

Center for Environmental Excellence AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS





U.S. Department of Transportation Federal Highway Administration

# Stormwater and DOT Construction Projects Web Forum

CEE by AASHTO Stormwater Community of Practice January 28, 2016

# **AASHTO and FHWA**



 GABRIEL WEIL, American Association of State Highway and Transportation Officials





 SUSAN JONES, PE, Federal Highway Administration

MARCEL TCHAOU, PE, Federal Highway Administration

# **Web Forum Topics**

- Web Forum 1: Water Quality affecting the project delivery process - post-construction treatment BMPs, Low Impact Development. *December 8, 2015 – available on CEE website:* http://environment.transportation.org/
- Web Forum 2: Stormwater and DOT construction projects lessons learned and process improvements on temporary construction BMP practices and administrative processes.
   Presenting now.
- Web Forum 3: DOT Stormwater Program Organizational Structure - how best to manage Stormwater Requirements. *Tentative March 17, 2016, 11:00 a.m. Eastern*

# **Community of Practice Presenters**



 BARRY FAGAN, PE/PLS, CPESC, CMS4S, CESSWI Environmental Program Engineer Alabama Department of Transportation



### **ROB SHREEVE**

Deputy Director Maryland State Highway Administration





### GABE ROBERTSON

Highway Stormwater Specialist Nebraska Department of Roads

**SCOTT TAYLOR,** PE, D.WRE, F.ASCE Facilitator, AASHTO Stormwater Community of Practice Michael Baker International

# **Community of Practice Forum Overview**

- DOT Construction Stormwater Program
   Effectiveness
  - Barry Fagan, Alabama Department of Transportation
- Erosion and Sediment Control Program
  - Rob Shreeve, Maryland State Highway
     Administration

# Inspection and Tracking Program

- Gabe Robertson, Nebraska Department of Roads
- Stormwater Community of Practice
   Forum Collaboration
  - From the drop down, submit your questions to "Host & Presenter" by typing in the Q&A box on the WebEx panel on your screen.
  - Closing

	-
Participants C	nat Q&A
<ul> <li>Participants</li> </ul>	
Speaking:	
<ul> <li>Panelists: 1</li> </ul>	
Tracy Highwart (Host)	<u>.u</u>
▼ Attendees:	
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▼ Q&A	
▼ Q&A All (0)	
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# DOT Construction Stormwater Program Effectiveness

Barry Fagan, PE/PLS, CPESC, CMS4S, CESSWI Environmental Program Engineer Alabama Department of Transportation

# The Compliance Paradox



# Environmental Program vision:

# an integrated environmental culture...



# DOT's mission:

# To provide a transportation system...





# EVOLUTION

Effectiveness Implementation Cause Source Symptom



# managing the symptom - sediment



# managing the source - erosion A = R K LS C P A = sediment yield



# managing the cause - water

Doubling the velocity of runoff...

- Increases erosive energy by 4x
- Increases the size of particle carried by 64x
- Increases the mass of soil that can be transported by 32x

...clean water in, clean water out...

# managing implementation - work

# managing implementation - work



# **EVOLUTION** – The Five Pillars



# managing for effectiveness – preconstruction **communication**





# managing for effectiveness – construction **communication**

# Birmingham Northern Beltline

# managing for effectiveness – post construction **communication**



# DOT Construction Stormwater Program Effectiveness



**Maryland Department of Transportation** 

Office of Environmental Design (OED) Office of Construction (OOC) Highway Hydraulics Division (HHD) Plan Review Division (PRD)









### **SHA Organizational Chart**



# SHA's Construction Oversight

Key Program Elements -

Design -ESD to the MEP -Constructability -Maintenance and Operations

### **Education**

SHA ESC Certification Training Program
 ESC Field Guide

### **Policy Development and Tools**

•Quality Assurance Inspection -Rating System

Incentive/Liquidated Damages

Tool kit

Performance-based Measurement

Bi-weekly Inspections and day after rain event

Cooperative Action among SHA, MDE, MTBMA

### Research

Study of Flocculants

New Products Evaluation

# Highway Hydraulics Division (HHD)

# Teams in HHD

Each team within HHD providing project engineering design and permit coordination services

The Division is divided into six teams. Each team provides design, review and construction support for roadway drainage, SWM and ESC

