

NDOR Stormwater Management Program

For implementation within the MS4 boundary designated for NDOR under the Phase II MS4 Permit requirements.

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Stormwater Management Plan

MCM 1 & 2: Public Education, Outreach and Involvement

The goal of the Public Education, Outreach and Involvement MCMs is to distribute messages that will result in practices implemented by the Target Audience which prevent stormwater pollution and, when appropriate, engage the target audience into the process of developing, improving, and providing stormwater management Best Management Practices

The purpose of the Public Education and Outreach Program – required by the Phase II Regulations – is to foster greater compliance with the MS4 program and to educate the public on how they can help protect storm water quality. Federal guidance for this Minimum Control Measure (MCM) encourages development of a public education program that is tailored, using a mixture of locally appropriate strategies, to target specific audiences and communities. Materials and outreach programs should be directed toward targeted groups likely to have significant storm water impacts.

The purpose of the Public Participation and Involvement Program – required by the Phase II Regulations – is to include the public in the development and review of the Nebraska Department of Roads (NDOR) Storm Water Management Program (SWMP). Federal guidance for this MCM encourages the public to be given opportunities to play an active role in both the development and implementation because an active and involved public is important to the success of a Storm Water Management Program.

NDOR is committed to facilitating various forms of public education, outreach and involvement for the SWMP. The term “Target Audience” is used throughout the SWMP in place of public to help clarify that the public is a specific audience that is unique to each BMP. In most cases, Target Audience does not include the general public. Formal and informal education is expected to increase the Target Audiences awareness of everyone’s responsibility to protect the quality of receiving waters, gain broad support for required activities, shorten implementation schedules, and coordinate multiple environmental compliance efforts. Successful implementation of the Public Education, Outreach, and Involvement Program will increase the level of support for the SWMP. The Public Education, Outreach and Involvement Program is incorporated into each of the other MCMs.

NDOR accomplishes the requirements of the Public Education, Outreach and Involvement Program through a collective effort utilizing multiple Agency Divisions for various purposes. Effective stormwater education occurs as a result of the input and buy-in from each Division. Planning and Project Development coordinates information with Design, Construction, Operations, Right-of-Way, Communication, and others to leverage existing tools and resources

for improving stormwater education and implementing new opportunities to provide Target Messages that are appropriate for Target Audiences.

Planning and Project Development:

- Direct the coordinated development of all stormwater educational materials, training, public review, public input resources and environmental events
- Coordinate regulatory interactions regarding stormwater compliance, Stormwater Management Plan updates, and Annual Reporting
- Maintain the general NDOR Stormwater webpage content with current and relevant information.
- Facilitate the Compliance Technical Advisory Committee and each CTAG Technical Committee
- Facilitate the Certification program for Construction Stormwater Inspectors
- Facilitate the Agency planning and project development policies and procedures that ensure each project considers water quality, among all other environmental resources, as part of the alternatives analysis and engineering design.

Communication:

- Implement the Agency public involvement policy for projects
- Assist with the publication of stormwater news articles, press releases, and other publicly distributed educational materials
- Host and maintain the Agency website where stormwater information is posted

Operations:

- Assist with the development of educational materials and training targeted to all employees within the Operations Division, specifically targeting the maintenance facility staff about recommended standard practices.
- Maintain the internal, web-based Maintenance library webpage content with current and relevant information.

Roadway Design:

- Assist with the development of educational materials and training targeted to roadway designers.

Construction:

- Assist with the development of educational materials and training targeted to construction project managers, inspectors, and contractors.

During the previous MS4 Permit term, NDOR made significant progress toward implementing a Public Education, Outreach and Involvement Program.

- NDOR was able to inject stormwater education and training into the myriad opportunities and resources that already existed within NDOR. Conferences, employee orientations, manuals, guidance, policy, statutes, and committees that already existed provided a solid foundation to build a stormwater Education, Outreach, and Involvement Program upon.

- As an Agency, education is often conducted in the form of NDOR policies, contracts, and practices prescribed in manuals published and kept updated continually. Use of these policies, contracts, and practices is not something that can be tracked effectively, but is a requirement of NDOR employees, Local Public Administrators (LPAs) and contracted entities and is an effective method of ensuring the protection of water quality through best practices.
- NDOR targeted construction stormwater compliance as a key priority during the first permit term and moved to establish improved education and training opportunities. A certification program was created as the highlight of the program to create a group of qualified inspectors (over 1,000 between 2008-2010) that would work on NDOR projects. NDOR also provided a stormwater design course to improve the development of Stormwater Pollution Prevention Plans. The program has been very successful to date and has received positive feedback from the Target Audience.
- NDOR targeted maintenance facility stormwater compliance as another key priority during the first permit term and moved to establish new education and training opportunities. A Facility Runoff Control Plan (FRCP) program was created as the centerpiece of the oversight and education initiative for all employees that conduct operations from MS4 maintenance facilities. Entire building staff's received general education and qualified inspectors were trained in small groups to verify that best practices were being put into place and implemented. The Agency also created an on-line video for maintenance facility good housekeeping and pollution prevention training that can be conducted at any time. This program received broad support and has proven to be very successful for the Target Audience.
- NDOR identified opportunities to enhance existing resources that could be used to improve education and outreach. The NDOR Construction Specifications, Roadway Drainage Design and Erosion Control Manual, and the Maintenance Manual are each important resources for Agency staff and contractors to follow. Each received significant updates to address the stormwater and environmental considerations that need to be made by the Target Audience.
- NDOR published newsletter articles, fact sheets, pocket guides and web resources that could be distributed to the diverse Target Audiences that NDOR has as a non-traditional MS4. The general public is not a primary Target Audience for NDOR. NDOR is most effective when specific groups of key stakeholders are targeted with Target Messages that are relevant to their interaction with NDOR. One example is the periodic meetings that are held between NDOR and the Association of General Contractors to discuss construction methods and stormwater requirements or the periodic inter-agency meetings with Resource Agencies to discuss what efforts NDOR is taking to comply with stormwater and other environmental regulations. This information could be good for the general public, but is targeted to the Audience with the most relevance.

NDOR identified the follow resources and partnerships as the most effective and useful during the previous MS4 Permit term:

- Adjacent MS4s (Papio-Partnership and Nebraska H₂O) conduct the most effective education, outreach and involvement to the general public. NDOR supports their efforts when possible, but does not intend to duplicate efforts.
- Local Technical Assistance Program (LTAP) – Facilitation of sediment and erosion control courses including instructors from Minnesota DOT and other technical speakers as needed held across the state.
- American Association of State Highway Transportation Officials (AASHTO) – Listserves, webinars, conferences, national standards, research
- Association of General Contractors (AGC) – Helps distribute the stormwater information provided by NDOR in a peer-to-peer manner within the industry
- University of Nebraska and University of Nebraska Extension - ongoing research and education on stormwater BMPs
- Local Project Administrator (LPA) Manual – Directs local projects toward the required consideration of stormwater management, implementation, and oversight of local roadway projects.

NDOR anticipates a minor amount of significant changes to this MCM during the next permit term (2012-2017).

- NDOR will continue to target existing stormwater education and training across the four major Divisions of Planning and Project Development, Construction, Operations, and Roadway Design.
- NDOR will explore additional delivery methods for education and training that include internet-based webinars for construction stormwater inspectors being re-certified.
- NDOR will explore how the ECO Database can be enhanced to deliver additional educational information, guidance and tips at the appropriate time of inspection and how to extract information that can help illustrate information presented in other educational mediums such as fact sheets, revised pocket guide, newsletters, conferences, etc.
- NDOR Roadway Design guides for stormwater treatment BMPs will be updated over time with new and emerging research, project highlights for practices constructed, and on-going maintenance feedback.
- NDOR will explore additional methods for distributing the contact information and response procedures for possible or identified illicit discharges and connections the MS4 to the individuals that routinely work in or inspect the state highway system.
- NDOR will continue to coordinate with, when applicable, Adjacent MS4s as they deliver public education, outreach, and involvement locally to provide consistent Target Messages and prevent the duplication of efforts to similar Target Audiences.

NDOR may conduct other activities not specifically identified in this section which contribute to MCM 1: Public Education and Outreach.

