

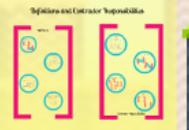
Erosion and Sediment Control

New NDDOT Special Provision

Matt Sperry
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Start
On the journey to obtain permit compliance there are many obstacles that must be overcome.

Who is supposed to do erosion and sediment control and how?



Obstacle 1



Obstacle 2

How does the Contractor and the NDDOT enforce these requirements?

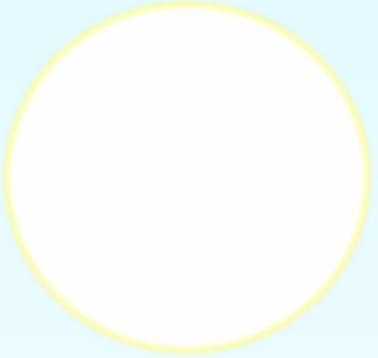
How are we paying for all this?

Obstacle 3



Goal

Achieving permit compliance through better understanding of roles and responsibilities for erosion and sediment control.



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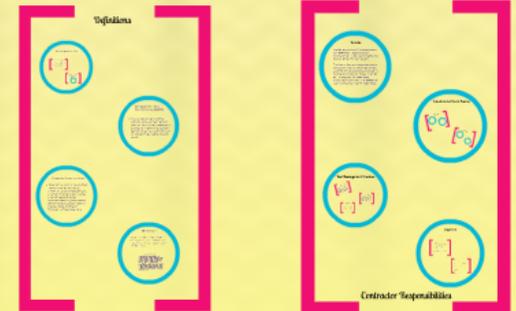
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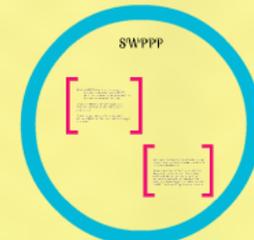
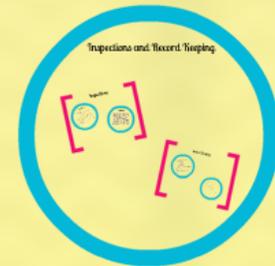
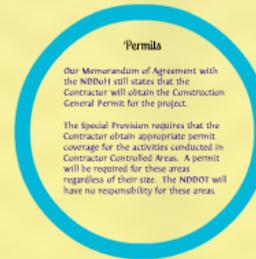
Obstacle 1

Definitions and Contractor Responsibilities



Definitions and Contractor Responsibilities

Definitions



Contractor Responsibilities

Definitions

Best Management Practices



Stormwater Pollution Prevention Plan (SWPPP)

- The document that identifies potential sources of sediment or other pollution from construction activity and ensures practices are used to reduce the contribution of pollutants from construction site runoff.

Contractor Controlled Areas

- Areas not included in the contract, but are obtained and solely controlled by the Contractor (e.g., concrete or asphalt batch plants, concrete washout areas, equipment staging yards, material storage areas, excavated material disposal areas, Contractor furnished borrow areas, etc.).

Maintenance

- Any action taken to keep a BMP in working condition. These actions may consist of repairing failures of the BMP itself.

Noncompliance

• Any action or inaction that reduces the effectiveness (measured by the total turbidity permits) or the implementation of this special measure (water control documents) for any of a BMP that has required a corrective measure (e.g., to the BMP's structure, method or implementation) within the time period established in the water control documents and the sediment is discharged from the site or into a water of the state.

Best Management Practices

Temporary Erosion and Sediment Control BMPs

- Installed and maintained before and during the term of the land disturbance activity. These items are removed when permanent erosion and sediment BMPs are installed.

Permanent Erosion and Sediment Control BMPs

- Installed and maintained once the project is completed so that the applicable permits can be terminated.

May be the same!

In some instances, individual permanent and temporary erosion and sediment BMPs for the same project or activity may be listed under the same permit and address both types to lead to the permanent erosion and sediment BMPs that may be required following a project.

After BMPs are installed, they may be considered permanent if they are not removed.

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In some instances, individual temporary and permanent erosion and sediment BMPs for a site may consist of identical BMPs. In these cases, the temporary erosion and sediment BMPs may be used as the permanent erosion and sediment BMPs if they meet the following criteria:

- 1.The BMP was installed correctly,
- 2.Is in a functional condition,
- 3.Has had all accumulated sediment removed.

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Maintenance

- Any action taken to keep a BMP in working condition. These actions may consist of repairing failures of the BMP itself.

Noncompliance

- Any action or inaction that violates the regulations imposed by the applicable permits or the requirements of this special provision and other contract documents. Failure of a BMP does not necessarily constitute noncompliance as long as the BMP is repaired, replaced or supplemented within the timelines established in the applicable permits and no sediment is discharged from the site or into a water of the state.

Noncompliance

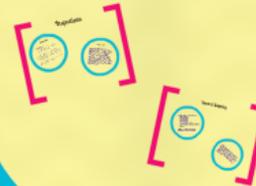
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Permits

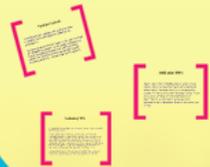
Our Memorandum of Agreement with the NDDoH still states that the Contractor will obtain the Construction General Permit for the project.

