



**Municipal Separate Storm Sewer System (MS4)  
Annual Report**

**January 1, 2012 – December 31, 2012**

**NDEQ Permit No: NE0134015**

March 28, 2013

Nebraska Department of Environmental Quality  
Wastewater Section  
1200 N Street, Ste. 400  
PO Box 98922  
Lincoln, NE 68509-8922

ATTN: Blayne Renner, Stormwater Program Coordinator

RE: Nebraska Department of Roads Municipal Stormwater Permit [NE0134015]

Dear Blayne:

Per Part IV.A of the Nebraska Department of Roads (NDOR) Municipal Stormwater Permit [NPDES Permit NE0134015], NDOR is submitting the attached Annual Report for Permit Year *Six* (*January 1, 2012 – December 31, 2012*).

“I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.”

Signed:

Date: 3/28/13

Printed Name: Ronald Poe

Title: Highway Environmental Program Manager

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## **Executive Summary of Program Activity**

The NDOR Storm Water Management Program (SWMP) was developed by the Nebraska Department of Roads (NDOR) in 2006 to comply with Municipal Separate Storm Sewer System (MS4) Permit application requirements. Each year activities from the previous year are summarized and recorded in an annual report to the Nebraska Department of Environmental Quality (NDEQ). This report documents MS4 Permit compliance efforts made during January 1, 2012 through December 31, 2012.

The following highlights the major accomplishments made in each of the program areas throughout 2012:

### Education and Outreach

- ✓ A total of 5 NDOR Erosion and Sediment Control for Inspector courses were held throughout 2012 with approximately 170 people attending. Upon completion of the course attendees are required to pass an exam and are then certified for 3 years to inspect NDOR projects. NDOR also began an extensive review and update of course material for this class. These changes will be implemented for classes starting in 2013.
- ✓ A total of 6 half day NDOR Erosion and Sediment Control for Inspector Re-certification classes were administered in 2012. Approximately 200 people were re-certified in these classes.
- ✓ Department of Transportation training was provided by Nebraska Safety Council to maintenance staff in all eight districts. Class materials, including a copy of the DOT Hazardous Materials Transportation Manual, were distributed to each district. In addition, Emergency Response Guidebooks were distributed to at least one person per facility statewide.

### Public Involvement

- ✓ NDOR held quarterly meetings with the Compliance Technical Advisory Group (CTAG) and conducted monthly/bi-weekly CTAG Workgroup meetings throughout the year to work on project specific items such as Chapter 3 of the Drainage Design and Erosion Control Manual.
- ✓ Environmental meetings were held with District Environmental Coordinators in the spring and fall. Meetings cover a range of environmental topics with the goal of improving communication between the Central and District offices.
- ✓ Approximately 3,284 volunteers participated and cleaned over 600 miles of roadway in the 2012 Adopt-a-Highway Program. Over 2800 bags of litter were collected statewide.

### Illicit Discharge Detection and Elimination

- ✓ NDOR completed monitoring of all “High Priority” outfalls across the state. “High Priority” outfalls require annual monitoring while non-priority outfalls are monitored once every five years according to the NDOR Illicit Detection Discharge and Elimination Plan.
- ✓ A spill protocol addressing District and Operations Division responsibilities within NDOR has begun to be developed. Initial responsibilities for District personnel are well defined. Subsequent areas of consideration pertain to right of way occupancy permits and performance bond issues (i.e. when needed and amounts charged). A collaborative effort between the NDOR Operations Division, NDEQ and NDOR Districts will be needed to complete a standard spill protocol within NDOR. This protocol was identified as necessary based on components included in the NDOR Illicit Discharge Detection and Elimination Program.
- ✓ A “Green Card” identifying appropriate steps and information needed, during spill events on NDOR right of way, was updated and placed in all NDOR fleet vehicles.

### Construction Stormwater

- ✓ The majority of MS4 activities in 2012 were focused around the continued development and enhancement of the ECO-Database Tool that is used for environmental inspections. In recent years additional functions have been incorporated to make this tool more valuable for documenting environmental commitments on construction projects. Recent discussions with the Federal Highway Administration have placed additional emphasis on using ECO-Database to document all applicable environmental commitments throughout the construction process. NDOR administration has set a goal to begin using ECO-Database to track commitments in the March 2013 Letting. In addition the administration would like to include Local Public Agencies in this process, beginning in 2014. The major accomplishments related to the ECO-Database are summarized in Section 4.0, Construction Site Runoff Control.

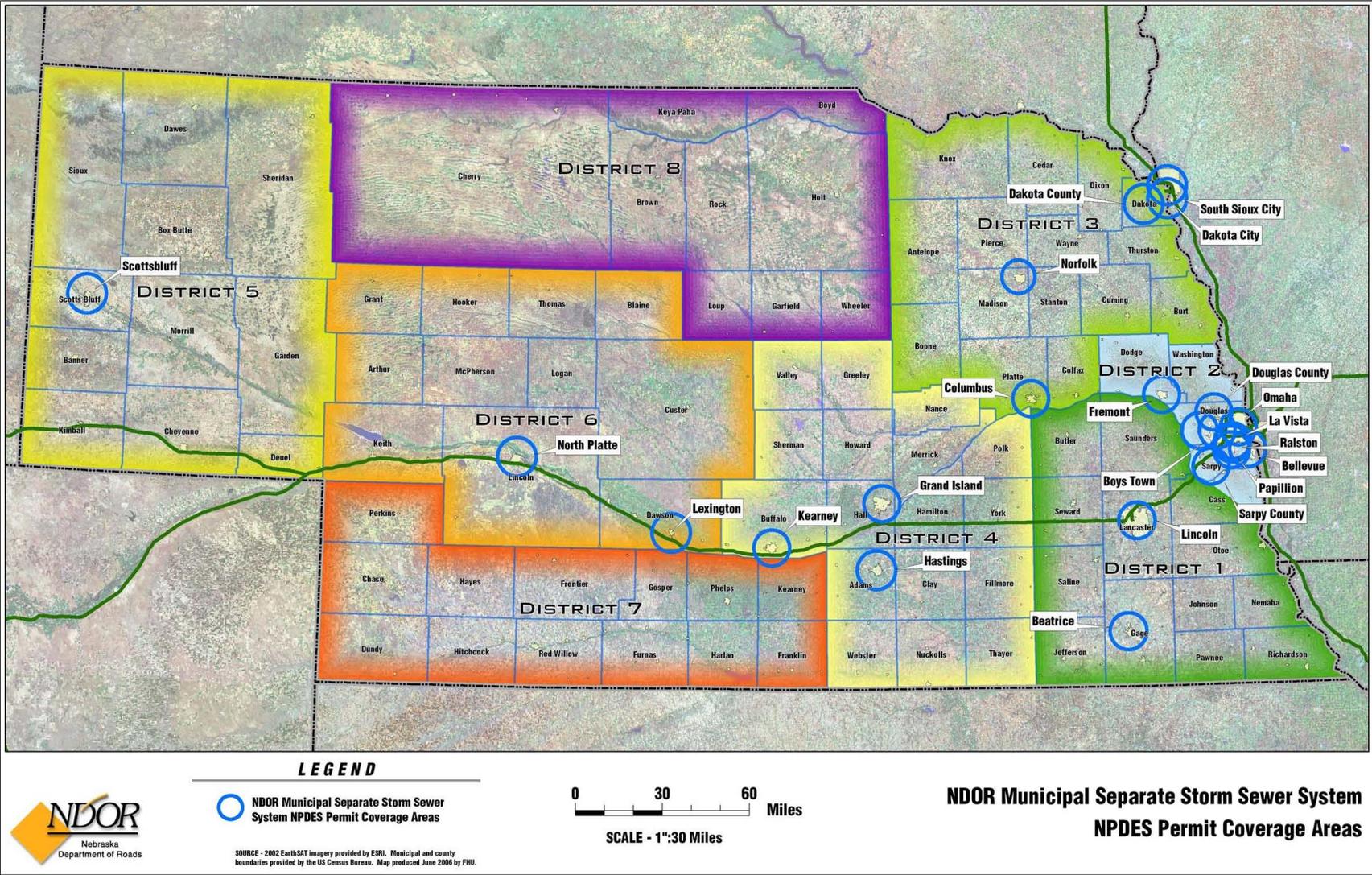
### Post Construction Stormwater

- ✓ The Post Construction Stormwater Workgroup completed a revised draft of Chapter 3 (*Stormwater Treatment Within Municipal Separate Storm Sewer System Communities*) in NDOR’s Drainage Design and Erosion Control Manual. A copy of the Chapter has been forwarded to the Federal Highway Administration for review and approval.
- ✓ All new projects are being reviewed for Post Construction Treatment BMPs at Environmental Coordination Meetings.
- ✓ Post Construction Stormwater Treatment BMP Design Guides were developed by Felsburg, Holt and Ullevig (FHU) Consulting Firm, under the direction and guidance of the Post Construction Workgroup. Post Construction Stormwater Designer Training is planned for 2013.

