

## Level 2

### Design Principles for Erosion Prevention and Sediment Control for Construction Sites Recertification Course

#### 2021 CGP Quick Reference Guide

##### CGP Coverage:

- Coverage under current 2021 Construction General Permit (CGP) required stormwater discharges associated with activities (1.2.1):
  - All sites  $\geq 1$  acre
  - Sites  $< 1$  acre will require coverage if one or more of these criteria are met:
    - if part of larger common plan of development or sale that comprises at least 1 acre
    - TDEC-DWR Director determined a site is causing, contributing to, or is likely to contribute to a water quality violation
    - TDEC-DWR Director has determined stormwater discharge (any discharge containing pollutants reasonably expected to cause or contribute to a violation of a water quality criteria or receiving stream designated uses) is, or is likely to be a significant contributor of pollutants to waters of the state
    - Changes in state or federal rules require sites  $< 1$  acre that are not part of a larger common plan of development to obtain a stormwater discharge permit
  - Existing sites permitted under 2016 CGP get coverage extended automatically (no notification required, no additional application fee for extended coverage)
    - Must update SWPPP within 12 months of 2021 CGP effective date (October 1, 2021) to meet CGP Section 5.3.1 requirements) (3.1.2)
    - Must make SWPPP available for review upon request from TDEC-DWR (5.3.1)
  - Where new operators are added to a construction site with existing coverage, those operators must submit an NOI before the new operator commences work at the site (3.1.4)

##### Non-Stormwater Discharges Authorized by this Permit (1.2.3)

- Dewatering of collected stormwater and groundwater (discharged per section 4.1.3)
- Waters used to wash dust and soils from vehicles (no detergents used AND detention and/or filtering is provided before the water leaves site). Wash removal of process materials such as oil, asphalt or concrete is not authorized
- Water used to control dust (per Section 5.5.3.7)
- Potable water sources, including waterline flushings (chlorine has been removed to the maximum extent practicable)
- Routine external building washdown that does not use detergents or other chemicals

- Uncontaminated, non-turbid groundwater or spring water
- Foundation or footing drains where flows are not contaminated with pollutants
- Discharges from emergency fire-fighting activities
- Fire hydrant flushings
- Landscape irrigation
- Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used
- Uncontaminated air conditioning or compressor condensate.

**Obtaining CGP Coverage (1.4):**

- Notice of Intent (NOI)
  - All operators included
    - Owner/Developer – primary permittee, site-wide permittee (2.1.1)
      - Has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specification
      - Responsible for complying with CGP requirements until permit coverage is terminated
    - Commercial Builders – can be primary or secondary permittee (2.1.2)
    - Contractors – secondary permittee (2.1.3)
  - Each operator covered by permit is responsible for complying with the permit; permittees are jointly and severally liable for a violation related to construction activities that affect the same project site, unless a permittee affirmatively demonstrates to the satisfaction of TDEC-DWR that its own action, or failure to act, was not a cause of the violation (2.1.1)
  - Construction Site Map (3.2.2) from USGS topographic map must be included with NOI
- Stormwater Pollution Prevention Plan (SWPPP)
  - *See “SWPPP” section.*
- Application Fee
  - Based on the total acreage planned to be disturbed by an entire construction project for which the applicant is requesting coverage (including construction support activities) (1.4.3)
  - May present documentation of areas in the project that will not be subject to disturbance at any time during the life of the project and have these areas excluded from the fee calculation.
  - Application will be deemed incomplete until the appropriate application fee is paid in full. The following conditions apply:
    - If stormwater discharges from the site or acreage to be disturbed were covered under a previous CGP, but coverage has been since terminated, a

new application must be submitted (including application fee) for coverage under the CGP.

