



“Playing Nice in the Sandbox”
Making Compliance Work for You.

2017 IECA Mountain States Conference
November 16, 2017

Presentation Agenda

- Benefits of Compliance
- Construction Motivation
- Overcoming Obstacles
- Decide on Profit
- Reinforce Lessons Through Examples



Benefits of Compliance



Goals Worth Achieving Often Make You Endure Tough Situations

- Keep your focus on the end result and the benefits of managing an environmentally compliant project.
- Improving compliance is not always easy. Focus on the benefits, focus on the profits, and don't get distracted by the typical behaviors which are not working.



Results of Non-Compliance

- Finger pointing
- Arguments
- Costly Repairs
- Work Shut Down
- Negative Press
- Longer permitting times
- Increased oversight
- Lack of trust



Environmental Enforcement Actions

“...are often reserved for those facilities which make no effort to comply after repeated warnings and notifications.”



Source: EPA' Compliance and Enforcement
National Initiative
(www.epa.gov/enforcement/national-enforcement-initiatives)

Environmentally Compliant Jobs Can Create Opportunities

- Build Client Relationships
- Less Oversight
- More Profit
- Endorsed Reputation (edge out your competitors!)
- Freedom with Means and Methods
- More Profit
- Minimizing Risk
- Increased Creativity
- More Profit



Environmentally Compliant Projects Are Complicated

- Manage any runoff
- Handle hazardous materials properly
- Plan ahead (Proactive Planning)
- Tell your story of compliance
- Don't waste money on things that don't work
- Clearly communicate results
- Have a good "image" for construction and natural resources
- Pay attention to the details



Here Is a Million Dollar Secret...

When you use the right BMPs in the right location they actually make your job easier!



Make Environmental Compliance a Benefit, not a Burden

- Don't "over-comply"
- Be smarter than your regulator
- Minimize complaints against your project
- If costs seem high, get a second opinion
- Do things right the first time
- Be clear about expectations
- Follow through when you have a "problem child"

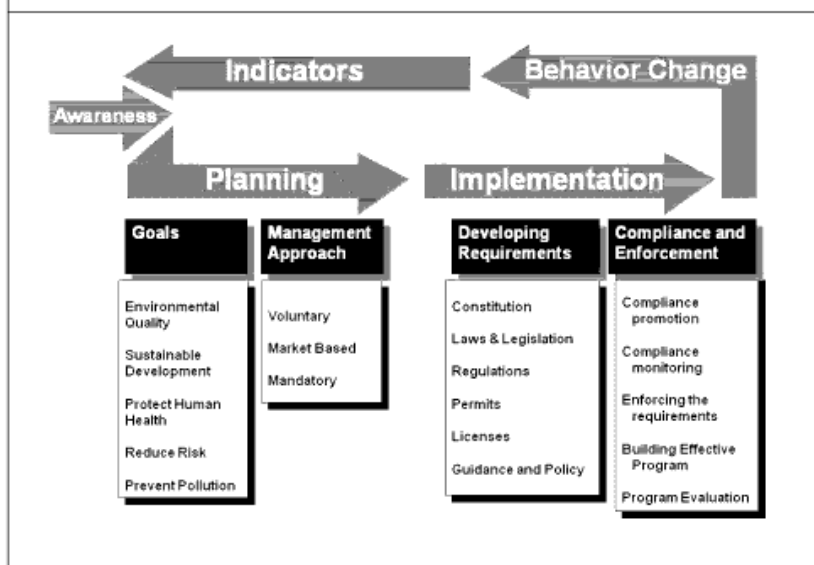


Environmental Compliance

- **Makes following the “law” easy.**
- **Illuminates methods for increasing profit on a project.**
- **Shows communities how to get credit for the good things they are doing to keep resources protected.**
- **Provide innovative ideas for complicated runoff challenges.**

Environmental Management Cycle

FIGURE 2-1: THE ENVIRONMENTAL MANAGEMENT CYCLE



Source: nepis.epa.gov

Creating Public Value vs. Private Value

Public Value

- Promotes rule of law
- Promotes good governance
- Ensures Fairness
- Strengthens credibility of environmental requirements
- Protects the environment
- Protects Public Health

Private Value

- Increases investor confidence by reducing Business Risks
- Stimulates innovations
- Increases competitiveness
- Creates New jobs and Markets
- Builds reputation

Theories of Compliant Behavior



Three categories of people

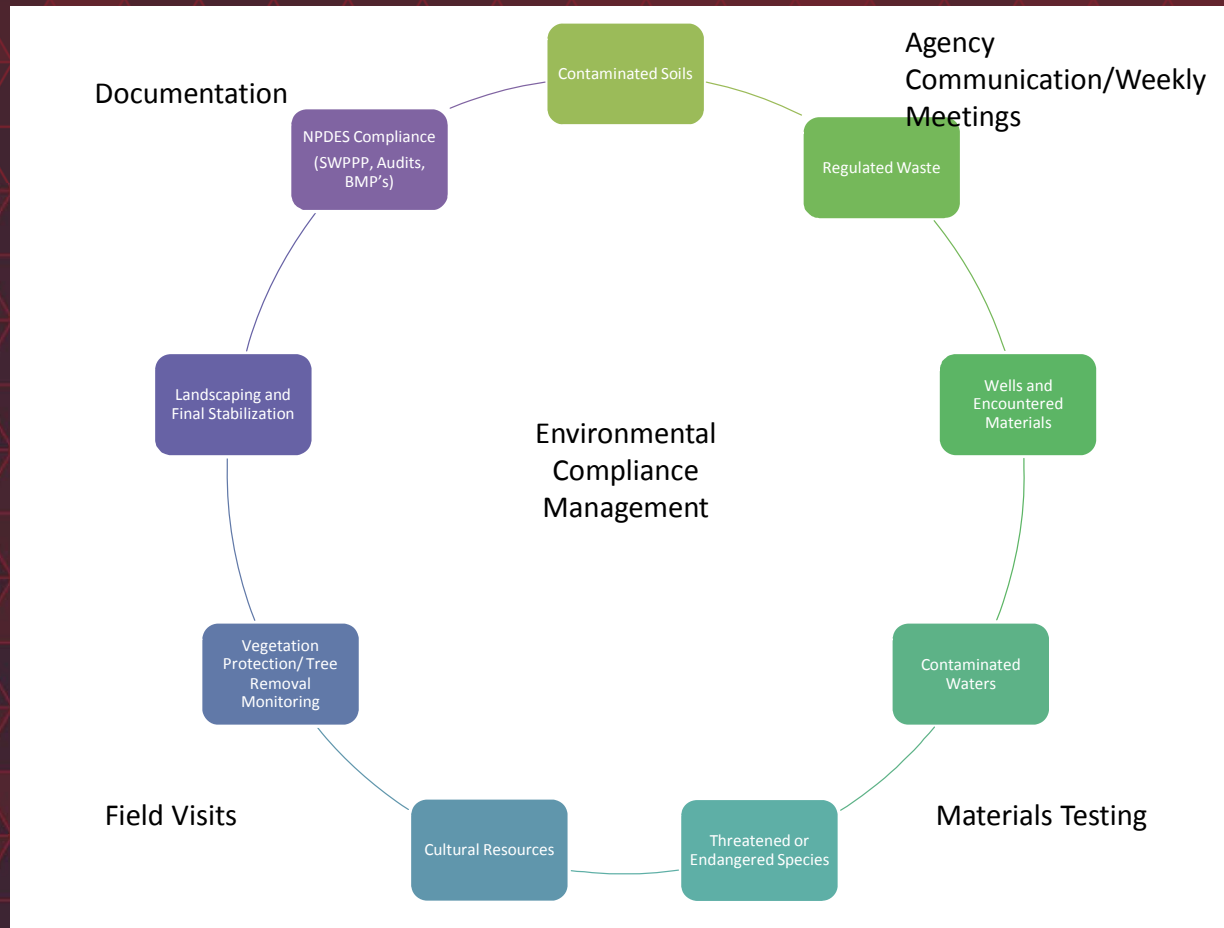
1. Those who will not comply, unless forced
2. Those who are “impressionable”
3. Those who will cooperate under most all circumstances