Good Housekeeping/Pollution Prevention

- ✓ A total of nine audits were performed across NDOR Districts 1 and 3 in 2012. NDOR maintenance facilities located in the Northeast region audited in 2012 were located in Columbus, Norfolk (2), Wayne, South Sioux City, and Dakota City. NDOR facilities for the Southeast region include Lincoln (2) and Beatrice. No corrective actions were documented during the audit. The records were comprehensive and visual assessment determined this facility has fully implemented the program on a voluntary basis. This is the second round of audits for the facilities located in these areas.
- ✓ District 2 (Headquarters) implemented new Best Management Practices for washing vehicles indoors and installed permeable pavers to reduce the quantity of stormwater leaving the facility grounds. The facility has implemented actions to limit stockpiling of street sweepings by transporting the sweepings to the landfill during normal operating hours. Erosion and drainage issues have been addressed through the placement of berms and erosion control blankets on the back slope of the facility.
- ✓ Facility Runoff Control Plan (FRCP) inspection reports are currently completed on a monthly basis for MS4 facilities. NDOR began developing a module in ECO-Database to address these inspections. This new FRCP Module will allow Maintenance Facility staff to record their monthly FRCP inspection in ECO-Database. Testing of this new module will occur in 2013 with a goal to roll it out statewide in 2014.

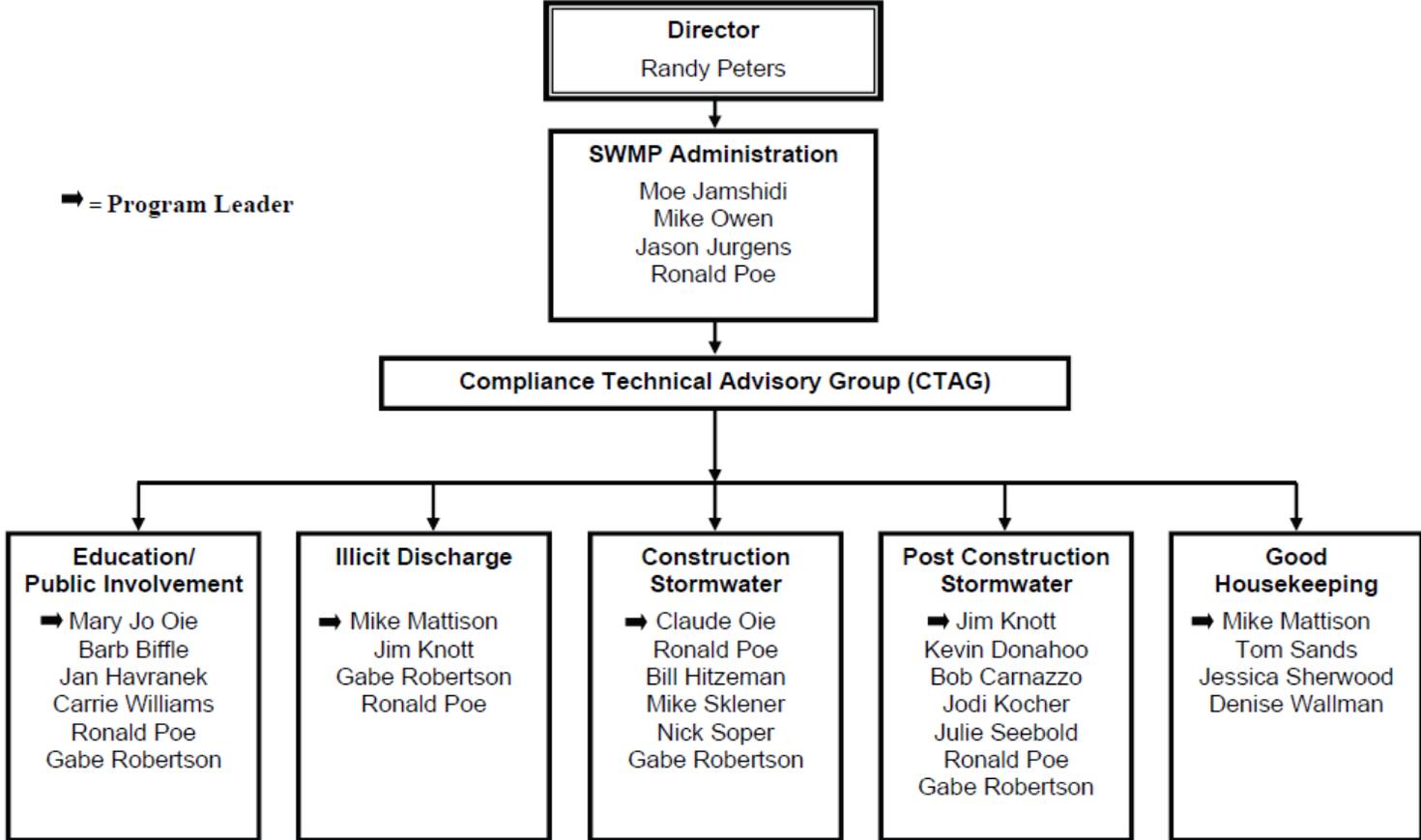
Figure 1 NDOR State-wide MS4 Areas



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Figure 2 NDOR Compliance Technical Advisory Group

