Best Management Practice (BMP) for Semi-Permanent Parking and Storage Areas ("ORANGE" LAND USE)

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Purpose:

To provide guidance for the use, maintenance, and restoration of semi-permanent vegetated parking and storage areas and the installation, maintenance, and removal of improved (surfaced) parking and storage areas on the preserved premises in a way that allows for current or proposed agricultural uses while minimizing the potential negative impacts on the soil. The intent is to offer standards for a functional, durable surface that reduces erosion potential, minimizes soil compaction, protects the integrity of the topsoil, and allows infiltration but that can also be readily removed and restored to pre-installation conditions with only the use of standard agricultural equipment, understanding that economic and agricultural interests may require a change in land use in the future.

Definitions:

"Agricultural production" means the production of plants or animals useful to man, including but not limited to: forages or sod crops; grains and feed crops; dairy animals and dairy products; poultry and poultry products; livestock, including beef cattle, sheep, swine, horses, ponies, mules or goats, and including the breeding and grazing of any or all of such animals; bees and apiary products; fur animals; aquatic organisms as part of aquaculture; trees and forest products; fruits of all kinds, including grapes, nuts and berries; vegetables; nursery, floral, ornamental and greenhouse products; or any land devoted to and meeting the requirements and qualifications for payments or other compensation pursuant to a soil conservation program under an agency of the Federal Government. For purposes of this BMP, "agricultural production" shall mean growing crops directly in the soil profile. Land in agricultural production shall have soil loss less than or equal to "T" for the soils present and shall have a positive soil conditioning index (SCI).

"Arterial lane" means established travel lanes used by vehicles to access parking areas, which typically follow the peripheral edges of a parking area. These arterial lanes shall follow the Improved Travel Lane BMP or Unimproved Travel Lane BMP.

"Coarse mulch" means wood chip mulch consisting of shredded leaves, bark, and wood particles ranging from 1 to 4 inches in length, with at least 50% of the mulch having a length of 2 inches or greater.

"Collector Lane" means a lane within a parking area used to connect arterial lanes to parking stalls. These lanes are included as part of the parking area and shall follow the Parking Area standards.

"Field moisture capacity" means the amount of water retained in a soil after it has been saturated and has drained freely. It is usually expressed as a percentage of the oven dry weight of the soil.

"Grass Reinforcement Mesh" means an extruded plastic grid specifically designed to be installed over existing vegetated ground to distribute loads and protect the soil and vegetation from compaction from vehicles, animals, or pedestrians.

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"Ground protection mats" means specifically designed construction mats consisting of wood, plastic, or metal that distribute heavy loads over a larger area to prevent soil compaction. Plywood is not acceptable to use as a ground protection mat.

"Improved parking and storage area" means a portion of the preserved premises used for parking vehicles or storage of agricultural equipment that has had a surface added to it in accordance with the standard set forth below.

"Parking area" means an area on a farm used for vehicular parking that does not meet the definition of a travel lane. A parking area encompasses collector lanes but does not include arterial lanes.

"Parking structure" means any fence, barrier, bollard, parking aid, traffic control device, or similar structure that is installed for long-term use, specifically structures that limit or prohibit normal harvesting or tillage activities. Temporary traffic control devices such as wooden stakes, fiberglass reflective rods, rope, and traffic cones which are installed only during a farm event and removed at the events' completion are not considering parking structures. Agricultural fencing whose primary purpose is to contain livestock or exclude wildlife and generally follows the field perimeter is not considered a parking structure.

"Public parking" means parking of vehicles registered to patrons, members of the public, or suppliers of the farm not directly employed by the farm.

"Semi-permanent parking and storage area" means a portion of the preserved premises used for parking vehicles or storage of agricultural equipment that occurs on vegetated areas and does not meet the design criteria set forth in the Temporary Parking and Storage Areas BMP and follows the standards set forth below.

"Soil conditioning index" means a Natural Resources Conservation Service (NRCS) tool that predicts the consequences of cropping systems and tillage practices on soil organic matter.

"Soil Loss Tolerance Rate (T)" means the maximum rate of annual soil loss that will permit crop productivity to be sustained economically and indefinitely on a given soil (source: American Society of Agronomy, Soil Science Society of America, Special Publication Number 45).

"Travel lane" means a generally linear feature on a farm primarily used for the conveyance of vehicles, pedestrians, livestock, and/or equipment that is not more than 10 feet wide for one-way traffic or 16 feet wide for two-way traffic, measured from the outside of the tire tracks with an additional 2 foot allowance per side for a shoulder.[1]

Where Practice Applies:

Any portion of a preserved premises used for parking and/or storage that do not meet the criteria identified in the Temporary Parking and Storage Areas BMP.