The Legend of the “Carrot” and the “Stick”

Real Examples





Superstructure SP8221-01



Documentation – By the Numbers

- 67 Environmental Management Plans, with 100's of revisions
- 51 SWPPP Amendments, and still counting
- 18 ACOE Permit Modifications for wetland impacts, and durations
- 8,760 Water Quality Measurements
- 338 Site Inspections
- 42 Site Incidents
- 16 flood events
- 840 Construction workers through project awareness training

So, What Are Some Examples of Site Compliance?

























Verification

- Seed type
- Topsoil Depth
- Seed Bed preparation
- Seed quantity
- Cover type and adequacy
- Fertilizer type and quantity
- Irrigation coverage
- Soil Amendments
- Weed Management Program



Ultimately, Our Success Depends on What is Left
After We Leave.







The Weis Builder's Story



- Client Relationship Driven Organization
- National Commercial Construction Firm
- Offices in Minneapolis, Chicago, Dallas, and Rochester
- 3rd Generation, family owned business since **1939**



Weis Builders, Inc.

- 420 Employees
- Working within 35 of the 50 United States
- Divisions included commercial, retail construction, hospitality, multi family and senior living specialties

What Changed Their SW Program?

- Used to have an in-house employee in charge of *storm water* and *quality control*
- February 2007, they had a site superintendent falsify an inspection report
- Resulted in a client very dissatisfied and immediate dismissal of the employee
- Client determined the problem was deeper than this isolated incident and we needed to ***enhance our SW program***
- Resulted in a new position, new program, and a premier program in SW Management

First, Identify What “We” Do



- Trying to put science and art together
- Learning performance based objectives on sharp curve – technology is changing quicker than this industry can absorb
- Tools and services available today to meet needs that have existed for many years

What is Professionalism?



- “The skill, competence, or character expected of a member of a highly trained profession.”

Source: Webster's Dictionary

Weis Builder's Storm Water Program – Initial Observations

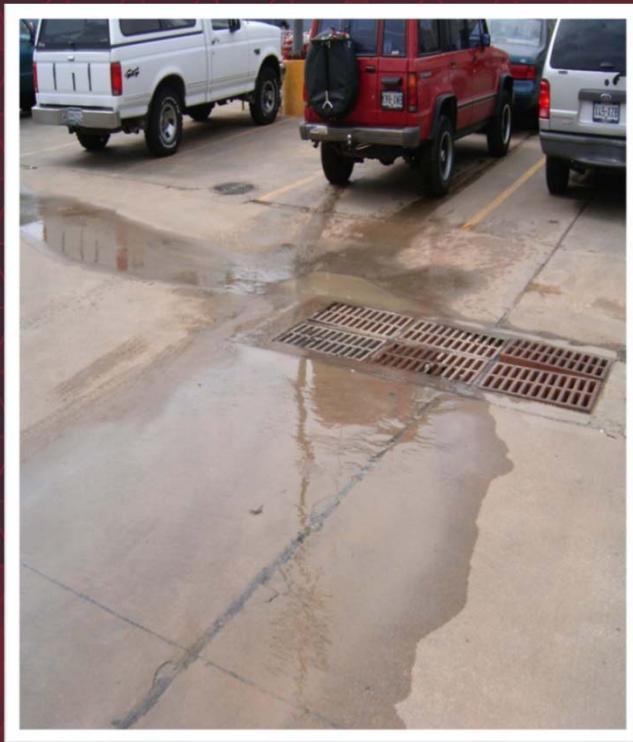


Observations and Opportunities

- Site audits were needed and should be performed bi-monthly by SW Manager
- “Weis” SW Binder policies were currently being implemented, and they were strong
- Project Superintendents were very responsive
- Inspections by local and state regulatory professionals have been positive



Opportunities and Observations



- PM's needed mentoring and education
- Plans are improving, need for dialog with design professionals
- NOT process (in-house) was confusing for field staff
- Consistency in client requests and level of intensity was variable
- New hires are overwhelmed with Weis SW program
- Need for ongoing training and intensity increase

