 - e. Do not over water recently fertilized areas to minimize the amount of runoff into streets and into storm drains.
 - f. Only mix enough chemical to complete the application. Excess or expired chemicals shall be returned to the supplier for proper disposal.

3.3 Application Schedule

The following is a list of City maintained locations and approximate pesticide / herbicide application schedules for the targeted areas within the City of Rockford:

- a. Sidewalks – May 1st thru June 30th
- b. Raised Medians – May 1st thru June 30th.
- c. Paved Ditches - June 1st thru July 31st
- d. Creeks – July 31st thru October 31st
- e. Ash Trees – June 1st thru August 31st - City-wide

Note: This is a tentative schedule; actual schedule may vary due to weather conditions.

A log shall be kept indicating the amount of chemicals used during each application event.

3.4 Chemical Storage

All chemicals shall be stored according to label directions

and shall not exceed threshold quantities as stated on the Safety Data Sheets.

All herbicides, fungicides and insecticides shall be stored in an enclosed, secure building at the maintenance facility. The materials shall be stored in accordance with all current federal, state and local laws, regulations and ordinances. Access to the storage area should be limited to licensed pesticide operators or applicators. Non-licensees requesting access to the storage area for any reason should be accompanied by a licensed pesticide operator or applicator.

3.5 Application Equipment

The following items shall be required for maintenance and use of application equipment:

- a. No sprayer should be used that is not approved for the type of chemical being applied.
- b. Spreaders shall be used to apply materials that are available only in granular forms.
- c. Fertilizers and pesticides should be loaded into application equipment over impervious surfaces, so that any spills can be cleaned without seeping into ground water.
- d. Properly calibrate application equipment according to manufactures instructions to ensure the recommended amount of chemical is applied.
- e. To avoid build up and cross contamination, application equipment shall be cleaned after each

use. Cleaning shall be completed according to manufacturer's recommendations.

4.0 EMPLOYEE TRAINING

All training shall be in accordance with the Standard Operating Procedures for Stormwater and Environmental Education. Training shall also be completed as required by the employee's IDOA Pesticides Applicators License. Records of employee training will be maintained by the Forestry Supervisor in the Street Division.

5.0 RECORD KEEPING

All application and maintenance records for the City of Rockford shall be kept by the Street Division of Public Works. For contracted PHF applications the Street Division shall receive copies of the maintenance records from the contractor by December 15th of every year or as directed otherwise.

Attachment A



Timothy S. Hanson
Director of Public Works
Department of Public Works

May 16, 2013

RE: Application of Pesticide/Herbicide and related schedule.

The following is a list of locations and approximate pesticide / herbicide application schedules for the targeted areas within the City of Rockford:

1. Sidewalks – May 1st thru June 30th
 - a. CBD – Area bordered by 4th St. on the east, Winnebago St. on the west, Jefferson St./Park Ave. on the north and Cedar St./Chestnut St. / Walnut St. on the south.
 - b. CBD – 7th St. between E. State St. and 6th Ave.
 - c. CBD – Broadway between 6th St. and 9th St.
2. Raised Medians – May 1st thru June 30th (see attached list for locations).
3. Paved Ditches - June 1st thru July 31st
 - a. Northwest Drainage Ditch – Between W. Riverside Blvd. and Kent Creek.
 - b. Westleyan / SE Drainage Ditch – Between Ohio Pkwy. and Kishwaukee St.
 - c. Upland / Holmes Drainage Ditch – Between Wilmette Ct. and Harrison Ave.
4. Creeks – July 31st thru October 31st
 - a. Keith Creek – Between Fairview Blvd. and Kishwaukee St. (Incremental, applied over a 5 year period).
 - b. Kent Creek – Between Central Ave. and Cedar St. (Incremental, applied over a 3 year period).
5. Ash Trees – June 1st thru August 31st - City-wide (see attached list)

Note: This is a tentative schedule; actual schedule may vary due to weather conditions.

Attachment B

MEDIAN LIST

| | LIN FT | START | COMP |
|---|---------|-------|------|
| RIVERSIDE FROM N MAIN TO ROBEY AVE | 258 | | |
| MAIN FROM RIVERBLUFF TO ELMWOOD | 5847 | | |
| CENTRAL FROM LIBERTY TO 50' SOUTH OF AUBURN | 1090 | | |
| AUBURN ST FROM SUNSET TO OAKLEY | 574 | | |
| RIDGE AVE 40' NORTH AND SOUTH OF AUBURN | 100 | | |
| RIDGE 100' NORTH OF WHITMAN | 100 | | |
| SOUTH BOUND 2 ND ST OFF RAMP FROM WHITMAN BRIDGE (LONG MEDIAN) | 1064 | | |
| FOREST HILLS 200' SOUTH OF LANDSTROM | 450 | | |
| N 2 ND ST FROM WHITMAN TO SPRING CREEK | 2863 | | |
| N 2 ND ST JERSEY WALL OVER SPRING CREEK BRIDGE | 3118 | | |
| WHITMAN FROM N MAIN TO N 2 ND ST | 2757 | | |
| WHITMAN FROM N MAIN TO LEE ST | 1882 | | |
| KILBURN FROM JEFFERSON TO BRUCE | 2357 | | |
| SCHOOL ST 100' EAST AND WEST OF CENTRAL | 200 | | |
| KILBURN FROM SAFFORD TO 100' EAST OF CENTRAL | 480 | | |
| CENTRAL 200' NORTH AND SOUTH OF KILBURN | 300 | | |
| CENTRAL 100' NORTH AND SOUTH OF HALSTED | 200 | | |
| CENTRAL 100' NORTH AND SOUTH OF RIVERSIDE | 200 | | |
| RIVERSIDE WEST OF CENTRAL | 825 | | |
| SPRING CREEK FROM RIVER TO STARKWEATHER | 393 | | |
| SPRING CREEK FROM 150' WEST OF ALPINE TO 200' EAST OF SPRINGBROOK | 830 | | |
| SPRING CREEK FROM SHAW WOODS TO TANGLEWOOD | 3383 | | |
| ALPINE FROM RIVERSIDE TO BROOKVIEW | 676 | | |
| ALPINE FROM DEMPSTER TO 150' SOUTH OF HARRISON | 5997 | | |
| ALPINE FROM SAMUELSON TO SANDY HOLLOW | 4740 | | |
| HARRISON FROM S MAIN TO PRAIRIE RD | 1180 | | |
| HARRISON FROM 18 TH ST TO ALPINE | 7261 | | |
| HARRISON FROM ALPINE TO MULFORD (NEW 08) | 7210 | | |
| 20 TH ST FROM ALTON TO CENTER ST | 1113 | | |
| BROADWAY FROM ALPINE TO POINT | 786 | | |
| NEWBURG FROM ALPINE TO QUENTIN RD | 643 | | |
| NEWBURG 200' EAST AND WEST OF MULFORD | 1074 | | |
| CHARLES ST FROM 28 TH ST TO PARKSIDE | 2618 | | |
| FAIRVIEW BLVD 100' NORTH AND SOUTH OF MORSAY DR | 150 | | |
| MORSAY 150' EAST OF FAIRVIEW | 350 | | |
| MULFORD FROM HARRISON TO E RIVERSIDE | 25533 | | |
| SPRINGBROOK 150' EAST OF PERRYVILLE | 290 | | |
| BELL SCHOOL 100' SOUTH OR RIVERSIDE | 100 | | |
| E STATE FROM LYFORD TO MILL RD | 6097 | | |
| E STATE FROM MILL RD TO ROXBURY | 5595 | | |
| COLLEGE EAST AND WEST OF SEMINARY | 185 | | |
| MORGAN ST BRIDGE WALL EAST AND WEST | 2026 | | |
| | | | |
| | 101,830 | | |



Attachment C

**Emerald Ash Borer Treatment Log as of
August 26, 2015**

| EAB TREATMENTS - SW | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|---------------------|---------------|---------------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---------------------|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 1 | 5-19-15 | 1209 Corbin St. | 4 | 10 | 50 | Myron Cabbage | 47° cloudy | *144229 | Slow uptake |
| 2 | " | 1215 Corbin St. | 2 | 21 | 120 | Myron Cabbage | 47° cloudy | *144230 | |
| 3 | " | 1127 Corbin St. | 6 | 25 | 160 | Myron Cabbage | 47° cloudy | *144242 | |
| 4 | " | 1117 Corbin St. | 4 | 22 | 135 | Myron Cabbage | 47° cloudy | *144243 | |
| 5 | " | 909 Corbin St. | 2 | 17 | 85 | Myron Cabbage | 47° cloudy | *144245 | |
| 6 | " | 825 Kent St. | 22 | 23 | 150 | Myron Cabbage | 51° cloudy | *144244 | |
| 7 | " | 907 Kent St. | 2 | 19 | 100 | Myron Cabbage | 51° cloudy | *146956 | |
| 8 | 5-20-15 | 1215 Kent St. | 2 | 9 | 40 | Myron Cabbage | 42° cloudy | *146959 | |
| 9 | " | " | 6 | 9 | 40 | Myron Cabbage | 42° cloudy | *146959 | |
| 10 | " | 906 Rose Ave | 22 | 18 | 90 | Myron Cabbage | 42° cloudy | *146955 | |
| 11 | " | 1703 Hulin | 6 | 7 | 40 | Myron Cabbage | 46° cloudy | *146970 | Slow uptake |
| 12 | " | 1527 S. Central Ave. | 5 | 25 | 160 | Myron Cabbage | 45° Light Rain | *144218 | |
| 13 | 5-21-15 | 2362 Meadow View Ln. | 4 | 6 | 25 | Myron Cabbage | 44° cloudy | *144228 | |
| 14 | " | " | 6 | 6 | 25 | Myron Cabbage | 44° cloudy | *144228 | |
| 15 | " | 2502 Forsythia Dr. | 3 | 9 | 40 | Myron Cabbage | 44° cloudy | *144226 | |
| 16 | " | 2160 Gilby Rd | 3 | 21 | 120 | Myron Cabbage | 55° Partly Sunny | *136845 | |
| 17 | " Empty Lot " | 2000 Gilby Rd. & Bird St. | 2 | 11 | 50 | Myron Cabbage | 55° Partly Sunny | *146957 | |
| 18 | " | 416 Webster Ave. | 7 | 21 | 120 | Myron Cabbage | 55° Partly Sunny | *144214 | |
| 19 | " | 2028 Green St. | 12 | 27 | 180 | ————— | ————— | ————— | By Pass Treatment |
| 20 | " | 615 Royal Ave. | 6 | 27 | 180 | Myron Cabbage | 56° Partly Sunny | *143174 | → NW Rockford |

| EAB TREATMENTS - SE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|---------------------|---------|---------------------------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 1 | 5-29-15 | Empty Lot 901 13 th St. | 8 | 14 | 70 | Myron Cabbage | 68° Cloudy | *141904 | |
| 2 | " | " | 10 | 15 | 70 | Myron Cabbage | 68° Cloudy | *141904 | |
| 3 | " | " | 12 | 17 | 85 | Myron Cabbage | 68° Cloudy | *141904 | |
| 4 | " | 918 13 th St. | 7 | 10 | 50 | Myron Cabbage | 68° Cloudy | *141894 | Very slow uptake |
| 5 | " | 1408 12 th St. | 23 | 16 | 75 | Myron Cabbage | 77° Cloudy | *141905 | |
| 6 | 6-2-15 | 1625 9 th Ave. | 1 | 18 | 90 | Myron Cabbage | 52° cloudy + sun | *141892 | |
| 7 | " | " ↓ " | 4 | 16 | 75 | Myron Cabbage | 52° cloudy + sun | *141892 | |
| 8 | " | 1629 9 th Ave | 3 | 15 | 70 | Myron Cabbage | 52° cloudy + sun | *141893 | |
| 9 | " | 1636 9 th Ave. | 5 | 16 | 75 | Myron Cabbage | 52° cloudy + sun | *141881 | |
| 10 | " | 1633 9 th Ave. | 5 | 21 | | | | | Present ^{TOP} Crown Dieback Past + Present |
| 11 | " | 1641 9 th Ave. | 2 | 17 | 85 | Myron Cabbage | 62° Sunny | Field | |
| 12 | " | " | 6 | 14 | 70 | Myron Cabbage | 62° Sunny | Field | |
| 13 | 6-3-15 | 2227 9 th Ave. | 6 | 18 | 90 | Myron Cabbage | 52° Sunny | *141880 | |
| 14 | " | 2215 10 th Ave. | 4 | 4 | 25 | Myron Cabbage | 62° Sunny | *141879 | |
| 15 | " | 1211 12 th Ave | 2 | 7 | 40 | Myron Cabbage | 65° Sunny | *141965 | |
| 16 | " | 1130 17 th Ave. | 5 | 21 | 120 | Myron Cabbage | 72° Sun | *142183 | |
| 17 | 6-4-15 | 624 Blenheim Dr. | 5 | 4 | 25 | Myron Cabbage | 68° cloudy | *141730 | |
| 18 | " | 1820 Colorado Ave. | 5 | 14 | 70 | Myron Cabbage | 70° Cloudy | *141993 | |
| 19 | " | 3303 California Rd. | 4 | 11 | 50 | Myron Cabbage | 70° Cloudy | *142232 | |
| 20 | " | 1903 Arizona Ave. | 10 | 9 | 40 | Myron Cabbage | 70° Cloudy | *141969 | |

| EAB TREATMENTS - SE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|---------------------|---------|------------------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---------------------|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 161 | 5-22-15 | 815 28 th St. | 2 | 8 | 40 | Myron Cabbage | 55° Sunny | Supervisor | |
| 162 | " " | 602 Blenheim Dr. | 4 | 14 | 70 | Myron Cabbage | 55° Sunny | Supervisor | ← *141731 |
| 163 | " " | 4864 flintridge | 6 | 23 | 150 | Myron Cabbage | 66° Sunny | Supervisor | |
| 164 | 5-26-15 | 517 Washington st | 3 | 20 | 110 | Myron Cabbage | 70° Cloudy | *141830 | |
| 165 | " " | 331 Washington st | 23 | 12 | 50 | Myron Cabbage | 70° Rain | *141832 | |
| 166 | 5-27-15 | 1220 31 st St. | 4 | 11 | 50 | Myron Cabbage | 64° Cloudy | *141870 | |
| 167 | " " | 512 29 th St. | 3 | 14 | 70 | Myron Cabbage | 65° Cloudy | *141738 | |
| 168 | " " | 608 27 th St. | 1 | 18 | 90 | Myron Cabbage | 66° Cloudy | *141737 | |
| 169 | " " | 524 27 th St. | 2 | 25 | 160 | Myron Cabbage | 66° Cloudy | *134405 | |
| 170 | " " | 604 27 th St. | 3 | 4 | 25 | Myron Cabbage | 66° Cloudy | *141733 | very slow uptake |
| 171 | " " | 1504 24 th St. | 5 | 13 | 70 | Myron Cabbage | 66° Cloudy | *141988 | |
| 172 | 5-28-15 | 1614 24 th St. | 3 | 11 | 50 | Myron Cabbage | 57° Partly Sunny | *141992 | |
| 173 | " " | 908 21 st St. | 7 | 15 | 70 | Myron Cabbage | 57° Partly Sunny | *141877 | |
| 174 | " " | 2715 2 nd Ave. | 7 | 8 | 40 | Myron Cabbage | 57° Sunny | *141808 | |
| 175 | " " | 1520 20 th St | 8 | 15 | 70 | Myron Cabbage | 66° Sunny | 142278 | |
| 176 | " " | 1803 18 th St. | 12 | 18 | 90 | Myron Cabbage | 66° Sunny | *141878 | |
| 177 | " " | 1919 15 th St. | 23 | 12 | 50 | Myron Cabbage | 76° Cloud Sun | *142274 | |
| 178 | " " | " " | 24 | 11 | 50 | Myron Cabbage | 76° Cloud Sun | *142274 | |
| 179 | 6-4-15 | 2117 Calgary st | 3 | 10 | 50 | Myron Cabbage | 77° Cloudy | *142252 | |
| 180 | 6-9-15 | 304 S. 2 nd St. | 2 | 9 | 40 | Myron Cabbage | 62° Cloud Sun | *147402 | |

| EAB TREATMENTS - NW | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT | |
|---------------------|---------|-------------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---------------------------------|
| | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 1 | 5-21-15 | 615 Royal Ave | 6 | 27 | 180 | Myron Cabbage | 56° Partly Sunny | *143174 | |
| 2 | 5-26-15 | 710 Royal Ave. | 3 | 16 | 75 | Myron Cabbage | 67° Cloudy | *143173 | |
| 3 | " " | 830 Royal Ave. | 1 | 21 | 120 | Myron Cabbage | 69° Cloudy | *143172 | |
| 4 | " " | 607 Royal Ave. | 1 | 27 | 180 | | | *143175 | ByPass (Bully Lifting Sidewalk) |
| 5 | 6-22-15 | 215 N. Day Ave. | 5 | 24 | 155 | Myron Cabbage | 73° Cloudy | *143199 | |
| 6 | " " | 211 N. Day Ave | 5 | 24 | 155 | Myron Cabbage | 73° Cloudy | *143200 | |
| 7 | " " | 304 Miriam Ave. | 22 | 20 | 110 | Myron Cabbage | 74° Light Rain | *143176 | |
| 8 | " " | ↓ | 5 | 18 | | | | *143176 | ByPass Structural Damage |
| 9 | " " | 415 N Independence Ave. | 5 | 21 | 120 | Myron Cabbage | 72° Light Rain | *143012 | |
| 10 | 6-23-15 | 714 N. Day St. | 6 | 15 | | | | *143195 | ByPass (Marked Letter) |
| 11 | " " | 118 N Johnston Ave. | 3 | 24 | 155 | Myron Cabbage | 67° Sunny | *143970 | |
| 12 | " " | 611 N. Johnston Ave. | 5 | 14 | 70 | Myron Cabbage | 67° Sunny | *143969 | |
| 13 | " " | 811 N. Johnston Ave. | 4 | 24 | 155 | Myron Cabbage | 71° Sunny | *143967 | |
| 14 | " " | 903 N. Johnston Ave. | 5 | 21 | 120 | Myron Cabbage | 75° Sunny | *143963 | |
| 15 | " " | 916 N. Johnston Ave. | 5 | 26 | 170 | Myron Cabbage | 76° Sunny | *143965 | |
| 16 | 6-24-15 | 2319 Sherman Ave. | 4 | 21 | 120 | Myron Cabbage | 61° Cloudy | *143114 | |
| 17 | " " | 2307 Sherman Ave. | 3 | 24 | 155 | Myron Cabbage | 61° Cloudy | *143113 | |
| 18 | " " | 2206 Sherman Ave | 20 | 20 | 110 | Myron Cabbage | 63° Cloudy | *143966 | |
| 19 | " " | 2003 Sherman Ave | 4 | 25 | 160 | Myron Cabbage | 65° Cloudy | *143112 | |
| 20 | " " | 2201 School St. | | | | | | *143193 | No Ash tree Present |

| EAB TREATMENTS - SE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|---------------------|--------|--|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 181 | 6-5-15 | 2212 Montana Ave. | 3 | 11 | 50 | Myron Cabbage | 67° cloudy | #142244 | Very Very Slow Uptake (Take Treatment off List) |
| 182 | " | 3503 Wesleyan Ave. | 2 | 9 | 40 | Myron Cabbage | 69° cloudy | #142271 | |
| 183 | " | " | 3 | 12 | 50 | Myron Cabbage | 69° cloudy | #142271 | |
| 184 | " | 3115 Wesleyan Ave | 2 | 14 | 70 | Myron Cabbage | 74° cloudy | #142243 | |
| 185 | " | 2306 Richard Ave | 22 | 11 | 50 | Myron Cabbage | 74° cloudy | #142272 | |
| 186 | " | " | 6 | 12 | 50 | Myron Cabbage | 74° cloudy | #142272 | |
| 187 | 6-8-15 | 440 Blackhawk Park Ave | #1 | 11 | 50 | Myron Cabbage | 61° sunny | #147795 | #1 East bound |
| 188 | " | " | #2 | 11 | 50 | Myron Cabbage | 61° sunny | #147795 | #2 |
| 189 | " | " | #3 | 11 | 50 | Myron Cabbage | 61° sunny | #147795 | #3 |
| 190 | " | " | #4 | 13 | 50 | Myron Cabbage | 61° sunny | #147795 | #4 |
| 191 | " | " | #5 | 17 | 85 | Myron Cabbage | 69° sunny | #147795 | #5 |
| 192 | " | " | #6 | 16 | 75 | Myron Cabbage | 69° sunny | #147795 | #6 |
| 193 | " | " | #7 | 15 | 70 | Myron Cabbage | 76° sunny | #147795 | #7 |
| 194 | " | " | #8 | 14 | 70 | Myron Cabbage | 76° sunny | #147795 | #8 |
| 195 | " | 3105 1 st St. North Empty lot | 1 | 8 | 40 | Myron Cabbage | 79° sunny | #147403 | |
| 196 | 6-9-15 | 409 S. 1 st St. | 1 | 9 | 40 | Myron Cabbage | 63° cloudy | #147404 | |
| 197 | " | " | 6 | 8 | 40 | Myron Cabbage | 63° cloudy | #147404 | |
| 198 | " | 405 S. 1 st St. | 9 | 8 | 40 | Myron Cabbage | 63° cloudy | #147773 | |
| 199 | " | 401 S. 2 nd St. | 10 | 11 | 50 | Myron Cabbage | 76° cloudy + sun | #147401 | |
| 200 | " | 410 S. 3 rd St. | 3 | 16 | 75 | Myron Cabbage | 76° cloudy + sun | | |

EAB TREATMENTS - SE

| EAB TREATMENTS - SE | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|---------|-----------------------------|--------------|---------------|------------------------------|-----------------|--------------------|---------------------------|--|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Precious HANSEN REQUEST # | COMMENTS |
| 201 | 6-10-15 | 934 S. 3 rd St. | 6 | 24 | 155 | Myron Cottage | 76° sun | #147784 | |
| 202 | " " | 2020 S. 4 th St. | 6 | 11 | 50 | Myron Cottage | 76° sun | #142275 | |
| 203 | " " | 2108 S. 4 th St. | 7 | 10 | — | | | #142276 | Tree Completely Dead |
| 204 | " " | 655 S. 5 th St. | 14 | 21 | 120 | Myron Cottage | 86° Sunny | #141967 | |
| 205 | " " | " " | 21 | 13 | 70 | Myron Cottage | 86° Sunny | #141967 | |
| 206 | " " | 234 Highland Ave | 8 | 8 | 40 | Myron Cottage | 86° Sunny | #141867 | Slow Uptake |
| 207 | " " | " " | 12 | 10 | 50 | Myron Cottage | 86° Sunny | #141867 | |
| 208 | 6-11-15 | 217 S. Prospect St. | 4 | 15 | 70 | Myron Cottage | 70° cloudy | #141869 | |
| 209 | " " | 235 S. Chicago Ave. | 23 | 22 | 135 | Myron Cottage | 72° T-storm | #141866 | |
| 210 | " " | 301 S. Chicago Ave | 10 | 12 | 50 | Myron Cottage | 72° T-storm | #141833 | |
| 211 | " " | 226 S. London Ave | 3 | — | — | | | #141868 | No tree (but) removed spot & fresh grass |
| 212 | " " | 524 St. Louis Ave. | 3 | 6 | 25 | Myron Cottage | 70° T-storm | #141831 | |
| 213 | " " | 3911 Shirley Rd. | 1 | 21 | 120 | Myron Cottage | 70° T-storm | #141728 | |
| 214 | 6-12-15 | 2703 Hooker Ave | 3 | 20 | 110 | Myron Cottage | 63° Light fog | #141829 | |
| 215 | " " | " " | 5 | 18 | 90 | Myron Cottage | 63° Light fog | #141829 | |
| 216 | " " | 807 Jordan Pl | 6 | 16 | 75 | Myron Cottage | 63° Light fog | #141742 | |
| 217 | " " | 807 Jordan Pl | 6 | 16 | 75 | | | #141802 | Same Location |
| 218 | " " | 3616 Larson Ave. | 2 | 16 | 75 | Myron Cottage | 63° Mist | #141741 | |
| 219 | " " | " " | 5 | 15 | 70 | Myron Cottage | 63° Mist | #141741 | |
| 220 | " " | 3817 Larson Ave | 2 | 24 | 155 | Myron Cottage | 63° Mist | #141732 | |

| EAB TREATMENTS - NE | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|---------|----------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|----------------------------------|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previews HANSEN REQUEST # | COMMENTS |
| 41 | 6/5/15 | 625 Calvin Park Blvd | 4 | 15 | 70 | A-24 | 67° cloudy | 141516 | |
| 42 | 6/5/15 | 3620 Crosby ST | 6 | 9 | 40 | A-24 | 69° cloudy | 141693 | |
| 43 | 6/5/15 | 3608 Crosby ST | 3 | 18 | 90 | A-24 | 70° cloudy | 141696 | |
| 44 | 6/5/15 | 3906 Crosby ST | 2 | 20 | 110 | A-24 | 70° cloudy | 141676 | |
| 45 | 6/5/15 | 3906 Crosby ST | 4 | 18 | 90 | A-24 | 70° cloudy | 141676 | |
| 46 | 6/8/15 | 120 Skylark Dr | 6 | 18 | 90 | A-24 | 67° P/cloudy | | |
| 47 | 6/8/15 | 4340 Marsay Dr | 4 | 13 | 70 | A-24 | 74° Fair | | |
| 48 | 6/8/15 | 316 Hemlock Ln | 2 | 25 | 160 | A-24 | 77° P/cloudy | | |
| 49 | 6/8/15 | 316 Hemlock Ln | 6 | 22 | 135 | A-24 | 77° P/cloudy | | |
| 50 | 6/9/15 | 3906 Crosby ST | 21 | 16 | 75 | A-24 | 60° cloudy | 141676 | |
| 51 | 6/9/15 | 516 Hemlock Ln | 4 | 20 | 110 | A-24 | 64° cloudy | | |
| 52 | 6/9/15 | 3000 Rural ST | | 23 | 150 | A-24 | 70° cloudy | | In Park on W |
| 53 | 6/10/15 | 3000 Rural ST | | 20 | 110 | A-24 | 75° P/cloudy | | In Park on Rural side |
| 54 | 6/10/15 | 507 vale | 6 | 19 | 100 | A-24 | 83° cloudy | | In Park on Rural side |
| 55 | 6/10/15 | 507 vale | 3 | 8 | 40 | A-24 | 83° cloudy | | |
| 56 | 6/10/15 | 602 James | 23 | 11 | 50 | A-24 | 85° cloudy | | |
| 57 | 6/10/15 | 431 Dawson Ave | 23 | 32 | 240 | A-24 | 86° cloudy | | |
| 58 | 6/11/15 | 3603 Greenwood | 3 | 13 | 70 | A-24 | 71° cloudy | | Incomplete - Complete |
| 59 | 6/11/15 | 3603 Greenwood | 6 | 14 | 70 | A-24 | 73° cloudy | | |
| 60 | 6/17/15 | 317 Fairview | 7 | 18 | 90 | A-24 | 66° cloudy | | |

| EAB TREATMENTS - SE | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|---------|--------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---------------------|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 1 | 6-15-15 | 2931 Oak Grove Ln. | 4 | 18 | 90 | Myron Cabbage | 72° Rain | #141828 | |
| 2 | " " | " " | 7 | 19 | 100 | Myron Cabbage | 72° Rain | #141828 | |
| 3 | " " | " " | 13 | 15 | 70 | Myron Cabbage | 72° Rain | #141828 | |
| 4 | " " | 720 Woodland Dr. | 4 | 24 | 155 | Myron Cabbage | 75° Cloudy | #141804 | |
| 5 | " " | 1736 Sexton Dr. | 6 | 9 | 40 | Myron Cabbage | 75° Cloudy | #141997 | |
| 6 | " " | 504 Sawyer Rd. | | | | | | #147789 | No Ash tree Present |
| 7 | " " | 824 Taft Rd. | 2 | 14 | 70 | Myron Cabbage | 76° Cloudy | #142439 | |
| 8 | 6-16-15 | 711 Seminary St. | 2 | 15 | 70 | Myron Cabbage | 66° Partly Sunny | #147779 | Very slow uptake |
| 9 | " " | 717 Seminary St. | 2 | 14 | 70 | Myron Cabbage | 66° Partly Sunny | #147780 | Very slow uptake |
| 10 | " " | 809 Seminary St. | 6 | 6 | 25 | Myron Cabbage | 71° Sunny | #147781 | Very slow uptake |
| 11 | " " | 815 Seminary St. | 1 | 9 | 40 | Myron Cabbage | 71° Sunny | #147782 | Very slow uptake |
| 12 | " " | 2902 Sewell St. | 7 | 6 | 25 | Myron Cabbage | 75° Sunny | #142437 | |
| 13 | 6-17-15 | 3022 Utah Pl. | 5 | 12 | 50 | Myron Cabbage | 59° cloudy | #141968 | |
| 14 | " " | 3208 Minnesota Dr. | 4 | 9 | 40 | Myron Cabbage | 59° cloudy | #141994 | |
| 15 | " " | 3445 Minnesota Dr. | 21 | 21 | 120 | Myron Cabbage | 62° cloudy | #142281 | |
| 16 | " " | 3316 Thelma St. | 6 | 7 | 40 | Myron Cabbage | 62° cloudy | #142257 | |
| 17 | " " | 2303 Cornell Dr. | 11 | 25 | 160 | Myron Cabbage | 68° Cloudy | #142279 | |
| 18 | " " | 2208 Ohio Pkwy | 23 | 27 | 180 | Myron Cabbage | 68° Cloudy | #142273 | |
| 19 | " " | " " | 21 | 20 | 110 | Myron Cabbage | 68° Cloudy | #142273 | |
| 20 | 6-18-15 | 1316 Farmella St. | 5 | 7 | 40 | Myron Cabbage | 71° Cloudy | #141907 | |

| EAB TREATMENTS - NE | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|---------|--------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|-----------------------|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 61 | 6-22-15 | 518 Fairview | 6 | 16 | 75 | A-24 | 74° cloudy | 141705 | |
| 62 | 6-23-15 | 1410 Benton st | 4 | 6 | 25 | A-24 | 65° sunny | 141657 | |
| 63 | 6-23-15 | 425 Gardner | 2 | 11 | 50 | A-24 | 65° sunny | need # | |
| 64 | 6-23-15 | 425 Gardner | 4 | 11 | 50 | A-24 | 65° sunny | need # | |
| 65 | 6-23-15 | 419 Gardner | 2 | 12 | 50 | A-24 | 69 sunny | need # | |
| 66 | 6-23-15 | 419 Gardner | 4 | 13 | 70 | A-24 | 69 sunny | need # | |
| 67 | 6-23-15 | 401 Gardner | 5 | 26 | 170 | A-24 | 72 sunny | need # | |
| 68 | 6-23-15 | 406 Gardner | 4 | 17 | 85 | A-24 | 77 sunny | need # | |
| 69 | 6-24-15 | 312 N. Gardner | 2 | 7 | 40 | A-24 | 62 cloudy | need # | very slow intake |
| 70 | 6-24-15 | 533 Landon | 21 | 23 | 150 | A-24 | 67 cloudy | need # | |
| 71 | 6-24-15 | 603 N. Chicago Ave | | | | | | | Tree has been removed |
| 72 | 6-24-15 | 516 N. Chicago | 8 | 8 | 40 | A-24 | 69 cloudy | need # | |
| 73 | 6-24-15 | 303 W. Prospect | 6 | 17 | 85 | A-24 | 74 cloudy | need # | |
| 74 | 6-24-15 | 5872 Shelford | 1 | 24 | 155 | A-24 | 62 fog | need # | |
| 75 | 6-29-15 | 5872 Shelford | 3 | 23 | 150 | A-24 | 62 fog | need # | |
| 76 | 6-29-15 | 1912 Shaw woods | 4 | 7 | 40 | A-24 | 64 cloudy | need # | uns |
| 77 | 6-29-15 | 773 N. 1st st | 2 | 18 | 90 | A-24 | 65 cloudy | need # | |
| 78 | 6-29-15 | 724 N. 1st st | 2 | 11 | 50 | A-24 | 69 cloudy | need # | |
| 79 | 6-29-15 | 730 W 1st ST | 2 | 28 | 110 | A-24 | 69 cloudy | need # | |
| 80 | 7-1-15 | 602 W. 1st | 2 | 6 | 25 | A-24 | 58 cloudy | 147774 | |

| EAB TREATMENTS - NW | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|---------|---------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---------------------|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 21 | 6-24-15 | 2223 School St. | 21 | 17 | 85 | Myron Castage | 73° cloudy | #143194 | |
| 22 | " " | 815 Hoban Ave. | 5 | 24 | 155 | Myron Castage | 76° cloudy | #143236 | |
| 23 | 6-25-15 | 711 Alliance Ave. | 2 | 30 | 225 | Myron Castage | 67° cloudy | #143198 | |
| 24 | " " | 2505 Ashland Ave. | 4 | 28 | 195 | Myron Castage | 69° cloudy | #143202 | |
| 25 | " " | 2511 Ashland Ave. | 5 | 30 | 225 | Myron Castage | 77° partly sunny | #143201 | |
| 26 | " " | " " | 1 | 27 | 180 | Myron Castage | 77° partly sunny | #143201 | |
| 27 | " " | 2516 Ashland Ave. | 2 | 22 | 135 | Myron Castage | 76° cloudy | #143237 | |
| 28 | 6-26-15 | 601 Albart Ave. | 6 | 17 | 85 | Myron Castage | 61° cloudy | #143132 | |
| 29 | " " | 2416 Ashland Ave. | 5 | 26 | 170 | Myron Castage | 61° cloudy | #143968 | |
| 30 | " " | 720 N. Sunset Ave. | 10 | 18 | 90 | Myron Castage | 61° cloudy | #143115 | |
| 31 | " " | 422 N. Sunset Ave. | 4 | 17 | 85 | Myron Castage | 61° cloudy | #143013 | |
| 32 | 6-29-15 | 314 Underwood St. | 3 | 18 | 90 | Myron Castage | 62° fog | 8-21-2013 List | |
| 33 | " " | 452 Underwood St. | 6 | 16 | 75 | Myron Castage | 63° fog | 8-20-2013 List | |
| 34 | " " | 436 Jilson Ave. | | | | | | #142981 | No Ash tree Present |
| 35 | " " | 528 N. Harshman St. | 1 | 8 | 40 | Myron Castage | 70° cloudy | #143357 | |
| 36 | " " | " " | 6 | 8 | 40 | Myron Castage | 70° cloudy | #143357 | |
| 37 | " " | 1203 Taylor St. | 13 | 20 | 110 | Myron Castage | 73° cloudy | List 8-23-2013 | |
| 38 | " " | 1417 Sherman Ave. | 1 | 19 | 100 | Myron Castage | 73° cloudy | #143025 | |
| 39 | " " | 1427 Sherman Ave. | 5 | 19 | 100 | Myron Castage | 73° cloudy | #143020 | |
| 40 | 6-30-15 | 1004 Andrews St. | 20 | 16 | 75 | Myron Castage | 64° cloudy | #142942 | |

| EAB TREATMENTS - NW | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|---------|-------------------|--------|-------|------------------------------|-----------------|---------------------------|---------------------------|----------|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Archerus HANSEN REQUEST # | COMMENTS |
| 61 | 7-1-15 | 1221 Camp Ave | 4 | 25 | 160 | A-24 | 64° cloudy | 143961 | |
| 62 | 7-6-15 | 703 Cottage Grove | 10 | 18 | 90 | A-24 | 70° cloudy | 142514 | |
| 63 | 7-6-15 | 1331 Post | 4 | 16 | 75 | A-24 | 72° cloudy | 143463 | |
| 64 | 7-6-15 | 1326 Post | 2 | 23 | 150 | A-24 | 74° cloudy | 143462 | |
| 65 | 7-6-15 | 1415 Camp | 5 | 28 | 195 | A-24 | 76° Rain | 139195 | |
| 66 | 7-6-15 | 1421 Camp | 2 | 12 | 50 | A-24 | 75° ^{Light} Rain | 143945 | |
| 67 | 7-8-15 | 1502 Camp | 21 | 4 | 25 | A-24 | 54° cloudy | 143944 | |
| 68 | 7-8-15 | 1508 Camp | 2 | 11 | 50 | A-24 | 54° cloudy | 143943 | |
| 69 | 7-8-15 | 1603 Camp | 10 | 22 | 135 | A-24 | 57° cloudy | 143942 | |
| 70 | 7-8-15 | 1626 Camp | 3 | 9 | 40 | A-24 | 61° cloudy | 143941 | |
| 71 | 7-8-15 | 1818 Camp | 2 | 18 | 90 | A-24 | 64° cloudy | 143634 | |
| 72 | 7-8-15 | 1818 Camp | 4 | 18 | 90 | A-24 | 64° cloudy | 143635 | |
| 73 | 7-8-15 | 1742 Douglas | 2 | 15 | 70 | A-24 | 67° cloudy | 142516 | |
| 74 | 7-8-15 | 1742 Douglas | 9 | 7 | 40 | A-24 | 67° cloudy | need # | |
| 75 | 7-8-15 | 1742 Douglas | 13 | 15 | 50 | A-24 | 67° cloudy | need # | |
| 76 | 7-8-15 | 1742 Douglas | 11 | 15 | 70 | A-24 | 67° cloudy | need # | |
| 77 | 7-13-15 | 1788 Douglas | 6 | 8 | 40 | A-24 | 67° cloudy | 142515 | |
| 78 | 7-13-15 | 2221 Douglas | 21 | 10 | 50 | A-24 | 71°/sunny | 142513 | |
| 79 | 7-13-15 | 2204 Douglas | 4 | 15 | 70 | A-24 | 74° cloudy | 142512 | |
| 80 | 7-13-15 | 2204 Douglas | 23 | 11 | 50 | A-27 | 74° cloudy | need # | |

| EAB TREATMENTS - NW | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|----------|---|---------------|----------------|------------------------------|-----------------|--------------------|---------------------------|--|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 1 | 7-1-15 | 1325 Blaisdell ^{St.} | | | | | | #143027 | No Ash tree Present |
| 2 | Location | 1333 Blaisdell ^{St.} | 2 | 20 | 110 | Myron Cartage | 59° cloudy | Field Location | Empty House |
| 3 | " " | 704 Irving ^{Ave} | 21 | 9 | 40 | Myron Cartage | 59° cloudy | #143011 | |
| 4 | 7-7-15 | 1503 Yonge ^{St.} | 6 | 9 | 40 | Myron Cartage | 63° cloudy | 8-8-2013 | |
| 5 | " " | " " | 8 | 22 | 135 | Myron Cartage | 63° cloudy | 8-8-2013 | |
| 6 | " " | 1283 N. Main ^{St.} | 10 | 23 | 150 | Myron Cartage | 63° cloudy | #143960 | |
| 7 | " " | 1321 N. Court ^{St.} | 22 | 19 | 100 | Myron Cartage | 65° cloudy | #143416 | |
| 8 | " " | " " | " " | " " | " " | " " | " " | #143417 | |
| 9 | " " | 618 Oakley ^{Ave} | 3 | 11 | 50 | Myron Cartage | 65° cloudy | #143010 | |
| 10 | " " | 2008 Shelley ^{Dr.} | 3 | 24 | 155 | Myron Cartage | 71° cloudy | #143014 | |
| 11 | 7-8-15 | 1726 N. Court ^{St.} | 1 | 25 | 160 | Myron Cartage | 53° cloudy | #142923 | |
| 12 | " " | 2309 N. Court ^{St.} | 5 | 19 | 100 | Myron Cartage | 58° cloudy | #142917 | |
| 13 | " " | 2310 N. Court ^{St.} | 3 | 17 | 85 | Myron Cartage | 63° cloudy | #142919 | |
| 14 | " " | 3356 Sun Valley ^{Tr.} | 6 | 16 | 75 | Myron Cartage | 63° cloudy | #142584 | |
| 15 | " " | 3348 Sun Valley ^{Tr.} | 22 | 135 | 100 | | | #142589 | |
| 16 | " " | 3348 Sun Valley ^{Tr.} | | 22 | 135 | Myron Cartage | 63° cloudy | #142590 | |
| 17 | " " | " " | | 19 | 100 | Myron Cartage | 63° cloudy | #142590 | |
| 18 | " " | 2208 Clinton ^{Dr.} | 5 | 14 | 70 | Myron Cartage | 66° cloudy | Blank | 2 years (Ago) tree was bypassed because of surface roots & crown structure |
| 19 | " " | 1810 Oxford ^{St.} | 7 | 11 | 50 | Myron Cartage | 66° cloudy | #142478 | |
| 20 | 7-15-15 | 1005 Haskell ^{Ave.} | 3 | 23 | 150 | Myron Cartage | 57° sunny | #143414 | |

