

2020

City of Columbus
Operations Water Quality Guide
MCM #6



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Introduction to National Pollutant Discharge Elimination System (NPDES) History

The Federal Water Pollution Control Act (FWPCA) (P.L. 80-845, 62 Stat. 1155) of 1948 was the first major law enacted by Congress to address the problems of water pollution in the United States. Legislators had made numerous attempts, totaling over 100 bills, to pass legislation over the previous half century, but without success. By 1948 the industrial and urban growth that was fueled by World War II had led to the obvious, and often notorious, pollution of the country's rivers, streams, and lakes, impelling Congress finally to confront the issue. Unfortunately, the act was not well designed and achieved very little. It did not generally prohibit pollution, and gave only limited authority to the Federal Government, and provided an extremely cumbersome enforcement mechanism. In 1972 Congress totally rewrote the act to provide adequate protection for the nation's waters.

Before 1948 various minor laws dealt with aspects of water pollution. The only notable law was the Refuse Act of 1899, which actually is a section of the Rivers and Harbors Appropriations Act of 1899. The Refuse Act was not aimed at preventing water pollution but rather at preventing the dumping of materials that might impede navigation. Although the Clean Water Act now predominates in the regulation of surface water pollution, the Rivers and Harbors Act remains a valid law. It provides useful supplemental jurisdiction for addressing certain kinds of water pollution, and especially for dredge and fill activities. In the postwar period, attention again turned to the country's polluted waters. It was reported in 1945 that over 3,500 communities pumped 2.5 billion tons of raw sewage into streams, lakes, and coastal waters every day. Nevertheless, it was difficult to gain political support for a water pollution proposal. Legislators generally considered the control of water bodies a responsibility of the states and viewed federal regulation with suspicion. Still, some conservationists and public officials recognized the need for action at the federal level. After years of failed bills, the

80th Congress in 1948 achieved a legislative compromise with the support of President Harry S. Truman.

Although there was general consensus on the need to clean up polluted water, there was strong disagreement on the extent of waters to be covered, the rights of the states, and the role of the federal government. Some legislators envisioned extending protection not only to interstate waters (waters that came in contact with more than one state), but also to intrastate waters (rivers and tributaries within individual states) that might contribute pollution to interstate waters. They urged that both intrastate and interstate waters be protected by a strong federal program with substantial enforcement authorities.

However, the final bill that reached the House floor at the end of the legislative session, under a gag rule permitting no amendments, was far weaker. The legislation applied only to interstate waters, eliminating from protection under the act heavily polluted waters that were wholly contained within one state, and it restricted the role of the federal government. These weaknesses led members of Congress who had worked long and hard on a water protection bill to speak and vote against the legislation. Nevertheless, many proponents of broader legislation felt that a weak bill was better than no bill at all. The bill was passed the House of Representatives by a vote of 138 to 14.

Congress then declared that the act's purpose was "to provide a comprehensive program for preventing, abating, and controlling water pollution," and that it was congressional policy "to recognize, preserve, and protect the primary responsibilities and rights of the States in controlling water pollution." The act gave individual states most of the responsibility for abating water pollution and encouraged interstate agreements. In addition to preserving states' control of their waterways, the act limited federal authority for the most part to preparing pollution abatement plans and providing support to the states. It also established federal technical services and grants to state and interstate government bodies. The law did not specifically prohibit polluting activities, set standards, or limit new sources of pollution.

Although the act did declare pollution of interstate waters a public nuisance subject to abatement, this applied only when water pollution endangered "the health or welfare of persons in a State other than that in which the discharge originates." When this situation occurred, the Surgeon General of the United States was authorized to bring an abatement action, but only after a cumbersome process and with the permission of the state where the pollution originated. This provision gave the states virtually unlimited power to override a federal action to prevent water pollution. Not surprisingly, in the following twenty years there were essentially no enforcement actions filed under the act.

The Federal Water Pollution Control Act was not effective in preventing and abating water pollution. Because of the federal government's inability to require any direct reduction in discharges, pollution continued to increase and the quality of the nation's waters did not significantly improve. However, the act demonstrated both popular and political support for pollution control efforts. It also established the basic framework for water pollution control, which Congress subsequently amended. Congress changed the act six times before completely rewriting it in the 1972 Federal Water Pollution Control Act Amendments. Today the statute is commonly known as the Clean Water Act and bears little resemblance to its 1948 ancestor.

*The 1960's were a pivotal time in our nation's history for environmental awareness. In 1962 Rachel Carson wrote a book entitled *Silent Spring* which made people aware of environmental protection. The book was one of the major contributors of the environmental movements across our nation in the 1960's and 70's. In the late 60's, after the environmental movements began there was excessive water pollution that was the cause of the death of fish and wildlife. As an example over 90% of Lake Erie's aquatic life died due to the excessive water pollution which caused the lack of oxygen in the water. On June 22, 1969, an oil slick on the Cuyahoga River, caught fire. By the time the fire was extinguished, twenty minutes later, severe damage had been done to two railroad trestles. The 1969 fire caught the attention of the national press that was led by *Time* magazine, which reported: "Some river! Chocolate-brown, oily, bubbling with subsurface gases, it oozes rather than flows. The resulting publicity was a significant factor in the passage of important environmental legislation.*

Growing public awareness and concern for controlling water pollution led to sweeping amendments in 1972. The law became commonly known as the Clean Water Act (CWA). The 1972 amendments were established as the basic structure for regulating pollutant discharges into the waters of the United States. It also gave the Environmental Protection Agency (EPA) the authority to implement pollution control programs such as setting wastewater standards for industry and maintained existing requirements to set water quality standards for all contaminants of surface waters. It also made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under those provisions. This also funded the construction of sewage treatment plants under the construction grants program and recognized the need for planning to address the critical problems posed by nonpoint source pollution. After these amendments were set in place the Environmental Protection Agency (EPA) performed a study from 1979 to 1983 called the Nationwide Urban Runoff Program (NURP). Which was the first comprehensive study of urban stormwater pollution across the United States.

From the Nationwide Urban Runoff Program (NURP) study, it was determined that what was causing that sediment was polluting the waters and was primarily from residential, commercial, and industrial construction activities. Due to these findings the National Pollutant Discharge Elimination System (NPDES) Clean Water Act was modified and a section focusing specifically on stormwater from construction activity was added.

In the late 1990's environmental groups began taking legal action against the Environmental Protection Agency (EPA) wanting an accurate list of impaired waters. Soon after the Environmental Protection Agency (EPA) began testing and documenting the quality of stormwater that was being discharged into waters impaired by both point sources and nonpoint sources. In 1990 after the studies were concluded and the results were in, Phase I of the Municipal Separate Storm Sewer System (MS4) was implemented.

A Municipal Separate Storm Sewer System (MS4) is a conveyance or system of conveyances that is owned by a state, city, town, village, or other public entity that

discharges to waters of the U.S... It is designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches), not a combined sewer (sanitary and storm water) and not part of a sewage treatment plant, or publicly owned treatment works (POTW).

This program is in place to prevent harmful pollutants from being washed or dumped into Municipal Separate Storm Sewer System (MS4's). Certain operators are required to obtain National Pollutant Discharge Elimination System (NPDES) permits and develop Stormwater Management Programs (SWMPs). The SWMP describes the stormwater control practices that will be implemented consistent with permit requirements to minimize the discharge of pollutants from the sewer system.

The 1999 Phase II of the regulation requires that small Municipal Separate Storm Sewer System (MS4's) as defined in the U.S. Census Bureau as urbanized areas, as well as MS4s designated by the permitting authority, to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for their stormwater discharges. Phase II also includes non-traditional Municipal Separate Storm Sewer System (MS4's) such as public universities, departments of transportation, hospitals and prisons.

In 2007 Nebraska H2O was formed in conjunction with the Nebraska Stormwater Cooperative, to educate the public of the importance of keeping Nebraska's waterways pollutant free. The Nebraska Stormwater Cooperative consists of 10 sMS4 Phase II cities including Grand Island, Beatrice, Columbus, Fremont, Hastings, Kearney, Lexington, Norfolk, North Platte and Scottsbluff. For more information visit www.nebraskah20.org.

In 2018 the City of Columbus renewed through the Nebraska Department of Environmental Quality (NDEE) for their Authorization to discharge into the waters of the United States. This will expire in 2023 when the City will again need to renew the permit. The NDEE also approved the cities Stormwater Management Plan (SWMP) in 2018 which is encouraged to be continually updated.

Overview

Mission and Goals of the Good Housekeeping & Pollution Prevention Program.

The mission of the Good Housekeeping & Pollution Program (GHPP) is to reduce or eliminate the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, outdoor storage areas and salt/sand storage locations as well as snow disposal areas which the City of Columbus operates.

The City of Columbus will continue the educational efforts for training municipal employees and key City staff on how the performance of their duties can affect Stormwater runoff quality. The city will focus on operations with the greatest likelihood to cause pollution to Stormwater runoff. These identified operations will be addressed in training focusing on methods to reduce pollutants to the maximum extents practical.

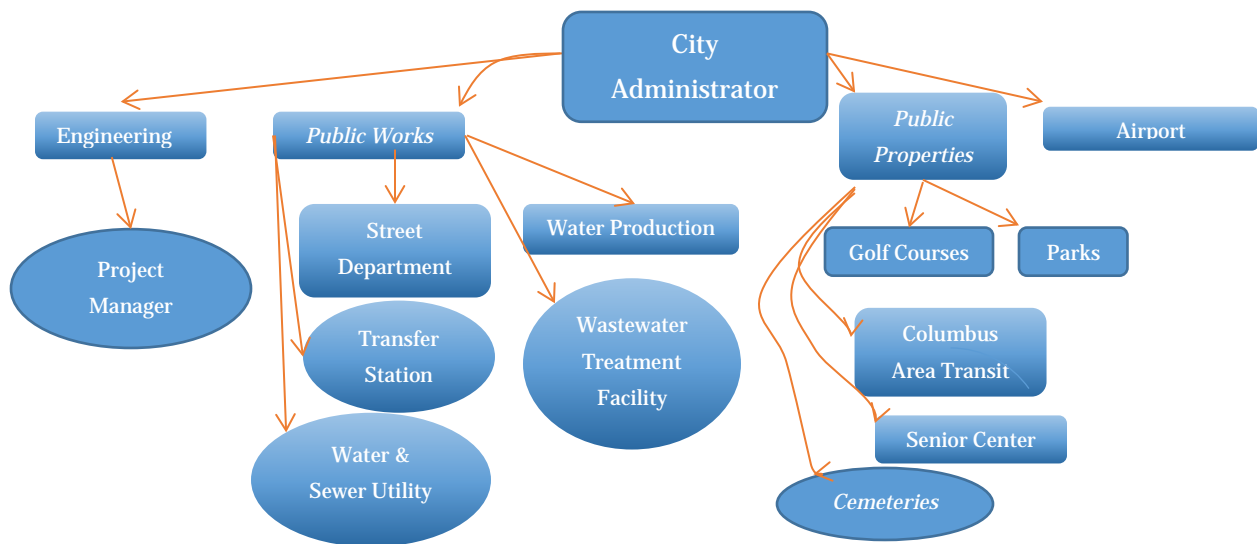
The goal of the Good Housekeeping & Pollution Program (GHPP) is to engage public employees and public properties in the best practices of Stormwater protection.

The goals of the Good Housekeeping & Pollution Program (GHPP) are to describe the procedures that the City of Columbus performs to properly dispose of waste removed from the MS4 including accumulated sediments, floatables and other debris. The intent is to have the precautions that the City of Columbus performs be as transparent as possible and easily identifiable.

Chapter 1

Overview of Program Areas

The City of Columbus has multiple facilities and grounds that house Departments and Divisions which perform necessary operations for the municipality. Departments and Divisions also incorporate the proper Best Management Practices (BMP's) while performing these duties. The Good Housekeeping & Pollution Prevention creating hazardous waste material; one division in particular deals solely with the handling and transfer of the city's solid waste. Departments and Divisions which operate within the City of Columbus municipal jurisdiction are depicted in the illustration below.



See **Appendix "A"** for map of sites.

Chapter 1

Municipal Facilities

The City of Columbus has Departments and Divisions and with each of these come their needed facilities to perform their day to day operations. For a few of these Departments and Divisions an Industrial Stormwater Permit and No Exposure Certification are required from the Nebraska Department of Environment and Energy (NDEE) to perform these operations. The Utilities Department controls the handling of these permits and certification since the divisions that require them, report to them. These divisions are:

Waste Water Treatment facility: Industrial Stormwater Discharge Notification: NER910230

*Facilities operating with the municipal jurisdiction of the City of Columbus that **do not** require special permitting or certification include:*

- ❖ Parks and Recreation*
- ❖ City of Columbus Cemeteries*
- ❖ Van Berg and Quail Run Golf Courses*
- ❖ Transportation and Streets*
- ❖ Snow Dump Sites*
- ❖ City of Columbus Transfer Station and Tree Dump Site*

*See **Appendix "A"** for a map of these sites.*

Chapter 1

City of Columbus Roadway and Parking Lot Maintenance

The City of Columbus Street Division routinely repairs sections of street throughout the spring, summer, and fall. These repairs range from one panel to the whole width of a road.

When curb and gutters are under construction the crews ensures proper flow, recognizing the direction of drainage. The Street Division follows repair and maintenance protocol when repairing and maintaining streets or parking lots.

- 1) The City plans concrete and asphalt removals during dry weather, unless the work is required as part of the response to an emergency condition.*
- 2) City crews will protect storm drain inlets and watercourses in the immediate vicinity of removal work, prior to breaking up asphalt or concrete.*
- 3) City crews must thoroughly remove pavement which has been broken by repair and maintenance activities.*
- 4) City crew's must utilize proper BMP's around nearby storm drain inlets using sandbags or an equivalent appropriate barrier. If slurry enters the storm sewer drain system, the material must be removed.*
- 5) Street sweepers must be called upon to complete the removal of saw cut slurry before the end of the day.*
- 6) Prior to reopening of the construction area sweepers must be called upon to remove any remaining materials.*

*The municipal parking lots that the City of Columbus is responsible for maintaining are shown in **Appendix "A"**.*

Chapter 1

Municipal Storm Drain System

The City of Columbus is a Phase II “MS4” entity. “MS4” is an acronym for “Municipal Separate Storm Sewer System.” This means that the Stormwater that is collected is kept separate from the sanitary sewer that is collected and treated at the Wastewater Treatment Plant. Some communities do not have separate facilities and combine their Stormwater with their sanitary sewage and treat the combination at a facility. Issues arise when there is heavy rain and runoff is collected at a rate that is greater than can be treated. This scenario causes overflow of the combination of Stormwater and sanitary sewage prior to proper treatment. MS4 entities do not have this issue. However, this also means that none of our Stormwater is treated prior to being discharged into the state’s water ways.

Our community enlists the aid of Computerized Maintenance Management System (CMMS), Lucity GIS software to keep track of our storm drain system. Upon completion of a project, the as-built of the municipal projects are given to our Engineering Department who insert the specific location, type and diameter of the storm pipe into that software. When a section of pipe is flushed or vacuumed of excessive sediment, that effort is acknowledged in the GIS software as well.

Chapter 1

Municipal Staff Education and Training

The city of Columbus employs nearly 370 full/part time staff in many departments and divisions to ensure the municipality runs smoothly for its residents. Occasional newsletters are sent out to all employees describing facets of the Stormwater Management Program. These newsletters discuss topics such as proper upkeep of Maintenance Yards, Fueling Operations, Stormwater Best Management Practices, Storm Drain Inlet Protection, Above Ground Storage Tanks and Spill Control, Hazardous Materials and Hazardous Waste, Rainy Season Preparations, Illegal Dumping and Spill Control Barriers and Proper Concrete management Waste. The Engineering Project Manager circulates these newsletters to all the departments for the City of Columbus.