Description of Current SW Program

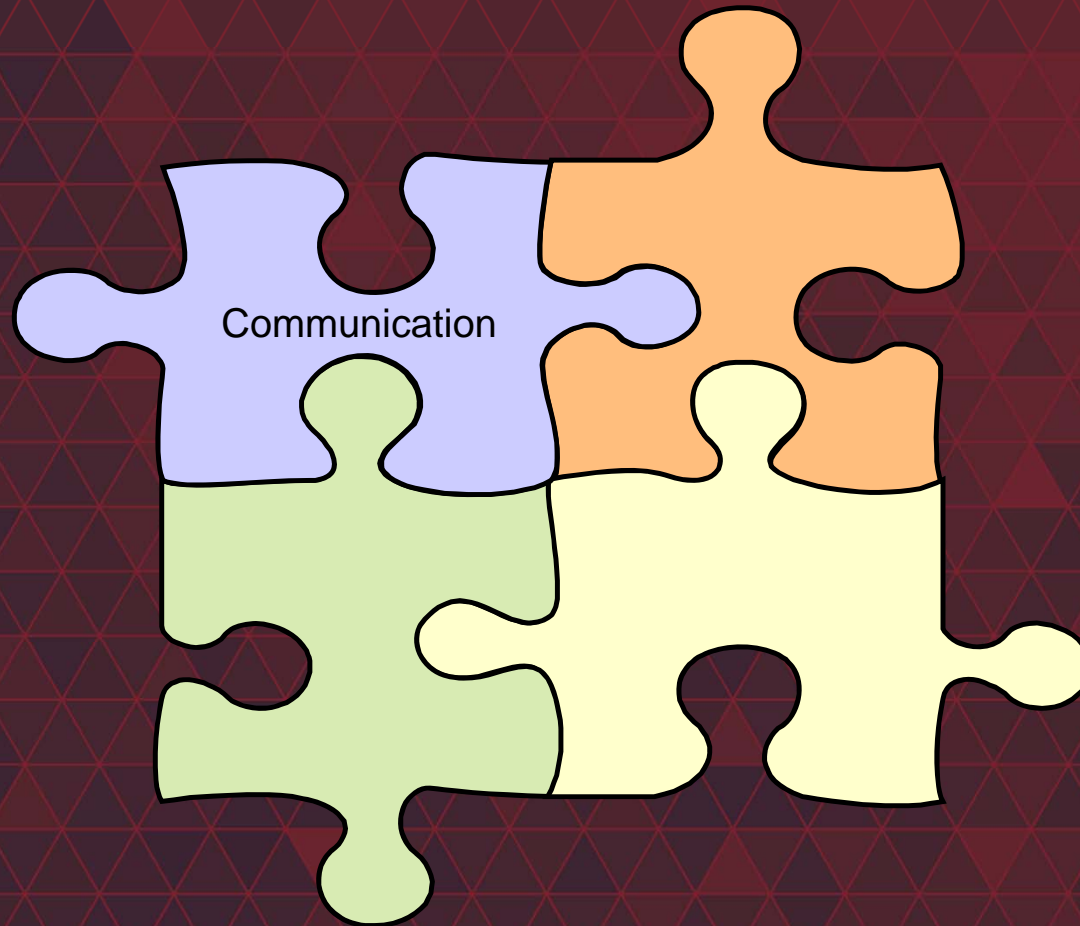


Weis Storm Water Management Manual



- Launched March, 2007
- Details program for all active construction sites
- Outlines expectations and procedures
- Has client specific sections for policy variables

Weis Communication Tools



Weis Communication Tools



- Newsletter – monthly
- New Superintendent Training and Exam
- Bi-monthly Site Visits
- Photo Requirements
- Internal resource system development
- Job Site Calendars

Weis Storm Water Newsletter



STORM WATER

Monthly Newsletter

Volume 4 September 2007

Program Information

As our busiest construction season draws to a close, we should all be strongly considering winter construction practices. For all of our active projects we need to continue weekly inspections. In addition our projects must remain in compliance.

Things to consider during winter construction are:

1. Inlet protection during frozen conditions
2. Temporary seeding and mulching open soil areas
3. Entrance and exit point management during freeze/thaw conditions
4. Dewatering and melting condition runoff management
5. Waste management and Hazardous materials management during construction

Is your site prepared? Over the next month, consider your winter management plans. The most integral part of effective winter management is planning ahead. Regardless of quantity of snow and ice, we realize winter

conditions will arrive. Plan ahead and be prepared; it will make you, the project, and this company more profitable.

Documentation Corner

By now many of you have most likely been asked to take photos of topsoil placement. In addition to pictures some of the necessary items for final stabilization include:

- Topsoil testing results
- Photo documentation of topsoil depth
- Seed tags for quantity and type
- Fertilizer Labels
- Soil Amendments and types

Proper documentation and tracking of these items assures success in the end. Remember, when final stabilization issues are discussed at the end of a project, the more documentation you have for supporting your end



result, the more likely the final NOT process will be successful.

Tools for the Future

Shortly after beginning my career here at Weis, I quickly recognized a need for "field tools." Storm water is a complicated subject. Although often times the process of site compliance feels repetitive, the reality is that each site is unique. Some of the first series of tools under production are:

- Weis targeted field guide for sub's
- Training video for Weis Superintendents and Field Personnel
- Calendar for site compliance strategies
- On-Line refreshment course for advanced level training

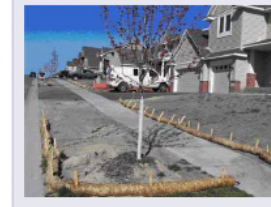
As always, if you have input or ideas on how to make these tools valuable to you, feel free to share your ideas, concerns, and comments with the (SWOC) Storm Water Oversight Committee and we can make certain your ideas are heard. Just as a reminder, the SWOC members are: Kris Lynn, Brian Olson, Joe Claire, Terry Leonard, Ryan Ehalt, Jim Molen, Bob Sucha, Gregg Johnson, and Jennifer Hildebrand.