MCM 1 & 2: Public Education, Outreach, and Involvement

BMP 1: Stormwater Education Materials

Permit Requirement Citation: 3.4.1.1

Activity: NDOR will follow a Public Education and Outreach (PEO) Strategy to distribute Targeted Messages for education using printed and electronic materials and the NDOR Stormwater Webpage (<http://www.nebraskatransportation.org/environment/swppp.htm>) to communicate the importance and methods of protecting stormwater.

Objective: To *increase* the Target Audience’s awareness and knowledge of stormwater pollution and best practices to protect water quality.

Target Audience: All NDOR Employees, Consultant Designers, Consultant Inspectors, Prime Contractors, Trade Contractors, Trade Associations, Contracted Maintenance Service Providers, and Adjacent MS4s

Target Messages: Use Best Practices for Everyday Activities, Report Illegal Discharges, Follow Required Construction Practices, Minimize Water Quality Impacts from Development and Redevelopment, Nothing but Stormwater Goes Down the Drain

Evaluation Measures/Measurable Goals:

Performance:

1. Maintain a Public Education and Outreach (PEO) Strategy
2. For each printed material, track the
 - a. Number of materials distributed
 - b. Frequency of distribution
 - c. Estimated number of recipients
3. Include stormwater program and general stormwater information links on the NDOR website.

Effectiveness:

1. Target educational information to targeted audiences for activities and pollution sources of the greatest concern.
2. Policies, contracts, and practices adopted by NDOR address enforceable stormwater protection BMPs.
3. Update educational information based upon information gained from public feedback (*MCM 1&2 BMP 3*).

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Maintain Stormwater Education Materials as one aspect of the current and accurate PEO Strategy with SWMP	✓	✓	✓	✓	✓
Coordinate resources needed to develop stormwater quality education materials	✓	✓	✓	✓	✓
Distribute, track, and report stormwater quality education materials made available to the Target Audience	✓	✓	✓	✓	✓

MCM 1 & 2: Public Education, Outreach, and Involvement

BMP 2: Stormwater Training and Events

Permit Requirement Citation: 3.4.1.1

Activity: NDOR will follow a Public Education and Outreach Strategy to promote, provide and/or participate in stormwater training opportunities using Conferences, Workshop, Training Sessions, Webinars and/or other Educational Events that teach the importance and methods of protecting stormwater.

Objective: To *improve* the Target Audience’s knowledge and skills needed to prevent stormwater pollution and to take an active role to protect water quality by using BMPs and participating in Environmental Events.

Target Audience: All NDOR Employees, Prime Contractors, Trade Contractors, Adjacent MS4s Residents, Businesses, Civic Groups

Target Messages: Reporting Illegal Discharges and Illicit Connections, Stormwater Controls for Construction Activity, Development Practices that Minimize Water Resource Impacts, Municipal Facility Good Housekeeping Best Management Practices, Outfall Field Screening

Evaluation Measures/Measurable Goals:

Performance:

1. For each training opportunity, track the:
 - a. Topic/agenda/trainer
 - b. Number invited/methods used
 - c. Number attended
2. Promote and participate in area Environmental Events that encourage the Public to reduce the risk of stormwater pollution.
3. For each Environmental Event, track:
 - a. Number of individuals and/or groups organizing/coordinating
 - b. Number of individuals attending

Effectiveness:

1. Target training topics and methods to target audiences for each MCM
2. Use attendee survey information to improve training topics and methods
3. Feedback from the Environmental Event participants is used to adjust how outreach efforts are provided to improve the stormwater program.
4. Estimated amounts of potential pollutants collected are tracked as a stormwater pollution load reduction.

	Permit Year				
Implementation Schedule:	1	2	3	4	5
Maintain Stormwater Training and Events as one aspect of the current and accurate PEO Strategy	✓	✓	✓	✓	✓
Coordinate resources needed to develop Stormwater Training and facilitate Event opportunities	✓	✓	✓	✓	✓
Promote, sponsor, (co)host, track, and report Stormwater Training and Event opportunities provided to the Target Audience	✓	✓	✓	✓	✓

MCM 1 & 2: Public Education, Outreach, and Involvement

BMP 3: Public Review and Comment

Permit Requirement Citation: 3.4.1.1

Activity: NDOR will provide the Target Audience with opportunities to review and comment on new policies, standards, permits, contract language and SWMP revisions intended to protect stormwater quality within the MS4 boundary.

Objectives: To *engage* the Target Audience in the process to review programmatic changes that may affect Agency operations to protect water quality and *document* considerations and changes made to the rules and policies as a result of the Target Audience’s comments.

Target Audience: *Primary:* Compliance Technical Advisory Committee (CTAG), NDOR Divisions Engineers, and Adjacent MS4s. *Secondary:* If a public notice is required by NDEQ for a change to any of the items in this Activity, the general public, including Associations, Contractors, Citizens and others will be included as the Target Audience.

Evaluation Measures/Measurable Goals:

Performance:

1. Maintain and implement Agency Public Participation policy and procedures for projects that include consideration and protections for water quality.
2. Facilitate CTAG meetings
3. For each review, track the:
 - a. Review type
 - b. Materials distributed
 - c. Comments submitted

Effectiveness:

1. Document how Target Audience comments were taken into consideration in revisions, or provided sufficient justification for why consideration was not implemented.

	Permit Year				
Implementation Schedule:	1	2	3	4	5
Maintain Public Review and Comment as one aspect of the current and accurate PEO Strategy	✓	✓	✓	✓	✓
Coordinate resources needed to facilitate review and comment by the Target Audience	✓	✓	✓	✓	✓
Promote, facilitate, track, and report Target Audience review opportunities	✓	✓	✓	✓	✓

MCM 1 & 2: Public Education, Outreach, and Involvement

BMP 4: Public Input Resources

Permit Requirement Citation: 3.4.1.1

Activity: NDOR will maintain resources that allow the Target Audience to provide feedback about educational efforts, policies and projects and to submit details about pollution problems impacting stormwater quality.

Objectives: To *equip* the Target Audience with tools to inform NDOR about stormwater pollution and efforts to protect stormwater quality so NDOR can *take appropriate actions* to protect water resources.

Target Audience: All NDOR Employees, Prime Contractors, Trade Contractors, Trade Associations, Contracted Inspectors and Citizens

Evaluation Measures/Measurable Goals:

Performance:

1. Host telephone hotline
2. Host feedback tool on website
(contact link at:
<http://www.nebraskatransportation.org/environment/swppp.htm>)
3. Maintain internal electronic reporting tools; District Incident Reporting and Knowledgebase (DIRK) and Environmental Compliance Oversight (ECO) Database
4. For each comment submitted, track:
 - a. Comment provided by the Public
 - b. Method comment was received
 - c. Action taken.

Effectiveness:

1. NDOR cannot require public feedback, but it can ensure that opportunities for providing information are readily available for the Target Audience to use.
2. Information submitted by the public is used to promptly address any stormwater problems and to make improvements to the stormwater management efforts by NDOR.

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Maintain Public Input Resources as one aspect of the current and accurate PEO Strategy	✓	✓	✓	✓	✓
Coordinate resources needed to host public input resources (hotline, website, DIRK, ECO Database, etc.)	✓	✓	✓	✓	✓
Promote, facilitate, track, and report public input provided to the MS4	✓	✓	✓	✓	✓

Stormwater Management Plan

MCM 3: Illicit Discharge Detection and Elimination

The goal of the Illicit Discharge Detection and Elimination MCM is to facilitate the timely identification and removal of prohibited stormwater connections and discharges.

The purpose of the Illicit Discharge Detection and Elimination (Illicit Discharge) Program - required by the Phase II Regulations - is to detect and eliminate any discharges to a Municipal Separate Storm Sewer (MS4) that is not intended to accept, process, or discharge such non-storm water flows. Exceptions to this are for discharges covered under another NPDES permit and discharges resulting from fire fighting activities and other allowable non-storm water discharges. Federal guidance for this Minimum Control Measure (MCM) encourages clear identification (mapping) and awareness (monitoring) of the MS4 system in order to determine the types and sources of illicit discharges entering the system that must be eliminated.