Occasionally the City of Columbus Engineering Project Manager will send out reminders to all employees about proper lawn refuse, best management practices and Earth Day Facts informing them on the quantity of water it takes to perform day to day operations and the time it takes to decompose certain items made of paper or plastic material.

The City of Columbus Engineering Project Manager performs annual Stormwater Pollution Prevention training, reminding employees of ways they can reduce pollutants in the Stormwater. The Engineering Project Manager is also sent to conferences of interest around the state to gain better practices for inspecting projects within the jurisdictional boundary of the City of Columbus.

Several formats of training have been given to the members of the departments that deal with the day to day operations of the municipality. PowerPoint, videos and presentations are all given to the employees regarding Stormwater and Pollution Prevention. Specifically, the program "Stormwater Pollution Prevention, A Drop in the Bucket," by EXCAL Visual, LLP was created for our employee training. This presentation goes into detail about Good Housekeeping, Spill Prevention, Exposure Minimization, Maintenance, and Spill Clean-up. All these are followed in our employees' day to day operations. A copy of this disc can be found at the City Offices in the Engineering Project Manager's office.

All City of Columbus dump truck/snow plow operators are required to have a Class B CDL. All operators of the Elgin Street Sweepers, VacCon, vacuum and jetting truck are properly trained in their operations upon delivery of each new vehicle.

Chapter 2

Municipal Facilities

Target Pollutants of Concern

The City of Columbus operations are needed to provide a certain level of quality of life for its residents, and deal with a variety of pollutant materials on a daily basis. The list of these materials consists of, but is not limited to:

- ❖ *Paints*
- ❖ *Varnishes*
- ❖ *Solvents*
- ❖ *Oil and other automotive fluids*
- ❖ *Non-hazardous liquids*
- ❖ *Solid Wastes*
- ❖ *Yard Waste*
- ❖ *Refuse*
- ❖ *Rubbish*
- ❖ *Garbage*
- ❖ *Litter*
- ❖ *Other discarded or abandoned objects*

So that some may cause or contribute to pollution, floatables, pesticides, herbicides and fertilizers, hazardous waste sewage, fecal coli form and pathogens, dissolved and particulate metals, animal wastes, wastes and residues that result from construction, wastes and residues that result from mobile washing operations and noxious or offensive matter of any kind.

These pollutants are used, collected and transferred with a keen understanding of the importance of keeping them out of the storm sewer system. Each shop of the City of Columbus drain directly to a sanitary sewer line. Once in the sanitary sewer, the substance gets taken to the wastewater treatment facility. It is then treated at our Waste Water Treatment Plant prior to being discharged to the Loup River.

Chapter 2

Facility Pollutant Source

- i. *Building and Grounds*
- ii. *Vehicles and Equipment*
- iii. *Products Material Storage*
- iv. *Bulk Fluid Storage*
- v. *Waste Materials*

Building and Grounds

The City of Columbus has areas of use that are not designated as “maintenance shops” or “parks and recreation” facilities. These places such as street patching storage or other storage yards are used but still receive pollutants. In the spring, summer and fall the Street Department has multiple crews that are repairing or replacing concrete through the municipality. The duration of construction varies, but lasts no more than a week or two. A list of locations to be completed is created and ideally completed by the beginning of winter. It is possible to be weather specific with some projects. For an example, if a big storm is predicted in three days, then projects that take less than that amount of time are started as to minimize the Stormwater pollution runoff. Projects are kept tidy to keep the risk of material getting into the storm sewer. To help expedite the process, all subgrade material that is saturated is replaced. This helps eliminate the drying time for existing material. The same process of backfilling is followed by the Water and Sewer Departments when construction of a service line or a main is required.

The City of Columbus has a site designated as the “Wood, tree and yard waste”. At this site there are piles of construction lumber, some concrete bricks, mulch, tree branches and yard waste as well as unsuitable soil from various projects around the city. If the soil can be used for other purposes once it has dried out it will be used. This site is adjacent to the City of Columbus Transfer Station. There is a soil berm surrounding the area then a vegetative area after that to help filter any run off.

The Parks Department has made it a practice of daily cleanup first thing in the morning at all of the city parks. All the city parking lots are walked through on a daily basis picking up refuse and swept at least once a year. The refuse is then taken to the City’s Transfer Station for proper disposal.

Chapter 2

Vehicles and Equipment

The City of Columbus, in times of expected extreme weather, puts all equipment indoors. This allows it to be accessible immediately after the event as to address the municipality's needs and it keeps any hazardous drips away from stormwater runoff. All of the city's snow plows that are hydraulically raised, lowered and tilted are kept indoors at all times. Any hydraulic fluid drops that may occur with the removal of these blades from the trucks are then accounted for indoors and are tended to in a timely manner. All oil from the city vehicles is kept in a waste oil tank at each facility, to be reclaimed at a later time. The City of Columbus has a contract with private contractors to pick up the used oil.

All vehicles are maintained and repaired by the Street Department. This maintenance and repair aspect cover all types of machines, from the smallest riding lawn mower to the largest dump truck in our fleet.

Chapter 2

Product Material Storage

The City of Columbus Street Department receives material that is put on the street for different purposes. The material is delivered and stored at our Central Maintenance yard. Using the aerial image below for guidance, we store our asphalt millings that are used for filling potholes in the city streets, labeled “A”. The street Department uses a Building labeled “B” to store loose salt. There is also a stockpile of good soil to use for backfilling of holes labeled “C”. The waste fluids accumulated from vehicle maintenance is kept in a waste oil tank on the east side of the Central Maintenance Building labeled “D”.



Chapter 2

Bulk Fluid Storage

The City of Columbus contains minimal fluids above ground. We have 4 above ground fluid storage tanks used to hold de-icing liquid for the municipal streets. Two that hold 10,000 gallons and two that hold 1,000 gallons. The city uses a de-icing agent called Salt Brine Beat 55 which contains a mixture of salt brine and Beat Juice. This is stored in the above ground tanks area labeled “E”.

As part of our maintenance program, the City of Columbus collects all used motor oil. The collection point for this used motor oil is in a double lined tank that sits on the east side of our Central Maintenance Building labeled “D”.

The City of Columbus Central Maintenance Facility has the main fueling station for the city’s fleet of vehicles. This fueling station which is labeled “F”, is located on the south edge of the Central Maintenance Facility Main Building, where there are pumps for gas, diesel, and off road diesel.



Chapter 2

Waste Materials

The City of Columbus requires all shop and maintenance facilities to have direct drainage to the sanitary sewer line. This ensures that any hazardous material that may be dripping or spilled and not cleaned up properly will still be treated prior to reaching the State of Nebraska's water sources. The City's fleet of vehicles is maintained at the Central Maintenance Facility. The used oil is accumulated in a waste oil tank located on the east side of the Central Maintenance Building.

Our Central Maintenance Facility is the base for the Street Department, Water and Sewer Department. The Transportation Department is located at its own separate location. They have floor drains to catch any hazardous material spills and these floor drains lead to the sanitary sewer line to be treated at the Waste Water Treatment Plant. The drains in the shops are flushed out quarterly.

The Waste Water Treatment Plant is located on South 14th Ave. The Waste Water Treatment Plant has a containment policy that is enacted if there is ever a spill. The plant is required to notify the NDEE if there is ever an overflow of waste.

Risk Assessment

The City of Columbus identifies it's most susceptible facilities for creating or disturbing pollutants and performs regular semi- annual evaluations on them. We recognize the following categories as having the chance for the highest risk:

- ❖ Site Activities*
- ❖ Solid Waste Activities*
- ❖ Grass and Weed Control Activities*
- ❖ Solvent Usage and Storage*
- ❖ Geography (i.e. wetlands near facilities)*
- ❖ Miscellaneous*

Chapter 2

Municipal Hot Spot Evaluation

The City of Columbus uses the process of Hot Spot Evaluations (HSE) to determine which among its facilities is to receive a Facility Runoff Control Plan (FRCP). The purpose of the HSE is to locate the facilities of the City of Columbus whose activities pose a threat to the State of Nebraska's water system. Hot Spots are defined as those land uses and physical features that may either contribute pollutant loading to a higher degree or be a recipient off pollutant loading impacts. Using certain criteria, a method has been used to ascertain these Hot Spots.

*See **Appendix "A"** for Municipal Hot Spot Evaluation*

Maintenance yards are defined as locations where activities include:

- ❖ Vehicle & equipment maintenance & repair (excluding small engine repair)*
- ❖ Vehicle & equipment fueling (bulk fuel storage capacity-stationary or mobile)*
- ❖ Vehicle & equipment washing (particular outdoor washing)*
- ❖ Vehicle & equipment storage (outdoor)*
- ❖ Outdoor loading & unloading*
- ❖ Outdoor material storage (stockpiles & bulk storage etc.)*
- ❖ Dumpster/trash compactors for waste management*
- ❖ Building & Grounds Maintenance (i.e. trench drains, sumps, o/w separators, stormwater drainages)*
- ❖ Parking Lot Maintenance (i.e. sweeping, patching, paving, grading)*
- ❖ Turf management & landscaping maintenance (i.e. fertilizer and pesticide management, mixing, storage)*

The City of Columbus has Hot Spot Evaluations for each of its major facilities. The Results of these evaluations can be found in the Engineering Project Manager's office.

Chapter 2

Facility Runoff Control Plan (FRCP)

- i. Purpose
- ii. Facility List of FRCP's
- iii. FRCP Example

In 1972, Congress passed the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waterways. The ultimate goal was to make sure those rivers and streams were fishable, swimmable and drinkable. In 1987, the Water Quality Act added provisions to the Clean Water Act that allowed the EPS to govern stormwater discharges from industrial activities. The EPA published the final notice for Phase 1 of the Multi-Sector General Stormwater Permit program in 1995 which included provisions for the development of a program to address the possible pollution sources at the municipal facilities, including transportation facilities, vehicle maintenance and where fueling activities are conducted. The developments, implementation and maintenance of a Facility Runoff Control Plan will provide the City of Columbus with the tools to reduce pollutants contained in stormwater discharges and comply with the requirements of the Stormwater Permit issued by the State of Nebraska's DEQ.

The primary goals of the Facility Runoff Control Plan are:

- ❖ *Identify potential sources of pollutants that affect stormwater discharges from the sites.*
- ❖ *Describe the practices that are implemented to prevent or control the release of pollutants in stormwater discharges.*
- ❖ *Provide an implementation schedule to ensure that the practices described in this plan are in fact implemented and to evaluate the plan's effectiveness in reducing the pollutant levels in stormwater discharges.*

Chapter 2

Municipal Maintenance and Industrial Facilities List

With over 35 facilities located in various areas around the city, there are many locations to focus on. The City of Columbus is responsible for the maintenance and upkeep of fifteen parks, one water tower, one water tank above ground, one water tank below ground, two fire stations and one fire training center as well as numerous other Department offices. The Hotspot Evaluations were completed on all of these facilities. All facilities with a rating greater than twenty (20) must implement a Runoff Control Plan. Any facility with a score less than twenty (20) should still follow Best Management Practices of the MCP's. See [Appendix "B"](#) for the list.

Essential Staff Roles and Policy Summary

Dave Boswell, the Program Manager for the City of Columbus will be designated as the plan coordinator. The facility manager will be responsible for the following duties as they pertain to the Runoff Control Plan.

- ❖ Identify individuals to aid in the implementation of the plan.*
- ❖ Implement the Runoff Control Plan.*
- ❖ Oversee maintenance practices identified as BMP's in the plan.*
- ❖ Implement and oversee employee training (with direct assistance from the Program Manager).*
- ❖ Conduct required semi-annual inspections.*
- ❖ Identify other potential pollutant sources and make sure they are added to the plan.*
- ❖ Identify any deficiencies in the Runoff Control Plan and make sure they are corrected.*
- ❖ Prepare and submit reports.*
- ❖ Ensure that any changes in facility operations are addressed in the Runoff Control Plan.*

Chapter 2

Essential Staff Roles and Policy Summary (continued)

Good Housekeeping/Pollution Prevention inspections will be conducted by Qualified Personnel on a semi-annual basis using the inspection form provided in Appendix B. An inspector is considered qualified at the discretion of the Facility Supervisors. At a minimum a Qualified Inspector will have read this Runoff Control Plan, be familiar with the Spill Response Plan and Procedures, receive a briefing from the Engineering Project Manager on the inspection process, and participate in spill control and hazardous waste control when provided by the City of Columbus. The Following personnel will be involved in managing and conducting the inspections as well as participating in random inspections by the Stormwater Program Management.

Street Superintendent

Clete Borchers

Utility Superintendent

Jake Wacha

Main Site Contact

Jim Rawhouser

Additional Inspectors

Shane Crumley

Chapter 2

Records and Reports Summary

Record Keeping and Authorized Signatures

Records will be kept of all significant stormwater pollution events (e.g. spills/releases), in house inspections, follow-up responses to these inspections, and any significant changes in onsite activities associated with the transportation & streets facility. These records shall be maintained for at least three (3) years.

Record Retention Requirements

Records described in the plan must be retained on site for three (3) years beyond the date of the cover letter notifying the facility of coverage under a stormwater permit, and shall be made available to the state or federal compliance inspection officer upon request. Additionally, employee training record, monitoring reports, changes to plan, and any information required by the permit to be retained will be done so for the minimum of a three (3) year period.

Provisions for Amendment of the Plan

If the facility expands, experiences any significant production increases or process modifications, or changes any significant material handling or storage practices which could impact stormwater, the plan will be amended appropriately. The amended plan will have a description of the new activities that contribute to the increased pollutant loading and planned source control activities. The Runoff Control Plan will also be amended if the state or federal compliance inspection officer determines that it is ineffective in controlling stormwater pollutants discharged into waters.

The City of Columbus has crews in all departments that perform the day to day maintenance for the municipality's infrastructure. Our Street Department performs the maintenance on the streets and sidewalks. It also does some maintenance on the equipment and vehicles as needed.

The Water and Sewer Department has a crew that makes repairs to the existing water and sewer mains. When there is a redevelopment, rebuild, rehabilitation projects on streets, water and sewer mains, there is a contractual maintenance that is described differently from project to project and the contracts are available upon request.

Chapter 3

Roadway and Parking Lot Maintenance

Target Pollutants of Concern

At this time the City of Columbus has nearly 500 lane miles of roads which includes concrete, asphalt and gravel surfaced streets. Maintaining this many miles of streets (500 total miles of streets) would be like sweeping, moving snow, or generally maintaining one lane of road from Columbus to Laramie, WY.

The City of Columbus has two full-time street sweeping operators who use two types of machines. One is an Elgin Pelican, which is a dry vacuum and one Elgin Eagle which are wet mechanical sweeper. Each of these types has their specialty use. The Eagles are best used for picking up gravel and minor sediment residue by wetting it down and brushing it into a hopper with multiple sets of brushes on the sides and in the rear. The Whirlwind is used for picking up light debris, such as leaves or trash.

Contrary to popular belief our street sweepers are not used to clean-up large material. While it is important to clear such material away, it's the smallest particles on the roads that inevitably cause the most stormwater pollution. Such items as brake dust, auto exhaust remnants, and zinc from car tires. Gravel, sand, dirt, sticks, grass and small litter are the key pollutants and all found predominantly within six inches of the curb and gutter. The total volume of these items is incredibly larger than the sum of the more highly visible items.