BMP's and Practical Tips

Perimeter control is continually an issue of active management. We are all, as an organization, accustomed to managing silt fence for perimeter control. However, many times alternative choices are more appropriately aligned with internal site perimeter management. As an example, some alternative site perimeter (internal or external) options are:

- Straw Wattles
- Wood Fiber Rolls
- Compost Rolls
- Rock Logs
- Memory Fence
- Coconut Fiber Logs

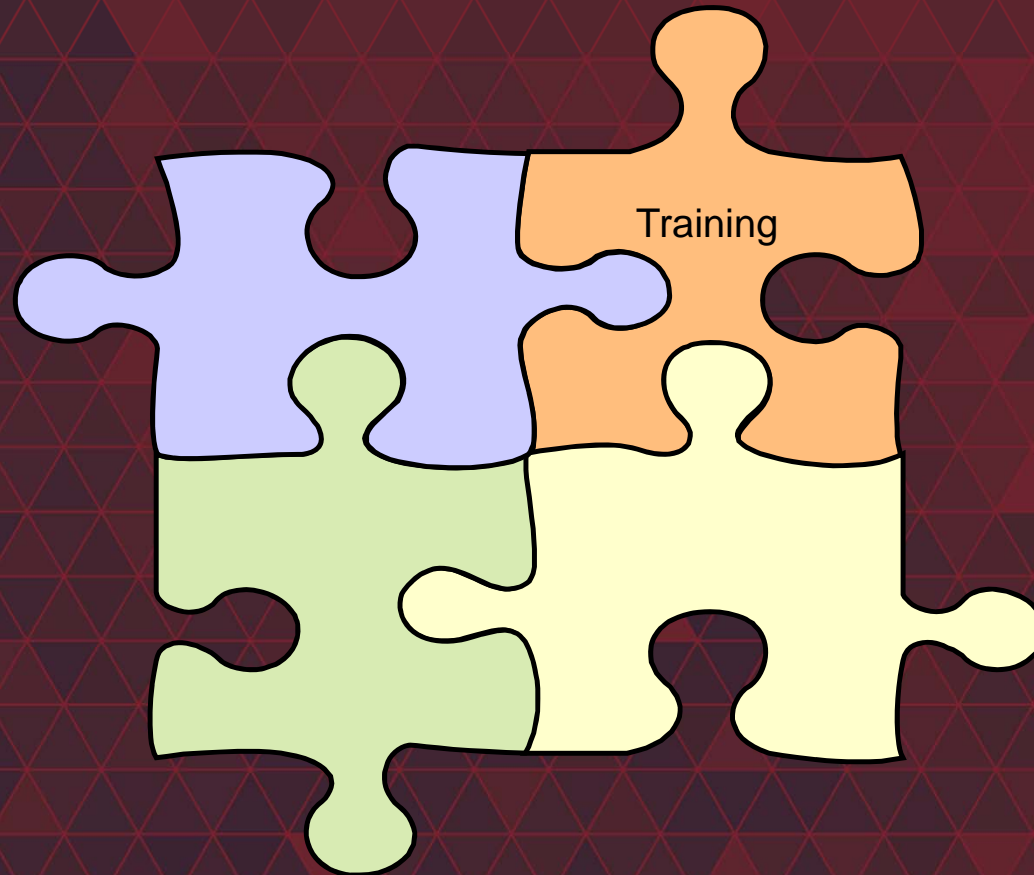
The following are pictures of what these items look like. If you or your team is interested in any alternative choices, be sure to follow the correct procedure or contact Jennifer Hildebrand immediately for assistance.



Weis Job Site Calendar



Weis Training Tools



Weis Training Tools

- Annual Curriculum for consistency in adult training
- Quarterly Training for PM's and Project Superintendents
- On-site “direction and field training initiative” for staff
- Weis Storm Water Field Guide
- Weis Storm Water Training Video
- Annual refresher course and revised exam – all staff
- In house SW oversight committee (SWOC)



Storm Water Curriculum



Weis Builders Storm Water Management Training Curriculum

Prepared By:
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Storm Water Compliance Program Description:

Weis Builders has made a deliberate commitment to actively preserve the environment in the communities where we do business. Our dedication to preserving the environment is accomplished daily by implementing our Storm Water Management policies at every site where we perform work.

All Associates are required to conduct themselves in a lawful and ethical manner in order to implement the Storm Water policies. All associates who know of a violation or potential violation to our policies are expected to report it immediately to the Storm Water Manager and the Director of Operations. Storm water compliance policies and procedures are applicable wherever Weis Builders conducts its business. Weis Builders expects and requires absolute compliance with our policies. Our expectation is that everyone is proactive and diligent when it comes to storm water compliance.

Weis Builders is committed to training associates to understand the storm water management policies is an important part of our Storm Water Management Program. Weis Builders provides training that will reinforce the information in the Storm Water Management Program, and will continue to provide associates with the knowledge, skills, and abilities to effectively implement our policies on Storm Water Management. The following is a description of this curriculum, and the details around the interconnection of these tools and procedures.



Weis Builders Storm Water Management Training Curriculum (Continued)

Training Activities:

1. Video
 - a. Client promotional video for SWPPP program - 2 minutes
 - b. Training internal associate video - 60 minutes
2. On-Line Training
 - a. 4-hour Superintendent Module for SWPPP
 - b. 4-hour Project Engineer Module for SWPPP
 - c. 4-hour Project Manager Module for SWPPP
 - d. 2-hour Estimating Module for SWPPP
 - e. 2-hour Administrative Module for SWPPP
 - f. all modules would be complete with exam and certificate
3. Compliance Calendar
 - a. 2008 topics are as follows:
 - b. January - Documentation
 - c. February - Temporary Sediment Basins
 - d. March - Perimeter Controls
 - e. April - Construction Entrances
 - f. May - Permanent Infiltration Basins & Ponds
 - g. June - Polyachrylimides
 - h. July - P2 Issues (Mason's area/Fuel Containment/Spill Kits)
 - i. August - Final Stabilization, NOT procedures
 - j. September - Concrete Wash Out
 - k. October - Dewatering
 - l. November - Hydromulch /Straw Mulch / RECP's
 - m. December - Silt Curtains
4. Bi-Monthly Emails
 - No follow up, need to re-start with 2008 topic calendar
5. Bi-Monthly Field Visits or Site Audits
 - a. 2x per month during construction
 - b. 1x per month during final stabilization phase / winter months

A Word About Transparency

- Transparency is important to maintaining public confidence in an environmental management program.
- Increasing transparency entails helping the regulated community and others to understand what is expected of them and what to expect from the program.



In-House Training Workshops



Weis Storm Water Field Guide



SLOPE TRACKING

Applicability and Effectiveness:

- > Cat tracking or horizontal slope tracking, is a very easy and inexpensive way to help reduce the erosion potential on site.
- > Cat tracking reduces the maintenance required for silt fence, sediment basins, or other sediment control BMP's.

Installation Techniques:

- > Drive the dozer vertically up and down the slope to create channels perpendicular to slope.

Inspection and Maintenance Standards:

At the end of each day cat tracking should be done:

- > On all slopes 3:1 and greater with a length of 20 feet or more.
- > To ensure a slope is worked to minimize the impacts of potential rain events prior to the next working day.

