

**APPENDIX C
GESC PLAN DEVELOPMENT CHECKLIST**

DRAINAGEWAYS

A. Drainageways Should Not be Filled, Regraded, or Realigned

- yes no 1. Determine design discharges for drainageways
- yes no 2. Delineate floodplain limits for all drainageways
- yes no 3. Show limits of fill adjacent to drainageways and channel area to be preserved

B. Ample Freeboard Above the 100-year Floodplain Provided

- yes no 1. Provide ample freeboard above the 100-year floodplain to lot grades and lowest floor elevations (including basements in fill)

C. Existing Drainageways Stabilized

- yes no 1. Design grade control structures in all drainage channels as necessary
- yes no 2. Design bank stabilization improvements as necessary

D. Disturbance to Existing Drainageways Minimized and Quickly Restored

- yes no 1. Identify features whose construction within drainageways is unavoidable, such as the following:
- yes no a) grade control structures
 - yes no b) bank stabilization
 - yes no c) road crossings (bridges or culverts)
 - yes no d) storm sewer outfalls
 - yes no e) utility crossings
 - yes no f) temporary stream crossings for construction access
- yes no 2. Determine limits of construction around the features identified in Item D.1. above that are just large enough to allow construction to minimize disturbance
- yes no 3. Show **Check Dam (CD)** or **Reinforced Check Dam (RCD)** immediately downstream of each disturbed area in the stream. Check sizing criteria
- yes no 4. Show **Temporary Stream Crossings (TSC)**, as necessary
- yes no 5. Show **Erosion Control Blanket (ECB)** in all disturbed areas of streams

E. Any Additional Drainageways Shall be Designed and Stabilized

- yes no 1. Identify any additional small drainageways that are necessary to manage stormwater runoff on the site
- yes no 2. Determine design discharges and size the drainageways
- yes no 3. Design stabilization improvements as necessary for drainageways, including any drop structures or lining. For 2-year flows less than 10 cfs, criteria for **Diversion Ditches (DD)** may be used

F. Stream-Related Permitting Shall be Completed

- yes no 1. Determine if the following permits (and any others) are necessary. If so, complete the required documentation and submit applications
- yes no a. US Army Corps of Engineers Section 404 Permit
 - yes no b. US Fish and Wildlife Service Threatened and Endangered Species approvals

SENSITIVE AREAS

- yes no 1. Conduct a resource inventory on the site and identify on the GESC Plan the type and extent of features such as the following:
 - yes no a. Protected habitat for endangered species
 - yes no b. Wetlands
 - yes no c. Nesting bird habitat
 - yes no d. Riparian buffer zones
 - yes no e. Forested areas
 - yes no f. Mature cottonwood stands
 - yes no g. Bedrock outcroppings
 - yes no h. Steep slopes
 - yes no i. Potential stormwater infiltration areas
 - yes no j. Historic, cultural, or archeological resources
 - yes no k. Areas of unique or pristine vegetation, or habitat

BALANCE EARTHWORK ONSITE

- yes no 1. Endeavor to balance earthwork quantities on site through the following tasks.
 - yes no a. Develop initial grading plan.
 - yes no b. Check earthwork quantities for balance (consider shrink/swell).
 - yes no yes no c. Raise or lower portions of the site as necessary to try to balance earthwork.
 - yes no d. Repeat steps b and c until balance is achieved.
- yes no 2. If it is impossible to balance earthwork quantities on site, prepare letter requesting variance per the information in Part 4.B. of the GESC Manual.

PHASING GRADING TO REDUCE SOIL EXPOSURE

- yes no 1. For large projects, determine separate grading phases.
- yes no 2. Balance earthwork for each phase following the guidance above.

STABILIZE SOILS IN A TIMELY MANNER

- yes no 1. Show **Surface Roughening (SR)** for all areas of grading, to be performed immediately after portions of grading are complete.
- yes no 2. Indicate **Seeding and Mulching (SM)** in all areas to be seeded.
- yes no 3. Indicate **Erosion Control Blanket (ECB)** or **Compost Blanket (CB)** on slopes steeper than 3:1 and in all areas where an extra measure of stabilization is appropriate.

