



# Findings and Orders

## Ohio's Incentive Based Erosion & Sediment Control Construction Specification







# Ohio's Construction General Permit

- Requires the development of a SWPPP on Earth Disturbing Activities (1 Ac. and greater)
- Includes Post-Construction BMP requirements
  - Typically regulated through MS4 Permit
  - Ohio's Post-Construction requirements are statewide
- Notice of Intent – filed with OEPA
  - No SWPPP plan reviews required – Except watershed specific permits
  - MS4 Permit addresses program level oversight
  - Requires development of SWPPP prior to submitting NOI – ODOT is exception (Memorandum of Understanding)
- Obligation to comply is solely the responsibility of the “Operator” of the project
  - ODOT & Contractor are co-operators



# Once upon a time in 2004...

- ODOT prepares all SWPPP & provides construction inspection
- \$90,000,000 Project with \$59,000 BMP budget
- Environmental Group complaint(s)
- NOD + NOV
- Threaten Law Suit to OEPA
- OEPA F&Os
  - Fines & mitigation
  - Plan to educate
  - Liaison with the Dept.
  - Project level response plans
  - Compliance shall be facilitated through the contract



# As a result...Introduce SS832

- ODOT no longer prepared SWPPP
  - No ODOT Erosion & Sediment Control Manual
- Compliance became a contract element
  - SWPPP preparation, inspections, SWPPP updates
  - ODOT tracks quantities of BMP to compensate the contractor
- Contractor shares in compliance responsibility
- SS832 is not a compliance guideline, it simply provides a mechanism that describes how to compensate a contractor for E&S controls



# SS 832 Fundamentals

- ODOT files initial NOI with OEPA and receives CGP Facility #
  - MOU allows variance of having SWPPP prepared prior to NOI filing
- Two bid items are added to construction plans
  - SS832 Erosion & Sediment Control Item (encumbered amount)
  - SS832 Stormwater Pollution Prevention Plan (competitive bid item)

## Supplemental Specification 832 Cost Breakout

SWPPP Bid Item:  
Contractor  
competitive bid item

SWPPP Design

Inspections

SWPPP Revisions

Encumbered Amount  
ODOT Plan preparer –  
BMP Estimator tool

Estimated bank  
account that  
pays a pre-  
determined  
amount for each  
BMP unit

04/30/2012

# Temporary Erosion Control Estimating English Units

Version 10/18/13

Project Name

PID

Estimated Construction Cost

Project Type

Planned Construction Seasons

clear entries

Total of Temporary Erosion Control

Percentage of Costruction Cost

Percentage less than 1% of construction - Recheck your inputs

**Sediment Basins**

Project Earth Disturbed Area (acres)

Est. Contractor Disturbed Area (acres)

Total Acres

CLICK FOR INPUT HELP

Do not enter information on Culvert Drainage Area

**Contributing Drainage Area to Culverts**

CLICK FOR INPUT HELP

Culvert 1

Culvert 2

Culvert 3

Culvert 4

Culvert 5

Culvert 6

Culvert 7

Drainage Area (acres)	Settling Basin Size (cyd.)	Temporary Sediment & Erosion Cost
<input type="text"/>	<input type="text" value="0"/>	
<input type="text"/>	<input type="text" value="0"/>	
<input type="text"/>	<input type="text" value="0"/>	
<input type="text"/>	<input type="text" value="0"/>	
<input type="text"/>	<input type="text" value="0"/>	
<input type="text"/>	<input type="text" value="0"/>	
<input type="text"/>	<input type="text" value="0"/>	

**Constuction Seeding and Mulching**

CLICK FOR INPUT HELP

(Square. yd.)