NDOR is committed to protect their MS4 from illicit discharges that result from direct connections (e.g. cross connections between sanitary or industrial sewers and storm sewers) or indirect connections (e.g. spills that flow into the storm drainage system from parking lots, animal feeding operations, etc.). The Illicit Discharge Program includes a combination of structural and nonstructural measures focused on mapping the MS4, instituting appropriate enforcement actions, implementing an Illicit Discharge Detection and Elimination Plan (IDDE), and educating the Target Audience about the Program. NDOR maintains the IDDE Plan to communicate how to locate problem areas, track the source of illicit discharges, remove or correct illicit connections, and document the actions taken.

NDOR accomplishes the requirements of the Illicit Discharge Program through a collective effort utilizing multiple Agency departments for various purposes. Mapping and dry weather monitoring is coordinated from headquarters, while the day-to-day actions to report and respond to discharges are conducted at the District level. The second MS4 Permit term will continue the MS4 effort to raise Agency staff awareness, knowledge and skills to identify, report and respond to illicit discharges in a manner that minimizes stormwater pollution. The current responsibilities are listed below.

Operations Headquarters:

- Maintain the IDDE Plan which includes current Outfall Mapping and Inventory procedures as well as Dry Weather Screening protocols and priorities.
- Notify adjacent property owners that discharge directly into the NDOR right-of-way (i.e. not through and Adjacent MS4) of any illicit discharges and coordinate responses to resolve the corrective action with property owner.
- Track process of resolving illicit discharges through the District Incident Response Knowledgebase (DIRK).

- Direct the notification to NDEQ regarding spills of reportable quantities

Planning and Project Development:

- Lead the collection of outfall field data, including new outfall locations, to support the IDDE Plan.
- Maintain outfall maps and inventory information.
- Assist with updates to the IDDE Plan including review of statutory (enforceable) language prohibiting non-stormwater discharges as a condition of all permits to discharge into the NDOR Right-of-Way.
- Assist with reporting illicit discharges to Adjacent MS4s when discharges enter NDOR right-of-way from within another MS4s jurisdictional boundary.
- Maintain outfall maps and outfall inventory information.

Operations Districts:

- Routinely observe drainages, culverts, and outfalls for illicit discharge evidence
- Report suspicious or known illicit discharges (including spills) to NDOR Headquarters and enter report information into DIRK.
- Provide direction to Responsible Parties, as necessary, for the response to spills and dumping of illicit material into the NDOR MS4.

During the previous MS4 Permit term, NDOR made significant progress toward enforcing an Illicit Discharge Program.

- The Compliance Technical Advisory Group – Illicit Discharge Committee was led by the NDOR Maintenance Engineer who provided leadership and committed the staff needed to develop policies and procedures for implementing and enforcing the Illicit Discharge Program.
- NDOR developed an Illicit Discharge Detection and Elimination Plan which helped coordinate resources and statutory authority already available to the Agency for other purposes.
- The IDDE Plan also created outfall mapping procedures and dry weather investigation priorities for the Agency to follow and update as necessary.
- NDOR developed inter-local agreements with many MS4s to share outfall information and to streamline the data collection effort required along shared boundaries where possible.
- The IDDE Plan also created procedures for reporting and tracking illicit discharges that occur within the MS4 boundary using DIRK to help ensure incidents are resolved.
- Outfalls within each of the MS4s were mapped from 2008 to 2011 and ArcMap (GIS) is used to manage the information collected in the field.
- NDOR did not observe any incidents of illicit discharges or connections during the field mapping efforts. This mapping effort and observations associated with the field effort were used to establish dry-weather monitoring priorities.

NDOR identified the follow resources and partnerships as the most effective and useful during the previous MS4 Permit term:

- Adjacent MS4s – for sharing GIS data and assisting with responses to illicit discharges.
- Illicit Discharge Detection and Elimination Plan – for coordinating all information relevant to the Illicit Discharge Program into one place.
- ArcMap (GIS) – for data collection and developing maps for the program.
- District Incident Response and Knowledgebase (DIRK) – for incident tracking and communication.
- Center for Watershed Protection – guidance on developing and Illicit Discharge Detection and Elimination Plan
- AASHTO – Ad hoc stormwater committee and email list serve for addressing unique concerns and challenges of transportation MS4s (sometimes referred to as TS4s).

NDOR anticipates significant changes to this MCM during the next permit term (2012-2017).

- NDOR will target education of Adjacent MS4 about their responsibility under statute to respond to notice of illicit discharges.
- NDOR will target education to operations districts about illicit discharges, reporting procedures, and required responses.
- NDOR has completed the mapping of the outfalls within the MS4 area. Less effort will be required for mapping existing outfalls. New outfalls that are constructed as part of a construction project will be field verified and added to the ArcMap database.
- NDOR anticipates that Environmental Compliance Oversight (ECO) Database will be utilized for tracking locations and non-incident related inspection information of outfalls.
- The linear, and highly controlled, nature of the NDOR MS4 has shown that illicit discharges pose a minimal risk to water quality. NDOR did not observe any incidents of illicit discharges or connections within the MS4 boundary during the previous permit term. Only two spills/dumping incidents were identified and those were resolved utilizing procedures that are in place to protect highway safety. Similar observations have been consistently reported by other MS4 Departments of Transportation. NDOR will follow the current priorities for dry-weather monitoring listed in the IDDE Plan and will maintain the DIRK illicit discharge reporting mechanism. Unless directed by the regulatory authority, the Illicit Discharge Program will not make significant modifications to the current program.
- Target Activities for BMP 1 Dry Weather Inspections that NDOR will focus on include: Educating field staff (construction and maintenance) about signs of illicit discharges and how to use DIRK.
- Target Activities for BMP 2 Discharge Investigation and Removal that NDOR will focus on include: Adjacent MS4 Coordination, Consistent Responses, Efficient Resolution, Adequate Documentation, Illegal Dumping
- Target Activities for BMP 2 Storm Sewer System Mapping that NDOR will focus on include: GIS, Emergency Response Planning, New Development and Redevelopment Plans with New Outfalls, Dry Weather Monitoring, and Receiving Water Quality.

NDOR may conduct other activities not specifically identified in this section which contribute to MCM 3: Illicit Discharge Detection and Elimination.

MCM 3: Illicit Discharge Detection and Elimination

BMP 1: Dry Weather Inspections

Permit Requirement Citation: 3.4.2.1.1.2, 3.4.2.3

Activity: NDOR will conduct a dry-weather field screening program that includes priority outfalls defined in the Illicit Discharge Detection and Elimination Plan.

Objective: To *maximize* the use of available resources to *look for* evidence of illicit discharges that can be *investigated, traced, and removed* to protect water quality.

Evaluation Measures/Measurable Goals:

Performance:

1. Routinely make observations for illicit discharges to the stormwater drainage system and illegal dumping activities when performing other work on the NDOR system.
2. Conduct and document outfall field screening according to frequency criteria listed in the Illicit Discharge Detection and Elimination Plan.
3. Maintain District Incident Reporting and Knowledgebase for reporting and tracking illicit discharges.
4. For each dry-weather, outfall field screening activity, track the results of field screening efforts in a central database.

Effectiveness:

1. Field screening inspection procedures include a scan for pollutants causing known stream impairments or that are in a TMDL.
2. Field screening inspections are prioritized for outfalls discharging to impaired streams and drainage areas with previous complaints.
3. Filed screening information in the investigation records is used to evaluate future priority areas and update list of hotspots.
4. The Public Education and Outreach Strategy includes education for staff responsible for identifying possible illicit discharges in the field and using District Incident Response Knowledgebase.

Permit Year

Implementation Schedule:	1	2	3	4	5
Update IDDE Plan with inspection priorities, reporting forms, contact info.	✓				
Follow dry weather field screening procedures	✓	✓	✓	✓	✓
Record incident and inspection dates, results, and observations in a database.	✓	✓	✓	✓	✓

MCM 3: Illicit Discharge Detection and Elimination

BMP 2: Discharge Investigation and Removal

Permit Requirement Citation: 3.4.2.1.1.3, 3.4.2.1.1.4, 3.4.2.2, 3.4.2.3

Activities: NDOR will develop and follow procedures to identify, investigate, and enforce the removal and/or clean up of illicit connections and illegal discharges.