The Special Provision requires that the Contractor obtain appropriate permit coverage for the activities conducted in Contractor Controlled Areas. A permit will be required for these areas regardless of their size. The NDDOT will have no responsibility for these areas.

Inspections and Record Keeping



Best Management Practices



SWPPP



Contractor Responsibilities

SWPPP

Develop a SWPPP specific to the project.
• Contractor creates a complete SWPPP which incorporates the plan sheets and the Contractor's means and methods.

Update the SWPPP to show changes due to revisions in work schedules or sequence of construction.

Update the site map to reflect erosion and sediment BMPs that have been installed, changed, or removed

The project plan sheets by themselves do not meet the requirements of a complete SWPPP and should not be considered as such.

The Contractor has the flexibility to modify the design and implementation of the temporary erosion and sediment controls to match the Contractor's means and methods and/or field conditions. These changes must be documented in the SWPPP and meet all regulatory requirements.

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Best Management Practices

Perimeter Controls

Install perimeter erosion and sediment BMPs according to the plans/SWPPP prior to site disturbance.

Do not rely on perimeter BMPs as the sole method of controlling erosion. As the project progresses, install temporary erosion and sediment BMPs within the perimeter BMPs to control erosion resulting from the construction of the project.

Stabilization BMPs

Install stabilization BMPs (mulch, seeding and mulch, etc.) in areas that have been disturbed where work has temporarily or permanently ceased following the timelines established in the applicable permits. If implementation of stabilization is precluded by snow cover, undertake such measures as soon as conditions allow.

Coordination of BMPs

Change the location of temporary erosion and sediment BMPs to fit the field conditions.

Coordinate temporary erosion and sediment BMPs with the construction of permanent erosion and sediment BMPs to provide continuous erosion control. Do not install temporary erosion and sediment BMPs when permanent erosion and sediment BMPs are able to be installed. Once the permit is terminated or transferred to the Department, the maintenance of the permanent erosion and sediment BMPs becomes the responsibility of the NDDOT.

Remove the temporary devices when directed by the Engineer or when permanent erosion and sediment controls are installed.

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Inspections

Inspections

Conduct inspections

- every 14 days
- within 24 hrs of rainfall >0.25 inches
- complete inspection and maintenance reports for each inspection

During prolonged rainfall (more than 1 day), conduct an inspection within 24 hours of the first day of the event and within 24 hours after the end of the event. Inspections are required only during normal business hours.

Install a rain gauge to monitor rainfall amounts as required by the appropriate permit.

Deficiencies

Correct any deficiencies in the BMPs within the timelines established in the applicable permits. If conditions do not permit access to the BMP, corrective actions can be taken by installing additional BMPs. Correct the original deficiencies as soon as conditions allow access to their location without causing additional damage to the slopes. In the inspection logs, document the conditions that prohibit access.

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Record Keeping

Provide copies to the Engineer of all inspections*, documentation, record keeping, maintenance*, remedial actions, and repairs required by the applicable permits.

*within 3 working days after an inspection has been conducted.

Provide immediate written notification to the Engineer of proposed changes to the erosion control plan or SWPPP. The Engineer will review the proposed changes and determine if they are adequate. Documentation of maintenance and inspections that does not affect the erosion control plan or SWPPP does not require approval by the Engineer.

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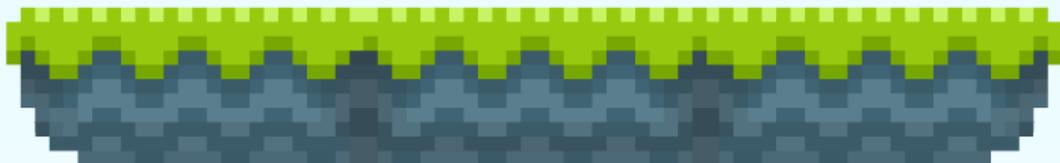
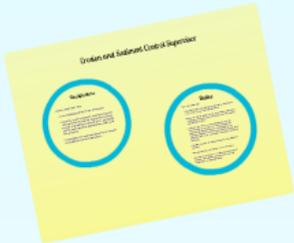
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Control

Division

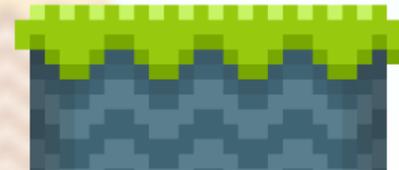
Accountability and Enforcement



Obstacle 2



How does the Contractor and the NDDOT enforce these requirements?



Accountability and Enforcement

Erosion and Sediment Control Supervisor

Qualifications

- Must be an employee of the Prime Contractor.
- Is familiar with installation, maintenance and removal of ESDS with the requirements of the erosion and sediment control plan, applicable permit requirements, and all other applicable laws and regulations.
- Is competent to supervise personnel in erosion and sediment control operations.

