Tracking Environmental Commitments During Construction

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Stormwater Specialist

Planning and Project Development Division
Overview

- What is ECODatabase
- Identifying Commitments to Track (Pre-Construction)
  - Project Setup
  - Project Review
  - Inspection Summary Sheet
- Documenting Commitments in the System (Construction)
  - Logging Inspections
  - Inspection Report Distribution
  - Corrective Actions
  - Inspection Reminders/Past Due Notices
  - Threatened and Endangered Species/Migratory Bird Surveys
- Reporting Commitments when Completed (Post-Construction)
- NDOR Certified Erosion Control Inspector List
What is ECO-Database?

- 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 headquarters.
Projects are manually created within the ECODatabase system and then additional project information is automatically pulled in from the SiteManager database on a regular basis:

- Project Name/Number/Control Number
- Project Description/Location
- Project Manager/Responsible Charge
- Prime Contractor
- Key Dates (Letting, Notice to Proceed, Start & Completion)
Identifying Commitments – Project Review

- ECODatabase sign-off incorporated into existing Environmental Review Process within Planning and Project Development Division
  - Roadside Stabilization Unit
    - Manages the ECODatabase System
    - Reviews for stormwater and erosion control conditions
  - Environmental Permits Unit
    - Reviews for wetland and 404 permit conditions
    - Reviews for threatened and endangered species conditions
  - Environmental Documents Unit
    - Reviews for NEPA related conditions

- After reviews are completed, an ECOD Inspection Summary Report is generated and sent to the construction project manager.
Identifying Commitments – Project Review

Questions for Project: E. JCT. US-281 - LAWRENCE

Show only category group(s): ☑ EDU - NEPA  ☐ T&E - Threatened and Endangered  ☐ LPA - Checklist 12-20 Questions

Save Changes  Refresh this list  Back to Project

These project checklist questions approved by:
- RSU approved by Ronald Poe on 12/17/2013 at 2:21 PM
- EPU approved by Justin Williams on 12/18/2013 at 9:06 AM
- T&E approved by Molissa Marinovich on 12/18/2013 at 8:57 AM
- EDU approved by Project Reviewer on 12/17/2013 at 4:04 PM

(EDU - NEPA) NEPA Conditions
- ☐ Has the construction process protected worker health and safety as required by the Construction Safety and Health Department of Labor and NDOR specifications?
- ☑ Has coordination with emergency services such as police and fire departments occurred?
- ☑ Has coordination with the utility companies occurred?
- ☑ Was a news release published?
- ☐ Has airport coordination been completed?
- ☐ Has the contractor coordinated with DEQ regarding the wellhead protection area(s)?

<table>
<thead>
<tr>
<th>Project name</th>
<th>NPDES Authorization Number</th>
<th>District</th>
<th>Manager</th>
<th>Let date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. JCT US-20 NORTH</td>
<td>No Permit Required</td>
<td>5</td>
<td>Carnahan, Brian</td>
<td>2/6/2014</td>
<td>Construction</td>
</tr>
</tbody>
</table>
ECOD Inspection Summary Report

- Sent to Construction Project Manager and District Environmental Coordinator before construction begins.
  - Contains Project Review Status
  - Outlines Required Inspections in ECOD
  - Highlights Species Conditions

### E. JCT US-20 NORTH

This form was prepared to print on 3/27/2014. 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-87-4(117) |
| Control Number:            | 61606         |
| MS4 Permit?:               | No            |
| NPDES Permit Number:       | No Permit Required |
| 404 Permit #:             | No Permit Required |
| T&E Species Assigned:      | Migratory Birds |

**Project Review Status**

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

**Summary of Required Inspections Anticipated**

<table>
<thead>
<tr>
<th>Inspection Types Enabled for Project</th>
<th>Estimated # of Inspections</th>
<th>Typical Frequency</th>
<th>Responsible party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Environmental Inspection (Construction Phase)</td>
<td>12</td>
<td>Once every 14 days</td>
<td>NDOR Project Inspector</td>
</tr>
<tr>
<td>Migratory Birds</td>
<td></td>
<td>Every 3 days during bird nesting season (April 1 - September 1 for trees/shrub, April 1 - Sept 30 for bridges/culverts)</td>
<td>NDOR Project Inspector</td>
</tr>
</tbody>
</table>