Objective: *Investigate* all prohibited illegal discharges and illicit connections reported so action can be taken by the responsible party to *remove and/or clean up* as many as possible.

Evaluation Measures/Measurable Goals:

Performance:

1. Maintain statutes, policies, permits, and procedures that prohibit and allow investigation of illegal discharges and illicit connections.
2. Implement an illegal discharge and illicit connection Enforcement Response Plan maintained as part of the IDDE Plan.
3. Follow procedures listed in the IDDE Plan to investigate reports and monitoring results that indicate a possible illegal discharge or illicit connection.
4. For each illegal discharge or illicit connection, track/document the steps taken to investigate and resolve it and result of enforcement action.

1. Monitor the success rate for removing illicit connections and illegal discharges from the MS4.
2. Circumstances for illicit connections are reviewed with staff and adjacent MS4, if necessary, to determine how the permitting and/or enforcement processes can be modified to prevent similar occurrences.
3. Circumstances where the Enforcement Response Plan does not cause removal of illicit connection or illegal discharge to the MS4 are evaluated to determine if any change in the Plan is needed.
4. The PEO Strategy includes training for staff responding and conducting investigations and removal of illegal discharges and illicit connections.

Effectiveness:

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Update IDDE Plan with policies, permits, and procedures for investigating discharges and the Enforcement Response Plan for causing removal of discharges	✓ <i>Draft</i>	✓ <i>Final</i>			
Maintain current and accurate statutes, policies, permits, procedures, ERP, and written investigation protocol	✓	✓	✓	✓	✓
Follow investigation and enforcement procedures and record details required by the IDDE Plan in a database.	✓	✓	✓	✓	✓

MCM 3: Illicit Discharge Detection and Elimination

BMP 3: Storm Sewer System Mapping

Permit Requirement Citation: 3.4.2.1.1.1

Activity: NDOR will maintain a current map of the MS4 outfall locations.

Objective: To *facilitate* the *prioritization* of dry-weather inspection locations, *investigation* of sources of pollution identified and reported, and protection of downstream receiving waters.

Evaluation Measures/Measurable Goals:

Performance:

1. Maintain geographic locations of all existing stormwater outfall locations and Waters of the State.
2. Field verify with geographic reference all new outfall location during the final project inspection.
3. Field verify and complete the mapping of existing stormwater drainage system assets not identified during previous permit term.

Effectiveness:

1. The effectiveness of storm drain system mapping is related to the ability to effectively complete *MCM 3 BMP 1 & 2*.
2. The stormwater drainage system map is used to prioritize areas for dry-weather monitoring.

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Coordinate resources needed to complete mapping of all existing stormwater outfalls.	✓				
Develop and implement protocol to record all new development and redevelopment plans to include geographic reference for all outfall locations.	✓ Draft	✓ Final	✓	✓	✓

Stormwater Management Plan

MCM: 4 Construction Site Stormwater Runoff Control

The Goal of the Construction Site Stormwater Runoff Control MCM is to require and oversee practices that minimize the discharge of pollutants from construction sites.

The purpose of the Construction Site Stormwater Runoff Control (Construction Stormwater) Program – required by the Phase II Regulations – is to ensure appropriate storm water pollution prevention measures are implemented during construction activities. Federal guidance for this Minimum Control Measure (MCM) encourages the development of a Construction Stormwater Program that focuses on specific pollutants and water quality concerns and uses effective enforcement mechanisms to ensure the protection of receiving waters.

NDOR is committed to facilitate appropriate enforcement mechanisms, consistent site plan review, and comprehensive site inspections in a manner that is open to the public. Successful implementation of this MCM allows NDOR to identify the scope of the impacts that their construction projects have on receiving water quality, standardize appropriate Best Management Practices (BMPs), educate and train the Target Audience how to protect downstream receiving waters, and maintain compliance with NPDES permit requirements for construction sites disturbing an acre of soil or more.

NDOR accomplishes the requirements of the Construction Stormwater Management Program by utilizing multiple Agency divisions for various purposes. These roles have been clarified as the program has evolved from initial development phase to the modification and implementation phase. The second MS4 Permit term will be used to provide additional clarification to Agency departments about their role in providing some portion of the comprehensive oversight of construction activity. The current responsibilities are listed below.

Roadway Design:

- Include designs for final stabilization control measures as part of the project plans and specifications.
- Attend training to learn about sediment and erosion control methods.

Planning and Project Development:

- Recommend Agency approved erosion and sediment controls that may be effectively implemented by the contractor during construction when creating and updating temporary erosion and sediment control plans. (In special circumstances only, Roadway Design will stipulate the temporary erosion and sediment control measures which the contractor must use and the contractor must receive approval from NDOR to deviate from the design plan. Within Roadway Design, NDOR typically does not stipulate the construction means and methods in the

construction plans; only that environmental permits be complied with as an obligation of the contractor being awarded the contract. To comply with the sediment and erosion control requirements, the contractor awarded the contract must submit temporary erosion and sediment control plans in accordance with their chosen construction sequence. NDOR reviews, comments and approves temporary erosion and sediment control plans which are then kept current by the Project Manager and the Contractor during the project.)

- Include all special conditions stipulated for erosion and sediment control by natural resource agencies and associated approvals or permits into contracts and contract special provisions.
- Maintain standard plans and details for erosion and sediment control BMPs use on construction plans.
- Develop SWPPPs and provide comments back to Roadway Design to address final stabilization measures.
- Conduct Compliance Oversight inspections.
- Provide Compliance Assistance (e.g., standards, references, procedures, methods, etc.) to the Target Audience about programmatic and regulatory stormwater requirements for all construction projects.
- Provide Compliance Assistance (e.g., plan review, site inspections, recommended corrective actions, etc.) to the Target Audience about project-specific stormwater requirements for all construction projects.
- Develop and provide education and training to the target audience for erosion and sediment control plan design, site inspections, and corrective actions.
- Maintain ECO Database framework to support construction stormwater inspections and reporting.
- Direct research of materials and technologies used in the field for erosion and sediment control purposes.

Construction Division and District Construction Offices:

- Lead the review and amendment of the Standard Specifications and Construction Manual used by Project Managers.
- Review and comment on temporary erosion and sediment control plans submitted by contractors for construction projects.
- Oversee the implementation of all measures listed in the SWPPP and the temporary erosion and sediment control plans.
- Oversee the update of SWPPP and temporary erosion and sediment control plans when field conditions are modified.
- Conduct routine site inspections (every 14 days and within 24-hours of a 0.5” or greater rain event) and coordinate findings with the ECO Database.
- Work with contractor to resolve Corrective Actions before they become a violation or as soon as possible.
- Enforce the terms of project contracts.
- Attend education and training that continues to be offered by NDOR to improve knowledge and skills in erosion and sediment control plan design/maintenance, site inspections, and corrective actions.

- Select, install, and maintain erosion and sediment control practices for maintenance projects that disturb less than one acre of soil and do not meet the minimum size requirement for NPDES Permit coverage and do not require a Storm Water Pollution Prevention Plan.

District Environmental Coordinators:

- Provide project-level stormwater Compliance Assistance to Project Managers in the District Construction Offices during construction.
- Conduct inspections and record findings in ECO Database to improve project and District-wide compliance efforts with stormwater permit conditions.
- Attend education and training that continues to be offered to improve knowledge and skills in erosion and sediment control plan design/maintenance, site inspections, and corrective actions.

Operations Division and District Operations Offices:

- Maintain final stabilization measures once contractor has been released from the contract and until the State-issued permit is terminated.
- Remove temporary erosion and sediment control BMPs left in place by the contractor until final stabilization is achieved and the State-issued permit is terminated.
- Install temporary erosion and sediment control BMPs that may be needed to prevent erosion after the contractor has been released from the contract and until final stabilization is achieved and the State-issued permit is terminated.
- Attend education and training that continues to be offered to improve knowledge and skills in erosion and sediment control plan maintenance, site inspections, and corrective actions.

During the previous MS4 Permit term, NDOR made significant progress to improve office and field procedures, standards, enforcement, and education to increase the control of erosion and sedimentation at construction projects.

