

**NJ Soil Erosion and Sediment Control Program  
Draft Plan Review Checklist**

**I. Administrative Review**

- a. Application Form \_\_\_\_\_
- b. Fee \_\_\_\_\_
- c. Affidavit \_\_\_\_\_
- d. Erosion Control Plan set \_\_\_\_\_
- e. Complete Site Plan set \_\_\_\_\_
- f. Drainage Report (if applicable) \_\_\_\_\_
- g. H&H Summary Form \_\_\_\_\_
- h. PDF grading/drainage plan file \_\_\_\_\_

**II. Sequence of Construction**

- a. Temporary controls (silt fence, stone pads, stockpile protection etc)  
\_\_\_\_\_
- b. Use of temporary sediment basin during construction \_\_\_\_\_
- c. Inlet protection after storm sewer installation \_\_\_\_\_
- d. Basin stabilization once majority of site is stabilized \_\_\_\_\_
- e. Permanent stabilization \_\_\_\_\_

**III. Hydrology/ Existing Conditions**

- a. Existing Drainage Area Map \_\_\_\_\_
- b. Contours at 2.0' intervals, clearly denoted \_\_\_\_\_
- c. Tc Flow Path Delineated \_\_\_\_\_
- d. Point of Analysis identified \_\_\_\_\_
- e. Land use/ Land Cover defined \_\_\_\_\_
- f. Soil type and HSG defined \_\_\_\_\_
- g. Field verification of physical features (POA, Tc, LU/LC)  
\_\_\_\_\_
- h. Rainfall depth (2 & 10, 25 yr) defined \_\_\_\_\_
- i. TR-55 or Rational Method (as appropriate) \_\_\_\_\_
- j. HEC-RAS stream channel analysis \_\_\_\_\_

**IV. Hydrology / Proposed Conditions**

- a. Proposed Drainage Area Map \_\_\_\_\_
- b. Contours at 2.0' intervals, clearly denoted \_\_\_\_\_
- c. Tc Flow Path Delineated \_\_\_\_\_
- d. Point of Analysis identified \_\_\_\_\_
- e. Land use/ Land Cover defined \_\_\_\_\_
- f. Soil type and HSG defined \_\_\_\_\_
- g. Rainfall depth (2 & 10, 25 yr) defined \_\_\_\_\_
- h. TR-55 or Rational Method (as appropriate) \_\_\_\_\_
- i. HEC-RAS stream channel analysis \_\_\_\_\_

**V. Offsite Stability Analysis (use flow chart from Standard to assist in evaluation)**

- a. Specific narrative/analysis in report \_\_\_\_\_
- b. Point Stability
  - i. Defined or Undefined or same point of discharge \_\_\_\_\_

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- ii. If defined or same point, how do peak flows compare? \_\_\_\_\_
  - iii. If undefined, does table 21-1 apply? \_\_\_\_\_
  - iv. Infiltration failure analysis for point discharge peak flow \_\_\_\_\_
  - v. Is conveyance structure (pipe or water way) needed? \_\_\_\_\_
- c. Downstream Stability
- i. Peak Flow Reductions (50% of 2yr pre, 75% of 10 yr pre) \_\_\_\_\_
  - ii. Infiltration used to meet reduction levels? (infiltration should not account for more than the reduction levels) \_\_\_\_\_
  - iii. Downstream obstructions (culverts, narrow channel, debris) \_\_\_\_\_
  - iv. Alternate Stability Analysis (watershed model, stream velocity model etc) \_\_\_\_\_

**VI. Structures**

- a. Stormwater Management
- i. Detention / Detention + Infiltration / Wet Pond / Underground Storage
  - ii. 2 and 10 year peak flows reduced? \_\_\_\_\_
  - iii. Infiltration component in basin/structure \_\_\_\_\_
  - iv. Design report outlet structure matches outlet structure details \_\_\_\_\_
  - v. Uncontrolled surface flows down basin slopes \_\_\_\_\_
  - vi. Suitable vegetation used in basin \_\_\_\_\_
  - vii. Rip rap design for COP in basin \_\_\_\_\_
  - viii. Location of outlet structure consistent with OSS \_\_\_\_\_
  - ix. Forebay used \_\_\_\_\_
  - x. Stability of berm for forebay \_\_\_\_\_
  - xi. Sand bottom for infiltration \_\_\_\_\_
  - xii. Other Misc \_\_\_\_\_
- b. Open Channels
- i. Channel Stabilization
    - 1. Temporary by-pass channel (2 year storm) \_\_\_\_\_
    - 2. Bankfull or 10 year storm design \_\_\_\_\_
    - 3. Side slopes less than 2:1 \_\_\_\_\_
  - ii. Grass Water Way
    - 1. Inlet and outlet \_\_\_\_\_
    - 2. Design Storm \_\_\_\_\_
    - 3. Max bed slope \_\_\_\_\_
    - 4. Velocity \_\_\_\_\_
    - 5. Froude number less than 0.9 \_\_\_\_\_
    - 6. D&E Retardance \_\_\_\_\_
    - 7. Turf Reinforcement Mat (Tx DOT table) \_\_\_\_\_
    - 8. Side Slope \_\_\_\_\_
    - 9. Stone center lining \_\_\_\_\_

