Below is a list of topics for discussion received from DEMLR staff regarding the Design Manual updates and changes that could be discussed.

General updates and recommended additions to the current manual:

- Maintenance inspection frequency now weekly and after each 1 inch or greater rainfall to match NCG01 permit requirements. Previously after every ½ inch rainfall or greater.
- Details or additional information for consideration to be added:
    - Silt Fence Outlet (standard stone outlet, Weir cut into silt fence, others), the need for a clear and comprehensive design guide or none at all has been voiced as silt fence outlets are commonly misused and result in failures and sediment loss from the site in some parts of the state.
    - Silt sack for Curb inlet
    - Silt bag for dewatering with floating intake
    - Scour hole
    - Slope tracking
    - J-hooks for silt fence
    - Coffer dam
    - Stockpiles: include location considerations, protection devices, etc.
    - Basin/Trap dewatering requirements/guidance. Dewatering is the source of a lot of public complaints.
    - Updated Sample Erosion and Sedimentation Control Plan.
- Provide guidance on the use of PAM, include suggested uses or conditions when appropriate.
- (Added 5/19/21) Add Super Silt Fence (fence backed with chain link fence)

Topics for discussion of specific existing design manual measures

6.06 Construction Entrance (C.E.)

- Add Geotextile underlayment fabric to the detail shown in the manual. Use of fabric currently is mentioned for use in certain conditions not for all entrances.
- Add Increased maintenance and inspection frequency comment especially in high construction traffic and/or wet conditions. (ex. Inspect a minimum of twice a day with fresh washed stone placed immediately.
- Require a dedicated stockpile of appropriately sized stone be on site for immediate use.
- C.E. detail for tire/vehicle wash station, useful for mass grading projects, especially in urban settings. Device could utilize a stone pad or a cattle guard “rumble strip” type device that uses a pressure washer to wash sediment off vehicles prior to leaving the site. Measure should either self-contained to filter water for reuse or direct runoff to drain to a skimmer sediment basin.

6.66 Silt Fence (S.F.)

- Silt fence location: place at least 10 feet downstream from the toe of slopes for maintenance access and increased sediment storage capability. This prevents the need for equipment to be on slopes and reduced potential for slope erosion and damage to existing vegetation.
- Considering using offset trenching

6.65 Baffles

- Provide length and depth of skirt to be buried.
- Comment on the use of arc or chevron pattern if site conditions necessitate.

6.70 Temporary Stream Crossing

- Consider removing Ford detail.
- Add Timber Mat detail. Should have solid deck with 4" side boards and stone approaches with diversion.

6.66 Compost and silt sock

- Use as check dam.
    - Spacing requirement (Should be spaced same as a regular check dam)
    - Diameter suggestions, smaller diameter silt socks/wattle will be required on steeper terrain, larger diameter equals fewer devices in steeper terrain.
    - Do not use in intermittent or perennial streams.
- Use as perimeter protection.
    - Add a statement to the effect of: "to allow for settling of sediment laden run-off, a silt sock/wattle used as a perimeter control device should provide a barrier of similar height and settling capability as silt fence. Multiple stacked wattles may be used when installed per manufacturer's specifications."
    - Smaller diameter sock/wattle equals reduced sediment settling and storage capacity, would require more frequent maintenance and increased potential for sediment loss during a heavy or prolonged rain event.

6.22 Diversion Dike (DD)

- Provide standard construction detail.
- Provide pipe for crossing dike.
- To reduce maintenance and displacement/loss of straw mulch, provide a RECP after seeding to top of berm. Unanchored mulch can float and clog other measures.

6.52 Block and Gravel Inlet Protection Device.

- Provide length and depth of Hard wire cloth skirt shown in diagram.
- Show diagram with 2x4 support anchors.

6.18 Compost Blankets

- Slopes 4:1 or greater should be tracked.
- Suggest the use of netting RECP to anchor/secure compost blanket. Recommend use of wildlife friendly netting.

6.14 Mulching

- When mulch is to be crimped, add application technique that one half the amount of straw mulch be applied and then crimped with the remaining balance applied after crimping.

6.23 Right of Way Diversions or Water Bars

- Show geotextile under stone for crossings or use properly sized pipe of material that will handle construction vehicles.

6.31 Rip Rap Channels

- Provide pin spacing for geotextile underlayment fabric or comment to follow manufacturer specifications.
- If channel is an outlet from a basin and extends to the Limits of disturbance, provide sediment containment in the form of a silt fence outlet, wattles or preferably check dam.

6.54 Temporary Rock Doughnut Inlet Protection

- To prevent sediment from entering the pipe, provide a type of material, either RECP or clean stone between the down gradient base of the doughnut and pipe inlet.
- Show fabric under tone doughnut in diagram.
- Indicate where or how to dispose of sediment build up and during excavation.

6.55 Rock Pipe Inlet Protection

- Undercut between the interior base of the device and pipe inlet for washed filter stone or RECP.
- Detail does not show fabric under the stone device.
- Tire rip rap and filter stone into embankment.
- Provide note on how to dispose of excavated sediment.

6.17 Rolled Erosion Control Product (RECP)

- Add note pertaining to slope tracking.
- Add note pertaining to seed bed preparation.

6.60 Sediment Trap (ST)

- To decrease erosion of slopes and improve discharge from the trap, mat upstream and downstream slopes of trap with a suitable RECP after seed bed preparation and seeding.
- Stabilize all bare soils from downstream toe of slope to the perimeter E&SC measures.
- Place a minimum of a silt fence outlet as a relief point for flow from trap.
- When using, show location of silt bag for dewatering trap.
- Provide statement in maintenance for disposal of excavated sediment.
- Place emergency spillway in undisturbed soils.
- Provide a statement regarding slope tracking.

6.64 Temporary Skimmer Basin (TSB)

- To decrease erosion of slopes and improve discharge from the trap, mat upstream and downstream slopes of trap with a suitable RECP after seed bed preparation and seeding.
- Provide stable conveyance from skimmer outlet to perimeter E&SC measures. Use of a Tarp, heavy duty RECP, rip rap lined channel or extend PVC pipe recommended to covey the skimmer outlet to a silt fence outlet or acceptable alternative.

- Include statement regarding the use of diversions, and slope drains, tarps, rip rap lined channels or other acceptable alternatives to eliminate sheet flow to basins.
- Include statement to show silt bag location for dewatering.
- Provide baffle spacing, slope angle and width of crest and a statement about slope tracking.
- Included a statement that specifies the skimmer may not be removed or converted until all up-gradient areas are permanently stabilized. Any dewatering must occur through a silt bag and utilize a floating intake place in the skimmer cell. Consideration should be given to the weather forecast so that pumping operations do not occur during rainy period.

6.20 Temporary Diversions

- Calculate for the two-year storm event.
- Mat berm to top of bank with a suitable RECP after seed bed preparation and seeding.
- Install Check dams or wattles with spacing detail to control velocity.
- Provide length limitations.

6.10 Temporary Seeding

- Provide tack rate.
- Do stage seeding of slopes by NPDES permit conditions and slope length.
- Remove disk statement from anchoring mulch or provide an application sequence. Apply ½ the amount of mulch, use the crimping tool then apply the remainder of the mulch.

6.32 Temporary Slope Drains

- Provide spacing and material for tie down stakes.