State-Wide Stormwater Management Program



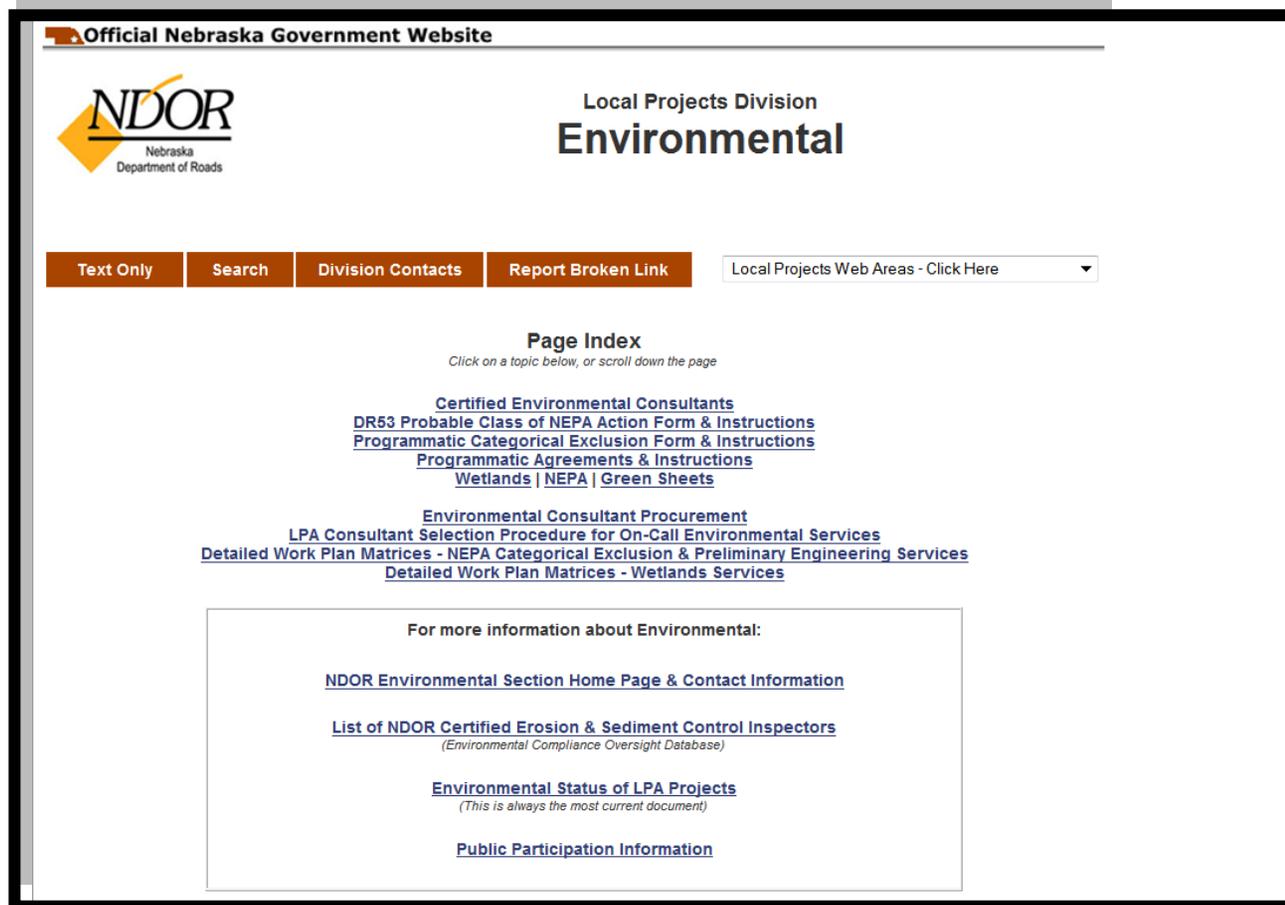
## **1.0 PUBLIC EDUCATION AND OUTREACH**

The 2012 measurable goals for Public Education and Outreach are summarized below.

### **Measurable Goal 1.1 (a) - Develop guidance materials on reducing storm water impacts to water bodies.**

- ▶ Approximately 120 people were certified in the NDOR Erosion and Sediment Control for Inspectors Course throughout 2012. Construction Stormwater Best Management Practices Pocket guides were distributed to all attendees.
- ▶ Chapter 3 (NDOR Drainage Design and Erosion Control Manual) Treatment BMP Design guides were completed in 2012. NDOR contracted with FHU Consulting to coordinate this effort. Training on the Post Construction Stormwater Design Process will be initiated in 2013.
- ▶ Participant guides will continue to be distributed via the New Highway Maintenance Supervisor/Superintendent Training Course. Updates will be provided as necessary.
- ▶ A “Green Card” identifying the appropriate steps and information needed during spill events, on NDOR right of way, was updated and placed in all NDOR fleet vehicles.
- ▶ References and guidance documents regarding hazardous waste management were provided in an eight hour long course titled “Conditionally Exempt Small Quantity Generator” (CESQG) to eight District selected trainers. This is a train the trainer class for Districts.
- ▶ NDOR developed the Local Public Agency (LPA) Construction Project Website to provide LPAs and others with a one stop shop for information related to local projects management. This site includes necessary forms and guidance documents and has a section dedicated to environmental information as illustrated in the website screen shot below:

Figure 3 Screenshot of new Local Projects Division, Environmental Webpage



**Measurable Goal 1.1 (b) - Provide training on reducing storm water impacts to water bodies.**

- ▶ Several Erosion and Sediment Control Training Classes were held throughout 2012. A total of 370 people attended at least one of the full day or half day classes. They are summarized in Table 1 below.
- ▶ NDOR environmental staff presented during a break-out session at the Annual Maintenance Conference in May of 2012. Presentations included information related to compliance with NPDES permits and hazardous waste management and spill response.
- ▶ On site evaluations of Good Housekeeping and Pollution Prevention practices were evaluated and discussed with site supervisors at the following locations receiving SPCC plan updates in 2012: Sidney, Osceola, Superior, Crawford, McCook, Ainsworth, and Valentine.
- ▶ Department of Transportation (DOT) training was provided by Nebraska Safety Council to maintenance staff in all eight districts. Class materials, including a copy of the DOT Hazardous Materials Transportation Manual, were distributed to each district. In addition, Emergency Response Guidebooks were distributed to at least one person per facility statewide.

**Measurable Goal 1.1 (c) - Participate in local and regional outreach efforts.**

- ▶ NDOR environmental staff members participate in several local and regional outreach events each year. Table 1 documents the outreach efforts for 2012.

**Table 1      Number and Nature of Education Activities**

Education Provided or Information Distributed	Target Audience	Attendance/ Number Distributed	Description	MS4 Program Addressed				
				Water Quality	IDDE	CSW	PCSW	PP/GH
<b>January 18: North Platte</b> , NDOR Erosion Control Inspector Re-certification Training	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	38 Attendees	Re-certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>January 19: Grand Island</b> , NDOR Erosion Control Inspector Re-certification Training	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	55 Attendees	Re-certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>January 24: Lincoln</b> , Pesticide General Permit Presentation by DEQ	NDOR Staff	6 Attendees	NDOR requested a presentation by DEQ to discuss the new NPDES pesticide general permit.	X				X
<b>January 30: Lincoln</b> , NPDES Dewatering Permit Meeting	NDOR Staff	12 Attendees	Meeting between Environmental and Construction Offices to discuss compliance with the newly released NPDES Dewatering Permit.	X		X		
<b>February 1: Lincoln</b> , NDOR Erosion Control Inspector Recertification Course	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	21 Attendees	Re-Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>February 8: North Platte</b> , NDOR Erosion Control Inspector Training	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	25 Attendees	Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>February 9: Grand Island</b> , NDOR Erosion Control Inspector Training	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	25 Attendees	Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	

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Education Provided or Information Distributed	Target Audience	Attendance/ Number Distributed	Description	MS4 Program Addressed				
				Water Quality	IDDE	CSW	PCSW	PP/GH
<b>February 15: Omaha,</b> City of Omaha Sediment and Erosion Control Seminar	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	30 Attendees	Omaha Sponsored Training with presentations related to NPDES requirements. NDOR Central Office Staff as well as District Personnel attend this event each year.	X		X	X	
<b>February 23: Lincoln</b> AGC/NDOR Partnership Meeting	Contractors, NDOR Employees, Vendors	20 Attendees	Seeding/Erosion Control and Grading Committee Meeting between AGC and NDOR	X		X	X	
<b>February 28: Kearney,</b> LPA Construction Training Meeting	NDOR Staff	100 Attendees	All day meeting with presentations related to management and oversight of LPA projects.	X		X	X	
<b>February 22: Norfolk,</b> NDOR Erosion Control Inspector Re-certification Course	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	50 Attendees	Re-Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>March 19-23: Lincoln,</b> Local Projects – Responsible Charge Training	Municipalities, NDOR Employees, Consultants	43 Attendees	Training Course Sponsored by Nebraska Local Technical Assistance Program (NE-LTAP) and administered by NDOR	X		X	X	
<b>March 6: Mahoney State Park,</b> NDOR Erosion Control Inspector Certification Course	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	51 Attendees	Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>March 13-15: NDOR</b> Project Managers Conference	NDOR Employees and Contractors	Approximately 250 NDOR Employees	Environmental Staff presented during a breakout session on NPDES requirements and ECO-Database	X		X	X	

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Education Provided or Information Distributed	Target Audience	Attendance/ Number Distributed	Description	MS4 Program Addressed				
				Water Quality	IDDE	CSW	PCSW	PP/GH
<b>March 22: Scottsbluff,</b> NDOR Erosion Control Inspector Re-certification Course	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	15 Attendees	Re-Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>March 22: Scottsbluff,</b> ECO-Database training	NDOR Staff	25 Attendees	ECO-Database Inspection Tool training for District 5 inspectors.	X		X		
<b>March 29: Lincoln,</b> NDEQ Stakeholder Meeting to discuss the new CSW Permit.	NDOR Employees, Consultants	3 NDOR Attendees	NDEQ Stakeholder Meeting to discuss the new CSW Permit.	X		X		
<b>April 3: CTAG</b> Stormwater Meeting	NDOR Employees	12 Attendees	Quarterly stormwater meeting	X	X	X	X	X
<b>April 4: North Platte,</b> ECO-Database training	NDOR Staff	40 Attendees	ECO-Database Inspection Tool training for District 6 inspectors.	X		X		
<b>April 5: Holdrege,</b> ECO-Database training	NDOR Staff	35 Attendees	ECO-Database Inspection Tool training for District 7 inspectors.	X		X		
<b>April 10: Lincoln,</b> ECO-Database training	NDOR Staff	60 Attendees	ECO-Database Inspection Tool training for District 1 inspectors.	X		X		
<b>April 17: Omaha,</b> ECO-Database training	NDOR Staff	35 Attendees	ECO-Database Inspection Tool training for District 2 inspectors.	X		X		
<b>May 2: S Sioux City,</b> Maintenance Conference	NDOR Employees	250 Attendees	Annual NDOR Operations/Maintenance Conference. Environmental held a breakout session to discuss NPDES compliance with attendees.	X	X	X	X	X
<b>May 23: Omaha,</b> NDOR Erosion Control Inspector Training	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	32 Attendees	Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	

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Education Provided or Information Distributed	Target Audience	Attendance/ Number Distributed	Description	MS4 Program Addressed				
				Water Quality	IDDE	CSW	PCSW	PP/GH
<b>June 19-21: North Carolina</b> , AASHTO Stormwater Conference	DOT State Stormwater Representatives	100 Attendees	National Stormwater Conference hosted by AASHTO to provide collaboration between state stormwater representatives.	X	X	X	X	X
<b>July 11: Grand Island</b> , District Environmental Coordinators Meeting	NDOR Staff	20 NDOR Attendees	NDOR Environmental Programs Coordination Meeting with District Staff	X	X	X	X	X
<b>July 12: Kearney</b> , NeFSMA Floodplain and Stormwater Mgmt Conference	Consultants, Cities, Counties, NDOR Employees, Regulatory Agencies	6 NDOR Attendees	NeFSMA Stormwater Conference. NDOR presented on the new ECOD Inspection Tool.	X		X	X	
<b>July 24: Omaha</b> , NDOR Erosion Control Inspector Recertification Course	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	18 Attendees	Re-Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>August 16: Lincoln</b> AGC/NDOR Partnership Meeting	Contractors, NDOR Employees, Vendors	20 Attendees	Seeding/Erosion Control and Grading Committee Meeting between AGC and NDOR	X		X	X	
<b>September 18, Lincoln</b> NDOR Erosion Control Inspector Training	Businesses, Contractors, Consultants, Municipalities, NDOR Employees, Utilities	37 Attendees	Certification Course Sponsored by NDOR and Nebraska Local Technical Assistance Program (NE-LTAP)	X		X	X	
<b>October 2-3: Kearney</b> , LPA Responsible Charge Training	Municipalities, NDOR Employees, Consultants	41 Attendees	Training Course Sponsored by Nebraska Local Technical Assistance Program (NE-LTAP) and administered by NDOR	X		X	X	
<b>October 9-10: Kearney</b> , LPA Responsible Charge Training	Municipalities, NDOR Employees, Consultants	29 Attendees	Training Course Sponsored by Nebraska Local Technical Assistance Program (NE-LTAP) and administered by NDOR	X		X	X	

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Education Provided or Information Distributed	Target Audience	Attendance/ Number Distributed	Description	MS4 Program Addressed				
				Water Quality	IDDE	CSW	PCSW	PP/GH
<b>October 18:</b> CTAG Stormwater Meeting	NDOR Employees	12 Attendees	Quarterly stormwater meeting	X	X	X	X	X
<b>October 23: North Platte,</b> District Environmental Coordinators Meeting	NDOR Staff	20 NDOR Attendees	NDOR Environmental Programs Coordination Meeting with District Staff	X	X	X	X	X
<b>November 1: Lincoln,</b> ECOD Collaboration Meeting with KDOT	NDOR Staff, KDOT Staff	5 Attendees	Meeting to introduce KDOT to the ECOD system.	X		X		
<b>December 4:</b> CTAG Quarterly Meeting	NDOR Employees,	8 Attendees	Quarterly MS4 Meeting	X	X	X	X	X
<b>Ongoing:</b> Bi-Weekly Post Construction CTAG Workgroup Meetings	NDOR Post Construction Program Work Group	6 NDOR Employees, 2 Consultant Employees	Regular Meetings to develop Chapter III of Erosion Control and Drainage Design Manual and Draft Treatment BMP Design Guides.	X			X	
<b>Ongoing:</b> Quarterly Interagency Meetings	DEQ/Corp/USFWS/NGPC/FHWA/NDOR Environmental Staff and Administration	Approx. 25 NDOR Employees	Quarterly partnership meetings to discuss upcoming projects and programs.	X	X	X	X	X
<b>Ongoing:</b> Weekly MS4 Permit/ECOD Meetings	NDOR Staff/MS4 Consultant	2-6 Attendees	Routine MS4/ECOD development meetings.	X	X	X	X	X
<b>Ongoing:</b> NDOR Environmental Website Outreach	NDOR employees and the general public	8,600 visits to the Environmental Site	Contains information related to the Environmental Section	X	X	X	X	X

## **Public Education and Outreach Activities Scheduled for 2013**

### **BMP 1: Stormwater Education Materials**

- ▶ 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

### **BMP 2: Stormwater Training and Events**

- ▶ 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

### **BMP 3: Public Review and Comment**

- ▶ 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

### **BMP 4: Public Input Resources**

- ▶ 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

## **2.0 PUBLIC PARTICIPATION AND INVOLVEMENT**

The 2012 measurable goals for Public Participation and Involvement are summarized below.

### **Measurable Goal 2.1 (a) - Continue to follow established public participation policies and procedures for NDOR projects.**

- ▶ Each project let in 2012 achieved the NDOR Public Participation Policy standards.
- ▶ Quarterly CTAG meetings were held throughout 2012. Meeting dates are summarized in Table 1.
- ▶ District Environmental Coordinator Meetings were held throughout the year and are also summarized in Table 1. These meetings address a variety of environmental topics and provide a chance for District and Central staff to communicate on project environmental issues.

### **Measurable Goal 2.1 (b)(c) - Engage public and track participation in environmental stewardship programs such as Adopt-A-Highway and Wetlands Bank Education.**

- ▶ Participation in stormwater education programs is tracked in a database managed by the MS4 staff. NDOR also partners with Nebraska LTAP to administer training classes and track participation. Training dates and class numbers are summarized in Table 1.
- ▶ Approximately 3,284 volunteers participated and cleaned over 600 miles of roadway in 2012 through the Adopt-a-Highway Program. This filled up over 2,800 bags of litter statewide.

### **Measurable Goal 2.1 (d) - Amend standard language for Engineering Statements to reference erosion control plans for distribution at public hearings.**

- ▶ Standard language is included in Engineering Statements stating sediment and erosion control measures will be implemented to minimize impacts on the surrounding environment and that exposed soil areas will be permanently seeded

### ***Public Participation and Involvement Activities Scheduled for 2013***

Public participation and involvement activities have been combined with MCM 1.0 Education in the draft SWMP for years 2012-2016.

### **3.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)**

The 2012 measurable goals for Illicit Discharge Detection and Elimination are summarized below.

**Measurable Goal 3.1 (a) - Develop map showing the location of all outfalls and the names and location of all waters of the state that receive discharges from those outfalls.**

- ▶ All applicable outfall locations have been mapped according to the NDOR IDDE Program.
- ▶ NDOR will continue to update the Outfall Map and attributes as any new outfalls are introduced or removed within the MS4 area on future projects.

**Measurable Goal 3.2 (a) - Develop specification to prohibit non-stormwater discharges to NDOR MS4.**

- ▶ Adequate statutes, policy, guidance and permits are in place and communicated in the IDDE Plan. NDOR will continue to review the program and make any necessary changes as the program is implemented in the second permit cycle.

**Measurable Goal 3.2 (b) - Develop a process to coordinate with adjacent MS4 communities to remove illicit discharges that flow through an NDOR outfall, but are not the result of an NDOR activity.**

- ▶ This coordination process will be discussed during the second permit cycle beginning in January 1, 2013.

**Measurable Goal 3.3 (a) - Develop Illicit Discharge Detection and Elimination Plan.**

- ▶ IDDE plan is completed. NDOR will continue to review and update as needed during the next permit cycle effective January 1, 2013.

**Measurable Goal 3.4 (a) - Evaluate need to update and implement adequate NDOR internal policy, guidance, and manuals.**

- ▶ NDOR will review the existing policy and make any necessary changes to the IDDE plan and associated documents during the second permit term effective January 1, 2013.

- ▶ A spill protocol addressing District and Operations Division responsibilities within NDOR has begun to be developed. Initial responsibilities for District personnel are well defined. Subsequent areas of consideration pertain to right of way occupancy permits and performance bond issues (i.e. when needed and amounts charged). A collaborative effort between the NDOR Operations Division, NDEQ and NDOR Districts will be needed to complete a standard spill protocol within NDOR. This protocol was identified as necessary based on components included in the NDOR Illicit Discharge Detection and Elimination Program.
- ▶ A “Green Card” identifying appropriate steps and information needed, during spill events on NDOR right of way, was updated and placed in all NDOR fleet vehicles.

### ***IDDE Inspections***

**Table 2 Summary of Illicit Discharge Detection and Elimination Inspections**

Activity	Summary of Activity
Dry Weather Inspections	<ul style="list-style-type: none"> <li>▶ Dry weather monitoring was completed for all “High Priority Outfalls” according to the IDDE Plan.</li> <li>▶ Field investigations resulted in 1 potential illicit discharge from conducting a physical characteristic evaluation at over 700 monitored outfalls. No sampling was required to investigate potential illicit discharges.</li> </ul>
Illicit Discharges Identified	<ul style="list-style-type: none"> <li>▶ 3 instances of spills or dumping were recorded within the MS4</li> <li>▶ 0 instances of illicit connections were recorded within the MS4</li> <li>▶ 0 instances of illegal discharges were recorded within the MS4</li> </ul>

## **IDDE Activities Scheduled for 2013**

### **BMP 1: Dry Weather Inspections**

- ▶ 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.

### **BMP 2: Discharge Investigation and Removal**

- ▶ Update IDDE Plan with policies, permits, and procedures for investigating discharges and the Enforcement Response Plan for causing removal of discharges
- ▶ Maintain current and accurate statutes, policies, permits, procedures, Environmental Response Plan (ERP) and written investigation protocol
- ▶ Follow investigation and enforcement procedures and record details required by the IDDE Plan in a database.

### **BMP 3: Storm Sewer System Mapping**

- ▶ 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.

## **4.0 CONSTRUCTION SITE RUNOFF CONTROL**

The 2012 measurable goals for Construction Site Runoff Controls are summarized below.

### **Measurable Goal 4.1 (a) - Update existing specifications and manuals to include erosion and sediment control sanctions to ensure compliance.**

- ▶ The Incentive/Disincentive Assessment, Special Provision is included in all new projects let by NDOR.
- ▶ Project Managers may also utilize additional options such as withholding payments and project shut down until activities are back in compliance.

### **Measurable Goal 4.2 (a) - Require construction site operators to implement erosion and sediment control practices.**

- ▶ NDOR specifications in conjunction with the Project Stormwater Pollution Prevention Plan require sediment and erosion control BMPs be implemented on all projects when necessary. Site inspections conducted on a routine basis identify corrective actions to address within the compliance window. In addition, NDOR conducts numerous trainings throughout the year to educate NDOR staff and Contractors on permit compliance as documented in Table 1.
- ▶ The half-day Erosion and Sediment Control for Inspectors Re-certification class was held 7 times in 2012 with approximately 250 people attending.
- ▶ The full-day Erosion and Sediment Control for Inspectors Certification class was held 4 times in 2012 with approximately 120 people attending.

### **Measurable Goal 4.3 (a) - Develop procedures for site plan review to include consideration of water quality impacts.**

- ▶ All stormwater permitted projects let through NDOR are required to implement a project specific Stormwater Pollution Prevention Plan (SWPPP). NDOR SWPPPs are developed by the Roadside Stabilization Unit and are delivered to project staff prior to the start of construction.
- ▶ The Temporary ESC Plan is submitted to NDOR for review prior to or during the preconstruction meeting. This plan must address temporary stormwater management measures needed throughout construction and must be updated as field conditions change.

**Measurable Goal 4.4 (a) - Develop and implement site inspection process.**

- ▶ A large number of NDOR's environmental inspections were conducted using the ECO-Database Inspection Tool in 2012. Each year an increasing number of NDOR's field staff (project inspectors) is using the tool to document environmental commitments. Looking ahead to 2013, there are several new changes that NDOR's administration is making to address how environmental commitments are documented on NDOR projects throughout construction. One new change will require all projects Let in March 2013 or later to document environmental commitments using the ECO-Database Inspection Tool. In addition to that, the Environmental Units at Central (Environmental Permits Unit, Roadside Stabilization Unit and Environmental Documents Unit) will be required to review projects in ECO-Database prior to construction beginning. This ECO-Database "Project Review" will be done during the normal green sheet review process currently in place and will involve turning on appropriate ECO-Database inspection questions to address permit conditions for each specific project. In anticipation of the new changes coming in 2013, NDOR made several enhancements to ECO-Database in 2012. Those enhancements are summarized below.
  1. Project Reviewer Functionality – This particular function was added to supplement the Green Sheet Review Process that occurs before the project starts construction. Each of the Environmental Units must review the project in ECO-Database during the Green Sheet Review, and turn on appropriate questions to populate inspections reports. Some projects, with several environmental permits (404, Stormwater, etc.) will have more detailed inspection reports while other projects with less environmental commitments may have less detailed reports. ECO-Database now contains a check-off box for each unit to click when they have completed their review.
  2. Project Specific Reporting – Upon completion of the "Project Review" in ECO-Database, RSU finalizes the project and it is ready for project inspectors to begin logging inspections. Each project now contains inspection questions that are unique to the permit conditions. This tailored approach will focus inspector efforts on actual permit conditions that apply to their particular job and will eliminate reports where N/A 's are entered for conditions that do not exist on the project.
  3. ECO-Database Inspector/User Roles – The ECO-Database Headquarter Module allows NDOR to setup users with a particular role such as "Project Manager" or "Project Reviewer". This allows the user to only see the necessary information that is pertinent to their position. A whole series of settings can be tailored to a particular "role". This is beneficial because instead of having to change settings for 300 users you can simply change the role that applies to all of those users.
  4. Program Management/Reporting Features – In addition to all the inspection features that have been added over the years, NDOR is also focusing on improving the program management functions in the ECO-Database Headquarter Module. For example, to keep track of project inspection requirements, the Database can query and filter data to produce a report that can help keep track of progress across the state. These reports will also be show where efforts may be lacking. In 2013, this item will be refined in greater detail.
  5. Inspection Reminders/Past Due Notifications – Another feature that has been incorporated in the last year is the ability for the ECO-Database system to general inspection report reminder and past due notification emails to project inspectors. When turned on, an email is generated about 2 days before an inspection report is due. Likewise, the database can send a past due reminder email when an inspection is missed or not synced with headquarters.

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6. Threatened and Endangered Species Reporting – Work is underway to add a Threatened and Endangered Species Report to the ECO-Database Inspection Tool. It is NDOR's intent that in 2013, project inspectors will be able to log Species Surveys (Whooping Crane, American Burying Beetle, etc.) using ECO-Database. This would eliminate the hard-copy forms currently in use.
  
7. Facility Runoff Control Plan (FRCP) Module – In an effort to capture the Facility Runoff Control Plan Inspections occurring for Operations/Maintenance facilities, NDOR developed a new module to manage these inspections. The difference between this FRCP module and the Construction Stormwater Module is that the FRCP section is completely web based and does not require a program to be loaded on user machines. The FRCP module allows users to access and complete inspections from any computer with an internet connection. This eliminates the need to “sync” machines and requires less programming. The FRCP Inspection Module will be tested throughout 2013 with the intent of releasing it to District inspectors in 2014.

**Summary of Construction Site Runoff Control Inspections and Enforcement Actions**

NDOR follows the inspection frequency requirements listed in the Nebraska Construction Stormwater General Permit. In addition, selected projects receive comprehensive Environmental Compliance Inspections and Environmental Audits conducted by District Environmental Coordinators, consultants and Roadside Stabilization Staff.

**Table 3 Summary of Construction Site Runoff Control Inspections**

Activity	Summary of Activity	
<b>Construction Site Inspections</b>	Bi-Weekly Inspections	<p>NDOR Inspectors conduct inspections on a biweekly basis and after every 0.5” of rain as required by the Construction Stormwater General Permit. In 2012, reports were either recorded using the hard copy form or the newer ECO-Database method. Those numbers are summarize below:</p> <ul style="list-style-type: none"> <li>▶ Hard Copy Inspections Statewide = Approx. 1300 Reports</li> <li>▶ Hard Copy Inspections MS4 Only = Approx. 150 Reports</li> <li>▶ ECO-Database Statewide = Approx. 500 Reports</li> <li>▶ ECO-Database MS4 Only = Approx. 70 Reports</li> </ul>
	Environmental Compliance Oversight Inspections	<p>NDOR utilized on-call Consultants and District Environmental Coordinators (DECs) to conduct a second level of inspections titled “Environmental Compliance Oversight Inspections. These inspections are typically done on a monthly or less frequent basis. All compliance inspections in 2012 were recorded using the ECO-Database Inspection Tool. Those numbers are summarized below:</p> <ul style="list-style-type: none"> <li>▶ Environmental Compliance Oversight Inspections Statewide = Approx. 340 Reports</li> <li>▶ Environmental Compliance Oversight Inspections MS4 Only = Approx. 60 Reports</li> </ul>
	Environmental Compliance Audits	<p>The NDOR Roadside Stabilization Unit (RSU) conducts a third level of inspections titled “Environmental Compliance Audits”. These inspections occur once or more during a project depending on the number of environmental conditions and the complexity of the project. Those numbers are summarized below:</p> <ul style="list-style-type: none"> <li>▶ Environmental Compliance Audits Statewide = 15 Reports</li> <li>▶ Environmental Compliance Audits MS4 Only = 2 Reports</li> </ul>

## **Construction Site Runoff Control Activities Scheduled for 2013**

### **BMP 1: Construction Stormwater Pollution Prevention Plans**

- ▶ 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.

### **BMP 2: Construction Stormwater Inspections**

- ▶ 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 Public Education and Outreach Strategy to reflect current information and targeted messages about conducting Construction Stormwater Inspections.

### **BMP 3: Construction Stormwater Enforcement**

- ▶ 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.

## **5.0 Post-Construction Site Runoff Control**

The 2012 measurable goals for Post-Construction Site Runoff Controls are summarized below.

### **Measurable Goal 5.1 (a) - Develop procedures for site plan review to include consideration of structural and/or non-structural BMPs.**

- ▶ In 2012 the Post Construction Stormwater Workgroup held routine meetings to continue developing a program to incorporate Treatment BMPs into NDOR projects. Chapter 3 of NDOR's Drainage Design and Erosional Control Manual was completed and is under final review by the Federal Highway Administration. The Roadside Stabilization Unit reviews each project at the Scoping Phase and determines if Post Construction Stormwater Treatment may be warranted. This review is documented in the *Clarity* project tracking system. If treatment may be warranted, the process, outlined in Chapter 3, is implemented and documented throughout the Design Phase of the project by the NDOR Project Designer.

### **Measurable Goal 5.1 (b) - Establish cooperative effort to coordinate both planning and design of structural and non-structural BMPs.**

- ▶ The Post Construction Stormwater Program affects many areas of the Department. Current efforts have focused on establishing the design process in Chapter 3 that outlines the steps for incorporating Treatment BMPs into applicable projects.

### **Measurable Goal 5.2 (a) - Update existing Specifications, manuals, and Standard Plans to address post-construction storm water runoff from new development and redevelopment projects.**

- ▶ Chapter 3 of the Drainage Design and Erosion Control Manual is completed and under final review by Federal Highway Administration.
- ▶ NDOR contracted with FHU Consulting to develop Post Construction Stormwater Treatment BMP Design Guides to supplement Chapter 3. These detailed guides were completed at the end of 2012 and provide designers with the necessary information to design one of the NDOR approved Treatment BMPs, listed below in Table 4.

**Table 4 NDOR Treatment BMP Suitability Matrix**

NDOR Treatment BMP Suitability Matrix										
Treatment BMP	Description	Treatment Type	Typical Drainage Area	Site Suitability	Soil Permeability	Groundwater Limitations	Best at Removing....	Construction Cost	Maintenance Cost	Comments
Vegetated Filter Strips	Densely vegetated strip of land designed to treat sheet flow	Water Quality Treatment Rate	Based on Sheet Flow Loading	Rural and Urban Section	Any (with soil conditioning)	≥ 2 feet	Suspended Solids	Low	Low	Maximum slope generally 6H:1V - longer filter strip needed on steeper slopes
Grass Swale	Densely vegetated drainage way designed to convey runoff slowly to allow for treatment	Water Quality Treatment Rate	≤ 5 acres	Rural and Urban Section	Any (with soil conditioning)	≥ 2 feet	Suspended Solids, Heavy Metals, Hydrocarbons	Low	Low	Limited depth of flow and velocity for effective treatment
Infiltration Trench	Aggregate-filled trench designed to capture runoff in the void space and infiltrate it	Water Quality Volume	≤ 5 acres	Rural and Urban Section	0.5 - 12 in/hr	≥ 4 feet	Suspended Solids, Heavy Metals, Nutrients	Moderate-High	Moderate	Width of Trench ≥ Depth
Infiltration Basin	Shallow basin designed to capture runoff above ground and infiltrate it through natural soils	Water Quality Volume	10-20 acres	Rural and Urban Section	0.5 - 12 in/hr	≥ 4 feet	Suspended Solids, Heavy Metals, Nutrients, Hydrocarbons	Moderate	Moderate	Drainage area limited if constructed online
Bioretention Basin	Shallow basin designed to capture runoff above ground and infiltrate it through an amended soil zone with underdrain	Water Quality Volume	≤ 5 acres	Rural and Urban Section	0 - 12 in/hr	≥ 4 feet	Suspended Solids, Heavy Metals	Moderate	Moderate	Landscape plantings typical with this BMP
Media Filter	Structure that includes a sedimentation chamber and sand filtration chamber to treat runoff	Water Quality Volume	≤ 2 acres	Urban and Ultra-Urban	Any	n/a	Suspended Solids	High	High	Typically a cast-in-place structure - check hydraulic grade lines and possibly buoyancy issues
Extended Dry Detention	Dry basin designed to capture runoff with drawdown to the basin bottom over an extended period	Water Quality Volume	≤ 5 acres	Rural and Urban Section	0 - 12 in/hr	0	n/a (see comments)	Low	Low	Only moderate treatment efficiency in general
Wet Detention	Basin with permanent pool of water designed to capture runoff with drawdown to the normal pool elevation over an extended period	Water Quality Volume	10 acres + (typ)	Rural and Urban Section	Depends on Design	Depends on Design	Suspended Solids	Low	Low	Minimum drainage area needed to maintain permanent pool
Stormwater Wetland	Basin or drainage way with a pool of water of varying depths designed to support wetland vegetation and treat water flowing through the system	Water Quality Volume	10 acres + (typ)	Rural and Urban Section	Depends on Design	Depends on Design	Suspended Solids, Heavy Metals	Moderate	Moderate	Minimum drainage area needed to maintain wetland
Pervious Pavement	Various types of pavement with the ability to pass stormwater through the surface to an underlying aggregate bed - the aggregate bed is designed to capture runoff in the void space and release it slowly through an underdrain	Water Quality Volume	≤ 5 acres	Urban and Ultra-Urban	0 - 12 in/hr	≥ 4 feet	Suspended Solids, Heavy Metals, Hydrocarbons	High	High	Protect adjacent pavement
Proprietary Structural Treatment Controls	Various types of proprietary devices designed to treat stormwater runoff	Water Quality Treatment Rate (Typical)	≤ 2 acres	Urban and Ultra-Urban	Any	n/a	Varies	High	High	Approval of device needed - check hydraulic grade lines and possibly buoyancy issues

**Measurable Goal 5.3 (a) - Communicate specific maintenance requirements for the long-term operation and maintenance of stormwater BMPs.**

- ▶ After the project design is completed, RSU will initiate NDOR Post Construction Stormwater Form C-Maintenance, which outlines special maintenance requirements for any Treatment BMP located on the project. Also, included with this form will be the corresponding Treatment BMP Design Guide - Maintenance Section, which includes general guidance for maintaining the BMP. This information will be forwarded to the adjacent MS4 or Operations/Maintenance Division.

***Post Construction Site Runoff Control Activities Scheduled for 2013***

**BMP 1: Post Construction Stormwater Treatment BMPs**

- ▶ 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.

## **6.0 POLLUTION PREVENTION AND GOOD HOUSEKEEPING**

The 2012 measurable goals for Good Housekeeping and Pollution Prevention Program are summarized below.

### **Measurable Goal 6.1(a) - Perform internal evaluation of NDOR maintenance operations.**

- ▶ A total of nine audits were performed across NDOR Districts 1 and 3 in 2012. NDOR maintenance facilities located in the Northeast region audited in 2012 were located in Columbus, Norfolk (2), Wayne, South Sioux City, and Dakota City. NDOR facilities for the Southeast region include Lincoln (2) and Beatrice. No corrective actions were documented during the audit. The records were comprehensive and visual assessment determined this facility has fully implemented the program on a voluntary basis. This is the second round of audits for the facilities located in these areas.
- ▶ As previous auditing grades were subjective (see 2011 annual report); NDOR facility audits in 2012 focused on a high level of visual reinforcement. Site Supervisors accompanied the NDOR Highway Environmental Program Specialist during the walk-through audit inspection. Areas of concern as it relates to the FRCP program and other regulatory considerations were photographed by the site supervisor under the auditor's direction. A final report including photos and a "punch-list" of needed corrective actions were developed by the Operations Division and sent to Districts to implement within 15 days. Districts submitted a written response when the corrective action lists were complete.
- ▶ On site evaluations of Good Housekeeping and Pollution Prevention practices were evaluated and discussed with site supervisors at the following locations receiving SPCC plan updates in 2012: Sidney, Osceola, Superior, Crawford, McCook, Ainsworth, and Valentine.
- ▶ District 2 (Headquarters) implemented new Best Management Practices for washing vehicles indoors and installed permeable pavers to reduce the quantity of stormwater leaving the facility grounds. The facility has implemented actions to limit stockpiling of street sweepings by transporting the sweepings to the landfill during normal operating hours. Erosion and drainage issues have been addressed through the placement of berms and erosion control blankets on the back slope of the facility.

**Measurable Goal 6.1(b) - Develop Operation and Maintenance Standard Operating Procedures for reducing pollutants in storm water runoff from Agency operations.**

- ▶ Audit inspection reports are received on a regularly basis from the monthly scheduled inspections. NDOR is developing an electronic system (Environmental Compliance Oversight Database) for recording these reports going forward. In 2013 it is expected that this system will be tested on the FRCP Audit Inspections with the goal of recording all FRCP monthly inspections done by Maintenance staff in 2014. This is the same system that is currently being used to document environmental commitments on construction sites.
- ▶ The FRCP Program is effective in protecting storm water runoff from participating facilities. Consistency in the evaluation process will be available under the Environmental Compliance Oversight Database as it is developed in implemented.

**Measurable Goal 6.1(c) - Establish process to track permanent BMPs.**

- ▶ The process to track permanent BMPs at NDOR Maintenance Facilities has been established through the FRCP program. Documentation of permanent BMPs employed by individual facilities is encouraged in each site-specific plan. NDOR is actively reviewing and updating the process with the Maintenance Module of the Environmental Compliance Oversight Database.

**Measurable Goal 6.1(d) - Ensure existing maintenance agreements between NDOR and MS4 communities address the goal of reducing pollutant runoff from municipal operations.**

- ▶ NDOR will continue to work with local communities with the goal of reducing pollutant runoff from NDOR operations.

**Measurable Goal 6.1(e) Develop Quick Reference Guides for maintenance employees regarding storm water responsibilities.**

- ▶ Participant guide will continue to be distributed via the New Highway Maintenance Supervisor/Superintendent Training Course. Updates will be provided as necessary.
- ▶ At the 2012 Maintenance Conference, NDOR staff received training through presentations on Hazardous Waste Management, Environmental Permits and Spill Response.

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- ▶ A “Green Card” identifying appropriate steps and information needed, during spill events on NDOR right of way, was updated and placed in all NDOR fleet vehicles.
- ▶ A spill protocol addressing District and Operations Division responsibilities within NDOR has begun to be developed. Initial responsibilities for District personnel are well defined. Subsequent areas of consideration pertain to right of way occupancy permits and performance bond issues (i.e. when needed and amounts charged). A collaborative effort between the NDOR Operations Division, NDEQ and NDOR Districts will be needed to complete a standard spill protocol within NDOR. This protocol was identified as necessary based on components included in the NDOR Illicit Discharge Detection and Elimination Program.
- ▶ References and guidance documents regarding hazardous waste management were provided in an eight hour Conditionally Exempt Small Quantity Generator (CESQG) “Train the Trainer” course to eight District selected trainers.
- ▶ Department of Transportation training was provided by Nebraska Safety Council to maintenance staff in all eight districts. Class materials, including a copy of the DOT Hazardous Materials Transportation Manual, were distributed to each district. In addition, Emergency Response Guidebooks were distributed to at least one person per facility statewide.
- ▶ Additional guidance is planned for development and distribution in the new Stormwater Management Plan for years 2013-2017.

**Summary of Pollution Prevention/Good Housekeeping Inspections and Enforcement Actions**

**Table 5 Summary of Pollution Prevention and Good Housekeeping Inspections and Enforcement Actions**

Activity	Summary of Activity
Facility Runoff Control Plan Site Inspections	<ul style="list-style-type: none"> <li>▶ Qualified individuals from each facility conduct monthly site-evaluations using the FRCP inspection checklist and corrective action form. Twenty five facilities statewide are actively participating in performing monthly inspections.</li> <li>▶ FRCP audits were conducted in Districts 1, 3, and 5. Auditors reviewed inspection records, provided visual reinforcement and training through photo-documentation taken by qualified inspectors.</li> </ul>
PP/GH Enforcement Actions	<ul style="list-style-type: none"> <li>▶ Corrective action “punch-lists” were provided to each individual facility audited in 2012. Other environmental regulatory considerations and Best Management Practices (e.g. flammable cabinets and activities near storm drains) were addressed in facility specific photo documentation audit reports sent to each District. Districts responded to corrective actions noted on the punch-lists.</li> </ul>

## ***Pollution Prevention and Good Housekeeping Activities Scheduled for 2013***

### ***BMP 1: Maintenance Facility Operations***

- ▶ 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

### ***BMP 2: Highway Stormwater Drainage System Inspection and Maintenance***

- ▶ Update inspection and maintenance policy for Treatment BMPs and drainage features in the Maintenance Manual.
- ▶ 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.
- ▶ Enforce statutes, contracts and agreements for Treatment BMP and drainage feature maintenance.