| EAB TREATMENTS - NW | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|---------------------|---------|--------------------|------------------|-------|------------------------------|-----------------------|--------------------|---------------------------|--|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 21 | 7-9-15 | 2040 Oxford St. | 6 | 13 | 70 | Myron Cottage | 62° Cloudy | #142477 | |
| 22 | " " | " " | 11 | 14 | 70 | Myron Cottage | 62° Cloudy | #142477 | |
| 23 | " " | 1742 Oxford St. | 6 | 21 | 120 | Myron Cottage | 62° Cloudy | #142479 | |
| 24 | " " | 1302 National Ave. | 2 | 17 | 85 | Myron Cottage | 65° Cloudy | #143443 | |
| 25 | " " | 1210 National Ave. | | | | | | #143444 | No Ash tree present |
| 26 | " " | 1214 National Ave. | | | | | | #143460 | No Ash tree present |
| 27 | " " | 1420 Grant Ave. | 2 | 19 | 100 | Myron Cottage | 69° Cloudy | #143430 | |
| 28 | " " | 1422 Grant Ave. | 5 | 19 | 100 | Myron Cottage | 69° Cloudy | #143429 | |
| 29 | " " | 1404 Grant Ave. | 7 | 23 | 150 | Myron Cottage | 70° Cloudy | #143431 | |
| 30 | 7-14-15 | 1110 Grant Ave. | 6 | 25 | 160 | Myron Cottage | 72° Sunny | #143432 | |
| 31 | " " | 1306 Grant Ave. | 4 | 12 | 50 | Myron Cottage | 72° Sunny | #143433 | |
| 32 | " " | 2118 Kilburn St. | 4 ^{ADP} | 31 | | Past Bypass Treatment | | | → Orange Dot ^{over} 1/2 decline |
| 33 | " " | 705 Kilburn St. | 13 | 7 | 40 | Myron Cottage | 79° Cloudy | #143245 | |
| 34 | " " | " " | 11 | 7 | 40 | Myron Cottage | 79° Cloudy | #143245 | |
| 35 | " " | " " | 8 | 4 | 25 | Myron Cottage | 79° Cloudy | #143245 | |
| 36 | " " | 1011 Haskell Ave. | 1 | 26 | 170 | Myron Cottage | 79° Cloudy | #143413 | |
| 37 | 7-15-15 | 721 Locust St. | 4 | 21 | 120 | Myron Cottage | 59° Sunny | #143244 | |
| 38 | " " | 1516 Midway Dr. | 6 | 16 | 75 | Myron Cottage | | #142610 | |
| 39 | " " | 1841 Harlem Blvd. | | | | | | #143633 | No Ash tree present |
| 40 | 7-20-15 | 2010 Harlem Blvd. | 3 | 20 | 110 | Myron Cottage | 62° Cloudy | #142885 | |

| EAB TREATMENTS - NW | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|---------------------|---------|-------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---------------------|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | Previous HANSEN REQUEST # | COMMENTS |
| 81 | 7-13-15 | 1825 Douglas | 2 | 9 | 40 | A-24 | 78° Fair | 142517 | |
| 82 | 7-13-15 | 2020 Cumberland | 2 | 15 | 70 | A-24 | 78° | 142476 | |
| 83 | 7-20-15 | 3318 Charles st | 11 | 20 | 110 | A-24 | 66° | 141740 | |
| 84 | 7-20-15 | 2102 Cumberland | 20 | 19 | 100 | A-24 | 69° | 142537 | |
| 85 | 7-20-15 | 2037 Clinton st | 2 | 16 | 75 | A-24 | 75° | 142486 | |
| 86 | 7-20-15 | 703 Auburn st | 9 | 7 | 40 | A-24 | 78° | 142220 | |
| 87 | 7-20-15 | 1605 Grace st | 6 | 9 | 40 | A-24 | 80° | 142616 | |
| 88 | 7-20-15 | 1603 Burton st | 10 | 16 | 75 | A-24 | 83° | 142922 | |
| 89 | 7-20-15 | 1603 Burton ST | 12 | 16 | 75 | A-24 | 83° | need # | |
| 90 | 7-21-15 | 523 Brown | 2 | 7 | 40 | A-24 | 64 sunny | 142546 | |
| 91 | 7-21-15 | 523 Brown | 6 | 21 | 120 | A-24 | 64 sunny | need # | |
| 92 | 7-21-15 | 1320 Boilvin Ave | 6 | 20 | 110 | A-24 | 71 sunny | 143461 | |
| 93 | 7-23-15 | 1211 Garrison Ave | 4 | 7 | 40 | A-24 | 64° sunny | 143439 | |
| 94 | 7-23-15 | 1211 Garrison Ave | 6 | 9 | 40 | A-24 | 64 sunny | need # | |
| 95 | 7-23-15 | 2216 Dresden | 6 | 26 | 170 | A-24 | 83° sunny | 134733 | |
| 96 | 7-24-15 | 818 Ellis Ave | 6 | 12 | 50 | A-24 | 64 cloudy | 142533 | |
| 97 | 7-24-15 | 2416 Ashland ave | 5 | 26 | 170 | A-24 | 76 cloudy | 143968 | |
| 98 | 7-24-15 | 523 Chisholm Trl | 2 | 20 | 110 | A-24 | 79 cloudy | 143235 | |
| 99 | 7-24-15 | 1820 Melrose | 3 | 14 | 70 | A-24 | 82 cloudy | 142491 | |
| 100 | 7-27-15 | 1742 Hancock | 4 | 13 | 70 | A-24 | | 142536 | |

| EAB TREATMENTS - NW | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|---------|--------------------|--------|-------|------------------------------|-----------------|--------------------|---------------------------|---|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | PREVIOUS HANSEN REQUEST # | COMMENTS |
| 41 | 7-15-15 | 1724 Harlem Blvd. | 6 | 7 | 40 | Myron Cottage | 75° sunny | #143962 | |
| 42 | " | " | 3 | 7 | | | | #143962 | Cell=3 Marked + Letter ^{Structural Damage} |
| 43 | " | 412 Mulberry | 5 | 9 | 40 | Myron Cottage | 75° sunny | Not on List 2013 year | |
| 44 | 7-16-15 | 130 N. Church St. | 6 | 8 | 40 | Myron Cottage | 63° cloudy | #143441 | |
| 45 | " | 126 N. Church St. | 7 | 8 | 40 | Myron Cottage | 63° cloudy | #143612 | Very Sparse + Very Slow Uptake |
| 46 | " | 132 N. Church St. | 9 | 8 | 40 | Myron Cottage | 64° cloudy | #143613 | Very Slow uptake |
| 47 | " | 408 Mulberry St. | 4 | 8 | 40 | Myron Cottage | 64° cloudy | #143617 | Very Slow uptake |
| 48 | 7-17-15 | 3333 N. Church St. | 9 | 13 | 70 | Myron Cottage | 74° sunny | #142582 | |
| 49 | " | 2203 Latham St. | 6 | 17 | 85 | Myron Cottage | 74° sunny | #142612 | |
| 50 | " | 1904 Latham St. | 5 | 18 | 90 | Myron Cottage | 74° sunny | #142925 | |
| 51 | " | 1704 Latham St. | 4 | 13 | 70 | Myron Cottage | 77° sunny | #142618 | |
| 52 | " | 416 King St. | 3 | 18 | 90 | Myron Cottage | 77° sunny | #143415 | |
| 53 | " | 504 King St. | 5 | 20 | 110 | Myron Cottage | 85° sunny | #143418 | |
| 54 | 7-20-15 | 2024 Harlem Blvd. | 2 | 17 | 85 | Myron Cottage | 62° clouds | #142483 | |
| 55 | " | 2026 Harlem Blvd. | 2 | 25 | 160 | Myron Cottage | 69° cloudy | #142484 | |
| 56 | " | " | 5 | 21 | 120 | Myron Cottage | 69° cloudy | #142484 | |
| 57 | " | 2333 Harlem Blvd. | 1 | 13 | 70 | Myron Cottage | 83° cloudy | #142482 | |
| 58 | " | " | 4 | 15 | 70 | Myron Cottage | 83° cloudy | #142482 | |
| 59 | " | " | 7 | 13 | 70 | Myron Cottage | 83° cloudy | #142482 | |
| 60 | 7-21-15 | " | 13 | 11 | 50 | Myron Cottage | 62° sunny | #142482 | |

| EAB TREATMENTS - SWE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|----------------------|--------|--------------------------------|---------------|--------------|------------------------------|-----------------|--------------------|------------------|--|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 1 | 6-2-14 | 4826 Antioch ^{Dr.} | 6 | 12 | 40 | Myron Cabbage | Cloudy 75° | 167127 | uptake Very Slow |
| 2 | 6-2-14 | 3306 Jacqueline ^{Dr.} | 4 | 11 | 40 | Myron Cabbage | Partly Sunny 76° | 167129 | uptake Very Slow |
| 3 | 6-3-14 | 2505 Revelation ^{Lv.} | 1 | 8 | 50 | Myron Cabbage | Sunny 65° | 167130 | |
| 4 | 6-3-14 | 2505 Revelation ^{Lv.} | 6 | 10 | 30 | Myron Cabbage | Sunny 65° | 167131 | |
| 5 | 6-3-14 | 2523 Revelation ^{Lv.} | 7 | 15 | 60 | Myron Cabbage | Sunny 67° | 167132 | |
| 6 | 6-3-14 | 2551 Revelation ^{Lv.} | 7 | 16 | 65 | Myron Cabbage | Sunny 69° | 167133 | |
| 7 | 6-3-14 | 2563 Revelation ^{Lv.} | 7 | 18 | 80 | Myron Cabbage | Sunny 69° | 167134 | |
| 8 | 6-3-14 | 2565 Revelation ^{Lv.} | 2 | 16 | 65 | Myron Cabbage | Sunny 71° | 167135 | |
| 9 | 6-3-14 | 2617 Revelation ^{Lv.} | 7 | 18 | 80 | Myron Cabbage | Sunny 75° | 167136 | |
| 10 | 6-3-14 | 2629 Revelation ^{Lv.} | | | | | | | → Stump DBH=26 |
| 11 | 6-4-14 | 2657 Revelation ^{Lv.} | 7 | 23 | 150 | Myron Cabbage | Light Rain 62° | 167139 | |
| 12 | 6-4-14 | 5087 Valley ^{Dr.} | 1 | 15 | 60 | Myron Cabbage | Light Rain 62° | 167140 | |
| 13 | 6-4-14 | 3904 Lookout ^{Dr.} | 13 | 9 | 30 | Myron Cabbage | Cloudy 61° | 167170 | |
| 14 | 6-4-14 | 3904 Lookout ^{Dr.} | 11 | 8 | 25 | Myron Cabbage | Cloudy 61° | 167170 | |
| 15 | 6-5-14 | 3717 MAY ^{St.} | 6 | 8 | 25 | Myron Cabbage | Sunny 53° | 167172 | |
| 16 | 6-5-14 | 5181 Houston ^{Rd.} | 4 | 18 | 80 | Myron Cabbage | Misty Sunny 65° | | |
| 17 | 6-5-14 | 3122 Breezeway ^{Dr.} | 5 | 18 | 80 | Myron Cabbage | Misty Sunny 63° | | |
| 18 | 6-5-14 | 3084 Breezeway ^{Dr.} | 11 | 7 | 20 | Myron Cabbage | Misty Sunny 67° | | |
| 19 | 6-6-14 | 1212 Asche ^{Ave.} | 10 | | | | | | → Marked + Letter ^{Budding} |
| 20 | 6-6-14 | 1212 Asche ^{Ave.} | 14 | | | | | | → Marked + Letter ^{7/4 Decline cur} |

Re-Treats

| EAB TREATMENTS - SWE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|----------------------|---------|--------------------|--------------|-------|------------------------------|-----------------|--------------------|------------------|---------------------|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL# | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 21 | 6-5-14 | 1212 Asche Ave. | Westside #11 | 6 | 20 | Myron Cottage | Mostly Sunny 72° | | Uptake Very Slow |
| 22 | 6-5-14 | 1212 Asche Ave. | Westside #12 | 6 | 20 | Myron Cottage | Mostly Sunny 72° | | Uptake Very Slow |
| 23 | 6-5-14 | 1212 Asche Ave. | Westside #13 | 8 | 25 | Myron Cottage | Mostly Sunny 72° | | Uptake Very Slow |
| 24 | 6-6-14 | 1212 Asche Ave. | Westside #15 | 8 | 25 | Myron Cottage | Mostly Sunny 59° | | |
| 25 | 6-6-14 | 1212 Asche Ave. | Westside #17 | 9 | 30 | Myron Cottage | Mostly Sunny 59° | | |
| 26 | 6-6-14 | 1212 Asche Ave. | Westside #18 | 8 | 25 | Myron Cottage | Mostly Sunny 59° | | |
| 27 | 6-6-14 | 1212 Asche Ave. | Westside #19 | 9 | 30 | Myron Cottage | Mostly Sunny 59° | | |
| 28 | 6-6-14 | 1212 Asche Ave. | Westside #1 | 9 | 30 | Myron Cottage | Sunny 77° | | |
| 29 | 6-6-14 | 1212 Asche Ave. | Westside #2 | 9 | 30 | Myron Cottage | Sunny 77° | | |
| 30 | 6-6-14 | 1212 Asche Ave. | Westside #3 | | 100 | Myron Cottage | Sunny 77° | | |
| 31 | 6-6-14 | 1212 Asche Ave. | Westside #4 | 9 | 30 | Myron Cottage | Sunny 77° | | |
| 32 | 6-9-14 | 4607 Newcastle Rd. | | 5 | 16 | Myron Cottage | Sunny 72° | | |
| 33 | 6-10-14 | 1212 Asche Ave | | 5 | 10 | Myron Cottage | Light Rain 65° | | |
| 34 | 6-10-14 | 1212 Asche Ave | | 1 | 11 | Myron Cottage | Light Rain 65° | | |
| 35 | 6-11-14 | 3469 Precision Dr. | | 3 | 18 | 80 | Myron Cottage | Light Rain 61° | |
| 36 | 6-11-14 | 3469 Precision Dr. | | 5 | 16 | 65 | Myron Cottage | Light rain 61° | |
| 37 | 6-11-14 | 3469 Precision Dr. | | 7 | 15 | 60 | Myron Cottage | Light Rain 61° | |
| 38 | 6-11-14 | 3230 Pyramid Dr. | | 24 | 16 | 65 | Myron Cottage | Cloudy 63° | |
| 39 | 6-11-14 | 3230 Pyramid Dr. | | 21 | 14 | 50 | Myron Cottage | Cloudy 63° | |
| 40 | 6-12-14 | 3230 Pyramid Dr. | | 20 | 14 | change 70 mil | Myron Cottage | Light Fog 57° | |

| EAB TREATMENTS - SE | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|--------------------|----------------------------|--------|-------|------------------------------|-----------------|--------------------|-------------------|---|
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 141 | 6-10-14 | 4635 Newcastle | 5 | 22 | 135 | A-24 | 62° cloudy | | |
| 142 | | ↓ | 2 | 30 | n/a | " | " | | by passed / sidewalk lifting |
| 143 | | 1836 Apple Tree Ln | 4 | 16 | 65 | " | 62° cloudy | | |
| 144 | | ↓ | 1 | 27 | n/a | | " | | by passed too large |
| 145 | 6-11-14 | 4603 Longmeadow Ln | 5 | 21 | 120 | A-24 | 61° rain | | Two Day intake |
| 146 | 6-12-14 | 4628 Longmeadow Ln | 5 | 14 | 70 | A-24 | 55° Fog | | |
| 147 | 6-12-14 | 1817 Arnold Ave | | 16 | 75 | " | 65° cloudy | | |
| 148 | 6-12-14 | 1817 Arnold Ave | | 22 | 115 | " | 61° cloudy | | |
| 149 | 6-12-14 | 1619 Arnold Ave | 11 | 18 | 75 | " | 61° cloudy | | |
| 150 | 6-12-14 | 1520 Kerstin CT | 2 | 21 | 120 | | 61° | | |
| 151 | 6-13-14 | 1520 Kerstin CT | 4 | 22 | 135 | A-24 | 53° Sunny | | |
| 152 | 6-13-14 | 1532 Kerstin CT | 4 | 23 | 150 | " | 58 sunny | | |
| 153 | 6-13-14 | 1532 Kerstin CT | 1 | 21 | n/a | " | " | | Non-Treatment BARK FALTY AWAY |
| 154 | 6-19-14 | 1517 Kerstin CT | 1 | 25 | 160 | A-24 | 67 cloudy | | |
| 155 | 6-19-14 | 1517 Kerstin CT | 4 | 22 | 135 | " | 67 cloudy | | |
| 156 | 6-20-14 | 1517 Kerstin CT | 12 | 27 | n/a | A-24 | 71 cloudy | | Defective vascular system (Removal) |
| 157 | 6-20-14 | 1517 Kerstin CT | 10 | 24 | 155 | " | 71 cloudy | | |
| 158 | | 1517 Kerstin CT | | | | " | | | |
| 159 | 6-20-14 | 5326 Cybele Ln | 3 | 18 | 90 | " | 73 cloudy | | |
| 160 | 6-20-14 | 5326 Cybele Ln | 6 | 11 | n/a | " | | | Defective vascular system marked for removal |

Re-Treats

| EAB TREATMENTS - SW E | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|-----------------------|---------|---------------------------------|--------|-------|------------------------------|-----------------|--------------------|------------------|---|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 41 | 6-12-14 | 5060 27 th Ave | 1 | 19 | 100 | Myron Cabbage | Cloudy 67° | | |
| 42 | 6-12-14 | 4217 O'Connell St | 3 | | | | | | Badly Lifting Sidewalk (ByPass) |
| 43 | 6-12-14 | 4308 Mayflower ^{Ave} | 2 | 19 | 100 | Myron Cabbage | Cloudy 74° | | |
| 44 | 6-13-14 | 3475 Holiday ^{Dr.} | 6 | 18 | 40 | Myron Cabbage | Sunny 52° | | Flat Picture Look's City |
| 45 | 6-13-14 | 4608 Trevor ^{CIR} | 5 | 18 | 90 | Myron Cabbage | Sunny 55° | | |
| 46 | 6-13-14 | 4309 Red Coat ^{Rd.} | 3 | 31 | 240 | Myron Cabbage | Sunny 62° | | Sidewalk (Starting) Drop |
| 47 | 6-13-14 | 3223 New England ^{Dr.} | 3 | 31 | 240 | Myron Cabbage | Sunny 62° | | |
| 48 | 6-13-14 | 4329 Majesty ^{ct.} | 2 | 22 | 135 | Myron Cabbage | Sunny 62° | | |
| 49 | 6-13-14 | 3351 Tannenbaum ^{LN.} | 4 | 16 | 75 | Myron Cabbage | Sunny 62° | | |
| 50 | 6-16-14 | 3315 Jacqueline ^{Dr.} | 2 | 20 | 110 | Myron Cabbage | Partly Sunny 62° | | |
| 51 | 6-16-14 | 3310 Jacqueline ^{Dr.} | 11 | 9 | 40 | Myron Cabbage | Partly Sunny 65° | | |
| 52 | 6-16-14 | 3310 Jacqueline ^{Dr.} | 8 | 9 | 40 | Myron Cabbage | Partly Sunny 65° | | |
| 53 | 6-16-14 | 3310 Jacqueline ^{Dr.} | 9 | 15 | 70 | | | | Lifting Sidewalk (ByPass) |
| 54 | 6-16-14 | 3404 Jacqueline ^{Dr.} | 4 | | | | | | Lifting Sidewalk (ByPass) |
| 55 | 6-16-14 | 3404 Jacqueline ^{Dr.} | 2 | | | | | | Start of Lifting Sidewalk (ByPass) |
| 56 | 6-16-14 | 3009 Foliage ^{LN.} | 3 | | | | | | OVER 1/2 Decline Marked & Letter |
| 57 | 6-16-14 | 3003 Greendale ^{Dr.} | 4 | 18 | 90 | Myron Cabbage | Partly Sunny 81° | | |
| 58 | 6-19-14 | 2303 Winnetka ^{Dr.} | 5 | 16 | 75 | Myron Cabbage | Cloudy 73° | | |
| 59 | 6-19-14 | 2303 Winnetka ^{Dr.} | 1 | 15 | | | | | Marked & Letter ^{over} 1/2 decline |
| 60 | 6-17-14 | 2906 Concordia ^{Dr.} | 4 | | | | | | ByPass Bulging terrace Lifting Sidewalk |

| EAB TREATMENTS - SWE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|----------------------|---------|-------------------------------|--------|-------|------------------------------|-----------------|--------------------|------------------|--|
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | IMMEMECTIN BENZOATE |
| 61 | 6-17-14 | 5048 American Rd | 1 | 9 | 40 | Myron Cabbage | Cloudy 70° | | |
| 62 | 6-17-14 | 5048 American Rd. | 2 | 8 | 40 | Myron Cabbage | Cloudy 70° | | |
| 63 | 6-17-14 | 5048 American Rd | 3 | 8 | 40 | Myron Cabbage | Cloudy 70° | | |
| 64 | 6-17-14 | 5048 American Rd | 6 | | 40 | Myron Cabbage | Cloudy 70° | | |
| 65 | 6-18-14 | 2810 North Moor Dr. | 2 | 21 | 120 | Myron Cabbage | Cloudy 76° | | |
| 66 | 6-18-14 | 2920 North Moor Dr. | 1 | 16 | 75 | Myron Cabbage | Cloudy 77° | | |
| 67 | 6-18-14 | 2722 Colorado Ave | 5 | 16 | 75 | Myron Cabbage | Partly Storms 67° | | |
| 68 | 6-18-14 | 2606 Colorado Ave | 3 | 16 | 75 | Myron Cabbage | Cloudy 69° | | |
| 69 | 6-19-14 | 5111 Upland Dr. | 3 | | | | | | Notice Orange Dot Present |
| 70 | 6-19-14 | 5112 Upland Dr. | 4 | | | | | | Notice Orange Dot Present |
| 71 | 6-19-14 | 5020 Upland Dr. | 3 | 17 | 85 | Myron Cabbage | Cloudy 67° | | |
| 72 | 6-19-14 | 4612 Upland Dr. | 11 | | | | | | Lifting Sidewalk |
| 73 | 6-19-14 | 4612 Upland Dr. | 9 | | | | | | Roots / Lean |
| 74 | 6-19-14 | 4511 Upland Dr. | 2 | 19 | 100 | Myron Cabbage | Cloudy 67° | | |
| 75 | 6-19-14 | 4511 Upland Dr. | 5 | 19 | 100 | Myron Cabbage | Cloudy 67° | | |
| 76 | 6-19-14 | 4503 Upland Dr. | | | | | | | No (Ash tree) Present |
| 77 | 6-19-14 | 4804 Upland Dr. | 6 | | | | | | Notice Orange Dot Present |
| 78 | 6-19-14 | 2315 Holmes St. | 5 | | | | | | Bulging terrace / Lean |
| 79 | 6-19-14 | 2315 Holmes St. | 2 | | | | | | Bulging terrace / Lean / Part replacement Sidewalk |
| 80 | 6-19-14 | 2700 (2214 + 2726) Holmes St. | 6 | | | | | | Notice Orange Dot Present |

| EAB TREATMENTS - SWE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|----------------------|--------------------|--------------------------------|--------------|---------------|------------------------------|-----------------|--------------------|------------------|---|
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | IMMEMECTIN BENZOATE |
| | | | | | | | | | COMMENTS |
| 81 | 6-19-14 | 2615 Bucknell Dr. | 1 | | | | | | ByPass Bulging terrace New Sidewalk ^{ByPass treatment} |
| 82 | 6-19-14 | 2615 Bucknell Dr. | 6 | | | | | | Marked Letter ^{Bad decline} |
| 83 | 6-20-14 | 2106 Ohio Parkway | 10 | | | | | | ByPass Bulging terrace curb |
| 84 | 6-24-14 | 2516 Skokie Dr. | 4 | 14 | 70 | Myron Cottage | cloudy 72° | | |
| 85 | 6-24-14 | 2528 Skokie Dr. | 4 | 14 | 70 | | | | ByPass 1) Lifting Sidewalk 2) New Sidewalk |
| 86 | 6-24-14 | 5362 Dierks Dr. | 13 | 13 | 70 | Myron Cottage | Partly Sunny 83° | | |
| 87 | 6-24-14 | 5345 Dierks Dr. | 10 | 13 | 70 | Myron Cottage | Partly Sunny 83° | | |
| 88 | 6-25-14 | 5334 Dierks Dr. | 19 | 13 | 70 | Myron Cottage | Mostly Sunny 66° | | |
| 89 | 6-25-14 | 5379 Dierks Dr. | 23 | 10 | 50 | Myron Cottage | Partly Sunny 69° | | |
| 90 | 6-25-14 | 5386 Dierks Dr. | 8 | 13 | 70 | Myron Cottage | Partly Sunny 69° | | |
| 91 | 6-25-14 | 1806 Highridge Rd. | 2 | 6 | | | | | ByPass Lifting Sidewalk |
| 92 | 6-25-14 | 1904 Highridge Rd. | 5 | 13 | 70 | Myron Cottage | Mostly Sunny 76° | | |
| 93 | 6-25-14 | 1904 Highridge Rd. | 2 | | | | | | ByPass Location Full |
| 94 | 6-25-14 | 6677 Grassridge Rd. | 2 | | | | | | ByPass Location somewhat full & Lifting Sidewalk |
| 95 | 6-25-14 | 6677 Grassridge Rd. | 3 | | | | | | ByPass V-Crotched Area ^{trunk (fall crown)} |
| 96 | 6-25-14 | 1999 Santa Monica Dr. | 2 | 21 | 120 | Myron Cottage | Mostly Sunny 76° | | |
| 97 | 6-25-14 | 1669 TeleMark Dr. | 3 | 21 | 120 | Myron Cottage | Partly Sunny 81° | | |
| 98 | 6-25-14 | 1669 TeleMark Dr. | 5 | 20 | 110 | Myron Cottage | Partly Sunny 81° | | |
| 99 | 6-26-14 | 1720 Telermark Dr. | 4 | 26 | 170 | | | | ByPass (Crown Area V-Crotch) ^{WATER} |
| 100 | 6-26-14 | 1601 Highridge Rd. | 2 | 6 | | | | | ByPass (Lifting Sidewalks) |

| EAB TREATMENTS - SW | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|---------------------|---------|--------------------|--------|-------|------------------------------|-----------------|--------------------|------------------|--|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 141 | 6/23/14 | 5321 Cybele Ln | 4 | 10 | 85 | A-24 | 68° | | |
| 142 | 6/23/14 | 5321 Cybele Ln | 7 | 21 | 120 | " " | 68° | | |
| 143 | 6/23/14 | 1522 Powderhorn Dr | 20 | 18 | 90 | " " | 73° | | |
| 144 | 6/23/14 | 1522 Powderhorn Dr | 23 | 21 | 120 | " " | 73° | | |
| 145 | 7/2/14 | 954 ANEE | 2 | 15 | 70 | A-24 | Sunny/60° | | |
| 146 | 7/2/14 | 895 ANEE | 5 | 13 | 70 | " " | Sunny/60° | | |
| 147 | 7/2/14 | 895 ANEE | 2 | 12 | 50 | " " | Sunny/60° | | |
| 148 | 7/2/14 | 1252 ANEE | 1 | 17 | 85 | " " | Cloudy 64° | | |
| 149 | 7/2/14 | 949 Britannia | 4 | 11 | 50 | " " | Cloudy 64° | | Intake slow Fished 7-3-14 |
| 150 | 7/3/14 | 913 Candleford | 5 | 20 | 110 | A-24 | P-Sunny 64° | | |
| 151 | 7/3/14 | 875 Stone Field | 3 | 16 | 50 | " " | P-Sunny 64° | | |
| 152 | 7/7/14 | 875 Stone Field | 7 | 9 | 40 | A-24 | Fog 72° | | |
| 153 | 7/7/14 | 6673 South Field | 3 | 13 | 70 | " " | Cloudy 75° | | ² dnr, w l - ^{Complete} 7-8-14 |
| 154 | 7/8/14 | 6643 Sandalwood | 6 | 11 | 50 | A-24 | Cloudy 67° | | |
| 155 | 7/8/14 | 6648 Sandalwood | 1 | 17 | 85 | " " | Cloudy 67° | | |
| 156 | 7/8/14 | 6683 Sandalwood | 2 | 18 | 90 | " " | Cloudy 74° | | |
| 157 | 7/8/14 | 6683 Sandalwood | 21 | 16 | 75 | " " | Cloudy 74° | | |
| 158 | 7/8/14 | 1364 Revere Ridge | 4 | 16 | 75 | " " | Cloudy 75° | | |
| 159 | 7/8/14 | 1377 Revere Ridge | 24 | 12 | 50 | " " | Cloudy 75° | | |
| 160 | 7/9/14 | 1196 Revere Ridge | 1 | 12 | 50 | " " | Cloudy 60° | | |

| EAB TREATMENTS - NE | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|---------------------|--------------------|--------------------------------|--------------|-------|------------------------------|-----------------|--------------------|---------------------|--|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 101 | 6-26-14 | 1460 Livingston Dr. | 5 | 9 | 40 | Myron Cottage | Cloudy 63° | | |
| 102 | 6-26-14 | 1434 Livingston Dr. | 4 | | | | | | BYPass (Lifting Sidewalks) |
| 103 | 6-26-14 | 1404 Livingston Dr. | 1 | | | | | | BYPass (Lifting Sidewalks) |
| 104 | 6-26-14 | 1340 Livingston Dr. | 5 | 12 | 50 | Myron Cottage | Cloudy 65° | | |
| 105 | 6-26-14 | 1340 Livingston Dr. | 7 | 7 | 40 | Myron Cottage | Cloudy 65° | | |
| 106 | 6-26-14 | 7353 Fairmont Ln | 12 | 11 | 50 | Myron Cottage | Cloudy 65° | | |
| 107 | 6-27-14 | 7380 Fairmont Ln | 3 | | | | | | BYPass stress + structural |
| 108 | 6-27-14 | 7412 Fairmont Ln | 3 | | | | | | BYPass Structural Weak |
| 109 | 6-27-14 | 7412 Fairmont Ln. | 7 | 12 | 50 | Myron Cottage | Cloudy 66° | | |
| 110 | 6-27-14 | 1357 Sandhurst Ln. | 1 | | | | | | BYPass Lifting Sidewalk |
| 111 | 6-27-14 | 1753 Oak Park Dr. | 20 | 12 | 50 | Myron Cottage | Mostly Sunny 71° | | Add on List |
| 112 | 6-27-14 | 7236 Sentinel Rd. | 1 | 16 | 75 | Myron Cottage | Mostly Sunny 78° | | |
| 113 | 6-27-14 | 7236 Sentinel Rd. | 3 | 16 | 75 | Myron Cottage | Mostly Sunny 78° | | |
| 114 | 6-27-14 | 7218 Sentinel Rd | 4 | | | | | | B Marked + Letter over 1/2 decline |
| 115 | 6-27-14 | 7218 Sentinel Rd | 6 | | | | | | BYPass (Poor Root System) |
| 116 | 6-27-14 | 7090 Sentinel Rd | 3 | 15 | 70 | Myron Cottage | Mostly Sunny 78° | | |
| 117 | 6-27-14 | 7085 Sentinel Rd | 6 | 15 | 70 | Myron Cottage | Partly Sunny 85° | | |
| 118 | 6-27-14 | 7085 Sentinel Rd | 4 | 16 | 75 | Myron Cottage | Partly Sunny 85° | | |
| 119 | 6-27-14 | 7085 Sentinel Rd | 7 | | | | | | BYPass (Storm damage trunk in the heartwood) |
| 120 | 7-9-14 | 1669 Marshfield | 11 | 12 | 50 | Myron Cottage | Partly Sunny 71° | | (Add to List) |

7-17-14 1431 Sandhurst Dr. BYPass Lifting Sidewalk

| EAB TREATMENTS - SWNE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|-----------------------|---------|------------------------|--------|-------|------------------------------|-----------------|---------------------|------------------|-------------------------|
| | | | | | | TREE-AGE | IMMEMECTIN BENZOATE | | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 121 | 6-30-14 | 1608 Oakforest Dr. | 4 | 12 | 50 | Myron Cottage | Cloudy 69° | | |
| 122 | 6-30-14 | 1552 Oakforest Dr. | 6 | 12 | 50 | Myron Cottage | Cloudy 69° | | |
| 123 | 6-30-14 | 1648 Rowntree | 6 | 13 | 70 | Myron Cottage | Cloudy 70° | | |
| 124 | 6-30-14 | 1463 Ramsey | 6 | 23 | 150 | Myron Cottage | Cloudy 75° | | |
| 125 | 6-30-14 | 1463 Ramsey | 2 | 23 | 150 | Myron Cottage | Cloudy 75° | | |
| 126 | 6-30-14 | 7217 Centennial Tr. | 7 | 12 | 50 | Myron Cottage | Cloudy 74° | | |
| 127 | 6-30-14 | 1150 Fox Chase Lane | 3 | 10 | 50 | Myron Cottage | Cloudy 76° | | |
| 128 | 7-1-14 | 7112 Weathered Oak Ln. | 6 | 12 | 50 | Myron Cottage | Cloudy 64° | | |
| 129 | 7-1-14 | 7150 Weathered Oak Ln. | 7 | 10 | 50 | Myron Cottage | Cloudy 64° | | |
| 130 | 7-1-14 | 6951 Academy Tr. | 5 | 10 | 50 | Myron Cottage | Cloudy 66° | | |
| 131 | 7-1-14 | 6951 Academy Tr. | 2 | 13 | 70 | Myron Cottage | Cloudy 66° | | |
| 132 | 7-1-14 | 6758 Academy Tr. | 4 | 14 | 70 | Myron Cottage | Cloudy 71° | | |
| 133 | 7-1-14 | 6758 Academy Tr. | 6 | 17 | 85 | Myron Cottage | Cloudy 71° | | |
| 134 | 7-1-14 | 6758 Academy Tr. | 2 | 19 | 100 | Myron Cottage | Partly Sunny 75° | | |
| 135 | 7-1-14 | 1617 Albany Ln. | 4 | 11 | 50 | Myron Cottage | Sunny 75° | | |
| 136 | 7-9-14 | 1585 Marshfield | 1 | 16 | 75 | Myron Cottage | Partly Sunny 66° | | |
| 137 | 7-9-14 | 1585 Marshfield | 3 | 18 | 90 | Myron Cottage | Partly Sunny 66° | | |
| 138 | 7-9-14 | 1585 Marshfield | 5 | | | | | | Bypass Lifting Sidewalk |
| 139 | 7-9-14 | 1585 Marshfield | 7 | | | | | | Bypass Lifting Sidewalk |
| 140 | 7-9-14 | 1640 Albany Ln. | 4 | 11 | 50 | Myron Cottage | Partly Sunny 69° | | *Slow uptake |

| EAB TREATMENTS - SW NE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|------------------------|---------|----------------------|--------|-------|------------------------------|-----------------|--------------------|------------------|---------------------------|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 161 | 7-11-14 | 2209 Wembley Place | 6 | 10 | | | | | Marked + Letter Declining |
| 162 | 7-14-14 | 2209 Wembley Place | 21 | 14 | 70 | Myron Castage | Partly Sunny 72° | | |
| 163 | 7-15-14 | 6483 Muirfield Ln. | 3 | 17 | 85 | Myron Castage | Partly Sunny 53° | | |
| 164 | 7-15-14 | 6658 Old Hunters Run | 6 | 19 | 100 | Myron Castage | Partly Sunny 53° | | |
| 165 | 7-15-14 | 6235 Muirfield Ln. | 3 | 14 | 70 | Myron Castage | Cloudy 55° | | (Add to List) |
| 166 | 7-15-14 | 6235 Muirfield Cv. | 6 | 14 | 70 | Myron Castage | Cloudy 55° | | (Add to List) |
| 167 | 7-15-14 | 6670 Timberline Ln. | 1 | 10 | 50 | Myron Castage | Cloudy 58° | SE | (Add to List) |
| 168 | 7-15-14 | 6636 Timberline Ln. | 7 | 10 | 50 | Myron Castage | Cloudy 58° | ↓ | (Add to List) |
| 169 | 7-15-14 | 1205 Woodcreek Bend | 10 | 9 | 40 | Myron Castage | Cloudy 58° | | |
| 170 | 7-15-14 | 1205 Woodcreek Bend | 12 | 9 | 40 | Myron Castage | Cloudy 58° | | |
| 171 | 7-16-14 | 1303 Hillcrest Rd. | 5 | 26 | 170 | Myron Castage | Fog 52° | | |
| 172 | 7-16-14 | 1115 Charlotte Dr. | | | BYPASS | | Poor Conditions | | Cell=1, 3, 6, 7 |
| 173 | 7-16-14 | 4909 Carla Cir | 21 | 21 | 120 | Myron Castage | Sunny 55° | | |
| 174 | 7-16-14 | 5005 Carol Ct. | 2 | 19 | 100 | Myron Castage | Sunny 60° | | |
| 175 | 7-16-14 | 721 Woodridge Dr. | 12 | 22 | 135 | Myron Castage | Sunny 64° | | |
| 176 | 7-16-14 | 5123 David Dr. | 4 | 20 | 110 | Myron Castage | Sunny 67° | | |
| 177 | 7-16-14 | 1214 Mondale Dr. | 4 | 26 | 170 | Myron Castage | Partly Sunny 69° | | |
| 178 | 7-17-14 | 4926 Orchard Ct. | 3 | 14 | 70 | Myron Castage | Cloudy 56° | | (Add to List) |
| 179 | 7-17-14 | 1104 Fieldcrest Dr. | 6 | 5 | 25 | Myron Castage | Cloudy 57° | | (Add to List) |
| 180 | 7-17-14 | 5614 Elaine Dr. | 1 | 18 | 90 | Myron Castage | Cloudy 62° | | (Add to List) |
| | 7-17-14 | 5614 Elaine Dr. | 5 | 18 | 90 | Myron Castage | Cloudy 62° | | |

| EAB TREATMENTS - SW NE | | | | | | PESTICIDE USED | | | ACTIVE INGREDIENT |
|------------------------|--------------------|---------------------------------|--------------|-------|------------------------------|-----------------|--------------------|------------------|--|
| | | | | | | TREE-AGE | | | IMMEMECTIN BENZOATE |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 181 | 7-17-14 | 1254 North Crest Dr. | 1 | 13 | 70 | Myron Cartage | Partly Sunny 71° | | |
| 182 | 7-17-14 | 1213 North Crest Dr. | 4 | | | | | | ByPass Lifting Sidewalk |
| 183 | 7-17-14 | 5553 Tasselbury Ct. | 10 | 16 | 75 | Myron Cartage | Partly Sunny 71° | | |
| 184 | 7-18-14 | 415 S. Mulford Rd | 20 | 20 | 110 | Myron Cartage | Partly Sunny 76° | | |
| 185 | 7-18-14 | 425 S. Mulford Rd. | 21 | 9 | 40 | Myron Cartage | Partly Sunny 76° | | |
| 186 | 7-18-14 | 415 S. Mulford Rd. | 23 | 17 | 85 | Myron Cartage | Partly Sunny 76° | | |
| 187 | 7-18-14 | 415 S. Mulford Rd | 24 | 21 | 120 | Myron Cartage | Partly Sunny 76° | | |
| 188 | 7-18-14 | 415 S Mulford Rd | 2 | 19 | 100 | Myron Cartage | Partly Sunny 76° | | |
| 189 | 7-18-14 | 415 S Mulford Rd. | 3 | 16 | 75 | Myron Cartage | Partly Sunny 76° | | |
| 190 | 7-18-14 | 415 S. Mulford Rd | 4 | 16 | 75 | Myron Cartage | Partly Sunny 76° | | |
| 191 | 7-18-14 | 415 S. Mulford Rd | 5 | 11 | 50 | Myron Cartage | Partly Sunny 76° | | (Slow uptake) |
| 192 | 7-18-14 | 415 S. Mulford Rd | 6 | 16 | 75 | Myron Cartage | Partly Sunny 76° | | |
| 193 | 7-21-14 | 3227 Orleans Ave. | 4 | 15 | 70 | Myron Cartage | Sunny 63° | | (Very slow uptake) |
| 194 | 7-21-14 | 812 Wood Rd | 1 | | | | 66' R.O.W | | * Note Posted to tree (TPO Green) (said) |
| 195 | 7-21-14 | 1915 23rd st. | 23 | 23 | 150 | Myron Cartage | Sunny 76° | | |
| 196 | 7-21-14 | 1915 23rd st. | 19 | 19 | 100 | Myron Cartage | Sunny 76° | | (very slow uptake) |
| 197 | 7-22-14 | 809 Highview Ave. | 6 | 17 | 85 | Myron Cartage | cloudy 70° | | " " |
| 198 | 7-22-14 | 1623 Grant Ave NW | 23 | 11 | 50 | Myron Cartage | Sunny 74° | | Northwest Rockford |
| 199 | 7-22-14 | 2125 Grant Ave | 6 | 8 | 40 | Myron Cartage | cloudy 76° | | ↓ |
| 200 | 7-22-14 | 2315 Grant Ave. | 6 | 11 | 50 | Myron Cartage | cloudy 76° | | |