Chapter 3

Roadway Street Sweeping

- i. *Risk Assessment*
 - 1.) *Prioritization and Frequency Determination*
 - 2.) *Map*
- ii. *Sweeping Protocols*
- iii. *Disposal Protocols*

Risk Assessment, Prioritization and Frequency

Goals of our Street Sweeping Program

Set priorities for sweeping frequency based on factors such as traffic volume, land use, proximity to waster courses and field observations of material accumulation.

- 1) *Establish and maintain a consistent sweeping schedule.*
- 2) *Sweep streets just prior to the beginning of the wet season, operating (2) sweepers during this time (i.e. during September and October).*
- 3) *Continue to maintain a record keeping system to evaluate the effectiveness of the program (Network Fleet software).*

Frequency and Routine

The City of Columbus is divided into four quadrants (NE, SE, NW, and SW). Each of the operators are responsible for sweeping two quadrants. They start in one quadrant one day and then move to their other quadrant the next day. The operators can cover the same stretch of street as many as 3-4 time per year. The prioritization of the routes depends on how much traffic the street receives.

- ❖ *Major Arterials are swept weekly.*
- ❖ *Major Collectors are swept monthly.*
- ❖ *Minor Collectors are swept quarterly.*
- ❖ *With residential roads being swept on average 4-5 times a year.*
- ❖ *With residential roads being swept on average 4-5 times a year.*

Chapter 3

Risk Assessment, Prioritization, Frequency for Street Sweeping Map. Using the State of Nebraska Prioritization of Routes for the City of Columbus. See Appendix “B”

Sweeping Protocols

The City of Columbus currently has two (2) Elgin brand industrial street sweepers. There is one that operates dry (Whirlwind model) and one that operate with water. The City of Columbus has two designated street sweeping operators. The City of Columbus is divided into four quadrants (NE, SE, NW, and SW) based off the intersection of 23rd Street and 33rd Ave. The operators are responsible for sweeping two of the four quadrants. They start in one quadrant and move to the next one they are assigned to when they are finished with one. The operators can cover their area 3-4 times a year. When the hopper on the sweepers is filled, the operator drives to the Storage Lot and unloads the hopper.

Disposal Protocols

The City of Columbus currently has two Elgin brand industrial street sweepers. There is one that operates dry and one that operates with water. The City uses the practice of lightly wetting streets as they are swept, for maximum material pick-up efficiency. Currently, water usage for street sweeping is in the range of 20 to 50 gallons per curb mile. This minimal amount of water has been observed to evaporate, rather than to flow into the storm drains and watercourses. The use of a small amount of water is important for dust control, air pollution prevention and for improving particle adhesion.

*The City of Columbus has two designated street sweeping operators. These operators drive Eagle model sweepers. When the hoppers of the machines are full, which can be as often as five times a day, the operator unloads at the Storage Lot where the material is dumped wet and dry and is at this location until it is dry. Once it is dry it then hauled to the Nebraska Regional Sanitary Landfill. See **Appendix "B"** for map.*

Chapter 3

Catch Basin Inventory

The City of Columbus implements a Storm Drain mapping system using Computerized Maintenance Management System (CMMS) Lucity software. Within this mapping system there are many features that records are kept on. Some of the features are:

- ❖ *Rim Elevations*
- ❖ *Flowline Elevation (invert taken from rim or top of the structure and subtracted measured depth).*
 - *Inlets and Outfall pipes at structure*
 - *Flowline Invert*
 - *Diameter of Pipe*
 - *Direction of flow*
- ❖ *Outfall Location*
 - *Pipe run to river, ditch, or detention cell.*
 - *Type of outfall (flared end, box, letdown structure, outlet to river or ditch)*
- ❖ *Discharge Status (at time/date of survey)*
- ❖ *Type of Conveyance Structure*
 - *Drainage canals, box culverts.*

Using CMMS Lucity software, a general query for Storm Sewer curb inlets can be performed. This software is updated via the Engineering Department. On the City of Columbus website, our GIS map includes identification of each curb inlet.

An example of the inventory sheet for the City of Columbus's inlets can be found in [Appendix "C"](#).

Chapter 3

Catch Basin Cleanout

- i. Prioritization and Frequency Determination*
- ii. Cleanout Protocols*
- iii. Disposal Protocols*

Prioritization and Frequency Determination

The City of Columbus Street Department is responsible for the cleaning out of the curb inlets (Catch Basins). These curb inlets are addressed when concerned citizens call in to the Project Manager or register an issue on the City of Columbus's web site. Preventive maintenance is performed on the transitional areas where concrete turns to gravel and has inlets nearby. There is usually more maintenance performed on inlets that were involved in a redevelopment process. The construction activity inevitably gets dirt/rock in the curb inlet and needs to be replaced. These are acknowledged upon the completion of construction activity and the contractor is required to clean out the inlets as necessary.

An inspection procedure of prioritizing storm drain system and catch basis's clean-out has been established. When the depth of the deposits are greater than 1/3 the diameter of the pipe, maintenance is required. After each storm, a physical inspection of known areas of concern is done. If there are blockages or pollution problems, they are addressed. A list of these inlet locations is provided to the crew periodically from the Project Manager. Upon completing the clean-out and jetting of the curb inlet, the crew returns the paperwork to the Project Manager who then enters that information into the Computerized Maintenance Management System (CMMS) Lucity software for that specific Curb inlet.

Chapter 3

Catch Basin Cleanout Protocols

The City of Columbus Street Division has one VacCon truck that is used to aid in the clean out of curb inlets and catch basin's when needed. Once the truck is filled or the clean-out of the curb inlets or catch basin's is completed, the truck is emptied out at our Storage Yard. The truck has a large debris tank that enables the crew to comfortably address any plugged line for more than 300 linear feet upstream or downstream of the inlet or junction box.

This vehicle is used as needed for cleaning out storm sewer inlets and lines in the event of build-up. It has a jet and a pump built on the vehicle to have a variety of ways to approach a clogged pipe.

*When the crew cleans out the curb inlet, they also clean out the immediate storm line near it. The crew writes the intersection of road names or numbers, the length of pipe that was cleaned out and a description of the inlet condition on a form See **Appendix "C"** and sends it to the Project Manager. This information is then posted on the Computerized Maintenance Management System (CMMS) Lucity Software for that curb inlet and the pipes features.*

Disposal Protocols

The City of Columbus Street Department is responsible for cleaning out the curb inlets, junction boxes and associated pipe when needed. The disposal protocol for this is similar to the street sweeping. Upon completion of the work, the operator of the VacCon truck will take the material to the Storage Yard and unload the truck. The collected Material is then hauled to the Nebraska Regional Sanitary Landfill.

Chapter 3

Parking Lot Sweeping

- i. Municipal Parking Lot Inventory*
- ii. Sweeping Protocols*
- iii. Disposal Protocols*

Hard Surface Parking Lot Inventory and Sweeping Protocols

The City of Columbus has a limited amount of municipal parking lots that they maintain. These parking lots are located in the downtown Business District. The frequency of sweeping is dependent on the activity level usually it is once a week. When the hopper on the sweeper is full, the operator unloads the hopper at the Storage Yard. When material has dried, it is hauled to the Nebraska Regional Sanitary Landfill.

List of Surfaced Parking Lots:

- A. 24th Ave. and 14th Street*
- B. 25th Ave. and 12th Street*
- C. 25th Ave. and 15th Street*
- D. 28th Ave. and 12th Street*
- E. 45th Ave. and 19th Street*
- F. 25th Ave. and 14th Street*
- G. Columbus Airport Parking Lot*
- H. Pawnee Plunge Parking Lot*
- I. Aquatic Center*
- J. Memorial Stadium*
- K. Legion Field*

See **Appendix "A"** for map of Surfaced Parking Lots

Chapter 3

Essential Staff Roles and Policy Summary

The City of Columbus Street Sweeping Program has established responsibilities for overseeing the implementation of Best Management Practices:

- 1) Oversight of the implementation of BMP's during the performance of street maintenance activities is the responsibility of the Public Works Director.*
- 2) Crew supervisors have the direct responsibility of ensuring that their workers implement appropriate BMP's while on the job.*

The City of Columbus Street Sweeping Program implements a number of measures to improve sweeping efficiency:

- 1) One or more of the following measures will be used, where needed to encourage voluntary relocation of vehicles parked in the streets.*
 - a) Develop and distribute newsletters and other public education materials notifying residents and businesses of street sweeping schedules.*
 - b) Post temporary "no stopping, no parking" signs (for an example in the business district, near large apartment complexes, etc.).*
- 2) The City of Columbus must place emphasis on street sweeping in the period from early fall into the winter months until leaf fall has been completed. This practice is thought to maximize the removal of leaves debris, and other pollutants, which would otherwise be washed into the storm drain system. Additional sweepers will be called upon to assist in the fall cleanup if needed.*
- 3) In areas where large accumulations of leaves or yard waste occur, use one or more of the following methods as necessary to improve sweeping efficiency.*
 - a) Utilize a front end loader with a dump truck just prior to cleaning.*
 - b) Operate street cleaning equipment in tandem.*
 - c) Inform citizens that fallen leaves must be cleaned up and contained.*
 - d) Raking leaves into the street is prohibited.*

4) *Do not sweep roads without curb and gutter. These streets will be done on an as needed basis, pending accumulation amounts and proximity to storm drainage system.*

5) *The City of Columbus encourages residents to collect their leaves and yard waste to be hauled to the yard waste site.*

Street sweeper operators must report trees and other obstacles which may interfere with street cleaning to the Street Department Supervisor. The Public Works Department employ adequate equipment and personnel to successfully cope with such obstacles in the public right-of-way.

6) *The City of Columbus will sweep streets without curb and gutter in residential areas, based on amounts of accumulation and proximity to the storm drainage system, except in Open Space areas.*

Records and Reports Summary

Sweeping Tracking and Reporting

- 1) The City of Columbus street sweeping program is conducted by the Street Department. Tracking records are provided by the Computerized Maintenance Management System (CMMS) Lucity Program.*
- 2) Statistics on the street sweeping activities are kept in a database provided in the Computerized Maintenance Management System (CMMS) Lucity program and recorded during the operation of the equipment, and a summary report must be completed by operators on a daily basis on cubic yards of debris. The number of curb miles swept, the number of cubic yards of debris picked up, time sweeping, and travel routes will be recorded.*

*This information is presented in the NPDES Annual Report in April. The City of Columbus keeps official records of the total debris accumulated each year since 2010. See **Appendix "A"** for debris hauled by year.*

Chapter 4

Municipal Storm Drain System

The City of Columbus operates and maintains a Municipal Separate Storm Sewer System also known as MS4's. All outfalls within the municipal limits of the City of Columbus are accounted for by the Engineering Project Manager and the GIS Department. Within the parameters of the NPDES Permit, the City of Columbus maintains an MS4-Phase II permit requiring the municipality to perform an annual Outfall Reconnaissance Inventory (ORI). During the annual Outfall Reconnaissance Inventory (ORI) all outfalls 36" and larger in diameter outfalls and one-third of all outfalls 35" and smaller that lead to the waters of the state are inspected and evaluated. The two main watersheds that collect stormwater from Columbus are the Lost Creek Flood Control Canal and the Loup River.

The Storm Drain Map was first developed with the help of a consultant group hired by the City of Columbus and used the existing GIS Coordinate system, Nebraska State Plane (NAD88). The specific stormwater system features were captured by surveying with GPS technology and equipment. The accuracy level of the captured features were within .05 feet horizontal and vertically. The collection crews were familiar with storm sewer systems and aware of any cross connection possibilities of concern.

Some of the data was stored in non-digital format. Some of the past projects were added to the current outfall database. We have modified all of the different datasets that have been created into a GIS format.

The City of Columbus Illicit Discharge Detection and Elimination (IDDE) Program consolidated all the information that has been gathered by the City of Columbus staff and other entities. This includes all outfall points, inlets and storm sewer pipes. Besides using an existing preliminary database, as-built created by construction inspectors during the time of construction of municipal projects had the necessary information input into the Computerized Maintenance Management System (CMMS) Lucity software.

Chapter 4

Municipal Storm Drain System (continued)

The following data was collected at the time of the GPS field survey:

❖ *Inlets and Junction Boxes*

- ◆ *Rim elevations (from GPS)*
- ◆ *Flowline elevations of structures*
- ◆ *Outflow direction and size*
- ◆ *Type of structure material*

❖ *Outfall Structures*

- ◆ *Flowline elevations where it is possible*
- ◆ *Dumps to a river, ditch, lake, or detention cell.*
- ◆ *Type of outfall (F.E.S., pipe only, letdown structure, ditch)*
- ◆ *Suspected cross connection must be reported to the Stormwater Program Manager.*

❖ *Discharge Status(at the time of survey)*

- ◆ *Discharge Present (yes or no)*
- ◆ *Odor Present (yes or no)*
- ◆ *Illegal Cross- Connection Suspected (yes or no).*

❖ Other conveyance structures

- ◆ *Drainage canals (centerline, estimated top and bottom width) where it is possible.*
- ◆ *Box culverts (beginning and end points, type).*

❖ *No survey will be completed on pipe sections between structures. The location and direction of the pipe will be based on a point A to B basis.*

❖ *All data will be delivered in shape (shp) files compatible with Computerized Maintenance Management System (CMMS) Lucity GIS and used by the City of Columbus Engineering Department. The created geodatabase is regularly updated with each annual inspection of the previously acknowledged outfalls. These inspections are performed in the summer and fall months. Newly installed outfalls are identified by the as-built of completed municipal projects. These outfalls are installed into the created geodatabase and can be identified with a simple query in the Computerized Maintenance Management System (CMMS) Lucity software.*

Chapter 4

Target Pollutants of Concern

The City of Columbus has a broad range of pollutants that it targets with its municipal storm drain system. Columbus considers anything which causes or contributes to pollution a pollutant. It may include, but is not limited to; paints, varnishes and solvents, oil and other automotive fluids; non-hazardous liquid and solid wastes, yard waste; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, so that the same may cause or contribute to pollution; floatables; pesticides, herbicides and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; wastes and residues that result from mobile washing operations; and noxious or offensive matter of any kind.

Detention and Retention Basin Inventory

The City of Columbus has begun to keep track of Detention and Retention Basins in a list and location format. As of now, there is a required basin in the design and development phases, that must be able to handle a 10 (ten) year rain event. This list consists of two categories, private and public. The purpose of this list is to create a bank to Total Water Quality Volume (WQVC). This allows redevelopment projects that do not have the available space for water quality treatment, an index of off-site locations available for retrofitting. As the public basins get used up, the private ones will be addressed. It should be expected that when the public basins are retrofitted there will not be an exact match of required volume compared to constructed volume. If it is not an exact match there will have to be more constructed volume. This would allow future redevelopments projects to benefit from the overages from previous projects.

*See **Appendix "C"** for an example of an Inventory List*

Chapter 4

Detention Cells functionality/ Prioritization/ Inspection Frequency

The City of Columbus Street Department is responsible for maintaining current public basins. This maintenance process consists of mowing of ditches and the occasional trash removal. Since the City of Columbus is in the process of implementing a Post-Construction Stormwater Management Program, there has not been any Water Quality practices designed into any of these existing basins. The City of Columbus is working on a list of public and private basins. The purpose of these lists is to use these existing basins for offsite mitigation of municipal redevelopment projects. These basins will be retrofitted to account for Water Quality practices. The maintenance process will be performed by the City of Columbus Street Department or designated personnel. This maintenance will consist of mowing on a regular basis, picking up any accumulated trash, ensuring the proper vegetation growth and that invasive species are not becoming an issue.