IMPLEMENT PERIMETER CONTROLS.

A. Upslope Perimeters.

yes no 1. Use **Diversion Ditch (DD)** to capture runoff entering the site via sheet flow. Follow design guidance in Section 3.17 of the GESC Manual.

yes no 2. For steep reaches, such as where the ditch conveys runoff down a channel bank to the bottom of a stream, the diversion ditch is to be lined based on the criteria shown in the GESC Manual.

yes no 3. For an alternative to a lined ditch in steep sections, consider a **Temporary Slope Drain**

B. Downslope Perimeters.

yes no 1. If the upslope disturbed drainage area exceeds 1.0 acre, use a **Diversion Ditch (DD)** or permanent drainage way to convey runoff to a **Sediment Basin (SB)**.

yes no 2. If the upslope disturbed drainage area is less than 1.0 acre, use a **Diversion Ditch (DD)**, **Reinforced Rock Berm (RRB)**, **Sediment Control Log (SCL)**, or **Silt Fence (SF)**. In general, the latter three BMPs are to be used on the contour.

yes no 3. Use a **Check Dam (CD)** or **Reinforced Check Dam (RCD)** across a stream or drainage channel at the downslope perimeter of the site.

TREAT RUNOFF IN A SEDIMENT BASIN.

yes no 1. Runoff from all disturbed areas greater than 1.0 acre shall be treated in a **Sediment Basin (SB)**. Use the standard design for drainage areas less than 15 acres. For areas less than 1.0 acre, a **Sediment Trap (ST)** may be used.

yes no 2. If a non-standard design is used, construction drawings detailing the storage volume, embankment, spillway, and outlet are required.

yes no 3. Wherever possible, sediment basins are to be located within any permanent water quality or quantity detention facilities. Permanent water quality or quantity detention facilities shall have a sediment basin incorporated within them.

PROTECT STEEP SLOPES.

A. Proposed Slopes Shall be no Steeper than 3 to 1.

yes no 1. Ensure that no slopes are proposed that are steeper than 3H to 1V, except small areas of riprap outlet protection near outfalls and culverts.

yes no 2. Show **Erosion Control Blanket (ECB)** on slopes steeper than 4:1.

B. Runoff Shall be Diverted Away from Steep Slopes.

yes no 1. Use **Diversion Ditch (DD)** at the top of steep slopes to capture runoff before it flows down the slope.

C. Terracing Shall be Incorporated into the Grading of Steep Slopes.

- yes no 1. Use **terracing (TER)** in steep slopes to break up the flow of incidental water and reduce the development of rill and gully erosion runoff before it flows down the slope.

PROTECT INLETS, STORM SEWER OUTFALLS, AND CULVERTS.

- yes no 1. Show **Inlet Protection (IP)** at all street and area inlets.
- yes no 2. Show **Reinforced Rock Berm for Culvert Protection (RRP)** at all culvert inlets.
- yes no 3. Design outlet protection for all storm sewer outfalls and culvert outlets.
- yes no 4. Show **Erosion Control Blanket (ECB)** in stream areas disturbed by the construction of the outfall or culvert.

PROVIDE ACCESS AND GENERAL CONSTRUCTION CONTROLS.

- yes no 1. Identify limits of construction activity.
- yes no 2. Provide one or more **Vehicle Tracking Controls (VTC)** at all entrance/exit points from a public street to a site.
- yes no 3. Provide a **Stabilized Staging Area (SSA)** near the main access point.
- yes no 4. Provide a **Concrete/Equipment Washout Area (CWA)** near all concrete work areas.
- yes no 5. Provide temporary access roads and stockpile areas.
- yes no 6. Provide appropriate control measures for all potential pollutant sources.
- yes no 7. Select areas for the vehicle tracking control, stabilized staging area, access roads, and stockpile areas that avoid disturbance to trees, desirable vegetation, steep areas, and low, wet areas.