SDG&E Access Road Maintenance Guidelines

Provided to Cleveland National Forest to support Category 3 2010 Road Maintenance Submittal (eTS 20281).

5/21/2010

1. Access Road Maintenance conducts a “kick-off” meeting for all supervisors, managers, crews, contractors and all field personnel involved in Access Road Maintenance. This kick-off meeting includes environmental training for SDG&E Natural Community Conservation Plan (NCCP), Best Management Practices (BMPs), drainage controls, and general company practices.

2. Environmental Permits (Clean Water Act Section 404, 401, and CDFG Section 1600) are required to conduct road maintenance and/or repairs in jurisdictional waterways such as streams and drainages. Prior to conducting any work (i.e. road maintenance and/or repairs) in potentially jurisdictional waterways, SDG&E will obtain applicable permits.
   a. Near-Term Approach: Flag and avoid. SDG&E’s current practice is to flag and avoid conducting road maintenance in potentially jurisdictional areas. This is because any impact to jurisdictional areas requires CWA 404, 401 and CDFG 1600 permits, which typically require compensatory mitigation. Due to a lack of available mitigation, SDG&E is unable to obtain these permits.
   b. SDG&E’s long-term approach is to obtain all required permits to conduct road maintenance and/or watercrossing repairs in jurisdictional areas. SDG&E has embarked on a long-term effort to establish mitigation to support CWA 404, 401 and CDFG 1600 permits. SDG&E is open to coordinating with Cleveland National Forest to identify opportunities to conduct compensatory mitigation.

3. Maintain original grade and width to maintain to the maximum extent of original access road as possible.

4. Don’t side cast material or create berms on the edges of the access roads, where soil, sediments or silt from the side cast material or berms can directly or indirectly enter a drainage course.

5. Maintain the access road in slope, out slope or crown to facilitate good drainage and to avoid ponding.

6. Where roadside ditches are required, install check dams at regular intervals to slow water velocity. These check dams could be rock, rock bags or other material that could be used as energy dissipaters at appropriate intervals along the access
road to reduce the velocity of runoff and protect the road edge from excessive erosion.

7. Where vegetation needs to be trimmed along roads to retain adequate road width, that trimming is not to be done with road grading equipment. The vegetation will be trimmed using appropriate hand tools.

8. Any road or section of road that has a slope greater than 5 degrees, should have water bars or rolling dips placed at a 30 to 45 degrees angle across the road with the angle opening in the direction where the water would naturally run-off. The discharge end of the water bar should be unobstructed (open with no soil piles) and riprap shall be placed at the discharge end to dissipate the energy of the water. Appropriate locations of the ends of the water bars or rolling dips are to be located so the discharge water will not cause additional erosion problems. When appropriate, diversions/lead-off ditches and dissipaters will be installed to facilitate getting water off the road to minimize erosion.

When possible, water bars should be placed accordance to the slope of the access road to slow down water and get the water off the road:

<table>
<thead>
<tr>
<th>Average Road Grade</th>
<th>Approximate Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5%</td>
<td>Not Required</td>
</tr>
<tr>
<td>5%</td>
<td>125 ft</td>
</tr>
<tr>
<td>10%</td>
<td>80 ft</td>
</tr>
<tr>
<td>15%</td>
<td>60 ft</td>
</tr>
<tr>
<td>20%</td>
<td>50 ft</td>
</tr>
</tbody>
</table>

9. To reduce the potential for sediment in the public right-of-ways, place rock or asphalt aprons where dirt access roads meet paved public or private streets. Such entrances shall have a locked and properly maintained access gate that would limit public access to the road system and preserve the integrity of installed BMPs.

10. Generally, all berms that are created by grading will be re-compacted into the road. If it is necessary to leave berms to control drainage that would drain on to the access road, they should be compacted. These berms will be compacted with the use of water when possible and be compacted by the equipment tires or tracks.

11. In the approaches to stream crossings, use BMPs as necessary to control sediment from entering the drainages.