- A new primary operator seeking subsequent coverage under an actively permitted activity must submit the subsequent coverage fee to obtain coverage under an active NOC.
- Added acreage up to 10% of the original plan area (but no more than a total of 5 acres), and other minor modifications of the original plan do not require separate NOI submittal.
  - Minor additions require submittal of a plan indicating the additional area(s) of disturbance, the total acreage to be disturbed, and the updated SWPPP
  - Permittee is responsible for thoroughly and accurately identifying all waterbodies (including wetlands and streams) located on the added acreage (provide a determination of the water's status if not previously provided)
  - An additional fee and updated NOI are required only if the total acreage of disturbance would require a higher fee than originally paid, and then only the difference is due
  - New acreage disturbances cannot be added as previously disturbed acreage is stabilized, to create a 'rolling' total of disturbance.
  - Iterative changes with cumulative impact exceeding 10% of the original plan area or a total of 5 acres require submittal of updated NOI and SWPPP to TDEC-DWR
- An annual maintenance fee is required in addition to the application fee
- Submit application package to local TDEC EFO where construction activity is located and where stormwater discharges enter waters of the state

#### **Local (MS4) Requirements (1.4.4)**

- Permittees must obtain all necessary authorizations pursuant to provisions of any local ordinances that apply to construction activities
- Permittees are expected to comply with any additional EPSC and construction stormwater management measures required by a local municipality, county or permitted MS4 program

#### **Qualifying Local Program (QLP) (1.4.5)**

- A Qualifying Local Program (QLP) is a municipal stormwater program implemented for stormwater discharges associated with construction activity that has been formally approved by the TDEC.

- If a construction has obtained a notice of coverage from, a QLP, the operator is authorized to discharge stormwater associated with construction without the submittal of an application to TDEC.

### **SWPPP:**

- Purpose (5.1)
  - Primary permittee must implement and maintain effective BMPs from start of construction activity until permanent stabilization is complete OR permittee no longer has design or operational control of any part of construction site
  - If a SWPPP submittal has contradictory or ambiguous information, TDEC-DWR will hold the permittee to the most stringent interpretation of the submitted information
  - Minimum requirement for BMPs is to be consistent with the recommendations contained in the current edition of Tennessee Erosion and Sediment Control Handbook
- SWPPP Qualification Requirements (5.2)
- Sites > 5 acres of disturbance
  - Narrative (prepared by CPESC, TDEC Level 2, or registered PE/LA) (5.2)
- Sites ≤ 5 acres of disturbance
  - Qualification requirements for larger sites do not apply
  - TDEC templates available for Single Family Residential Homebuilding Sites, Sites not Requiring Engineer Design
- **All sites** - Plans and specifications must be prepared, signed and sealed by TN-registered PE or LA if one or more of the following apply:
  - For any building or structure
  - Changes in topography and drainage, including the design or modification of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations
  - Engineering design of sediment basins or equivalent sediment controls must be provided for construction sites involving drainage to an outfall totaling 10 or more acres **OR** 5 or more acres if draining to waters with unavailable parameters due to siltation or Exceptional Tennessee Waters
- SWPPP Narrative Content (5.5.1)
  - Construction activities
  - Sequence major activities
  - Site topography description
    - Estimation of percent slope
    - Estimate of disturbed area

- Delineation of drainage area (acres) for each outfall
- Hydric soils must be clearly identified
- How runoff will be handled to prevent erosion at permanent outfall and receiving water
- EPSC Plan – *see “EPSC Plan” below*
- Description of other industrial activity discharges on site
- Identify stream(s) on or adjacent to the project
  - Description of any anticipated alteration of these waters
  - Permit number or tracking number for ARAP or Section 401 Certification for alteration
- Identify receiving waters (unavailable parameters due to siltation, ETW)
- Identify and outline buffer zones to protect waters of the state in project boundaries
- Phasing for projects >50 acres
- Timing of planting vegetative cover (if permanent or temporary vegetation used)
- EPSC Plan (5.5.1, 5.5.2)
  - Construction area clearly outlined
  - Boundaries of permitted area
  - Drainage patterns
  - Approximate slopes after major grading activities
  - Areas of soil disturbance
  - Areas not to be disturbed
  - Location(s) of major structural and nonstructural controls
  - Location of areas where stabilization practices expected to occur
  - Streams and sinkholes
  - Outfall points (with estimate drainage area to outfall)
  - Appropriate number of EPSC Plan Sheets
    - 3 sheets required for most sites (initial land disturbance, interim grading, and final grading)
    - For single-lot homes, commercial lots, or linear infrastructure projects of less than or equal to 5 acres, one EPSC plan sheet may be sufficient
- SWPPP must include all calculations related to drainage areas, runoff coefficients, basin volumes, and equivalent control measures.

### **Sites With Disturbance > 50 Acres At One Time (5.5.3.3)**

- If permittee chooses to disturb > 50 acres at one time, permittee must:
  - Notify TDEC-DWR immediately
  - Conduct site assessments on a quarterly basis (*see “Site Assessment” section*)
  - Conduct EPSC Inspections at least twice per week and following any rainfall event > 0.5 inches in 24 hours

- Provide data describing the erodibility of soils on site, how the soil type erodibility will dictate the needed control measures and how the soil may affect the expected quality of runoff from the site
- Provide a geospatial file to TDEC-DWR which identifies the project area boundaries as a polygon feature
- Conduct stormwater runoff monitoring at each outfall draining  $\geq 10$  acres OR  $\geq 5$  acres if draining to waters with unavailable parameters due to siltation or Exceptional Tennessee Waters
- Maintain a log of rainfall events including date, estimated duration (in hours), and total estimated rainfall per calendar day
- Estimate the total volume of discharge per sampled outfall and the interval between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (for sampling events) to provide an estimate of the total volume of the discharge
- Report the estimated total drainage area and estimated acreage of land disturbance in the drainage area for each outfall for each sampling event
- Record of the estimated drainage area and amount of land disturbance for a given sample event in the notes section of the Discharge Monitoring Report

**Stabilization (5.5.3.4):**

- To be completed within 2 weeks of work cessation
- To be completed within 1 week of work cessation for slopes  $\geq 35\%$

**Structural Practices (5.5.3.5):**

- Structural practices to divert flows
- Flow storage or limit runoff and pollutant discharge
- Design controls to minimize erosion and maximize sediment removal
  - 2-yr, 24-hr storm
  - 5-yr, 24-hr storm if receiving waters are waters with unavailable parameters due to siltation or ETW
- Sediment Basin
  - Outfall receiving  $\geq 10$  acres, design for 2-yr, 24-hr storm
  - Outfall receiving  $\geq 5$  acres, design for 5-yr, 24-hr storm if receiving waters are waters with unavailable parameters due to siltation or ETW
  - Provide all calculations in SWPPP
- Sediment structures treating drainage areas in excess of 25 acres require a site-specific design that accurately defines the site hydrology, site-specific sediment loading, hydraulics of the site, and adheres to all Tennessee Erosion and Sediment Control Handbook design recommendations for sediment basins.

**Stormwater Management (5.5.3.6):**

- Factors that must be accounted for in design of stormwater controls
  - Nature of stormwater runoff and run-on at the site (expected flow from impervious surfaces, slopes, and site drainage features)
  - Designed to control stormwater volume, velocity, and peak flow rates to minimize discharges of pollutants in stormwater, as well as minimizing channel and streambank erosion at discharge points
  - Soil type and range of soil particle sizes expected
  - Description of measures to be installed during construction to control pollutants in stormwater discharges after construction is completed
  - Brief description of applicable State or local erosion and sediment control requirements.

#### **Site Assessments (5.5.3.8):**

- Required at the following locations, if applicable:
  - At outfall draining  $\geq 10$  acres
  - At outfall draining  $\geq 5$  acres if receiving waters are waters with unavailable parameters due to siltation or ETW
- Initial site assessment performed within the 1<sup>st</sup> 30 days of disturbance within the corresponding outfall drainage area
- Follow up monthly assessments required until BMP(s) constructed per the SWPPP
- Additional site assessment apply for sites with  $>50$  acres disturbed at one time
- Performed by PE, LA, CPESC or TDEC Level 2.

#### **Inspections (5.5.3.9, 5.5.3.10, 5.5.3.11)**

- Performed by TDEC Level 1, TDEC Level 2, PE, LA, or CPESC
- Inspect at least twice weekly with inspections at least 72 hours apart
- Additional inspections required for sites with  $>50$  acres disturbed at one time
- EPSC maintenance conducted before the next rain event but in no case more than 7 days after identification
- SWPPP revisions implemented as soon as practicable but no more than 14 days after identification
- Remove sediment from sediment controls when design capacity reduced by 50% (half full)  
(5.5.3.1)

#### **Water Quality Riparian Buffer Zone Requirements (4.1.2):**

- 30-ft buffer average
  - 15-ft minimum (each side must average the 30-foot criterion independently)
- 60-ft buffer average (waters with unavailable parameters due to siltation or ETWs)
  - 30-ft minimum (each side must average the 60-foot criterion independently)
- 15-ft buffer for wet weather conveyance identified as Waters of the United States (WOTUS) (Section 4.1.2 Footnote #6)

## Additional Web Resources:

TDEC Data Description/Contents	Web Link
<p><u>Data Viewers:</u></p> <ul style="list-style-type: none"> <li>• Permit Information</li> <li>• Exceptional Tennessee Waters &amp; Outstanding National Resource Waters</li> <li>• Hydrologic Determination Information</li> <li>• Ground Water Permits (Septic)</li> <li>• Water Well Data Viewer</li> <li>• TDEC Enforcement Program</li> </ul> <p><u>Map Viewers:</u></p> <ul style="list-style-type: none"> <li>• Water Quality Assessments and Permits</li> <li>• Construction Stormwater Permitting</li> <li>• Hydrologic Determinations</li> <li>• Water Well Map Viewer</li> </ul>	<p><a href="https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-resources-data-map-viewers.html">https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-resources-data-map-viewers.html</a></p>
<p>Biennial List of Waters with Unavailable Parameters</p>	<p><a href="https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-quality-reports---publications.html">https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-quality-reports---publications.html</a></p>
<p>GIS Data</p>	<p><a href="https://tdeconline.tn.gov/dwr/">https://tdeconline.tn.gov/dwr/</a></p>
<p>SWPPP for Single Family Residential Homebuilding Sites General NPDES Permit for Stormwater Discharges from Construction Activities</p>	<p><a href="http://tdec.tn.gov/etdec/DownloadFile.aspx?row_id=CN-1249">http://tdec.tn.gov/etdec/DownloadFile.aspx?row_id=CN-1249</a></p>
<p>SWPPP Template for Sites Not Requiring Engineer Design from the DWR – NR – G – 02 - Construction Stormwater – 05172019 Guidance regarding construction stormwater general permit coverage involving sites with Non-Engineer Design SWPPP</p>	<p><a href="https://www.tn.gov/content/dam/tn/environment/water/policy-and-guidance/dwr-nr-g-02-cgp-non-engineering-swppp-final-051719-template.docx">https://www.tn.gov/content/dam/tn/environment/water/policy-and-guidance/dwr-nr-g-02-cgp-non-engineering-swppp-final-051719-template.docx</a>.</p>
<p>Total Maximum Daily Loads in Tennessee</p>	<p><a href="https://www.tn.gov/environment/program-areas/wr-water-resources/watershed-stewardship/tennessee-s-total-maximum-daily-load--tmdl--program.html">https://www.tn.gov/environment/program-areas/wr-water-resources/watershed-stewardship/tennessee-s-total-maximum-daily-load--tmdl--program.html</a></p>
<p>Qualified Local Program (QLP) Participants</p>	<p><a href="https://www.tn.gov/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/tennessee-qualifying-local-program.html">https://www.tn.gov/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/tennessee-qualifying-local-program.html</a></p>
<p>Aquatic Resource Alteration Permits</p>	<p><a href="https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html">https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html</a></p>
<p>NetDMR and Electronic Reporting</p>	<p><a href="https://www.tn.gov/environment/program-areas/wr-water-resources/netdmr-and-electronic-reporting.html">https://www.tn.gov/environment/program-areas/wr-water-resources/netdmr-and-electronic-reporting.html</a></p>

<b>TDEC Data Description/Contents</b>	<b>Web Link</b>
Municipal Separate Storm Sewer System (MS4) Permittees	<a href="https://www.tn.gov/content/tn/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/npdes-municipal-separate-storm-sewer-system--ms4--program.html">https://www.tn.gov/content/tn/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/npdes-municipal-separate-storm-sewer-system--ms4--program.html</a>

<b>Tennessee Stormwater Data Description/Contents</b>	<b>Web Link</b>
Training	<a href="http://tnstormwatertraining.org/index.asp">http://tnstormwatertraining.org/index.asp</a>
TDEC Erosion and Sediment Control Handbook	<a href="http://tnepsc.org/handbook.asp">http://tnepsc.org/handbook.asp</a>
TDEC Permanent Stormwater Management and Design Guidance Manual	<a href="http://tnpermanentstormwater.org/manual.asp">http://tnpermanentstormwater.org/manual.asp</a>

<b>Other Resources Data Description/Contents</b>	<b>Web Link</b>
NOAA Atlas 14	<a href="https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html">https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html</a>
USDA NRCS Web Soil Survey	<a href="https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm">https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</a>