Soil that is not compacted and has plenty of organic matter is best for turf growth.

The Iowa Stormwater Management Manual outlines several methods to preserve and restore soil quality.

Decompress subsurface soils as deep as possible using ripping and tillage equipment.

Add topsoil and compost, till after addition to reduce compaction.
Straw mulch should be crimped and applied at 2 tons per acre. Wood mulch or compost should be applied to a uniform depth of 1-3 inches. Inspect for signs of thin or bare spots. Add mulch as required to maintain initial thickness. Eroded areas should be repaired and may require additional protection with an erosion mat.

Use on bare soils susceptible to erosion, such as on slopes and channels, and in locations where establishing vegetation may otherwise be difficult. Soil surface should be smooth. Inspect for signs of rill or gully erosion below the matting until vegetation is fully established. Repair eroded areas, tearing, tenting, or areas where product is no longer anchored firmly to the ground. Flexible pipe/tube that runs from top to bottom of a disturbed slope. 

Inspect for leaking joints, pipe movement, erosion at inlet/outlet, and seepage through the berm at the inlet. End should be upturned, placed on contour, and bottom of edge of fabric buried. Maintenance is needed when accumulated sediment reaches approximately 1/2 of silt fence height. Repair tears and fabric post anchor and remove when area is stabilized and the project is complete. Should be staked in place, ends upturned and placed on the contour. Replace those that have been driven over and/or torn. Remove sediment when accumulated sediment reaches approximately 1/2 height of wattle or filter sock.

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100% of the site has a 70% plant density. Inspect for bare spots, which should be re-seeded immediately. 

Alternative stabilization measures are required if seeding with field equipment or initiating vegetative stabilization is infeasible.

Ensure compliance by maintaining on a regular schedule. Stabilization of areas must, at a minimum, be initiated immediately whenever any clearing, grading, or excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on a portion of the site and will not resume for a period exceeding 14 calendar days.

Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and storm water. Upon inspection of potential pollutant sources at a site, the permit and SWPPP shall be revised as soon as practicable after the inspection but no later than 7 calendar days.

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Inspect outlet for plugging.

Turbid water discharges are prohibited to storm sewers and streams unless managed by appropriate controls. Use an environmentally-safe flocculent. Periodically clean out roll-off and basin systems and properly dispose of waste.

Utilize outlet structures that withdraw water from the surface when discharging from basins.

Remove any sediment tracked onto paved roadways.

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Replace rock when plugged with sediment.

Rock exit, engineering fabric and any accumulated sediment should be removed when project is completed.

Iowa DNR General Permit Information
http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/NPDES-General-Permits