Treat Bi-Annually for EAB

| EAB TREATMENTS - SW NW | | | | | | PESTICIDE USED | | ACTIVE INGREDIENT | |
|-----------------------------------|---------|-----------------------|-----------|-------|------------------------------|-----------------|--------------------|---------------------|-------------------------------------|
| | | | | | | TREE-AGE | | IMMEMECTIN BENZOATE | |
| # | DATE | ADDRESS | CELL # | DBH " | QUANTITY INJECTED (M/LITERS) | APPLICATOR NAME | WEATHER CONDITIONS | HANSEN REQUEST # | COMMENTS |
| 201 | 7-22-14 | 2300 Huffman Blvd. | West Side | 29 | 210 | Myron Cottage | cloudy 83° | | |
| 202 | 7-23-14 | 2300 Huffman Blvd. | West Side | 16 | 75 | Myron Cottage | sunny 64° | | |
| 203 | 7-23-14 | 1807 Huffman Blvd. | | 4 | 85 | Myron Cottage | sunny 67° | | |
| 204 | 7-23-14 | 1738 Hancock | | 7 | 40 | Myron Cottage | sunny 69° | | |
| 205 | 7-23-14 | 2208 Oxford St. | | 4 | 85 | Myron Cottage | sunny 75° | | |
| 206 | 7-23-14 | 2016 Cumberland St. | | 2 | 40 | Myron Cottage | sunny 75° | | |
| 207 | 7-24-14 | 707 Cottage Grove Ave | | 4 | 195 | Myron Cottage | sunny 58° | | |
| 208 | 7-24-14 | 518 Ellis Ave. | | 6 | 50 | Myron Cottage | sunny 58° | | |
| 209 | 7-24-14 | 1935 Cumberland St. | | 2 | 50 | Myron Cottage | sunny 63° | | |
| 210 | 7-24-14 | 6595 E-State St. | 19 | | | Myron Cottage | sunny 73° | | SE Rockford |
| 211 | 7-24-14 | 6595 E-State St. | 20 | | | Myron Cottage | | BYPass | Vascular stress |
| 212 | 7-24-14 | 6595 E-State St. | 21 | 14 | 70 | Myron Cottage | sunny 73° | | |
| 213 | 7-24-14 | 6595 E-State St. | 23 | 13 | 70 | Myron Cottage | sunny 73° | | |
| 214 | 7-24-14 | 3139 N-Trainer Rd. | 6 | 14 | 70 | Myron Cottage | sunny 78° | | NE Rockford |
| 215 | 7-25-14 | 3178 N-Trainer Rd. | 4 | 13 | 70 | Myron Cottage | cloudy 59° | | |
| 216 | 7-25-14 | 3238 N-Trainer Rd. | 5 | | | | | | BYPass (Large storage damage wound) |
| 217 | 7-25-14 | 3238 N-Trainer Rd. | 1 | 13 | 70 | Myron Cottage | cloudy 59° | | |
| 218 | 7-25-14 | 3261 N-Trainer Rd. | 7 | 13 | 70 | Myron Cottage | light rain 60° | | |
| 219 | 7-25-14 | 3261 N-Trainer Rd. | 4 | 14 | 70 | Myron Cottage | light rain 60° | | |
| 220 | 7-25-14 | 3289 N-Trainer Rd. | 3 | 13 | 70 | Myron Cottage | cloudy 60° | | |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|-------|----------------|---------------|--------------|------------|--------------|---|------------------------------|
| 95083 | 6/29/11 | 2505 | REVELATION | 6/29/11 | FMISC-EAB | Cell 1, 13", 45ML, Jacobi, Cloudy/65, No problems | Completed by Jacobi, 6/23/11 |
| 95085 | 6/29/11 | 2505 | REVELATION | 6/29/11 | FMISC-EAB | Cell 6, 10", 30ML, Jacobi, Cloudy/65, No problems | Completed by Jacobi, 6/23/11 |
| 95087 | 6/29/11 | 2523 | REVELATION | 6/29/11 | FMISC-EAB | Cell 7, 13", 45ML. x 2, Jacobi, Cloudy/65, Blowout 1st application, 2nd applicaiton - No problems | Completed by Jacobi, 6/23/11 |
| 95098 | 6/29/11 | 2551 | REVELATION | 6/29/11 | FMISC-EAB | Cell 7, 15", 60ML., Jacobi, Cloudy/65, No problems | Completed by Jacobi, 6/23/11 |
| 95099 | 6/29/11 | 2563 | REVELATION | 6/29/11 | FMISC-EAB | Cell 7, 17", 75ML, Jacobi, Cloudy/60, No problems | Complete by Jacobi 6/24/11 |
| 95100 | 6/29/11 | 2565 | REVELATION | 6/29/11 | FMISC-EAB | Cell 1, 15", 60ML, Jacobi, Cloudy/60, No problems | Complete by Jacobi 6/24/11 |
| 95101 | 6/29/11 | 2617 | REVELATION | 6/29/11 | FMISC-EAB | Cell 7, 17", 75ML, Jacobi, Cloudy/60, No problems | Complete by Jacobi 6/24/11 |
| 95102 | 6/29/11 | 2629 | REVELATION | 6/29/11 | FMISC-EAB | Cell 7, 16", 55ML, Jacobi, P Cloudy/60, No problems | Complete by Jacobi 6/24/11 |
| 95104 | 6/29/11 | 2657 | REVELATION | 6/29/11 | FMISC-EAB | Cell 7, 20", 110ML, Jacobi, P Cloudy/60, No problems | Complete by Jacobi 6/24/11 |
| 95108 | 6/29/11 | 3717 | MAYWOOD | 6/29/11 | FMISC-EAB | Cell 6, 7", 20ML, Jacobi, Cloudy/65, No problems | Complete by Jacobi 6/24/11 |
| 95106 | 6/29/11 | 3904 | LOOKOUT | 6/29/11 | FMISC-EAB | Cell 12, 7", 20ML, Jacobi, Cloudy/65, No problems | Complete by Jacobi 6/24/11 |
| 95107 | 6/29/11 | 3904 | LOOKOUT | 6/29/11 | FMISC-EAB | Cell 13, 7", 20ML, Jacobi, Cloudy/65, No problems | Complete by Jacobi 6/24/11 |
| 95105 | 6/29/11 | 5087 | VALLEY PINES | 6/29/11 | FMISC-EAB | Cell 1, 13", 45ML, Jacobi, P Cloudy/60, No problems | Complete by Jacobi 6/24/11 |
| 95110 | 6/29/11 | 5181 | HOUSTON | 6/29/11 | FMISC-EAB | Cell 4, 17", 75ML, Jacobi, Cloudy/65, No problems | Complete by Jacobi 6/24/11 |
| 95112 | 6/29/11 | 3122 | BREEZEWAY | 6/29/11 | FMISC-EAB | Cell 5, 17", 75ML, Jacobi, Cloudy/69, No problems | complete by Jacobi 6/27/11 |
| 95114 | 6/29/11 | 3475 | HOLIDAY | 6/29/11 | FMISC-EAB | Cell 6, 7", 20ML, Jacobi, Sunny/71, No problems | complete by Jacobi 6/27/11 |
| 95115 | 6/29/11 | 4608 | TREVOR | 6/29/11 | FMISC-EAB | Cell 5, 17", 75ML, Jacobi, Sunny/78, No problems | complete by Jacobi 6/27/11 |
| 95111 | 6/29/11 | 4826 | ANTIOCH | 6/29/11 | FMISC-EAB | Cell 5, 11", 40ML, Jacobi, Cloudy/69, No problems | complete by Jacobi 6/27/11 |
| 95116 | 6/29/11 | 1212 | ASCHE | 6/29/11 | FMISC-EAB | Cell 19A, 8", 25ML, Jacobi, Sunny/65, No problems | Complete by Jacobi, 6/28/11 |
| 95117 | 6/29/11 | 1212 | ASCHE | 6/29/11 | FMISC-EAB | Cell 19B, 8", 25ML, Jacobi, Sunny/65, No problems | Complete by Jacobi, 6/28/11 |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|-------|----------------|---------------|------------|------------|--------------|--|---------------------------|
| 95457 | 7/6/11 | 1212 | ASCHE | 7/6/11 | FMISC-EAB | 6/28/11, cell 20A, 6", 20ML, Jacobi, 65/Sunny, Good cond. | Jacobi completed 6/28/11 |
| 95458 | 7/6/11 | 1212 | ASCHE | 7/6/11 | FMISC-EAB | 6/28/11, cell 20B, 7", 20ML, Jacobi, 65/Sunny, Good cond. | Jacobi completed 6/28/11 |
| 95459 | 7/6/11 | 1212 | ASCHE | 7/6/11 | FMISC-EAB | 6/28/11, cell 21B, 6", 20ML, Jacobi, 67/Sunny, Good cond. | Jacobi completed 6/28/11 |
| 95460 | 7/6/11 | 1212 | ASCHE | 7/6/11 | FMISC-EAB | 6/28/11, cell 23A, 8", 25ML, Jacobi, 67/Sunny, Good cond. | Jacobi completed 6/28/11 |
| 95461 | 7/6/11 | 1212 | ASCHE | 7/6/11 | FMISC-EAB | 6/28/11, cell 24A, 8", 25ML, Jacobi, 37/Sunny, Good cond. | Jacobi completed 6/28/11 |
| 95467 | 7/6/11 | 3230 | PYRAMID | 7/6/11 | FMISC-EAB | 6/29/11, cell 20, 14", 50ML, Jacobi, 73/Sunny, Good cond. | complete. Jacobi 6/29/11 |
| 95468 | 7/6/11 | 3230 | PYRAMID | 7/6/11 | FMISC-EAB | 6/29/11, cell 22, 13", 45ML, Jacobi, 73/Sunny, Good cond. | complete. Jacobi 6/29/11 |
| 95470 | 7/6/11 | 3230 | PYRAMID | 7/6/11 | FMISC-EAB | 6/29/11, cell 24, 15", 60ML, Jacobi, 73/Sunny, X2 - Blowout. | complete. Jacobi 6/29/11 |
| 95464 | 7/6/11 | 3469 | PRECISION | 7/6/11 | FMISC-EAB | 6/29/11, cell 3, 16", 65ML, Jacobi, 67/Sunny, Good cond. | complete. Jacobi 6/29/11 |
| 95465 | 7/6/11 | 3469 | PRECISION | 7/6/11 | FMISC-EAB | 6/29/11, cell 4, 15", 60ML, Jacobi, 67/Sunny, Good cond. | complete. Jacobi 6/29/11 |
| 95466 | 7/6/11 | 3469 | PRECISION | 7/6/11 | FMISC-EAB | 6/29/11, cell 6, 13", 45ML, Jacobi, 67/Sunny, Good cond. | complete. Jacobi 6/29/11 |
| 95473 | 7/6/11 | 4217 | OCONNELL | 7/6/11 | FMISC-EAB | 6/30/11, cell 3, 15", 60ML, Jacobi, 72/Sunny, Good Cond | complete. Jacobi, 6/30/11 |
| 95474 | 7/6/11 | 4308 | MAYFLOWER | 7/6/11 | FMISC-EAB | 6/30/11, cell 1, 18", 80ML, Jacobi, 77/Sunny, Good Cond | complete. Jacobi, 6/30/11 |
| 95475 | 7/6/11 | 4309 | RED COAT | 7/6/11 | FMISC-EAB | 6/30/11, cell 3, 29", 210ML, Jacobi, 79/Sunny, Good Cond | complete. Jacobi, 6/30/11 |
| 95471 | 7/6/11 | 5060 | 27TH | 7/6/11 | FMISC-EAB | 6/30/11, cell 1, 18", 80ML, Jacobi, 66/Sunny, Good Cond | complete. Jacobi, 6/30/11 |
| 95481 | 7/6/11 | 3310 | JACQUELINE | 7/6/11 | FMISC-EAB | 7/1/11, cell 8, 7", 20ML, Jacobi, 80/Cloudy, Good Cond | complete. Jacobi 7/1/11 |
| 95478 | 7/6/11 | 3351 | TANNENBAUM | 7/6/11 | FMISC-EAB | 7/1/11, cell 5, 15", 60ML, Jacobi, 79/Cloudy, Good Cond | complete. Jacobi 7/1/11 |
| 95479 | 7/6/11 | 3404 | JACQUELINE | 7/6/11 | FMISC-EAB | 7/1/11, cell 2, 14", 50ML, Jacobi, 79/Cloudy, Good Cond | complete. Jacobi 7/1/11 |
| 95480 | 7/6/11 | 3404 | JACQUELINE | 7/6/11 | FMISC-EAB | 7/1/11, cell 4, 14", 50ML, Jacobi, 79/Cloudy, Good Cond | complete. Jacobi 7/1/11 |
| 95477 | 7/6/11 | 4329 | MAJESTY | 7/6/11 | FMISC-EAB | 7/1/11, cell 2, 21", 120ML, Jacobi, 77/Sunny, Good Cond | complete. Jacobi 7/1/11 |
| 99302 | 8/10/11 | 3003 | GREENDALE | 8/26/11 | FMISC-EAB | TREAT FOR EAB | JACOBI TREATED 1 UNIT |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|-----------|------------|--------------|---|---|
| 99302 | 8/10/11 | 3003 | GREENDALE | 8/26/11 | FMISC-EAB | TREAT FOR EAB | DUP OF 100087 |
| 99304 | 8/10/11 | 2810 | NORTHMOOR | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | JACOBI TREATED 1 TREE |
| 99304 | 8/10/11 | 2810 | NORTHMOOR | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | DUP OF 100088 |
| 99308 | 8/10/11 | 2920 | NORTHMOOR | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | JACOBI TREATED 1 TREE |
| 99308 | 8/10/11 | 2920 | NORTHMOOR | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | DUP OF 100091 |
| 99310 | 8/10/11 | 2722 | COLORADO | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | JACOBI TREATED 1 TREE |
| 99310 | 8/10/11 | 2722 | COLORADO | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | DUP OF 100093 |
| 99321 | 8/11/11 | 2617 | BEAUMONT | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | FOR EAB |
| 99321 | 8/11/11 | 2617 | BEAUMONT | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | DUP OF 100094 |
| 99322 | 8/11/11 | 2706 | OHIO | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | FOR EAB |
| 99322 | 8/11/11 | 2706 | OHIO | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | DUP OF 100097 |
| 99325 | 8/11/11 | 5020 | UPLAND | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | FOR EAB |
| 99325 | 8/11/11 | 5020 | UPLAND | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | DUP OF 100100 |
| 99323 | 8/11/11 | 5112 | UPLAND | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | FOR EAB |
| 99323 | 8/11/11 | 5112 | UPLAND | 8/26/11 | FMISC-EAB | TREAT TREE FOR EAB | DUP OF 100098 |
| 99883 | 8/15/11 | 4503 | UPLAND | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | FOR EAB |
| 99883 | 8/15/11 | 4503 | UPLAND | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | DUP OF 100101 |
| 99884 | 8/15/11 | 4511 | UPLAND | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | FOR EAB |
| 99884 | 8/15/11 | 4511 | UPLAND | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | DUP OF 100103 |
| 99886 | 8/15/11 | 2315 | HOLMES | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | FOR EAB |
| 99886 | 8/15/11 | 2315 | HOLMES | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | DUP OF 100104 |
| 99885 | 8/15/11 | 4612 | UPLAND | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | FOR EAB |
| 99885 | 8/15/11 | 4612 | UPLAND | 9/1/11 | FMISC-EAB | EAB TREATMENT - 1 TREE | DUP OF 100106 |
| 99944 | 8/15/11 | 2200 | HOLMES | 9/2/11 | FMISC-EAB | TREAT ASH TREE FOR EAB | FOR EAB |
| 99944 | 8/15/11 | 2200 | HOLMES | 9/2/11 | FMISC-EAB | TREAT ASH TREE FOR EAB | Not a dupe, but closed as dupe - should have never been entered, need all data on specific tree, can't pinpoint 1 tree on this address. |
| 100109 | 9/6/11 | 2303 | WINNETKA | 9/6/11 | FMISC-EAB | cell 5, 15", 60 ML, Jacobi, 65/sunny, good cond | complete. Jacobi |
| 100104 | 9/6/11 | 2315 | HOLMES | 9/6/11 | FMISC-EAB | cell 2, 21", 120 ML., Jacobi, 68/sunny, good cond | complete. Jacobi |
| 100079 | 9/6/11 | 2606 | COLORADO | 9/6/11 | FMISC-EAB | cell 3, 15", 60ML, Jacobi, 71/sunny, good cond | complete. Jacobi |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|-------------|------------|--------------|---|------------------|
| 100085 | 9/6/11 | 2615 | BUCKNELL | 9/6/11 | FMISC-EAB | cell 1, 22", 135ML, Jacobi, 73/Coudy good cond | complete. Jacobi |
| 100094 | 9/6/11 | 2617 | BEAUMONT | 9/6/11 | FMISC-EAB | cell 3, 31", 240ML, Jacobi, 55/sunny, good cond | complete. Jacobi |
| 100097 | 9/6/11 | 2706 | OHIO | 9/6/11 | FMISC-EAB | cell 10, 29", 210 ML, Jacobi, 65/sunny, good cond | complete. Jacobi |
| 100093 | 9/6/11 | 2722 | COLORADO | 9/6/11 | FMISC-EAB | cell 5, 15", 60ML, Jacobi, 71/sunny, good cond | complete. Jacobi |
| 100075 | 9/6/11 | 2801 | EDELWEISS | 9/6/11 | FMISC-EAB | cell 6, 20", 110ML, Jacobi, 82/sunny, good cond | complete. Jacobi |
| 100077 | 9/6/11 | 2804 | EDELWEISS | 9/6/11 | FMISC-EAB | cell 4, 17", 75ML, Jacobi, 82/sunny, good cond | complete. Jacobi |
| 100088 | 9/6/11 | 2810 | NORTHMOOR | 9/6/11 | FMISC-EAB | cell 2, 20", 110 ML, Jacobi, 63/sunny, good cond | complete. Jacobi |
| 100081 | 9/6/11 | 2906 | CONCORDIA | 9/6/11 | FMISC-EAB | cell 4, 27", 180 ML, Jacobi, 71/cloudy, good cond | complete. Jacobi |
| 100091 | 9/6/11 | 2920 | NORTHMOOR | 9/6/11 | FMISC-EAB | cell 1, 15", 60 ML, Jacobi, 71/sunny, good cond | complete. Jacobi |
| 100087 | 9/6/11 | 3003 | GREENDALE | 9/6/11 | FMISC-EAB | cell 4, 17", 75ML, Jacobi, 59/Sunny, good cond | complete. Jacobi |
| 100078 | 9/6/11 | 3009 | FOLIAGE | 9/6/11 | FMISC-EAB | cell 3, 14", 50ML, Jacobi, 71/Sunny, Good cond | complete. Jacobi |
| 100083 | 9/6/11 | 3223 | NEW ENGLAND | 9/6/11 | FMISC-EAB | cell 3, 29", 210 ML, Jacobi, 66/Cloudy, Good cond | complete. Jacobi |
| 100073 | 9/6/11 | 3306 | JACQUELINE | 9/6/11 | FMISC-EAB | Cell 4, 9", 30ML, Jacobi, 66/Sunny, Good Cond | complete. Jacobi |
| 100071 | 9/6/11 | 3310 | JACQUELINE | 9/6/11 | FMISC-EAB | Cell 10, 13", 45ml, Jacobi, 80/Cloudy, Good Cond Cell 12, 7", 20ml, Jacobi, 80/Cloudy, Good Cond | complete. Jacobi |
| 100074 | 9/6/11 | 3315 | JACQUELINE | 9/6/11 | FMISC-EAB | Cell 2, 18", 80ML, Jacobi, 78/Sunny, Good Cond | complete. Jacobi |
| 100101 | 9/6/11 | 4503 | UPLAND | 9/6/11 | FMISC-EAB | cell 7, 14", 50ML, Jacobi, 56/sunny, good cond | complete. Jacobi |
| 100103 | 9/6/11 | 4511 | UPLAND | 9/6/11 | FMISC-EAB | cell 5, 17", 75ML, Jacobi, 56/Sunny, Good cond | complete. Jacobi |
| 100106 | 9/6/11 | 4612 | UPLAND | 9/6/11 | FMISC-EAB | cell 10, 18", 80ML, Jacobi, 60/sunny, good cond | complete. Jacobi |
| 100110 | 9/6/11 | 4628 | CLEVELAND | 9/6/11 | FMISC-EAB | cell 1, 19", 90ML, 70/sunny, good cond | complete. Jacobi |
| 100108 | 9/6/11 | 4804 | UPLAND | 9/6/11 | FMISC-EAB | cell 24, 17", 75ML, Jacobi, 60/Sunny, good cond | complete. Jacobi |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|--------------|------------|--------------|--|------------------|
| 100100 | 9/6/11 | 5020 | UPLAND | 9/6/11 | FMISC-EAB | cell 3, 16", 65ML, Jacobi, 74/sunny, good cond | complete. Jacobi |
| 100098 | 9/6/11 | 5112 | UPLAND | 9/6/11 | FMISC-EAB | cell 4, 11", 40ML, Jacobi, 73/sunny, good cond | complete. Jacobi |
| 100132 | 9/6/11 | 1517 | KERSTIN | 9/6/11 | FMISC-EAB | cell 2, 21", 120ML, Jacobi, 55/sunny, good cond | complete. Jacobi |
| 100131 | 9/6/11 | 1520 | KERSTIN | 9/6/11 | FMISC-EAB | cell 3, 19", 90ML, Jacobi, 55/Sunny, good cond | complete. Jacobi |
| 100127 | 9/6/11 | 1522 | POWDERHORN | 9/6/11 | FMISC-EAB | cell 4, 18", 80ML Jacobi, 60/sunny, good cond cell 21, 16", 65ML, Jacobi, 60/sunny, good cond | complete. Jacobi |
| 100133 | 9/6/11 | 1532 | KERSTIN | 9/6/11 | FMISC-EAB | cell 4, 21", 120ML, Jacobi, 69/sunny, good cond | complete. Jacobi |
| 100117 | 9/6/11 | 1601 | HIGHRIDGE | 9/6/11 | FMISC-EAB | cell 1, 13", 45ML, Jacobi, 72/sunny, good cond | complete. Jacobi |
| 100124 | 9/6/11 | 1619 | ARNOLD | 9/6/11 | FMISC-EAB | cell 12, 16", 65ML, Jacobi, 70/sunny, good cond | complete. Jacobi |
| 100122 | 9/6/11 | 1669 | TELEMARK | 9/6/11 | FMISC-EAB | cell 4, 19", 90ML, Jacobi, 61/sunny, good cond cell 6, 17", 75ML, Jacobi, 61/sunny, good cond | complete. Jacobi |
| 100121 | 9/6/11 | 1720 | TELEMARK | 9/6/11 | FMISC-EAB | cell 4, 24", 155ML, Jacobi, 80/sunny, good cond | complete. Jacobi |
| 100115 | 9/6/11 | 1806 | HIGHRIDGE | 9/6/11 | FMISC-EAB | cell 1, 13", 45ML, Jacobi, 68/sunny, good cond cell 6, 12", 40ML, Jacobi, 68/sunny, good cond | complete. Jacobi |
| 100134 | 9/6/11 | 1817 | ARNOLD | 9/6/11 | FMISC-EAB | cell 4, 15", 60ML, Jacobi, 73/sunny, did not take full dose | complete. Jacobi |
| 100118 | 9/6/11 | 1904 | HIGHRIDGE | 9/6/11 | FMISC-EAB | cell 1, 12", 40ML, Jacobi, 77/sunny, good cond cell 5, 12", 40ML, Jacobi, 77/sunny, good cond | complete. Jacobi |
| 100120 | 9/6/11 | 1999 | SANTA MONICA | 9/6/11 | FMISC-EAB | cell 1, 19", 90ML, Jacobi, 75/sunny, good cond | complete. Jacobi |
| 100112 | 9/6/11 | 2516 | SKOKIE | 9/6/11 | FMISC-EAB | cell 4, 12", 40ML, 73/sunny, good cond | complete. Jacobi |
| 100113 | 9/6/11 | 2528 | SKOKIE | 9/6/11 | FMISC-EAB | cell 4, 20", 110 ML, 77/sunny, good cond | complete. Jacobi |
| 100128 | 9/6/11 | 5321 | CYBELE | 9/6/11 | FMISC-EAB | cell 4, 15", 60ML, Jacobi, 63/sunny, good cond | complete. Jacobi |
| 100129 | 9/6/11 | 5326 | CYBELE | 9/6/11 | FMISC-EAB | cell 5, 17", 75ML, Jacobi, 63/sunny, Did not take full dose | complete. Jacobi |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|-------------|------------|--------------|--|--|
| 100114 | 9/6/11 | 5334 | DIERKS | 9/6/11 | FMISC-EAB | 5334 Dierks - cell 19, 11", 40ML, Jacobi, 64/sunny, good cond 5362 Dierks - cell 13, 12", 40ML, Jacobi, 64/sunny, good cond 5345 Dierks - cell 5, 10", 30ML, Jacobi, 66/sunny, good cond 5386 Dierks - cell 2, 11", 40ML, Jacobi, 70/sunny, good cond | complete. Jacobi |
| 100126 | 9/6/11 | 5340 | FOREST VIEW | 9/6/11 | FMISC-EAB | cell 6, 16", 65ML, Jacobi, 70/sunny, good cond | complete. Jacobi |
| 100119 | 9/6/11 | 6677 | GRASSRIDGE | 9/6/11 | FMISC-EAB | cell 2, 16", 65ML, Jacobi, 69/cloudy, good cond cell 4, 17", 75ML, Jacobi, 69/Cloudy, good cond | complete. Jacobi |
| 100141 | 9/6/11 | 1836 | APPLE TREE | 9/6/11 | FMISC-EAB | cell 4, 14", 50ML, Jacobi, 69/cloudy, good cond | complete. Jacobi |
| 100138 | 9/6/11 | 4603 | LONGMEADOW | 9/6/11 | FMISC-EAB | cell 5, 20", 110ML, Jacobi, 59/cloudy, good cond | complete. Jacobi |
| 100140 | 9/6/11 | 4607 | NEWCASTLE | 9/6/11 | FMISC-EAB | cell 4, 14", 50ML, Jacobi, 69/cloudy, good cond | complete. Jacobi |
| 100137 | 9/6/11 | 4628 | LONGMEADOW | 9/6/11 | FMISC-EAB | cell 5, 12", 40ML, Jacobi, 75/sunny, good cond | complete. Jacobi |
| 100142 | 9/6/11 | 4635 | NEWCASTLE | 9/6/11 | FMISC-EAB | cell 5, 20", 110ML, Jacobi, 69/cloudy, good cond | complete. Jacobi |
| 110573 | 3/21/12 | 533 | HILTON | 3/21/12 | FMISC-EAB | Property Owner paid Tree Care to treat 25" Green Ash in cell 1 with soil drench. | RFS for documentation purposes only |
| 112510 | 4/23/12 | 1372 | BOILVIN | 4/23/12 | FMISC-EAB | Treat ash in cell 5 | Closed as dup of 112509. (OOPS) |
| 112513 | 4/23/12 | 2120 | HARLEM | 4/23/12 | FMISC-EAB | 38" Green Ash, cell 3. Tree Care treated at property owner's expense. RFS Created for tracking purposes only. | No action taken, RFS was only to document Tree Care's treatment of the tree. |
| 115764 | 5/21/12 | 1303 | HILLCREST | 6/5/12 | FMISC-EAB | Cell 5, 22" DBH, 135ml, Jacobi, Sunny, 55' | Jacobi |
| 116014 | 5/21/12 | 875 | STONEFIELD | 6/7/12 | FMISC-EAB | Cell 3, 9" DBH, 30ml, Jacobi, Sunny/66' | Jacobi, Route 1 |
| 115770 | 5/22/12 | 1214 | MONDALE | 6/5/12 | FMISC-EAB | Cell 4, 25", 160ml, Jacobi, Sunny/65' | Jacobi |
| 115781 | 5/22/12 | 1218 | ARNOLD | 6/5/12 | FMISC-EAB | Cell 2, 16" DBH, 65ml, Jacobi, Sunny/60' | Jacobi |
| 115782 | 5/22/12 | 1218 | ARNOLD | 6/5/12 | FMISC-EAB | Cell 4, 17" DBH, 75ml, Jacobi, Sunny/60' | Jacobi |
| 115769 | 5/22/12 | 4830 | ORCHARD | 6/5/12 | FMISC-EAB | Cell 4, 25" DBH, 160ml, Jacobi, Sunny/62', Route 1 | Jacobi |
| 115774 | 5/22/12 | 5123 | DAVID | 6/5/12 | FMISC-EAB | Cell 4, 18" DBH, 80ml, Jacobi, Sunny/70' | Jacobi |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|--------------|------------|--------------|---|---------------|
| 115768 | 5/22/12 | 721 | WOODRIDGE | 6/5/12 | FMISC-EAB | cell 12, 20" DBH, 110ml, Jacobi, Sunny/63' | Jacobi |
| 115778 | 5/23/12 | 1115 | CHARLOTTE | 6/5/12 | FMISC-EAB | Call 3, 19" DBH, 90ml, Jacobi, Sunny/64' | Jacobi |
| 115776 | 5/23/12 | 4909 | CARLA | 6/5/12 | FMISC-EAB | Cell 21, 19" DBH, 90ml, Jacobi, Sunny/60' | Jacobi |
| 115775 | 5/23/12 | 5005 | CAROL | 6/5/12 | FMISC-EAB | Cell 2, 18" DBH, 80ml, Jacobi, Sunny/57' | Jacobi |
| 115786 | 5/24/12 | 1190 | REVERE RIDGE | 6/5/12 | FMISC-EAB | Cell 1, 11" DBH, 40ml, JACOBI, Sunny/75' | Jacobi |
| 115785 | 5/24/12 | 1252 | ANEE | 6/5/12 | FMISC-EAB | Cell 1, 15" DBH, 60ml, Jacobi, Sunny/75' | Jacobi |
| 115914 | 5/24/12 | 1308 | REVERE RIDGE | 6/7/12 | FMISC-EAB | Cell 7, 18", 80ml, Jacobi, Sunny/75' | Jacobi |
| 115913 | 5/24/12 | 1309 | REVERE RIDGE | 6/7/12 | FMISC-EAB | Cell 5, 16" DBH, 65ml, Jacobi, Sunny/75' | Jacobi |
| 115915 | 5/24/12 | 1364 | REVERE RIDGE | 6/7/12 | FMISC-EAB | Cell 4, 14" DBH, 50ml, Jacobi, Sunny/84' | Jacobi |
| 115916 | 5/24/12 | 1377 | REVERE RIDGE | 6/7/12 | FMISC-EAB | Cell 24, 11" DBH, 40ml, Jacobi, Sunny/84' | Jacobi |
| 115784 | 5/24/12 | 415 | MULFORD | 6/5/12 | FMISC-EAB | Cell 3, DBH 15, Qty Injected (ml) 60, Applicator JACOBI, Weather Cond Sunny/68', 6, 15, 60, JACOBI, Sunny/68', 20, 18, 80, JACOBI, Sunny/80', 21, 9, 30, JACOBI, Sunny/79', 23, 16, 65, JACOBI, Sunny/79' | Jacobi |
| 115783 | 5/24/12 | 5614 | ELAINE | 6/5/12 | FMISC-EAB | Cell 5, 17" DBH, 75ml, Jacobi, Sunny/72' | Jacobi |
| 115917 | 5/25/12 | 6652 | TIMBERLINE | 6/7/12 | FMISC-EAB | Cell 6, 12" DBH, 40ml, Jacobi, Sunny/86' | Jacobi |
| 115922 | 5/25/12 | 6655 | TIMBERLINE | 6/7/12 | FMISC-EAB | Cell 7, 11" DBH, 40ml, Jacobi, Sunny/86' | Jacobi |
| 116001 | 5/29/12 | 1205 | WOODCREEK | 6/7/12 | FMISC-EAB | Cell 10, 7" DBH, 20ml, Jacobi, Sunny/77' | Jacobi |
| 116002 | 5/29/12 | 1205 | WOODCREEK | 6/7/12 | FMISC-EAB | Cell 12, 7" DBH, 20ml, Jacobi, Sunny/77' | Jacobi |
| 115942 | 5/29/12 | 1338 | BRANDYWINE | 6/7/12 | FMISC-EAB | Call 6, 13" BDH, 45ml, Jacobi, Sunny/69' | Jacobi |
| 115940 | 5/29/12 | 6643 | SANDALWOOD | 6/7/12 | FMISC-EAB | Cell 6, 9" DBH, 30ml, Jacobi, Sunny/60' | Jacobi |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|-------------|------------|--------------|---|---|
| 115938 | 5/29/12 | 6648 | SANDALWOOD | 6/7/12 | FMISC-EAB | Cell 1, 15" DBH, 60ml, Jacobi, Sunny/60' | Jacobi |
| 115935 | 5/29/12 | 6683 | SANDALWOOD | 6/7/12 | FMISC-EAB | Cell 3, 15" DBH, 60ml, Jacobi, Sunny/60' | Jacobi |
| 115937 | 5/29/12 | 6683 | SANDALWOOD | 6/7/12 | FMISC-EAB | Cell 21, 14" DBH, 50ml, Jacobi, Sunny/60' | Jacobi |
| 116008 | 5/29/12 | 894 | TRAINER | 6/7/12 | FMISC-EAB | cell 4, 8" DBH, 25ml, Jacobi, Sunny/79' | Jacobi |
| 116006 | 5/30/12 | 1009 | TRAINER | 6/7/12 | FMISC-EAB | Cell 7, 11" DBH, 40ml, Jacobi, Sunny/61' | Jacobi |
| 116007 | 5/30/12 | 943 | TRAINER | 6/7/12 | FMISC-EAB | Cell 2, 7" DBH, 20ml, Jacobi, Sunny/61' | Jacobi |
| 116004 | 6/1/12 | 6364 | SPRING HILL | 6/7/12 | FMISC-EAB | Cell 19, 13" DBH, 45ml, Jacobi, Sunny/59' | Jacobi |
| 116005 | 6/1/12 | 6364 | SPRING HILL | 6/7/12 | FMISC-EAB | Cell 20, 16" DBH, 65ml, Jacobi, Sunny/75' | Jacobi |
| 116011 | 6/1/12 | 6673 | SOUTHFIELD | 6/7/12 | FMISC-EAB | Cell 3, 11" DBH, 40ml, Jacobi, P Cloudy | Jacobi, Route 1 |
| 116013 | 6/1/12 | 895 | ANEE | 6/7/12 | FMISC-EAB | Cell 5, 11" DBH, 40ml, Jacobi, Sunny/48' | Jacobi, Route 1 |
| 116010 | 6/1/12 | 913 | CANDLEFORD | 6/7/12 | FMISC-EAB | Cell 5, 18" DBH, 80ml, Jacobi, Sunny/51' | Jacobi, Route 1 |
| 116009 | 6/1/12 | 949 | BRITTANIA | 6/7/12 | FMISC-EAB | Cell 4, 9" DBH, 30ml, Jacobi, Sunny/53' | Jacobi, Route 1 |
| 116012 | 6/1/12 | 954 | ANEE | 6/7/12 | FMISC-EAB | Cell 2, 13" DBH, 45ml, Jacobi, Sunny/48' | Jacobi, Route 1 |
| 117479 | 6/11/12 | 1150 | FOX CHASE | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 6 8" DBH 25ml Sunny/70 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|-------------|------------|--------------|--|---|
| 117476 | 6/11/12 | 1213 | NORTH CREST | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 5 9" DBH 30ml Sunny/60 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117475 | 6/11/12 | 1254 | NORTH CREST | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 1 11" DBH 40ml Sunny/67 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117465 | 6/11/12 | 1340 | LIVINGSTON | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 5 10" 30mlSunny/60 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117470 | 6/11/12 | 1357 | SANDHURST | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 2 8" DBH 25ml Sunny/65 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 112509 | 6/11/12 | 1372 | BOILVIN | 4/23/12 | FMISC-EAB | Treat Ash in cell 5 | Closed as dup of 112509. (OOPS) |
| 112509 | 6/11/12 | 1372 | BOILVIN | 4/23/12 | FMISC-EAB | Treat Ash in cell 5 | OOPS - Cattage went to address - property owner paid Tree Care to treat the tree. |
| 117466 | 6/11/12 | 1404 | LIVINGSTON | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 11" DBH 40ml Sunny/60 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117469 | 6/11/12 | 1431 | SANDHURST | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 3 12" DBH 40ml Sunny/65 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117467 | 6/11/12 | 1434 | LIVINGSTON | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 11" DBH 40ml Sunny/60 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|------------|------------|--------------|--|---|
| 117468 | 6/11/12 | 1460 | LIVINGSTON | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 7" DBH 20ml Sunny/65 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117464 | 6/11/12 | 1463 | RAMSEY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 3 21" DBH 120ml Sunny/73 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117456 | 6/11/12 | 1552 | OAKFOREST | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 6 11" DBH 40ml Sunny/63 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117502 | 6/11/12 | 1585 | MARSHFIELD | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 3 16" DBH 65ml Cloudy/77 Treated Ash with TREE-AGE CELL 7 17" DBH 75ml Cloudy/77 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117458 | 6/11/12 | 1608 | OAKFOREST | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 11" DBH 40ml Sunny/62 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117480 | 6/11/12 | 1617 | ALBANY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 9" DBH 30ml Sunny/73 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117481 | 6/11/12 | 1640 | ALBANY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 9" DBH 30ml Sunny/73 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|------------|------------|--------------|--|---|
| 117463 | 6/11/12 | 1648 | ROWNTREE | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 7 11" DBH 40ml Sunny/60 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117494 | 6/11/12 | 2042 | WEMBLEY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 2 15" DBH 60ml Sunny/73 Treated Ash with TREE-AGE CELL 5 15" DBH 60ml Sunny/73 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117493 | 6/11/12 | 2082 | WEMBLEY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 5 16" DBH 65ml Sunny/68 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117492 | 6/11/12 | 2130 | WEMBLEY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 7 14" DBH 50ml Sunny/67 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117495 | 6/11/12 | 2141 | CARRINGTON | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 14" DBH 50ml Sunny/78 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117490 | 6/11/12 | 2172 | WEMBLEY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 2 13" DBH 45ml Sunny/65 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117496 | 6/11/12 | 2187 | CARRINGTON | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 15" DBH 60ml Sunny/78 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|--------------|------------|--------------|---|---|
| 117488 | 6/11/12 | 2209 | WEMBLEY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 20 13" DBH 45ml Sunny/75 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117489 | 6/11/12 | 2210 | WEMBLEY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 3 13" DBH 45ml Sunny/55 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117487 | 6/11/12 | 6244 | FEATHERSTONE | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 2 10" DHB 30ml Sunny/74 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117500 | 6/11/12 | 6333 | BRIGANTINE | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 5 13" DBH 45ml Sunny/72 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117498 | 6/11/12 | 6358 | BRIGANTINE | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 2 11" DBH 40ml Sunny/72 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117486 | 6/11/12 | 6459 | SHILOH | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 2 10" DBH 30ml Sunny/71 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117483 | 6/11/12 | 6758 | ACADEMY | 6/28/12 | FMISC-EAB | CELL 2 16" DBH 65ml Sunny/55 Treated Ash with TREE-AGE | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117482 | 6/11/12 | 6835 | CODY | 6/28/12 | FMISC-EAB | Ash with TREE-AGE CELL 4 21" DBH 120ml Sunny/55 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|---------------|------------|--------------|--|---|
| 117484 | 6/11/12 | 6951 | ACADEMY | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 2 11" DBH 40ml Sunny/55 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 111683 | 6/11/12 | 707 | COTTAGE GROVE | 4/5/12 | FMISC-EAB | Treat for EAB | Treated. .26" DBH, 170ml. Cattage |
| 117462 | 6/11/12 | 7085 | SENTINEL | 6/28/12 | FMISC-EAB | CELL 3 14" DBH 50ml Sunny/72 Treated Ash with TREE-AGE | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117461 | 6/11/12 | 7090 | SENTINEL | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 13" DBH 45ml Sunny/72 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117477 | 6/11/12 | 7112 | WEATHERED OAK | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 6 9" DBH 30ml Sunny/52 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117478 | 6/11/12 | 7150 | WEATHERED OAK | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 7 8" DBH 25ml Sunny/52 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117474 | 6/11/12 | 7217 | CENTENNIAL | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 6 9" DBH 30ml Sunny/52 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117460 | 6/11/12 | 7218 | SENTINEL | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 5 12" DBH 40ml Sunny/71 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|-------------|------------|--------------|--|---|
| 117459 | 6/11/12 | 7236 | SENTINEL | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 4 14" DBH 50ml Sunny/71 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117473 | 6/11/12 | 7353 | FAIRMONT | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 12 10" DBH 30ml Sunny/75 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117472 | 6/11/12 | 7380 | FAIRMONT | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 3 10" DBH 30ml Sunny/65 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 117471 | 6/11/12 | 7412 | FAIRMONT | 6/28/12 | FMISC-EAB | Treated Ash with TREE-AGE CELL 6 10" DBH 30ml Sunny/65 | EAB Treatment of Route 13 completed 6/11/12 by Jacobi/Cattage |
| 110292 | 6/12/12 | 1915 | 23RD | 3/16/12 | FMISC-EAB | P/B LARSON inspection - treat ash trees in ROW @ address for EAB. | CCR Request form Ald Johnson again. Homeowners think one of the trees looks bad. BRandon will call Adl Johnson. |
| 110292 | 6/12/12 | 1915 | 23RD | 3/16/12 | FMISC-EAB | P/B LARSON inspection - treat ash trees in ROW @ address for EAB. | Cell 19, 90ml, cell 23 - 150ml. |
| 118118 | 6/12/12 | 6483 | MUIRFIELD | 7/11/12 | FMISC-EAB | Treated 1 tree. 3 15" B Jacobi Sunny/61 | complete. |
| 118117 | 6/12/12 | 6658 | OLD HUNTERS | 7/11/12 | FMISC-EAB | Treated 1 tree. 5 17" 75 B Jacobi Sunny/75 | Complete. |
| 111770 | 6/12/12 | 809 | HIGHVIEW | 4/9/12 | FMISC-EAB | Treat Ash Tree | Cattage/Loudermilk |
| 116172 | 6/13/12 | 1738 | HANCOCK | 6/11/12 | FMISC-EAB | Green Ash, cell 8", No Wires. Treat for EAB | 30mol. Cattage. |

| RFS # | Date Completed | Address/Block | Street | Date Added | Problem Code | Comments | Logs/Comments |
|--------|----------------|---------------|------------|------------|--------------|--|---|
| 116174 | 6/13/12 | 1935 | CUMBERLAND | 6/11/12 | FMISC-EAB | Green Ash, 10" DBH, cell 2, wires (telecom - OK). Treat for EAB | 30ml. Cattage. |
| 116175 | 6/13/12 | 2016 | CUMBERLAND | 6/11/12 | FMISC-EAB | EAB | 25ml. Cattage |
| 116184 | 6/13/12 | 2125 | GRANT | 6/11/12 | FMISC-EAB | GREEN ASH, 7" DBH, CELL 7, NO WIRES. TREAT FOR EAB. | 20ml. Cattage |
| 116179 | 6/13/12 | 2205 | HANCOCK | 6/11/12 | FMISC-EAB | GREEN ASH, 16" DBH, CELL 6, NO WIRES, TREAT FOR EAB | 65ml. Cattage |
| 116177 | 6/13/12 | 2208 | OXFORD | 6/11/12 | FMISC-EAB | Green Ash, 16" DBH, CELL 4, NO WIRES. TREAT FOR EAB | 65ml. Cattage |
| 116183 | 6/13/12 | 2315 | GRANT | 6/11/12 | FMISC-EAB | GREEN ASH, 10" dbh, CELL 7, NO WIRES. TREAT FOR EAB. | 30ml. Cattage |
| 116181 | 6/14/12 | 518 | ELLIS | 6/11/12 | FMISC-EAB | GREEN ASH, 9" DBH, CELL 6, NO WIRES. TREAT FOR EAB. | Cell 11. 40ml. Cattage |
| 121466 | 6/22/12 | 5553 | TASSELBURY | 8/29/12 | FMISC-EAB | Cell # 10 DBH - 15" Qty Injected (ml) 60 Applicator Name - CATTAGE Weather Conditions -Sunny/76 | Cattage completed. |
| 117136 | 6/28/12 | 1623 | GRANT | 6/25/12 | FMISC-EAB | Autumn P. Ash. 9" DBH, cell 23, wires. Treat for EAB. Mark Stockman | Complete. Cattage. Cell 23, 9" DBH, 30ml, Sunny/80' |
| 117193 | 6/28/12 | 1807 | HUFFMAN | 6/25/12 | FMISC-EAB | Treat 17" Ash in cell 5 for EAB. | Complete Cattage. Cell 5, 17", 75ml, sunny/80' |
| 116910 | 6/28/12 | 3227 | ORLEANS | 6/20/12 | FMISC-EAB | treat for EAB | Completed. Cattage. Cell 4, 14" DBH, 50ml, Sunny/86' |
| 117385 | 7/2/12 | 2300 | HUFFMAN | 6/27/12 | FMISC-EAB | Treat 2 Green Ash trees for EAB. 16" DBH in cell 2N; 24" DBH in cell 4S. | treated 2 Ash trees 86'/Sunny Cattage/Loudermilk Cell 4S 155ml |
| 118293 | 7/13/12 | 1122 | WINNEBAGO | 7/12/12 | FMISC-EAB | Treat 45" DBH White Ash in cell 1. | EAB treatment. White Ash, cell 1, 45" DBH, 450ml - TreeaAge. Sunny/63'. Jacobi. |
| 121413 | 8/23/12 | 812 | WOOD | 8/29/12 | FMISC-EAB | Property owner hired True Green to treat the ash tree in front of his house. Wants it inspected and to know that it won't be taken down. | Inspected by Brandon Larson. OK to stay. 8" DBH, cell 1, no wires. |



ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

STANDARD OPERATING PROCEDURES

January 2022

1.0 General

The purpose of this standard operating procedure for Illicit Discharge Detection and Elimination program is to comply with Part II, A.7 of the City of Rockford's NPDES Stormwater Permit (ILS000001). This document outlines how to detect and investigate a potential illicit discharge.

