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Stormwater Management Plan

City of Grain Valley, Missouri

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Introduction

The City of Grain Valley consists of a separate (non combined sewer) Municipal Storm Sewer System (MS4). Since Grain Valley has a population over 10,000, it is a Missouri “regulated MS4” and must obtain a NPDES Stormwater permit, and must also develop a Stormwater Management Plan (SMP).

The SMP summarizes the City’s intentions to reduce the amount of pollution in its stormwater runoff by addressing the six categories of concern listed in the permit and as follows:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post Construction Site Storm Water Management
6. Pollution Prevention/Good House Keeping

The City will adopt this plan to best fit the current level of staffing, funding, and geography and will attempt to improve upon the plan each year. As circumstances change, adjustments to the plan may be necessary to better control storm water runoff. This plan will be the foundation for future innovative ideas and solutions to protect the water quality of our local streams for years to come.

City Information

Name of Municipality: Grain Valley
Population: 11,800 (estimated)
Water Supply: Purchased
Waste Water Treatment: Treatment Plant
Water Shed: Sni-A-Bar Creek
Geologic Setting: West-Central Missouri
Average Rainfall: 41 inches per year

Grain Valley is located in the West-Central region of Missouri east of the Kansas City metropolitan area in Jackson County. Rainfall accumulation flows northeast along the Sni-A-Bar Creek and eventually collects at the Missouri River. Grain Valley is predominately a bedroom community with its limited commercial local specialty shops and light manufacturing.

There is currently 33 miles of engineered storm sewers in the City and which has expanded its sewer system by approximately 6 percent each year for the past five years due to new development.

Definitions

Stormwater: The rainwater not absorbed by parking lots, roads, storm drains, yards, and other properties impervious or not that flows to local creeks and streams during a storm event.

Municipal Separate Storm Sewer System: A stormwater sewer system that is separate from the regular domestic sewage system. The stormwater sewer system discharges directly to a stream without treatment of the rainwater.

MS4: An abbreviated term for the phrase “Municipal Separate Storm Sewer System”.

Regulated MS4: A Municipal Separate Storm Sewer System that is required to obtain a NPDES Permit to discharge storm water into the waters of the U.S.

MCM: “Minimum Control Measure”.

Minimum Control Measure: One of the six categories including Public Information, Public Participation, Illicit Discharges, Construction Site Runoff, Post Construction Runoff, and Pollution Prevention/ Good House Keeping.

BMP: “Best Management Practice”.

Best Management Practice: A management practice, habit, policy, or ordinance that accomplishes the best results in the six minimum control measures.

NPDES: National Pollutant Discharge Elimination System.

MARC: Mid-America Regional Council.

SMP: Stormwater Management Plan.

Public Education and Outreach

The City of Grain Valley intends to increase education and awareness among its citizens of the importance of stormwater pollution and water quality using MARC (Mid-America Regional Council) as a primary source for public education and outreach. The City will also use its website, cable channel, and publicly posted displays to educate the importance of stormwater management. Education and outreach will seek to inform the public about the following:

1. Proper handling and disposal of solid wastes.
2. Proper handling and disposal of hazardous wastes.
3. Proper handling and applications of fertilizers and pesticides.
4. Elimination of illegal dumping of debris, sediment, yard waste, oil and other chemicals into storm drains.
5. The purpose of erosion control devices on construction sites.
6. The purpose of detention basins and other run-off control structures.

Actions and Measurable Goals:

Action: Establish a section on the City's website that informs the public of the six subjects listed above.

Measurable Goal: Complete this action step in year one of this NPDES permit.

Action: Establish a household hazardous waste day for the public to participate in.

Measurable Goal: Complete this action step in year one of the NPDES permit.

Action: Have informational brochures and displays available to the public discussing the six subjects listed above.

Measurable Goal: Complete this action step in year one of the NPDES permit.

Action: Use MARC as a provider of local radio, television service, and paper media announcements for the six subjects listed above.

Measurable Goal: Complete this action step in year one of the NPDES permit.

Action: Use the City's local cable channel as a tool for slide shows or programs related to stormwater management.

Measurable Goal: Complete this action step in year one of the NPDES permit.

Action: Work with the local school district to provide presentations to classrooms on the six subjects listed above.

Measurable Goal: Complete this action step in year two of the NPDES permit.

Public Involvement and Participation

The City of Grain Valley will implement programs to better inform the public and teach the youth of our community what stormwater runoff is, how to collect it, and how better to deal with significant rain events.

Action: The City of Grain Valley will discuss with the local school district student education programs informing about the significance of storm water runoff and how better to protect our creeks and streams.

Measurable Goal: The City will have in place a recurring education program by year two of the NPDES permit.

Action: The City will maintain a permanent recycling program to better control point pollutants and debris being placed in our creeks and streams.