Seeding Area

(\$/Square Yard)

**Perimeter Filter Fabric Fence**

CLICK FOR INPUT HELP

Length of project (ft)

(\$/Foot)

**Temporary Sediment and Erosion Control Best Management Practices (BMP)  
Unit Price Schedule, October 2013**

**EROSION CONTROL PRICES**

Item	Unit	Description	Project Identified EDA (acres)					Fixed Price	Comment
			<5	5 to 10	10 to 15	15 to 20	>20		
			Price (\$)						
832	Sq. Yd.	Construction Seeding and Mulching	1.00	0.92	0.83	0.75	0.74		Based on NOI acres
832	Feet	Slope Drains						12.00	
832	Cu. Yd.	Sediment Basins and Dams						13.50	[3]
832	Feet	Perimeter Filter Fabric Fence	4.05	3.10	2.85	2.55	2.30		Based on NOI acres
832	Feet	Filter Fabric Ditch Check						11.00	
832	Feet	Inlet Protection						11.25	
832	Cu. Yd.	Dikes						3.00	
832	Sq. Yd.	Construction Ditch Protection						2.50	
832	Cu. Yd.	Rock Channel Protection, Type C or D with Filter						55.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D without Filter						50.00	[1]
832	Cu. Yd.	Basin Sediment Removal						10.00	
832	Cu. Yd.	Miscellaneous Sediment Removal						15.50	
832	Feet	Construction Fence						5.75	
832	Sq. Yd.	Construction Mulching	0.79	0.71	0.58	0.56	0.54		Based on NOI acres
832	Sq. Yd.	Winter Seeding and Mulching	1.08	1.00	0.92	0.85	0.81		Based on NOI acres
832	Cu. Yd.	Construction Entrance						75.25	

[1] Add the following amount per cubic yard for the cost of Type C or D Rock materials.

[3] Add the amount for the appropriately sized surface dewatering device for sediment basin outlet.



# SS 832 Fundamentals

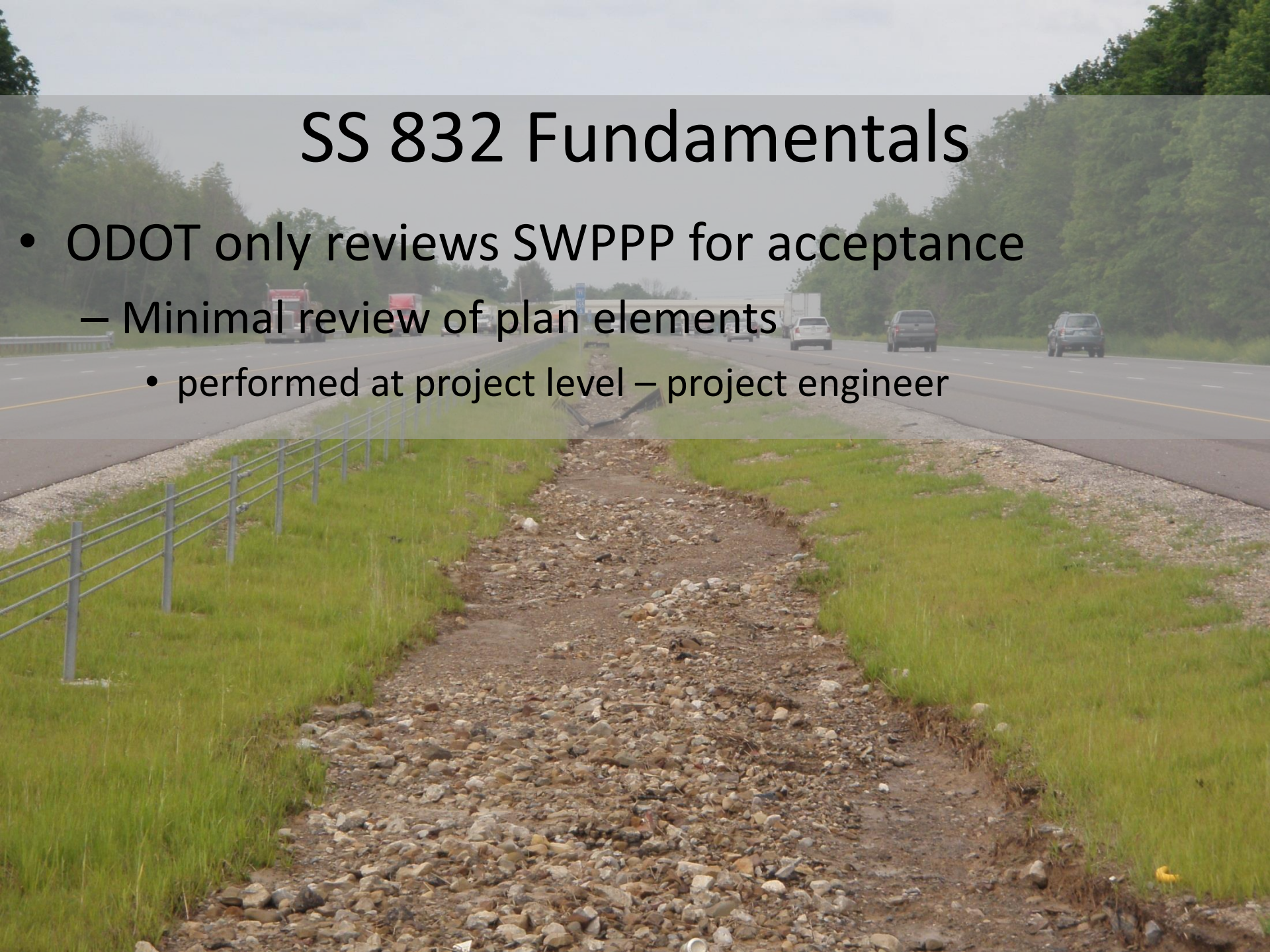
- Once awarded – Contractor submits co-operator request with CGP Facility #
- Contractor becomes co-operator
- Contractor develops a SWPPP appropriate for the work
  - Must be prepared by Professional Engineer & Certified Professional in Erosion & Sediment Control