Additional guidance can be found in: *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments* by the Center for Watershed Protection.

2.0 Legal Authority

The City has the authority to investigate all reports of illicit connections or illegal dumping within its City limits. Legal authority for the City's Illicit Discharge Detection and Elimination Program can be found in the City of Rockford's Code of Ordinances in Chapter 109, Article 12.

3.0 Definition of Illicit Discharges

An illicit discharge is defined as any discharge that enters the MS4 (municipal separate storm sewer system) that is not composed entirely of stormwater, except discharges pursuant to a National Pollutant Discharge Elimination System (NPDES) permit.

3.1 Allowable Non-stormwater discharges

Illicit discharges are considered “illicit” because storm sewer systems, unlike sanitary sewer systems, are not designed to accept, treat, or discharge non-stormwater wastes. Unless identified by the City of Rockford or Illinois EPA as significant sources of pollutants to waters of the state, Table 1 indicates non-stormwater discharges that shall not be prohibited from entering the MS4 though they should be investigated to confirm they are the only source:

| Table 1. Allowable Non Stormwater Discharges | |
|--|--|
| Waterline Flushing | Foundation drains |
| Landscape Irrigation | Air conditioning condensate |
| Diverted stream flows | Irrigation water |
| Rising ground waters | Springs |
| Uncontaminated pumped groundwater | Water from crawl space pumps |
| Discharges from potable water sources | Footing drains |
| Individual residential car washing | Lawn Watering |
| Dechlorinated swimming pool discharges | Street wash waters |
| Flows from riparian habitats and wetlands | Discharges or flows from emergency firefighting activities |
| Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(b)(20)) to separate storm sewers | |

3.2 Categories of Illicit discharges

- 1) TRANSIENT – Short in duration, lasting only a short time and then disappearing.

- a. Examples of potential Direct transient illicit discharges include:
 - i. Intermittent discharges of wash water or process water to the storm sewer through a straight pipe connection from an industrial facility
 - ii. Discharges of non-stormwater to a floor drain that is connected to the storm sewer.
 - iii. Discharges of contaminated stormwater including discharges from industrial facilities that have, but are not in compliance with, a stormwater NDPES permit.

- b. Examples of potential Indirect transient illicit discharges include:
 - i. Materials that have been dumped into a storm drain inlet or catch basin (Figure 1),
 - ii. An old or damaged sanitary sewer line that is leaking fluids into groundwater that then seeps into a storm sewer line or drainage way, and
 - iii. A failing septic system that is leaking into a cracked storm sewer line.

- 2) CONTINUOUS – Continuing without changing, stopping, or being interrupted. Examples include:
- a. Sanitary wastewater piping that is cross-connected from a building or sanitary sewer line to the storm sewer,
 - b. A broken sanitary line resulting in discharge of sanitary waste into the storm sewer system (Figure 2), and

- c. A discharge of process wastewater or other non-stormwater from an industrial facility to the storm sewer system.

3.3 Illicit Discharge Indicators

The following are indicators of potential illicit discharges/connections. An investigation shall be initiated should any of the following be observed:

- Flowing water when there has been 3 days without precipitation
- Discolored water (cloudy, sheen on water, etc.)
- Sediment laden water
- Foul smelling water (i.e. fats, oil, grease from restaurants, sewage)
- Dead fish or animals near water bodies
- Blockages in storm system
- Sanitary sewer overflows
- Basement back-ups
- Floatables
- Staining indicating flows (oily, rust, etc.)

4.0 Staffing

The primary staff from the Stormwater Environmental Team (SWET) responsible for performing illicit discharge investigations shall be the following positions: Stormwater

Manager, Assistant Stormwater Manager, Stormwater Coordinator and designated Senior Engineering Techs.

The following staff from the following City of Rockford departments shall receive annual training for detecting and initiating illicit discharge investigations:

- Community and Economic Development – Inspectors, Enforcement Specialists
- Public Works Streets & Engineering Division, (Engineers, Managers, Technicians, Street Maintenance & supervisors)

When a potential illicit discharge has been observed the bubble chart in Appendix A shall be followed through the investigation process. Staff from the Department of Public Works Stormwater Environmental Team (SWET) shall be responsible for performing outfall inspections and review of illicit discharge complaints and/or observations. Each team member shall be familiar with this document and be trained to recognize potential illicit discharges and the process to initiate an investigation. Project Managers and Senior Engineering Techs can perform inspections provided they are current in their training and are approved to perform inspections by the Stormwater Manager and the Stormwater Program Manager.

Equipment to perform the investigation can include but not limited to: the field observation or appropriate inspection form, map of the storm system, camera, sample bottles, sampling equipment and personal protection equipment.

Under no circumstances should anyone perform an investigation that could cause bodily harm to themselves or others. In those cases the proper authorities. (i.e. the Fire Department) should be contacted for direction and assistance.

4.1 Safety Procedures

The field activities described in this guide could include sampling of potentially contaminated water and, as such, have some associated risk. As with any field procedures, appropriate precautions should be taken to ensure the safety of field crews. General and specific suggested safety procedures are provided below.

General suggestions:

- While performing field work activities, use appropriate caution, make an effort to recognize potentially dangerous situations while performing field work, and take the proper steps to avoid or minimize them.
- Field work activities should not be performed alone.
- A list of team member and emergency contact numbers should be kept with each field team.
- Long pants and close-toed shoes are required.

- Carry adequate water, sunscreen, and bug repellent if needed.
- Employees should use their judgment to ensure their safety while working during inclement weather. It may be necessary to suspend and/or reschedule field work if the weather will not permit safe and effective completion of the activities. Recommended precautions include:
 - Severe heat or cold: Dress appropriately, take breaks as needed to warm up or cool down, and stay hydrated.
 - Thunderstorms: Stop working, get out of the water, if applicable, and take shelter if there is a threat of lightning strikes.
 - Snowstorms, flooding, tornadoes, and other dangerous weather: Field work should be stopped or canceled if dangerous weather arises or is predicted.
- Each field work team should have a functioning mobile phone and a fully-stocked first aid kit.

Public roadways

- Whenever work will be performed in or near a public roadway, wear a high-visibility safety vest.

Manholes and similar structures

If a manhole cover or similar structure must be removed (in order to determine sewer line configuration, for example):

- Safety-toe footwear (steel-toed shoes) should be worn.
- Lifting manhole covers should be done with the proper tools and technique so as to avoid injury.
- The open cover should only remain open as long as necessary to gather the required information, and should never be left unattended.
- Due to the potential dangers of confined spaces, do not enter a manhole or put your head below the rim of the opening without the proper training.

Stream walks and illicit discharges

- Properly fitting waders with high-traction soles should be worn when walking in a stream.
- Rubber gloves should be worn if contact with polluted water is expected.
- Skin contact with suspected illicit discharges should be avoided.
- Hand sanitizer and/or careful hand washing should be employed after potential contact with polluted water.
- High-visibility orange or yellow vests should be worn.
- Wear safety goggles when performing any chemical tests.

- Reagents and other chemicals should be used and disposed of properly by following the guidance on the MSDS safety sheets.

5.0 Identification of Illicit Discharges

5.1 NPDES Permitted Facilities

During the process of performing industrial and construction inspections these sites will also be checked for illicit discharges and connections pursuant to the Standard Operating Procedures governing the City's Industrial High Risk Runoff Facility Inspection Program and its Erosion & Sediment Control Plan Review and Regulatory Inspections. The Illinois Environmental Protection Agency (IEPA) issues NPDES permits to construction sites and industrial facilities and maintains limited information on permitted sites on their website. This website shall be reviewed as detailed in those standard operating procedures to ensure all NPDES permitted sites identified have obtained the proper City of Rockford approvals.

5.2 Non-Routine Inspections

If an employee observes evidence of an illicit discharge during an informal or non-routine

inspection, he/she shall complete the Field Observation Form (Appendix B) and provide it to a supervisor who shall inform a member of SWET by the end of the business day for further follow-up. SWET shall initiate an investigation within 3 business days. While it may not be reasonable to expect all City employees to have copies of the forms at all times, there are other ways to collect the information:

- The person observing the discharge can provide the information verbally to dispatch, the supervisor, or a member of SWET who can then complete the field observation form.
- The person can log information onto the form upon returning to the office based on their recollection and any field notes; or
- A member of SWET dedicated to inspecting and tracing illicit discharges can be sent to the location as soon as possible where the potential illicit discharge was observed to collect the necessary information directly on the form.

It is important to collect as much information as possible at the time of initial observation because of the likelihood that a discharge may be transitory or intermittent. Initial identification of the likely or potential sources of the discharge is also very important.

5.3 Submitted Complaints (i.e. citizens, staff, etc.)

Citizen complaints are a high priority for the City of Rockford. The City has an existing compliance program under which citizens can either call a hotline (779-348-7300) or report an illicit discharge/connection online (www.rockfordil.gov). All complaints from the public will be followed-up with the field inspection by City staff within 3 business days.

Reports to the hotline during normal business hours shall be forwarded directly to a member of SWET. Reports after hours shall be sent to Ocean Remote, a 24 hour service which will have instructions to notify the on-call supervisor. The supervisor shall send a crew to investigate and a field observation form (Appendix B) shall be filled out and provided to a member of the Storm Water & Environmental Team for further investigation.

Complaints submitted online shall be emailed directly to SWET who shall initiate an investigation within 3 business days. See sample below.



5.4 Dry Weather Screening of Outfalls

Screening of stormwater outfalls is conducted during dry weather to identify potential illicit discharges (i.e., flowing outfalls, staining or other evidence of illicit discharge) and is followed by indicator monitoring to characterize flow types to aid in finding sources. The field screening can also be used to develop a systematic outfall inventory and map of the MS4 (Table 2). Regular inspections of outfalls are a primary part of an effective IDDE program.

Table 2. Outfalls to Include in the Screening

| Outfalls to Screen | Features Not to Screen |
|---|--|
| <ul style="list-style-type: none"> • Both large and small diameter pipes that are, or appear to be part of the storm drain infrastructure. • Outfalls that appear to be piped headwater streams. • Field connections to culverts. • Submerged or partially submerged culverts | <ul style="list-style-type: none"> • Drop inlets from roads in culverts (unless evidence of illegal dumping) • Cross-drainage culverts in transportation right-of-way (i.e. can see daylight at other end) • Weep holes |

| | |
|--|---|
| <ul style="list-style-type: none"> • Outfalls blocked with debris or sediment • Pipes that appear to be outfalls from stormwater treatment practices • Small ductile iron pipes • Pipes that appear to only drain roof downspouts but are subsurface to prevent definitive confirmation. | <ul style="list-style-type: none"> • Flexible HDPE pipes that are known to serve as slope drains • Pipes that are clearly connected to roof downspouts via above ground connections |
|--|---|

The inspections shall primarily rely on visual observations and the use of portable instrumentation (phone camera) during dry weather to complete a thorough inspection of the City’s outfalls. See Table 1 on the Monitoring Standard Operating Procedures for a list of common indicator parameters used to detect illicit discharges. The protocol is applicable to most typical storm sewer systems; however, modifications to materials and methods may be required to address situations such as open channels, piped stream networks, systems impacted by sanitary sewer overflows, or situations where groundwater or backwater conditions preclude or confound adequate inspection. The primary focus of the protocol is sanitary waste, however, toxic and nuisance discharges may also be identified.

5.4.1 When to conduct an outfall survey?

- To maintain a regular schedule of long-term inspections for outfalls the City shall inspect all known outfalls every even year. The outfall database shall be updated following the even year

inspections. Newly located outfalls shall be inspected in the years the City became aware of them.

- Late Fall/Early Spring- outfalls are easiest to spot during leaf-off conditions; however, it may require field work outside of the leaf-off time frame.
- After a dry period of at least 72 hours (trace rainfall activity may be acceptable depending on the size of the watershed).
- Early Morning/Late Afternoon- though not always possible, checking outfalls when people are home may increase the chances of catching an illicit connection.
- Avoid conditions during snow melt and/or if salt has been applied to the road system draining to the outfalls. Also note that some field tests (e.g. ammonia, chlorine) are affected by cold temperatures or confounded by the presence of salt (detergents).

5.4.2 Mapping

The first step to successful field work is to have a map with the necessary information. Data that shall be considered for inclusion on mapping for either outfall screenings or illicit discharge investigation is detailed in Table 3. Which data layers shall be dependent on the scale of the map and the type of illicit discharge reported. See appendix F for a sample map.

| Table 3. Map Preparation | |
|---|--|
| Desired Data layers Outfall Screenings | Desired Data layers Illicit Discharge Investigation |
| Roads | Roads |
| Streams | Streams |
| Outfall Locations | Outfall Locations |
| City Boundaries | Jurisdictional Boundaries |
| Aerial Photography | Aerial Photography |
| | Industrial facilities |
| | Storm System (inlets, manholes, pipes) |
| | Water mains |
| | Sanitary mains |

5.4.3 **Outfall screening procedures**

The primary field screening tool shall be the Stormwater Inspection Outfall form (Appendix C). The basic procedure at each outfall is to take a picture of the outfall and, if the outfall is not already in the City’s mapping system, mark the location on the printed map (record location on ArcGIS once back in the office). Next, a Stormwater Inspection Outfall form is completed, which includes recording a description of the outfall (e.g., pipe material, diameter), a description of physical indicators of potential illicit discharges for both flowing and non-flowing outfalls.

If the outfall has dry weather flow, an illicit discharge investigation shall be implemented.

6.0 Illicit Discharge Investigations

An illicit discharge investigation shall be initiated when one of the identification measures indicates a potential illicit discharge or connection and the source has not been identified.

An illicit discharge source investigation is conducted to isolate the source of the pollution. There are two types of source investigations: Drainage Area Investigations and Storm Drain Investigations. An illicit discharge that is determined to be likely transient in frequency, entering the storm drain system directly through dumping or spills from the landscape shall follow the procedure for a Drainage Area Investigation. A continuous or intermittent discharge that likely occurs from direct or indirect entry into the storm drain system from the interaction of pipes underground shall follow the procedure for a Storm Drain Investigation. Either investigation should be conducted during dry weather. Regardless of the type of investigation the Illicit Discharge Investigation form (Appendix D) shall be utilized.

A rapid windshield survey of the drainage area may be used to find the potential discharger or generating sites if the discharge observed at an outfall has distinct or unique characteristics that allow crews to quickly ascertain the probable operation or business that is generating it. Discharges with a unique color, smell, or off-the-chart indicator sample reading may point to a specific industrial or commercial source.

A rapid windshield survey works well in small drainage areas, particularly if field crews are already familiar with its business operations. Field crews can match the characteristics of the discharge to the most likely type of generating site, and then inspect all of the sites of the same type within the drainage area until the source is found. For example, if fuel is observed at an outfall, crews might quickly check every business operation in the catchment that stores or dispenses fuel.

In larger or more complex drainage areas, GIS data can be analyzed to pinpoint the source of a discharge. If only general land use data exist, maps can at least highlight suspected industrial areas. If more detailed Standard Industrial Classification (SIC) code data are available digitally, GIS may be used to pull up specific hotspot operations or generating sites that could be potential dischargers.

In a Storm Drain Investigation, field crews strategically inspect manholes within the storm drain network system to observe flows or measure chemical or physical indicators that can isolate discharges to a specific segment of the network. Once the pipe segment has been identified, on-site investigations are used to find the specific discharge or improper connection. This method involves progressive screening at select manholes in the storm drain network to narrow the discharge to an isolated pipe segment between

two manholes. Field crews need to make two key decisions when conducting a storm drain network investigation—where to start screening in the network and what indicators will be used to determine whether a manhole is considered clean or dirty.

6.1 Illicit Discharge Investigation Procedures

The field crew can sample the pipe network in one of three ways:

- Crews can work progressively up the trunk from the outfall and test manholes along the way.
- Crews can split the trunk into equal segments and test manholes at strategic junctions in the storm drain system.
- Crews can work progressively down from the upper parts of the storm drain network toward the problem outfall.

During a manhole inspection, manholes are opened and inspected for visual evidence of contamination. Where flow is observed, and determined to be contaminated through visual indicators or field monitoring, the upstream tributary storm sewer system is isolated for investigation (e.g. further flow inspection, dye testing, CCTV). No additional downstream manhole inspections are performed unless the observed flow is determined to be uncontaminated or until all upstream illicit

connections are identified and removed. Where flow is not observed but an intermittent discharge is suspected in a junction manhole, select inlets to the structure are partially dammed for the next 48 hours when no precipitation is forecasted. Inlets are dammed by blocking a minimal percentage of the pipe diameter at the invert using sandbags, caulking, weirs/plates, or other temporary barriers. The manholes are thereafter re-inspected (prior to any precipitation or snow melt) for the capture of periodic or intermittent flows behind any of the inlet dams. The same visual observations and field testing is completed on any captured flow, and where contamination is identified, abatement is completed prior to inspecting downstream manholes. In addition to documenting investigative efforts in written and photographic form, it is recommended that information and observations regarding the construction, condition, and operation of the structures also be compiled.

Where flow is observed and does not demonstrate obvious indicators of contamination, samples are collected and analyzed and then compared with established benchmark values to determine the likely prominent source of the flow. This information facilitates the investigation of the upstream storm sewer system. Benchmark values may be refined over the course of investigations when compared with the actual incidences of observed flow sources. In those

manholes where periodic or intermittent flow is captured through damming inlets, additional laboratory testing (e.g. toxicity, metals, etc.) should be considered where an industrial discharge is suspected. See Monitoring Standard Operating Procedures for guidance on how to collect and analyze samples.

Adequate storm and sanitary sewer mapping is a prerequisite to properly execute a storm drain investigation. As necessary and to the extent possible, infrastructure mapping should be verified in the field and corrected prior to investigations. This effort affords an opportunity to collect additional information such as latitude and longitude coordinates using a global position system (GPS) unit if so desired. To facilitate subsequent investigations, tributary area delineations should be confirmed and junction manholes should be identified during this process.

To facilitate investigations, storm drain infrastructure should be evaluated for the need to be cleaned to remove debris or blockages that could compromise investigations. Such material should be removed to the extent possible prior to investigations, however, some cleaning may occur concurrently as problems manifest themselves.

Where field monitoring has identified storm sewer systems to be influenced by sanitary flows or

washwaters, the tributary area is isolated for implementation of more detailed investigations. Additional manholes along the tributary are inspected to refine the longitudinal location of potential contamination sources (e.g. individual or blocks of homes). Targeted internal plumbing inspections, dye testing, smoke testing or CCTV inspections are then employed to more efficiently confirm discrete flow sources. Consulting services shall be utilized to perform these tests.

6.2 Eliminating Illicit Discharges

Once the source of an illicit discharge has been identified, steps should be taken to eliminate the discharge. Four questions should be answered for each individual illicit discharge to determine how to proceed; the answers will usually vary depending on the source of the discharge.

- 1) Who is responsible?
- 2) What methods will be used to repair?
- 3) How long will the repair take?
- 4) How will removal be confirmed?

Financial responsibility for source removal will typically fall on property owners, the City, or a combination of the two. Methods for removing illicit discharges usually involve a combination of education

and enforcement. A process for addressing illicit discharges that focuses on identifying the responsible party and enforcement procedures is presented in Figure 1, while Table 4 presents potential sources of illicit discharges. Additional guidance can be found in Chapter 14 of the Illicit Discharge Detection and Elimination Guidance Manual.

Investigators should use judgment in exercising the right mix of compliance assistance and enforcement with approval of the Stormwater Administrator. Voluntary compliance should be used for first-time, minor offenders. Often, property owners are not even aware of a problem, and are willing to eliminate it when educated. More serious violations or continued non-compliance may warrant a more aggressive, enforcement oriented approach provided it is consistent with Chapter 109 and the City of Rockford Stormwater Division Enforcement Response Plan.

Flow Chart for Corrective Actions

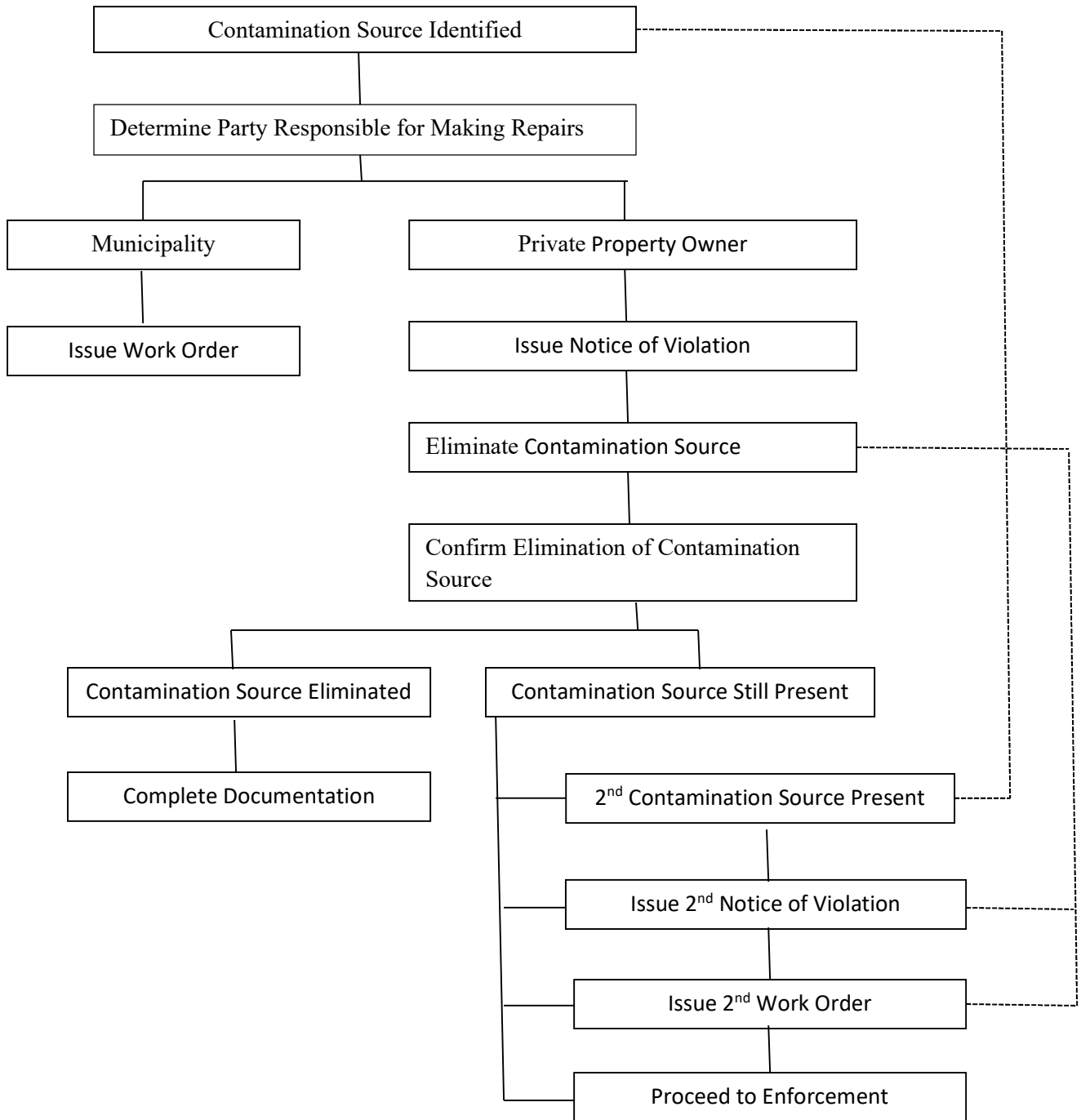


Figure 1: Process for Eliminating an Illicit Discharge

| Table 4: Sources of Illicit Discharges | |
|---|--|
| Type of Discharge | Source |
| Sewage | Break in right-of-way |
| | Commercial or industrial direct connection |
| | Residential direct connection |
| | Infrequent discharge (e.g., RV dumping) |
| | Straight pipes/septic |
| Wash Water | Commercial or industrial direct connection |
| | Residential direct connection |
| | Power wash/car wash (commercial) |
| | Commercial wash down |
| | Residential car wash or household maintenance related activities |
| Liquid Wastes | Professional oil change/car maintenance |
| | Heating oil/solvent dumping |
| | Homeowner oil change and other liquid waste disposal (e.g., paint) |
| | Spill (trucking) |
| | Other industrial wastes |

6.3 Post-Removal Confirmation

As the sources of illicit discharges are confirmed, measures to correct them must be taken, working with the property owner or other responsible party. The exact type of repair needed will depend on the type of discharge and mode of transmission.

After completing the removal of illicit discharges from a subdrainage area, it is re-inspected to verify corrections and documented as detailed in in Section 9.0. Depending on the extent and timing of corrections, verification monitoring can be done at the initial junction manhole or the closest downstream manhole to each correction.

Verification is accomplished by using the same visual inspection, field monitoring, and damming techniques as described above.

7.0 Illinois Environmental Protection Agency (IEPA) Notifications

IEPA shall be notified within 24 hours should an illicit discharge meet the requirements of the Illinois Emergency Management Agency Emergency Release Notifications (Appendix E). A member of SWET shall perform this notification.

8.0 Enforcement

Enforcement measures will be in accordance with Chapter 109, Article 13 of the City of Rockford Code of Ordinances and the Storm Water Division Enforcement Response Plan for corrective actions not remedied within the required timeframe.

9.0 Documentation and Record Management

In an effort to reduce paper no hard copies of site data (inspection reports and letters) will be kept. All site records will be in a digitized form in the Stormwater Drive on the City of Rockford computer system. Digitized information may include: SWPPP, inspection

reports/checklists, letters, photos, correspondence, etc. These files will be saved as follows:

Open the Stormwater Drive (note: this drive has limited access for people who perform duties directly related to the City's stormwater program),

Open the Inspections & Investigations Folder

Open the IDDE folder,

Open the Investigations folder

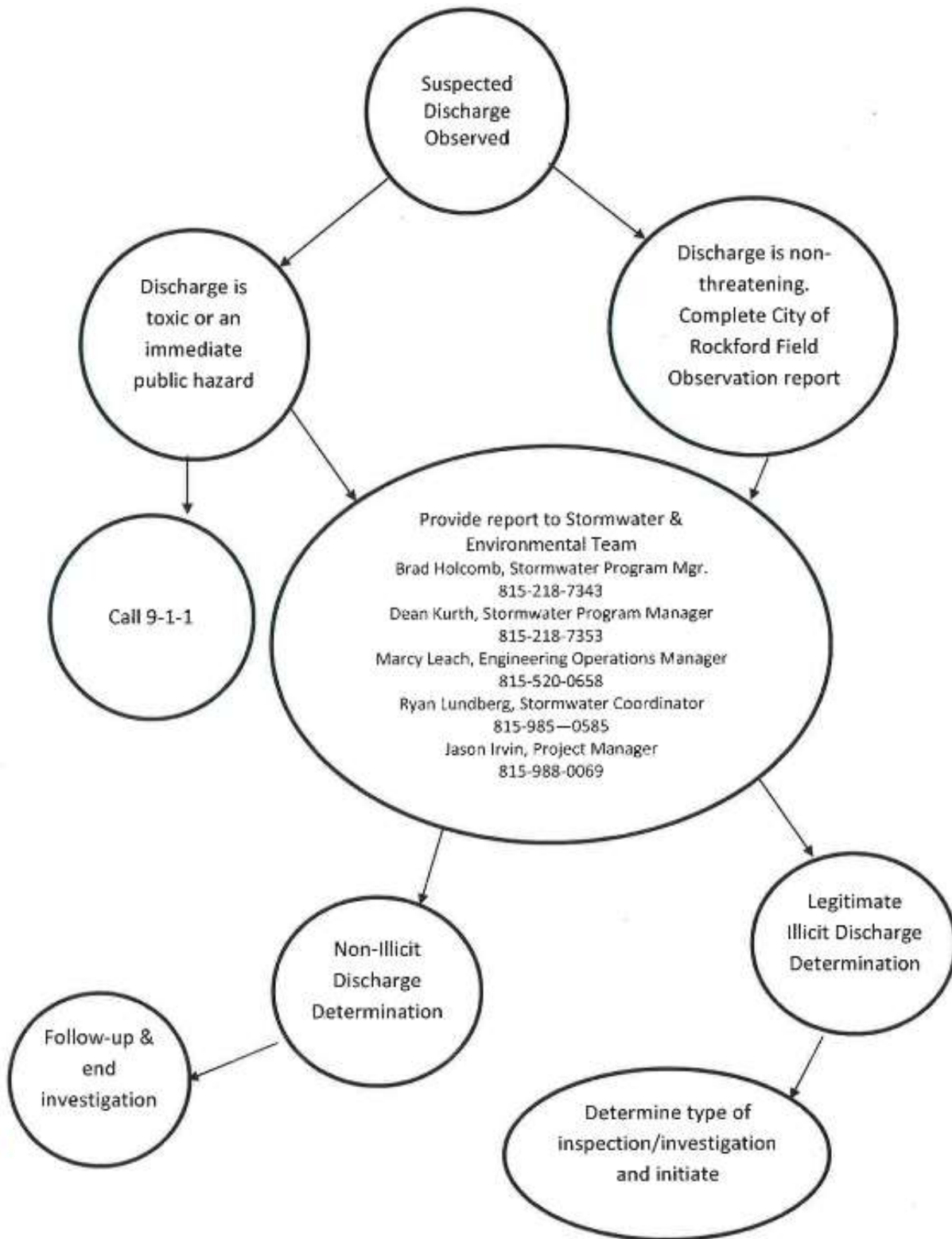
Open the inspection folder for the current year,

Investigations shall be saved by address. If a folder for an address is already created open it and save the data in a new folder by date.

Investigations that carry over into the next year shall have the entire folder copied and saved into the existing year.

An excel spreadsheet for all inspections has also been created. This spreadsheet can be found in the Stormwater Drive in the folder entitled Inspection and Sampling Logs. All spreadsheets are saved by year for easy tracking. Data includes: date, incident address, complaint and type of discharge. Notes about the inspection can also be included.

ILLICIT DISCHARGE REPORTING AND RESPONSE By City of Rockford Staff



Appendix B City of Rockford Field Observation

1. Person Making Observation: _____ Date: _____

2. Type of Observation (check all that apply):

_____ Drainageway

_____ Creek

_____ Citizen Complaint

_____ Industrial/Commercial Site

_____ Detention Basin

_____ Outfall Monitoring

_____ Construction Site

_____ Illicit Discharge

(If the Illicit Discharge is active contact Brad Holcomb, Dean Kurth or Ryan Lundberg immediately)

_____ Inlet

_____ Other _____

3. Location/Project Name: _____

4. Is this a post rain event observation? _____ Yes _____ No

5. If yes: Date of Rainfall _____ Rainfall amount (inches)

6. Is a follow-up inspection required? _____ Yes _____ No

7. Is maintenance needed? _____ Yes _____ No

8. Comments (please be detailed and supply photos if necessary): _____

Signature: _____ Date: _____

Provide Copies to one of the following:


Brad Holcomb, Stormwater Manager – Cell # 815-218-7343, brad.holcomb@rockfordil.gov,

Jeremy Mitchell, Asst. Stormwater Manager – Cell # 779-200-1413, Jeremy.mitchell@rockfordil.gov

Samantha Futrell, Stormwater Coordinator - Cell # 779-207-5799, Samantha.futrell@rockfordil.gov

Nicholas (Ripp) Rippentrop, Sr. Engineering Tech. - Cell # 815-721-1387, Nicholas.rippentrop@rockfordil.gov

Appendix C

| | | | | | |
|---|---|--|--|---|--|
|  | | S.W.E.T. | | Stormwater Outfall | |
| Tributary/Watershed: | | | Date: | Assessed By: | |
| Site ID #: | Time: | AM/PM | | Photo ID #: | |
| Location: | | Reach: | GPS ID: | | |
| | | | | | |
| Bank: <input type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head | Type: <input type="checkbox"/> Closed Pipe <input type="checkbox"/> Partially | Material: <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other: _____ | Shape: <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ | Submerged: <input type="checkbox"/> No Diameter: ____ (in) <input type="checkbox"/> <input type="checkbox"/> Fully | |
| Flow: <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Open Channel <input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Depth: ____ (in) <input type="checkbox"/> Width (Top): ____ (in) <input type="checkbox"/> Width (Bot): ____ (in) | | |
| Condition: <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other: _____ | Odor: <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other: _____ | Deposits/Stains <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: _____ | Veggie Density: <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other: _____ | Pipe Benthic Growth: <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other: _____ | |
| | | | | Pool Quality: <input type="checkbox"/> No Pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other: _____ | |
| | | | | | |
| For Flowing Only | Color: <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other: _____ | | | | |
| | Turbidity: <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque | | | | |
| | Floatables: <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other: _____ | | | | |
| Other Concerns: | <input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other: _____ | | | | |
| | | | | | |
| Notes / Sketch: | | | | | |
| | | | | | |

Revision: October 2013

Signature: _____ Date: _____

Appendix D

| Illicit Discharge Investigation Form | | | | |
|--|---|---|--------------------------------------|--|
| Responder Information <i>(for hotline incidents only)</i> | | | | |
| Call taken by: | | Call date: | | |
| Reporter Information | | | | |
| Incident time: | | Incident date: | | |
| | | Precipitation (inches) in past 24-48 hrs: | | |
| Caller contact information <i>(optional)</i> : | | | | |
| Incident Location <i>(complete one or more below)</i> | | | | |
| Latitude & longitude: | | | | |
| Stream address or outfall #: | | | | |
| Closest street address: | | | | |
| Nearby landmark: | | | | |
| Primary Location Description | | Secondary Location Description: | | |
| <input type="checkbox"/> Stream corridor <i>(In or adjacent to stream)</i> | <input type="checkbox"/> Outfall | <input type="checkbox"/> In-stream flow | <input type="checkbox"/> Along banks | |
| <input type="checkbox"/> Upland area <i>(Land not adjacent to stream)</i> | <input type="checkbox"/> Near storm drain | <input type="checkbox"/> Near other water source (storm water pond, wetland, etc.): | | |
| Narrative description of location: | | | | |
| Upland Problem Indicator | | | | |
| <input type="checkbox"/> Dumping | <input type="checkbox"/> Oil/solvents/chemicals | | <input type="checkbox"/> Sewage | |
| <input type="checkbox"/> Wash water, suds, etc. | <input type="checkbox"/> Other: _____ | | | |
| Stream Corridor Problem Indicator Description | | | | |
| Odor | <input type="checkbox"/> None | <input type="checkbox"/> Sewage | <input type="checkbox"/> Rancid/Sour | <input type="checkbox"/> Petroleum (gas) |
| | <input type="checkbox"/> Sulfide (rotten eggs); natural gas | <input type="checkbox"/> Other: Describe in "Narrative" section | | |
| Appearance | <input type="checkbox"/> "Normal" | <input type="checkbox"/> Oil sheen | <input type="checkbox"/> Cloudy | <input type="checkbox"/> Suds |
| | <input type="checkbox"/> Other: Describe in "Narrative" section | | | |
| Floatables | <input type="checkbox"/> None | <input type="checkbox"/> Sewage (toilet paper, etc.) | <input type="checkbox"/> Algae | <input type="checkbox"/> Dead fish |
| | <input type="checkbox"/> Other: Describe in "Narrative" section | | | |
| Narrative description of problem indicators: | | | | |
| Suspected Violator (name, personal or vehicle description, license plate #, etc.): | | | | |

| Data Collection | |
|---|-------------------------|
| Sample collected for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Sample collected from? <input type="checkbox"/> Flow <input type="checkbox"/> Pool <input type="checkbox"/> Other | |
| Sample result indicated: <input type="checkbox"/> No Pollutants <input type="checkbox"/> Presence of pollutants | |
| Investigation Notes | |
| Initial investigation date: | Investigators: |
| <input type="checkbox"/> No investigation made | Reason: |
| <input type="checkbox"/> Referred to different department/agency: | Department/Agency: |
| <input type="checkbox"/> Investigated: No action necessary | |
| <input type="checkbox"/> Investigated: Requires Action | Description of actions: |
| Hours between call and investigation: | |
| Notification and Enforcement Actions (if any): | |
| Date case closed: | |
| Notes: | |

Investigator: (sign & print name) _____

Date of Investigation: _____



ILLINOIS EMERGENCY MANAGEMENT AGENCY

JB Pritzker
Governor

Alicia Tate-Nadeau
Director

Emergency Release Notification Fact Sheet

- A. Immediate telephone notification shall be given by the owner or operator of a facility when a release equal to or exceeding the reportable quantity of an extremely hazardous substance⁽¹⁾ or a CERCLA hazardous substance⁽²⁾ occurs at the facility.