### ***BMP 3: Highway Maintenance Activities and Operations***

- ▶ Develop highway and parking lot sweeping practices to include with NDOR Maintenance Manual.
- ▶ Review Agency maintenance activities and operations conducted within MS4s and update the NDOR Maintenance Manual with pollution prevention practices.
- ▶ Implement Agency maintenance and operation policies.
- ▶ Enforce statutes, contracts and agreements for pollution prevention required of contractors and Adjacent MS4s.

## **7.0 Additional Requirements**

This Section of the Annual Report summarizes NDOR's efforts to comply with additional MS4 Permit requirements that are not specifically associated with the six Minimum Control Measures.

### **7.1 Evaluation of Compliance and the Appropriateness of Identified BMPs**

Part III.C of the MS4 Permit requires NDOR to evaluate SWMP compliance and the appropriateness of identified BMPs.

- ▶ NDOR is in compliance with conditions and requirements of the MS4 Permit.
- ▶ NDOR is on track or for accomplishing year six (administrative extension year under first permit) MCM milestones listed in the SWMP.
- ▶ NDOR is on track with accomplishing the Desired Outcomes for each Minimum Control Measure BMP listed in the SWMP Evaluation and Assessment Plan.

### **7.2 Proposed Changes to SWMP**

Either the Department or the Permittee may propose amendments that are consistent with the requirements in Part III of the Permit for the SWMP or evaluation program at any time. Proposed amendments shall not be implemented without agreement from both the Department and Permittee.

- ▶ No changes are proposed to the current SWMP.
- ▶ An updated SWMP for years 2013-2017 has been submitted and approved by NDEQ.

### **7.3 Improvements or Degradation in Receiving Waters**

- ▶ NDOR is not aware of any improvements or degradations to receiving water quality that are currently caused by stormwater runoff from highways or maintenance facilities.

### **7.4 Compliance Assistance from other Entities**

- ▶ NDOR continues to partner with the Local Technical Assistance Program (LTAP) of the University of Nebraska to implement statewide stormwater training as well as FHU Consulting for MS4 permit compliance.

**7.5 Data Collection and Analysis**

**Table 6 Current Research Projects (University of Nebraska)**

Research Topic	Description	Status
Feasibility of Integrating Natural and Constructed Wetlands in Roadway Drainage System Design	This research project will collect and analyze data on roadway pollutant discharges and the effectiveness of selected established stormwater BMPs. In addition, it will provide improved design guidelines for future BMP applications considering specific suites of roadway pollutants and constraints such as space and safety. The results of this study will be useful for planning, design, construction, and operation of Nebraska's transportation infrastructure and for implementing BMPs so that NDOR can effectively address the requirements of the NPDES Program.	In progress
Improving Wildflower Longevity in Roadside Seeding Areas	This study will test different strategies for establishing and maintaining wildflowers in roadside vegetation stands. Wildflower establishment techniques will be tested in areas of new construction, and wildflower persistence will be tested by seeding into established stands of roadside vegetation and applying management practices such as mowing and interseeding. Drought conditions prevented installed plots from being successful in 2012. New sites are being selected for the 2013 growing season (2012 expenditure \$0)	0%
Adapting NDOR's Roadside Seed Mixture for Local Site Conditions	This project evaluated roadside seeding segments statewide. Final report was received in 2012. Results include recommendations for changes to NDOR seed mixtures in some Nebraska regions, and for staying the same in a few regions. NDOR has incorporated the recommendations seed mixtures. (2012 expenditure \$2,410)	100% Complete

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<b>Research Topic</b>	<b>Description</b>	<b>Status</b>
Establishing Permanent Vegetation after Highway Construction	The objective of this work is to determine the effect of compost blankets and other types of blankets or soil surface treatments on soil movement and establishment of seeding mixtures on roadway shoulders and backslopes. The rapid establishment of the grass mixture on roadway shoulders and backslopes will reduce the likelihood of soil erosion on roadsides. Erosion on roadsides negatively impacts the aesthetics, stability, maintenance costs, and safety of the roadway shoulders and backslopes.	90% Complete, Final Report being Prepared
Fertilizer Effects on Attaining Vegetation Requirements	This project seeks to determine the interacting effects of application rates of N and P on roadside backslopes shaped from fill (with and without mycorrhizae) or stock-piled topsoil on establishment of NDOR's complex seeding mixture(s) (Type A) and soil movement. The expected benefits will be a more thorough understanding of the multiple interactions occurring on the newly installed seeding locations; thereby giving NDOR the ability to adjust project inputs as needed for soil types, project location, and season of installation to best insure the success of the vegetation establishment.	70% Complete, Additional data to be collected in 2012
Stormwater Pollution Treatment BMP Discharge Structures	The objective of the proposed work is to identify an effective outlet structure design for stormwater treatment BMPs (detention BMPs). This objective will be achieved by (1) and extensive review of literature on detention based BMPs and BMP outlet structures, and (2) laboratory testing of structures that are not sufficiently documented but hold promise for being effective. The effectiveness of each structure is assessed based on efficiency for removing suspended solids, long-term reliability and susceptibility to obstruction by debris and long-term maintenance requirements.	In Progress
Development and Evaluation of BMPs for Highway Runoff Pollution Control	The goal of this research is to develop and evaluate BMPs that rely on bioretention, infiltration, and slow conveyance of stormwater, to ultimately provide improved water quality. The first objective is to find the combinations of native plant species and growth media that will be sustainable (cost and maintenance effective), while treating the first 0.5" Water Quality Volume. The second objective is to test the feasibility of using shredded tires as an available porous media in structural stormwater treatment BMPs such as infiltration and bioretention systems (BRSs), as well as aggregate media.	In Progress

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<b>Research Topic</b>	<b>Description</b>	<b>Status</b>
Study of Bridge Deck Runoff from NDOR Highways	The objective of this research is to evaluate the quality of bridge deck runoff, and to determine the effects of bridge deck runoff on surface water bodies in Nebraska by evaluating both water and sediment chemistry as well as effects on aquatic life. The goal of this research project is to identify the potential environmental impacts of bridge deck runoff on receiving streams, and to determine design criteria that can be used by NDOR or regulatory agencies to identify when structural controls for bridge deck runoff may be necessary to protect in-stream water quality and aquatic life.	In Progress
Passive Stormwater Samplers for Sampling Highway Runoff from BMPs: Feasibility Study	The objective of this research is to provide an overview and recommendation of samplers that would be optimal for the parameters of this project.	In Progress

**7.6 Annual Budget and Expenditures**

**Table 7 Annual MS4 Budget**

	2012 Expended	2013 Budgeted
Education and Involvement	NDOR Staff: \$23,000 MS4 Consultant: \$55,000	NDOR Staff: \$25,000 MS4 Consultant: \$80,000
Illicit Discharge	NDOR Staff: \$21,000	NDOR Staff: \$23,000
Construction Stormwater	NDOR Staff: \$53,000 MS4 Consultant: \$26,000 On-Call Consultants: \$74,500	NDOR Staff: \$54,000 MS4 Consultant: \$120,000 On-Call Consultants: \$75,000 ECO-Database Sub-Consultant: \$68,000
Post-construction Stormwater	NDOR Staff: \$24,500 MS4 Consultant: \$101,000 Research: \$214,000	NDOR Staff: \$26,000 MS4 Consultant: \$56,000 Research: \$200,000
Good Housekeeping	NDOR Staff: \$11,000 MS4 Consultant: \$40,000	NDOR Staff: \$13,000 MS4 Consultant: \$60,000
Program Management	NDOR Staff: \$14,000 MS4 Consultant: \$52,000	NDOR Staff: \$16,000 MS4 Consultant: \$16,000
<b>Total MS4 Program Cost</b>	<b>\$709,000</b>	<b>\$832,000</b>