1



SEEDING

Applicability and Effectiveness:

- > Seeding establishes both temporary or permanent erosion and sediment control.
- > The purpose of temporary seeding is to reduce runoff and erosion until permanent vegetation or other erosion control practices can be established. The purpose of permanent seeding to permanently stabilize areas of exposed soil.

Installation Techniques:

- > Make sure the seed is in good condition before planting-it should not be wet, moldy or partially germinated.
- > Seeding can be accomplished using many different types of equipment.
- > Make sure to use the right type of equipment and seed for the type of soil.

Inspection and Maintenance Standards:

- > Look for proper seedbed, preparation and uniform seed placement, and good seed-to-soil contact.
- > Inspect vegetation establishment for successful germination.
- > Inspect seed bags before placement for correct seed mix and discuss application rate with contractor

Important: Disturbed areas within 200' of files, stormwater conveyance systems (e.g. swales, roadside ditches), and surface waters must be mulched or seeded within 7 days of disturbance if the slope is 2:1 or steeper, within 14 days if 10:1 to 2:1; or within 21 days if flatter than 10:1.

2



SEDIMENT CONTROL

Applicability and Effectiveness:

- > Silt fence is the most common sediment control BMP.
- > Its purpose is to reduce slope length of the disturbed area and to intercept and retain transported sediment from disturbed areas.
- > Silt fence is not meant to define property boundaries nor should it be used in areas of concentrated flow.

Installation Techniques:

- > Machine slice or hand installation.
- > Install as far away from toe of slope as possible in order to maximize storage area (5' minimum recommended).
- > Woven geotextile fabric should have stitched loops with 2" x 2" wood or metal posts spaced 4' (wood) or 8' (metal) apart.
- > Bury bottom of fabric in a 6" x 6" trench, backfill and compact both sides.
- > Termination points should be extended uphill one full section (5').
- > Must be installed along slope contours.

Inspection and Maintenance Standards:

- > Remove sedimentation once it has reached 1/3 the height of the fence.
- > Check fabric for damage.
- > Install additional sediment fence as a back up, if needed (optional).

Note: Typical alternatives to silt fence are: fiber logs, compost berms, compost logs, shredded wood mulch berms, engineered soil berms and rock berms.

4



FIBER LOGS AND ROCK LOGS

Applicability and Effectiveness:

- > Useful to stabilize shorelines and to facilitate the establishment of vegetation.
- > Effectively used for ditch checks, inlet protection, and directing or diverting water runoff.
- > Can be placed along contours to break long slope runs and minimize potential for rills and gullies.
- > Consists of coconut, straw, or wood fiber that have been compressed and stuffed into a netting.

Installation Techniques:

Straw and Wood fiber bionolls, compost logs:

- > Place along slope contours.
- > Staked into the ground with wood stakes at a 1' spacing.
- > Drive stakes through the back half of log at a 45 degree angle with top of stake pointing upstream.
- > When more than 1 fiber log is needed, overlap ends a minimum of 6" and stake.

Rock Logs:

- > Place rock log on paved surfaces to protect inlets or divert runoff from project site.

Inspection and Maintenance Standards:

- > Inspect for water undercutting and around log.
- > Most fiber logs can be left in place or easily removed after final establishment.
- > When used for inlet protection, be cautious of public safety or flooding concerns.

5

Storm Water Oversight Committee (SWOC)



- Approximately 30 in attendance, all experience levels; all business units represented
- Most time discussing procedures and refined processes
- Clarified “Weis” procedures for certain BMP’s
- Created wish list of concerns for future meetings
 - In house certification, recertification online options, opportunities for additional training for CM’s, discussion of ideas for recognition of “good” project management teams

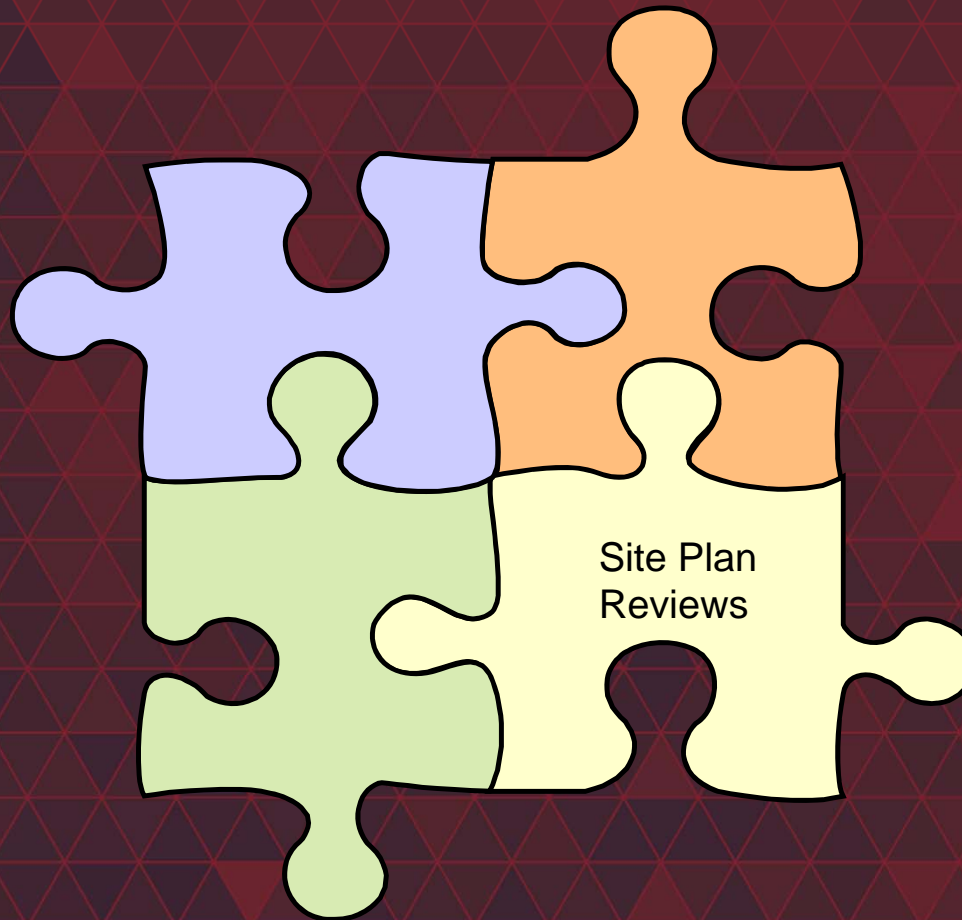
Think About the Big Picture

- Well designed internal communication can help employees to understand organization objectives and adapt behavior and workplace processes to achieve these objectives.
- Employees want to understand why and how decisions are being made, ***and they learn management strategies by observing their immediate supervisors.***

Weis Storm Water Training Video



Plan Review and Comment Process



Site Plan Review Procedures



- Pre-Bid SWPPP review
- Documentation process for “challenged” plans
- Dialog increase with plan designers about constructible design (SWPPP perspective...)
- Increase in SW perspective at Pre-Con meetings
- Documented schedule discussion

Example Site Plan Review Checklist

(6 pages....)