In such incidents, notifications are to be made to the following:

- 1) Illinois Emergency Management Agency (IEMA)/State Emergency Response Commission (SERC) at 1-800-782-7860 (within state) or (217) 782-7860 (when calling from out-of-state);
- 2) Local Emergency Planning Committee (LEPC) that is likely to be affected by the release. The LEPC telephone number(s) may be obtained from the IEMA Website at <http://www.illinois.gov/iema/Preparedness/SERC/Pages/default.aspx>.
- 3) National Response Center (NRC) at 1-800-424-8802 (if the substance is a CERCLA hazardous substance).

Please Note: *Transportation-related incidents only require 9-1-1 notification.*

- B. Immediate telephone notification is also required if an incident or accident involving a hazardous material⁽³⁾ occurs which results in:
- 1) a member of the general public is killed;
 - 2) a member of the general public receives injuries requiring hospitalization;
 - 3) an authorized official of an emergency agency recommends an evacuation of an area by the general public;
 - 4) a motor vehicle has overturned on a public highway;
 - 5) Fire, breakage, release or suspected contamination occurs involving an etiologic agent;
 - 6) Any release of petroleum (or oil) that produces a sheen on nearby surface water⁽⁴⁾ and/or threatens navigable waters;
 - 7) Any spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons (25-gallon reporting threshold for USTs only)⁽⁴⁾. ASTs are not subject to the 25-gallon spill reporting threshold in 41 IAC 176.340 but are subject to 29 IAC 430.

In such incidents, notification shall be made as noted in Paragraph A, above, except no notification is required to the NRC, except items 6 and 7 (oil that impacts water and overfills emanating from underground storage tanks).



ILLINOIS EMERGENCY MANAGEMENT AGENCY

JB Pritzker
Governor

Alicia Tate-Nadeau
Director

At a minimum, notification shall include:

- 1) the chemical name or identity of any substance involved in the release;
- 2) an indication of whether the substance is an extremely hazardous substance;
- 3) an estimate of the quantity in pounds of any such substance that was released into the environment;
- 4) the time and duration of the release;
- 5) the specific location of the release;
- 6) the medium or media (air, land, water) into which the release occurred;
- 7) any known or anticipated acute or chronic health risks associated with the emergency and, where appropriate, advice regarding medical attention necessary for exposed individuals;
- 8) proper precautions to take as a result of the release, including evacuations;
- 9) the name and telephone number of the person or persons to be contacted for further information.

C. WRITTEN FOLLOW-UP NOTICE IS REQUIRED WITH RESPECT TO INCIDENTS AS DESCRIBED IN PARAGRAPH A, ABOVE. As soon as practicable after such release (within 30 days), the owner or operator shall provide a written follow-up emergency notice (or notices, as more information becomes available) to the SERC and the LEPC, updating the information provided in the immediate notification and including additional information with respect to:

- 1) Actions taken to respond to and contain the release;
- 2) Any known or anticipated acute or chronic health risks associated with the release;
- 3) Where appropriate, advice regarding medical attention necessary for exposed individuals.

¹ See 40 CFR 355 for a listing of extremely hazardous substances (EHS)

² See 40 CFR 302.4 for a listing of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) hazardous substances

³ See 49 CFR 172.101 for a list of hazardous materials

⁴ See 41 IAC 176.340 Reporting and Cleanup of Spills and Overfills (USTs).

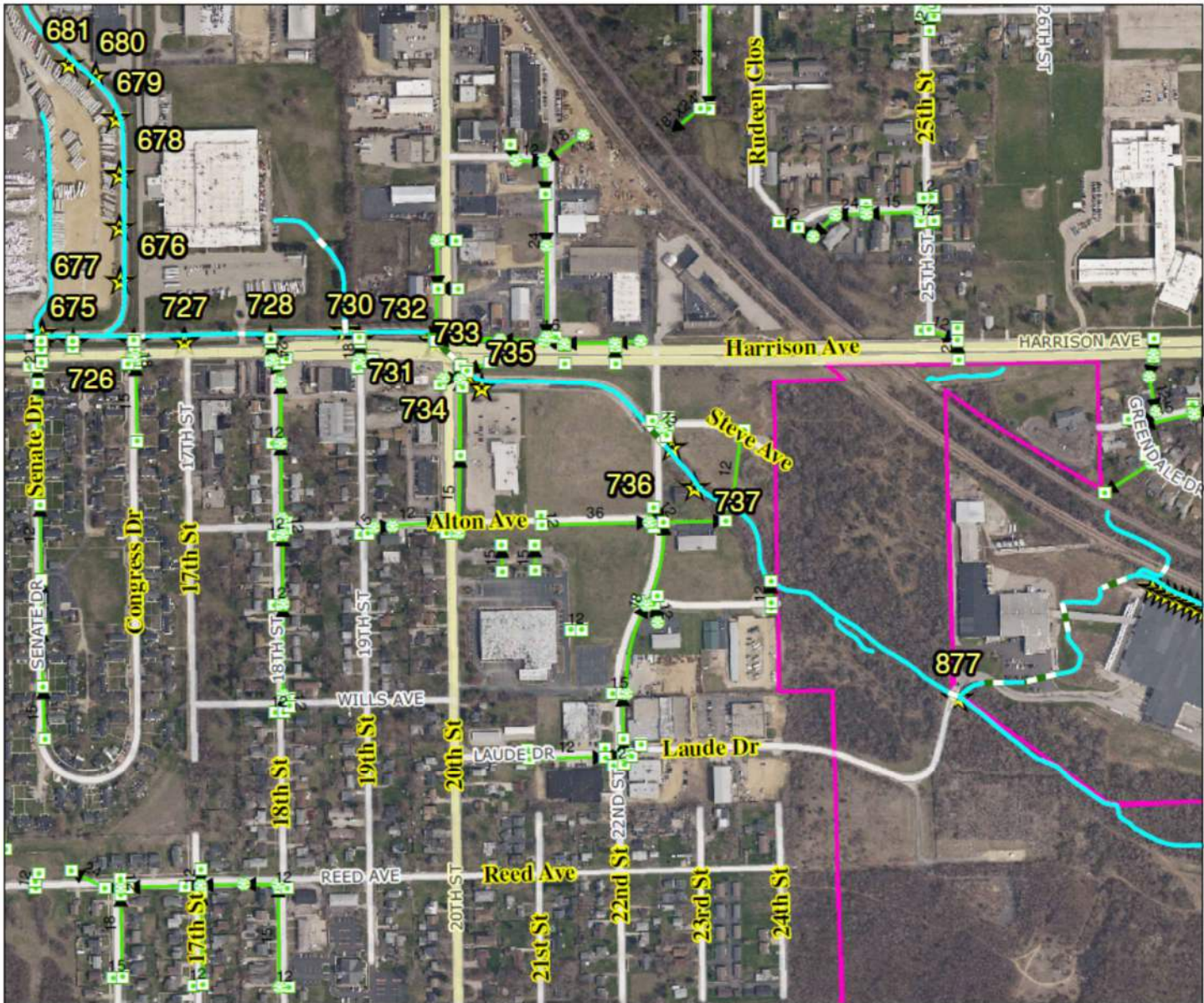
(These rules are compiled in 29 IAC 430 and 29 IAC 620)

rev. 12/2020

1035 OUTER PARK DRIVE | SPRINGFIELD, IL 62704 | 217.782.2700

illinois.gov/iema | ready.illinois.gov

Appendix F



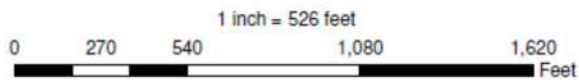
Legend

- Storm
- Storm
- Storm Pipe**
- LifeCycles**
- Aban
- ▶ Activ
- - - Culve
- Rock
- Major
- Minor
- Local
- Ramp
- WinS
- Rock
- ★ Outfa
- City L
- ORTHOS**
- RGB**
- Red:
- Gree
- Blue:

Sample Outfall Screening Map



City of Rockford
Public Works
Engineering Division



Pro
Facilities Ma

| | |
|---------------------|-------------------------|
| Photo # | Address: |
| Taken By: | Date: |
| Description: | <p>Place Photo Here</p> |

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| Description: | <p>Place Photo Here</p> |

Spill Prevention and Response Standard Operating Procedures

HAZARDOUS MATERIALS

I. PURPOSE

- A. This Annex provides general guidelines and an assignment of responsibility for response and cleanup of hazardous materials incidents within the City of Rockford. Due to the inherent risks related to the production, transport, and storage of hazardous materials, contingency plans addressing containment and response to hazardous materials incidents have been developed to minimize and mitigate the effects of an event.
- B. Therefore, this Annex addresses the operational concepts, organization, and support systems required to implement the plan, including:
1. The responsibilities assigned to authorities and responding agencies which are required to minimize potential, threatened, or existing damage to human health, natural systems, and property, including the joint effort required to aid in the mitigation of a hazard;
 2. Establishing an operational structure that has the ability to function at a hazardous materials incident anywhere within the City of Rockford;
 3. Utilizing individuals who have been trained to handle hazardous materials incidents;
 4. Establishing lines of authority and management for hazardous materials incidents;
 5. Establishing and providing an overall response plan that adheres to and addresses the provisions of the Superfund Amendments and Reauthorization Act (SARA) Title III (OSHA), Title 29CFR 1910.120, which affects the operations and functions of the fire service and hazardous materials response teams who will or might be engaged in various activities at the scene of a hazardous materials incident.
- C. This Annex was developed in compliance with the State Emergency Response Commission (SERC), which promotes chemical emergency preparedness and prevention throughout the State of Illinois. SERC, in support of Local Emergency Planning Committees (LEPCs), assists in chemical emergency planning by providing public access to chemical data, raising public awareness of chemical risks, and encouraging public participation in local chemical safety issues.

II. SITUATION

The City of Rockford requires Extremely Hazardous Substances (EHS) and Hazardous Materials transportation routes. These are identified on maps located in the resource

manual located at the 911 Communications Center and at the Emergency Operations Center (EOC). The manual also includes names and contact numbers for rail, pipeline, and airports.

A. Roadways

Within the City of Rockford, there are three different types of roadways used for the transport of EHS: Interstate Highways, US Highways, and State Routes. Industrial areas within the city are usually served by truck traffic routes along major streets within the city. Quantities of EHS can range from small shipments to large tractor trailers. Any Hazardous Materials/EHS could be shipped to a facility within the city limits. Typical accidents include ruptured fuel tanks, low overhead clearance accidents, and collisions. Major accidents often include street closures and traffic control which have the potential to disrupt local traffic patterns. In addition, an accidental release of Hazardous Materials could result in protective action for the vicinity. Emergency response may include activating the area's MABAS system. Street closures may involve local police departments and emergency management agencies.

B. Railroads

The City of Rockford is served by four railroads: Union Pacific, Canadian Pacific, Burlington Northern, and Illinois Central (Chicago Central & Pacific). Shipments can range from small to 200,000 gallon tank cars. It is possible that any Hazardous Materials/EHS could be shipped through the region. Possible accident types include ruptured fuel tanks, train derailments, collisions, and low overhead clearance accidents. Major accidents often include highway closures and traffic control. This can cause a large disruption in traffic patterns and has the potential for creating a substantial short-term economic impact. In addition, an accidental release of a Hazardous Material could result in the need for protective action for the vicinity. Emergency response may include activating the area's mutual aid box alarm system (MABAS) and coordinating highway closures with the Illinois State Police and Department of Transportation. A list of phone numbers for these railroads can be found in Attachment 2 of this Annex; a map of these railroads can be found in Attachment 3 of this Annex.

C. Pipelines

There are several transmission pipelines that run through the City of Rockford. These include:

- Natural gas pipelines, both supplying and traversing the city, and
- Petroleum products pipelines traversing the city (See Attachment 4).

Pipelines generally do not contain EHS, but they do contain Hazardous Materials and are included here as a facility that could contribute to additional risk. The 911 Communications Center maintains a list of Pipeline Emergency contacts. All maps are currently available in Rockford's CAMEO system.

III. ASSUMPTIONS

- A. According to the Illinois Emergency Planning and Community Right to Know Act (IEPCRA) 430 ILCS 100; 29 Ill. Adm. Code 620, any facility that has present onsite
1. a **hazardous chemical** for which OSHA requires a material safety data sheet (MSDS); and
 2. the chemical is **present in certain threshold quantities**

must report such substances to IEMA and contain such information in the LEPC Hazardous Materials Plan.

- B. For the purposes of IEPCRA, a “**hazardous chemical**” is defined as any chemical that causes a physical or health hazard (Occupational Safety and Health Act of 1970). The number of such chemicals has been estimated at 500,000, though no comprehensive list has been made available. It is acceptable to assume that any chemical for which the Material Safety Data Sheet (MSDS) lists any type of hazard is covered by IEPCRA.
- C. This plan is for use in the case of any hazardous materials incident associated with any mode of transportation in any industrial process, storage or storage sites, waste disposal procedures, manufacturing, usage, abandonment, and illegal usage and disposal.
- D. The hazardous material itself may include but is not limited to explosives, flammables, combustibles, compressed gases, cryogenics, poisons, toxins, reactive and oxidizing agents, radioactive materials, corrosives, carcinogens, etiological agents, hazardous wastes, or any combination thereof, or any material that may pose a hazard to health or the environment in the opinion of the response crew.
- E. In the event of a hazardous materials release, many different agencies may be called upon to respond for the mitigation of the incident.

IV. CONCEPT OF OPERATIONS

- A. This plan is directed to those hazardous materials incidents which occur within the City of Rockford. These hazards shall include actual or threatened fires, spills, leaks, ruptures, container failures, contamination, and any threat to life, safety, property, or the environment involving hazardous materials.
- B. All State Emergency Response Commission (SERC) approved LEPC chemical emergency response plans are maintained by the HazMat team. Plans are stored in mobile emergency response kits and will be transported to the EOC during an emergency response event.
- C. In the event of an accidental chemical release, the owner or operator of a facility or the transporter of chemicals will be required to properly notify federal, state, and local agencies. Notification is required when the chemical released exceeds the reportable quantity of an extremely hazardous substance, hazardous material, or the

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and is defined as a hazardous substance.

D. Failure to follow these notification requirements may cause the LEPC to refer the matter to IEMA for enforcement.

E. **Notification**

1. **When to Notify:** Immediate notification is necessary if a release occurs and
 - a. A member of the general public is injured
 - b. An authorized official of an emergency agency recommends an evacuation for the general public
 - c. Fire, breakage, release, or suspected contamination occurs involving an etiologic agent
 - d. A release of oil produces sheen of water and/or threatens navigable waters
 - e. Or any time responders are unsure whether they should notify or not.
2. **Who to Notify:** (in order of notification)
 - a. 911
 - b. Illinois Emergency Management Agency (IEMA) 800-782-7860
 - c. National Response Center (NRC) 800-424-8802
 - d. Winnebago County ESDA 815-319-6215
 - e. Winnebago County Local Emergency Planning Committee (LEPC) 815-319-6215

Note* Transporters involved in an accidental chemical release over the Reportable Quantities (RQs) must call the NRC and 911.

National Response Center (800) 424-8802 or use the On-Line Reporting Tool at:
www.nrc.uscg.mil/

3. **What to Include in Notification:**

Initial notification should include the following:

- a. Specific location of release;
- b. Name and telephone number of the person to contact at the site;
- c. The chemical name of substance that is released and whether or not it is hazardous;
- d. Quantity of substance released;
- e. Time and duration of release;
- f. Medium (air, land, and water) where release occurred;

- g. Proper precautions that need to be put in place as a result of the release, including evacuation; and
 - h. Health risks associated with the release of this chemical. Advice regarding the treatment of people who may be exposed.
4. **Follow-up Notification:** A written follow-up notification should be done after the initial notification. The owner or operator of the facility/carrier should send the follow-up report to both SERC and the LEPC. The follow-up report should include the following:
- a. Actions taken to respond to and contain the release;
 - b. Any known or anticipated health risks associated with the release;
 - c. Appropriate advice regarding medical attention for exposed individuals;
 - d. Any changed or updated information from the initial notification; and
 - e. Additional follow-up notices, which will be made as conditions and information change.

F. Community Notification Procedures

Incident Commander or the PIO will be responsible for communicating notification of an EHS/HM release. The circumstances requiring public notification will depend on site-specific or incident-specific factors and may vary depending on public safety issues.

G. Determining the Occurrence of a Release

One of the duties of the LEPC is to determine the likelihood of a release and estimate the consequences of the release. A Tier II Map for the City of Rockford can be found in Attachment 5 of this Annex. This map was created after performing a hazard analysis of the city. The following procedures describe the methods and techniques used to perform a hazard analysis:

1. Review Tier II Reports and Identify Hazardous Materials and EHS Facilities;
2. Request additional information from Hazardous Materials and EHS Facilities;
3. Enter data and map data in CAMEO;
4. Perform screenings and scenarios for each facility; and
5. Prepare and Review Hazard Analysis for each facility.

H. Review Tier II Reports and Identify Hazardous Materials and EHS Facilities

The Illinois Emergency Management Agency (IEMA) and the LEPC receive Tier II reports from regulated facilities. IEMA will perform Tier II data entry for the LEPC and provide the database information to the LEPC. The LEPC will review reports generated from Tier II data and will identify Hazardous Materials and EHS Facilities.

I. Request additional information from Hazardous Materials and EHS Facilities

The LEPC may send a letter asking the Hazardous Materials and EHS facilities for additional information. This additional information may be required on a case-by-case basis.

J. Entering Data and Map Data in CAMEO

In 2005, the US Environmental Protection Agency (US EPA) released a new version of the CAMEO emergency planning software. CAMEO stands for "Computer-Aided Management of Emergency Operations" and is freely available to LEPCs and emergency responders nationwide. CAMEO is a database program optimized for chemical emergency planning. It works with other free programs from the US EPA, such as MARPLOT, ALOHA, and LandView. Together these four programs are commonly referred to as the CAMEO Suite. Once inventory information is entered into CAMEO and MARPLOT, a Screening and Scenario can be conducted to determine the number of people and the area which may be impacted by major chemical releases. It is a goal and objective of the Winnebago County LEPC to enter and map data into the CAMEO Suite.

K. Perform Screenings and Scenarios for each Hazardous Materials and EHS Facility

Winnebago County LEPC will perform CAMEO screenings and scenarios for each Hazardous Materials and EHS facility.

L. Prepare and Review Hazard Analysis for each Hazardous Materials and EHS Facility

Winnebago County LEPC will prepare and review CAMEO hazard analysis for each Hazardous Materials and EHS facility.

V. ANNEX MAINTENANCE, REVIEW, AND UPDATING

Responsibility for the maintenance of this Functional Annex is assigned to the City of Rockford ESDA Coordinator. Emergency plan maintenance includes an annual review and periodic updating of the plan. Additionally, the City of Rockford Emergency Disaster Agency shall be responsible for document control. This includes the distribution of the plan and its updated sections as required. Each agency head is responsible for the updating of their agency's section. **Updates to each section should be brought to the attention of the ESDA Coordinator prior to distribution of the update.**

VI. HAZARDOUS MATERIALS INCIDENT CLASSIFICATION LEVELS

There are three (3) levels of hazardous materials incident classification. The criteria used for the establishment of the concept of classifying hazardous material incidents into levels are:

1. Level of technical expertise required to abate the incident;
2. Extent of local, state, and federal government, and private industry involvement required to assist in abating the hazard;
3. Extent of evacuation of civilians;
4. Extent of injuries and/or deaths related to the hazardous materials incident; and

5. Extent and involvement of decontamination procedures.

A. LEVEL I INCIDENT

Level I incidents include spills, leaks, ruptures and/or fires involving hazardous materials which can be contained, extinguished, and/or abated utilizing equipment, supplies, and resources immediately available to the first responders of the fire department or industry having jurisdiction. Additionally, Level I incidents can be properly handled by personnel whose qualifications are limited to and do not exceed the scope of their training.

B. LEVEL II INCIDENT

A hazardous materials incident which can only be identified, tested, sampled, contained, extinguished, and/or abated utilizing the expertise and resources of a hazardous materials response team.

A hazardous materials incident which requires the use of any kind of specialized protective gear, tools, equipment or knowledge beyond the scope and capabilities of the first responding engine company.

A hazardous materials incident which requires the evacuation of civilians within the area of the fire department having jurisdiction; and/or fires involving hazardous materials that are permitted to burn for a controlled period of time, or are allowed to consume themselves; and/or the incident can only be properly handled by fire department personnel whose qualifications meet or exceed the scope of training explained in Superfund Amendments and Reauthorization Act (SARA) Title III, Title 25 CFR 1910.120 within the Hazardous Materials Specialist realm.

C. LEVEL III INCIDENT

Actual spills or threat of spills, leaks, or ruptures which can or must be contained and/or abated only by utilizing the highly specialized equipment and supplies available to environmental and industrial response personnel. Such equipment, techniques, and qualified personnel are in excess of or are in addition to those available from the on-scene hazardous materials response team and/or:

1. Fires involving hazardous materials that are allowed to burn due to the ineffectiveness or dangers of the use of any kind of extinguishing agent, or the unavailability of the proper extinguishing agent;
2. There is a real threat of large container failure and/or explosion, detonation, Boiling Liquid Expanding Vapor Explosion (BLEVE), or container failure has already occurred;
3. Hazardous materials incidents which require evacuation of civilians from a large geographical area or evacuation has extended across jurisdictional boundaries;
4. There are serious civilian injuries and/or deaths as a result of the hazardous materials incident;

5. Decontamination of equipment, civilians, or personnel is required;
6. The hazardous materials incident has become a multi-agency involvement; and/or
7. The incident can only be properly handled by personnel whose qualifications exceed Hazardous Materials Specialist level.

VII. INCIDENT COMMAND AND SCENE MANAGEMENT

Incident Command (IC) shall be responsible for all operations directed toward the containment and mitigation of the hazards at the scene of a hazardous materials incident. Upon arrival on the scene, IC shall secure and maintain control until the situation has been corrected or abated.

The Rockford Fire Department shall accept and provide the position of IC for the scene of all hazardous materials incidents within the City of Rockford.

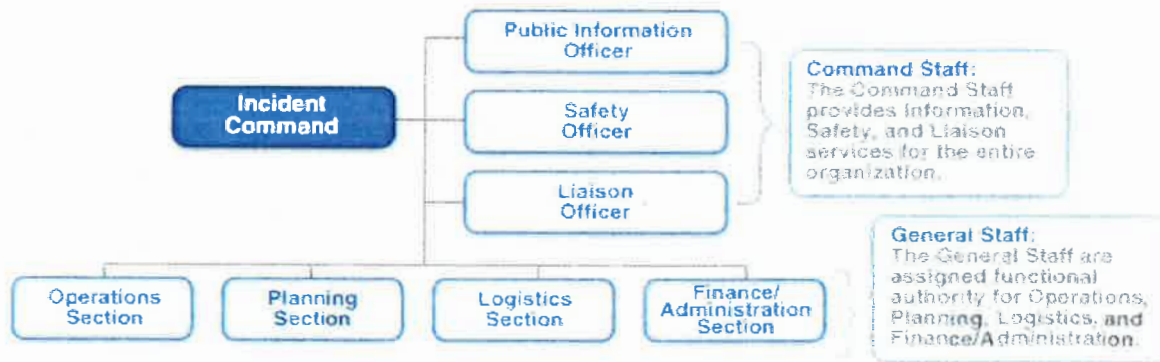


Figure 1 Incident Command Structure

A. FREEWAYS AND STATE ROADS

For all hazardous materials incidents that occur on any freeway or any state road, the Scene Manager shall be the Illinois State Police in accordance with the Illinois Revised Statutes. However, the IC of the department having jurisdiction shall provide direct control and authority over all fire department related activities at the scene of any hazardous materials incident. For hazardous materials incidents that occur on streets and public roads within the City of Rockford, the agency with jurisdiction shall function as the Scene Manager.

The City of Rockford Fire Department Hazardous Material Response Team is available to respond anywhere within the corporate limits of the city and anywhere a mutual aid agreement is in force.

B. BASIC INCIDENT DISCIPLINE

When appropriate, it shall be the responsibility of the initial responders to initiate and place into position the following actions at all hazardous materials incidents:

1. Upon arrival, identify themselves;
2. Isolate the affected area;
3. Immediately arrange for a briefing with key response personnel from other agencies;
4. Establish and function within an Incident Command System;
5. Establish the boundaries of the hot, warm, and cold zones as soon as possible;
6. Determine the level of the response; and
7. Notify additional agencies (if and when appropriate).

C. FIRST ON SCENE

The first responders on the scene shall determine if hazardous materials are involved in the incident. If confirmed, personnel must, in a safe manner and within the scope of their training, attempt to identify:

1. Type of Material Involved;
2. Quantity of Material Involved;
3. Possibility of Contamination;
4. Immediate Exposure Problem;
5. Threat to Life/Safety; and
6. Threat to property and the environment.

This information must be relayed to the 911 Communication Center immediately. If the department on the scene determines that a Level I incident exists, they shall inform 911 if they have the capability to handle the situation. If a Level II or III incident is determined, the responders shall notify 911, isolate the area, formulate a plan, and immediately begin actions that will eventually bring the incident under control.

When another agency is on the scene prior to the arrival of the fire department (generally law enforcement), the first on-scene fire department official shall establish contact with the agency first on the scene. The fire department official shall then proceed to gather as much information as possible about the incident to relay and pass on to other responding units.

VIII. RESPONSIBILITIES OF AGENCIES

- A. ***Illinois Emergency Management Agency (IEMA)***: This is the lead agency in Illinois for hazardous materials response. IEMA acts to coordinate the activities of all other responding agencies at a hazardous materials emergency.
- B. ***Jurisdictional Fire Department***: Responsible for providing routine fire and rescue support services at all incidents. In most cases, the Fire Department having jurisdiction will assume the position of Incident Command at the scene of a hazardous materials incident. The Fire Department having jurisdiction shall coordinate and effect

appropriate rescue efforts, evacuation, first aid, containment, and immediate hazard reduction activities within the scope of their training, as well as the implementation of all other normal fire department related activities and responsibilities.

- C. **Illinois State Police Hazardous Materials Section:** Established in 1979, this entity enforces the Federal Hazardous Materials Regulations as adopted by the Illinois Department of Transportation. Each officer in the HazMat section receives specialized training in the areas of enforcing regulations, radiological monitoring, and emergency response. Each Illinois State Police HazMat Officer carries equipment for hazardous materials emergency response in addition to the equipment normally carried by an Illinois State Police Officer. These items include binoculars, combustible gas indicators, radiological monitoring equipment, and reference books.
- D. **Illinois State Police (ISP):** ISP troopers also provide routine traffic control on all state and federal roads and on public roads in unincorporated areas. They also provide traffic control, traffic re-routing, road closure, and prevention of unauthorized entry into restricted areas when requested to do so. They may function as Incident Command for traffic and hazardous materials incidents occurring within their response jurisdiction. The ISP has the authority to enforce all Illinois criminal statutes as well as the authority to investigate criminal activities as related to hazardous materials incidents.
- E. **Illinois Environmental Protection Agency:** This agency has the responsibility to assure protection of the environment from all types of contamination. They may elect to respond depending on the seriousness of the threat of contamination. When they do respond, they are a source of additional on-scene technical advice. The EPA representative is responsible for assisting in identifying HazMat contaminants present in the environment as well as identifying violations. On very large scale incidents or operations involving long, drawn out clean-up within their jurisdictions, they have the authority to become the On-Scene Commander in accordance with the National Contingency Plan. *The EPA must be notified of any hazardous material incident that is confirmed to have caused ground or water contamination.*
- F. **Illinois Department of Transportation:** IDOT's primary duty in response to hazardous material incidents is in the area of regulation and administration. IDOT can be called on to respond to transportation emergencies with personnel, equipment, and supplies. A number of supply depots have been established that are stocked with foam, diking materials, and other supplies to aid in the mitigation of hazardous material spills.
- G. **Chemtrec:** Chemtrec is responsible for providing immediate emergency action information for spills, leak exposure, or fire control. They can assist with identification of hazardous materials, especially if the manufacturer is known or the shipping papers are present. Chemtrec can immediately notify manufacturers or shippers through their emergency contacts. They can notify other federal agencies as is necessary or as required, depending on the circumstances at the scene. For those incidents that require notification of the National Response Center regarding spills of a Reportable Quantity chemical, Chemtrec will pass on notification to the proper authorities.

Contact numbers for all of the above agencies are on file with the 911 Communication Center.

IX. LINE OF SUCCESSION

In order to provide for continuous leadership and control in emergency situations, each emergency response organization is responsible for identifying at least three (3) levels of succession. The line of succession for Hazardous Material Response is:

1. City of Rockford Fire Department
2. The City of Rockford Fire Department HazMat Team
3. MABAS Division 8

X. TASKS AND RESPONSIBILITIES FOR PRIMARY AND SUPPORT AGENCIES

| HAZARDOUS MATERIALS | |
|-----------------------------|--|
| <i>PRIMARY AGENCY</i> | |
| FIRE | <ol style="list-style-type: none"> 1. Coordinate with representatives from regulated facilities and vulnerable facilities to maintain a list of hazardous materials. 2. Initiate containment and communicate with PIO and Police concerning safety measures that need to be communicated to the public. 3. Determine a safe route into the incident site. 4. Establish HazMat incident functional areas (Hot Zone, Warm Zone, Cold Zone, Staging Area). 5. Initiate appropriate SOPs to control and eliminate the hazard. 6. Advise organization/facility where contamination occurred in choosing a clean-up company (of their choosing). 7. Provide medical treatment for casualties. |
| <i>SUPPORT AGENCIES</i> | |
| POLICE | <ol style="list-style-type: none"> 1. For incidents where transportation infrastructure or routes are contaminated by hazardous materials, help to identify safe evacuation and ingress routes. 2. Maintain a supervisor at IC until released by Incident Commander. 3. Evacuate citizens when requested by IC. Request assistance from the Fire Department, as necessary. 4. Control access to the immediate incident site for safety, limiting entry to authorized personnel only. 5. Perform traffic control in and around the incident site and along evacuation routes. 6. To prevent looting, provide access control to evacuated areas. |
| PUBLIC WORKS | <ol style="list-style-type: none"> 1. Provide barricades, sand, and equipment to isolate the incident site. 2. Assess the nature and extent of contamination. 3. Provide heavy equipment and materials for spill containment. 4. Cooperate with law enforcement to detour traffic around the incident site. 5. If a HazMat incident impacts water or sewer systems, check systems for damage and restore service. |
| STATE, FEDERAL, IEPA | <ol style="list-style-type: none"> 1. Conduct actions to detect and assess the nature and extent of hazardous materials releases. 2. Take appropriate actions to stabilize the release and prevent the spread of contamination, conduct environmental clean-up actions and decontaminate buildings and structures, and manage wastes. 3. When required, serve as the primary agency for response. |

| | |
|------------------------------------|---|
| | <ol style="list-style-type: none"> 4. Provide technical coordination and administrative support for personnel, facilities, and communications in support of response, recovery, and mitigation. 5. Coordinate, integrate, and provide investigative support, intelligence analysis, and legal expertise on environmental statutes related to hazardous materials incidents, including criminal cases. |
| RMTD | <ol style="list-style-type: none"> 1. Provide transportation for evacuation, as needed. |
| PIO | <ol style="list-style-type: none"> 1. Serve as liaison between responding agencies, including EPA and DHS, in order to communicate with the media/public on tactical operations and matters affecting public health and safety, particularly during the early stages of the emergency response. |
| WINNEBAGO CTY. HEALTH DEPT. | <ol style="list-style-type: none"> 1. When notified of an incident which may impact water or sewer systems, take precautionary actions to control contamination and prevent damage to those systems. |

XI. ATTACHMENTS

1. Hazardous Materials Assistance – Local
2. Contacts for Railroads Which Traverse the City of Rockford
3. Map of Railroads Which Traverse the City of Rockford
4. Major Pipelines Traversing the City of Rockford
5. Tier II Map for the City of Rockford

ATTACHMENT 1 - HAZARDOUS MATERIALS ASSISTANCE - LOCAL

| Name | Address | Telephone # | Comments |
|--|---------------------------------------|------------------------------|---|
| Rockford Fire Department Hazardous Materials Unit | | 815-987-5555 | 9-1-1 1-815-987-5649 |
| Trans-Environmental | 8184 Starwood Dr., Loves Park | 815-885-4840 | 24 Hours |
| William Charles Environmental Services | 5290 Nimtz Rd | 815-636-5560 | 24 Hours |
| | 5450 Wansford Way, Rkfd | 815-654-4726 | 24 hours |
| Byron Fire Department | 232 W 2 nd St Byron, IL | 815-234-2341 815-234-4911 | Emergency # For Radioactive Materials |
| Rockford Memorial Hospital | 2400 N. Rockton Av | 815-971-5000 | Radioactive Assistance Only |
| ESDA Winn. County Sheriff Emerg. Response Team (SERT) | 420 W State St | 815-319-6215 | Or Page Through 9-1-1 Center |

ATTACHMENT 2 - CONTACTS FOR RAILROADS WHICH TRAVERSE THE CITY OF ROCKFORD

| Name | Comments | Telephone # |
|--|--|------------------------------|
| Canadian Pacific (Formerly Soo Line) | | 800-716-9132 800-766-4357 |
| Union Pacific Railroad Police | 24 Hour Fast Emergency Service | 708-649-5301 |
| Canadian National Illinois Central Railroad | | 800-716-9132 800-465-9239 |
| Illinois Central – Aka – (I.C.E. & D.M.E.) Chicago Central & Pacific | Monday-Friday 0800-1700 Dispatcher 24 Hours | 605-782-1421 800-658-3551 |
| Iowa Chicago Eastern Railroad | | 800-321-3891 |
| Tel-Csx Railroad | | 800-232-0144 |
| Union Pacific Railroad | Belvidere Business Hours 0700-1700 | 888-877-7267 |

Railroad Information

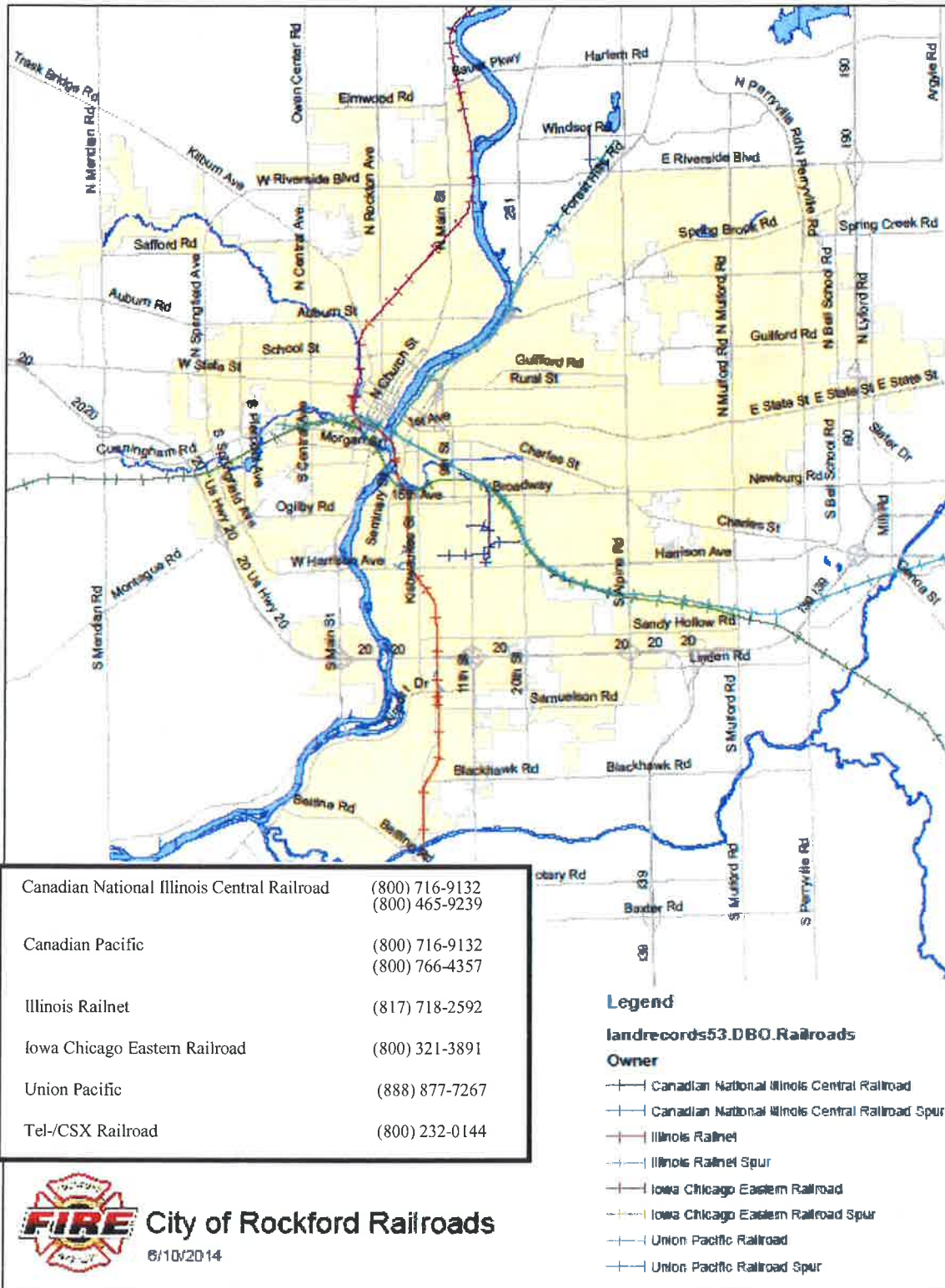
Canadian Pacific, Burlington-Northern (BNSF), Union Pacific...

... Is responsible for anything that happens on or with their tracks. They are the direct contact for any problem or emergency associated with all of their railways (regardless of the freight owner).

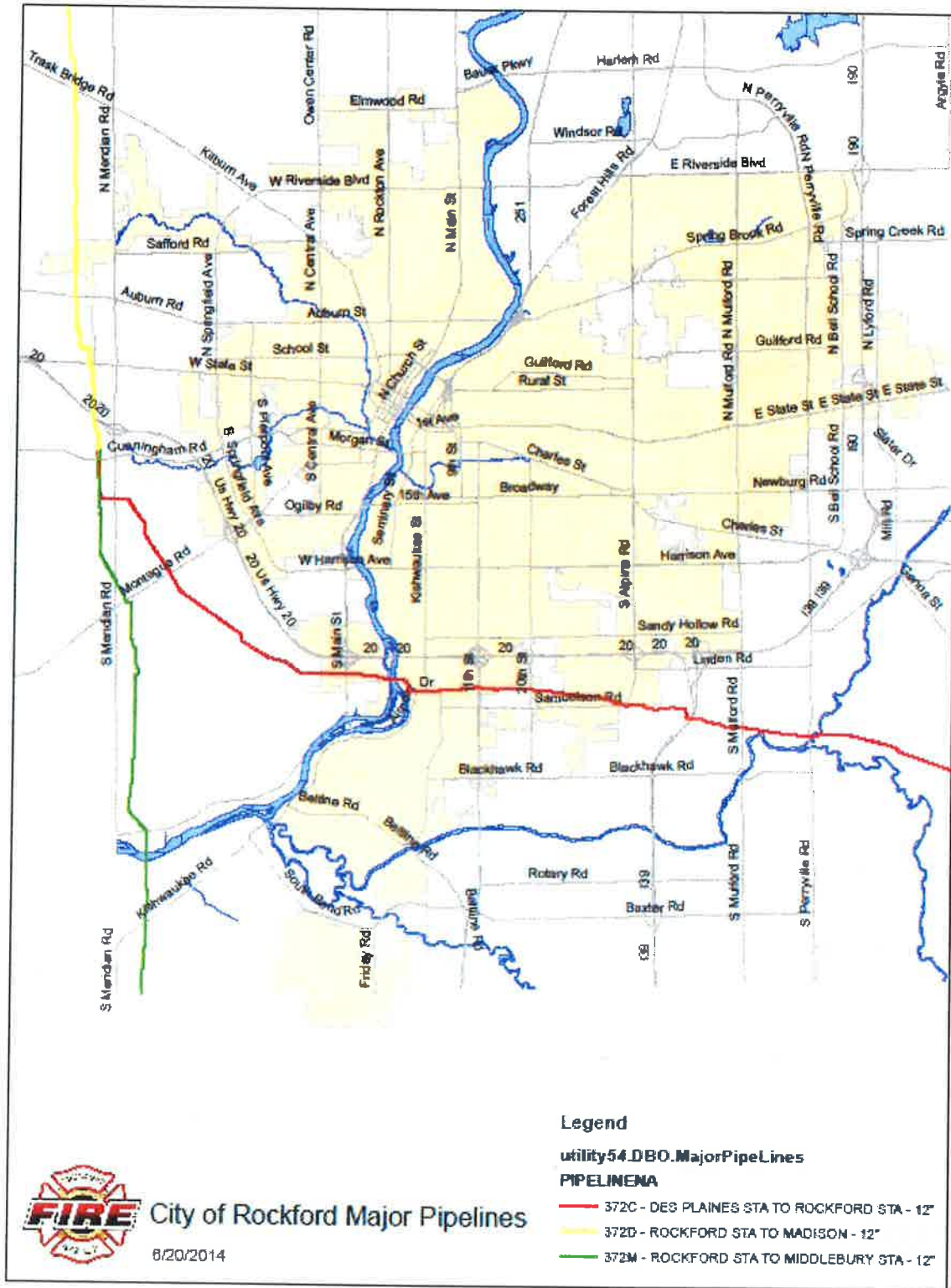
Illinois Central (I.C.E.)