- The Compliance Technical Advisory Group –Construction Committee was led by the NDOR Construction Engineer who provided leadership and committed the staff needed to develop policies, procedures, technical standards and guidance for erosion and sediment control practices used within NDOR.
- Contract language for temporary erosion and sediment controls required significant modification to improve the selection, design, and bidding procedures for temporary erosion and sediment control practices on projects. This was achieved in 2011 with updates to Section 800 of the Standard Specifications which are to be included in contracts as special provisions until 2012.
- NDOR Construction Engineers, Project Managers, District Environmental Coordinators, Design Engineers, Construction Inspectors, and other target audiences were introduced to the concepts of erosion and sediment control practices in training courses and workshops. The effort is highlighted by the NDOR Erosion and Sediment Control Inspector Program

which reached over 1,000 inspectors between 2008-2010 and continues with a strong recertification process of inspectors.

- NDOR implemented third-party consultant inspections for select projects to improve the level of compliance assistance at the project level.
- NDOR developed and initiates a contract-based financial incentive and deficiency notification and disincentive procedure.
- NDOR conducted research on erosion and sediment control practices and compiled research from other state Departments of Transportation and research centers to learn the existing and emerging erosion and sediment control practices utilized for roadway construction projects.
- NDOR updated the Approved Product List
- NDOR developed and distributed a pocket sized, full-color guide of construction site stormwater management. This guide was published with assistance from Nebraska Department of Environmental Quality and distributed across the State as part of the Inspector Certification Program and to anyone that requested a copy.

NDOR identified the following resources and partnerships as the most effective and useful during the previous MS4 Permit term:

- NDOR Drainage Design and Erosion Control Manual – for Designers
- NDOR Construction Manual and Standards Specifications – for Project Managers, Contractors, Inspectors, and Maintenance Staff
- NDOR Maintenance Manual – for Maintenance Staff
- ECO Database – to track stormwater inspection findings, corrective actions, and summary reports.
- Association of General Contractors (AGC)
- American Association of State Highway and Transportation Officials (AASHTO)
- International Erosion Control Association (IECA)
- Local Technical Assistance Program (LTAP)
- Nebraska H₂O – Phase II MS4 Stormwater Cooperative

NDOR anticipates significant changes to this MCM during the next permit term (**2012-2017**).

- The focus of this MCM will shift from development of new standards and policies to streamlined oversight of implementation. NDOR will focus Compliance Assistance efforts at the Headquarters and District Level to encourage consistent application of erosion and sediment control standards and practices to protect receiving water quality.
- ECO Database will be made available for all construction project inspections. Information will not only improve responses to Corrective Actions, but will direct NDOR

toward improved education about erosion and sediment control practices as well as the design, review and approval processes of erosion and sediment control plans.

- Additional research will be conducted and gathered to determine local conditions that influence the effectiveness of erosion and sediment control practices.
- Target Activities for BMP 1 Construction Stormwater Pollution Prevention Plans that NDOR will focus on include: Review Process Consistency, Site Plans, Standard BMP Information, Enforceability, Compliance Assistance, Documentation, Sensitive Resources, Effluent Limitation Review Procedures, and As-Built Record Drawings.
- Target Activities for BMP 2 Construction Stormwater Inspections that NDOR will focus on include: Oversight of Temporary Erosion and Sediment Control Plans, Future Monitoring, Documentation, Trending, Compliance Assistance, Education and Training.
- Target Activities for BMP 3 Construction Stormwater Enforcement that NDOR will focus on include: Enforceability, Compliance Assistance, Documentation, Equality, and Predictability.

Enforcement of NDOR construction contracts for the Construction Stormwater Program occurs in multiple phases of the construction process. NDOR is the Applicant and Project Manager for all NPDES Construction Stormwater Permits issued within the MS4 boundary. The contractor awarded a construction contract is added as a co-permittee. This allows and requires different methods of enforceable authority than a traditional MS4s would use.

Stormwater Pollution Prevention Plans are produced by NDOR and a standard checklist of items is followed to ensure all elements required by the NDEQ General Permit for Construction Stormwater Discharges are included. Erosion and sediment control plans for final stabilization are developed as a part of the SWPPP and the project plan set. This is done to ensure that practices are communicated properly to the Project Manager and the Prime Contractor.

Upon being awarded the project contract, the Prime Contractor submits their temporary erosion and sediment control plan to NDOR prior to construction. This plan is based on the Prime Contractor's proposed sequence and phasing of construction. It addresses all measures that will be used during the active phase of construction to minimize erosion and capture sediment as well as implement good housekeeping practices. These plans receive an initial review by the Construction and Project Development Divisions and then are monitored for updates in the field by the Project Manager.

NDOR enforces erosion and sediment control measures through contract language which requires compliance with Standard Specifications for Highway Construction. This set of Standard Specifications is essential for enforcing consistent construction practices, materials, methods and payment for selected BMPs. The Standard Specifications are updated to reflect current practices on a set frequency and establish current terms for enforcing contract language with appropriate BMP information.

NDOR's contracts also include requirements and sanctions (enforcement) that address planning, design, and maintenance of erosion and sediment controls. For example, in 2009, NDOR began implementing an Environmental Commitment Deficiency Notification as a Special Provision for all NPDES permitted projects. This notification sequence allows NDOR to identify specific

Corrective Actions for any environmental commitment and a timeline to get them resolved. The special provision is included in the contract which the contractor signs. Consequence of failure to comply is typically a financial disincentive, but can include other actions.

Inspections are also an important part of the enforcement sequence. NDOR uses inspections to document findings of current site conditions and to determine if the documentation is current as required by the contract and the NPDES Construction Stormwater Permit. Findings that require Corrective Actions are recorded onto a paper form or into Environmental Compliance Oversight (ECO) Database. The ECO Databases is utilized to support enforcement and provide compliance assistance.

NDOR may conduct other activities not specifically identified in this section which contribute to MCM 4: Construction Site Stormwater Runoff Control.

MCM 4: Construction Site Stormwater Runoff Control

BMP 1: Construction Stormwater Pollution Prevention Plans

Permit Requirement Citation: 3.4.3.1, 3.4.3.2, 3.4.3.3

Activity: NDOR will develop Construction Stormwater Pollution Prevention Plans (SWPPPs) and review and approve temporary erosion and sediment control plans for projects that meet criteria established by regulations and minimum standards in Agency policies.

Objective: To *review and approve* documented procedures and practices that will be used to provide temporary and permanent soil stabilization and water quality protection during the construction and final stabilization process. (Approved plans will be maintained and updated through MCM 4 - BMP 2 Construction Stormwater Inspections.)

Evaluation Measures/Measurable Goals:

Performance:

1. Maintain Agency approved standards for construction stormwater BMPs.
2. Follow checklist of minimum SWPPP development requirements to include project phasing, erosion and sediment controls, soil stabilization, dewatering, good housekeeping, prohibited discharges and surface outlets.
3. Respond to temporary erosion and sediment control plan submittals that do not achieve established Agency selection and design criteria by providing comments and identifying deficiencies that must be addressed prior to approval.
4. Maintain a current list of permitted construction sites within the MS4 with status dates for *under review, authorized, active construction, completed*

Effectiveness:

1. The Agency considers special conditions during SWPPP development for pollutants that are causing known local stream impairments or TMDLs.
2. Qualified individuals knowledgeable in the principles and practices of stormwater pollution control develop SWPPPs.
3. Compliance Oversight stormwater inspections help illustrate the effectiveness of SWPPP development and Temporary Erosion and Sediment Control Plan maintenance processes.
4. The Public Education and Outreach Strategy includes education and training for designing, reviewing, updating, and implementing SWPPPs and temporary erosion and sediment control plans.

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Maintain Agency Standard Specifications that address construction stormwater BMPs.	✓	✓	✓	✓	✓
Enforce contracts that enable the Agency to require temporary erosion and sediment control plans from contractors.	✓	✓	✓	✓	✓
Follow checklist and document development and review considerations for SWPPPs and temporary erosion and sediment control plans.	✓	✓	✓	✓	✓
Maintain current list of permitted construction sites within the MS4.	✓	✓	✓	✓	✓
Maintain the Public Education and Outreach Strategy to reflect current information and targeted messages about Construction SWPPPs.	✓	✓	✓	✓	✓

MCM 4: Construction Site Stormwater Runoff Controls

BMP 2: Construction Stormwater Inspections

Permit Requirement Citation: 3.4.3.4

Activity: NDOR will maintain a process of construction site self-inspections for types of construction activity that meet criteria established by regulations and Agency policies.