WSB

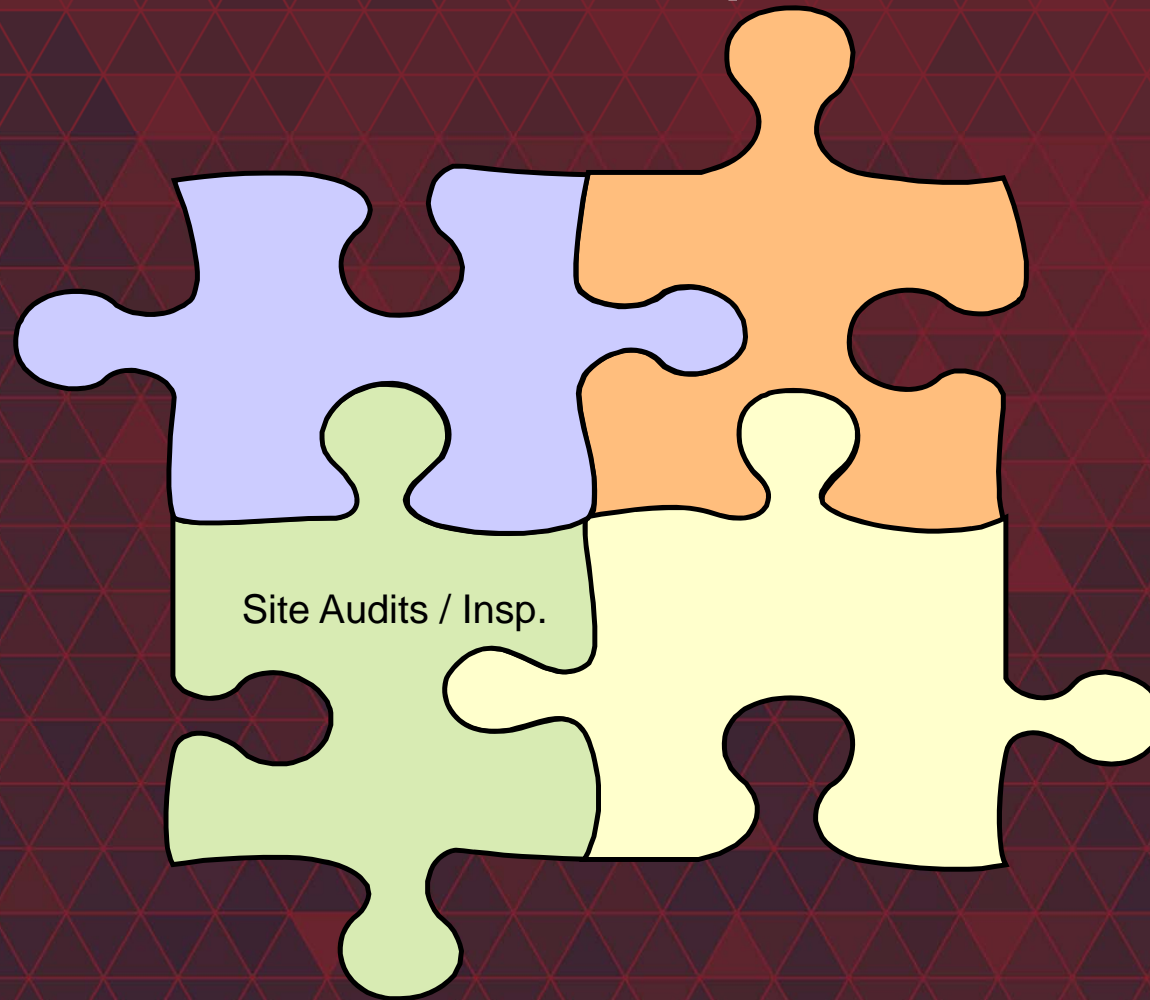
NPDES Construction SWPPP Checklist

Project #	Project Manager	SWPPP Designer
Project Name	Due Date	
Funding	<input type="checkbox"/> State Aid <input type="checkbox"/> Federal <input type="checkbox"/> Other	
SWPPP Narrative		
Project Location/Description		
Does the Project/Site Name match the plan set?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Do Project Numbers include all applicable project numbers (e.g., S.A.P., WSB)?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Does Street include an arterial street associated with the project?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Is Latitude/Longitude from the approximate centroid of the project and in "45.XXXX/-63.XXXX" format?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Comments:		
Contact Information/Responsible Parties		
Owner/Operator		
Does the Owner/Permittee contact information include: entity's name, contact person, address, phone, and email?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Does the Operator/Permittee contact information include: entity's name, contact person, address, phone, and email?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Comments:		
SWPPP Developer		
Did you update the SWPPP Developer section to include your name and contact information?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Are your SWPPP certification cards included and up-to-date?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Comments:		
Agency Contacts		
Are required permits listed in the permit table with up-to-date Agency contact information (including name, phone, and email)?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
<input type="checkbox"/> NPDES CDP (MPCA) <input type="checkbox"/> Section 401/404 (ACOE) <input type="checkbox"/> Public Waters (MNONR)		
<input type="checkbox"/> MPCA Local Government Units <input type="checkbox"/> Plan Review/Permit Rules (Watershed District)		
Comments:		
Project Description & Schedule		
Does the project description describe the proposed construction activity?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Does the project description include the city and state that the project will be constructed in?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Does the schedule include Temporary ESC, Final Stabilization, Substantial Completion, etc.?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Does the schedule include phasing and match the project's intended timeline?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Comments:		
Pre-Construction Impervious Surface and Disturbed Area Calculations		
Are the following calculations included (in acres)?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
<input type="checkbox"/> Total area to be disturbed <input type="checkbox"/> Pre-Construction Impervious <input type="checkbox"/> Post-Construction Impervious <input type="checkbox"/> Net Change in Impervious		
*Changes in Impervious > 1 acre Requires Permanent Stormwater Treatment		
Comments:		