IL Railnet is the night user and owner of tracks. During the day the tracks in Winnebago County are leased out to I.C.E., also known as Illinois Central (D.M.E.). IL Railnet does not claim responsibility nor liability for IL Centrals' freight or trains. **Contact I.C.E. 1-800-658-3551 dispatch for daytime freight information.**

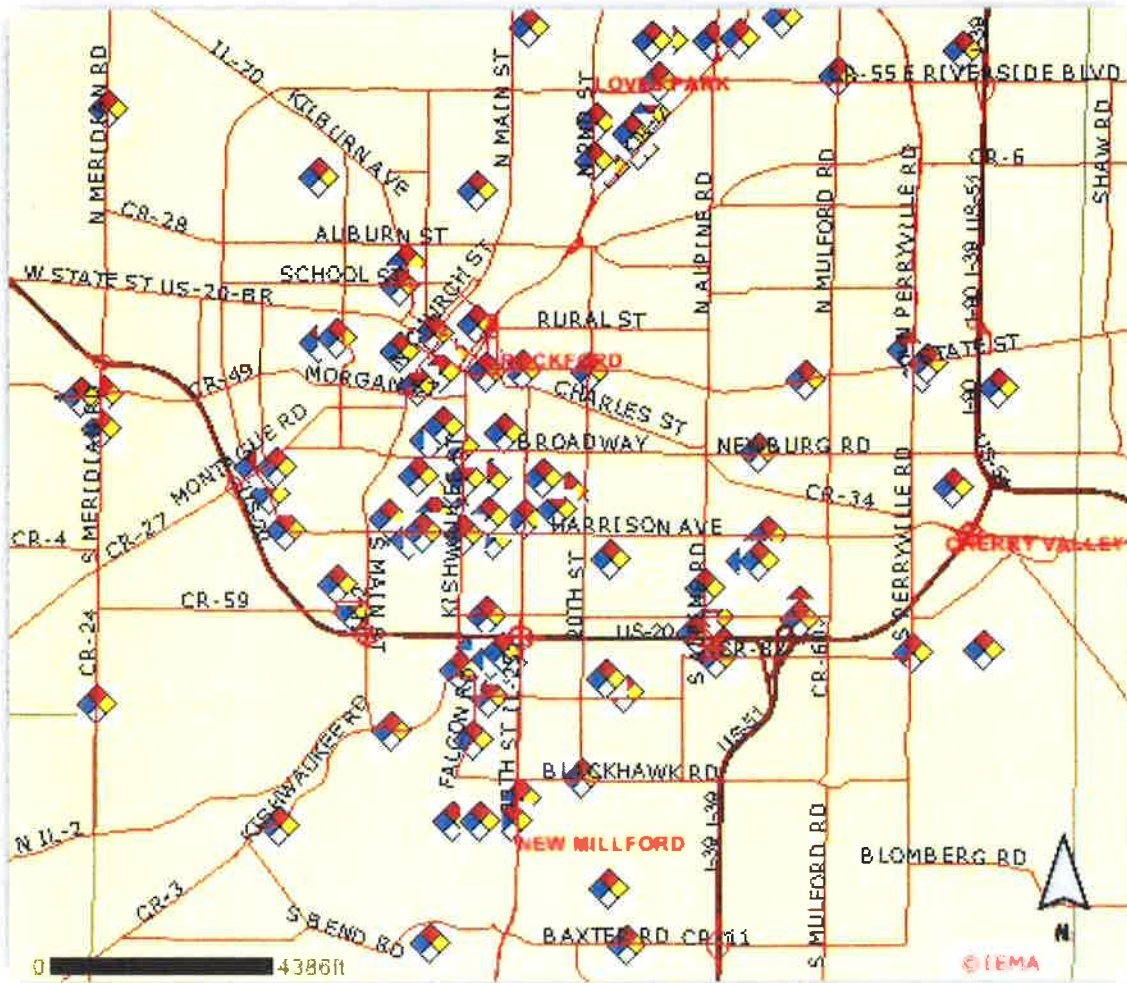
ATTACHMENT 3 – MAP OF RAILROADS WHICH TRAVERSE THE CITY OF ROCKFORD



ATTACHMENT 4 – MAJOR PIPELINES TRAVERSING THE CITY OF ROCKFORD



ATTACHMENT 5 – TIER II MAP FOR CITY OF ROCKFORD





INDUSTRIAL HIGH RISK RUNOFF FACILITY INSPECTION PROGRAM

STANDARD OPERATING PROCEDURES

January 2022

1.0 General

The goal of this standard operating procedure is to reduce the amount of polluted runoff from industrial and commercial facilities entering the City of Rockford's MS4. This industrial high risk runoff inspection program complies with Part II, A, 9 of the City of Rockford's NPDES Storm Water Permit (ILS000001). This document addresses how industrial facilities are identified for inspections and the procedures for performing them.

2.0 Legal Authority

Legal authority for the Industrial High Risk Runoff Inspection program is found in the City of Rockford's Code of Ordinances Chapter 109, Article 12. This Chapter of the City of Rockford Code provides City staff the authority to access properties for inspections.

3.0 Staffing

Staff from the Department of Public Works shall be responsible for performing inspections at industrial, commercial and other high risk facilities to ensure that these facilities are in compliance with the City of Rockford's Code of Ordinances Chapter 109, Article 12. Each team member shall be trained to perform the inspections as referenced in the ILR00 industrial stormwater permit and shall be familiar with this document. The primary public works staff trained to

perform industrial inspections shall be the following positions: Stormwater Manager, Assistant Stormwater Manager, Stormwater Coordinator and designated Senior Engineering Techs. Each shall be trained in performing industrial inspections from in-house and external training sources as approved by the Stormwater Manager and the Assistant Stormwater Manager. Stormwater Coordinator and Engineering Technicians can perform inspections provided they have the above training and are approved to perform inspections by the Stormwater Manager and the Assistant Stormwater Manager.

All training shall be in accordance with the Standard Operating Procedures for Stormwater and Environmental Education.

The following equipment may be utilized when performing inspections: a copy of the SWPPP and SPCC for the site if available (if copies cannot be obtained beforehand they shall be reviewed onsite), clipboard, inspection form, camera, sampling supplies, personal protection equipment. Personal protection equipment shall include:

- Hard hats – as required by the industrial facility.
- Safety vests – as required by the industrial facility
- Work boots
- Safety glasses - as required by the industrial facility

Safety while doing any inspection is a top priority. Staff should always be aware of their surroundings as well as the location of equipment operating in the area.

4.0 Inspection Frequency and Priority

Inspections may be scheduled in advance or without prior notice. Inspections shall be prioritized based on the following which is updated annually:

| Inspection Priority | | Priority Ranking |
|---|---|-------------------------|
| Citizen Complaints and Staff Observations | | High |
| Flows recorded during outfall Inspections & tracked to an industrial facility & past compliance concerns within the past 3 years. | | High |
| Municipal Facilities (see attachment B for list of municipally owned facilities and priority ranking) | List categories of high priority facilities (e.g., vehicle maintenance) | High |
| | List categories of medium priority facilities | Medium |
| | List categories of low priority facilities (e.g., municipal buildings) | Low |
| Facilities requiring an IEPA industrial Stormwater permit based on SIC and ILR00 | Facilities with approved permit | Medium |
| | Unpermitted facilities - Food Manufacturing (SIC starting at 20) | Medium |
| | Unpermitted facilities - Textile & Apparel products & manufacturing (SIC starting at 22,23) | Low |
| | Unpermitted facilities – Wood & paper manufacturing facilities (SIC starting at 24, 25, 26) | High |
| | Unpermitted facilities – Wood, paper & Printing facilities (SIC starting at 27) | Low |

| | | |
|--|--|-----------------------------|
| | Unpermitted facilities – Chemical & Petroleum related industries (SIC Starting at 28, 29) | High |
| | Unpermitted facilities – Rubber, leather & glass products. (SIC starting at 30, 31, 32) | Low |
| | Unpermitted facilities – Metal fabrication Industries (SIC starting at 33, 34, 35) | High |
| | Unpermitted facilities – Electronic & transportation equipment (SIC starting at 36, 37, 38) | Low |
| | Unpermitted facilities – Miscellaneous Manufacturing (SIC starting at 39) | Low |
| | Unpermitted facilities – Transportation and trucking services, USPS (SIC starting at 41, 42, 43) | Low |
| | Unpermitted facilities – Recycling Facilities (SIC starting at 5015, 5093) | High |
| | Facilities with No Exposure Certifications | Low |
| | Facilities that do not required an IEPA industrial Stormwater permit | Commercial Fueling Stations |
| Laundry and dry cleaning facilities | | Medium |
| Car repair shops and car washes | | Medium |
| Retailers with lawn & garden centers | | Medium |
| Large & Small retailers | | Low |
| Landscapers | | Low |
| Restaurants | | Low |
| Other facilities as determined by the City | | TBD |

The City shall inspect 100% high priority facilities and 50% medium priority facilities once every permit term. The City shall continue to evaluate the database using desktop analysis to determine if a facility's Standard Industrial Classifications (SIC) are appropriate, if it is still operational and within City limits. Citizen complaint inspections will be in addition to the scheduled inspections. Low priority facilities shall not be inspected unless there is a complaint submitted or an issue referred by another public entity such as the County Health Department or the RRWRD. The facility inventory and prioritization will be evaluated annually and revised where appropriate based on inspection findings and desktop analysis. New facilities will be added when identified. Changes will be summarized each year in the Annual Report.

Once all high and medium priority facilities have been reviewed new inspections on the facilities shall commence.

Complaints from the public shall be recorded and investigated. The City has a citizen complaint program which includes a hotline (779-348-7300) for phone calls and the City's website (www.rockfordil.gov) to register a complaint. Calls to the hotline shall be forwarded to the Stormwater & Environmental Program Manager or the Stormwater Project Manager. The same positions are sent emails for online complaints.

Citizen complaints shall be followed up with a field inspection by City staff within 72 hours of the complaint being submitted. Citizen complaints may initially be investigated as an Illicit Discharge Investigation (see Illicit Discharge and Detection and Elimination Standard Operating Procedures. If an industrial inspection is warranted procedures in Section 6.0 shall be followed. Priority ranking and inspection frequency may be adjusted based on inspection results if necessary.

5.0 Identification of Industrial High Risk Runoff Facilities

The City utilizes the following resources to build and update their industrial facility database for performing inspections. Updated data shall be incorporated into the existing database and mapping. This database shall be updated annually and changes referenced in the annual report. Mapping of industrial facility locations shall be updated at the same time as the database. See Appendix A for contacts to the listed organizations

5.1 NPDES Permitted Facilities

The Illinois Environmental Protection Agency (IEPA) issues NPDES permits to industrial facilities (based on SIC code) and maintains information on permitted sites on their website. The City will work with the local office of the Illinois Environmental Protection Agency to review its list of permitted sites or utilize

the website below to make sure all NPDES permitted sites have obtained the proper City of Rockford approvals. This website shall be reviewed quarterly and the database updated as needed. (<https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/industrial-applicants.aspx>)

Since IEPA does not list “No Exposure” certifications on their website the City shall request an updated list annually from IEPA.

5.2 Winnebago County Local Emergency Planning Committee (LEPC)

The LEPC maintains a database of industrial facilities with hazardous materials (Tier II reporting to Illinois Emergency Management Agency). An updated copy of this shall be requested annually and the database updated as needed.

5.3 City of Rockford Water Division

That City of Rockford Water Division shall provide a list of non-residential (more than one unit) users annually. This list can be used to determine existing facilities using water and further to identify any industrial activity not otherwise captured for prioritization. This list shall be updated annually.

5.4 Winnebago County Health Department

The Winnebago County Health Department maintains a list of permanent food establishments in Winnebago County. Since these facilities are inspected on a complaint only basis this list will be updated as staff becomes aware of openings and closings.

5.5 Illinois Department of Agriculture – Motor Fuel Dispenser Information for Businesses

The City utilizes the Illinois Department of Agriculture's database to determine the locations of licensed fueling stations within City limits. This report is updated annually. (https://www2.illinois.gov/sites/agr/Consumers/WeightsMeasures/Documents/WM_SUN_MFD_DEV_by_Result.pdf)

5.8 City Owned Facilities

The database shall include City owned facilities which use or store pollutants or implement activities that may pose a threat to water quality. These facilities shall include, but are not limited to: city yards including vehicle storage and maintenance facilities, well houses, pesticide storage facilities, the compost facility, publicly owned parking lots, and City owned public buildings. While IEPA has confirmed that stormwater discharges from the city yards do not

require authorization under a NPDES permit, the City shall develop a stormwater plan establishing best management practices for that site and shall evaluate that plan annually for potential improvements to best management practices and efficiencies to operations. Changes to the plan shall be summarized in the Annual Report. All other facilities shall maintain Stormwater Pollution Prevention Plans or Spill Prevention Control and Countermeasure plans if required through state or federal requirements.

Well houses are inspected daily by the Water Division for chemical leaks and other issues per Water EPA requirements. All other City owned facilities shall be inspected based on their priority rank. See Appendix B for a list of City owned facilities and their priority ranking.

6.0 Performing Industrial High Risk Runoff Inspections

The Industrial Survey Storm Water Compliance form (Appendix C) shall be completed during the inspection and any noticeable issues addressed with the facility supervisor during an exit interview. The inspector should review all areas of a facility that could impact water quality through stormwater runoff or illicit discharges. During the inspection, City inspectors shall complete the following steps:

- 1) For facilities requiring NPDES Industrial stormwater permitting, an appointment shall be made with the site representative. This is to ensure the appropriate person is onsite and available. For facilities that do not require an industrial stormwater permit unscheduled inspections are preferred.
- 2) If scheduling, obtain a copy of the facilities Stormwater Pollution Prevention Plan (SWPPP) for review in advance of the inspection. If it is not available the SWPPP shall be reviewed during the inspection.
 - a. Review the facilities standard industrial classification (SIC) and confirm a SWPPP or No Exposure certification is required.
 - b. If permitting is required confirm SWPPP is up to date and/or confirm the facility qualifies for the No Exposure certification.
 - c. Review required inspection reports.
 - d. If a facility does not have a permit/SWPPP as required discuss with site manager the permit requirements and determine a timeframe to develop a SWPPP. These facilities shall be referred to the IEPA in a timely manner.
- 3) Review the interior and/or exterior of the facility as needed utilizing the attached inspection report (Appendix C).
 - a. Any items in the visual survey section of the inspection report marked “no” shall be reviewed

with the site manager with possible corrective actions discussed.

- b. Photos may be taken if possible and not against the facility's policy.
 - c. Review the facilities discharge point(s) as indicated on the SWPPP. If the discharge point is not indicated the inspector shall determine the discharge point (i.e. storm drain inlets, where the facilities storm sewer enters the City's right-of-way, an adjacent drainageway, property perimeter etc.). See Table 1 for common discharges produced at generating sites.
 - d. Ensure floor drains are not connected to the stormsewer system.
- 4) Indicators of potential illicit discharges from a facility include:
- a. Odors (gas, sewer, rancid/sour, etc.)
 - b. Deposit/stains (oily, flowline, paint, etc.)
 - c. Pipe Benthic growth
 - d. Dry weather discharges from the facility to the storm sewer system
 - e. Other potential indicators can be found in the Illicit Discharge and Elimination standard operating procedures.
- 5) If an indicator of illicit discharges is present the City may:
- a. If sampling of the questionable discharge is required by the facility's NDPES permit, verify that sampling is being completed and request test results.

- b. If sampling is not required or being completed for the particular discharge in question, or the City questions the accuracy of the facility's test results, the City can request additional sampling to confirm tests. Inspectors shall observe sampling to verify location of sample taken.
- c. Utilize the City's field testing equipment and follow the monitoring standard operating procedures. Sample types shall be based on the type of facility.
 - i. Sampling may need to be completed upstream of the site to verify the source of suspected illicit discharge.
 - ii. If an illicit discharge is not from the facility, initiate an illicit discharge investigation as detailed in the Illicit Discharge Detection and Elimination standard operating procedures.
- d. If test results indicate presence of contaminants including exceedances of NDPEs permit limits, contact IEPA and City legal department to discuss enforcement.
- e. Require facility to implement temporary and/or permanent best management practices based on their response plans and as approved by the City to control or eliminate the contaminant.
- f. Perform subsequent field test to confirm that discharge has been managed appropriately.
- g. All documents, sampling results and conversations shall be saved as indicated later in this document.

6) Letters shall be sent to all NPDES permitted facilities detailing inspection findings and timeframes for performing corrective actions (see sample letter in Appendix D). A copy of this letter shall also be emailed to the Illinois EPA Rockford office (see Appendix A for contact information). For facilities that do not require NPDES permitting, letters shall only be sent if there are corrective actions.

| Table 1: Common Discharges Produced at Generating Sites | |
|---|---|
| Generating Site | Activity Generating the Discharge |
| <p>Vehicle Operations (Maintenance, Repair, Fueling, Washing, Storage)</p> | <ul style="list-style-type: none"> ● Improper disposal of fluids down shop and storm drains ● Spilled fuel, leaks and drips from wrecked vehicles ● Hosing of outdoor work areas ● Wash water from cleaning ● Spills |
| <p>Outdoor Materials (Loading/Unloading, Outdoor Storage)</p> | <ul style="list-style-type: none"> ● Liquid spills at loading areas ● Hosing/washing of loading areas into shop storm drains ● Leaks and spills of liquid stored outside |
| <p>Waste Management (Spill prevention and response, Dumpster management)</p> | <ul style="list-style-type: none"> ● Spills and leaks of liquids ● Dumping into storm drains ● Leaking dumpsters |
| <p>Physical Plant Maintenance (Building repair, Remodeling and maintenance, Parking lot maintenance)</p> | <ul style="list-style-type: none"> ● Discharges from power washing steam cleaning ● Rinse Water and wash water discharges during clean up ● Runoff from degreasing and re-surfacing |
| <p>Turf and Landscaping (Turf Management Landscaping/rounds care)</p> | <ul style="list-style-type: none"> ● Non-target irrigation ● Improper rinsing of fertilizer/pesticide applicators |

| | |
|--|--|
| <p>Unique Hotspot Operations (pools, Golf Courses, Marinas, Construction, restaurants, Hobby Farms)</p> | <ul style="list-style-type: none"> • Discharge of chlorinated water from pools • Dumping of sewage and grease. |
|--|--|

7.0 Enforcement

Enforcement measures shall be in accordance with Chapter 109, Article 13 of the City of Rockford Code of Ordinances and the Stormwater Division Enforcement Response Plan for corrective actions not remedied within the required timeframe.

8.0 Documentation and Record Management

In an effort to reduce paper usage no hard copies of site data (inspection reports and letters) will be kept. All site records will be in digitized form and saved in the Stormwater Drive on the City of Rockford computer system. Digitized information may include: SWPPP, inspection reports/checklists, letters, photos, correspondence, etc. These files will be saved as follows:

- 1) Open the Stormwater Drive (note: this drive has limited access for people who perform duties directly related to the City's stormwater program),
- 2) Open the Inspections and Investigations folder
- 3) Open the IHRRI folder,
- 4) Open the Inspections folder,

- 5) Inspections shall be saved by address and facility name.
- 6) If a folder for a site is already created open it and save the data. Inspection reports should be saved by date. If it is a new site create a new folder.

Any industrial facility site where inspections carry over to the next year shall have the entire digitized inspection folder copied and pasted to the next year. All hard copy inspections shall be saved in the same file.

An excel spreadsheet for all inspections has also been created. This spreadsheet can be found in the Stormwater Drive in the folder entitled *Inspection and Sampling Logs*. All spreadsheets are saved by year for easy tracking. Data includes: date, facility name and address, SIC number, NPDES permit # (if applicable), type of follow-up needed, date of follow-up and whether corrective actions have been addressed. Notes about the inspection can also be included.

Appendix A

Database Contacts

| <u>Company</u> | <u>Name</u> | <u>Phone #</u> | <u>Email</u> | <u>Website</u> |
|---|----------------------------------|----------------|--|---|
| Winnebago County Local Emergency Planning Committee (LEPC) | Captain Erik Meyer | 779-348-7171 | Erik.meyert@rockfordil.gov | |
| City of Rockford Water Division | Jamie Rott | 779-348-7654 | Jamie.rott@rockfordil.gov | |
| Illinois EPA | Terri Lemasters (Springfield) | 217-782-0610 | Terri.lemasters@Illinois.gov | https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/industrial-applicants.aspx |
| | Rockford | 815-987-7760 | | Currently no contact |
| Winnebago County Health Department (may need to submit FOIA) | NA | 815-720-4000 | foia@wchd.org | https://www.wchd.org/freedom-of-information-act |
| Illinois Department of Agriculture | List only | NA | NA | https://www2.illinois.gov/sites/agr/Consumers/WeightsMeasures/Documents/WM_SUN_MFD_DEV_byResult.pdf |

Appendix B

City of Rockford
Updated Facilities Maintenance list 1/2022

| Name | Address | Maintenance frequency | Priority Rank |
|-------------------------|----------------------|-------------------------------------|---------------|
| Armory Bldg* | 605 N. Main St | 2xwk check, vandalism repairs only | Low |
| Barber Coleman* | 1300 Rock St. | 2xwk check, vandalism repairs only | Low |
| Beavermatic/Buckbee* | 424 Buckbee St | daily check, full repairs | Low |
| Broadway storage site* | 1308 Broadway | daily check, vandalism repairs only | Low |
| B Deck parking | 211 Elm St | daily check, full repairs | Low |
| Chick Hotel* | 120 S. Main St. | 2xwk check, vandalism repairs only | Low |
| City Hall | 425 E. State St. | Staffed full time | Low |
| Church School* | 1419 Blaisdale St. | 2xwk check, vandalism repairs only | Low |
| City Yards | 523 S. Central Ave. | Staffed full time | High |
| Cedar St Freight Depot* | 498 Cedar St. | 2xwk check, vandalism repairs only | Low |
| Coucourse parking | 130 S. Church St. | Only check if reported from Parking | Low |
| Coronado PAC | 314 N. Main | They Maintain their own since 2010 | Low |
| Davis Park* | 320 S Wyman | 1xwk check, medium repairs | Low |
| Geo3Newtowne | 557 S. New Towne Dr. | New Policing Site/Daily Requests | Low |
| Geo2Turner | 1406 Broadway | New Policing Site/Daily Requests | Low |
| Geo1Avon | 1045 W. State st | New Policing Site/Daily Requests | Low |
| Geo4Shepherd | 4801 Shepherd trail | New Policing Site/Daily Requests | Low |
| Human Services | 612 N. Church | They Maintain their own since 2018 | Low |
| Jefferson St storage | 300 Madison St. | 1xwk check, medium repairs | Low |
| Murphy Evidence Storage | 500 S. Independence | daily check, full repairs | Low |
| Pioneer parking | 328 N. Wyman | daily check, full repairs | Low |
| Roundabout@Main | Main and Auburn | daily check, full repairs | Low |
| State/Main parking | 102 N. Main St. | only check if reported from Parking | Low |
| Shumway/RAAC | 713 E. State St. | Occupied/ tenant requested repairs | Low |
| Trekk building* | 134 N. Main St. | 2xwk check, vandalism repairs only | Low |
| Water Division Main | 1111 Cedar St. | daily check, full repairs | Low |
| Watch Factory* | 325 S. Madison St. | 2xwk check, vandalism repairs only | Low |
| Wellness Center | 120 N. 3rd St. | daily check, full repairs | Low |

Fire Department Properties

| | | | |
|--------------------|---------------------|---------------------------------------|-----|
| Fire Station #1 | 528 Woodlawn Ave. | fire secured, requested repairs daily | Low |
| Fire Station #2 | 1004 7th St. | fire secured, requested repairs daily | Low |
| Fire Station #3 | 802 Marchesano Dr. | fire secured, requested repairs daily | Low |
| Fire Station #4 | 2959 Shaw Woods Dr. | fire secured, requested repairs daily | Low |
| Fire Station #5 | 501 Trainer Rd. | fire secured, requested repairs daily | Low |
| Fire Station #6 | 3329 W. State St. | fire secured, requested repairs daily | Low |
| Fire Station #7 | 2323 Sawyer Rd. | fire secured, requested repairs daily | Low |
| Fire Station #8 | 505 Sherman St. | fire secured, requested repairs daily | Low |
| Fire Station #9 | 2416 Halstead St. | fire secured, requested repairs daily | Low |
| Fire Station #10 | 3407 Rural St. | fire secured, requested repairs daily | Low |
| Fire Station #11 | 2117 Calgary Ct. | fire secured, requested repairs daily | Low |
| Fire HQ/911 Center | 204 S. 1st St. | daily check, full repairs | Low |
| Fire Repair Shop | 4979 Falcon Rd. | fire secured, requested repairs daily | Low |
| Fire Storage Site | 110 N. Pierpont | fire secured, requested repairs | Low |

Well Houses

City of Rockford

Standard Operating Procedures for Industrial High Risk Runoff Inspection Program

| | | | |
|-------------------------------|-----------------------|--------------------------------|-----|
| Well 3 Base Well | 1404 Riverbluff Blvd. | Daily Check, water Dept. Staff | Low |
| Well 4 Land to be sold | 801 Marchesano Dr. | Daily Check, water Dept. Staff | Low |
| Well 5 - 5A Treatment plant | 2526 Pelham Rd. | Daily Check, water Dept. Staff | Low |
| Well 6 Base Well | 2604 19th Ave. | Daily Check, water Dept. Staff | Low |
| Well 9A Secondary Well | 2708 Crosby St. | Daily Check, water Dept. Staff | Low |
| Well 10 Treatment plant | 4316 Newburg Rd. | Daily Check, water Dept. Staff | Low |
| Well 11 Land to be sold | 1218 7th Ave. | Daily Check, water Dept. Staff | Low |
| Well 12 Land to be sold | 1022 Benton St. | Daily Check, water Dept. Staff | Low |
| Well 13 Treatment plant | 4625 Skyline Dr. | Daily Check, water Dept. Staff | Low |
| Well 15 Zone Control Valve | 3030 Chestnut St. | Daily Check, water Dept. Staff | Low |
| Well 16 Land to be sold | 4550 Harrison Ave. | Daily Check, water Dept. Staff | Low |
| Well 17 Secondary Well | 3700 Brookview Rd. | Daily Check, water Dept. Staff | Low |
| Well 18 Base Well | 1409 S. Johnston Ave. | Daily Check, water Dept. Staff | Low |
| Well 19 Used for storage only | 1220 Lockheed Lane | Daily Check, water Dept. Staff | Low |
| Well 20 Land to be sold | 2434 N Central Ave, | Daily Check, water Dept. Staff | Low |
| Well 21 Base Well | 703 Daisyfield Rd. | Daily Check, water Dept. Staff | Low |
| Well 22 Base Well | 5110 Auburn St. | Daily Check, water Dept. Staff | Low |
| Well 23 Secondary Well | 1206 Elmwood Rd. | Daily Check, water Dept. Staff | Low |
| Well 24 Base Well | 6475 Cessna Dr. | Daily Check, water Dept. Staff | Low |
| Well 25 Secondary Well | 5602 Springcreek Rd. | Daily Check, water Dept. Staff | Low |
| Well 26 Secondary Well | 5516 E State St. | Daily Check, water Dept. Staff | Low |
| Well 27 Land to be sold | 5834 Guilford Rd. | Daily Check, water Dept. Staff | Low |
| Well 28 Secondary Well | 5400 Kishwaukee Rd. | Daily Check, water Dept. Staff | Low |
| Well 29 Treatment plant | 4750 Pepper Dr. | Daily Check, water Dept. Staff | Low |
| Well 30 Treatment plant | 6544 Palo Verde | Daily Check, water Dept. Staff | Low |
| Well 31 Treatment plant | 1780 Bell School Rd. | Daily Check, water Dept. Staff | Low |
| Well 33 Used for storage only | 930 Arthur Ave. | Daily Check, water Dept. Staff | Low |
| Well 34 Base Well | 3945 Dawes Rd. | Daily Check, water Dept. Staff | Low |
| Well 35 Secondary Well | 2944 Bildahl St. | Daily Check, water Dept. Staff | Low |
| Well 36 Treatment plant | 4141 Samuelson Rd. | Daily Check, water Dept. Staff | Low |
| Well 37 Base Well | 2100 Huffman Blvd. | Daily Check, water Dept. Staff | Low |
| Well 39 Secondary Well | 7423 Springbrook Rd. | Daily Check, water Dept. Staff | Low |
| Well 40 Treatment plant | 788 Lyford Rd. | Daily Check, water Dept. Staff | Low |
| Well 42 Treatment plant | 6733 Newburg Rd. | Daily Check, water Dept. Staff | Low |
| Well 43 Treatment plant | 3447 Publishers Dr. | Daily Check, water Dept. Staff | Low |
| Well 44 Base Well | 5250 Owen Center Rd. | Daily Check, water Dept. Staff | Low |
| Well 45 Base Well | 1141 Cedar St. | Daily Check, water Dept. Staff | Low |

(The asterisk denotes properties potentially for sale)

Appendix C

**Industrial Survey
Storm Water Compliance Form**

| | | |
|---|---|--------------------|
| COMPANY NAME | | DATE |
| ADDRESS | | |
| CITY, ZIP | TELEPHONE | |
| MAILING ADDRESS (if different from site address) | MAILING CITY, ZIP | |
| CONTACT | TITLE | EMAIL/PHONE NUMBER |
| SIC CODE | Does the facility have a NPDES industrial storm water permit or a 'No Exposure' Exemption? (circle one) | |
| DAYS OF WEEK FACILITY CONDUCTS BUSINESS (CIRCLE): Sun Mon Tues Wed Thurs Fri Sat Hours of Operation: _____ | Yes No Is the SWPPP available or review? Yes No NA | |
| Weather Conditions: <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: Temperature: _____ | | |
| Briefly describe the principal activities that occur on-site including all manufacturing and/or services provided. | | |
| Are any vehicles serviced or washed/cleaned at this facility? (circle one) Yes _____ No _____ If yes, is this performed indoors or outdoors? Indoors _____ Outdoors _____ | | |
| Does the waste drain to (circle one): Rockford sanitary sewer Dry well Storm sewer 100% recycled Collected for off-site disposal | | |
| Are any materials/products stored outdoors (i.e. chemicals, equipment, tanks, drums, barrels, etc.)? Yes ___ No ___ If Yes what is the material? _____, Where is it stored? _____ How is it stored? (pallets, undercover, etc.) _____ | | |
| Do you use or store liquid chemicals in quantities of 25 pounds or more? (circle one) Yes _____ No _____ If yes, is this indoor or outdoor storage? Indoor _____ Outdoor _____ If outdoors, where and how? _____ If Yes what is the chemical? _____ Is there secondary containment? (circle one) Yes _____ No _____ | | |
| Proximity to water bodies, drainageways and inlets? | | |
| Do you use or store dry chemicals in quantities of 500 pounds or more? (circle one) Yes _____ No _____ If yes, is this indoor or outdoor storage? Indoor _____ Outdoor _____ If Yes what is the chemical? _____ | | |
| Does the facility generate <i>any</i> wastewater excluding domestic wastewater? (circle one) Yes _____ No _____ If yes, please describe the wastewater. (circle all that apply) Boiler blowdown Noncontact cooling water Process water Remediation water Cooling tower blowdown Wash water (vehicle, equipment, etc.) Other _____ | | |
| Is this wastewater discharged to the City of Rockford stormsewer system? (circle one) Yes _____ No _____ Unknown _____ | | |
| Is this wastewater discharged to the sanitary sewer system? (circle one) Yes _____ No _____ Unknown _____ | | |

| VISUAL SURVEY | YES | NO | N/A |
|--|-----|----|-----|
| GENERAL – Are regular housekeeping practices carried out? Are good housekeeping procedures and reminders posted in appropriate locations? | | | |
| SPILL CONTAINMENT - Are appropriate spill containment and cleanup materials kept on-site and in convenient locations and are staff familiar with these locations and use of the material? | | | |
| EQUIPMENT - Is exposed piping and process equipment regularly inspected and/or tested to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters? | | | |
| OUTSIDE AREAS (Free of staining & debris; exhibits good housekeeping; maintained in a manner to prevent runoff) | | | |
| CHEMICAL STORAGE – The outside storage area is kept to minimize the possibility of a release. Chemicals/materials are protected from precipitation/storm water runoff and the containers show no signs of leaking. | | | |
| DUMPSTERS – No liquids are leaking from the dumpster; surrounding area is free of trash. Distance from water bodies, inlet and drainageways. _____ | | | |
| ABOVEGROUND STORAGE TANKS – No ground staining, no spillage observed and no discharge to storm drain. Tanks are maintained to minimize the possibility of a release (secondary containment). | | | |
| ONSITE STORM DRAIN – Protected from accidental discharge other than water. | | | |
| POWER WASH OR STEAM CLEAN - (discharge to sewer) Drains to oil/water separator connected to a sanitary sewer and not a septic system. Steam cleaning not discharged to parking lot, storm drain or soil. | | | |
| PARKING LOT/DRIVEWAY – Free of excess trash, chemical staining or liquids other than water. | | | |
| No Indicators are present to suspect an illicit discharges or connections? If answered “no” list indicators: | | | |
| MOP WATER TO SANITARY SEWER VIA CLARIFIER – Mop water is not dumped to the soil, parking lot, gutter, or other areas susceptible to storm water drainage. | | | |
| OTHER – Non-storm water discharge (i.e. non-hazardous process discharge) | | | |
| OVERALL EVALUATION/COMMENTS: | | | |

Inspector Signature: _____ Date: _____

Appendix D



Kyle Saunders
Director
Public Works Department

Insert Date

*(Insert name & address of
Permit holder)*

RE: Industrial Inspection at *(insert facility name)* (ILR00 *insert permit # if applicable*)

Dear Mr. /Ms. ;

An industrial inspection for stormwater compliance was completed on *(insert date)* by the City of Rockford. The purpose of the inspection was to determine if stormwater pollution prevention measures are adequate for the site and to determine if the site was in compliance with the City of Rockford's Code of Ordinances.

The inspection identified the following items needing corrections to comply with your IEPA Industrial Stormwater Permit and Chapter 109 of the City of Rockford Code of Ordinances:

1. List all items needing to be addressed

Note: if no corrected actions are needed indicate that in the above paragraph

I have included a copy of the IEPA industrial stormwater permit for your review and implementation. I have also included a link to the IEPA website which details the industrial permitting requirements.

<https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/industrial.aspx>

Please update the City via phone or email within 30 days to review your progress in completing the above items. Failure to contact the City shall result in enforcement measures as indicated in Chapter 109 of the City of Rockford's code of Ordinances.

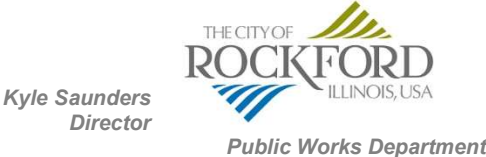
If you have any questions regarding this inspection please contact (Insert: Name, Title, Phone #, Email address).

Sincerely,

Name

Title

City of Rockford
Public Works Department
425 E. State Street
Rockford, IL 61104



| | |
|--------------|--|
| Photo # | Address: |
| Taken By: | Date: |
| Description: | <p style="text-align: center;"><i>Place Photo Here</i> <i>Note: Ask permission before taking photo's at industrial facilities</i> <i>Proprietary rules may bin place</i></p> |

| | |
|--------------|--|
| Photo # | Address: |
| Taken By: | Date: |
| Description: | <p style="text-align: center;"><i>Place Photo Here</i> <i>Note: Ask permission before taking photo's at industrial facilities</i> <i>Proprietary rules may bin place</i></p> |

Note: the attached photos indicate examples of corrective actions observed at this facility. When performing maintenance as indicated in the photos, check the entire site for other areas with similar maintenance needs.



**STORMWATER AND ENVIRONMENTAL
EDUCATION
STANDARD OPERATING PROCEDURE**

January 2022

1.0 General

The purpose of this standard operating procedure for the Stormwater & Environmental Education program is to comply with Part II, A.6.B AND Part II,A.10 of the City of Rockford's NPDES Stormwater Permit (ILS000001). The Engineering Operations Manager oversees the City's Stormwater Programs and the Stormwater and Environmental Program Manager manages the program. This document outlines how City staff and the public will be educated regarding the City's stormwater programs.

2.0 Staff Training

Public Works Engineering Division staff shall receive annual training in the following areas regarding the stormwater program:

- 1) General overview of the stormwater program
- 2) Illicit Discharge Detection and Elimination
- 3) Erosion and Sediment Control Requirements

The Stormwater Program shall be presented by the Stormwater team either in person or through Power DMS, the City of Rockford's online training portal.

All Public Works Engineering Division technical staff shall also attend additional training, both internally and externally, for any other stormwater related topics when necessary and as scheduling allows them to do so. Internal training may

include supervisor meetings, contractor meetings, pre-construction meetings and informal reviews of stormwater program.

The City receives training notices from a variety of different sources. These include, but are not limited to: Illinois EPA, local soil and water conservation districts, USEPA (primarily webinars), Lorman, Illinois Association of Floodplain Managers and the American Public Works Association. Typically the Stormwater Managers are notified of upcoming training who then forward the information to the Engineer Division staff. Other training opportunities will be reviewed as they become available.

Tracking: All training received by staff is recorded in the Stormwater Drive along with any certificates received (see section 4.0). All in-house training shall be saved in the same location. Sign –in sheets, instructor and topics discussed shall be included in the respective folders. Copies of certificates shall be given to the Stormwater Manager to be saved in the Stormwater Drive.

In-depth in-house training shall be provided to designated staff in the City of Rockford Public Works Engineering Division for the following stormwater related topics:

2.1 Private Detention Basin Inspections (training every other year or prior to event inspections as described in the Standard Operating Procedures for Detention Basins –

Section 4.2) – presented by the Stormwater Manager or Designee

1. Public Works Engineering Division staff attendance shall include: Stormwater Manager, Assistant Stormwater Manager, Stormwater Coordinator and Senior Engineering Techs. For Private basin event inspections all engineers, managers, technicians, and coordinators will be trained.
2. Topics to include: review of Standard Operating Procedures Detention Basins and the detention basin maintenance guide, Identifying and locating detention basins, procedures for conducting inspections and recording and saving inspection reports and photos.

2.2 Public and Priority Private Detention Basin Inspections (annual training)

1. Public Works Engineering Division staff attendance shall include: Stormwater Manager, Assistant Stormwater Manager, Stormwater Coordinator and designated Project Manager and Engineering Tech.
2. Topics to include: review of Standard Operating Procedures for public and high priority detention basins, list of basins, when to perform event inspections, procedures for conducting inspections and recording and saving inspection reports and photos.

2.3 Inlet & Storm Pipe Inspections (annual training)

1. Staff attendance shall include: Street Supervisors and designated street maintenance staff
2. Topics to include: Review of standard operating procedures, inspecting inlets and storm pipes, procedures for cleaning of inlets and disposal of material.

2.4 Creek Inspections (training to be held every other year)

1. Public Works Engineering Division staff attendance shall include: Stormwater Manager, Assistant Stormwater Manager, Stormwater Coordinator and Engineering Techs (2).
2. Topics to include: Identify eroding stream channels, review of creek inspection form, reporting and documenting inspections.

2.5 Erosion and Sediment Control on Non-City Construction Projects (annual training) – presented by Stormwater Manager or Designee.

1. Public Works Engineering Division staff attendance shall include: , Stormwater Manager(s), Stormwater Coordinator and designated Project Manager and Engineering Tech.
2. Topics to include: ILR10 general construction

permit requirements, common BMP's from Illinois Urban Manual and the IDOT Manual, requirements and procedures for conducting inspections, follow up and enforcement procedure and record keeping.