Objective: To *conduct* consistent site inspections that *document* site conditions and compliance efforts, *identify* compliance trends, and *improve* compliance assistance.

Evaluation Measures/Measurable Goals:

Performance:

1. Conduct stormwater inspections every 14 days and within 24 hours of rain events of 0.5 inches or greater.
2. Conduct at least one (1) Compliance Oversight inspection for each active NPDES-permitted project within the MS4 annually.
3. Follow Agency procedure for inspections that considers:
 - a. if Temporary Erosion and Sediment Control plan is current and accurate;
 - b. if field conditions are in compliance with contract and permit conditions;
 - c. if Corrective Actions are required;
 - d. if discharge of pollutants can be observed;
4. Produce an inspection report for every routine and Compliance Oversight inspection and utilize the NDOR ECO-Database for stormwater inspection information when possible; and
5. Track the number of inspections conducted and directed by NDOR.

Effectiveness:

1. Conduct more frequent Compliance Oversight inspections for projects that are causing known local stream impairments, TMDLs, or have demonstrated significant violations with Agency standards, inspection requirements, or erosion and sediment control standards.
2. Qualified individuals knowledgeable in the principles and practices of stormwater pollution control conduct inspections.
3. Information collected from Compliance Oversight inspections helps illustrate the effectiveness of the routine inspection program.
4. The Public Education and Outreach Strategy includes education and training for inspectors that conduct inspections for projects.

	Permit Year				
Implementation Schedule:	1	2	3	4	5
Maintain ECO Database and paper inspection forms to use for construction stormwater inspections.	✓	✓	✓	✓	✓
Maintain Agency construction stormwater Compliance Oversight plan and inspection procedures.	✓	✓	✓	✓	✓
Conduct routine, complaint response and Compliance Oversight inspections and document inspection dates, findings, and Corrective Actions required.	✓	✓	✓	✓	✓
Maintain the PEO Strategy to reflect current information and targeted messages about conducting Construction Stormwater Inspections.	✓	✓	✓	✓	✓

MCM 4: Construction Site Stormwater Runoff Control

BMP 3: Construction Stormwater Enforcement

Permit Requirement Citation: 3.4.3.4.4

Activity: NDOR will take enforcement action against construction activities that are in violation of project contracts.

Objective: To *issue* timely and consistent enforcement actions and *direct* the timely resolution of non-compliance at construction sites.

Evaluation Measures/Measurable Goals:

Performance:

1. Maintain contracts that enable the Agency to prohibit construction stormwater non-compliance.
2. Maintain and implement the Enforcement Response Plan to for construction stormwater findings and violations.
3. Document and track actions taken such as *verbal notice, notice of violation, stop work order, withholding payment, and/or assessment of work and materials against contract amount* for each non-compliant construction site.

Effectiveness:

1. Track the length of time required to bring construction stormwater Violations into compliance and findings with Corrective Actions resolved.
2. Track the number of Corrective Actions listed as immediate action required.
3. Information collected from Compliance Oversight stormwater inspections helps illustrate enforcement program effectiveness.
4. The Public Education and Outreach Strategy includes education and training for inspectors about how to follow the Enforcement Response Plan.

Permit Year

Implementation Schedule:	1	2	3	4	5
Update the Agency construction stormwater Enforcement Response Plan and associated enforcement mechanisms available to the Agency.	✓				
Maintain current and accurate construction stormwater policies, procedures, permits, Enforcement Response Plan, and project contracts.	✓	✓	✓	✓	✓
Follow ERP and document enforcement communication dates, parties involved, actions taken, and resolution dates in a database.	✓	✓	✓	✓	✓

Stormwater Management Plan

MCM 5: Post Construction Stormwater Management Program

The Goal of the Post Construction Stormwater Management Program MCM is to require permanent treatment measures that protect stormwater quality from new development and redevelopment projects.

The purpose of the Post Construction Stormwater Management Program – required by the Phase II Regulations – is to include appropriate stormwater treatment BMPs on projects undergoing new development or redevelopment resulting in land disturbance of greater than or equal to one acre. Federal guidance for this Minimum Control Measure (MCM) encourages the development of a Post Construction Stormwater Program that focuses on early planning and design for minimization of pollutants from post-construction stormwater discharges.

NDOR is committed to facilitate the appropriate enforcement mechanisms and ensure long-term operation and maintenance of controls. Successful implementation of this MCM allows NDOR to identify and minimize the long-term water quality impacts that Agency development and redevelopment projects have on receiving water quality through the use of structural and non-structural stormwater treatment BMPs.

NDOR accomplishes the requirements of the Post Construction Stormwater Management Program by utilizing multiple Agency divisions for various purposes. These roles have been modified as the program has evolved from the development phase to the implementation phase which is getting underway at the start of the second MS4 Permit term. The current responsibilities are listed below.

Roadway Design:

- Lead the review and amendment of design manuals, specifications and guidance used by designers
- Select and design appropriate stormwater treatment BMPs on each new development and redevelopment project within the MS4 boundary.
- Provide stormwater quality treatment practice technical assistance to project designers.
- Assist with development of and attend training for designers about selection, design, and examples of stormwater quality treatment practices.

Planning and Project Development:

- Assist with review and amendment of design manuals, specifications and guidance used by designers
- Review the selection and design process according to established Agency procedures required in Chapter 3 of the Drainage Design and Erosion Control Manual.

- Coordinate training for designers for selection, design, and examples of stormwater quality treatment practices.
- Maintain ECO Database infrastructure to support tracking Post Construction stormwater treatment BMPs and ability to conduct electronic inspections.

Construction Division and District Construction Offices:

- Coordinate update of Construction Manual to require adequate As-Built records for each new development and redevelopment project stormwater quality treatment practice location and critical elevations.
- Project Managers ensure stormwater quality treatment practices are installed properly and material specifications are adhered to.
- Attend training efforts that are coordinated to educate the Project Managers about stormwater quality treatment practices

Operations Division and District Operations Offices:

- Coordinate update of Maintenance Manual to direct the proper maintenance of stormwater quality treatment practices.
- Coordinate maintenance responsibility for each stormwater treatment BMP and incorporate appropriate enforceable mechanisms for future maintenance.
- Attend training efforts that are coordinated to educate Facility Supervisors and Superintendents about maintaining stormwater treatment BMPs.
- Enter inspections and current condition information about stormwater treatment BMPs into ECO Database.

During the previous MS4 Permit term, NDOR made significant progress toward adopting a new program and standards that would create permanent stormwater quality treatment practices.

- The Compliance Technical Advisory Group – Post Construction Committee was led by the NDOR Roadway Design Engineer who provided leadership and committed the staff needed to develop policies, procedures, technical standards and guidance for stormwater quality treatment practices within NDOR.
- NDOR Drainage Design and Erosion Control Manual required significant modification to introduce the selection and design procedures for Post Construction stormwater quality treatment practices within the existing design process.
- NDOR design engineers and consultant designers were introduced to the concepts of stormwater quality treatment in training courses and workshops in anticipation of the upcoming design requirements for new development and redevelopment projects within the MS4.
- NDOR conducted research on stormwater quality treatment practices and compiled research from other state Departments of Transportation to learn the existing and emerging treatment practices unitized within linear corridor settings.

- NDOR established stormwater treatment BMP guides for designers to reference during their design of new development and redevelopment projects. NDOR has observed that treatment practices used by DOTs and traditional MS4s are experiencing rapid advancement. As this information comes forward from the practice community, the NDOR treatment practice guides will be modified and updated so designers have access to the most relevant design information in one location.

NDOR identified the follow resources and partnerships as the most effective and useful during the previous MS4 Permit term:

- NDOR Drainage Design and Erosion Control Manual – for Designers
- NDOR Construction Manual – for Project Managers
- NDOR Maintenance Manual – for Maintenance Staff
- During the previous permit term, NDOR investigated the use of various databases for tracking treatment practices including Enterprise Asset Management System, Environmental Access Database, District Incident Reporting and Knowledgebase, and Site Manager and ECO Database. NDOR will utilize the ECO Database to track the location and condition of each water quality treatment practice.
- NDOR will utilize existing standards to require maintenance of stormwater treatment BMPs by adjacent MS4s unless the roadway is classified as an interstate or freeway.