**Species Notes**

Swift Fox: A swiftfox survey will be needed within 2 weeks prior to construction start. Contact Melissa Marinovich (Melissa.marinovich@nebraska.gov) to schedule this survey with NDOR Environmental. Migratory Birds: Migratory bird surveys are only required if they are part of the contractor's plan to avoid impacts to migratory birds in trees, bridges, culverts, etc. Trees and shrubs should be cleared prior to April 1 if possible. Bridges or culverts should be netted or cleaned before April 1 if possible. Refer to NDOR Avian Protection Plan on NDOR website at: [http://www.transportation.nebraska.gov/environment/guides/avian-protection-plan.pdf](http://www.transportation.nebraska.gov/environment/guides/avian-protection-plan.pdf)
Documenting Commitments – Logging Inspections

ECOD Inspection Tool

- Software installed on user machines
- Inspection reports are tailored to each project:
  - Commitments become inspection questions in the field
  - Inspectors only have access to projects they are responsible for and inspections that they may conduct.
- NDOR environmental inspections are recorded using the ECOD system
  - 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
Erosion Control Certification Number auto-populates the report.

ECODatabase - Routine Environmental Inspection (Construction Phase)
Project: Test Project (For Training Purposes only)

**Inspection Information**

Primary inspector: Gabe Robertson
Inspector Certification number: 0086
Expires: 2/18/2019
Inspection type: Routine Environmental Inspection (Construction Phase)
Inspection date: 3/27/2014

- Inspectors present:
- Weather during previous 24hrs:
- Project status: Construction
- Description of current construction activity:
- 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:
Corrective Action Button will glow if items are pending. Inspectors only have access to projects they are responsible for.

<table>
<thead>
<tr>
<th>Inspection</th>
<th>Name</th>
<th>Status</th>
<th>Control Number</th>
<th>Date of last inspection</th>
<th>Corrective Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Test Project (For Training Purposes only)</td>
<td>Construction</td>
<td>000000</td>
<td>3/27/2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMSTOCK SOUTH</td>
<td>Establishment</td>
<td>61513</td>
<td>3/24/2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>56TH STREET - WAVERLY INTERCHANGE</td>
<td>Construction</td>
<td>12477</td>
<td>3/21/2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ALBION WEST</td>
<td>Establishment</td>
<td>31833</td>
<td>3/21/2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sidney EB Rest Area - Parking</td>
<td>Construction</td>
<td></td>
<td>3/21/2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FULLERTON SOUTH</td>
<td>Construction</td>
<td></td>
<td>3/21/2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N-112 - BEAT</td>
<td>Construction</td>
<td>13034</td>
<td>3/21/2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIG SPRINGS SOUTHWEST</td>
<td>Construction</td>
<td>61279</td>
<td>3/21/2014</td>
<td></td>
</tr>
</tbody>
</table>
Questions are generated from environmental commitments and are specific to each project.

Answering “No” requires an action to be logged, and then the system will generate a corrective action that must be addressed.
Documenting Commitments – Logging Inspections

ECODatabase - Environmental Compliance Oversight Inspection
Project: Test Project (For Training Purposes only)

BMP Category
- Erosion Control
- Sediment Control
- Good Housekeeping

BMP
- Mulching
- Compost
- Tackifier
- Hydromulch
- Soil Binders
- Soil Roughening
- Slope Tracking
- Berms and Diversions
- Benching

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

Erosion Control - Mulching

1. BMP Location: Same as Previous
   Station 345 - 348 Right

2. BMP Problem Type:
   Missing

3. Action items (select all that apply):
   - Install missing BMP.
   - Immediate action required
     (select this only in situations where there is an imminent threat to the environment)
   - 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.

Upload pictures (can do this on Edit Report page also):
- Upload

Delete this BMP
Save BMP

Findings

Seq  BMP  Location  Problem Type
Documenting Commitments – Logging Inspections

- Sign and Seal button makes the reports final and un-editable.
- Inspectors can make a draft of the report before signing.