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10. Drain down basin slope/ break in grade at foot of slope \_\_\_\_\_

11. Proper selection of vegetation \_\_\_\_\_

iii. Diversions

1. Same design issues as GWW \_\_\_\_\_
2. Temporary or Permanent? \_\_\_\_\_
3. Diversion outlet \_\_\_\_\_
4. Design Storm based on level of risk to downstream area \_\_\_\_\_
5. Supporting ridge \_\_\_\_\_
6. Diversions on slopes use downchutes \_\_\_\_\_

iv. Lined Waterway

1. Vegetated lining not appropriate \_\_\_\_\_
2. Lining material uses proper n-value per table 20-1 \_\_\_\_\_
3. Flow depth, velocity and freeboard per table 20-2 \_\_\_\_\_
4. Side slopes per table 20-3 \_\_\_\_\_
5. Liner thickness \_\_\_\_\_
6. Slope less than 10% - if not then use slope protection \_\_\_\_\_

c. Conduit Outlet Protection

i. General Conditions

1. Bridge opening or conduit? \_\_\_\_\_
2. Velocity in last section of pipe requires COP \_\_\_\_\_
3. Soil type at outlet \_\_\_\_\_
4. Slope of area at outlet \_\_\_\_\_
5. Tailwater calculated correctly \_\_\_\_\_
6. Calculated D50 very large; gabions or reno mats appropriate? \_\_\_\_\_

ii. Apron

1. L, W and Thickness correct \_\_\_\_\_
2. D50 size with filter layer \_\_\_\_\_
3. Installed inside a detention basin with deep tail water? \_\_\_\_\_
4. Can installation occur with no slope or overfall at end? \_\_\_\_\_
5. Appropriate equation used for tailwater? \_\_\_\_\_

iii. Scour Hole

1. Depth = full or ½ pipe diameter \_\_\_\_\_
2. Dimensions correct using side slopes and depth \_\_\_\_\_
3. Elevation of top of hole flush with surrounding elevation \_\_\_\_\_
4. Slope around and below scour hole flat \_\_\_\_\_

iv. Multiple Conduits

1. Spacing greater or less than ¼ width of conduit(s) \_\_\_\_\_
2. Width of apron accounts for spacing, S \_\_\_\_\_
3. Largest values used for dis-similar conduits \_\_\_\_\_

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- d. Rip Rap
  - i. Greater of design discharge or 25 year storm \_\_\_\_\_
  - ii. Channel bend accounted for \_\_\_\_\_
  - iii. Sized for bioengineering using Lane or Ishbash \_\_\_\_\_
  - iv. D50 and thickness (2x D50 with filter fabric) \_\_\_\_\_
  - v. Angular stone (no river stone or round stone prone to rolling) \_\_\_\_\_
  - vi. Gabion thickness and velocity per table 22-1 \_\_\_\_\_
  - vii. Shore line / wave protection needed \_\_\_\_\_
  
- e. Slope Protection Structure
  - i. Flume Design \_\_\_\_\_
  - ii. Rip Rap Chute \_\_\_\_\_
  - iii. Pipe Drop \_\_\_\_\_
  - iv. Unconcentrated Runoff from paved surfaces \_\_\_\_\_
  
- f. Grade Stabilization Structure
  - i. Design depth, width and velocity per the Standard \_\_\_\_\_
  - ii. Capacity per Table 17-1 \_\_\_\_\_
  