>In addition, each team has a specialty focus

# Highway Hydraulics Division (HHD)

# Specialty Focus of HHD Teams

### **Christie Minami**

### **Glen Helms**

- District Projects Reviews
  MDE/PRD Coordination for SWM/ESC approval
- •ESC Training Certifications
- •ESC Incentives & Liquidated Damages Determination
- •ESC Construction Modifications Review
- •Water Quality Bank Management
- Design Criteria,
   Specifications, and Guidance
- NPDES CA Permits

- Project Planning Support
- •Major Projects Support
- •CDD Projects Support
- •ICD Projects Support
- •Drainage Improvement Projects

### Abdul Wakil

•Drainage Standards

- •Shop Drawings Review & Approval
- Major Project Support
- •Drainage Assessments & Investigations
- •Emergency & Rapid Response Investigations
- •District Maintenance Support
- •Stream Restoration/ Outfall Stabilization

# Highway Hydraulics Division (HHD)

# Specialty Focus of HHD Teams

### **Jonathan Brown**

- •Drainage & SWM Remediation Projects
- •Drainage Improvement Projects
- Outfall Stabilization
- •Major Dams Inspections Program
- •Water Quality Bank Projects
- •MS4 SWM Facility Remediation and Retrofit Projects

### **Kiona Leah**

- •Drainage Improvement (Fund 74) Projects
- •Major Projects Support
- •CDD Projects support
- •SWM & Drainage Asset Management SWM Facility Inspections,
- •TMDL Program Support technical review

### Vacant

MS4 SWM Facility Remediation and Retrofit Project

- TMDL program Support technical review
  - Programmatic Outfall Stabilization
  - **Stream Restoration**
  - Drainage Improvement Projects

**District Maintenance Support** 



# Plan Review Division (PRD)

### **MARYLAND STATE LEGISLATION PASSED**

Effective October 2013 HOUSE BILL 97 – Authorizing the Maryland Department of the Environment to designate authority for specified sediment control plan and stormwater management plan review and approval

### **MEMORANDUM OF UNDERSTANDING – SHA/MDE**

Effective February 2015 Specifies Regulatory Responsibilities, Program Details, Administrative and Technical Procedures, Compliance Oversight Responsibilities

Pursuant to Maryland Code Ann., Environment Article, Title 4, Subtitle I, Sediment Control and Title 4, Subtitle 2, Stormwater Management, the Department has the authority to delegate its plan review and approval responsibility for State and federal projects to a designated entity. Under this MOU, MDE has designated SHA as the approving authority for erosion and sediment control and stormwater management plans for all SHA projects.

# Plan Review Division (PRD)

### IMPROVEMENTS AND COMMITMENT AT EVERY LEVEL CHANGES IN PLAN REVIEW AND APPROVAL

### Improvement in Plan Review Process

- Better communication throughout the design, review, and approval process
- Establish clear Guidelines and Procedures so designers and reviewers know what is required
- Ensure consistency between all reviewers
- Provide timely reviews and approvals

### Improvement in Engineering Design

- Improve the quality and consistency of SHA's construction plans
- Develop ESC/SWM Designer Training (with HHD)
- SHA to closely follow its own project development process and schedules including critical decision making affecting designs, r/w, utilities, traffic controls, field investigations, allowing input from local jurisdictions

### Improve our ability to meet SHA business goals

- Get buy-in from project manager, construction, reviewer and approver at Concept (PI) stage
- Develop a tighter integration of the SWM/ESC review process with project development milestones

### □ Improve our ability to meet SHA environmental goals

- Improve the construction process for field modifications
- Develop a tighter integration of the SWM As-Built plans with Design and Maintenance

# Office of Construction (OOC)

- Construction Roles and Responsibilities
  - Construction PE/Inspectors
  - Construction Directives
  - <u>Quality Control</u> Inspections
- Contractor Responsible personnel
  - MDE Certification (Green Card)
  - SHA Certification (Yellow Card)
  - ESC Manager
  - Superintendent
- Maryland Transportation Builders and Materials Association (MTBMA)
  - $\circ~$  Communication and Buy In
- Performance Measures

# Quality Assurance Program (QA)



Quality Assurance Program (QA)

# Inspections Training & Resources Field Modifications & QA Concurrence Quality Assurance Toolkit

### Quality Assurance Team



# Quality Assurance Program (QA)

### **Two Part Certification**

### I. For Inspectors & Contractors

- Require SHA certification to work on SHA projects
- Require recertification every three years
- Day and Half training
- Launched training in cooperation with MTBMA
  - http://www.mtbma.org/?page\_id=154
- SHA staff as well as contractors must be certified

### II. For Designers

- Require SHA certification to work on SHA projects
- Additional one day of training with Inspector training as a prerequisite
  - http://www.mtbma.org/?page\_id=156
# Compliance

- To ensure compliance with environmental regulations, E&SC permits issued to SHA and the MOU between SHA and MDE.
- Review each project at least every two weeks to ensure compliance with the E&SC Plan and Contract Documents (**This includes all environmental permits**).