[1] Width based on NRCS-NJ Field Office Technical Guide standards for Access Road (Code 560).

Design Criteria to Qualify for BMP Certification:

For Semi-Permanent Vegetated Parking and Storage Areas:

1. The use of semi-permanent parking and storage areas shall be compliant with the deed of easement and applicable local and state regulations.
2. The primary use of the land shall be for agricultural production or for the private storage of agricultural equipment. Use for event or public parking shall not prohibit the use of the land for agricultural production.
3. Soil loss shall be maintained at or below "T" and long-term soil management shall have a positive Soil Conditioning Index (SCI).
4. On the preserved premises, parking shall be preferentially directed to permanently disturbed areas to the maximum extent practicable.
5. Mechanical soil compaction (e.g. with a sheep-foot compactor or vibratory compactor, or similar) at any time shall not be eligible for BMP certification.
6. Established vegetation with at least 70% vegetative cover, or four (4) to six (6) inches of coarse mulch shall be in place prior to use as a parking or storage area.
7. The vegetation or mulch shall be maintained to the maximum extent practicable for the entire time the area is not being used for agricultural production.
8. Parking areas shall be designed in a manner to minimize the overall parking area, minimize the number of collector lanes, maximize parking stalls, and locate arterial lanes along field edges or on existing farm lanes to the maximum extent practicable.
9. When used for public parking, individual parking stalls shall be delineated using paint, markers, lime, or other suitable materials to control traffic and limit compaction to specific wheel tracks within the field. A traffic-flow pattern shall be established to minimize the total area subjected to repeat compaction through the use of temporary rope barriers, parking cones, temporary signage, or similar traffic control devices.
10. Connector lanes shall be of the minimum width required for the intended purpose or as determined by the local regulatory authority, if applicable, and shall not exceed 16 feet in width in all cases.
11. If vegetative cover falls below 70%, connector lanes shall be covered with grass reinforcement mesh or ground protection mats designed for the proposed vehicular load to limit soil compaction and protect existing vegetation. Grass reinforcement mesh shall be installed per manufacturer's recommendations.
12. A scaled plan-view map shall be prepared and submitted to SADC showing the layout of all proposed and existing arterial lanes, connector lanes, parking spaces, parking structures, and traffic control devices with estimates of anticipated frequency of use for each area. The total acreage of soil disturbance shall be included.
13. For BMP certification, the land shall not be used for public parking until the plans have been approved by the SADC and any other relevant local, state, or federal agencies.
14. No topsoil shall be removed, graded, or mixed with the underlying soil for semi-permanent parking or staging areas. Parking or staging areas excavated or mechanically disturbed more than the depth of the plow layer shall be considered land grading and will be subject to the Soil Protection Rules.
15. Public parking shall take place only while soil moisture is at or below field moisture capacity.
16. Parking public vehicles with a gross vehicle weight greater than 10,000 lb. shall only occur on grass protection mesh or ground protection mats or improved parking areas to qualify for BMP

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certification. Vehicles with a gross vehicle weight between 5,000 lb. and 10,000 lb. shall be parked on improved parking areas or permanently disturbed areas when possible.

For Improved (Surfaced) Parking and Storage Areas:

1. The use of improved parking and storage areas shall be compliant with the deed of easement and applicable local and state regulations.
2. Improved parking and storage areas shall obtain a soil erosion and sediment control plan from the local Soil Conservation District prior to construction when more than 5,000 square feet of the surface area of land is disturbed during installation.
3. Improved parking and storage areas shall be primarily to service the agricultural areas of the farm and shall be minimized to the maximum extent practicable.
4. A scaled plan-view map shall be prepared and submitted to SADC showing the layout of all proposed and existing parking areas, designating their status as permanent, semi-permanent, or temporary.
5. For the purposes of this certification, parking areas and all associated disturbances required for their successful implementation (topsoil stockpiles, drainage features, and stormwater basins, or similar land disturbances) shall be considered part of the total disturbed area and must be accounted for in calculations for Soil Protection Allocation in the Soil Protection Rules.
6. The total acreage of soil disturbance related to parking areas shall be included in the map and the size and location of proposed topsoil stockpile areas clearly designated.
7. All relevant construction details shall be supplied with the plan including but not limited to: notes about limiting soil compaction, a typical cross-section of the parking or storage area, and material specifications.
8. Construction shall not begin until the plans have been approved by the SADC and any other relevant local, state, or federal agencies.
9. To avoid adverse impacts to the premises, all new parking areas shall be constructed in compliance with the NJ Stormwater Best Management Practices Manual.
10. Prior to installation, organic material and the entire topsoil layer (the O and A horizons), shall be removed, stockpiled, and stabilized according to the stockpiling standard. At no time shall the topsoil be removed from the premises or mixed with the underlying subsoil.
11. Parking areas excavated or mechanically disturbed more than the depth of the plow layer shall be considered land grading and will be subject to the Soil Protection Rules.
12. When moving topsoil, care shall be taken to avoid overhandling and compaction.
13. Low-ground-pressure equipment and ground protection mats shall be used during construction.
14. No vehicular traffic shall be allowed on the subsoil during construction. All placement of surface material, grading, and other work necessary to construct the road shall take place from existing travel lanes or parking areas, or from temporary work areas utilizing ground protection mats.
15. All work shall be completed while soil moisture is at or below field moisture capacity.
16. Mechanical soil compaction (e.g. with a sheep-foot compactor or vibratory compactor, or similar) prior to and during installation is not eligible for BMP certification.
17. Parking areas shall follow the contour of the natural terrain to the maximum extent practicable.
18. Parking areas shall be underlain with as suitable woven or non-woven geotextile fabric to prevent base or surface material from becoming embedded into native soil. Fabric shall be permeable to water and must extend sufficiently beyond the gravel to ensure native soil/surface material separation. The fabric shall be installed per manufacturer's guidelines and in accordance with the Geotextiles and Geomembranes BMP.
19. Additional layers of pressure-distributing material (i.e. geogrids) may be added.