- g. Land Grading
  - i. Cut and fill areas noted \_\_\_\_\_
  - ii. Existing and Proposed contours at 2.0' intervals shown \_\_\_\_\_
  - iii. Cut face of slope stabilization \_\_\_\_\_
  - iv. Protection of adjacent properties \_\_\_\_\_
  - v. No fill adjacent to stream channels without proper controls \_\_\_\_\_
  - vi. No trash or debris in fill material \_\_\_\_\_
  - vii. Sufficient compaction in load bearing areas \_\_\_\_\_
  - viii. De-compaction of soils where appropriate \_\_\_\_\_
  
- h. Stream Crossing – General Considerations.
  - i. Temporary or Permanent? \_\_\_\_\_
  - ii. 90 degrees to center of stream \_\_\_\_\_
  - iii. Temporary Culvert 2 year storm design \_\_\_\_\_
  - iv. Temporary culvert COP 10 year design storm \_\_\_\_\_
  - v. Removal and restoration note(s) \_\_\_\_\_
  - vi. Permanent Culvert stabilization of:
    - 1. Outlet COP \_\_\_\_\_
    - 2. Abutments up and downstream \_\_\_\_\_
  
- i. Subsurface Drainage
  - i. Design Inflow \_\_\_\_\_
  - ii. Drain sizing by Manning's \_\_\_\_\_
  - iii. Minimum grade 0.1%, V greater than 1.4 fps \_\_\_\_\_
  - iv. Appropriate measures to prevent soil migration into drain \_\_\_\_\_
  - v. Outlet protected against scour \_\_\_\_\_

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**VII. Temporary Controls**

a. Dewatering

- i. Tank, bag, sump pits etc are located so that discharge cannot enter waterways or water bodies \_\_\_\_\_
- ii. Size of the dewatering device (bag, tank etc) is appropriate for size of pump and flow rate \_\_\_\_\_
- iii. Temporary filters (stone, haybales etc.) have proper detail and notes \_\_\_\_\_
- iv. Note indicating periodic maintenance is required along with proper disposal of contaminated filters \_\_\_\_\_

b. Dust Control

- i. Notes describing method, frequency and location of control measures \_\_\_\_\_

c. Sediment Barrier

- i. Location graphically depicted at key locations at lower elevations \_\_\_\_\_
- ii. Location receives sheet flow only (not to be installed across a channel) \_\_\_\_\_
- iii. Design detail properly addresses Standards requirements for height, embedding, materials etc. \_\_\_\_\_
- iv. Drainage area less than 1 acre; slope upgradient of barrier less than 5% \_\_\_\_\_
- v. Super siltfence detail includes wire backed fence \_\_\_\_\_
- vi. not proposed in lieu of properly designed diversion \_\_\_\_\_
- vii. For filter tube products, details address Sections A and B (bale barrier) of the Standard \_\_\_\_\_

d. Sediment Basin

- i. Compare two design volume options per standard \_\_\_\_\_
- ii. Length vs. Width ratios \_\_\_\_\_
- iii. Use proposed detention basin note on plan \_\_\_\_\_
- iv. Dewatering
  - 1. 50% TE 4" hole \_\_\_\_\_
  - 2. Floating Riser \_\_\_\_\_
  - 3. Underdrain \_\_\_\_\_
- v. Riser
  - 1. Use outlet control box \_\_\_\_\_
  - 2. Use add-on riser (no perforations) \_\_\_\_\_
  - 3. Watertight connection \_\_\_\_\_
  - 4. 1' freeboard \_\_\_\_\_

e. Stabilized Construction Entrance

- i. 1-2 " clean stone, 6" thick x entrance width x 50' long \_\_\_\_\_
- ii. Steep sloped entrance per table 27-1 \_\_\_\_\_

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- iii. Over 5% slope, stabilized with hot mix base course \_\_\_\_\_
- iv. Tire Wash needed \_\_\_\_\_
  
- f. Storm Sewer Inlet Protection
  - i. Less than 3 acres of contributory drainage \_\_\_\_\_
  - ii. Does not close of the inlet \_\_\_\_\_
  - iii. Does not cause traffic or flooding hazard \_\_\_\_\_
  - iv. Capture/filter/detain 1 year event; larger storms are bypassed into system \_\_\_\_\_
  
- g. Traffic Control
  - i. Entrance/Exit points clearly identified on plan \_\_\_\_\_
  - ii. Avoids trouble areas such as slopes, watercourses, vegetated areas \_\_\_\_\_
  - iii. Tire washing used? \_\_\_\_\_
  - iv. Compaction remediation needed on traffic route? \_\_\_\_\_
  