• Review the ESCM's daily log and the CPE's documentation to determine if the E&SC Plan are being complied with.

• Assign a rating in accordance with Section 308 of the Standard Specifications for Construction and Materials (http://www.roads.maryland.gov/Index.aspx?PageId=44)

## Compliance Inspections, QA-1 and QA-2 reports

 Compliance is documented utilizing the QA-1 and QA-2 reports
 Grading system outlined in the 308 specifications (A,B,C,D,F)
 Automatic 'F'

• The inspection reports have questions beyond just E&S control issues.

- •Permit status
- •Contractors responsibilities
- •NPDES Compliance
- •SWM compliance
- •Contractor responsiveness

00C61 07012011 CD 07220 300.01 STATE HIGH ADMINISTRATION INDEPENDENT QUALITY ASSURANCE EROSION AND SEDMENT CONTROL FIELD INVESTIGATION OF TOAT	
DISTRICT: COUNTY: CONTRACT NO: DATE OF INSPECT PROJECT DESCRIPTION: T	TON: IME:
CONTRACTOR:	
SITE STATUS: CURRENTLY ACTIVE CURRENTLY INACTIVE SITE CONDITION: COMPLANCE NEEDS CORRECTIONS **NON-COMPLIANCE REASON FOR INSPECTION: ROUTINE INVESTIGATION COMPLAINT MD E COMPLAI *RECOMMENDED ACTIONS: NOTHFY CONTRACTOR FOLLOW UP INSPECTION NOTH  **SHUT DOWN GRADING OPERATIONS **SHUT DOWN ENT  REFER TO NOTES  NO GRADE  GRADE	NT _ OTHER Y M.D.E. IRE PROJECT
Section         Number of points         Number of points         Percent Awarded for awarded         Section (X/Y) × 100           1         - <td></td>	
3         x         x           4	
Section 5 × 20%         B           Total Grade (Add box A and B)	
6 Bonus area, Number of points awarded TOTAL	
<b>RATING:</b> $\square$ <b>A</b> $\square$ <b>B</b> $\square$ <b>**C</b> $\square$ <b>**D</b> $\square$	] ** <b>F</b>
QUALITY ASSURANCE INSPECTOR: DATE:	
CONTRACTOR: DATE:	
RECEIVED BY:	S REPORT ONLY)
ORIGINAL: Project Engineer cc : Contactor	

# Compliance Incentives & Disincentives

#### <u>Incentives –</u>

 Quarterly incentive payment made if average score equal to or greater than 85 for rating quarter

#### Disincentives –

- 'D' or 'F' rating
- LD imposed for each day
- Pay within 30 days from imposition
- No incentives will be paid for any quarter that liquidated damages are imposed.
- For 2 'F ' ratings, E&S Control Certification revoked from Superintendent and ESCM for 6 months

# Compliance Inspections performed





# Compliance Grades



## Compliance Percent of compliance statewide



### Non-Compliance

- Non-Compliance Data is Documented and Reported to the SHA Business Plan and Governor's office
- Non-Compliance Issues can Result in E&S Liquidated Damages, Loss of Incentive Payments and Loss of "Yellow Card" Credentials
- Non-Compliance Data may be a Consideration during a Design Build Proposal Review

![](_page_42_Figure_4.jpeg)

![](_page_42_Figure_5.jpeg)

# Training SHA Erosion and Sediment Control Certification Program

![](_page_43_Picture_1.jpeg)

Provide online and in field training related to the Administration's environmental commitments and stewardship.

## Training SHA Erosion and Sediment Control Certification Program

![](_page_44_Figure_1.jpeg)

![](_page_44_Figure_2.jpeg)

## Training Resource Materials

![](_page_45_Picture_1.jpeg)

#### ENVIRONMENTAL GUIDELINES FOR CONSTRUCTION ACTIVITIES

Maryland State Highway Administration September 2010 Revised March 2013

![](_page_45_Picture_4.jpeg)

•Updates in Progress

![](_page_45_Picture_6.jpeg)

![](_page_45_Picture_7.jpeg)

![](_page_45_Picture_8.jpeg)

Maintenance Activity Guidelines Team

Highway Hydraulics Division & & Greenman-Pedersen, Inc.