2.6 Street Sweeping (annual training) Presented by Street Sweeping Contractor

1. Street sweeping contractor shall be responsible for training of their staff and maintaining all training records.

2.7 Nuisance Flooding and Drainage Complaints (Annual training) – presented by Stormwater Manager or designee

1. Staff Attendance shall include – Stormwater Managers, Stormwater Coordinator, designated Sr. Environmental Techs.
2. Topics to include: receiving complaint, completing investigation, resolution, closing out.
- 3.

2.8 Flood Control and Floodplain Management (annual training) – presented by the City Floodplain Manager

1. Staff attendance shall include: Designated Managers, Coordinators & Technicians
2. Topics to include: floodplain regulations, review of areas where nuisance flooding occurs, IDNR/ACOE regulations.

2.9 Pesticide, Herbicide & Fertilizer Applications

1. Since all City of Rockford employees who perform PHF applications are licensed through the Illinois Department of Agriculture, training shall be what is required to acquire and maintain their certifications.
2. The Forestry Supervisor shall track licensing and required training to maintain certifications.

2.10 Illicit Discharge Detection and Elimination Program (annual training) - presented by the Stormwater Manager or Designee

1. Staff attendance shall include:
 - a. Public Works Engineering Division: Engineers, Managers, Technicians, Coordinators and street supervisors.
 - b. Community and Economic Development – inspectors, Enforcement Specialists
2. Topics to include: IDDE program – allowable discharges, indicators of potential illicit discharges, process to report potential illicit discharges reporting and documenting observations.

2.11 Outfall Inspections (training to be held every other year)

1. Public Works Engineering Division staff attendance

shall include: Stormwater Manager, Asst. Stormwater Manager, Stormwater Coordinator and Engineering Techs (2).

2. Topics to include: Review of Standard Operating Procedures for IDDE, procedures/protocols for Monitoring (including outfall screening and sampling) and outfall inspection sheet, reporting and documenting inspections.

2.12 Industrial High Risk Runoff Program (annual training)

1. Public Works Engineering Division staff attendance shall include: Stormwater Manager, Asst. Stormwater Manager, Stormwater Coordinator and Engineering Techs (2).
2. Topics to include: Review of Standard Operating Procedures for Industrial High Risk Runoff Program including procedures for conducting inspections, List of IHRRI facilities, reporting and documenting inspections.

2.13 Monitoring Program (annual training)

1. Public Works Engineering Division staff attendance shall include: Stormwater Manager, Asst. Stormwater Manager, Stormwater Coordinator and Engineering Techs (2).
2. Topics to include: Review of Standard operating

procedures for Monitoring Program and IDDE, reporting and documenting samples review on operating equipment.

3.0 Public Education

The City continues to review ways to increase public awareness on reducing contaminants in our stormwater to improve water quality. These activities adopted to date include:

3.1 Educational Brochures

Several brochures regarding a number of topics about improving our stormwater quality have been developed. These are all available for the public at City Hall and can also be found on the City's website at (<http://rockfordil.gov/public-works/engineering-cip/stormwater.aspx>). In addition, public works staff has placed brochures at locations throughout the City as an added effort to educate the public including but not limited to: Rockford Park District and Winnebago County Soil & Water Conservation District. Educational brochures and documents available include:

- Concrete Washout
- Erosion and Sediment Control
- Fertilizer and Pesticide Applications
- Hazardous Materials

- Illicit Discharge and Detection
- Pet Waste
- Water Friendly Landscaping
- Residential Deicing
- Recycling
- City's Stormwater Management Program
- Yard waste
- Citizens Guide to Pest Control & Pesticide Safety
- Rain Garden "How To" Manual
- Fats, Oil & Grease

The City will evaluate the need for additional education materials on an annual basis and will identify any new brochures or other materials in the City's annual reports.

3.2 Public Presentations/Meetings

When applicable, displays will be at public/private events. Presentations shall be made at neighborhood meetings, seminars, workshops as requested. A preliminary list of neighborhood meetings is included on the City of Rockford's SharePoint site under: Public Works, Engineering/Admin, Neighborhood Assoc. meetings. The City's annual reports will summarize the public presentations provided during the year.

3.3 Erosion and Sediment Control Seminar

The City shall host its annual contractor's

preconstruction meeting for developers, development engineers, construction site operators and other interested parties. These seminars may cover a variety of topics including erosion and sediment control on construction sites. Meeting attendees will be tracked.

3.3 Public Reporting Tools

The public is encouraged to report any concerns about stormwater contaminants. The hotline (779-348-7300) and an online reporting tool (see web link in 3.4) are in place for the public to report a stormwater pollution concern.

A Stormwater link has been included on the City of Rockford's website:

<https://rockfordil.gov/274/Stormwater-Environmental-Team>

This link is designed to educate the public about our stormwater programs and other environmental topics and how they can help the City to improve the quality of water in the Rockford area.

4.0 Documentation and Record Management

All staff and public educations shall be saved in the Stormwater Drive.

These files shall be saved as follows:

- 1) Open the Stormwater Drive (note: this drive has limited access for people who perform duties directly related to the City's stormwater program),
- 2) Open the Education folder,
- 3) Open the folder for the current year,
- 4) Open folder for Community or staff education
- 5) Create a folder for the training, note: title of folder should show date and name of training (i.e. *2013.03.06 SWCD ESC Seminar*)
- 6) Data to be saved within folders may include: agenda, attendees (include certificate if received), correspondence

An excel spreadsheet for all inspections and education opportunities has also been created. This spreadsheet can be found in the Stormwater Drive in the folder entitled ***Inspection and Sampling Logs***. All spreadsheets are saved by year for easy tracking. Data for education includes: date of event, type of public education/staff training, presenter/attendees, title of program, # in attendance and # and type of educational brochures handed out.



**MONITORING AND SAMPLING
PROGRAM
STANDARD OPERATING PROCEDURES**

1.0 General

The purpose of this standard operating procedure (SOP) for the Monitoring Program is to comply with Part II, A.7 & 9 and Part V, A & B of the City of Rockford's NPDES Storm Water Permit (ILS000001). This document addresses the procedures for the collection of water quality samples in varying conditions and locations for Representative Monitoring, Industrial High Risk Runoff and Illicit Discharge Detection & Elimination Monitoring. The City shall follow the NPDES Permit terms should there be any conflict or deviation with any portion of this SOP.

Additional guidance can be found in: *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments* by the Center for Watershed Protection.

2.0 Legal Authority

Legal authority for the Monitoring Program is found in the City of Rockford's Code of Ordinances Chapter 109, Article 12.

3.0 Staffing

Positions of the City of Rockford's Stormwater Environmental Team (SWET) include: Stormwater Manager, Assistant Stormwater Manager, Stormwater Coordinator and designated Senior Engineering Techs (2).

Monitoring & sampling will be performed by the Public Works Engineering Division utilizing the following staff positions: Stormwater Manager(s), Assistant Stormwater Manager(s), and Coordinator(s), Engineering Tech(s). These positions shall be trained to perform these functions according to the Standard Operating Procedures for Stormwater and Environmental Education and shall be familiar with this document.

Safety while completing any of these tasks is a top priority. Staff should always be aware of their surroundings and any potential hazards in the area.

4.0 Laboratory

The City shall use the Four Rivers Sanitation Authority (FRSA) Laboratory (unless otherwise determined by the City) to analyze the samples collected. The laboratory hours are from 8:00 am – 4:30 pm on weekdays and are closed on weekends. Grab samples of fecal coliform are not accepted on Fridays or after 3:30 pm, Monday thru Thursday.

Field staff completing the sample collection should notify the lab contact or lab (typically by email) to inform them a delivery is forthcoming prior to the start of the sample collection operation.

Location

FRSA Lab
3333 Kishwaukee Street
Rockford, Illinois 61109
(815) 387-7522
web_lab@fourrivers.illinois.gov

Lab Contact

Mary Johnson, Lab Supervisor
mjohnson@fourrivers.illinois.gov
(815) 387-7523

The field staff that collected the sample shall be the same person to deliver the sample to the lab. If this cannot be accomplished then it shall be documented when and to whom the sample was transferred to for delivery on the Sample Sheets.

5.0 Representative Monitoring

The City's representative monitoring program includes in-stream sampling of tributaries to the Rock River and representative outfalls. Appendix A lists the Analytical Parameters to be sampled.

5.1 Tributary Monitoring

Tributary sites are analyzed for a suite of nutrient, heavy metal, and conventional water quality parameters, as noted in Appendix A.

5.1.1 Locations

Samples are collected at the following five (5) urban tributary locations:

(Refer to the site maps being Appendixes D-H for detailed locations)

| Site ID | Locations |
|---------|---------------------------------------|
| T1 | North Kent Creek @ Fairgrounds Park |
| T2 | South Kent Creek @ Tay & Corbin St.'s |
| T3 | Keith Creek @ Tenth Avenue Park |
| T4 | Keith Creek @ Dahlquist Park |
| T5 | Spring Creek @ Starkweather Avenue |

5.1.2 Frequency

Four dry weather samples will be collected on the second Monday in the months of February, May, August and November. A dry weather period is that which occurs at least 72 hours from a previously measurable (greater than 0.1 inch rainfall) storm event. The day of Monday was selected to complete these sample collections is based on an understanding with the FRSA Lab and their workload. If weather conditions preclude collection of samples as scheduled, the sample collection shall be re-scheduled with the FRSA Lab when and as conditions allow. Some conditions that may delay the collection of samples include but are not limited to: extreme temperatures, frozen flows, flooded conditions, high velocity flows and/or drought conditions.

5.1.3 Supplies and Equipment

The basic supplies and equipment needed to collect water quality samples from flowing tributaries includes:

- Safety vest

- Hip waders
- YSI Pro DSS Water Quality Meter Cooler (for storing and transporting samples)
- Ice (for preserving samples – obtained at the City Yards)
- Permanent marker (for labeling sample bottles)
- Tributary Sample Sheets, Appendix N
- Five (5) one-gallon plastic jugs (from the laboratory)
- Five (5) sterile six-ounce bottles (from the laboratory)
- Labels for the jugs and the sterile bottles (from the laboratory)

5.2 Representative Outfalls

The City of Rockford's NPDES Storm Water Permit No. ILS000001 (City's permit) details most of the criteria & requirements cited in this section. The City's permit identifies five representative outfall locations for monitoring.

5.2.1 Locations

Samples are collected at the following five (5) representative outfall locations:

(Refer to the site maps being Appendixes I-M for detailed locations)

| Source: Rockford Storm Water NPDES Permit No. ILS000001 | | |
|--|--|--|
| Outfall | Location | Watershed Description |
| Station R1 | Paradise Boulevard | 225 ac residential & open space |
| Station R2 | Market St. & N. Water St. | 50 ac commercial, offices & residential |
| Station R3 | Fairview Blvd & Crosby St. | 510 ac residential |
| Station R4 | 8 th Street & Wills Avenue | 780 ac industrial, commercial & residential |
| Station R5 | Forest View Rd & 28 th Ave | 80 ac light industrial |

These sites have been prepared for the installation of automatic samplers and tip-bucket rain gauges.

5.2.2 Frequency

Samples shall be collected in the spring and fall for a total of two sets of the required samples at each location (R1-R5) each year. Samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event.

5.2.3 Rain Event Data Collection

Data must be maintained for the following of each rain event:

- Date of event
- Duration of event (in hours)

- Rainfall measurements or estimates (in inches)
- Duration between event and end of previous event (in hours)
- Estimate of the total volume of the discharge sampled (in gallons)

The source of weather observation data to be used by Staff is from the National Weather Service website

(<http://w1.weather.gov/data/obhistory/KRFD.html>)

which reports the past 72 hours of weather data (including hourly rainfall data) from the Chicago Rockford International Airport. Copy and paste this data into the Rain Event data log spreadsheet found in the City's Storm Water directory.

5.2.4 Sampling Techniques for Representative Outfalls

The City's permit allows for grab samples and/or composite samples to be collected from the outfall sites. The use of automatic samplers is also allowed given proper programming of the unit. Appendix B denotes which technique to use, grab or composite, based on the type of sample to be collected.

5.2.4.1 Grab Sampling for Representative Outfall

Grab samples may be taken by hand or with the use of automatic samplers. Sampling consists of 3 grab samples; the first grab

sample shall be taken within 2 hours after the commencement of the storm event. The second and third grab samples shall be taken at intervals of not less than 2 hours thereafter. Should the discharge cease before the 2nd and 3rd samples can be taken, Staff shall identify the approximate time that the discharge ceased.

5.2.4.2 Composite Sampling for Representative Outfall

Composite samples may be taken using automatic samplers that are triggered using either tipping-bucket rain gages programmed to initiate sampling after 0.1 inch of rain, or flow meters programmed to initiate sampling after 0.1 inches of runoff. Using automatic samplers to collect a composite sample is the preferred method.

5.2.4.3 Fecal Coliform Grab Sample for Representative Outfall

Staff will complete a grab sample to be tested for fecal coliform independent of the use of a composite or grab sampling technique. If possible, this grab sample will take place during the same storm event, but if this cannot be performed, these samples will be taken from separate events.

These samples should be collected directly from the discharge stream into the sterilized 6 oz. Nalgene sample bottle.

5.2.5 Supplies and Equipment

The basic supplies and equipment needed to collect water quality samples from flowing tributaries includes:

- Safety vest
- Manhole hook
- YSI Pro DSS Water Quality MeterCooler (for storing and transporting samples)
- Ice (for preserving samples – obtained at the City Yards)
- Permanent marker (for labeling sample bottles)
- Storm Sewer Sample Sheets, Appendix N
- Five (5) one-gallon plastic jugs (from the laboratory)
- Five (5) 1 liter glass sample bottle (from the laboratory)
- Five (5) sterilized, 6 oz. Nalgene sample bottle (from laboratory)
- Labels for the jugs and the sterile bottles (from the laboratory)
- ISCO automatic sampler (if necessary – pre-event setup required)
- Two-gallon polyethylene bottle (for use with automatic samplers).

Sample Bottles, Preservatives, and Maximum Holding Times

Field Technicians will deliver samples to the Laboratory within three hours of collection. Laboratory Analysts will split the sample needed for the analyses required and preserve accordingly.

5.3 Collection of Grab Samples

The laboratory will provide sample containers in accordance with Appendix B. The labeled uncapped bottle is submerged in the flow by hand, and allowed to fill without entraining surface or bottom debris. A rubber glove will be worn on the hand holding the sample bottle. The sample is taken from a visibly flowing location that is deep enough to accommodate the sample container under these conditions. If there is no flow the samples should not be collected. Stagnant pools will not be sampled.

The filled containers are immediately placed in a cooler with water ice. The minimum information required on the label is the site identifier code, date and time, and sample designation (bottle type) as shown below. Laboratory issued stickers and/or tags may be used.

| |
|--|
| T-1 07-21-13 @ 1200 Fecal Coliform |
|--|

5.4 Collection of Composite Samples

Composite samples are collected using the automatic samplers. Based on previous data, in order to collect the appropriate quantity for the required samples, the sampled rain event must produce .0.3 inches of total rainfall.

The samplers must be in-place prior to the start of a rain event. Installation and setup of the sampler is important for proper function. The following is a list of tasks to complete during this process:

- Install sampler before rain event
- Make sure battery for the sampler holds enough charge
- Verify the sampler is programmed properly (weather time or rain gauge weighted)
- Verify the intake tube is free of kinks and the line is clear of debris
- When using the tip bucket trigger, verify the connection is free of debris and moisture
- When using the tip bucket trigger, verify the tip bucket and screen is free of debris. A ladder will be required to complete this.
- Verify the program have been started before replacing the cover on the sampler

When staff returns for the collection of the sample, document the readout of the samplers display before completing other tasks. This data will provide rainfall totals registered by the sampler.

Pull the samplers internal bottle out and carefully fill the sample bottles provided by the laboratory. The sample bottle should not be filled to the top. The filled containers are immediately placed in a cooler with water ice. The minimum information required on the label is the site identifier code, date and time, and sample designation (bottle type) as shown below. Laboratory issued stickers and/or tags may be used.

| |
|-------------------------------|
| R-1 07-21-13 @ 1200 FOG |
|-------------------------------|

5.5 YSIPro DSS Water Quality Meter– Field measurements

Field measurements of water quality (pH, DO, temperature, conductivity) are made in the same location following water sample collection. The meter must be properly calibrated according to the manufacturer's instructions for accurate measurements to be taken. Record this information on the Tributary or Storm Sewer Sample Sheet.

6.0 Illicit Discharge Detection and Elimination Indicator Monitoring

Illicit Discharge Detection & Elimination (IDDE) indicator monitoring is used to confirm illicit discharges, and provide clues about their source or origin when discovered through tributary, outfall monitoring or IDDE SOP. In addition, this monitoring can measure improvements in water quality during dry weather flow.

6.1 Where to Collect Samples

Indicator sampling normally occurs at three principle locations in the storm drain system to detect illicit discharges – at the outfall, in the stream, and within the storm drain pipe network.

Monitoring of dry weather flows from outfalls is the most common location for indicator sampling.

In-stream monitoring involves sample collection during dry weather flow conditions. Stream monitoring is less precise than outfall monitoring at detecting individual discharges. It can detect the most severe or high volume discharges, and measure progress over time in terms of changes in stream water quality.

In-pipe sampling is often needed to track down and isolate individual discharges once a potential discharge problem is encountered at an outfall.

6.2 When to Collect Samples

Indicator samples should be collected during dry weather periods to avoid flowing outfalls caused by storm water or groundwater infiltration. A dry weather period is that which occurs at least 72 hours from a previously measurable (greater than 0.1 inch rainfall) storm event. An exception to this is for response to reported active illicit discharges to which an investigation should occur immediately.

Time of day that sampling is conducted is particularly important when the suspected source is residential sewage. Peak water usage occurs in the morning and evening, therefore sampling in the early morning is recommended in these situations.

6.3 Supplies and Equipment

The basic supplies and equipment needed to collect water quality samples for IDDE includes:

- Safety vest
- Manhole hook
- YSI Pro DSS Water Quality Meter
- Hach DR 900 Colorimeter
- Hach 2100 Turbidity Meter
- Cooler (for storing and transporting samples)
- Ice (for preserving samples – obtained at the City Yards)
- Permanent marker (for labeling sample bottles)
- Storm Sewer or Tributary Sample Sheets

- One-gallon plastic jug per sample set (from the laboratory)
- One liter glass sample bottle per sample set (from the laboratory)
- Six oz. Nalgene sterilized sample bottle per sample set (from laboratory)
- Labels for the jugs and the sterile bottles (from the laboratory)
- ISCO automatic sampler (if necessary – pre-event setup required)
- Two-gallon polyethylene bottle (for use with automatic samplers).

Sample Bottles, and Maximum Holding Times

Field Technicians will deliver samples to the Laboratory within three hours of collection. Laboratory Analysts will split the sample needed for the analyses required and preserve accordingly.

6.4 Water Quality Indicators Used to Identify Illicit Discharges

Different water quality parameters can be used to confirm the presence or origin of an illicit discharge at a flowing storm drain outfall. These parameters, which are discussed in more detail in Appendix C, include:

- Ammonia
- Boron
- Chlorine
- Color
- Conductivity
- Detergents

- *E. Coli*, enterococci, or total coliform
- Fluoride
- Hardness
- pH
- Potassium
- Surfactants
- Turbidity

Table 1 summarizes these parameters, compares their ability to detect different flow types, and reviews some of the challenges that may be encountered when analyzing them in the lab or in the field.

| Table 1: Water Quality Parameters Used to Identify Illicit Discharges | | | | | |
|--|---------------------------------|-------------------|------------------|-------------------------------------|---|
| Parameter | Flow Types It Can Detect | | | | Analytical Challenges |
| | Sewage | Wash Water | Tap Water | Industrial/ Commercial Waste | |
| Ammonia | ● | ⊙ | ○ | ⊙ | Can change into other forms of nitrogen as flow travels to the outfall |
| Boron | ⊙ | ⊙ | ○ | N/A | |
| Chlorine | ○ | ○ | ○ | ⊙ | High chlorine demand in natural systems limit usefulness to flow with very high chlorine concentrations |
| Color | ⊙ | ⊙ | ○ | ⊙ | |
| Conductivity | ⊙ | ⊙ | ○ | ⊙ | Not useful in natural systems with high salinities |
| Detergents | ● | ● | ○ | ⊙ | Reagent is a hazardous waste |
| <i>E. coli</i> Enterococci | ⊙ | ○ | ○ | ○ | 24-hour test procedure |

| Table 1: Water Quality Parameters Used to Identify Illicit Discharges | | | | | |
|--|---------------------------------|-------------------|------------------|-------------------------------------|---|
| Parameter | Flow Types It Can Detect | | | | Analytical Challenges |
| | Sewage | Wash Water | Tap Water | Industrial/ Commercial Waste | |
| Total coliform | | | | | Need to modify standard analytical procedures to measure high bacteria concentrations |
| Fluoride* | ○ | ○ | ● | ⊙ | Regent is a hazardous waste |
| Hardness | ⊙ | ⊙ | ⊙ | ⊙ | |
| pH | ○ | ⊙ | ○ | ⊙ | |
| Potassium | ⊙ | ○ | ○ | ● | May need to use two separate analytical techniques, depending on the concentration |
| Surfactants | ● | ● | ○ | ⊙ | Reagent is a hazardous waste |
| Turbidity | ⊙ | ⊙ | ○ | ⊙ | |

Key:

- Can almost always (i.e., > 80% of the time) distinguish this flow type from clean water (e.g., tap water, natural water). For tap water, can almost always distinguish tap water from natural water.
- ⊙ Can sometimes (i.e., > 50% of the time) distinguish this flow type from clean water, depending on regional characteristics, or can be helpful when used with another parameter.
- Poor indicator parameter. Cannot reliably distinguish an illicit discharge from clean water (e.g., tap water, natural water).

N/A Data are not available to assess the usefulness of this parameter in distinguishing this flow type from clean water (e.g., tap water, natural water).

* Fluoride is a poor indicator when used on its own. However, when it is used with other parameters, such as detergents, ammonia and potassium, it can almost always distinguish between sewage and wash water.

6.5 Selecting Indicator Parameters

As shown in Table 1, no single water quality parameter meets all of these criteria. However, in most cases, only a small subset of these parameters (e.g., three to five) is required to adequately confirm the presence of an illicit discharge. The CITY will use the parameters associated with the Flow Chart Method, as well as pH and chlorine, to confirm the presence of illicit discharges at flowing storm drain outfalls. Additional information about the Flow Chart Method is provided below.

6.6 Flow Chart Method

The primary data interpretation technique to be used to identify illicit discharges is the Flow Chart Method. The Flow Chart Method has been selected because it is a relatively simple interpretation technique that uses four basic water quality parameters to confirm the presence of an illicit discharge. The water quality parameters used in the Flow Chart Method can be used to distinguish amongst the four major flow types typically found in residential watersheds, including sewage and wash water, which are the most common types of illicit discharges found in urban communities.

The Flow Chart Method uses benchmark concentrations to identify and characterize illicit discharges. The benchmark concentrations were developed by CWP and Pitt (2004), Lalor (1994) and Pitt et al. (1993) from illicit discharge detection and

elimination work conducted in Alabama and Maryland.

The basic decision points involved in the Flow Chart Method are shown in Figure 1 and described below.

6.6.1 Distinguish Clean Flow from Contaminated Flow Using Detergents

The first step in the Flow Chart Method is to determine whether the discharge is “clean” or is derived from either sewage or wash water, based on the presence of detergents. Surfactants and/or boron are used as the primary indicator of detergents, and values of surfactants or boron that exceed 0.25 mg/L or 0.35 mg/L, respectively, signal that the discharge is contaminated by either sewage or wash water.

6.6.2 Distinguish Wash Water from Sewage Using the Ammonia-to-Potassium Ratio

If the discharge contains detergents, the next step is to determine whether the discharge is derived from sewage or wash water, using the ammonia-to-potassium ratio. An ammonia-to-potassium ratio of greater than one suggests sewage contamination, while a ratio of less than one indicates wash water contamination.

6.6.3 Distinguish Tap Water from Natural Water

If the sample is free of detergents, the next step is to determine whether the flow is derived from natural sources (e.g., groundwater, springs) or from tap water. The indicator used in this analysis is fluoride, and values of fluoride that exceed 0.60 mg/L signal that tap water is the source. Fluoride concentrations of between 0.25 and 0.60 mg/L indicate that the source may be excess or non-target irrigation water. The purpose of determining the source of a relatively “clean” discharge is that it can identify water main breaks and identify where potable water is being used in a manner (e.g., non-target irrigation, vehicle rinsing, and building rinsing) that contributes polluted runoff to the storm drain system.

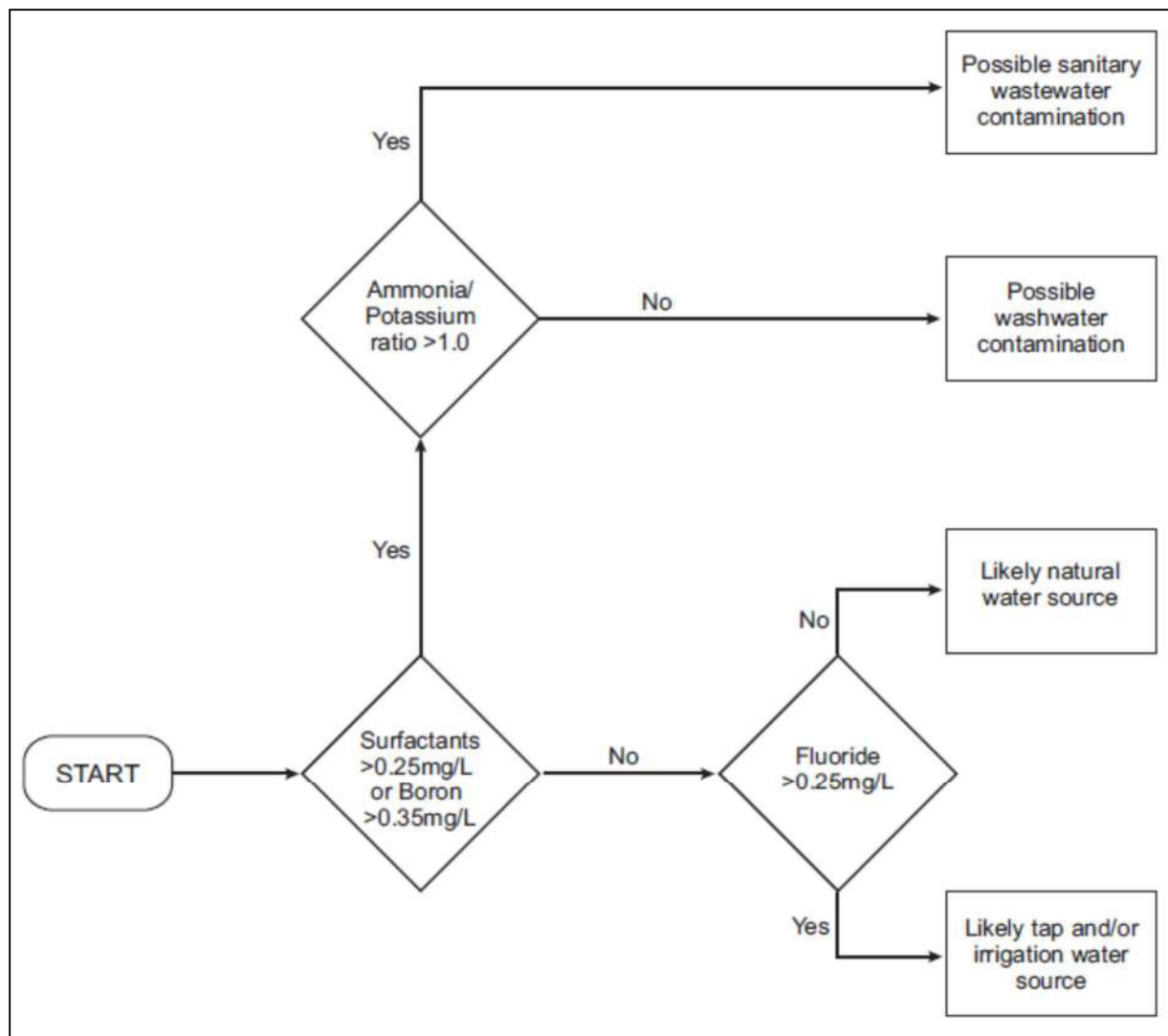


Figure 1: Flow Chart Method Used to Interpret Indicator Parameters

6.7 Interpreting Water Quality Data

This section provides information on three other techniques that the CITY may use to interpret water quality data with respect to illicit discharges. One or more of which the CITY may use to supplement the Flow Chart Method:

- Environmental Consultant – A consultant may be used when staff time is limited to analyze the test

results or additional interpretation of the results is needed.

- Single Parameter Screening
- Industrial Flow Benchmarks

As with the Flow Chart Method, each of these techniques uses benchmark concentrations to identify and characterize illicit discharges. The benchmark concentrations were developed by CWP and Pitt (2004), Lalor (1994) and Pitt et al. (1993) from illicit discharge detection and elimination work conducted in Alabama and Maryland.

6.7.1 Single Parameter Screening

Research by Lalor (1994) suggests that a detergent is the best single parameter that can be used to detect the presence of the most common illicit discharges (i.e., sewage and wash water). However, ammonia is another parameter that has been used by some communities with widespread or severe sewage issues. While some communities have used a benchmark concentration as low as 0.30 mg/L, an ammonia concentration of greater than 1.0 mg/L is generally considered to be a positive indicator of sewage flow. Ammonia can be analyzed using a portable spectrophotometer, which provides fairly rapid results and allows investigators to begin tracking down and eliminating sources while they are still out in the field.

As a single indicator parameter, ammonia does have some limitations. First, ammonia, by itself, is not always capable of identifying sewage discharges, particularly if they have been diluted by “clean” flows. Second, while some wash waters and industrial wastes have relatively high ammonia concentrations, not all of them do. This increases the possibility of obtaining false negatives during outfall monitoring efforts. Third, other dry weather discharges, such as those caused by excess and non-target irrigation, can also have ammonia concentrations that exceed 1.0 mg/L. This may lead investigators to falsely assume that sewage is the source of a particular illicit discharge. Adding potassium as an indicator parameter and looking at the ammonia-to-potassium ratio is a simple adjustment to the single parameter approach that helps to more accurately and reliably characterize illicit discharges.

6.7.2 Industrial Flow Benchmarks

Commercial and industrial sites often produce illicit discharges that are not composed entirely of sewage or wash water (e.g., spills, discharges from floor drains). Consequently, if a particular sub-watershed or drainage area has a high density of industrial sites, additional water quality

parameters may need to be used to identify and characterize illicit discharges.

The seven water quality parameters that are commonly used to identify the industrial-related illicit discharges and are not picked up by the Flow Chart Method include: ammonia, color, conductivity, hardness, pH, potassium and turbidity. Table 2 summarizes the benchmark concentrations that are commonly used to identify industrial-related illicit discharges.

| Table 2: Parameters and Benchmark Concentrations Used to Identify Industrial-Related Illicit Discharges | | |
|--|---|---|
| Parameter | Benchmark Concentration | Notes |
| Ammonia | ≥ 50 mg/L | <ul style="list-style-type: none"> Existing “Flow Chart” Parameter. Concentrations higher than the benchmark typically can identify a few industrial-related illicit discharges |
| Color | ≥ 500 units | <ul style="list-style-type: none"> Supplemental parameter that identifies a few specific industrial illicit discharges. Should be refined with local data. |
| Conductivity | $\geq 2,000$ μ S | <ul style="list-style-type: none"> identifies a few specific industrial-related illicit discharges May be useful in distinguishing between different industrial sources |
| Hardness | ≤ 10 mg/L as CaCO_3 $\geq 2,000$ mg/L as CaCO_3 | <ul style="list-style-type: none"> Identifies a few specific industrial illicit discharges May be useful in distinguishing between industrial sources |
| pH | ≤ 5 | <ul style="list-style-type: none"> Only captures a few industrial discharges High pH values may also indicate an industrial discharge, but residential wash water may have high pH values as well |
| Potassium | ≥ 20 mg/L | <ul style="list-style-type: none"> Existing “Flow Chart” Parameter Excellent indicator of a broad range of industrial discharges. |
| Turbidity | $\geq 1,000$ NTU | <ul style="list-style-type: none"> Supplemental parameter identifies a few specific industrial discharges. Should be refined with local data. |

As shown in Table 2, most industrial-related illicit discharges can consistently be identified by using potassium as an indicator parameter. Note that these

discharges would be incorrectly classified as wash water if the Flow Chart Method was used on its own.

Table 3 illustrates how the industrial flow benchmarks can be used independently or to supplement the Flow Chart Method. The best industrial indicator parameters, which can almost always (i.e., > 80% of the time) distinguish industrial-related discharges from wash water and sewage, are identified with bold text. The industrial indicator parameters that can sometimes (i.e., > 50% of the time) distinguish industrial-related discharges from wash water and sewage are identified with italicized text.

By their very nature, industrial sites can produce a bewildering diversity of illicit discharges that are difficult to identify, let alone characterize. Consequently, the CITY may experience some initial difficulties in identifying industrial-related discharges. Over time, however, as its illicit discharge detection and elimination program matures, it will build a sampling database that it can use to identify and better characterize industrial-related illicit discharges.

| Table 3: Usefulness of Various Parameters to Identify Industrial Discharges | | | | | | | | | | | |
|---|----------------------------------|----------------|------------------|----------------------------|-------------------|-----------------------------------|---------------------------------------|--------------|-----------------|--|--|
| Industrial Benchmark Concentrations | Detergents as Surfactants (mg/L) | Ammonia (mg/L) | Potassium (mg/L) | Initial "Flow Chart" Class | Color (Units) | Conductivity (:S/cm) ¹ | Hardness (mg/L as CaCO ₃) | pH | Turbidity (NTU) | Best Indicator Parameters to Identify This Flow Type | Additional Indicator Parameters to Identify This Flow Type |
| | -- | ≥50 | ≥20 | | ≥500 | ≥2000 | ≤10 ≥2,000 | ≤5 | ≥1,000 | | |
| Concentrations in Industrial and Commercial Flow Types | | | | | | | | | | | |
| Automotive Manufacturer ¹ | 5 | 0.6 | 66 | Wash water | 15 | 220 | 30 | 6.7 | 118 | Potassium | |
| Poultry Supplier ¹ | 5 | 4.2 | 41 | Wash water | 23 | 618 | 31 | 6.3 | 111 | Potassium | |
| Roofing Product Manufacturer ¹ | 8 | 10.2 | 27 | Wash water | >100 ² | 242 | 32 | 7.1 | 229 | None | Potassium Color |
| Uniform Manufacturer ¹ | 6 | 6.1 | 64 | Wash water | >100 ² | 798 | 35 | 10.4 | 2,631 | Potassium | Color Turbidity |
| Radiator Flushing | 15 | (26.3) | (2,801) | Wash water | (3,000) | (3,278) | (5.6) | (7.0) | - | Potassium Conductivity Color | Hardness |
| Metal Plating Operation | 7 | (65.7) | (1,009) | Wash water | (104) | (10,352) | (1,429) | (4.9) | - | Ammonia Potassium Conductivity Hardness | pH |
| Commercial Car Wash | 140 | 0.9; (0.2) | 4; (43) | Wash water | >61; (222) | 274; (485) | 71; (157) | 7.7; (6.7) | 156 | | Potassium Turbidity |
| Commercial Laundry | (27) | (0.8) | 3 | Wash water | 47 | (563) | (36) | (9.1) | - | | |
| Best indicator, shaded in pink, distinguish this source from residential wash water in 80% of samples in both Tuscaloosa and Birmingham, AL. | | | | | | | | | | | |
| Supplemental indicator, shaded in yellow, distinguish this source from residential wash water in 50% of samples. | | | | | | | | | | | |
| (Data in parentheses are mean values from Birmingham); Data not in parentheses are from Tuscaloosa | | | | | | | | | | | |
| ¹ Fewer than three samples for these industrial-related flows. | | | | | | | | | | | |
| ² The color analytical technique used had a maximum value of 100, which was exceeded in all samples. Color may be a good indicator of these industrial discharges and the benchmark concentration may need adjustment downward for the City of Rockford. | | | | | | | | | | | |

Source: Illicit Discharge Detection and Elimination, A Guidance Manual – Center for Watershed Protection October 2004.

(Please refer to this document for further guidance.)

Appendix A

Analytical Parameters

| List of Water Quality Analyses | |
|--|--|
| Storm Water Analysis | Tributary Site Analyses |
| | Dissolved oxygen |
| 5-day biochemical oxygen demand (BOD) | 5-day biochemical oxygen demand (BOD) |
| Chemical oxygen demand (COD) | Chemical oxygen demand (COD) |
| Total Kjeldahl Nitrogen Ammonia Nitrogen Nitrate+nitrite Nitrogen | Ammonia Nitrogen Nitrate+nitrite Nitrogen |
| Total Phosphorus | Total Phosphorus |
| Fats, Oils and grease | |
| Cadmium (total) Copper (total) Lead (total) Zinc (total) Mercury | Cadmium (total) Chromium (total) Copper (total) Lead (total) Nickel (total) Mercury Zinc (total) |
| pH | pH |
| Hardness | Hardness |
| Fecal coliform bacteria E. coli (occasionally, as laboratory capacity allows) | Fecal coliform bacteria E. coli (occasionally, as laboratory capacity allows) |
| Total suspended solids Total dissolved solids | Total suspended solids Total dissolved solids |

Appendix B**Sample Bottles, Preservatives, and Maximum Holding Times**

City Staff will deliver samples to the Laboratory within three hours of collection. Laboratory Analysts will split the sample needed for the analyses required and preserve accordingly.

| Parameter | Type | Container & Preservation |
|------------------------------|-------------------|--|
| Fecal Coliform (and E. coli) | Grab | Sterilized, 6 oz. Nalgene sample bottle, chill with ice. |
| Fats, Oils & Grease | Grab | 1 liter glass sample bottle, chill with ice. |
| All other parameters | Composite or Grab | 1 gallon plastic sample bottle, chill with ice. |

Bottles used in the automatic samplers are two-gallon polyethylene. Laboratory analysts will preserve samples, as necessary immediately upon delivery to the laboratory. In cases when analysts begin the analysis immediately upon sample delivery, they may omit sample preservation. Except for metals, all samples are stored in a 4°C refrigerator.

| Parameter | Preservative | Hold Time |
|---|---|------------------|
| DO (field) | NA | NA |
| Temperature | NA | NA |
| pH | NA | NA |
| Conductivity | NA | NA |
| Metals | HNO ₃ to pH < 2 | 6 months |
| Nitrogen, Ammonia | H ₂ SO ₄ to pH < 2 | 28 days |
| Nitrogen, Kjeldahl | H ₂ SO ₄ to pH < 2 | 28 days |
| Nitrogen, Nitrate | --- | 48 hours |
| Phosphorus | H ₂ SO ₄ to pH < 2 | 28 days |
| Biochemical Oxygen Demand | --- | 48 hours |
| Chemical Oxygen Demand | H ₂ SO ₄ to pH < 2 | 28 days |
| Hardness | HNO ₃ to pH < 2 | 6 months |
| Total Suspended Solids / Dissolved Solids | --- | 7 days |
| Oil and Grease | H ₂ SO ₄ to pH < 2 | 28 days |
| Fecal Coliform (or E. coli) | sodium thiosulfate (Na ₂ S ₂ O ₃) | 6 hours |

Appendix C

Water Quality Parameter Overview

This appendix provides an overview of the thirteen different water quality parameters that can be used to confirm the presence or origin of an illicit discharge.

Ammonia

Ammonia is a good indicator of sewage, since its concentration is much higher there than is ground or tap water. High ammonia concentrations may also be found in liquid waste streams generated on industrial sites. Ammonia is relatively simple and safe to analyze. Some challenges associated with analyzing ammonia include the tendency for it to volatilize and the fact that it can come from non-human sources, such as pets or wildlife.

Boron

Boron is an element present in the compound borax, which is often found in detergents and soaps. Consequently, boron should be a good indicator for both wash water and sewage. Preliminary research conducted in Alabama supports this contention, particularly when it is combined with other detergent indicators, such as surfactants. Boron may not be a useful indicator everywhere in the country since it is occasionally found at elevated levels in groundwater and is a common ingredient in a number of water softener products. Over time, the CITY should collect data on the boron concentrations found in local tap water and groundwater sources to confirm whether or not it is a useful local indicator of illicit discharges.

Chlorine

Chlorine is used throughout the country to disinfect tap water, except where private wells serve as the primary water supply. Chlorine concentrations in tap water tend to be significantly higher than those in most other flow types. Unfortunately, chlorine is extremely volatile, and even moderate concentrations of organic material can cause chlorine levels to drop below detection levels. Because chlorine is non-conservative, it is not a reliable indicator, although if a very high chlorine concentration is found, it typically indicates a water main break, swimming pool discharge, or a discharge from a chlorine-based industrial process.