<table>
<thead>
<tr>
<th>Project Number:</th>
<th>Test Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Description:</td>
<td>NDOR Example Construction Project for training purposes. District staff can select this project to test the new software installed on their machines (ECD-Database).</td>
</tr>
</tbody>
</table>

| Control Number: | 000000 |
| Prime Contractor: | Example Prime Contractor |
| Current Activity: | Major grading and culvert work |
| NPDES Permit #: | NER__Test |
| Primary Inspector: | Gabe Robertson |
| Inspectors Present: | Test Inspector 1, Test Inspector 2 |
| Inspection Day weather: | cold and dry |

Summary of findings

<table>
<thead>
<tr>
<th>Previous (unresolved) Corrective Actions</th>
<th># Corrective Action Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of previous (unresolved) corrective actions:</td>
<td>6</td>
</tr>
</tbody>
</table>

Documentation Corrective Actions

<table>
<thead>
<tr>
<th># Corrective Action Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of documentation corrective actions:</td>
</tr>
</tbody>
</table>

BMP Corrective Actions

<table>
<thead>
<tr>
<th># Corrective Action Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of BMP corrective actions:</td>
</tr>
</tbody>
</table>

Total combined number of corrective actions: 6

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 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.

This document has not yet been electronically signed by Gabe Robertson.
Completed inspection reports are automatically distributed (email) to pre-defined groups for review.

Email contains web links to both the inspection report and corrective action log for the project.

- PDFs of the report and corrective action log can be generated and printed using the included links.
### Documenting Commitments – Corrective Actions

<table>
<thead>
<tr>
<th>Inspection type</th>
<th>BMP Category</th>
<th>Problem type</th>
<th>Location</th>
<th>Action taken</th>
<th>Inspection date</th>
<th>Due date</th>
<th>Date action taken</th>
<th>Submitted on</th>
<th>Uploaded on</th>
<th>Pending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Compliance Oversight Inspection</td>
<td>Erosion Control (RECP)</td>
<td>Details</td>
<td>Maintenance</td>
<td>1175+00 east slope at Hwy. 6 overpass.</td>
<td>3/25/2014</td>
<td>4/1/2014</td>
<td>3/27/2014</td>
<td>pending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine Environmental Inspection (Construction Phase)</td>
<td>Slash Mulch</td>
<td>Details</td>
<td>Missing</td>
<td>Box at approximate STA 1208, both right and left</td>
<td>3/21/2014</td>
<td>3/28/2014</td>
<td>3/26/2014</td>
<td>completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine Environmental Inspection (Construction Phase)</td>
<td>Area Inlet Protection</td>
<td>Details</td>
<td>Missing</td>
<td>STA 1003, median</td>
<td>They shoveled some dirt but didn't mess with the vegetation area as to keep this inlet protected</td>
<td>3/21/2014</td>
<td>3/28/2014</td>
<td>3/26/2014</td>
<td>completed</td>
<td></td>
</tr>
</tbody>
</table>
A “Corrective Action Punch List” can be printed and filled out by contractor or inspector as things are completed.

Inspectors then date-out each completed action within the system and items are removed from their to do list.

<table>
<thead>
<tr>
<th>Inspection type</th>
<th>BMP category</th>
<th>Location</th>
<th>Inspection date</th>
<th>Due date</th>
<th>Inspector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Compliance</td>
<td>Erosion Control (RECP)</td>
<td>1175+00 east slope at Hwy. 6 overpass</td>
<td>3/25/2014</td>
<td>4/1/2014</td>
<td>Ron Prochaska</td>
</tr>
</tbody>
</table>

**Corrective Action/Inspector comments:**
Repair broken/malfunctioning BMP. Erosion blanket has been damaged by wind. Needs to be repaired and re-attached.

**Applicable Reference(s)**

Corrective action taken:  
Signed off by:  
Action date:
ECODatabase allows NDOR to schedule inspections and send out inspection reminders/past-due notices.

- One day before an inspection is due, an “inspection reminder email” will be sent out to project inspectors.
- Likewise one day after an inspection should have been logged in the system, an “inspection past-due notice email” will be send to project inspectors as well as select upper management personnel within the District.