- h. Turbidity Barrier (Floating)
  - i. Materials used meet design criteria page 32-1 \_\_\_\_\_
  - ii. Barrier placement correct \_\_\_\_\_

**VIII. Vegetative Standards**

- a. Acid Soil Management
  - i. Project location has potential for acid soil \_\_\_\_\_
  - ii. Stockpile detail includes covering with plastic after 48 hrs \_\_\_\_\_
  - iii. Burial with 10 TPA lime, 12-24" deep \_\_\_\_\_
  - iv. Equipment wash away from streams and storm sewers \_\_\_\_\_
  
- b. Dune Stabilization
  - i. Certified cultivars (vegetation) is proposed \_\_\_\_\_
  - ii. Details for wind breaks (fencing etc) provided \_\_\_\_\_
  - iii. Planting instructions & details provided \_\_\_\_\_
  - iv. Maintenance plans provided \_\_\_\_\_
  
- c. Maintaining Vegetation
  - i. Notes on plan consistent with 'Methods and Materials' \_\_\_\_\_
  
- d. Permanent Vegetative Cover
  - i. Notes contain:
    - 1. Seed bed prep \_\_\_\_\_
    - 2. Subsoil prep per Land Grading Standard \_\_\_\_\_
    - 3. Topsoil quality and application depth (5") \_\_\_\_\_
    - 4. Fertilizer and lime requirements \_\_\_\_\_
    - 5. Seed selection appropriate to use \_\_\_\_\_
    - 6. Mulch over seed and mulch anchor \_\_\_\_\_
    - 7. Hydroseeding: rates appropriate; no mixing of much and seed in tank \_\_\_\_\_
    - 8. Irrigation until established \_\_\_\_\_

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9. Note # 7 (page 4-4) included (recommended) \_\_\_\_\_
- ii. Pinelands Reserve Stabilization
1. Re-use of native O & A horizons \_\_\_\_\_
  2. Native Pineland seed mix used \_\_\_\_\_
  3. No Seeding – mulch over native topsoil, monitor until established \_\_\_\_\_
- e. Mulch Only Stabilization
- i. Temporary, non-vegetative stabilization after 14 days of inactivity \_\_\_\_\_
  - ii. Note indicating non-growing season stabilization \_\_\_\_\_
  - iii. Materials specified w/ amounts: hay/straw, soil stabilizers, hydromulch, woodchips, stone \_\_\_\_\_
  - iv. Anchoring methods (straw/much) \_\_\_\_\_
- f. Sod
- i. Notes contain:
    1. Seed bed prep \_\_\_\_\_
    2. Subsoil prep per Land Grading Standard \_\_\_\_\_
    3. Topsoil quality and application depth (5") \_\_\_\_\_
    4. Fertilizer and lime requirements \_\_\_\_\_
    5. Irrigation until established \_\_\_\_\_
    6. Fresh/moist sod specified \_\_\_\_\_
    7. Sod installation/placement/anchoring (where necessary) \_\_\_\_\_
- g. Temporary Vegetative Stabilization
- i. Seedbed preparation, de-compaction, lime and fertilizer requirements \_\_\_\_\_
  - ii. Proper seed selection from Tale 7-2 \_\_\_\_\_
  - iii. Mulching required on all seeding \_\_\_\_\_
- h. Topsoiling
- i. Quality – no debris, weeds etc. \_\_\_\_\_
  - ii. Minimum organic matter content 2.75% \_\_\_\_\_
  - iii. Topsoil substitute (manufactured topsoil) should be noted if intended for use \_\_\_\_\_
  - iv. Stripped topsoil should be stored and stabilized with vegetation \_\_\_\_\_
  - v. Do not work topsoil when wet \_\_\_\_\_
  - vi. Scarify/break up compacted subsoil prior to application \_\_\_\_\_
  - vii. Topsoil depth should be 5", unsettled. \_\_\_\_\_
- i. Tree Protection
- i. Typical detail on plan sheet noting maximum area of protection (fig 9-3) \_\_\_\_\_
  - ii. Trees identified on plan to be protected \_\_\_\_\_
  - iii. Notes for tree selection, protection etc. on plan \_\_\_\_\_
- j. Trees, Vines, Shrubs
- i. No invasive species specified \_\_\_\_\_
  - ii. Tree planting detail provided \_\_\_\_\_

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**Notes**