NDOR anticipates significant changes to this MCM during the next permit term (**2012-2017**).

- The focus of this MCM will shift from development of standards and policies to implementation and update of standards and policies.
- Additional research will be conducted and gathered to determine local conditions that influence the effectiveness of stormwater quality treatment practices.
- NDOR will target the design, construction, and maintenance audiences with technical and practical training and education about stormwater quality treatment practices.
- NDOR will add coordination efforts with Adjacent MS4s that will be required to maintain stormwater quality treatment practices after construction is completed.
- Targets Activities that NDOR will focus on include: Submittal Procedures/Content, Review Process Consistency, Enforceability, Documentation/Tracking, and Maintenance Access

NDOR may conduct other activities not specifically identified in this section which contribute to MCM 5: Post Construction Stormwater Management for new development and redevelopment projects.

MCM 5: Post Construction Stormwater Management Program

BMP 1: Post Construction Stormwater Treatment BMPs

Permit Requirement Citation: 3.4.4.1, 3.4.4.2 (tracking, inspection, maintenance are found in Good Housekeeping and Pollution Prevention due to NDOR unique MS4 conditions)

Activity: NDOR will apply Agency Post Construction Stormwater Treatment guidance and require stormwater treatment BMPs for all new development and redevelopment projects within the MS4 boundary according to design procedures listed in Chapter 3 of the Drainage Design and Erosion Control Manual.

Objective: To guide and enforce Agency development practices on new development and redevelopment projects inside the MS4 boundary that *minimize* urban stormwater pollution, *preserve and protect* natural landscapes, *prevent* erosion, and *control* sedimentation.

Evaluation Measures/Measurable Goals:

Performance:

1. Adopt and follow written procedures to implement a Post Construction Program to include:
 - a. policy and Agency approved standards for Post Construction stormwater treatment BMPs; and
 - b. submittal requirements for minimum review considerations.
2. Return design review submittals that do not achieve established Agency selection and design criteria by providing comments and identifying deficiencies that must be addressed prior to approval.
3. Receive As-built record drawings with final geo-location and survey elevations after new development and redevelopment projects are completed.

Effectiveness:

1. Receiving waters do not demonstrate increased impairment, reduced water quality, or inhibited habitat integrity due to urban highway stormwater runoff.
2. On a project basis, development and redevelopment sites demonstrate consideration of pollutants listed in a TMDL or are known local impairments.
3. The Public Education and Outreach Strategy includes information for NDOR and consultant designers to understand the function, benefit, selection, and design of stormwater treatment BMPs.
4. The Public Education and Outreach Strategy includes a sequence of public review opportunities to inform the public and gain feedback about stormwater treatment BMPs proposed, designed, and requiring maintenance for each project within the MS4 boundary.

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Maintain current Post Construction Stormwater Treatment BMP Guides as references to the Drainage Design and Erosion Control Manual Chapter 3	✓	✓	✓	✓	✓
Implement Agency policy and standards for selection, design and maintenance of Post Construction stormwater treatment BMPs	✓	✓	✓	✓	✓
Follow procedures adopted for reviewing Post Construction Stormwater Treatment BMPs on all new development and redevelopment projects	✓	✓	✓	✓	✓
Maintain current list and information about Post Construction stormwater treatment BMPs installed within the MS4 boundary.	✓	✓	✓	✓	✓

Stormwater Management Plan

MCM 6: Good Housekeeping / Pollution Prevention

The Goal of the Good Housekeeping/Pollution Prevention Program is to engage public employees and public properties in the best practices of stormwater protection.

The purpose of the Good Housekeeping/Pollution Prevention (Good Housekeeping) Program – required by the Phase II Regulations – is to prevent or reduce pollutant runoff from NDOR operations and maintenance. Federal guidance for this Minimum Control Measure (MCM) encourages the improvement of operation and maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural storm water controls. Focus for this program is placed on highway maintenance and operation activities, storage yards, fleet maintenance shops, salt/sand storage locations operated by NDOR.

NDOR is committed manage, prevent, and reduce the risk of storm water pollution that can result from maintenance operations and associated activities. Successful implementation of this MCM will allow NDOR to define the scope of the impacts maintenance operations can have on receiving water quality, standardize appropriate Best Management Practices (BMPs) for internal operations, and educate and train the public on how to protect receiving waters from polluted runoff leaving highways and agency facilities.

NDOR accomplishes the requirements of the Good Housekeeping Program by utilizing multiple Agency departments for various purposes. The Operations Division oversees the most responsibility for the practices implemented in the eight Agency Districts. The second MS4 Permit term will continue the State-wide effort to raise Agency staff awareness, knowledge and skills to conduct operations in a manner that minimizes stormwater pollution. The current responsibilities are listed below.

Operations Headquarters:

- Conduct evaluations of operations and activities to identify high risk actions that require improved practices to protect stormwater quality.
- Coordinate development of and maintain all Agency operation and activity policies that address good housekeeping and pollution prevention BMPs.
- Develop and evaluate implementation of Facility Runoff Control Plans for facilities located within the MS4.
- Coordinate education and training needed for Agency staff.
- Implement and update Municipal Maintenance Agreements with Adjacent MS4s.

Planning and Project Development:

- Assist with evaluation of operations and activities to identify high risk actions.
- Assist with development of educational materials related to good housekeeping/pollution prevention practices.
- Assist with procedures to develop maintenance easements and responsibilities for Treatment BMPs with adjacent municipalities operating MS4s.
- Assist with procedures to develop maintenance easements and responsibilities for Treatment BMPs in adjacent counties operating MS4s.

Operations Districts:

- Implement approved Agency policies for operations and activities
- Implement facility stormwater plans.
- Track findings at facilities and take action to resolve any corrective action that could have a negative impact on receiving water quality.
- Participate in training opportunities and distribute education provided by Operations Headquarters about stormwater protection.

Construction:

- Assist with maintaining stormwater treatment BMPs when structural maintenance or improvements are needed.
- Assist with evaluation of pollution prevention practices required for highway maintenance projects that are coordinated through Construction division.

During the previous MS4 Permit term, NDOR made significant progress toward adopting a new program and standards to implement good housekeeping/pollution prevention practices.

- The Compliance Technical Advisory Group – Good Housekeeping Committee was led by the NDOR Maintenance Engineer who provided leadership and committed the staff needed to develop policies, procedures, technical standards and guidance for good housekeeping practices within NDOR facilities and along highways.
- Maintenance facilities (28) that are located inside the MS4 boundary received an individualized Facility Runoff Control Plans. Plans were distributed with a general stormwater awareness training for all staff and a qualified stormwater inspector training for those conducting routine inspections at the facility. Periodic audits were conducted of FRCPs through Operations Headquarters to determine the effectiveness of the FRCP program and individual FRCP implementation efforts.
- An Environmental Chapter 11 has been added to the Maintenance Manual as well as modification to other Chapters to address good housekeeping and pollution prevention policies (e.g., winter operations and roadside vegetation management).
- Maintenance focused, web-based resources are now provided through a NDOR intranet library accessible to all employees. The library contains links to training videos, policies, best practices and other helpful information for Districts to use on demand.
- Some District Environmental Coordinators, who work through the District Construction offices, have demonstrated the ability to provide direction and input for maintenance facility and operations good housekeeping and pollution prevention practices.

- Other Federal requirements for Spill Prevention Control and Counter Measure Plans were updated to meet new regulations, which often include similar requirements and measures included with Facility Runoff Control Plans implemented in MS4s.
- In 2010, Operations began a new initiative for training Supervisors, Superintendents, and Crew Chiefs about environmental commitments and regulations that apply to their jobs, staff, and facility operations.