Post Construction Storm Water Treatment Facility Inventory

The City of Columbus will follow a schedule of Implementation for its Post Construction Stormwater Management Plan. There are post construction ordinances in place that will be clarified and enforced to ensure proper understanding of this plan. In this plan there are allowable Stormwater Treatment Facilities (STF's) available for installation on development and redevelopment projects. Upon completion, the Stormwater Treatment Facilities (STF's) information will be provided to the City of Columbus, where it will be kept in a database with all other completed Stormwater Treatment Facilities. (STF'S) The table will consist of the developer providing the Stormwater Treatment Facilities (STF Identification Number) as to easily locate it within a database of other Stormwater Treatment Facilities (STF's). The developer must also identify the type of facility that has been created. The City of Columbus will allow bioswales, regional facilities, rain gardens and sediment forebays as types of allowable Storm Water Treatment Facilities (STF's). In order to pinpoint these facilities on a map, the latitude and longitude must be provided as well. A hydrologic study must identify the acreage of the drainage area. This area will be necessary to help determine the needed design volume or rate of discharge for the allowable Stormwater Treatment Facilities (STF's).

Chapter 4

Maintenance Practices/Frequency

In the City of Columbus's Post Construction Stormwater Management Plan, there is a section labeled Maintenance of Controls. This section outlines the responsibilities for the maintenance of Stormwater Treatment Facilities (STF's).

Stormwater Treatment Facilities (STF's) located on private property shall be owned and operated by the owner(s) of the property on which the Stormwater Treatment Facilities (STF) is located, unless the City of Columbus agrees in writing in the form of a maintenance agreement, that a person or entity other than the owner shall own or operate such Stormwater Treatment Facilities (STF). As a condition of approval of the Stormwater Treatment Facilities (STF), the owner shall also maintain the Stormwater Treatment Facilities (STF) in perpetuity to its design capacity.

The City of Columbus shall continue to maintain public storm sewer infrastructure including public Stormwater Treatment Facilities (STF's). Each homeowners association of a subdivision or individual lot owner shall maintain Post Construction Stormwater Treatment Facilities (STF's).

Chapter 4

Storm Drain Inventory

The Purpose and Scope of the Project

The purpose of this storm drain inventory will be to provide geospatial data collection of the City of Columbus Storm Water conveyance system features.

The engineer must utilize the existing GIS horizontal coordinate system, Nebraska State Plane (NAD83) and vertical datum of NAVD88. The storm water system features should be within 0.05 feet horizontal and vertically, or limits approved by the City of Columbus. The Collection Crew should be familiar with storm sewer systems and aware of any cross connection possibilities of concern. This project will consist of a large amount of system observation and tracking of unknown system locations.

Data Collection

The Storm Water GIS survey will include the following:

- ❖ *Inlets and Junction Boxes.*
- ❖ *Outfall Structure (F.E.S., End of Pipe, Concrete Letdown, etc.)*
- ❖ *Outflow Pipe Direction and Size*
- ❖ *Number of Inflow Pipe and Size*
- ❖ *Conveyance Structure (drainage canals, culverts, detention cells)*

The following data was collected at the time of the field surveys:

- ❖ *Inlets and Junction Boxes*
 - *Rim Elevations*
 - *Flowline elevation of structure*
 - *Outfall direction and size of pipe*
 - *Type of structure material*

❖ Outfall Structures

- *Flowline elevations where it is possible*
- *Dumps to river, ditch, lake, or detention cell.*
- *Type of outfall (F.E.S, pipe only, or ditch).*

Chapter 4

Storm Drain Inventory (continued)

- ❖ *Discharge Status (at time of survey)*
 - *Discharge present (yes/no)*
 - *Odor present (yes/no)*
 - *Illegal Cross Connection Suspected (yes/no)*
 - *Suspected cross connections must be reported to the Stormwater Program Manager.*
- ❖ *Other conveyance structures*
 - *Drainage canals centerline, estimated top and bottom width, where possible*
 - *Box culverts beginning and end points & type of material.*
- ❖ *No survey will be completed on pipe sections between structures. The location and direction of the pipe will be based on a point A to B basis*
- ❖ *All data will be delivered in a shape (shp) files compatible with GIS software used by the City of Columbus.*

Storm Drain Inventory Map Example

*There is an example of the City of Columbus's Storm Drain Inventory in **Appendix "C"**.*

Municipal Storm Drain Cleanout Protocols

The City of Columbus implements a storm drain cleanout procedure that addresses cleanout practices when curb inlets are cleaned. If there are concerned citizens that use our City of Columbus Stormwater hotline or our City of Columbus website to register an observation that curb inlets are draining slowly or are clogged then the Engineering Project Manager is notified. The Engineering Project Manager then notifies the Street Department so they may get the issue resolved. Once the issue is resolved, the information (which inlets, length of pipe, amount of debris etc.) is sent to the Engineering Project Manager for input into the City of Computerized Maintenance Management System (CMMS) Lucity software.

Chapter 4

Municipal Storm Drain Disposal Protocols

The City of Columbus Street Division is responsible for cleaning out the storm drains of the municipality. The disposal protocol for storm drains is similar to that of the curb inlets and street sweepers. Upon completion of the work, the operator unloads the hopper at the Storage Yard. Once the material is dried it is collected and loaded into a dump truck and taken to the Nebraska Regional Sanitary Landfill.

Stormwater Outfall Inventory

The City of Columbus performs an Outfall Reconnaissance Inventory (ORI) on all outfalls within the City of Columbus jurisdiction limits. The Outfall Reconnaissance Inventory (ORI) is performed every year, as described in the Storm Water Maintenance Plan (SWMP) and in accordance with the NPDES permit, it must be monitored in dry-weather to make the best assessment as to if an illicit discharge is occurring or not.

Outfall Dry Weather Screening

The City of Columbus Engineering Project Manager performs Dry Weather Screening and Outfall Reconnaissance Inventory (ORI). The best time of the year to do this is when there are no flows (dry weather) from melting snow, rain or sprinkler systems. Also, since access to a few of these outfalls are near the City of Columbus Lost Creek Flood Control Canal and the Loup River the reconnaissance must be done when the weather is dry.

The determining factor in deciding which outfalls to observe is the outfalls interior diameter (ID). Pipes with an ID of 36" or greater will be observed on an annual basis and one third of pipes with an ID of 35" or less. Then a list of the outfalls is created with the GIS and Engineering Department. It is updated when as-builts are received from completed stormwater projects. All newly installed outfalls are added to this list and monitored according to the ID of the pipe.

Chapter 4

Outfall Dry Weather Screening (continued)

Certain field methods are required to complete the outfall observations.

- ❖ *Ensure outfall is accessible, contact maintenance and operations if overgrown.*
- ❖ *Inspect outfall only if safe to do so.*
- ❖ *Characterize the outfall by recording information on the Outfall Reconnaissance Forms.*
- ❖ *Photograph the outfall with a digital camera or other means.*
- ❖ *If dry weather flow is present and does not appear to be an illicit discharge, attempt to identify the source of the flow (document the flow for future comparison)*
- ❖ *Document dry outfalls for future comparison.*
- ❖ *Follow procedure if an illicit discharge is suspected.*
- ❖ *Do not enter private property without permission.*

Procedures to follow if Illicit Discharge is suspected

- ❖ *Use Outfall Reconnaissance Inventory Form and CMMS Lucity to document observations.*
- ❖ *Visually inspect general area for possible sources.*
- ❖ *Take photos*
- ❖ *Estimate flow*
- ❖ *Collect samples if they would help with source identification.*
- ❖ *Refer to investigating Illicit Discharge S.O.P. for further directions on source identification.*

Chapter 4

Essential Staff Roles and Policy Summary

As a part of the NPDES Phase II MS4 Permit, permittees are required to develop, if not already completed, a storm sewer system map showing the location of all outfalls and the names and locations of all waters that receive discharge from those outfalls. The map is to be used to assist permittees in completing the Illicit Discharge Detection (IDDE) and Elimination Minimum Control Measure as outlined by the Environmental Protection Agency (EPA) and the Nebraska Department of Environmental Quality (NDEE).

The Engineering Department has identified the locations of storm sewer pipes, culverts, inlets, outfalls, ditches and swales. Some areas already have outfalls recorded that we use from storm water conveyance operations. Some data is stored in a non-digital format.

Since past projects have added to the current created outfall database and storm sewer map, there is little chance that all databases will be consistent. As part of the City of Columbus Illicit Discharge Detection and Elimination (IDDE) program we have modified all of the different datasets that have been created into a GIS format. The main objective of the program is to ensure that all future mapping efforts complete the mapping database and do so with similar features as municipal projects are added in the future.

Records and Reports Summary

The City of Columbus utilizes our GIS Division as well as the Computerized Maintenance Management System (CMMS) Lucity software to control the status of our Storm Drain Mapping Information. The Engineering Department is responsible for updating the City Storm drain map on a regular basis as the municipal projects are completed.

When a storm drain is maintained by the Street Department, the operators will fill out Catch Basin/ Inlet Cleanout Log. This information is then given to the Project Manager who then inserts it into the Computerized Maintenance Management System (CMMS) Lucity software. This information can then be accessed via query to what length of feet have been cleaned compared to the total storm sewer length.

Chapter 5

Municipal Storm Drain Education and Training

The City of Columbus consists of a myriad of Departments and Divisions. The departments keep the community running, and therefore implement the operations that create most of the municipalities stormwater pollution are;

- ❖ Columbus Airport*
- ❖ Columbus Police Department*
- ❖ Columbus Aquatic Center*
- ❖ Pawnee Plunge*
- ❖ Columbus Cemetery*
- ❖ Rose Lawn Cemetery*
- ❖ Fire Department*
- ❖ Quail Run Golf Course*
- ❖ VanBerg Golf Course*
- ❖ Park and Recreation*
- ❖ Public Works*
- ❖ Utilities*

The municipality employs over three hundred (300) full-time employees. The Engineering Project Manager periodically hosts a Stormwater Training Session. The purpose of the training is to get these employees, consisting of field staff, maintenance staff, supervisors and facility managers informed on the importance of how their actions effect the environment. The goal is for these employees to implement Best Management Practices (BMP's) in their daily operations to minimize that effect.

Chapter 5

Target Pollutants of Concern

The City of Columbus is concerned with all pollutants that it introduces into not just the MS4, but the environment as well. However, being a municipality, it's similar to being an industry, where many of the pollutants that get into the MS4 are identifiable as point source pollution. The City of Columbus has a broad range of pollutants that it targets within its municipal storm drain system. Within the City of Columbus many of these points have been identified.

Pollutants may include, but are not limited to paints, varnish, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter or other discarded or abandoned objects, ordinances, and accumulations so that the same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coli form and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; wastes and residues that result from automobile washing operations; and noxious or offensive matter of any kind.

The municipal Staff Education and Training that is performed by the Engineering Project Manager targets all items on this list as it pertains to our municipality's day to day operations, raw sewage at the Waste Water Treatment Plant; oil at the Central Maintenance Facility Shop, and Stormwater Pollutants with the Street Department.

Chapter 5

Target Audience and Resources

The City of Columbus has trained and will continue to train its employees in:

- ❖ *Fleet Maintenance*
- ❖ *Park and Recreation Maintenance*
- ❖ *Solid Waste Operations*
- ❖ *Street Drain Maintenance*
- ❖ *Material Storage*
- ❖ *Land Disturbances*

All these aspects are utilized within the City of Columbus daily operations and represent a point-source of pollution. Identifying the sources of the pollution is the first step in minimizing it. The target audiences for these training events are field staff, maintenance staff, supervisors and facility managers which directly effect this point-source pollution in all departments throughout the municipality.

The City of Columbus has quite a few formats of media at its disposal, as well as conferences that it sends it employees to occasionally to get informed on updates to municipal operations. The City uses guest speakers, newsletters, PowerPoint Presentations, movies, e-mails, and Press releases.

Because the City of Columbus is involved in a cooperative with many other Nebraska Communities (Nebraska H2O), we have access to professionally created material that would not be available if we were acting alone.

- ❖ *Radio Public Service Announcements*
- ❖ *Best Management Practices guides*
- ❖ *Illegal Dumping Protocol Videos*
- ❖ *Illicit Discharge Detection and Elimination Resources*
- ❖ *Site-Specific Training*
- ❖ *Stormwater Publications*

Chapter 5

Outcomes for Municipal Facility Maintenance

The City of Columbus maintains a training program regarding its Facility Runoff Control Plan (FRCP) for the City employees. It introduces the concept of the Facility Runoff Control Plan (FRCP) and the process for each facility evaluation. The goals for the FRCP training program are;

Identify potential sources of pollution.

- ❖ *Identify Facility Manager Duties*
- ❖ *Implement Best Management Practices (BMP's).*
 - *Spill Kits*
 - *Fueling Area*
 - *Equipment Wash Bay*
 - *Double Containment of Used Oils and Chemicals.*
- ❖ *Create a program evaluation process.*
 - *Semi-Annual Program Evaluation*
 - *Semi-Annual Dry Weather Inspections*

Outcomes for Sweeping Maintenance

The City of Columbus maintains as street sweeping program with a primary goal of improving lake, river, and stream water quality. The secondary goals are:

- ❖ *Define the street sweeping program with frequencies.*
- ❖ *Establish and maintain a consistent schedule.*
- ❖ *Sweep streets just prior to the beginning of the wet season.*
- ❖ *Continue to maintain a record-keeping system to evaluate effectiveness.*

As the program is being utilized, the amount of sediment removed from the streets is recorded. This gives us a year to year idea of how much debris is being taken off the street and therefore not being discharged into the lakes, rivers, and streams. Also being recorded is the amount of lane miles that are being cleaned. Using these two bits of information, the City of Columbus can determine a ratio of debris/miles. This ratio tells us if more or less pollutants are being cleaned off the streets each year.

Chapter 5

Outcomes for Storm Drain Maintenance

The City of Columbus maintains a storm drain maintenance program with the goal of maintaining an active and usable storm sewer system. The City of Columbus Street Department is responsible for the maintenance of the municipality's storm drain system.