Permanent Stormwater Management			
Permanent Stormwater Management System			
If permanent stormwater treatment is required, does the permanent stormwater management system describe how and where the permanent water volume quality will be managed?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
If permanent stormwater treatment is not required, does the permanent stormwater management system describe why it is not required (e.g., the net new impervious surfaces created by the project are less than one acre)?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Comments:			
Location of SWPPP Components			
Review Descriptions column in the Locations of SWPPP Components table. Remove any items that are not applicable (e.g., On-Off Fish Exclusion).	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
Review Title column in the Locations of SWPPP Components table. Match Descriptions to sheet titles in the plan set.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Review Location column in the Locations of SWPPP Components table. Match Locations to sheets in the plan set.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Comments:			
Existing Site Conditions, Soils, & Water Resources			
Soils and Native Topsoil			
Utilize the USDA Web Soil Survey to determine existing soil types.	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
Ensure the total of the Percentage of Project Area column = 100%.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Comments:			
Description of Receiving Waters (located within 1 mile)			
Describe all receiving waters within one mile of the project, including ditches, ponds, wetlands, lakes, etc.	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
Comments:			
Description of Impaired Waters or Water Subject to TMDLs			
Utilize the MPCA's Comprehensive Stormwater, Sediment, and Inland Waters Search to identify impaired and/or special waters within one mile of the project.	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
If the project discharges to an impaired and/or special waterbody within one mile of the project, include Appendix A requirements that are applicable to the project (e.g., Part C.1, Part C.2, Part C.3, and/or Part C.4).	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Update SWPPP narrative language to address Appendix A requirements (e.g., 7 day stabilization timeframe, 5 acres draining to common location for temporary sediment basins, etc.).	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Comments:			
Construction Phasing/Staging, Buffers, & Areas not to be Disturbed			
If project phasing will be utilized, are phasing and staging described?	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
Describe additional or different measures that will be used to protect vegetation.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Comments:			
Environmentally Sensitive Areas			
Steep Slopes			
Update stabilization timeframe to match Appendix A requirements (if applicable).	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
Comments:			
Contaminated Properties			
Utilize the MPCA's What's in my Neighborhood database to locate contaminated properties or leak sources located within and adjacent to the project limits.	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		
If contaminated properties or leak sources are located within and adjacent to the project limits, include the MPCA's ID number, status (active or inactive), and the location of the contaminated property.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Identify stormwater management measures needed to mitigate impacts identified as a result of the contaminated properties review.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Comments:			

Don't worry, I can't read this either...

Site Audits / Inspections



Site Audits

- Audits are similar to inspections, but whereas inspections are generally conducted by a regulatory party, audits are conducted by your own staff for the benefit of your project.
- Audits may be conducted by internal staff, external consultants, or a combination of both. Typically, audits are done for the purpose of truly identifying conditions of the “real site conditions”.

Source: 23 years in this business

Measurements for Progress

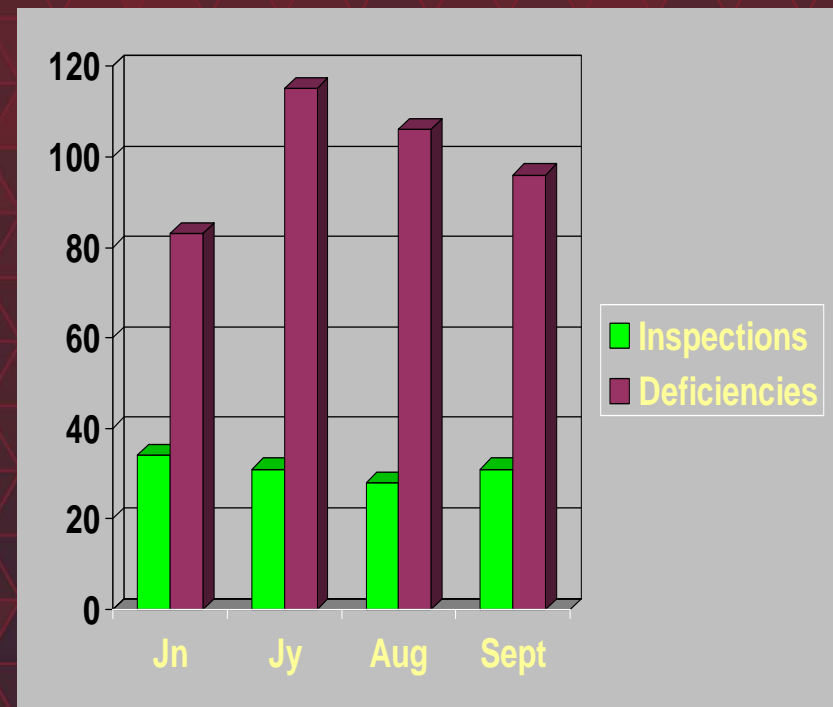


- Per site deficiency tracking system
- Response time for bi-monthly audit results
- Segmentation of construction process into quarterly grade system
- Design of reward system for compliant, well managed sites

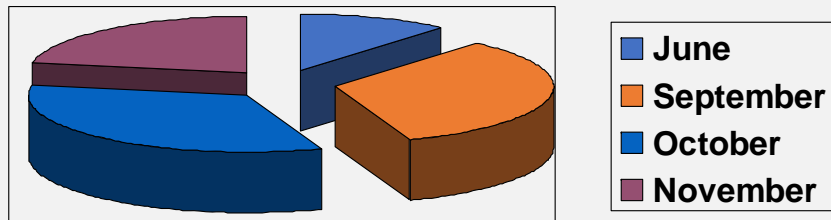
“Delighting Clients is our Mission”

What They Found

- 140 inspections
- Deficiencies average 5-6 per inspection
- Education level of deficiency correction was underestimated
- NOT process was not well defined
- Superintendent “ownership” was an unidentified issue



NOT Processes



- Developed strategy to include 3 months, 2 months, 1 month, 2 weeks....etc.
- Completed 9 NOT's in 3 months....
- Clarified what our challenges are, and a clear plan to address these issues

