Connecticut Department of Energy and Environmental Protection
CT STORMWATER PROGRAM

Construction Stormwater Permitting

1992 – CT Authorized by EPA to develop CGP
- Most recent reissuance 2013
- Regulates construction >1 acre
- DEEP Stormwater staff inspects & enforces
- Locally approvable – Mostly private construction
  - Reviewed by Qualified Professional Engineer
- Locally exempt – Mostly state/federal
  - Reviewed by DEEP Stormwater staff
- Solar bypasses local approval – Siting Council
- Considered Locally exempt
Connecticut Department of Energy and Environmental Protection

CT STORMWATER PROGRAM
Solar Array Construction

2013 CGP did not consider Solar Arrays
- Extremely large (>100 ac) disturbed area
- Design makes phasing difficult/impractical
- Frequently on hillsides (slopes)
- Contract timelines too short (< 1 year)
- Designs not adequate to protect large areas
- Contractors not following plans
- Lack of independence = unreliable inspections
- Soil compaction increases runoff
- Ineffective/untimely corrective actions
- Inadequate post-construction controls
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Sprague - 200 acre clear cut

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Lebanon – no stabilization

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East Lyme – erosion/stabilization failures

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Sprague - “Finished” basin
Fusion Solar - Sprague
CT STORMWATER PROGRAM

Fusion Solar - Sprague

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East Lyme – Basin failure
East Lyme – sediment deposits
East Lyme – stream bank high flow undercutting
CT STORMWATER PROGRAM

East Lyme – Post-construction erosion

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Connecticut Department of Energy and Environmental Protection

**CT STORMWATER PROGRAM**

**Enforcement**

**Enforcement Actions Taken**

- Three major enforcement cases
- Cease and desist orders
- Consent orders
- Penalties from $200,000 - $575,000
- Letters of credit – $15,000 per acre
- Two year closeout process
CT STORMWATER PROGRAM
Solar Construction

How to Address Problems?

- Review other large projects
- Review other states’ procedures
  - MN, MD, PA, NH
  - Minnesota solar calculator?
- NEIWPCC Stormwater Workgroup
- Discussions with consultants
CT STORMWATER PROGRAM

CGP Solar Appendix I

Design & Construction Measures

- >15% considered all impervious
- Increase stabilization as slopes increase
- Provide adequate spacing between rows
- Qualified PE for routine inspections
- Inspection reports submitted to DEEP
- District conducts periodic inspections
- District conducts Post-Const/Final Inspections
- Registrant provides letter of credit

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CT STORMWATER PROGRAM
CGP Solar Appendix I

Post-Construction Design Measures

- Consider panel orientation for drainage pattern
- Conduct pre- & post- runoff calculations
- Maintain non-erosive velocity & volume at property line
- Site specific soil mapping
- Conduct complete hydrologic analysis
- Downgrade Hydrologic Soil Group one level
  - Ex. HSG A ➔ B, HSG B ➔ C, etc.
CT STORMWATER PROGRAM
Helpful Links

www.ct.gov/deep/stormwater

https://nemo.uconn.edu/ms4/
Connecticut MS4 Guide

This guide was developed by NEMO program staff within the UConn Center for Land Use Education and Research with funding from the Connecticut Department of Energy and Environmental Protection (DEEP). It is part of a broad outreach effort to provide guidance, training, tools and other support to help Connecticut MS4 communities and institutions comply with the revised MS4 general permit. This website is frequently updated and materials will be added throughout the 5-year project period (Fall 2016 – Fall 2021) based on deadlines for various requirements and community needs or requests.

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Construction Site Stormwater Runoff Control
Post-construction Stormwater Management
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