Color

Color is a numeric computation of the color observed in a water quality sample, as measured in terms of cobalt-platinum units. Both industrial wastes and sewage tend to have elevated color values. Unfortunately, some “clean” flows can also have high color values. Field testing in Alabama found high color values associated with all contaminated flows, but also for many “clean” flows, which yielded many false positive results. Overall, color may be a good initial screening parameter, but needs to be supplemented by other indicator parameters.

Conductivity

Conductivity, or specific conductance, is a measure of how easily electricity can flow through water. Conductivity is often strongly correlated with the total amount of dissolved solids found in the water column. The utility of conductivity as an indicator depends on whether concentrations are elevated in natural or “clean” waters. In particular, conductivity is a poor indicator of illicit discharges in estuarine waters and in northern climates where salt is used to remove salt from roadways.

Field testing in Alabama suggests that conductivity has limited value in detecting sewage or wash water. It does, however, have some value in detecting industrial-related illicit discharges, some of which can exhibit extremely high conductivity values. Conductivity is extremely easy to measure using meters, so it has the potential to be a useful supplemental indicator in sub-watersheds dominated by commercial and industrial land uses.

Detergents

Most illicit discharges have elevated concentrations of detergents. Sewage and wash water discharges contain detergents that were used to wash clothes or dishes, whereas industrial-related discharges contain detergents used in commercial or industrial cleaning compounds. The nearly universal presence of detergents in illicit discharges, combined with their absence in natural waters or tap water, makes them an excellent indicator parameter. Research has revealed that three indicator parameters that measure detergents or its components: surfactants, fluorescence, and surface tension. Surfactants have been the most widely applied and transferable of these three indicator parameters.

E. coli, Enterococci and Total Coliform

Each of these bacteria is found in very high concentrations in sewage flows, particularly when compared with other flow types. They are very good indicators of sewage and septic discharges, except in sub-watersheds where pet or wildlife sources exist. Overall, bacteria is a good supplemental indicator and can be used to find “problem” outfalls that are discharging flows with bacteria concentrations that exceed public health standards. Relatively simple analytical methods are now available for bacteria samples, although they still suffer from two monitoring constraints. The first is the relatively long time (i.e., 18-24 hours) it takes to get results. The second is that the waste produced

during analysis may be considered a biohazard and may require special disposal procedures.

Fluoride

Fluoride is added to drinking water supplies in most communities to improve dental health, and is normally found in tap water at a concentration of two parts per million. Consequently, fluoride is an excellent indicator of tap water discharges and water main breaks or leaks that end up in the storm drain system. Fluoride is obviously not a useful indicator in communities that do not fluoridate their drinking water supplies or in areas where private wells serve as the primary water supply. One key constraint is that the recommended analytical method for fluoride uses a reagent that is considered to be a hazardous waste. It must be properly disposed of.

Hardness

Hardness measures the number of positive ions dissolved in the water column. It primarily measures magnesium and calcium, but sometimes measures the presence of other metals. Field testing in Alabama suggests that hardness has limited value as an indicator parameter, except where values are extremely high or low, which may indicate the presence of an industrial-related discharge. It may be a useful supplemental indicator in communities where groundwater has hardness levels that are higher than those in tap water. In these situations, hardness can help distinguish between groundwater and tap water and other potable water-derived flows (i.e., sewage, wash water).

pH

Most discharges are neutral, having a pH value of around 7, although groundwater pH values can be somewhat variable. pH is a reasonably good indicator for industrial-related discharges, which can have very high or very low pH values ranging from 3 to 12. pH is very simple to

measure in the field using low cost test strips or meters. Although pH, on its own, isn't a particularly conclusive indicator parameter, it can be used as an initial screening parameter, identifying outfalls that merit follow up investigation.

Potassium

Potassium is found at relatively high concentrations in sewage and in extremely high concentrations in many industrial-related discharges. Consequently, it is a very useful indicator parameter. Although simple meters can be used to detect potassium at relatively high concentrations (i.e., 5 mg/L or greater), more complex colorimetric methods are needed to detect potassium at concentrations lower than 5 mg/L.

Surfactants

Surfactants are the active ingredient in most commercial detergents and are typically measured as Methyl Blue Active Substances (MBAS). They are a synthetic replacement for soap. Since surfactants are not found in nature, but are always present in detergents, they are excellent indicators of sewage and wash water flows. The presence of surfactants in cleaners, emulsifiers and lubricants also makes them an excellent indicator of industrial-related discharges. Several analytical methods are available to measure the surfactant content of a water quality sample. Unfortunately, the reagents used in these analyses include toluene, chloroform or benzene, each of which is considered hazardous waste and each of which pose a potential human health risk. The recommended analytical method uses chloroform as a reagent, which is safer than the reagents used in the other analytical methods.

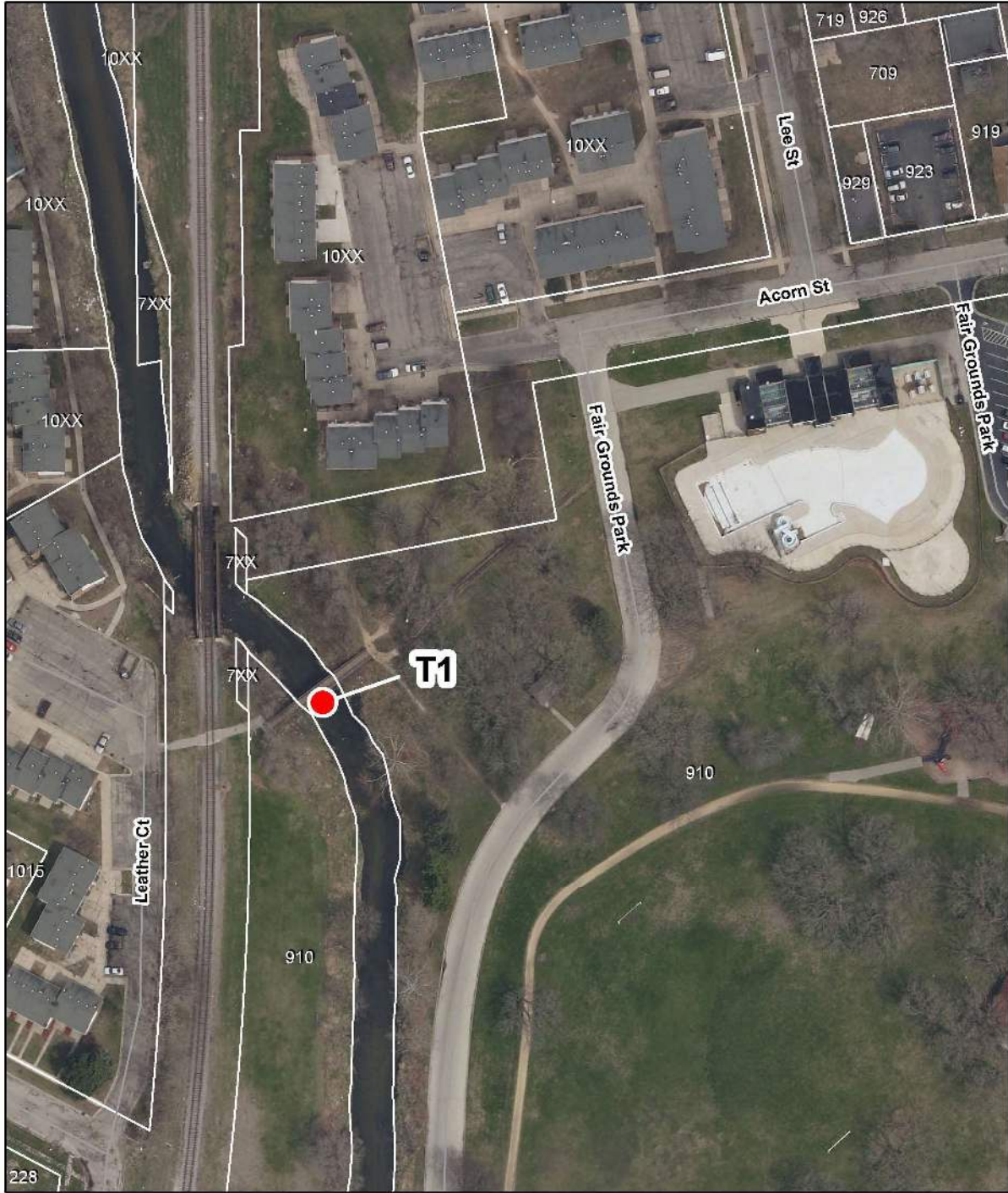
Turbidity



Turbidity is a quantitative measure of the cloudiness of a water column and is normally measured with a specialized instrument called a turbidimeter. While turbidity itself cannot always be used to distinguish

between different flow types, it is potentially useful in determining whether or not a discharge is illicit and merits a follow up investigation.

Appendix D

Tributary Site Map



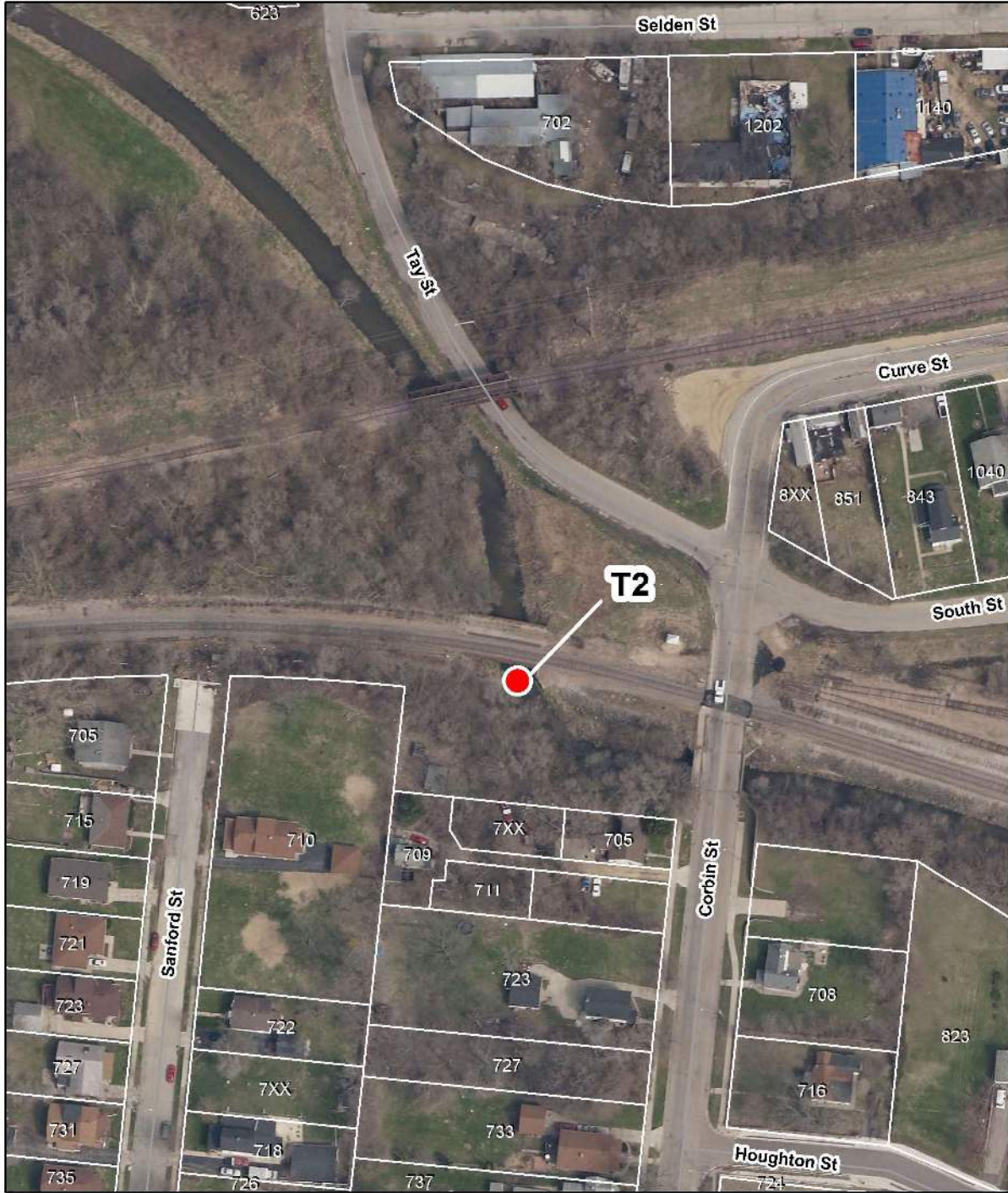
 **T1 - North Kent Creek @ Fairgrounds Park** 



1 inch = 100 feet

0 50 100 200 300 Feet

Appendix E

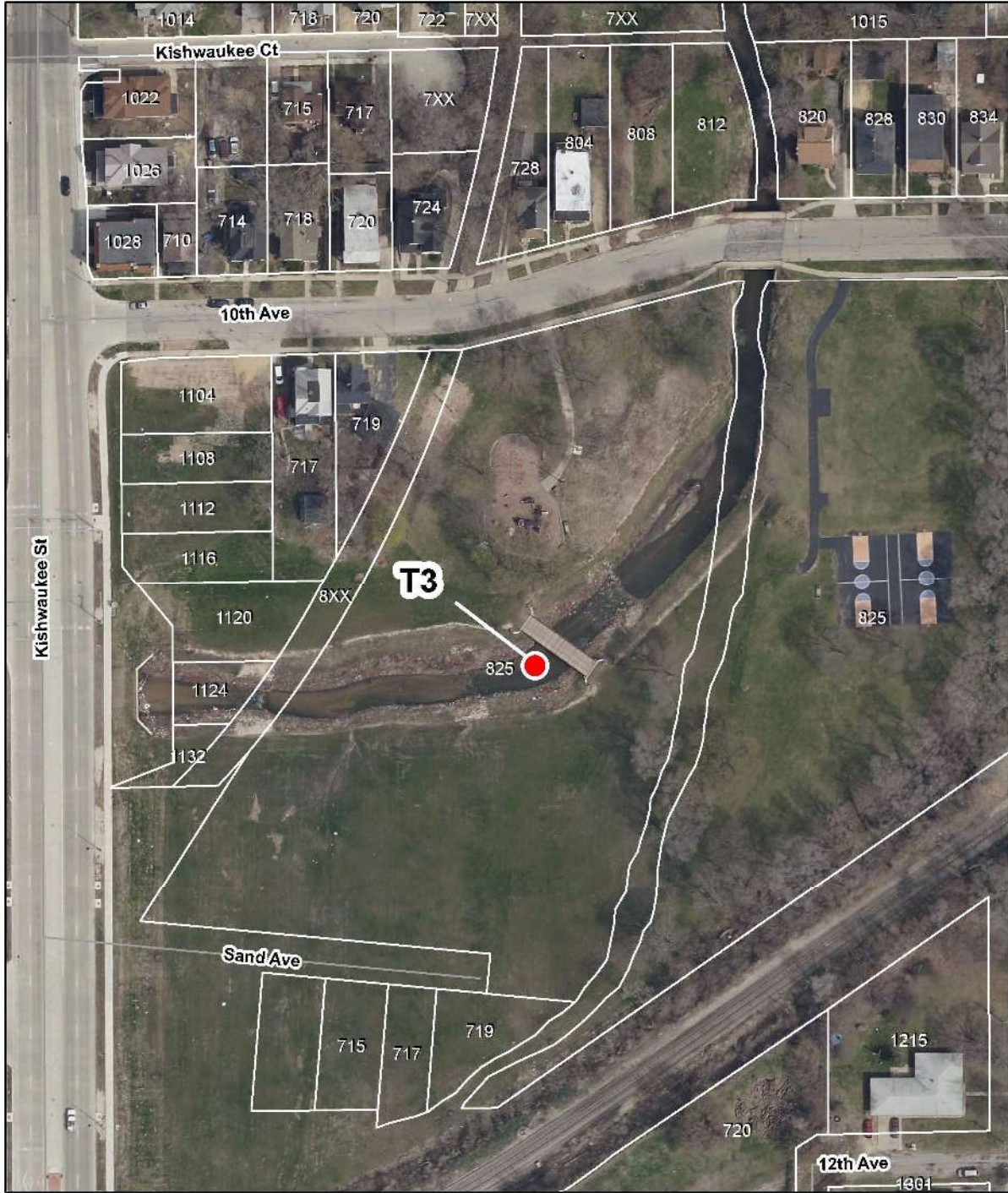
Tributary Site Map




 **T2 - South Kent Creek @ Tay St & Corbin St** 
1 inch = 100 feet
0 50 100 200 300 Feet

Appendix F


Tributary Site Map



 **T3 - Keith Creek @ Tenth Avenue Park**

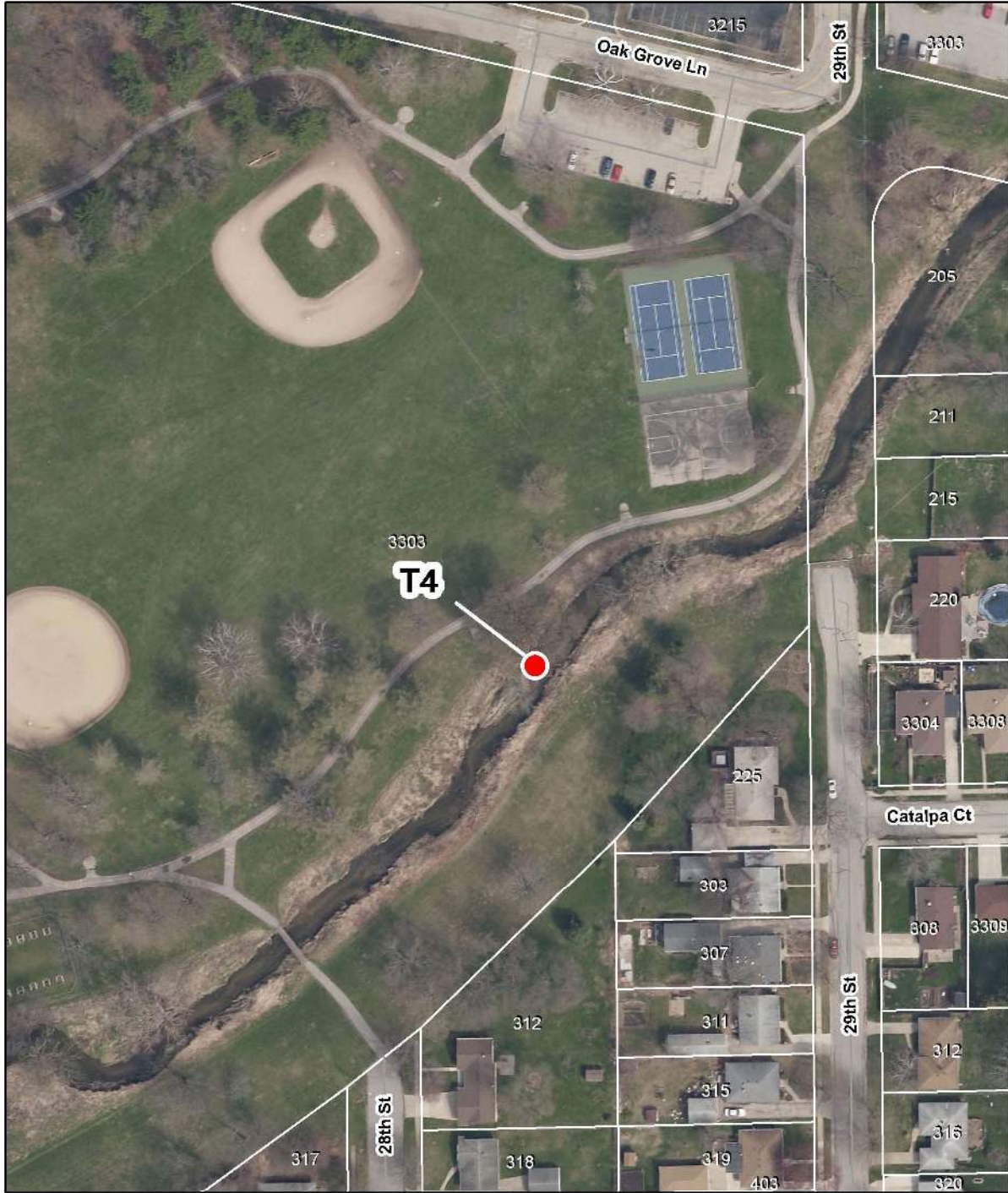
1 inch = 100 feet

0 50 100 200 300 Feet



Appendix G

Tributary Site Map



 **T4 - Keith Creek @ Dahlquist Park**

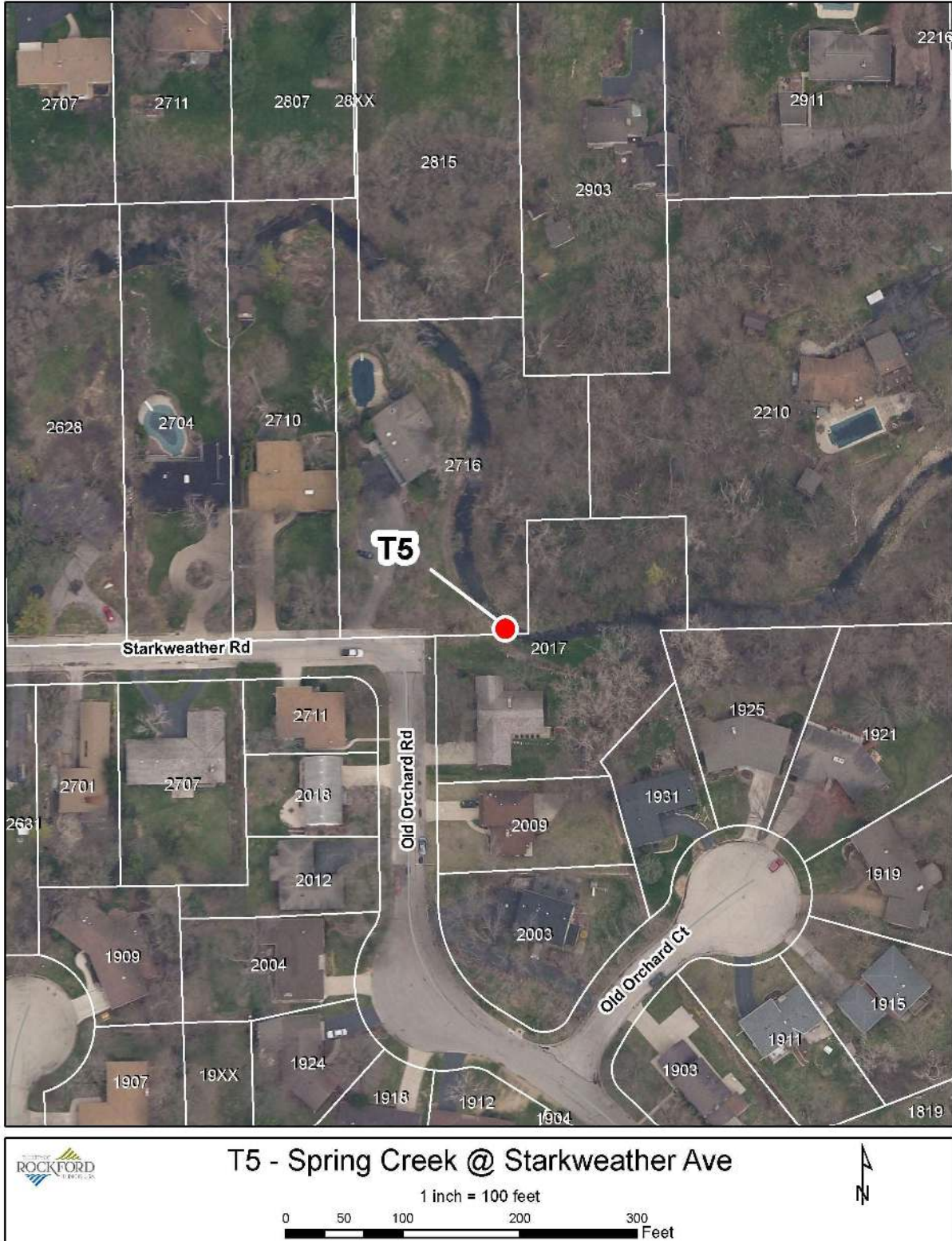
1 inch = 100 feet

0 50 100 200 300 Feet



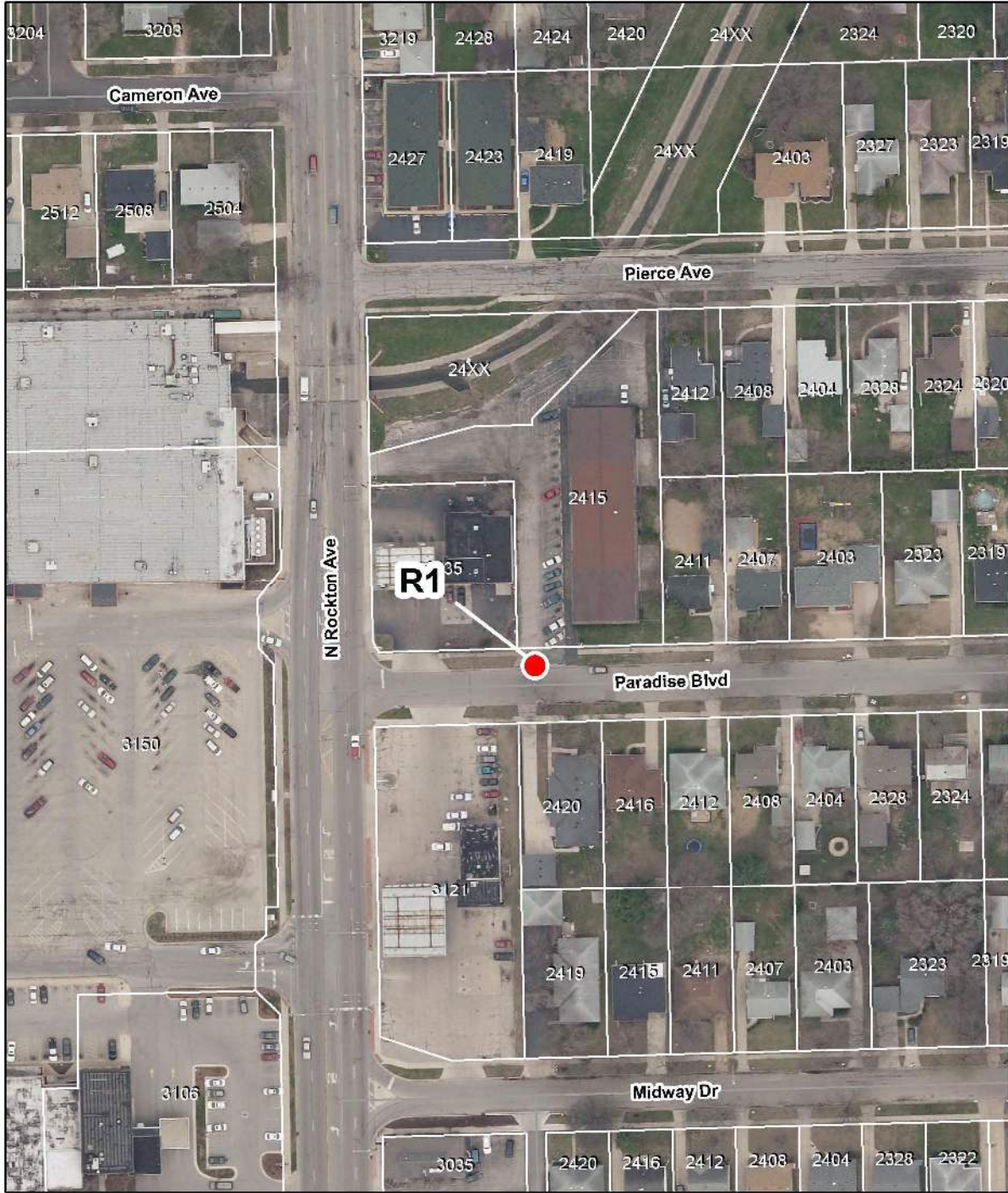
Appendix H



Tributary Site Map



Appendix I

Outfall Site Map



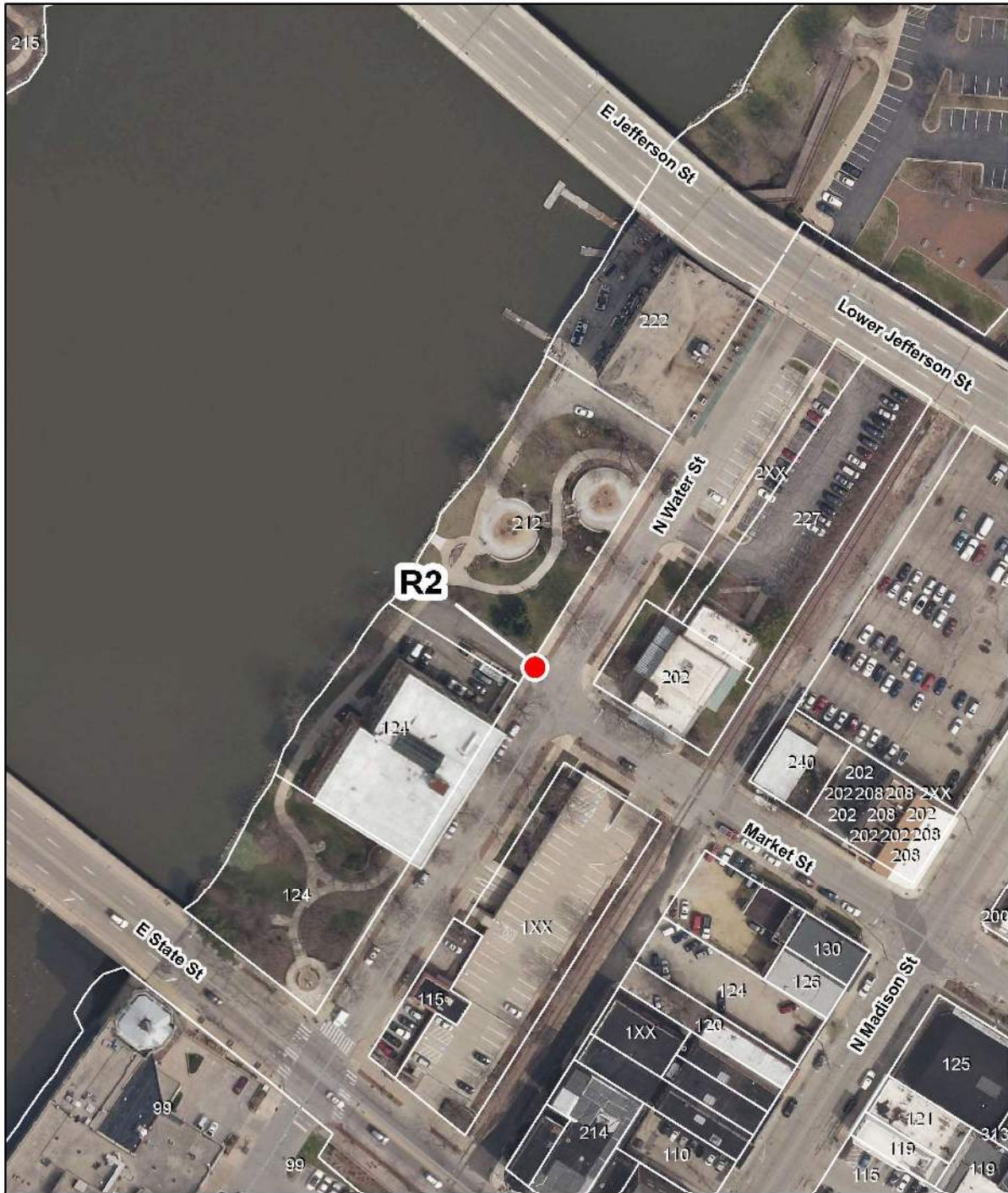
 **R1 - Paradise Blvd** 

1 inch = 100 feet

0 50 100 200 300 Feet

Appendix J

Outfall Site Map



 **R2 - Market St & N Water St**

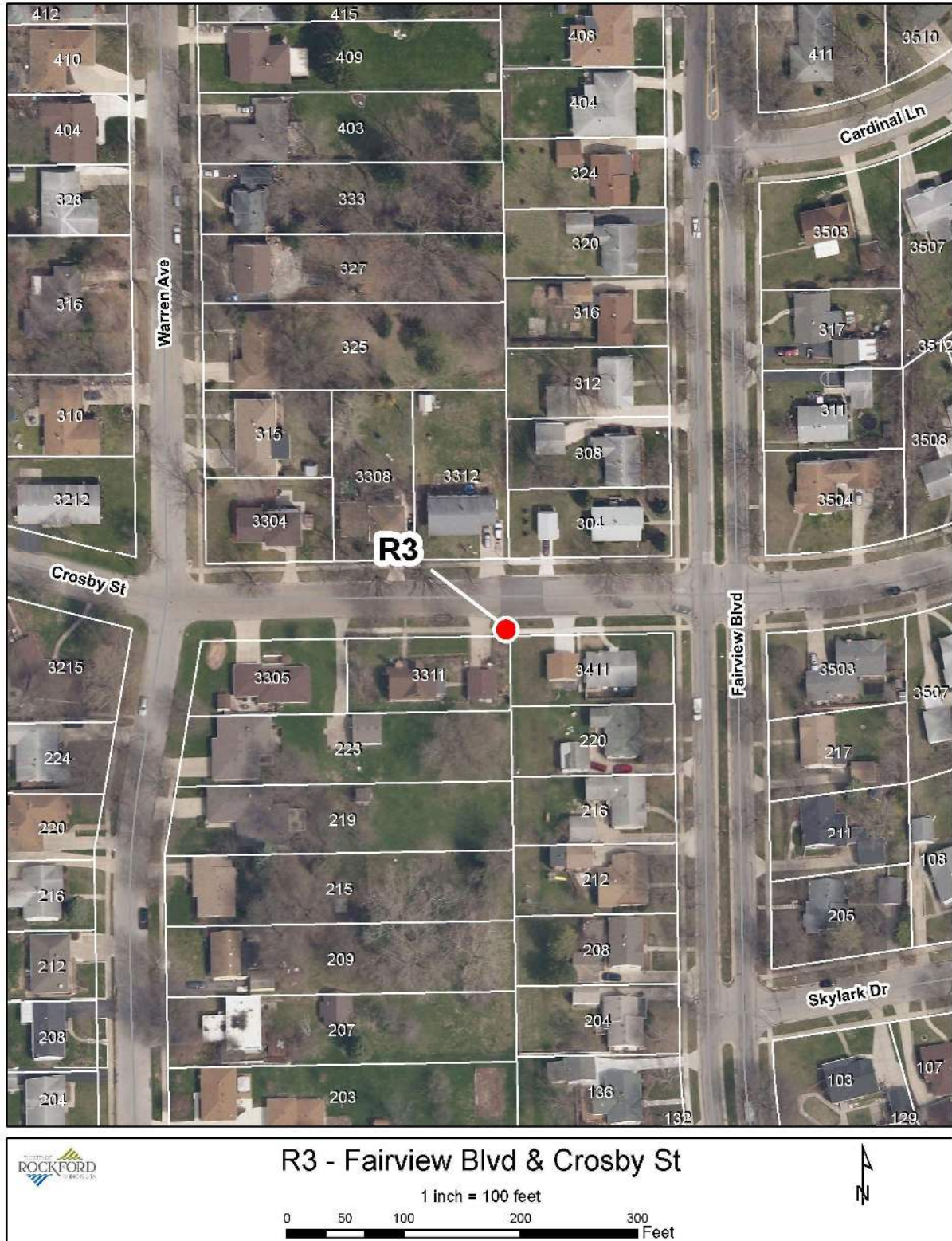
1 inch = 100 feet

0 50 100 200 300 Feet



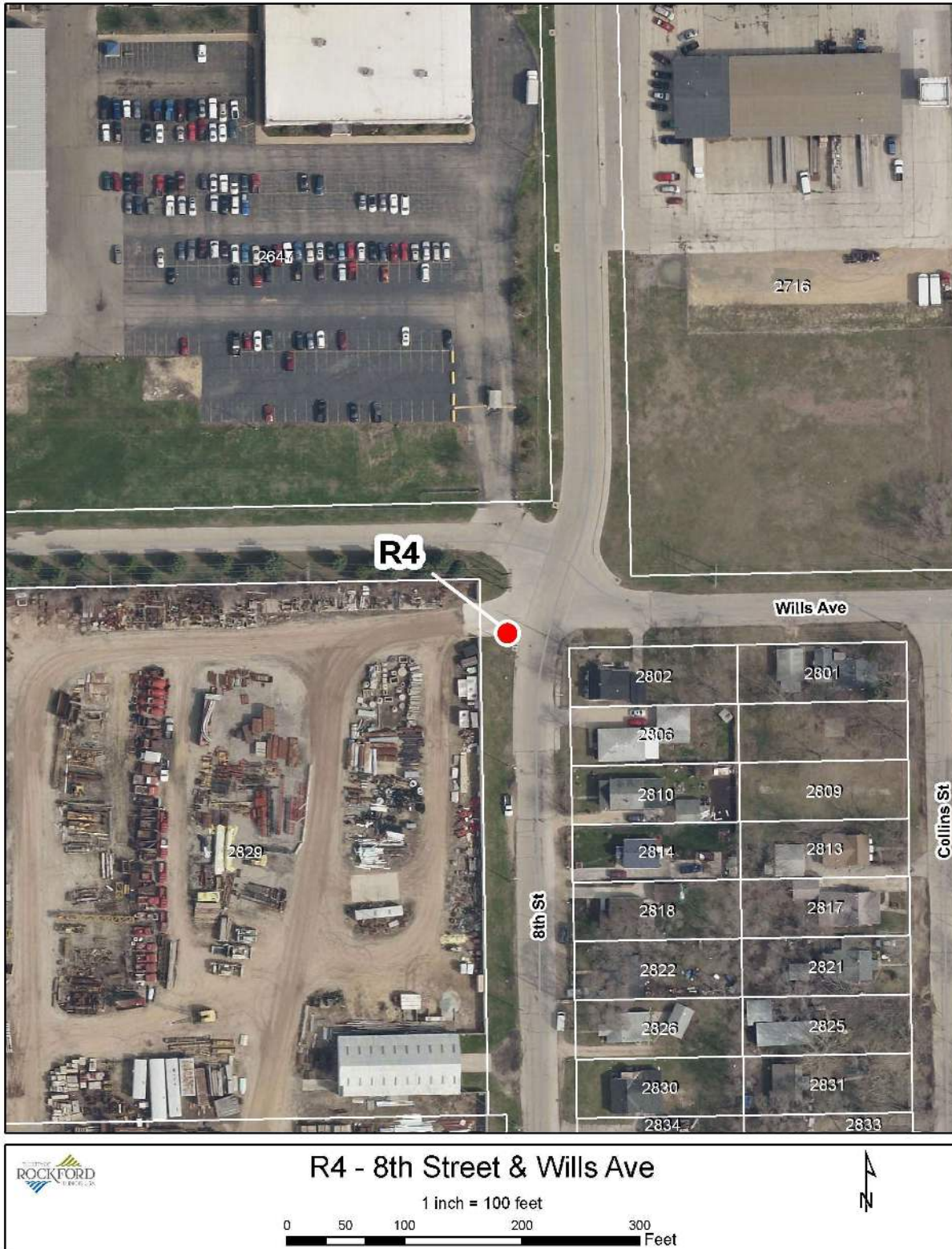
Appendix K

Outfall Site Map



Appendix L


Outfall Site Map



Appendix M


Outfall Site Map



 **R5 - Forest View Rd & 28th Ave**

1 inch = 100 feet

0 50 100 200 300 Feet



Appendix N



FRSD Laboratory
3107 Grant Park Blvd.
Rockford, IL 61109
Phone: (815) 387-7523
E-Mail: laboratory@fourivers.illinois.gov

CHAIN OF CUSTODY

Company Name: City of Rockford Stormwater Samples
Street Address: 425 East State Street
City: Rockford State: IL Zip: 61104
Phone: 779.348.7617 Fax: 815.957.7058
Send Report To: Stormwater email: stormwater@rockfordil.gov
Sampled By: jeremy.mitchell@rockfordil.gov

Matrix Codes: S = Solid W = Water O = Other
Sample Type: G = Grab C = Composite
For Grab Samples, enter date and time under "start date" and "start time."

| Sample Description | Sample Date | Sample Time | Analyses Requested | | | | | | Lab Use | | | | |
|--------------------|-------------|-------------|--------------------|----------|------------|----------|----------|--------------|---------|---------|-------------|---------------|--|
| | | | COD | TSS, TDS | Phosphorus | NH3, NO3 | Hardness | Heavy Metals | Fecal | Mercury | Temperature | Lab ID Number | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Sample Tech(s): _____
 Weather: _____
 Temp °C: _____ Dissolved Oxygen: _____ Conductivity: _____
 pH: _____ River Elevation: _____ Secchi Clarity: _____

Relinquished By: _____ Date/Time: _____
 Received By: _____ Date/Time: _____

For Lab Use Only

workorder: _____
 contract:
 IWS:
 plant:

