



# **EPA CONSTRUCTION GENERAL PERMIT STORMWATER POLLUTION PREVENTION PLAN: PUTTING IT ALL TOGETHER**

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NH Chapter - ASCE**

# CGP SWPPP: Putting It All Together

- Introduction – Organizations - Definition
- Site Construction Activities: EPA NPDES CGP Eligibility Conditions
- Essential Elements of the SWPPP  
(2017 Construction General Permit)
- Components of the SWPPP
- Record Keeping and Modifications to the SWPPP
- Notice of Intent & Notice of Termination - NeT System
- Inspections: Construction Activity & Dewatering
- Watershed Evaluation – Impaired Waters, Impairments, & TMDL
- Resources
- Perspectives: Owner, Designer, Contractor, & Regulators.

# CGP SWPPP: Putting It All Together

- Attendance – Contractors, Designers, Engineers, Scientist, Owners?
- Introduction – Kenneth A. Berry, PE, LLS, CPSWQ, CPESC, CESSWI
  - Licensed Land Surveyor, 1991
  - Professional Engineer, 2013, Civil Engineer – Construction Concentration (NH, ME)
  - CPESC – Certified Professional of Erosion & Sediment Control (EnviroCert International Inc.)
  - CESSWI – Certified Erosion, Sediment and Stormwater Inspector
  - CPSWQ – Certified Professional of Stormwater Quality
  - Former Instructor / Presenter for EnviroCert International Inc.
  
  - US Army – Army Corp. of Engineers
  - Berry Surveying & Engineering, Barrington, NH
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  - BS&E – Principal & VP – Technical Operations

Ken Berry



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# Gravel Wetland System

## Construction Stabilization & Diversion



Zoom: 1X



## Rain Garden #2 – Bio-Retention System

Failure to prevent Erosion & Provide Sediment protection



ECI would like to congratulate our newest Certified Professionals!



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Arcadia Williams  
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Michael Avery  
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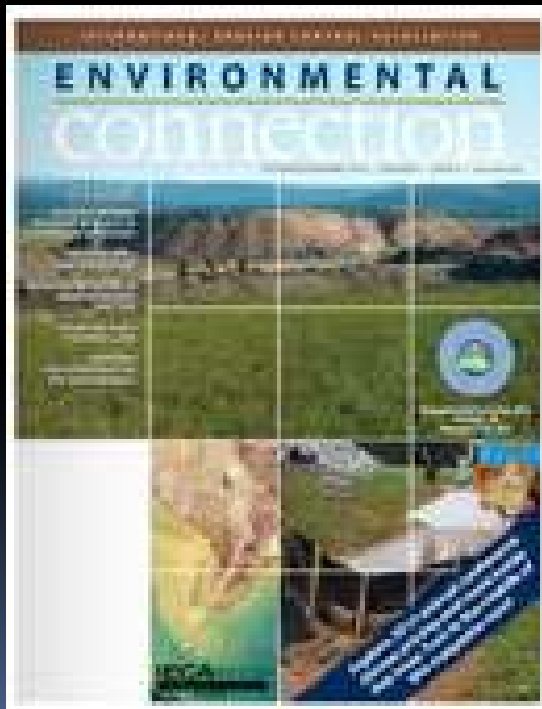


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# CGP SWPPP: Putting It All Together

- **SWPPP – Definition – Appendix A, 2022 CGP**
  - “SWPPP” (Stormwater Pollution Prevention Plan) – a site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater controls to reduce or eliminate pollutants in stormwater discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.”