November 2003

Prepared by:

#### •Updates in Progress

### Modifications & QA concurrence QA-3

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			page 1 of 4	yazy bre
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Audilication Origin Date:	District Number:	Modil	lication Number;	ion
Contract Number:	PRD/WOC			71m
Project Description:	phone:	Emai	all:	1 1
Contractor:	Phone:	Erne	ed Sketch	1
SHA Project Engineer		L see Attent		Im
		Ovininal Stamp	ed Date:	
	Number(s):	Original Stamp	ed Date:	-
Original Drawing Sheet	Number(s):	Original Stamp	ed Date:	- - sr
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Modifications to plans and permits require approval. This approval may be necessary from a field level all the way to formal review by multiple Agencies.

# QA concurrence is handled at the field level with the

![](_page_46_Figure_4.jpeg)

### Modifications & QA concurrence Modification Process

Modification request made by Contractor with proper supporting documentation.

The SHA Construction Project Engineer reviews the completed modification along with supporting documentation and upon concurrence signs the modification request.

The QA Package reviewer ensures all necessary information is included with the modification request and then forwards to the necessary reviewers.

![](_page_47_Figure_4.jpeg)

All communication related to the modification will be tracked by the QA toolkit.

With completed and signed approval by all the necessary groups the Project Engineer informs the contractor that work related to the modification can then be performed.

## Modifications & QA concurrence Modification approval process levels

LEVEL 1: Request for existing Conditions Adjustments, upgrade and/or add an Erosion and Sediment control (considered minor in scope) SHA REC/QA Team Approver

LEVEL 2: Request for revision to design of the project that requires drainage calculations and/or change in limits of disturbance (considered minor in scope but require review for major implications).

SHA OHD/HHD

LEVEL 3: Request for deviation from project resource impacts (considered major in scope).

SHA OHD/PRD

![](_page_49_Figure_0.jpeg)

## Quality Assurance Toolkit

![](_page_50_Figure_1.jpeg)

Quality Assurance Toolkit is used to document the REC/QA review of a project (30,000+ reviews since 2001)

#### **MDE OVERSIGHT AND SHA SUCCESS**

MDE to maintain enforcement authority and continue to provide programmatic oversight

SHA to submit quarterly and annual reports

MDE conducts design and construction audits

EPA may audit SHA processes

SHA success linked to its commitment to excellence at every level of the organization

# State Boundary of the second s

Maryland Department of Transportation Rob Shreeve Office of Environmental Design 410/545-8644 rshreeve@sha.state.md.us

![](_page_53_Picture_0.jpeg)

# **Gabe Robertson**

Highway Stormwater Specialist Nebraska Department Roads

# Inspection and Tracking Program

# Outline

- NDOR Background
- Training and Inspection Requirements

# Tracking and Reporting Environmental Commitments

- Identifying Commitments to Track (Pre-Project)
  - Environmental Review Process
- Documenting Commitments in the System (During-Project)
  - Field Inspections
- Reporting Commitments when Completed (Post-Project)
  - Compliance Oversight and Performance Reporting
- Down the Road.....

# **NDOR Background**

# **Eight Districts Across State – Central Coordination**

- Environmental Coordinator Position in each District Liaison with Central Office
- Stormwater Program Coordinated through Roadside Stabilization Unit within the Planning and Project Development Division (6 Staff)

# Nebraska Construction Stormwater Permit

 Statewide General Permit required for all NDOR projects disturbing 1 acre or more

# MS4 Permit

- Permitted in 2007
- Operating in Second Permit Term
- Not Statewide (Permitted only within the boundary of City MS4s)
- EPA Audit Conducted October 2015 (1st Audit)

# **Inspector Certification Training**

- Full Day Training Course
- 5 Year Certification
  - Temporary (6 month) online Certification also available
- Required for anyone inspecting or installing/maintaining BMPs on NDOR Projects.
- Re-certification Available Online
- NDOR Partners with University Of Nebraska to Administer the Training Course

![](_page_56_Picture_7.jpeg)

Field Pocket Guide

# **Inspector Certification Training**

- Certified Inspector List Managed with NDOR's ECODatabase System (Online)
- Certification ID Numbers Auto-Populate Inspection Reports
- ECODatabase system automatically sends email notifications to inspectors as they approach their certification expiration date.

NDOR Certified Erosion & Sediment Control Inspectors						
	Last name: Agency/Company: D1 NDO Show at most: 50	R ] from 0 << < >				
Refresh this li	st					
Last name	First name Middle Initial	Certification ID#	Agency/Company	Exam date	Recertification date -	Exam town
Lierman	Rich	0112	D1 NDOR	3/26/2014	3/26/2019	ONLINE COURSE
Klaus	Ronald	0115	D1 NDOR	3/21/2014	3/21/2019	ONLINE COURSE
Lee	Jason	0137	D1 NDOR	3/20/2014	3/20/2019	ONLINE COURSE
Knutson	Dewaine	0261	D1 NDOR	3/20/2014	3/20/2019	ONLINE COURSE
Hobelman	Ryan	0263	D1 NDOR	3/20/2014	3/20/2019	ONLINE COURSE
McCoy	Tim	0274	D1 NDOR	3/20/2014	3/20/2019	ONLINE COURSE
Schoen	Brian	0106	D1 NDOR	3/20/2014	3/20/2019	ONLINE COURSE

# **Environmental Inspection Requirements**

# Routine Environmental Inspections

- Occur every 2 weeks at a minimum
- Conducted by District Construction Staff

![](_page_58_Picture_4.jpeg)

 Required on most projects regardless of whether or not there is a Stormwater Permit.

# Environmental Oversight Inspections

- Occur monthly on projects with Stormwater Permits
- Conducted by District Environmental Coordinators

# Environmental Oversight Audits

- Occur at a predetermined frequency
- Conducted by Headquarter Staff and Consultants

# **Environmental Inspection Requirements**

- Findings are to be corrected within 7 days
- Immediate Action issues are to be corrected within 24 hours

# Tools for Compliance

- Dis-Incentives
  - \$500/day for each corrective action over 7 days
  - \$1000/day for each Immediate Action over 24 hours
- Incentives
  - NDOR's answer to "multiple mobilizations"
  - Associated with Rain Event Inspections
  - o Bid Item
- Withholding Estimates
- Job Shutdown

![](_page_59_Picture_13.jpeg)

# Environmental Compliance and Oversight Database (ECODatabase or ECOD)

- Electronic reporting software used to identify, document, and report environmental commitments on NDOR construction projects.
- Consists of inspection software loaded on field machines and a web based headquarter module that manages the data.
- A "sync" process exchanges data between user machines and the headquarter site.

![](_page_60_Figure_4.jpeg)

# Identifying Environmental Commitments Project Setup

- Projects are manually created within the ECOD system and additional project information is then automatically updated from the SiteManager (Construction) database on a regular frequency:
  - Project Name/Number/Control Number
  - Project Description/Location
  - Project Manager/Responsible Charge
  - Prime Contractor
  - Key Dates (Letting, Notice to Proceed, Start & Completion)

Creat	Create Project Refresh this list Export to excel							
Project	numbers marked in gre	en came from the S	M/PES database.					
	Project number	Control number	Project name	NPDES Authorization Number	District	Manager	Let date	Status
EDIT	STP-4-4(108)	42654	E. JCT. US-281 - LAWRENCE	NER114199	4	Meyer, Steve	2/6/2014	Construction
EDIT	STP-41-5(107)	42591	IN GENEVA & WEST	No Permit Required	4	Anderson, Tom	2/6/2014	Construction
EDIT	RD-281-3(1014)	80948	BARTLETT NORTH & SOUTH	No Permit Required	8	Ziska, Dan	2/6/2014	Construction
EDIT	S-75-2(1059)	13216	UNION SOUTH	NER114184	1	Hobelman, Ryan	2/6/2014	Construction

# Identifying Environmental Commitments Project Review

ECODatabase project approval incorporated into existing Environmental Review Process at Headquarters

- Roadside Stabilization Unit
  - Stormwater/Erosion Control
- Environmental Permits Unit
  - Wetlands/404 Conditions
- Environmental Documents Unit
  - NEPA Conditions
- Technical Documents Unit
  - Hazmat/Threatened & Endangered Species/Historical
- After reviews are completed, an ECOD Inspection Summary Report is generated and is available in ECOD for project inspectors.

# Inspection Summary Report

![](_page_63_Picture_1.jpeg)

#### ALMERIA EAST & WEST

Project Set Up Complete.

State-Wide Environmental Compliance Oversight Program - District 8

#### Environmental Inspection Summary Report Construction Project Set-up Review

This form was prepared to print on 1/21/2016. Changes made to this project after that date will not be reflected on this form. Please review this form carefully for accuracy with project commitments before completing the ES Construction Authorization Form.

NDOR Project Number:	STP-91-3(109)
Control Number:	80898
MS4 Area?	No
NPDES Permit Number:	CSW-201500023
T&E Species Assigned:	American Burying Beetle Bald Eagle Roosts Migratory Birds Whooping Crane

#### Project Review Status

Project Review completed for: (All reviews completed on 11/12/2015)

- Erosion Control/Stormwater
- Threatened and Endangered Species
- Wetlands/404 Permitting
- Environmental Documents/NEPA

#### Summary of Required Inspections Anticipated

Inspection Types Enabled for Project	Estimated # Inspections	Typical frequency	Responsible party
Environmental Compliance Oversight Inspection	3	Monthly	District Environmental Coordinators
Routine Environmental Inspection (Construction Phase)	7	Every 14 days (Also 0.50" rain event inspections)	NDOR Project Inspector
Routine Environmental Inspection (Establishment Phase)	8	Monthly	NDOR Project Inspector
Stormwater Permit Close-Out Inspection	1	Varies	NDOR Headquarters Staff
Environmental Compliance Audit	1	Varies	NDOR Headquarters Staff

# Documenting Environmental Commitments Inspection Types

- ECOD Inspection Software installed on user machines
- Type of Inspections:
  - Routine Environmental Inspection (Construction Phase)
  - Routine Environmental Inspection (Establishment Phase)
  - Environmental Compliance Oversight Inspection
  - Environmental Compliance Audit
  - Stormwater Permit Close-Out Inspection
  - Threatened and Endangered Species Survey
  - Migratory Birds Survey

# **Documenting Environmental Commitments** Inspectors Projects List Page

![](_page_65_Figure_1.jpeg)

# **Documenting Environmental Commitments**

# **Inspection Setup Page**

ECODatabase - Routine Envi Project: Test Project (For T	ironmental Inspection (Construction Phase)
Department of Roads	Save and Continue
Inspection	Information
Primary inspector: Gabe Robertson Inspector Certification number: 0086 Expires: 2/18/2019 Inspection type: Routine Environmental Inspection (Construction Pl	Erosion Control Certification Number auto-populates the
Inspection date: 3/27/2014	report.
Inspectors present:	A 
*Weather during previous 24hrs:	
Project status:	Construction
Description of current construction activity:	۵ ۳
Date of most recent precipitation since last inspection (leave blank if none):	
Amount that fell (inches, #.## format):	
Describe additional precipitation that fell prior to this date if applicable:	۸ ٦ ٦

# **Documenting Environmental Commitments** Inspection Questions Page

Documentation*	
1. Is a complete notice posted in a publicly accessible location near where the construction activity is underway? Noti include a copy of Discharge Authorization Notice (DAN), SWPPP Location and Contact Person with Phone Number.	ce must C Yes C No
Notes:	C N/A
2. In the CWDDD susibility for survivory during a second business because the CWDDD location in the Nature Fold	
2. Is the Swppp available for review during normal business hours? Document the Swppp location in the Notes field.	C Yes C No
Notes.	
	Questions are generated from
	for each project
Temporary Erosion Control Plan*	for each project.
1. Are the locations and installation/removal dates, of erosion and sediment control measures, documented on the Ten Erosion and Sediment Control Plan?	nporary Cities
Notes:	C N/A
	^
	-
NEPA Conditions*	
1. Is the contractor in compliance with the approved bridge demolition plan, including lead based paint and asbestos?	C Yes
Notes:	C N/A
Answoring "No" roquiros	
Answering No requires	•
2. If hazardous materials were for all action to be logged, as followed?	C Yes C No
Notes: and addo-generates a	C N/A
confective action.	
Wetlands and Waters of the US*	
1. Have measures been taken to avoid areas identified on Green Sheet Attachment 1?	C Yes

# Documenting Environmental Commitments BMP Toolbox Page

ECODatabase - Environmental Compliance Oversight Inspection Project: Test Project (For Training Purposes only) 2581.0				
Department of Roads Project List	Inspection List  Checklist Quest	ions 🚺 Field BMPs 🚺 Summary		
BMP Category         Image: Constront of the second secon	Mulching Compost Tackifier Hydromulch Soil Binders Soil Roughening Slope Tracking Berms and Diversions	BMP Temporary Slope Drains Erosion Checks, Type Wattle (Slope Application) Cover Crop Seeding Temporary Seeding Permanent Seeding Sodding Erosion Control (RECP) Other		
Notes • Mulch must be uniform and applied within 24 hours of seeding • Mulch should have a depth of 1 - 2 inches • Mulch is anchored approximately 6 inches into the soil • An approved tackifier may be used to hold mulch in place	Erosic BMP Location: Same as Previous Station 345 - 348 Right BMP Problem Type: Missing	Other         on Control - Mulching         3 Action items (select all that apply):            ✓ Install missing BMP.             ✓ Other actions             (this is required if you have not picked an item from step 3         above)		
Comments (225 Character limit): Install temporary mulch on disturbed areas.				
<u>Seq</u> BMP	Findings Location	Problem Type		

# **Documenting Environmental Commitments** Generating Inspection Reports

![](_page_69_Picture_1.jpeg)

Statewide Environmental Compliance Oversight Program District T: Test Project for Training Purposes Routine Environmental Inspection (Construction Phase) Inspection Date: 1/21/2016

#### Project Summary

Project Number:		Project Description:	Test Project Description
Project Status:	Establishment	Winter conditions in effect:	yes
Control Number:	00000		
Project Manager:	Gabe Robertson	Prime Contractor:	<b>Test Prime Contractor</b>
Current Activity:	Culvert Work		
NPDES Permit #:	Test Permit	Wetlands Permit #:	

- Reports are electronically signed and then autogenerated.
- Inspectors can make a draft of the report before signing.

#### Certification

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnelproperly 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.

This document has not yet been electronically signed by Gabe Robertson.

Make Draft

Sign and Seal Now 🔒

NOTE: This report was formatted to print on 3/27/2014. It represents the most current information available for this inspection period at the time it was formatted on the user's computer.

Inspect	ion Su	mmary
---------	--------	-------

Primary Inspector:	Gabe Robertson	Certification Number:
Inspectors Present:	Test Inspectors	
Inspection Day weather:	Cold and Dry	
Most recent precipitation date:	1/19/2016	Amount that fell (inches)

A ROUTINE ENVIRONMENTAL INSPECTION was conducted for this project. Find included in the following report and allow NDOR to determine the environmenta necessary Corrective Actions.

Previously unresolved corrective actions:	8
Oldest unresolved corrective action (due date):	11/2/2015
This inspection corrective actions:	6
Environmental Commitment Corrective Actions:	4
Field Finding Corrective Actions:	2
Total Project Corrective Actions Needing Resolved:	14
Immediate Action Required for:	3

# **Documenting Environmental Commitments** Distributing Inspection Reports

- Completed inspection reports are automatically distributed (email) to pre-defined groups for review.
- Email contains links to both the inspection report and corrective action log (punch list) for the project.
- PDFs of the report and corrective action log can be generated and printed using the links within the email.

![](_page_70_Figure_4.jpeg)

# Documenting Environmental Commitments Corrective Actions

- A "Corrective Action Punch List" can be printed and used onsite to document items as they are completed.
  - Inspectors then date-out each completed action within the ECOD system.
- Pending items carry-over into new inspections reports until they are addressed.

	NDC Nebrask Department o	DR ka f Roads	ECOD - Corr Project: 56TH STRE	ective Ac	tion Punch	n List	Created	d on 3/27/2014	
	Inspection type	BMP ca	tegory		Location	Inspection date	Due date	Inspector	
	Environmental Compliance Oversight Inspection <b>Corrective Action/I</b> Repair broken/mal	Erosion (nspector Ifunctionin	Control (RECP) r comments: Ig BMP. Erosion blank	et has been da	1175+00 east slope at Hwy. 6 overpass. maged by wind. I	3/25/2014 Needs to be re	4/1/2014	Ron Prochaska re-attached.	
	Applicable Reference(s)								
N. Contraction	Corrective action tak	en:				Signed off	by: Actio	on date:	
### **Documenting Environmental Commitments** Inspection Notifications