# SS 832 Fundamentals

- ODOT only reviews SWPPP for acceptance
  - Minimal review of plan elements
    - performed at project level – project engineer





# Reviewing the Contractor's SWPPP

- SS832.10 ODOT Acceptance of the SWPPP
- ODOT may critically assess...
  - Delineate the watersheds
  - Supporting Calculations (minimal)
    - Silt fence
    - Sediment pond geometry and drawdown
  - Trained Personnel
  - Staging / sequencing the work
  - BMP quantities for entire project
    - Is estimated amount within limits... does it appear adequate for entire project?
  - *Does the SWPPP appear to be reasonably compliant?*

02/03/2012



# SS 832 Fundamentals

- If accepted, authorizes the start of work
- Contractor installs BMP per the SWPPP and is paid per item each installed
- Post-Construction BMP are not compensated under SS832 – have their own item numbers





# Inspections & SWPPP Updates

- Contractor's inspector provides weekly and after 0.5" rainfall event inspections
- CPESC/P.E. is required to review weekly reports and re-certify compliance monthly
- The SWPPP is "amended" as the work progresses
- **Contractor is compensated for appropriate BMPs only**

04/30/2012



# Projects that Do not require an SWPPP

- All projects *should* contain SS 832
- When a SWPPP is not required by the CGP, the Contractor does not get compensated for the SS832 lump sum
- The Contractor must still provide a written plan describing BMP to be used on the project

02/07/2012



# When a Contractor does not comply...

- SS832.04 Provisions
- Provide notification to Contractor that they are not in compliance with CGP
  - This is formal notice that your construction activity is not compliant with the law...Site the provisions 832.05
  - The BMPs installed on the construction site are not consistent with the SWPPP. You are required to correct these inconsistencies or submit a revised SWPPP that is sealed by your CPESC/PE storm water designer.