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20. At least 6 inches of 1-3 inch clean, angular gravel shall be installed as a subbase to properly distribute loads into the subsoil. Other subbase may be acceptable if specified by a professional engineer as being suitable for distributing the design load without compaction of the subsoil.
21. Additional surfacing above the subbase may be added as necessary.
22. Additional road surfacing may include gravel, crushed concrete, cinders, shells or sand more than two inches thick, soil, pavers, bricks, blocks, or a mix of synthetic material and soil.
23. The use of poured concrete, asphalt, asphalt millings, porous asphalt or porous concrete shall be considered a permanent parking area and is not eligible for BMP certification.

Maintenance:

For Semi-Permanent Vegetated Parking and Storage Areas:

1. During the period of active use of the parking area any soil erosion must be promptly addressed.[2]
2. If growing conditions and/or intensity of use cause there to be less than 30% vegetative cover averaged over the approved parking area, ground protection mats shall be used to prevent soil compaction.
3. At least once per 30 days of active use during the growing season the area shall be aerated utilizing a hollow core aerator to alleviate soil compaction, except where mats or coarse mulch are used.
4. Annual agronomic soil testing is required for semi-permanent vegetated parking or storage areas. Lime and fertilizer shall be applied at the specified agronomic rates to maintain dense vegetative cover. Copies of all soil tests and application records shall be maintained on the Premises.

For Improved Parking and Storage Areas:

1. Erosion from runoff generated from the parking area shall be addressed promptly.
2. All requirements from the Topsoil Stockpiling BMP shall be followed.
3. Maintenance requirements shall be followed for any additional structures (stormwater basins, drainage swales, and similar water control devices installed as part of BMP certification.

Restoration:

For Semi-Permanent Parking and Storage Areas:

At the end of the growing season, or within 30 days of the end of the use of the parking area:

1. All temporary installations (traffic control, grass reinforcement mesh, ground protection mats, etc.) shall be removed.
2. Any permanent parking structures shall be cleared of weeds and woody vegetation.
3. Prior to the establishment of the next crop, or after the annual use is completed for permanent vegetative areas, soil compaction will be measured to a depth of 18 inches. Should root

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[2] For more information, reference The NJ Department of Agriculture – State Soil Conservation Committee, The Standards for Soil Erosion and Sediment Control in New Jersey (July 2017).

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restrictive compaction exist within the top 18 inches, subsoiling or decompaction shall be required.

4. If a restrictive layer is found, the restoration standards set forth in the Soil Protection Rules shall be followed.
5. The area will be restored to a condition suitable for soil-based agriculture by reseeding, tillage, planting with cover-crop or other practices identified in the Farm Conservation Plan.
6. For areas utilizing mulch cover criteria
    a. Coarse mulch shall mulch be removed from the area as soon as reasonably practical and before tillage or planting, when soil is at or below field capacity. In all cases, care should be taken to avoid compaction during removal.
    b. Wood chips shall not be incorporated into the soil unless specifically recommended in a Farm Conservation Plan approved by the USDA Natural Resources Conservation Service.
    c. To avoid erosion, mulched areas shall be overseeded, planted, or covered with appropriate agronomic mulches such as straw or leaves within 1 week of coarse mulch removal. All use of the field shall maintain an annual soil loss at or below "T".

For Improved Parking and Storage Areas:

The restoration standards set forth in the Soil Protection Rules shall be followed.

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