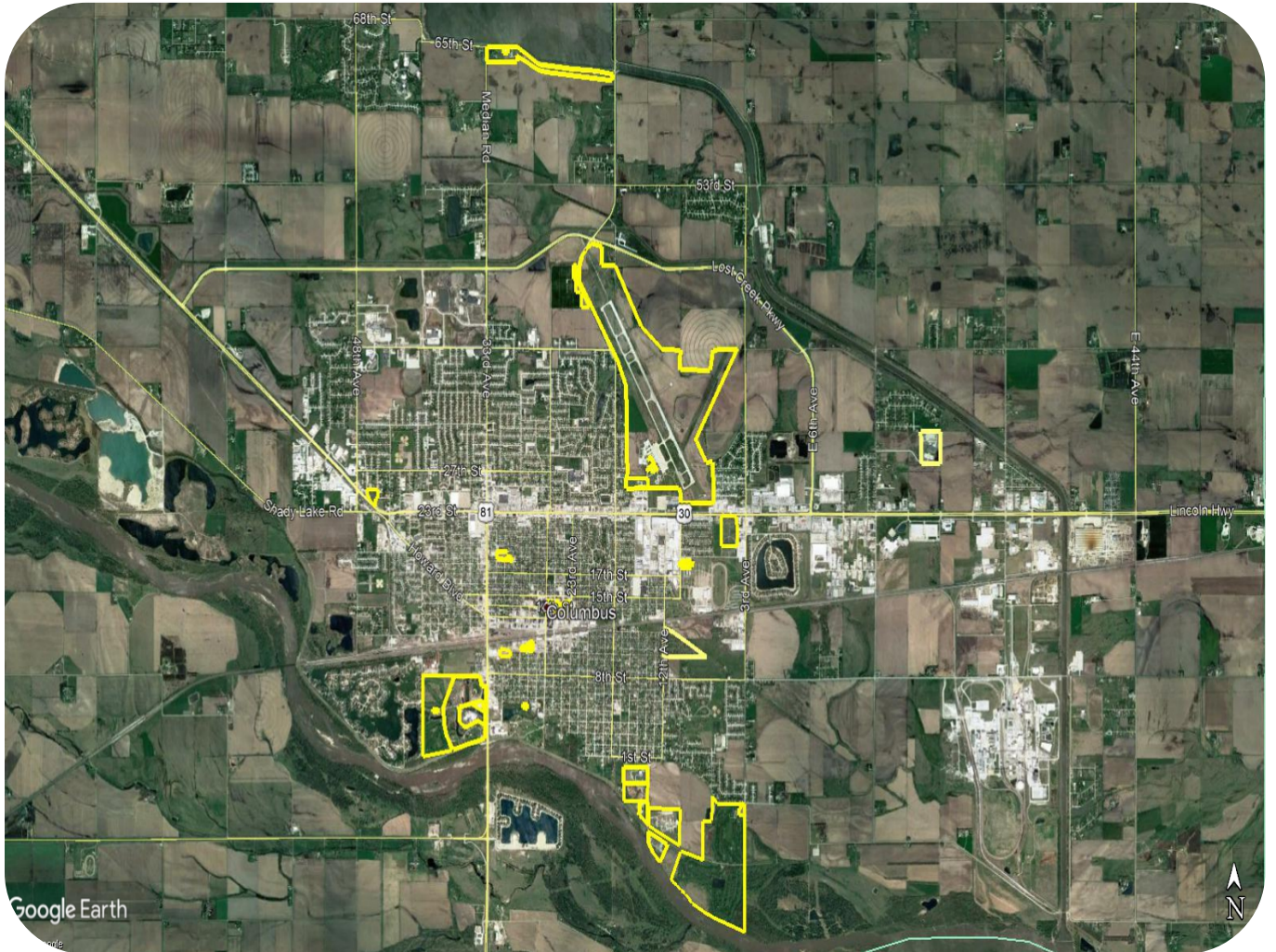
The goals of the Storm Drain Maintenance Program are to ensure our staff:

- ❖ Have a clear line of communication for receiving concerned citizen calls.*
- ❖ Have a quick reaction time to the issue.*
- ❖ Clean out inlet of concern as well as all pipes going into, coming out from that inlet.*
- ❖ Maintain a record of which inlets have been cleaned out.*

Appendix “A”

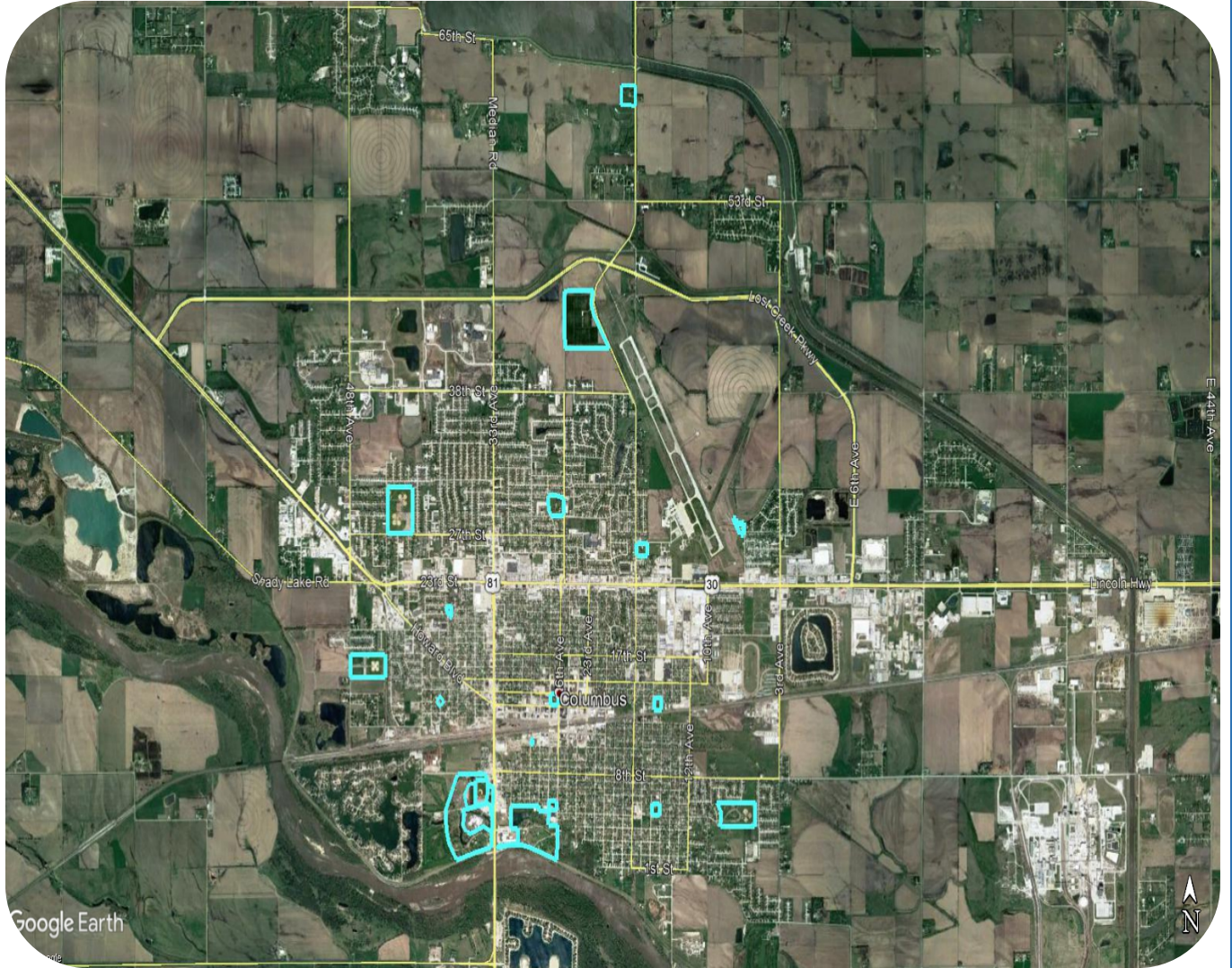
Appendix "A"

City of Columbus Municipal Sites



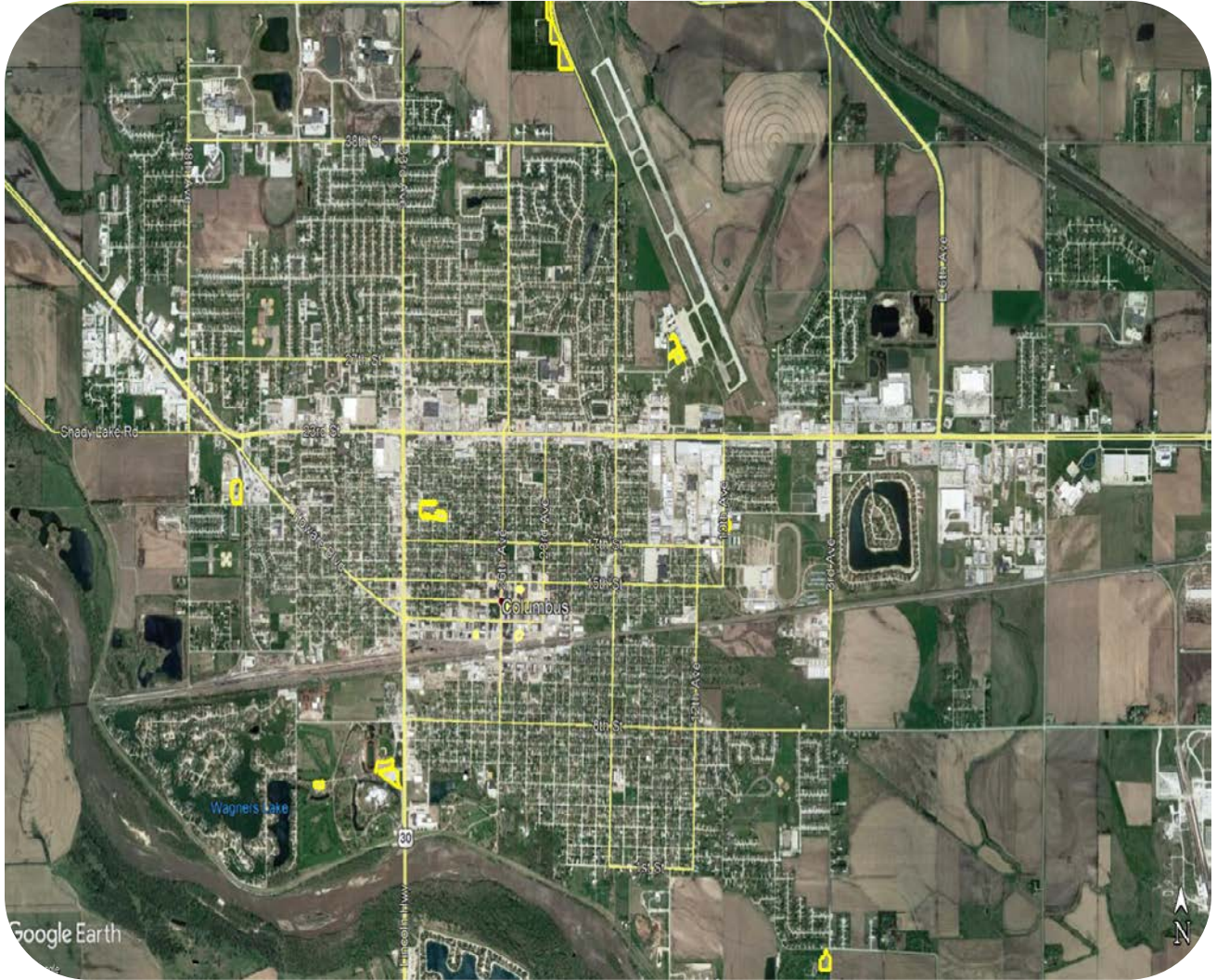
Appendix "A"

City of Columbus Parks



Appendix "A"

City of Columbus Surfaced Parking Lots



Appendix “B”

Municipal Hot Spot Evaluation



Municipal Hot Spot Evaluation Site Location

Activity	Never (0)	Occ. (1)	Freq. (2)	Everyday (3)	Comments	Score
Maintenance & Repair						
Fueling (0-100 gallons)						
Washing						
Outdoor Chemical Storage						
Loading & Unloading						
Outdoor Material Storage						
Dumpsters/Trash Cans						
Building & Ground Maintenance						
Parking Lot Maintenance						
Turf Management						

0

Rating

Never=0 or only rare occasions, Occasionally= 1-2 times a year, Frequently= Approx. 1/month, Routine= At least once a week

Activities are defined as described below:

Vehicle & equipment maintenance & repair (excluding small engine repair)

Vehicle & equipment fueling (bulk fuel storage capacity-stationary or mobile)

Vehicle & equipment washing (particular outdoor washing)

Vehicle & equipment storage (outdoor)

Outdoor loading & unloading

Outdoor material storage (stockpiles & bulk storage etc.)

Dumpster/trash compactors for waste management

Bulding & Grounds Maintenance (i.e. trench drains, sumps, o/w separators, stormwater drainages)

Parking Lot Maintenance (i.e. sweeping, patching, paving, grading)

Turf management & landscaping maintenance fertilizer and pesticide management, mixing

<u>Scale</u>	<u>Result</u>	<u>Action</u>
≥ 20	Hot Spot	FRCP required
10-20	Potential Hot Spot	Targeted Education & Policy (Consider FRCP)
≤ 10	Not a Hot Spot	Targeted Education

Municipal Hot Spot Inventory List



Municipal Hot Spot Evaluation Inventory List

Site Name	Address
<i>City of Columbus Recreational Facilities</i>	
<i>Parks</i>	
<i>Air Vista Park</i>	<i>27th Street and 7th Ave.</i>
<i>Airport Park</i>	<i>18th Ave. and Bill Babka Drive</i>
<i>Baseball Stadium</i>	<i>Pawnee Park</i>
<i>Berne Square</i>	<i>6th Street and 26th Ave.</i>
<i>Bradshaw Park</i>	<i>1600 48th Ave.</i>
<i>Buffalo Square</i>	<i>6th Street and 15th Ave.</i>
<i>Centennial Park</i>	<i>5th Street and 7th Ave.</i>
<i>Columbus Bark Park</i>	<i>Monastery Road</i>
<i>Fountain Square</i>	<i>13th Street and 39th Ave.</i>
<i>Frankfort Square</i>	<i>13th Street and 26th Ave.</i>
<i>Frontier Park</i>	<i>Armory Drive and Kozy Drive</i>
<i>Gerrard Park</i>	<i>27th Street and 45th Ave.</i>
<i>Glur Park</i>	<i>30th Street and 26th Ave.</i>
<i>Gruenther Park</i>	<i>21st Street and Gruenther Park</i>
<i>Hanover Square</i>	<i>14th Street and 15th Ave</i>
<i>Memorial Stadium</i>	<i>Pawnee Park</i>
<i>Pawnee Park (East)</i>	<i>Pawnee Park</i>
<i>Pawnee Park (West)</i>	<i>Pawnee Park</i>
<i>Pawnee Plunge Water Park</i>	<i>Pawnee Park</i>
<i>Wilderness Park</i>	<i>Lost Creek Pkwy and 18th Ave.</i>

Municipal Hot Spot Evaluation Inventory List

(continued)

<i>Golf Courses</i>	
<i>Quail Run Golf Course</i>	<i>627 South 5th Street</i>
<i>Van Berg Golf Course</i>	<i>560 Van Berg Drive</i>
<i>Cemeteries</i>	
<i>Columbus Cemetery</i>	<i>1058 12th Ave</i>
<i>Roselawn Cemetery</i>	<i>23rd Street and 3rd Ave.</i>
<i>Senior Center and Columbus Area Transit (CAT)</i>	
<i>Senior Center</i>	<i>3111 19th Street</i>
<i>Columbus Area Transit</i>	<i>1058 28th Ave.</i>
<i>City of Columbus Public Works</i>	
<i>Water and Sewer Utility Departments</i>	
<i>Central Maintenance Facility</i>	<i>4528 19th Street</i>
<i>South Water Plant</i>	<i>1077 28th Ave</i>
<i>North Water Plant</i>	<i>6651 33rd Ave.</i>
<i>Underground Water Tank</i>	<i>10th Street and 25th Ave.</i>
<i>Water Tower</i>	<i>5th Street and 28th Ave.</i>
<i>North Water Tank</i>	<i>6651 33rd Ave.</i>
<i>Behlen's Water Tank</i>	<i>4025 East 23rd Street</i>
<i>Waste Water Treatment Facility</i>	<i>865 South 14th Ave.</i>
<i>Transfer Station</i>	
<i>New Transfer Station</i>	<i>250 South 14th Ave.</i>
<i>Old Transfer Station</i>	<i>251 South 14th Ave.</i>
<i>Yard Waste Site</i>	<i>252 South 14th Ave.</i>

Municipal Hot Spot Evaluation Inventory List

(continued)