Site Inspections



- Identifying specific non compliance issues
- Making owner/manager aware of issues
- Gathering information to document compliance status
- Verifying corrective action (or lack of corrective action)
- Ensuring any self reporting data
- Following through on outstanding items

Observation in Behavior Change

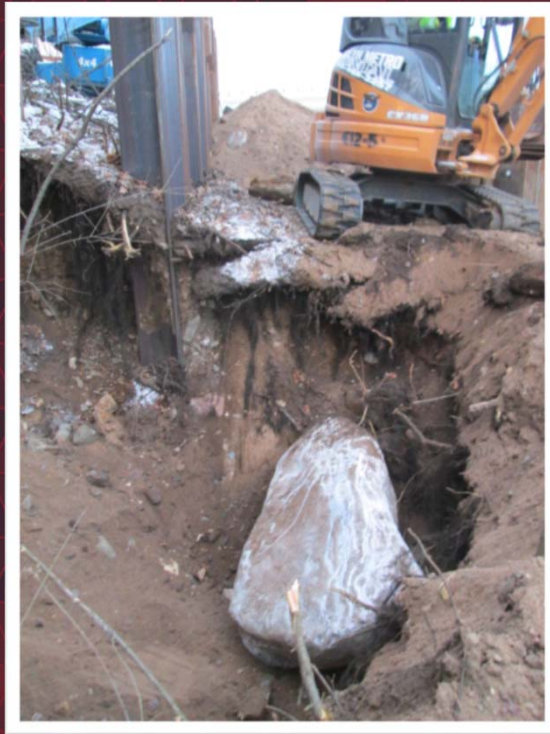
- Initial concerns:
 - Off-site track out
 - Silt fence
 - Final seeding practices
 - Reporting concerns
- More advanced concerns:
 - Temporary seeding challenges
 - Debris/waste management
 - NOT processes
 - Dewatering practices
 - Check dams and velocity concerns

“Take Away” Messages

- This can be a *cost savings* for an organization
- There are multiple opportunities for increasing *education* within each organization for employees
- Professional *certifications* are a way to differentiate yourselves among your competition



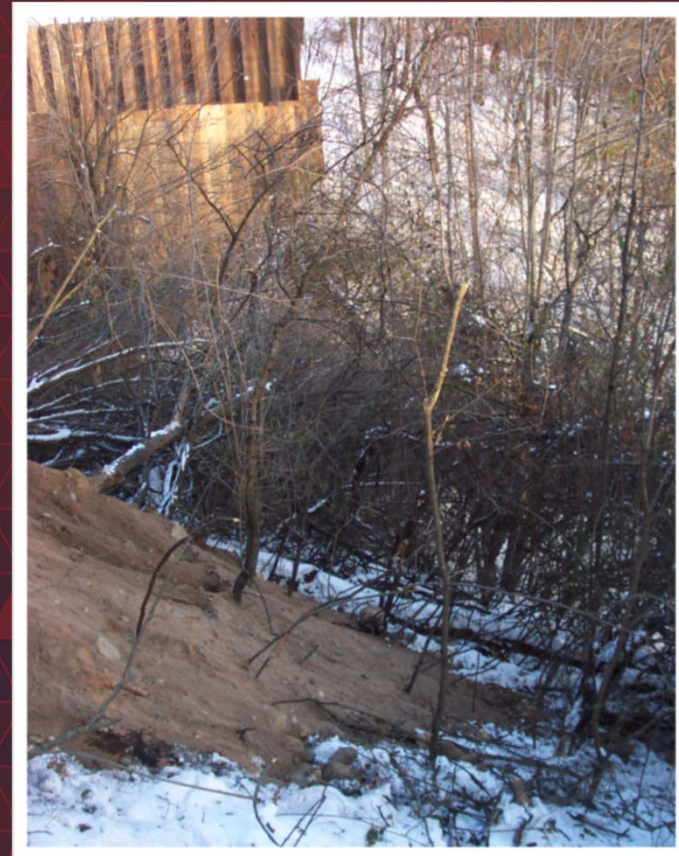
Keep in Mind...



- Have a clearly stated vision; and gain buy-in
- Develop and communicate realistic and measurable goals – make them align with your vision
- Goals should be supported by targets that describe results
- Use a balance of strategies (education, inspection, enforcement)

Overcoming Obstacles

- Creating negative consequences
- Having timely, predictable and appropriate enforcement actions
- Making punishments outweigh benefits of non-compliance
- Using strategies the “potential violators” hold sacred (money)



What Drives Behavior?



- Enhanced Efficiency
- Lower Costs
- Desire to Create a Positive Public Image
- Improved Relationship with Clients
- Enhanced Business Relationships
- Fewer Inspections, Less Scrutiny
- Faster Project Approvals

What Are Your Carrots?

- Compliance assistance
- Compliance Incentives
- Recognition



What Are Your Sticks?



- Fines
- Penalties
- Work Stoppage
- Negative Press
- Permit Approvals

Resources

- CPESC, Inc. (*CPESC, CPSWQ, CESSWI*)
 - www.cpesc.org
- Environmental Protection Agency
 - http://cfpub.epa.gov/npdes/home.cfm?program_id=6
- Construction Industry Compliance Assistance
 - <http://www.cicacenter.org/>
- EPA Region 10
 - <http://www.epa.gov/region10/>
- International Erosion Control Association
 - www.ieca.org
- Protecting Water Quality in Urban Areas, Plants, SW Manual
 - www.pca.state.mn.us/water/pubs/sw-bmpmanual.html
- Minnesota Urban Small Sites BMP Manual
 - www.metrocouncil.org

Resources (contd.)

- **Straight Talk Strategies for Environmental Compliance**
www.foresterpress.com
- **Erosion Draw**
www.erosiondraw.com
- **Bio Draw**
www.biodraw.com
- **Esenss**
www.salixaec.com
- **Construction Site Erosion and Sediment Controls**
www.destechpub.com
- **Dirt Time with John McCullah**
www.dirttimetv.com
- **Erosion and Sediment Control Network**
www.escn.tv
Designing for Effective Sediment and Erosion Control on Construction Sites
www.forester.net
- **Stormwater Permitting: A guide for builders and developers**
www.builderbooks.com

Thanks to this Environmental Compliance Team!



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TH 169
12 MS4 Clients



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TH 371
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Thank You.

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