# CGP SWPPP: Putting It All Together

- Stormwater Pollution Prevention Plan
  - Your sites construction activity:
    - Will disturb one or more acre of land or ...
    - Will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land.
  - Your site is located in an area where EPA is the permitting authority.
  - Source: National Pollution Discharge Elimination System, General Permit For Discharge From Construction Activities, 2017 Construction General Permit (CGP), US EPA, February 16, 2017, Expires February 2022

# CGP SWPPP: Putting It All Together

- **Essential Elements of the SWPPP – US EPA, NPDES, (CGP 2012)**
  - **Stormwater Control**
  - **Erosion & Sediment Control Requirements**
  - **Pollution Prevention Requirements**
  - **Construction De-watering Requirements**
  - **Site Inspection Requirements**
  
  - **Source: National Pollution Discharge Elimination System, General Permit For Discharge From Construction Activities, 2012  
Construction General Permit (CGP), US EPA, June 27, 2019, Expires February 16, 2022**

# Equivalent E&SC for 50-Foot Buffer

Rochester, NH



# CGP SWPPP: Putting It All Together

- **Components of the SWPPP – US EPA, NPDES, CGP 2017**
  - **All Site Operators & Stormwater Team**
  - **Nature of Construction Activities – Specifics (Area, Impact, MS<sub>4</sub>, Discharge Points)**
  - **Site Map**
  - **Non-stormwater Discharges**
  - **Stormwater Control Description**
  - **Inspection, Maintenance, & Corrective Action Requirements**
  - **Staff Training**

# CGP SWPPP: Putting It All Together

- Components of the SWPPP – US EPA, NPDES, CGP
  - Compliance with other Federal Mandates
    - Threatened & Endangered Species – USF&G / NOAA
    - Historic Properties
    - Safe Drinking Water
  - Certifications: Operators / Contractors / Subcontractors / Delegations
    - Signatures
  - Source: National Pollution Discharge Elimination System, General Permit For Discharge From Construction Activities, 2017 Construction General Permit (CGP), US EPA, February 16, 2017, Expires February 2022

# Final Stabilization – Mechanical Contractor

## Non-stormwater Erosion



# Final Stabilization – Mechanical Contractor

Teamwork throughout the Team





# Final Stabilization – Mechanical Contractor

Earthwork Contractor was not happy.



# CGP SWPPP: Putting It All Together

- EPA NOI & NOT - SWPPP Modifications & Record Keeping
  - Notice of Intent – NeT System
  - Requirement to Post a Notice with a sign on the property
  - Notice of Termination - 3 Year File Storage
  - On Site Availability of the SWPPP
  - SWPPP Amendments – Working Flexible Document
    - Excavation Record
  - Inspection Records – Filed within 24 Hours
  - Corrective Action – Corrections within 24 Hours

## SWPPP: Putting It All Together

- **Inspections – US EPA, NPDES, CGP 2022**
  - **Responsible Person**
  - **Inspection Frequency**
  - **Increase / decrease in Inspection Frequency**
  - **Areas that Need to Be Inspected**
  - **Requirement for Inspections**
  - **Inspection Reports**
  - **Inspections by EPA**
  - **Source: National Pollution Discharge Elimination System, General Permit For Discharge From Construction Activities, 2017 Construction General Permit (CGP), US EPA, February 17, 2022, Expires February 2027**

# Perimeter Control Road Construction Initiation

Proper prioritization & installation



# Perimeter Control Road Construction Initiation

Performance Criteria & Failure



# Rain Garden Bio-retention System

## Poor perimeter control Maintenance



## Rain Garden #2 Bio-retention System

Lack of erosion protection and poorly maintained perimeter protection.



# Rain Garden Bio-retention System

## Sedimentation and Siltation





# Rain Garden Bio-retention System

## Rolled Erosion Control Blanket Stabilization



# Rain Garden Bio-retention System Berm Stabilization



# Lot Development

## Lot 3 & 4

Premature clearing of a lot without erosion protection



# Lot Development Lot 3 & 4

Premature clearing without erosion protection.



# Lot Development Lot 3 & 4

Failure of the perimeter control impacting the buffer.



# Lot Development Lot 3 & 4

Perimeter Control application requirements.



# Lot Development Lot 3 & 4

Failure with buffer clean up the result.



# SWPPP: Putting It All Together

- **Description of Stormwater Controls**
  - Each Erosion & Sediment Control measure – Project Specific Details
  - Natural Buffers and / or equivalent sediment Controls
  - Perimeter Controls and Linear Construction Sites
  - Sediment Track-out Controls
  - Sediment Basins
  - Treatment Chemicals
  - Stabilization Measures
  - Spill Prevention and Response Procedures
  - Waste Management Procedures
  - Application of Fertilizers



# Silt Fence Installation Who was he kidding?

Actual perimeter control application



# Level Spreader Stone Check Dam

Actual solution to a sedimentation issue.



# Rain Garden - Stabilized

Positive example



Date & Time: Mon Oct 12 11:03:36 EDT 2015  
Position: +043.17321° / -070.86292°  
Altitude: 95ft  
Datum: WGS-84  
Azimuth/Bearing: 318° N42W 5653mils (True)  
Elevation Angle: -10.0°  
Horizon Angle: +01.0°  
Zoom: 1X



# Subsurface Gravel Wetland System

Well stabilized stormwater practice



Date & Time: Mon Jun 22 09:45:11 EDT 2015  
Position: +042.98027° / -070.91597°  
Altitude: 111ft  
Azimuth/Bearing: 266° S86W 4729mils (True)  
Elevation Angle: -05.1°  
Horizon Angle: -00.1°  
Zoom: 1X