<i>Street Department</i>	
<i>Gravel Parking Lots</i>	
	26th Ave. and 11th Street
	23rd Ave. and 13th Street
<i>Surfaced Parking Lots</i>	
	24th Ave. and 14th Street
	25th Ave. and 12th Street
	25th Ave. and 15th Street
	28th Ave and 12th Street
<i>City Offices Parking</i>	2424 14th Street
<i>Aquatic Center Parking</i>	1783 10th Ave.
<i>Baseball Stadium</i>	Pawnee Park
<i>Central Maintenance Parking</i>	4528 19th Street
<i>Police Station</i>	2419 14th Street
<i>Community Center</i>	3111 19th Street
<i>Quail Run Golf Course Lot</i>	327 South 5th Street
<i>Van Berg Parking Lot</i>	560 Van Berg Drive
<i>Columbus Airport Parking</i>	Bill Babka Drive
<i>Wilderness Soccer Complex</i>	4100 18th Ave.
<i>City of Columbus Facility Sites</i>	
<i>Police Station</i>	2419 14th Street
<i>Police Station & Storage Bldg.</i>	24th Ave. and 14th Street
<i>Police Impound Lot</i>	10th Street and 30th Ave.
<i>Columbus Airport</i>	1308 Bill Babka Drive
<i>City of Columbus Offices</i>	2424 14th Street
<i>Aquatic Center</i>	1783 10th Ave.
<i>Parks Dept. Maint Facility</i>	1057 28th Ave.
<i>Main fire Station</i>	1459 26th Ave.
<i>C.W. Lewis Fire Station</i>	424 8th Street
<i>Columbus Fire Training Ctr</i>	Bill Babka Drive
<i>Columbus Library</i>	2504 14th Street

Appendix “B”

Appendix "B"

Sweeping Record (example)



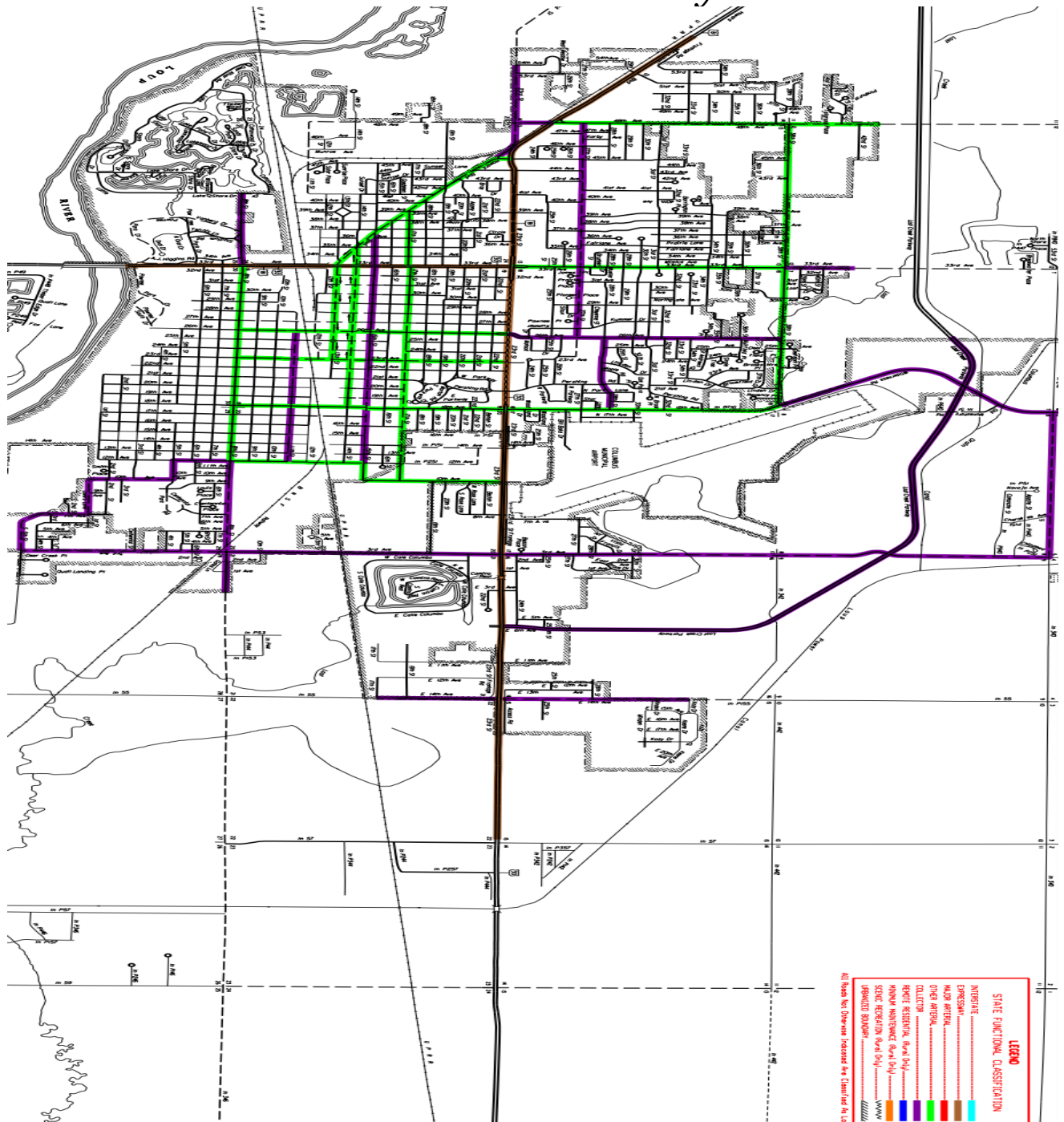
City of Columbus

Record of Sweeping Debris

<i>Year</i>	<i>Yearly Tonnage</i>	<i>Number of Loads</i>	<i>Average Tonnage per Load</i>	<i>Sweeping Hours</i>	<i>Lane Miles Swept</i>	<i>Remarks/ Notes</i>
2010	491	39	13			7/29-12/29/10
2011	3347	109	31			1/06/-12/30/11
2012	2903	86	34			1/17/-12/04/12
2013	868	74	12			1/9-12/10/13
2014	2552	44	58			3/19-8/21/14
2015	3160	96	33			3/31-10/29/15
2016	1021	79	13			4/18-10/06/16
2017	1311	100	13			3/30-12/11/17
2018	830	60	14	1849	7142	5/02/18-12/7/18
Totals						
	16483	687	24	1849	7142	

Appendix "B"

Risk Assessment, Prioritization, Frequency for Street Sweeping Map. Using the State of Nebraska Prioritization of Routes for the City of Columbus



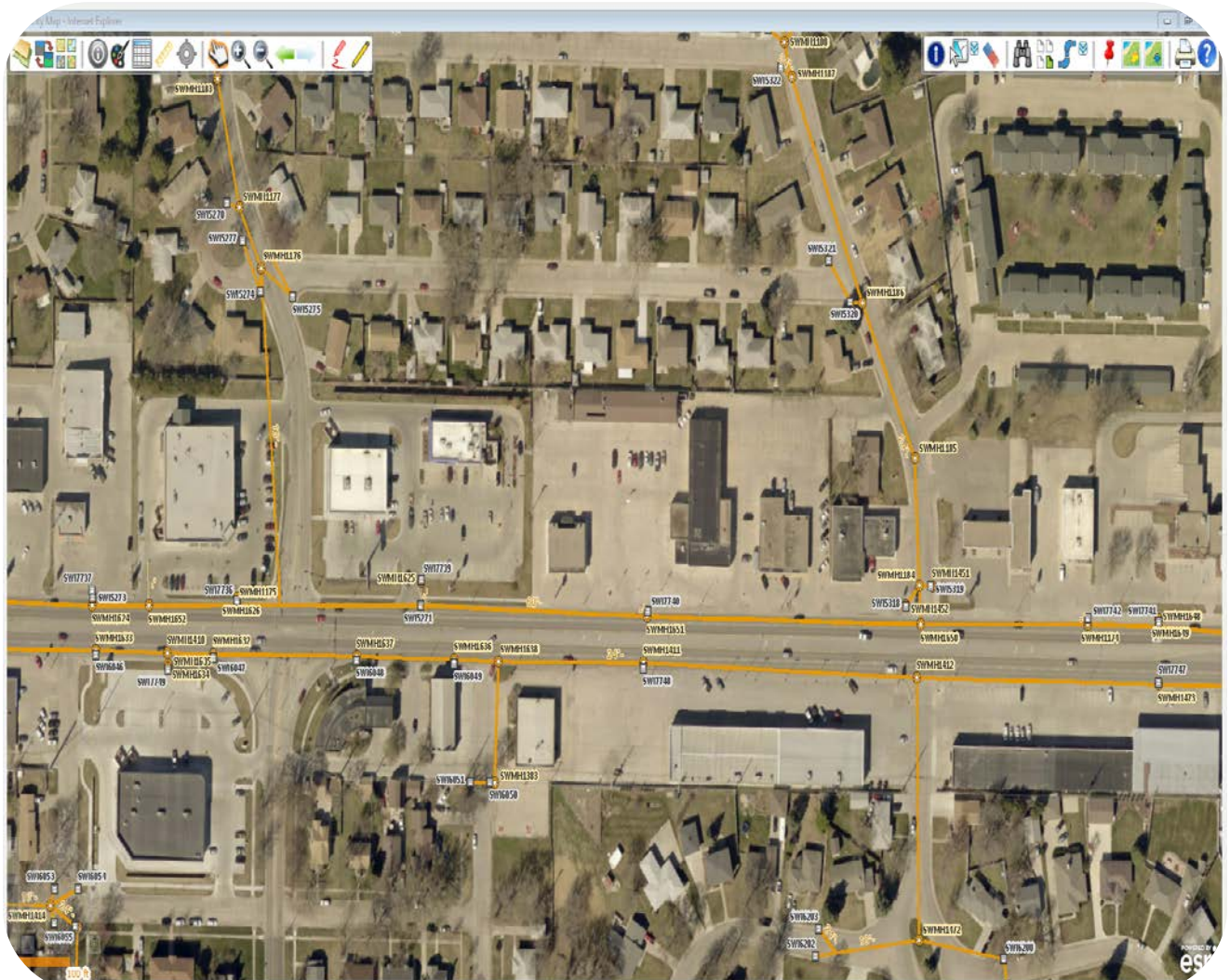
Appendix "B"

Nebraska Regional Sanitary Landfill Stanton County



Appendix “C”

Example of Neighborhood Map



Appendix “D”

Facility Runoff Control Plan for Central Maintenance

City of Columbus

2020

*Facility Runoff Control Plan
Central Maintenance Facility
(FRCP)*

MCM #6 BMP 4.1



Table of Contents

Facility Runoff Control Plan InformationError! Bookmark not defined.

Suggested Best Management Practices (BMP's)Error! Bookmark not defined.

Suggested Best Management Practices (BMP's)Error! Bookmark not defined.

*The following potential pollution sources are included in the FRCP:Error!
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Appendix "A" Monthly Inspection Reports.....Error! Bookmark not defined.

Overview

The City of Columbus Central Maintenance Facility serves as a base for all street and utility maintenance operations, as well as the office for all managerial and administrative positions. The facility is utilized for the purpose of storing, staging and maintaining vehicles, equipment and materials that are necessary for city operations. Some of the street maintenance operations include street cleaning, repair, winter road application material, sign maintenance, as well as litter and debris. Vehicle maintenance provides repair and routine maintenance activities for equipment and vehicles used by various departments throughout the city.

Facility Information

Facility: Central Maintenance Facility

Main Facility Contact: Clete Borchers, Street Superintendent

Facility Address: 4528 19th Street

Name of Receiving Waters: Soch Pond

Facility Size 9.21 acres

Facility Map



A: Millings Stockpile

B: Salt Storage Building

C: Soil Stockpile

D: Recycled Oil Tank

E: Winter Road De-Icing Storage Containers

F: Underground Fuel Tanks and Fuel Island

Facility Runoff Control Plan Information

This Facility Runoff Control Plan (FRCP) supports the City of Columbus Stormwater Management Program. The document provides education, inspection, and corrective action guidance for the Central Maintenance Facility to help implement the Good Housekeeping/Pollution Prevention Measures required of the City.

Facility staff can use the site-specific information provided in this document to:

- 1. Conduct inspections required by the City*
- 2. Identify potential target pollutants and their sources.*
- 3. Take personal actions for managing pollutants and sources.*

*Facility Good Housekeeping/Pollution Prevention inspections will be conducted by Qualified Facility Inspectors each month at approximately **30 day** intervals using the form provided in **Appendix "A"** of this Facility Runoff Control Plan (FRCP). A Facility Inspector will have read this Facility Runoff Control Plan (FRCP); be familiar with, if applicable, the Spill Prevention Control and Countermeasure (SPCC) Plan. The following personnel will be involved in managing and conducting the monthly inspections as well as participating in random Audit Inspections scheduled by the Project Manager.*

<i>Division Supervisor</i>	<i>Clete Borchers, Street Superintendent</i>
<i>Main Site Contact</i>	<i>Jim Rawhouser, Dispatcher</i>
<i>Alternate Contact</i>	<i>Shane Crumley, Mechanic II</i>
<i>Qualified Inspectors</i>	<i>Clete Borchers</i> <i>Shane Crumley</i>

*A Facility Runoff Control Plan (FRCP) Monthly Inspection form must be completed as part of approximately **30 day** inspection. When problems are identified during an inspection, the last page of the form will be used to note corrective actions that can be done to quickly reduce risk that the problem possesses. Sometimes personal actions call for nonstructural best management practices, which typically require capital expenditures, are necessary, the inspection forms can be used as a demonstration of such a need. Corrective actions must be clear, descriptive and specific. Write corrective actions in such a way that anyone can understand exactly what needs to be done and where it needs to be done.*

*Problems identified on the monthly inspection form should be addressed or resolved before the next rain event and no later than the next inspection. Mark the date that each corrective action was taken and attach a more detailed description of the problems to the form if necessary. Completed inspection forms will be kept at the facility for **at least three years, and a copy must be provided to the Project Manager.***

Qualified inspectors may encounter difficult or complex issues that will take longer than a month to resolve. It is important that the inspectors and that facility supervisor work together to identify a corrective action that can be accomplished before the next inspection takes place. Some possible examples of the intermediate steps will include:

- Research alternative products available, costs and possible distributors.*
- Order new part or products through purchasing*
- Contact Main Site Contact, Alternate Contact, Division Supervisor, or the Public Works Director to discuss priorities and available funding for alternative management practices.*

If a corrective action is not completed by the end of the month, it must be moved over to the next inspection report. Place an asterisk in the Date Implemented box and move the incomplete corrective action to the next month's form. Carry the incomplete corrective action month to month until it is completed and dated.

Potential Pollutant Sources and BMP's

Target Pollutants enter the environment through the day to day operation maintenance activities conducted within maintenance facilities. The following five groups of target pollution categories include a range of pollution sources that can be managed to reduce the risk of stormwater pollution by minimizing the exposure of target pollutants to the environment.

Building and Grounds Management

The Central Maintenance facility require building and grounds management, which includes care of landscaped areas around each facility, cleaning of parking areas and pavements, and maintenance of the stormwater drainage system and some structural Best Management Practices (BMP's).

Tasks to perform these activities include equipment operation, litter/trash pickup and maintenance landscaping which can in turn result in spills, leaks, trash, sewage, chemical vegetation control, and erosion.

Potential target pollutants could include sediment, litter, trash, sewage, pesticides, fuel, hydraulic fluid, and oil. Buildings and grounds must be maintained in a manner that reduces the risk of discharging pollutants to the stormwater drainage system.

The following potential pollution sources and or potential pollutant conveyances are included in the FRCP:

Stormwater Drainages- drain inlets, ditches, and outfalls

Infiltration, Retention, and Detention BMP's

Paved Areas

Exposed Soil, Gravel and Millings

Floor Drains, Trench Drains, and Oil-Water Separators.