Duties

- Must be trained and holding a valid license required by the ESDS Plan and Specifications.
- Be in full compliance with all applicable laws, regulations, codes, and standards.
- Enforce the ESDS by such practices to those workers, but to include, at a minimum, the following: a) Supervision, as is defined by the ESDS Plan, of all workers in order to ensure and enforce that the best feasible practice, method, or material is used.
- Enforce compliance to erosion control and sediment control.
- Be available to the field on a daily basis.
- Coordinate the ESDS with the requirements of all other applicable laws, regulations and codes.

PERFORMANCE

Correct all areas of noncompliance within 24 hours after notification of noncompliance. If corrective actions are not taken within 24 hours, the Engineer may:

- Apply a contract price reduction of \$500 per day per instance.
 - Have deficiencies corrected by another Contractor and deduct the cost of the work from the monies due or to become due to the Contractor.
 - Suspend all work.
 - Withhold payment on other contract items/pay estimates.
- These actions will be applied until deficiencies have been corrected.

Erosion and Sediment Control Supervisor

Qualifications

Name a supervisor that:

- Is an employee of the Prime Contractor.
- Is familiar with installation, maintenance and removal of BMPs and the requirements of the erosion and sediment control plans, applicable permit requirements, specifications, plans and this provision.
- Is competent to supervise personnel in erosion and sediment control operations.

Duties

Have the supervisor:

- Provide erosion and sediment control as required by the SWPPP, Plans, and Specifications.
- Be on the site to supervise the installation, operation, inspection, maintenance, and removal of the erosion and sediment BMPs.
- Update the SWPPP as work progresses to show changes due to revisions in work schedules or sequence of construction, or as directed by the Engineer. Update the site map to reflect erosion and sediment BMPs that have been installed, changed, or removed.
- Propose changes to improve erosion and sediment control.
- Be accessible to the job site within 24-hours.
- Provide the Engineer with documentation of all erosion and sediment control activities and inspections as required above.

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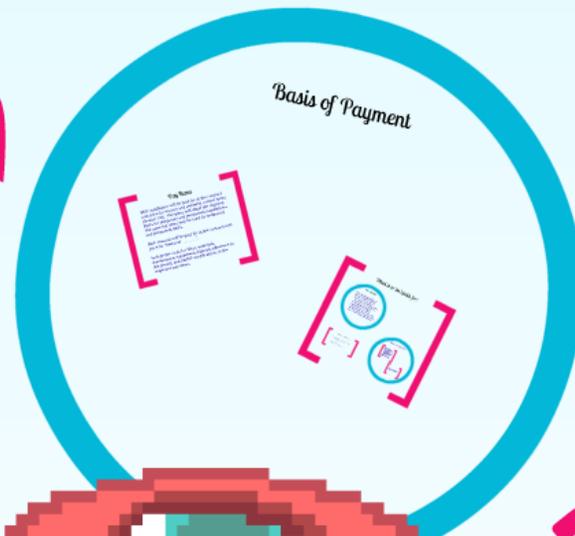
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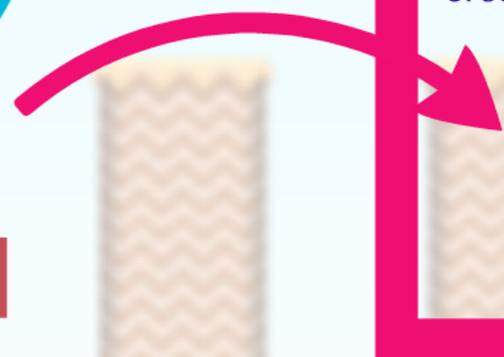
How are we paying for all this?

Obstacle 3



Goal

Achieving permit compliance
understanding of roles and
erosion and sediment control



Basis of Payment

Pay Items

BMP installation will be paid for at the contract unit price for erosion and sediment control items (Section 758). The plans will detail the required BMPs for temporary and permanent installations. The same bid items may be used for temporary and permanent BMPs.

BMP removal will be paid for at the contract unit price for "Removal _____".

Include the costs for labor, materials, maintenance, equipment, disposal, adherence to the permit, and SWPPP modifications in the respective pay items.

What is or isn't paid for?

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What is not paid for?
BMP removal.

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When temporary erosion and sediment BMPs are installed according to the Contract Documents, or as approved by the Engineer and such BMPs are no longer effective because of deterioration or functional incapacity, payment will be made for replacement of these devices, if the Engineer directs replacement.

BMP or Facility Specific Payment Issues

The cost to move Flotation Silt Curtain as work progresses should be included in the price bid for "Flotation Silt Curtain".

Removal of sediment will be paid for at the price listed in the "Price Schedule PS-1."

What is not paid for?

No payments will be made for:

- replacing temporary erosion and sediment BMPs that the Engineer determines are ineffective because of:
 - improper installation,
 - lack of maintenance, or
 - the Contractor's failure to pursue timely installation of permanent erosion and sediment BMPs according to the Contract Documents.
- replacing temporary erosion and sediment BMPs due to contractor operations.

Erosion and sediment controls for Contractor Controlled Areas are the responsibility of the Contractor and will not be paid for by the Department.

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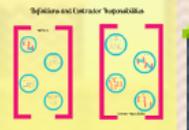
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