04.06.2011 12:06



## When a Contractor does not comply...

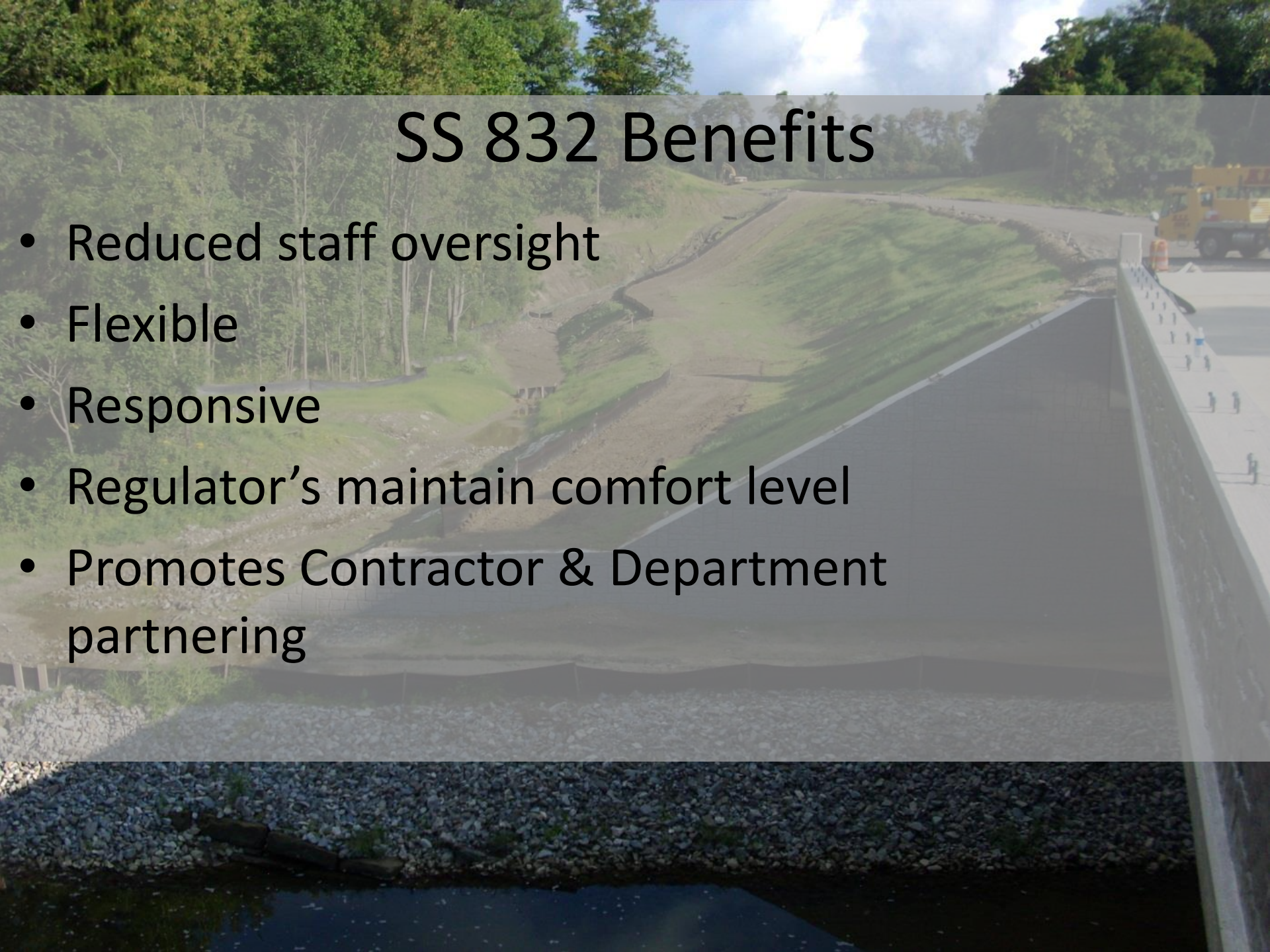
- Correct and mitigate non-compliant conditions within 48 hours of notification
- Failure to correct the conditions may result in suspension of the work for the entire project until such corrections are performed
- Repeated non-compliance may result in removal of the project superintendent

07/20/2011



# SS 832 Benefits

- Reduced staff oversight
- Flexible
- Responsive
- Regulator's maintain comfort level
- Promotes Contractor & Department partnering





# SS 832 Lessons Learning...

- Difficult to manage with limited staff
  - E&S is a low cost, low priority item in the context of the overall project
- Set project level contract provisions
- Project submittals – set quality standards
- Training & education is essential
- Difficult to control the contract elements
  - Too little BMP
  - Too many BMP
  - Selection of BMP





# Ohio EPA Audit

- No US EPA involvement
- Notified in 2012 - Construction site inspections conducted in December of 2013
- No report issued to date
- Still waiting internal process audit
- Possible findings...
  - More Dept. oversight to control quality
  - More detailed review of SWPPP
  - Internal quality control assessment



# Questions



- [Hans.Gucker@dot.state.oh.us](mailto:Hans.Gucker@dot.state.oh.us)
- 614-387-3058