Suggested Best Management Practices (BMP's)

- a) *Keep culverts, ditches, gutters, drain inlets, catch basins, and outfalls as well as infiltration, retention and detention areas free of target pollutants and in good condition.*
- b) *Sweep paved areas to remove sediment and other materials that could be tracked or dispersed across the facility. Do not wash or spray materials into the storm drain system.*
- c) *Inspect and identify areas of erosion, or offsite discharge of sediment or aggregate, that need preventative maintenance.*
- d) *Keep floor drains, trench drains, and oil-water separators clear of build-up or debris to ensure proper drainage.*
- e) *Clearly mark storm drain inlets with a message to protect location from target pollutants.*
- f) *Keep emergency clean-up materials such as drain covers, absorbent booms, rags, or sandbags conveniently located near drain inlets, catch basins, and outfalls to stop pollutants from entering in the event of a spill.*
- g) *Keep paved surfaces in good condition. Protect slopes, flat areas, exposed soil area, or transportation corridors with pavement if vegetation or aggregate are not an option or are inadequate solutions.*

Vehicle and Equipment Management

The Central Maintenance facility is a regional staging area for all vehicles and equipment used to operate and maintain streets, sewers, fleets, waste collection and other properties owned by the City. All vehicles and equipment require operation and management of some type, which may include storage, fueling, cleaning, maintenance and repair.

Poor management practices can quickly lead to substantial spills, leaks, and non-Stormwater discharges. Vehicle fluids at fueling areas as well as equipment washing, storage, and maintenance areas must be managed to reduce the risk of discharging pollutants to the Stormwater drainage system.

The following potential pollution sources are included in the FRCP:

- a) Vehicle and Equipment*
- b) Equipment washing*
- c) Parked vehicle and equipment storage*
- d) Vehicle and equipment fueling*
- e) Vehicle and equipment maintenance and repair.*

Suggested Best Management Practices (BMP's)

- a) *Wash vehicles in designated areas (preferably under cover with a pipe to a collection pit and the City sanitary sewer system)*
- b) *Minimize water usage during cleaning operations and use dry clean-up methods to remove sediments, clippings and other debris.*
- c) *Use biodegradable detergents if cleaning agents are necessary.*
- d) *Keep part, equipment, and vehicles stored indoors or within designated outdoor areas away from storm drains, inlets, or catch basins.*
- e) *Inspect all connectors and liquid reservoirs on stored equipment and vehicles for leaks. Move leaking equipment and vehicles indoors or capture materials and dispose of properly.*
- f) *Immediately contain and clean up any spills or releases when they occur, and properly dispose of the cleaning materials.*
- g) *Cleanup evidence of fuel or oil residues on surfaces by grinning absorbent into the surface and sweeping up the material.*
- h) *Keep spill response kits and/or clean-up materials in close proximity to areas where spills or leaks are most likely to occur. Dispose of properly after use.*
- i) *Park vehicles and/or equipment close to the pump when refueling.*
- j) *Conduct all maintenance on vehicles and equipment indoors whenever possible.*

Product Material Management

The Central Maintenance facility stores a large variety of liquid and soluble products that could be harmful to the environment if they come into contact with surface waters. Materials that may be stored include pesticides, petroleum products, paints, concrete and asphalt products, solvents and others. Storage and handling practices that minimize exposure of these materials to Stormwater significantly minimize the potential for pollution of receiving waters.

Stockpiles of materials located on the maintenance lot require responsible management just as much as products that are stored indoors or under cover. Stockpiles of material may include sand or gravel, or mixed de-icing chemicals or asphalt cold patch material, soil or millings.

***The following potential pollution sources are included in the
FRCP:***

Stockpiled Materials- Gravel, de-icing chemicals, asphalt cold patch, millings and soil.

Paints, adhesive and solvents

Petroleum, oils and fluids

Suggested Best Management Practices (BMP's)

- a) Locate raw material stockpiles away from drain inlets, catch basins and outfalls.*
- b) Sweep up loose product that is outside of designated area to prevent tracking.*
- c) Reduce the exposure of stockpiles and limit the amount of stockpiled materials during the rainy season.*
- d) To the extent possible, store materials indoors or cover piles with storm resistant coverings to prevent exposure to precipitation.*
- e) Minimize the amount of pesticides and fertilizers that are stored on-site at all times.*
- f) Store and dispose of pesticides and fertilizers per manufacturer's recommendations.*
- g) Store materials in a dedicated area away from direct traffic routes to prevent accidental damage or spills and store materials indoors or under a covered area when possible.*
- h) When receiving new product materials, check drums, tanks, and contents.*
- i) Ensure all containers are clearly and accurately labeled according to contents.*
- j) Close containers between filling and emptying events.*
- k) Keep an adequate supply of dry absorbent material and dispose of properly once used.*

Bulk Storage Tank Management

Bulk storage containers with stock products are a typical feature of the Central Maintenance Facility and they generally come in all shapes and sizes. Some of the substances that may be contained in storage containers may include, de-icing chemicals, fuels, lubricants and petroleum products.

A Spill Prevention, Control and Countermeasure (SPCC) Plan may be in place to reduce the risk of pollution from certain petroleum products, but all bulk storage tanks generate a certain level of risk of discharging pollutants to adjacent drainages and receiving waters. Storage containers must be protected and maintained in a manner that reduces the risk of discharging pollutants to the Stormwater drainage system.

***The following potential pollution sources are included in the
FRCP.***

Aboveground Storage Containers- Winter road chemicals and assorted oils.

Underground Storage Tanks- fuel.

Suggested Best Management Practices (BMP's)

- a) *Inspect storage tanks, pumps, pipes, and valves for leaks, signs of corrosion, support or foundation failure, or other deterioration.*
- b) *Keep valves or plugs on secondary containment closed at all times, except when containment water that is free from visual evidence of pollution, is being removed (see SPCC requirements, if applicable). Collected water can be discharged after any evidence of pollution has been removed. Immediately replace plug or close valve once water is drained.*
- c) *Protect tanks from traffic using bulkheads, jersey barriers, or other substantial barriers.*
- d) *Educate tank fillers to use wheel chocks during unloading and where overflow warning devices and alarms are located.*
- e) *When possible, locate aboveground storage tanks on paved, impermeable surfaces with secondary containment.*
- f) *Inspect surfaces near storage tanks for visible signs of residues. Cleanup fuel or oil residues on surfaces by grinding absorbent into the surface and sweeping up materials.*
- g) *Maintain and inspect integrity of all underground storage tanks as per state fire marshal requirements.*
- h) *Periodically check to make sure the ball float valve is functioning properly and that it will restrict fuel flow according to manufacturer's specifications.*
- i) *Make sure automatic shutoff devices for all tanks are functioning properly.*

Waste Materials Management

Activities at the Central Maintenance Facility generate many types of wastes that accumulate or may be discharged into the environment. Some of the types of waste that must be managed may include fencing, soil, aggregate and recyclables. Such as scrap metal, tires, spent parts, washer solvent, used oil, and used batteries. Waste materials can also include trash and debris, empty product containers, and rinse water.

Personnel should reference the Departmental Procedures to determine the appropriate methods for managing all types of waste since federal and state waste management regulations require specific disposal practices. For any material that poses a significant threat to human health and the environment, contact Hazardous Materials Response. If unsure of disposal requirements, contact the Public Works Director for direction. Both hazardous and non-hazardous wastes must be managed to reduce the risk of discharging pollutants to the Stormwater drainage system.

The following potential pollution sources are included in the FRCP:

Waste Materials- *trash, debris, empty product containers, rinse water, used oil filters.*

Construction Salvage- *rubble, replaced equipment, soil, aggregate.*

Recyclables- *scrap metals, used batteries, tires, spent solvent, used oil.*

Suggested Best Management Practices (BMP's)

- a) *Cover and clearly label all waste receptacles according to waste type.*
- b) *Collect all litter that accumulates around the facility grounds and dispose in properly labeled containers.*
- c) *Ensure that trash bins are used and not overflowing by scheduling regular pick-up and disposal of waste materials.*
- d) *Store containers, material, and salvage away from direct traffic routes, drain inlets, catch basins, outfalls, areas prone to flooding or ponding, and floor trench drains to prevent accidental damage or spills.*
- e) *Educate and train every employee that is their daily responsibility to be aware of materials, residues, and trash that could be washed away in Stormwater.*
- f) *Develop a plan to reuse or dispose of irregular waste material as soon as the material is brought on site.*
- g) *Store batteries in an upright position in leak proof covered containers.*
- h) *Schedule regular pick up for waste tires, scrap metal used oil, used antifreeze and other waste intended for recycling.*
- i) *If any waste material may be hazardous, complete a waste determination prior to disposal according to Departmental Procedures and keep records at the facility. Any material that poses a significant threat to human health and the environment, contact Hazardous Material Response. If unsure of disposal requirements, contact the Public Works Director for direction.*
- j) *Store hazardous waste containers (preferred in a building or covered area) on pallets or in a containment device to prevent corrosion of the containers by contact with moisture or other chemicals.*
- k) *Immediately contain and clean up any spills that may occur, and properly dispose of the cleaning materials.*

Appendix “A” Monthly Inspection Reports

Facility Runoff Control Plan Monthly Inspection

Month _____
Year _____

City of Columbus Central Maintenance Facility

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action. All "yes" responses will require some type of corrective action.

<i>Facility Areas</i>						
Parking/Office Area	Mechanics Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Winter Maintenance Staging	Material Storage/Winter

(A) Building and Grounds

Storm Drains:

1. Do storm drains, inlets, or drainage ditches need cleaning or repair?
2. Do outfall structures or adjacent waterways show signs of pollutant migration?

Indoor Collection System:

3. Do floor drains, trench drains, or oil/water separators need to be cleaned out or repaired?

Exposed Soil and Gravel:

4. Do areas of exposed soil or gravel show signs of erosion?

Paved Surface:

5. Do paved surfaces need to be swept to prevent stormwater from carrying loose debris or materials to storm drain system?

Facility Runoff Control Plan Monthly Inspection

Month _____
Year _____

City of Columbus Central Maintenance Facility

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action. All "yes" responses will require some type of corrective action.

Facility Areas

Parking/Office Area	Mechanics Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Winter Maintenance Staging	Material Storage/Winter
---------------------	-----------------	----------------------	-------------------	-----------	----------------------------	-------------------------

(B) Vehicles and Equipment

Outdoor Storage:

6. Are there any leaks, spills or fluid residue from parked vehicles?

--	--	--	--	--	--	--

7. Are leaking vehicles parked near storm drains, known ponding areas or drainage ditches?

--	--	--	--	--	--	--

8. Is there damage or leaks to equipment lines or connectors?

--	--	--	--	--	--	--

Washing:

9. Do wash areas have accumulated gravel, salt, grass clippings that are in need of disposal?

--	--	--	--	--	--	--

Maintenance and Repair Bays:

10. Are there loose materials or leaks on the floor that could be tracked outdoors?

--	--	--	--	--	--	--

Fueling:

11. Does the area where fueling occurs show evidence of staining from fuel or

--	--	--	--	--	--	--

12. Are hoses and nozzles showing signs of wear, cracks, or damage?

--	--	--	--	--	--	--

Facility Runoff Control Plan Monthly Inspection

Month _____

Year _____

City of Columbus Central Maintenance Facility

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action. All "yes" responses will require some type of corrective action.

Facility Areas

Parking/Office Area	Mechanics Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Winter Maintenance Staging	Material Storage/Winter
---------------------	-----------------	----------------------	-------------------	-----------	----------------------------	-------------------------

(C) Product Materials

Stock Piles:

13. Do material storage areas need to be contained or protected to prevent erosion?

--	--	--	--	--	--	--

14. Is there any loose material outside the designated area?

--	--	--	--	--	--	--

15. If the material is not actively being used, does the stockpile need covered or reduced in size?

--	--	--	--	--	--	--

16. Are containers located in traffic areas or near drains?

--	--	--	--	--	--	--

17. Do the materials need to be reduced?

--	--	--	--	--	--	--

18. Are there leaks, spills, damaged, uncovered or unlabeled containers?

--	--	--	--	--	--	--

Facility Runoff Control Plan Monthly Inspection

Month _____

Year _____

City of Columbus Central Maintenance Facility

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action, All "yes" responses will require some type of corrective action.

Facility Areas

Parking/Office Area	Mechanics Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Winter Maintenance Staging	Material Storage/Winter
---------------------	-----------------	----------------------	-------------------	-----------	----------------------------	-------------------------

(D) Building and Grounds

Bulk Storage Tanks:

19. Have stored materials/residues accumulated on the ground surface near the storagew tank areas?

--	--	--	--	--	--	--	--

20. Are there signs of leaks, corrosion, support or foundation failure or deterioration of the tanks, pumps, pipes or valves?

--	--	--	--	--	--	--	--

21. Do storage tanks need to be protected from traffic by location or barriers?

--	--	--	--	--	--	--	--

Facility Runoff Control Plan Monthly Inspection

Month _____

Year _____

City of Columbus Central Maintenance Facility

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action. All "yes" responses will require some type of corrective action.

Facility Areas

Parking/Office Area	Mechanics Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Winter Maintenance Staging	Material Storage/Winter
---------------------	-----------------	----------------------	-------------------	-----------	----------------------------	-------------------------

(E) Building and Grounds

Waste Materials

22. Has trash, litter, or debris accumulated along the boundary of the facility?

--	--	--	--	--	--	--	--

23. Is there evidence of leaks, spills, damaged, unlabeled or uncovered waste containers?

--	--	--	--	--	--	--	--

24. Are waste materials located near floor or trench drains, outfalls, traffic, or areas prone to flooding or ponding?

--	--	--	--	--	--	--	--

25. Can the amount of waste materials or recyclables be reduced to minimize exposure?

--	--	--	--	--	--	--	--

Appendix “E”

Facility Runoff Control Plan for Quail Run Golf Course

2020

City of Columbus

*Facility Runoff Control Plan
Quail Run Golf Course
(FRCP)*

MCM #6 BMP 4.1

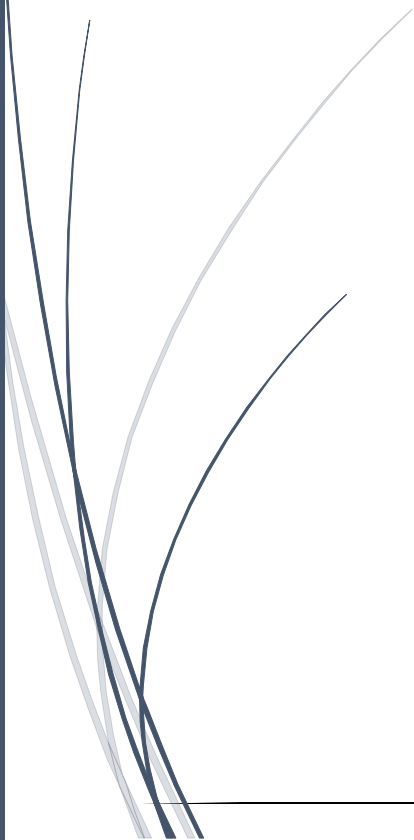


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Overview.....**Error! Bookmark not defined.**
Facility Information.....**Error! Bookmark not defined.**
Facility Map.....**Error! Bookmark not defined.**
Potential Pollutant Sources and BMP's.....**Error! Bookmark not defined.**
Building and Grounds Management.....**Error! Bookmark not defined.**
Vehicle and Equipment Management**Error! Bookmark not defined.**
Product Material Management**Error! Bookmark not defined.**
The following potential pollution sources are included in the FRCP:..... **Error!
Bookmark not defined.**
Waste Materials Management**Error! Bookmark not defined.**
Appendix "A" Monthly Inspection Reports.....**Error! Bookmark not defined.**

Overview

The City of Columbus Central Maintenance Facility serves as a base for all street and utility maintenance operations, as well as the office for all managerial and administrative positions. The facility is utilized for the purpose of storing, staging and maintaining vehicles, equipment and materials that are necessary for city operations. Some of the street maintenance operations include street cleaning, repair, winter road application material, sign maintenance, as well as litter and debris. Vehicle maintenance provides repair and routine maintenance activities for equipment and vehicles used by various departments throughout the city.

