SCI Involvement 2008-2010

- Over 2 years assessing ESC program
- 2008-Monitored sites in Districts 2-9
- Focus on site conditions
- 2009-Monitored sites statewide
- Additions to Scope of Work included SWPPP Design Reviews
Overview

- Design
- Budget
- Contractor Performance
- IONs
- Receiving Waters
- Suggestions
SWPPP Requirements

- **Intended sequence of major soil disturbing activities**
- **Identification of potentially erosive areas**
- **Site specific scheduling of BMP implementation**
ESC Design and Detail

- Include existing topography
- Erodible soils/areas
- Increase pay item quantities
- More info on phasing/sequencing
- Better protection of waterbodies
Erosion Control General Notes

Description of Stabilization Practices at the Beginning of Construction

Description of Stabilization Practices During Construction

Description of Structural Practices after Final Grading
Project Phasing/ Sequencing

- 45% said generally not enough phasing info
- 45% said construction conditions dictate phasing (i.e. you can’t accurately plan phasing during design)
- 10% said phasing is essential and designers should make site visits to verify the suitability of proposed plans
Pre-Construction Meeting

- ESC requirements should be discussed
- BMP selection/ substitutions & problem areas (Designer input?)
- Engineer and Contractor need to clearly communicate regarding assumed responsibilities and ambiguous costs
- Project Phasing
- Minutes from these meetings help document responsibilities
Pre-Construction Meetings

- Should be held at both the District Office and on project site
- 50% held at both
- 35% held only at office
- 15% had no pre-construction discussion of ESC
Construction BMPs

- Emphasis should be on temporary stabilization
- Waterbodies
- Erosion control > Sediment control
Winter Shutdown Protocol

- Critical areas often lay dormant during winter months
- ESC project phasing
- Pre-shutdown SWPPP modifications & BMP maintenance
- Erosion, Sediment, and Runoff Controls
- Active permit monitoring required
Deficiency Deductions

- 10% Threatened its use
- 90% Not used
- 1 deficiency deduction levied
- Almost universally felt that it is an effective tool (especially on big jobs)
- Small % felt it was too significant ($), making REs less likely to enforce for smaller issues
Suggestions for Improving Contractor Performance

- Allow another contractor to come in to correct deficiencies and charge the Prime the associated cost
- Allow sub-contractor to do initial structural BMP installation but require Prime to maintain them
- Train contractors on IDOT ESC specs
Contractor Performance

- Hand holding/ baby sitting by RE
- RE must supervise proper installation
- Maintenance only as instructed
- Sub-contractor availability/ performance
- Contractor complaints about maintenance costs compared to bid estimates
Non-Compliance

- Refers primarily to events or conditions that lead to the discharge of sediment beyond the site limits (Incidence of Non-Compliance (ION))
Incidence of Non-Compliance

- Filing an ION will not result in an inspection from a regulatory agency (Complaints from passers-by or adjacent land owners will)
IONS

-Filed on 50% of projects
-15% felt that more IONs could have been filed over the course of their project
-Still feel it raises a red flag
-So much rain that they quit sending them
-85% felt that IONs were properly reported and understand the requirement
IONS?

- Culverts
- Creek
- Sed. accumulation
- Erodible temp crossing
- Sediment used as fill for crossing
- Sediment migration toward stream
- Maintained lawn
- Clean drainage
- Flow
- Outfall
- Sed. accumulation
- Bare slopes
- Sediment migration toward stream

Maintained lawn
Clean drainage
On-site Tributary Management
“Temp diversion will likely be required...means and methods left to Contractor/ RE...should follow specs of 404/ 401 permit.”

BMPs/ Stabilization
Pumps

- Pumps can create turbid environments that lead sediment drainages
- Discharge to Basin or Dirt Bag
- No IDOT instructions to field personnel to date regarding this matter
Temporary Creek Crossings

- Location left to Contractor and RE
- General specs include flow pipes and clean rock
- Sediment prohibited as fill
- Pre-Con topic

Clean rock should be in place rather than finer sediments

CMP allows flow beneath old piers
REs #1 Suggestions
(95% felt ESC has improved)

- Increase quantities of ESC pay items
- Make Prime Contractor responsible for ESC maintenance
- Train and use qualified inspectors in each district
- More designer involvement
- Clarify project requirements/restrictions for work in streams
- Presentations and training to refresh and stay current on regulations and requirements
Effluent Limitations Guidelines (ELGs)

- ≥ 10 acres at one time
- 280 NTUs
- Daily sampling at all discharge points
- Monitoring exempt from 2yr/24 hr events
- Monitoring results are an average of readings taken/day
Beyond Construction Sites
(Municipal Relevance)

- Municipal construction sites
- Ordinances
  - Revenue
  - Environmental Protection
  - MS4 Overlap
- Stormwater Master Plans
  - Grant Eligibility
  - Flood Plain Management Tool
Thank You

Any Questions?
SCI Engineering, Inc.