- ECODatabase allows NDOR to set a frequency for inspections and send out inspection reminders/past-due notices as well as an email summarizing pending corrective actions.
  - Inspection Reminder
  - Inspection Past Due Notice
  - Pending Corrective Actions Notice
  - Threatened and Endangered Species Survey Reminders

Inspection schedule List										
ior Project: SEWARD EAST										
Update Inspection schedules Back to Project										
Allow inspections for project	Inspection type	Start date	Construction	Winter conditions	Ongoing monitoring	Establishment	Send upcoming notifications	Send past due notifications		
<b>v</b>	14-Day Routine - 1/2" Rain Event Compliance Inspection (Construction Phase)		14 day 🔻	30 day 🔻	30 day 🔻	30 day 🔻	<b>√</b>	<b>V</b>		
	Environmental Compliance Audit		one time 🔻	•	•	•	<b>V</b>			
<b>v</b>	Environmental Compliance Oversight Inspection		30 day 🔻	one time 💌	-	one time 🔻	<b>√</b>	<b>v</b>		
	Green Sheet Compliance Inspection		30 day 🔻	30 day 🔻	30 day 🔻	30 day 🔻				
	Monthly Compliance Inspection (Establishment Phase)		30 day 🔻	30 day 🔻	30 day 🔻	30 day ▼	<b>v</b>	<b>V</b>		

### Reporting Environmental Commitments Compliance Oversight Tools

### ECOD Headquarter Module (Administrative Site)

- Easily Identify Corrective Actions Pending Statewide
- Manage Notifications
- Review/Monitor Inspection Reports Statewide
  - Generate Performance Reports:
    - Percent Environmental Inspection Reports Submitted
    - Percent Environmental Commitments in Compliance
    - Average Days to Address Corrective Actions by Project/District/State
    - o Other

## Reporting Commitments when Completed



#### ECODATABASE SUMMARY REPORT

#### DRAFT

#### Project Close-Out Report - PLATTE RIVER TO US-81

District: 4 Control Number: 42302

Project Number: STPD-92-d(107)

#### **Environmental Compliance Oversight Inspection**

Documentation	Date Satisfied	One-Time	Seasonal
Is a complete notice posted in a publicly accessible location near where the construction activity is underway? Notice must include a copy of Discharge Authorization Notice (DAN), SWPPP Location and Contact Person with Phone Number.	2/14/2014	N	N
Is the SWPPP available for review during normal business hours? Document the SWPPP location in the Notes field.	2/14/2014	N	N
Are inspection reports current and complete? Reports should cover all disturbed areas and must include findings of inspection and the corrective actions required.	2/14/2014	N	N
Is there a Spill Prevention Plan on-site?	2/14/2014	Ν	Ν
Have borrow, waste, or plant site approvals been acquired?	2/14/2014	Ν	Ν
Temporary Erosion Control Plan	Date Satisfied	One-Time	Seasonal
Are the locations and installation/removal dates, of erosion and sediment control measures, documented on the Temporary Erosion and Sediment Control Plan?	2/14/2014	N	N
Are the following dates recorded: 1)Dates when grading occurred 2) Dates when construction activities temporarily or permanently ceased on a portion of the site.	2/14/2014	N	N
Are material stockpiles documented on the Temporary Erosion and Sediment Control Plan?	2/14/2014	N	N

## Down the road....

### ECOD Enhancements

- Construction Site Inspections
  - Web Based Inspection Platform (Mobile Applications)
- Operations (Maintenance) Inspections
  - SPCC/Tank Inspections
  - Facility Runoff Control Plan (FRCP) Inspections
  - Post Construction BMP Maintenance Inspections
  - Outfall Field Inspections
  - Wetland Mitigation Sites Inspection/Tracking

### Incorporate EPA Audit Recommendations

## Stormwater Community of Practice Forum Collaboration

- Submit your questions by typing in the Q&A box on the WebEx panel on your screen.
  - PLEASE designate 'Host & Presenter' in the drop down.



## **CoP Questions/Discussions**



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## CLOSING Reminder....Future Web Forum Topic

- Web Forum 3: DOT
  Stormwater Program
  Organizational Structure --
- how best to manage
  Stormwater Requirements.
  *Tentative March 17, 2016, 11:00 a.m. Eastern*



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U.S. Department of Transportation Federal Highway Administration

# **Stormwater and DOT Construction Projects Web Forum THANK YOU FOR ATTENDING CEE by AASHTO Stormwater Community of Practice** January 28, 2016