Facility Information

Facility: Quail Run Golf Course

Main Facility Contact: Keith Kline, Golf Superintendent

Facility Address: 657 South 5th Street

Name of Receiving Waters: Loup River

Facility Size 181 approximately

Facility Runoff Control Plan Information

This Facility Runoff Control Plan (FRCP) supports the City of Columbus Stormwater Management Program (SWMP). The document provides education, inspection, and corrective action guidance for Quail Run Golf Course to help implement the Good Housekeeping/Pollution Prevention Measures required of the City.

Facility staff can use the site-specific information provided in this document to:

- 4. Conduct inspections required by the City*
- 5. Identify potential target pollutants and their sources.*
- 6. Take personal actions for managing pollutants and sources.*

*Facility Good Housekeeping/Pollution Prevention inspections will be conducted by Qualified Facility Inspectors each month at approximately **30 day** intervals using the form provided in **Appendix "A"** of this Facility Runoff Control Plan (FRCP). A Facility Inspector will have read this Facility Runoff Control Plan (FRCP); be familiar with, if applicable, the Spill Prevention Control and Countermeasure (SPCC) Plan. The following personnel will be involved in managing and conducting the monthly inspections as well as participating in random Audit Inspections scheduled by the Project Manager.*

<i>Division Supervisor</i>	<i>Keith Klein, Golf Superintendent</i>
<i>Main Site Contact</i>	<i>Keith Kline</i>
<i>Alternate Contact</i>	<i>Shawn Riedmiller, Crew Leader</i>
<i>Qualified Inspectors</i>	<i>Keith Kline</i>
	<i>Jade Harless</i>
	<i>Shawn Riedmiller</i>

*A Facility Runoff Control Plan (FRCP) Monthly Inspection form must be completed as part of approximately **30 day** inspection. When problems are identified during an inspection, the last page of the form will be used to note corrective actions that can be done to quickly reduce risk that the problem possesses. Sometimes personal actions call for nonstructural best management practices, which typically require capital expenditures, are necessary, the inspection forms can be used as a demonstration of such a need. Corrective actions must be clear, descriptive and specific. Write corrective actions in such a way that anyone can understand exactly what needs to be done and where it needs to be done.*

*Problems identified on the monthly inspection form should be addressed or resolved before the next rain event and no later than the next inspection. Mark the date that each corrective action was taken and attach a more detailed description of the problems to the form if necessary. Completed inspection forms will be kept at the facility for **at least three years, and a copy must be provided to the Engineering Project Manager.***

Qualified inspectors may encounter difficult or complex issues that will take longer than a month to resolve. It is important that the inspectors and that facility supervisor work together to identify a corrective action that can be accomplished before the next inspection takes place. Some possible examples of the intermediate steps might include:

- *Research alternative products available, costs and possible distributors.*
- *Order new part or products through purchasing*
- *Contact Main Site Contact, Alternate Contact, Division Supervisor, or the Public Property Director to discuss priorities and available funding for alternative management practices.*

If a corrective action is not completed by the end of the month, it must be moved over to the next inspection report. Place an asterisk in the Date Implemented box and move the incomplete corrective action to the next month's form. Carry the incomplete corrective action month to month until it is completed and dated.

Potential Pollutant Sources and BMP's

Target Pollutants enter the environment through the day to day operation maintenance activities conducted within maintenance facilities. The following five groups of target pollution categories include a range of pollution sources that can be managed to reduce the risk of stormwater pollution by minimizing the exposure of target pollutants to the environment.

Building and Grounds Management

The Quail Run Maintenance facility requires building and grounds management, which includes care of landscaped areas around the facility, cleaning of parking areas, and any maintenance of the stormwater drainage system and some structural Best Management Practices (BMP's).

Tasks to perform these activities include equipment operation, litter/trash pickup and maintenance of landscaping. Potential target pollutants could include sediment, litter, trash, sewage, pesticides, fuel, hydraulic fluid, and oil. Buildings and grounds must be maintained in a manner that reduces the risk of discharging pollutants to the stormwater drainage system.

The following potential pollution sources and or potential pollutant conveyances are included in the FRCP:

Stormwater Drainages- drain inlets, ditches, and outfalls

Infiltration, Retention, and Detention BMP's

Surfaced Areas

Exposed Soil, Gravel and Millings

Floor Drains, Trench Drains, and Oil-Water Separators.

Suggested Best Management Practices (BMP's)

- a) Keep culverts, ditches, gutters, drain inlets, catch basins, and outfalls as well as infiltration, retention and detention areas free of target pollutants and in good condition.*
- b) Sweep surfaced areas to remove sediment and other materials that could be tracked or dispersed across the facility. Do not wash or spray materials into the storm drain system.*
- c) Inspect and identify areas of erosion, or offsite discharge of sediment or aggregate, that need preventative maintenance.*
- d) Keep floor drains, trench drains, and oil-water separators clear of build-up or debris to ensure proper drainage.*
- e) Keep emergency clean-up materials such as drain covers, absorbent booms, rags, or sandbags conveniently located near drain inlets, catch basins, and outfalls to stop pollutants from entering in the event of a spill.*
- f) Keep surfaced areas in good condition. Protect slopes, flat areas, exposed soil area, or transportation corridors with pavement if vegetation or aggregate are not an option or are inadequate solutions.*

Vehicle and Equipment Management

The Quail Run Maintenance Facility is a staging area for all vehicles and equipment used to operate and maintain the Golf Course, waste collection and other maintenance equipment. All the vehicles and equipment require operation and maintenance of some type, which may include storage, fueling, cleaning, and repairs.

Poor management practices can quickly lead to substantial spills, leaks, and non-Stormwater discharges. Equipment fluids at fueling areas as well as equipment washing, storage, and maintenance areas must be managed to reduce the risk of discharging pollutants to the Stormwater drainage system.

The following potential pollution sources are included in the FRCP:

- a) Vehicle and Equipment*
- b) Equipment washing*
- c) Parked vehicle and equipment storage*
- d) Equipment fueling*
- e) Equipment maintenance and repair.*

Suggested Best Management Practices (BMP's)

- a) Wash all equipment in designated areas (under cover with a pipe to a collection pit and then City sanitary sewer system)*
- b) Minimize water usage during cleaning operations and use dry clean-up methods to remove sediments, clippings and other debris.*
- c) Use biodegradable detergents if cleaning agents are necessary.*
- d) Keep parts, equipment, and vehicles stored indoors or within designated outdoor areas away from storm drains, inlets, or catch basins.*
- e) Inspect all connectors and liquid reservoirs on stored equipment and vehicles for leaks. Move leaking equipment and vehicles indoors or capture materials and dispose of properly.*
- f) Immediately contain and clean up any spills or releases when they occur, and properly dispose of the cleaning materials.*
- g) Cleanup evidence of fuel or oil residues on surfaces by grinning absorbent into the surface and sweeping up the material.*
- h) Keep spill response kits and/or clean-up materials in close proximity to areas where spills or leaks are most likely to occur. Dispose of properly after use.*
- i) Park vehicles and/or equipment close to the pump when refueling.*
- j) Conduct all maintenance on vehicles and equipment indoors whenever possible.*

Product Material Management

The Quail Run Maintenance Facility stores a large variety of liquid and soluble products that could be harmful to the environment if they come into contact with surface waters. Materials that may be stored include pesticides, petroleum products, paints, solvents and other liquids. Storage and handling practices that minimize exposure of these materials to Stormwater significantly minimize the potential for pollution of receiving waters.

Stockpiles of materials located in the maintenance lot require responsible management just as much as products that are stored indoors or under cover. Stockpiles of material may include sand, gravel, or soil.

The following potential pollution sources are included in the FRCP:

Stockpiled Materials- Gravel, sand and soil, paints, fertilizers, other chemicals and pesticides.

Suggested Best Management Practices (BMP's)

- a) Locate raw material stockpiles away from drain inlets, catch basins and outfalls.*
- b) Sweep up loose product that is outside of designated area to prevent tracking.*
- c) Reduce the exposure of stockpiles and limit the amount of stockpiled materials during the rainy season.*
- d) To the extent possible, store materials indoors or cover piles with storm resistant coverings to prevent exposure to precipitation.*
- e) Minimize the amount of pesticides and fertilizers that are stored on-site at all times.*
- f) Store and dispose of pesticides and fertilizers per manufacturer's recommendations.*
- g) Store materials in a dedicated area away from direct traffic routes to prevent accidental damage or spills and store materials indoors or under a covered area when possible.*
- h) When receiving new product materials, check drums, tanks, and contents.*
- i) Ensure all containers are clearly and accurately labeled according to contents.*
- j) Close containers between filling and emptying events.*
- k) Keep an adequate supply of dry absorbent material and dispose of properly once used.*

Waste Materials Management

Activities at the Quail Run Maintenance Facility generate different types of wastes that accumulate or may be discharged into the environment. Some of the types of waste that must be managed may include sand, soil, aggregate and recyclables. Such as scrap metal, spent parts, washer solvent, used oil, and used batteries fertilizers and pesticides. Solid Waste materials can also include trash and debris, empty product containers, and rinse water.

Personnel should reference the Departmental Procedures to determine the appropriate methods for managing all types of waste since federal and state waste management regulations require specific disposal practices. For any material that poses a significant threat to human health and the environment, contact Hazardous Materials Response. If unsure of disposal requirements, contact the Public Works Director for direction. Both hazardous and non-hazardous wastes must be managed to reduce the risk of discharging pollutants to the Stormwater drainage system.

The following potential pollution sources are included in the FRCP:

Waste Materials- *trash, debris, empty product containers, rinse water, used oil filters.*

Fluids and Materials- *gravel, sand, and soil.*

Recyclables- *scrap metals, used batteries, tires, spent solvent, used oil.*

Suggested Best Management Practices (BMP's)

- a) Cover and clearly label all waste receptacles according to waste type.*
- b) Collect all litter that accumulates around the facility grounds and dispose in properly labeled containers.*
- c) Ensure that trash bins are used and not overflowing by scheduling regular pick-up and disposal of waste materials.*
- d) Store containers, material, and salvage away from direct traffic routes, drain inlets, catch basins, outfalls, areas prone to flooding or ponding, and floor trench drains to prevent accidental damage or spills.*
- e) Educate and train every employee that is their daily responsibility to be aware of materials, residues, and trash that could be washed away in Stormwater.*
- f) Develop a plan to reuse or dispose of irregular waste material as soon as the material is brought on site.*
- g) Store batteries in an upright position in leak proof covered containers.*
- h) Schedule regular pick up for waste tires, scrap metal used oil, used antifreeze and other waste intended for recycling.*
- i) If any waste material may be hazardous, complete a waste determination prior to disposal according to Departmental Procedures and keep records at the facility. Any material that poses a significant threat to human health and the environment, contact Hazardous Material Response. If unsure of disposal requirements, contact the Public Works Director for direction.*
- j) Store hazardous waste containers (preferred in a building or covered area) on pallets or in a containment device to prevent corrosion of the containers by contact with moisture or other chemicals.*
- k) Immediately contain and clean up any spills that may occur, and properly dispose of the cleaning materials.*

Appendix “A” Monthly Inspection Reports

Facility Runoff Control Plan Monthly Inspection

Date _____

City of Columbus Quail Run Golf Course

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action. All "yes" responses will require some type of corrective action.

Facility Areas

Parking/Office Area	Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Material Storage Area
---------------------	-------	----------------------	-------------------	-----------	-----------------------

(A) Building and Grounds

Storm Drains:

1. Do storm drains, inlets, or drainage ditches need cleaning or repair?
2. Do outfall structures or adjacent waterways show signs of pollutant migration?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Indoor Collection System:

3. Do floor drains, trench drains, or oil/water separators need to be cleaned out or repaired?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Exposed Soil and Gravel:

4. Do areas of exposed soil or gravel show signs of erosion?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Paved Surface:

5. Do paved surfaces need to be swept to prevent stormwater from carrying loose debris or materials to storm drain system?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Revised 10/2020

Facility Runoff Control Plan Monthly Inspection

Date _____

City of Columbus Quail Run Golf Course

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action, All "yes" responses will require some type of corrective action.

Facility Areas

Parking/Office Area	Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Material Storage Area
---------------------	-------	----------------------	-------------------	-----------	-----------------------

(B) Vehicles and Equipment

Outdoor Storage:

6. Are there any leaks, spills or fluid residue from parked vehicles?

--	--	--	--	--	--

7. Are leaking vehicles parked near storm drains, known ponding areas or drainage ditches?

--	--	--	--	--	--

8. Is there damage or leaks to equipment lines or connectors?

--	--	--	--	--	--

Washing:

9. Do wash areas have accumulated gravel, salt, grass clippings that are in need of disposal?

--	--	--	--	--	--

Maintenance and Repair Bays:

10. Are there loose materials or leaks on the floor that could be tracked outdoors?

--	--	--	--	--	--

Fueling:

11. Does the area where fueling occurs show evidence of staining from fuel or

--	--	--	--	--	--

12. Are hoses and nozzles showing signs of wear, cracks, or damage?

--	--	--	--	--	--

Revised 10/2020

Facility Runoff Control Plan Monthly Inspection

Date _____

City of Columbus Quail Run Golf Course

Facility Areas

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action, All "yes" responses will require some type of corrective action.

Parking/Office Area	Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Material Storage Area
---------------------	-------	----------------------	-------------------	-----------	-----------------------

(C) Product Materials

Stock Piles:

13. Do material storage areas need to be contained or protected to prevent erosion?						
14. Is there any loose material outside the designated area?						
15. If the material is not actively being used, does the stockpile need covered or reduced in size?						
16. Are containers located in traffic areas or near drains?						
17. Do the materials need to be reduced?						
18. Are there leaks, spills, damaged, uncovered or unlabeled containers?						

Revised 10/2020

Facility Runoff Control Plan Monthly Inspection

Date _____

City of Columbus Quail Run Golf Course

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action, All "yes" responses will require some type of corrective action.

Facility Areas

Parking/Office Area	Shops	Vehicle Fueling Area	Equipment Storage	Wash Bays	Material Storage Area
---------------------	-------	----------------------	-------------------	-----------	-----------------------

(D) Building and Grounds

Bulk Storage Tanks:

19. Have stored materials/residues accumulated on the ground surface near the storage tank areas?

--	--	--	--	--	--

20. Are there signs of leaks, corrosion, support or foundation failure or deterioration of the tanks, pumps, pipes or valves?

--	--	--	--	--	--

21. Do storage tanks need to be protected from traffic by location or barriers?

--	--	--	--	--	--

Revised 10/2020

Facility Runoff Control Plan Monthly Inspection

Date _____

City of Columbus Quail Run Golf Course

Enter yes (Y) or no (N). Record the needed corrective actions(s) on the last page. Include the Area and Question Number with each of the corrective action. All "yes" responses will require some type of corrective action.

Facility Areas

<i>Parking/Office Area</i>	<i>Shops</i>	<i>Vehicle Fueling Area</i>	<i>Equipment Storage</i>	<i>Wash Bays</i>	<i>Material Storage Area</i>
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(E) Building and Grounds

Waste Materials

22. *Has trash, litter, or debris accumulated along the boundary of the facility?*

--	--	--	--	--	--

23. *Is there evidence of leaks, spills, damaged, unlabeled or uncovered waste containers?*

--	--	--	--	--	--

24. *Are waste materials located near floor or trench drains, outfalls, traffic, or areas prone to flooding or ponding?*

--	--	--	--	--	--

25. *Can the amount of waste materials or recyclables be reduced to minimize exposure?*

--	--	--	--	--	--

Revised 10/2020