NDOR identified the follow resources and partnerships as the most effective and useful during the previous MS4 Permit term:

- NDOR Maintenance Manual (with Environmental Chapter) – for Maintenance Staff
- NDOR Maintenance Library (hosted on intranet) – for Maintenance Staff
- American Association of State Highway and Transportation Officials – for National references of best practices to include into NDOR policies, procedures and practices.
- City of Lincoln, Lower Platte South Natural Resources District, and Nebraska Department of Environmental Quality provided funding and technical assistance for maintenance facility rain garden demonstration project at the District 1 Operations facility.

NDOR anticipates significant changes to this MCM during the next permit term (2012-2017).

- The focus of this MCM will shift from development of standards and policies to overseeing implementation of best practices.
- Web-based tools will be used to improve implementation and oversight of FRCP implementation and oversight.
- Additional guidance will be provided for practices that have procedures in place, but require additional pollution prevention standards to improve effectiveness.
- Options for financially constrained approaches to pollution prevention and good housekeeping practices will be better communicated to the Compliance Technical Advisory Group, Maintenance Engineer, and Deputy Directors.
- NDOR will expand the effort to educate the District Environmental Coordinators and/or create a state-wide Environmental Green Team to harvest the institutional process knowledge about how maintenance activities are identified, scheduled and delivered. Addressing activities that have the highest risk of introducing pollutants into the environments will be the focus of procedures developed and recommended by this team.
- Target Activities for BMP 1 Maintenance Facility Operations that NDOR will focus on include: Training, Inspections, Corrective Actions, Documentation, Proactive Solutions.
- Target Activities for BMP 2 Highway Stormwater Drainage System Inspection and Maintenance that NDOR will focus on include: Unknown Future Maintenance Needs, Education and Training, Dewatering Practices, Tracking Methods, Prioritizing Efforts.
- Target Activities for BMP 3 Highway Maintenance Activities and Operations that NDOR will focus on include: Dewatering Practices, Tracking Methods, Alternative Practices, Public Safety.

NDOR may conduct other activities not specifically identified in this section which contribute to MCM 6: Good Housekeeping/Pollution Prevention Program.

MCM 6: Good Housekeeping / Pollution Prevention

BMP 1: Maintenance Facility Operations

Permit Requirement Citation: 3.4.4.4, 3.4.5.1, 3.4.5.2, 3.4.5.3

Activity: NDOR will direct Good Housekeeping/Pollution Prevention practices to be followed within the property of highway maintenance and storage facilities.

Objective: To *equip* employees with resources needed to *minimize* pollutants associated with maintenance facility activities from leaving the property through stormwater runoff and *facilitate* routine evaluation of Best Management Practices as a routine operation.

Evaluation Measures/Measurable Goals:

Performance:

1. Maintain accurate inventory of NDOR maintenance facilities inside MS4.
2. Maintain MS4 Facility Runoff Control Plans with standard operating procedures for *general good housekeeping practices, storage of de-icing materials, fueling operations, vehicle maintenance, and equipment and vehicle washing.*
3. Conduct routine and comprehensive inspections and visual monitoring at facilities.
4. Track findings and corrective actions that result from routine and comprehensive inspections and visual monitoring at facilities.

Effectiveness:

1. Audit of MS4 maintenance facilities demonstrate progress toward outstanding conditions on a scale of “*Outstanding, Satisfactory, Needs Improvement.*”
2. Maintenance facility BMPs target measures that control all pollutants that are causing known local stream impairments or TMDLs.
3. Inspection and corrective action documentation – evaluated during periodic Audits - demonstrates facility improvements that protect water quality.
4. The Public Education and Outreach Strategy includes information and training needed for facilities staff members to conduct self-inspections and to follow standard operating procedures.

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Maintain maintenance facility inventory with a map, routine assessment and periodic audit assessment and investigation procedures.	✓	✓	✓	✓	✓
Maintain current site-specific stormwater runoff control plans at all high-priority MS4 facilities.	✓	✓	✓	✓	✓
Conduct and record routine inspections and findings in a central database.	✓	✓	✓	✓	✓
Conduct audits of MS4 facilities and record evaluation results in a central database	✓	✓	✓	✓	✓

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

BMP 2: Highway Stormwater Drainage System Inspection and Maintenance

Permit Requirement Citation: 3.4.4.3, 3.4.4.5, 3.4.5.4.1

Activity: NDOR will require all Post-Construction Stormwater Treatment BMPs, catch basins, open channels and culverts to be inspected and maintained according to Agency policies.

Objective: To periodically *review and document* the structural condition of Post Construction Stormwater Treatment BMPs and stormwater drainage features and to *take action to restore* such assets to their designed conditions when inspections indicate action is warranted.

Evaluation Measures/Measurable Goals:

Performance:

1. Develop and implement NDOR MS4 Treatment BMP and drainage feature inspection and maintenance policy – include dewatering/disposing waste.
2. Enforce statutes, contracts, and agreements that address Treatment BMP and drainage feature maintenance adjacent MS4s or contractors conduct.
3. Conduct and document routine inspections of Treatment BMPs.
4. Follow NDOR policy for routine observations of all highway assets to include drainage features.
5. Track inspection dates, findings, communications, and maintenance action taken for Treatment BMPs.
6. Maintain list and map of Treatment BMPs by type, location, easement, and maintenance responsibility.

Effectiveness:

1. Inspection findings for Treatment BMPs allow the MS4 to target good housekeeping practices as well as education about design considerations.
2. Treatment BMP design problems, functional deficiencies, and construction-related errors are identified and communicated back to Design to help inform the design plan development process (*MCM 5 BMP 1*).
3. Removal of material from Treatment BMPs and drainage features is considered a pollutant load reduction.
4. The Public Education and Outreach Strategy includes information for the Target Audience to understand how to inspect and maintain Treatment BMPs and drainage features.

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Update inspection and maintenance policy for Treatment BMPs and drainage features in the Maintenance Manual.	✓ Draft	✓ Final			
Conduct routine and complaint response inspections and maintain Treatment BMPs, open channels, and catch basins.	✓	✓	✓	✓	✓
Track Treatment BMP information including geographic location, inspection dates, observations, communications, and maintenance actions.	✓	✓	✓	✓	✓
Review and update enforceable authority to address adjacent MS4 and contractor maintenance of Treatment BMPs and drainage features.	✓ Draft	✓ Final			
Enforce statutes, contracts and agreements for Treatment BMP and drainage feature maintenance	✓	✓	✓	✓	✓

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

BMP 3: Highway Maintenance Activities and Operations

Permit Requirement Citation: 3.4.5.4.2

Activity: NDOR will follow Agency policies for highway maintenance activities and operations including, but not limited to, winter maintenance, sweeping, and cleaning operations for facility parking lots not otherwise maintained by an adjacent MS4.

Objective: To *safely minimize and remove* material and pollutants that collect on paved and vegetated surfaces and would otherwise be carried into the storm drain system by precipitation.

Evaluation Measures/Measurable Goals:

Performance:

1. Develop and implement a highway and parking lot sweeping policy to address location, frequency, equipment, method of material dewatering, and disposal practices.
2. Implement highway winter maintenance policy for procedures and processes that safely minimize salt and sand use.
3. Implement vegetation management policy for procedures and processes that stabilize soil and control chemical application.
4. Identify high priority operations and update recommended pollution prevention practices.
5. Maintain Municipal Maintenance Agreements with adjacent MS4s to address good housekeeping practices.

Effectiveness:

1. The winter maintenance and sweeping policy prioritizes protection of stormwater drainage systems that directly discharge to impaired streams or streams that have a TMDL.
2. The highway winter maintenance policy reflects current research available regarding use of salt alternatives, anti-icing methods, and product substitutions for winter maintenance where public safety is not diminished.
3. The Public Education and Outreach Strategy includes measures to train staff to implement Agency policy for winter maintenance, street sweeping, and other high priority activities.

Implementation Schedule:	Permit Year				
	1	2	3	4	5
Develop highway and parking lot sweeping practices to include with NDOR Maintenance Manual	✓ Draft	✓ Final			
Review Agency maintenance activities and operations conducted within MS4s and update the NDOR Maintenance Manual with pollution prevention practices.	✓ Draft	✓ Final			
Implement Agency maintenance and operation policies	✓	✓	✓	✓	✓
Enforce statutes, contracts and agreements for pollution prevention required of contractors and Adjacent MS4s.	✓	✓	✓	✓	✓