Measurable Goal: The City currently has in place a daily recycling program and will find methods of improving public awareness by year two of the NPDES permit.

Action: The City will team with MARC (Mid-America Regional Council) for public involvement programs and stream team programs.

Measurable Goal: The City will negotiate an involvement program by year two of the NPDES permit.

Action: The City will hold household hazardous waste programs to help eliminate toxic point source pollutants.

Measurable Goal: The City currently has a program in place and will improve on public awareness by year one of the NPDES permit.

Action: The City will maintain a city wide clean up day to eliminate trash and debris from being placed in our local creeks and streams.

Measurable Goal: The City currently has in place an annual clean up program and will improve on public awareness and involvement by year one of the NPDES permit.

Illicit Discharge Detection and Elimination

The City of Grain Valley will implement measures to minimize illegal discharges to its creeks, streams, and storm water sewer systems.

Action: The City of Grain Valley will create a program to monitor outlets for illegal discharges to our waterways.

Measurable Goal: The City will have a monitoring program in place by year two of the NPDES permit.

Action: The City will establish a place for citizens to report illegal discharges either through our web site, phone number, or internet site.

Measurable Goal: The City will have this place established by year two of the NPDES permit.

Action: The City will have in place a deterrent for illicit discharges through ordinance and fines.

Measurable Goal: The City will review the ordinance for updates and make a policy for fines or other assessed punishments by year three of the NPDES permit.

Action: The City will have in a place a water monitoring program that will determine water quality standards at the City specified discharge points.

Measurable Goal: The City will have a water monitoring program in place by year five of the NPDES permit.

Construction Site Runoff Control

The City of Grain Valley will establish procedures and policies to better control the erosion and runoff from sites under construction or in an underdeveloped status. The following will outline the actions the City will have in place.

Action: The City will produce a manual for developers and contractors that will outline proper site maintenance and approved devices for erosion and sediment control before inspections will be made and permits issued.

Measurable Goal: A developer and contractor manual will be produced by year one of the NPDES permit.

Action: The City will require a phased erosion control plan be submitted to the City before issuance and approval of construction plans and permits.

Measurable Goal: Require submittal of an erosion control plan for construction sites by year two of the NPDES permit.

Action: The City will review its current ordinance and make necessary updates to our erosion control section for compliance to the NPDES permit.

Measurable Goal: Begin public discussions of an updated erosion control ordinance within one year of the NPDES permit.

Action: Create procedures for our building inspectors to enforce our erosion and sediment control policies.

Measurable Goal: Have a violation policy in place by year two of the NPDES permit.

Action: The City will enforce the DNR Land Disturbance Permit requirements as well as provide an ordinance that would require a permit for erosion and sediment control for construction sites of 1 acre or larger.

Measurable Goal: Have an ordinance in place for permitting site disturbance by year five of the NPDES permit.

Post-Construction Site Runoff Control

The City of Grain Valley will establish procedures and policies to better control post-construction site runoff. The following will outline the actions the City will have in place.

Action: The City of Grain Valley requires stormwater detention and water quality structures for all projects creating additional impervious surface to better control downstream erosion and flooding.

Measurable Goal: The City will maintain standards for stormwater management and continue to make updates to include innovative stormwater management designs within year three of the NPDES permit.

Action: The City will have a master plan to better control site runoff using regional retention or detention basins for new developing areas.

Measurable Goal: The City will have in place a stormwater master plan by year 5 of the NPDES permit.

Action: Create procedures for our building inspectors to fine enforce our stormwater standards.

Measurable Goal: Have a compliance policy in place by year three of the NPDES permit.

Pollution Prevention/Good House Keeping

The City of Grain Valley will establish policies, procedures and training to reduce the potential for pollution of stormwater by City operations. The following will outline the actions the City will have in place.

Action: The City will have in place a regularly scheduled meeting with all public works staff to discuss good house keeping policies.

Measurable Goal: Have staff meeting on pollution prevention and good house keeping every six months by year four of the NPDES permit.

Action: The City will maintain a semi-annual street sweeping program for prevention of contaminants entering the cities storm sewer system.

Measurable Goal: The City will continue a semi-annual street sweeping.

Action: The City will have in place an annual training program on the proper handling and disposal of pollutants.

Measurable Goal: Have a pollutant training program in place by year four of the NPDES permit.

Action: The City will provide instruction and training on the proper use of BMPs on City operated construction sites.

Measurable Goal: Have a BMP training program in place by year four of the NPDES permit.

Action: The City will create an inventory of all hazardous materials on site and used during City operations.

Measurable Goal: The City will create an inventory and record keeping process of hazardous material by year four of the NPDES permit.

Action: The City will track records of training for all public works staff.

Measurable Goal: The City will have a process of record keeping for public works staff training by year four of the NPDES permit.

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