These are auto-generated by the system based off of the inspection frequency and phase of the project.

Currently programming email notices for Threatened and Endangered Species Surveys.....

### Inspection schedule List

*For Project: SEWARD EAST*

<table>
<thead>
<tr>
<th>Allow inspections for project</th>
<th>Inspection type</th>
<th>Start date</th>
<th>Construction</th>
<th>Winter conditions</th>
<th>Ongoing monitoring</th>
<th>Establishment</th>
<th>Send upcoming notifications</th>
<th>Send past due notifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>14-Day Routine - 1/2&quot; Rain Event Compliance Inspection (Construction Phase)</td>
<td>14 day</td>
<td>30 day</td>
<td>30 day</td>
<td>30 day</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>✔</td>
<td>Environmental Compliance Audit</td>
<td>one time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔</td>
<td>Environmental Compliance Oversight Inspection</td>
<td>30 day</td>
<td>one time</td>
<td></td>
<td>one time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔</td>
<td>Green Sheet Compliance Inspection</td>
<td>30 day</td>
<td></td>
<td>30 day</td>
<td>30 day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔</td>
<td>Monthly Compliance Inspection (Establishment Phase)</td>
<td>30 day</td>
<td></td>
<td>30 day</td>
<td>30 day</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Documenting Commitments – Logging Inspections

- Threatened and Endangered Species/Migratory Bird Surveys also logged using ECODatabase.
- Surveys are submitted on a weekly basis.
- Species are specific to each project and the time of year the survey is being completed.
- Reports are automatically sent to Headquarters for review and are then made available to Partner Agencies such as FHWA and USFWS.
ECODatabase has the ability to query data in the system and generate summary reports.

<table>
<thead>
<tr>
<th>Report type List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the type of report from the list below.</td>
</tr>
<tr>
<td>Title</td>
</tr>
<tr>
<td>SELECT Average Days to Perform Corrective actions</td>
</tr>
<tr>
<td>SELECT Project inspections</td>
</tr>
<tr>
<td>SELECT Number of Corrective Actions</td>
</tr>
<tr>
<td>SELECT Percent Environmental Commitments Inspection Reports Submitted</td>
</tr>
<tr>
<td>SELECT Percent Environmental Commitments In Compliance</td>
</tr>
<tr>
<td>SELECT Percent Corrective Actions Completed Within Seven Days</td>
</tr>
<tr>
<td>SELECT T &amp; E Species Summary Report</td>
</tr>
</tbody>
</table>
Environmental Compliance Oversight Inspection

<table>
<thead>
<tr>
<th>Documentation</th>
<th>Date Satisfied</th>
<th>One-Time</th>
<th>Seasonal</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Is the SWPPP available for review during normal business hours? Document the SWPPP location in the Notes field.</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Are Inspection reports current and complete? Reports should cover all disturbed areas and must include findings of inspection and the corrective actions required.</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Is there a Spill Prevention Plan on-site?</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Have borrow, waste, or plant site approvals been acquired?</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Temporary Erosion Control Plan

<table>
<thead>
<tr>
<th>Documentation</th>
<th>Date Satisfied</th>
<th>One-Time</th>
<th>Seasonal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are the locations and installation/removal dates, of erosion and sediment control measures, documented on the Temporary Erosion and Sediment Control Plan?</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>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.</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Are material stockpiles documented on the Temporary Erosion and Sediment Control Plan?</td>
<td>2/14/2014</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>
NDOR Certified Erosion Control Inspector List

- NDOR requires inspectors to be certified in the Erosion Control Inspector Certification Program.
- The list of certified inspectors is managed through ECODatabase. A link to the database is available on NDOR’s Environmental Website.
- Inspector ID’s automatically populate the inspection report.
- The system issues notifications to individuals through email when their certification is about to expire. The notice contains a web link to the UNL-LTAP training site so they can re-certify.

Online Training is Now Available.
Down the road….

- Maintenance Facilities – Environmental Inspections
  - Tank Inspections
  - SPCC etc.
  - Facility Runoff Control Plan (FRCP) Inspections
- Post Construction BMP - Maintenance Inspections
- Wetland Mitigation Sites – Inspection/Tracking
Questions?

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