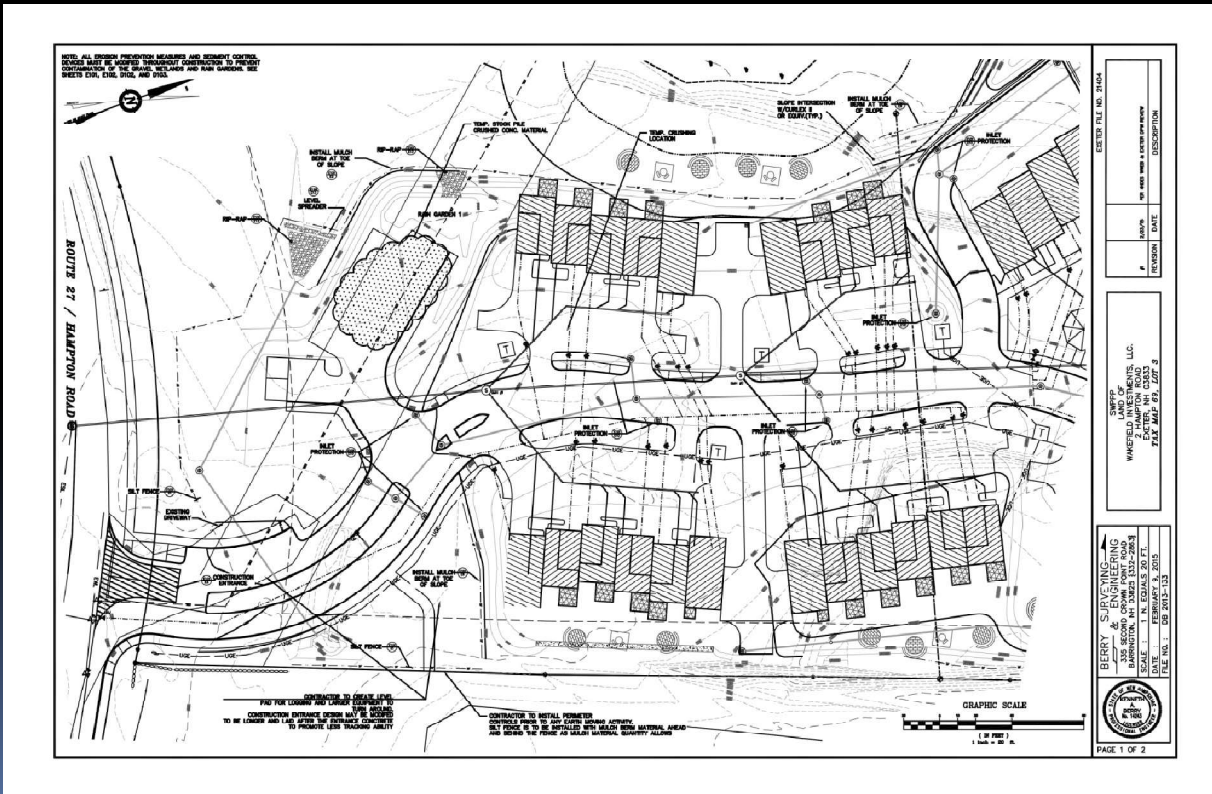
# Level Spreader Gravel Wetland

## Inspection Documentation



# Erosion & Sediment Control Plan

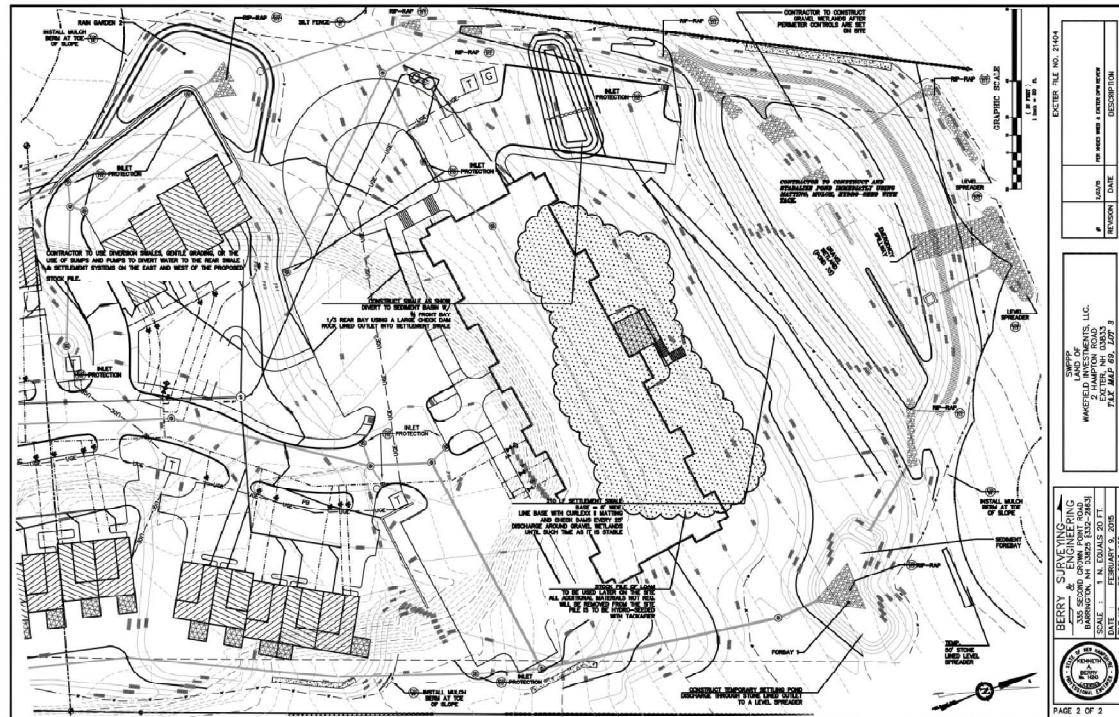
## SWPPP Documentation



# E&S Plan

## CGP SWPPP: Putting it all together

### SWPPP Documentation



## CGP SWPPP: Putting It All Together

- **Watershed Evaluation, Impaired Waters, & Impairments**
  - **NHDES Watershed Report Cards – Surface Water Quality Assessment**
  - **2020 Draft 303(d) List – NHDES Watershed Management Bureau – Impaired Waters**
  - **NHDES OneStop GIS**
  - **Outstanding Resources Waters (ORW) and Impaired (4A and 5) Waters, Stormwater Program (AoT, Shoreland Protection) List of ORW and Impaired (4A and 5) Waters for CGP NOIs [[PDF](#) | [XLS](#)] (Updated May 10, 2012)**
  - **NHDES Total Maximum Daily Load Program (TMDL)**
  - **NHDES Stormwater Manual(s)**
  
- Source: [CLARIFICATION of Section 9.1.1 \(State of New Hampshire Conditions\) and other New Hampshire specific information for the U.S. EPA 2017 NPDES Construction General Permit \(CGP\)](#), NH Department of Environmental Services, January 20, 2017, NPDES-cgpclarification.pdf



## CGP SWPPP: Putting It All Together

- Impaired Waters, Outstanding Resource Waters (ORW - Tier 3), NHDES Tier 2 Waters
- Normal Inspection Schedule
  - Once every 7 days
  - Once every 14 days and after a storm event of 1/4-inch storm event.
- Increased in Inspection Frequency
  - Sediment Impaired or Nutrient Impaired Waters
  - Tier 2, 2.5, Tier 3 Waters for anti-degradation purposes
  - Once every 7 days and after a storm event of 1/4-inch storm event.
- Stabilization Requirements:
  - Normally a 14 day stabilization requirement
  - Discharge into a sediment or nutrient impaired water
  - Discharge into a Tier 2, 2.5, or 3 water for anti-degradation purposes
  - Seven day stabilization requirement.

# CGP SWPPP: Putting It All Together

- Impaired Waters, Outstanding Resource Waters (ORW - Tier 3), NHDES Tier 2 Waters
- Dewatering
  - Daily Inspection
  - Turbidity Discharge Sampling – Daily
  - Turbidity Benchmark 50 NTU
  - Reporting & Recordkeeping 3.3.4 – Quarterly eReporting Tool (NeT)

## Inspection Requirements – Qualified Person – Part 4.1 & 6.3

- Training Requirements
- Grandfather clause until February 17, 2023
- Three part requirements & qualifications.
- EPA Course (Webinar) & Exam
- Other Certification – EnviroCert International Inc. & Others

## CGP SWPPP: Putting It All Together - Resources

- National Pollution Discharge Elimination System, General Permit For Discharge From Construction Activities, 2017 Construction General Permit (CGP), US EPA, February 17, 2022, Expires February 16, 2027
- Developing Your Stormwater Pollution Prevention Plan, A Guide for Construction Sites, US EPA, May 2007 (Not currently available)
- 2022 Construction General Permit (CGP) - Fact Sheet, US EPA cgp2012\_finalfactsheet.pdf, February 2022
- CLARIFICATION of Section 9.1.1 (State of New Hampshire Conditions) and other New Hampshire specific information for the U.S. EPA 2017 NPDES Construction General Permit (CGP), NH Department of Environmental Services, January 20, 2017, NPDES-cgpclarification.pdf

## CGP SWPPP: Putting It All Together - Resources

- EPA, Example Construction SWPPP: Small Commercial Site (<5 Acres), US EPA, [exampleswppp\\_smallcommercial.pdf](#) & [exampleswppp\\_smallcommercial\\_app.pdf](#)
- SWPPP Template, US EPA, [sw\\_cg2022\\_swppptemplate.doc](#)
- Erosion Control Magazine, Forester Media & International Erosion Control Association, Region One, [erosioncontrol.com](#), Periodical
- Stormwater - The Journal For Surface Water Quality Professionals, Forester Media, [stormh2o.com](#), Periodical
- Forester University, [foresteruniversity.net](#) & Forester Press, [foresternetwork.com/books](#)
- EnviroCert International Inc.

## CGP SWPPP: Putting It All Together - Resources

- National Pollution Discharge Elimination System, General Permit For Discharge From Construction Activities, 2022 Construction General Permit (CGP), US EPA DRAFT
- Section 6.3 Training Requirements for Persons Conduction Inspections
  - EPA Construction Inspection Course
  - Inspection Certification or License meeting the EPA Criteria
  - This is a major step compared to the 2017 CGP and Stormwater Team
- No change in the definition of the SWPPP and only minor changes proposed to Section 7
- Expansion and explanation of sediment control along the perimeter. (2.2.3)
- Dewatering Protections to prevent erosion. (2.4.5) Inspections (4.6.3)
- Clarification and winter expansion of Inspection Requirements. (4.2.2)
- Corrective Action: Observed Sediment Plume (5.1.5)



Thank You

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# CGP SWPPP: Putting It All Together

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