Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Erosion Control** | **Description** | **Purpose** | **Operational or Structural** |
| **Contour Buffer Strips** | Narrow strips of perennial vegetation established across the slope and alternating down the slope with wider cropped strips. | Reduce sheet and rill erosion Manage runoff water and trap sediment Provide food and nesting for wildlife | Operational |
| **Contour Farming** | Farming sloping land (preparing, planting, and cultivating) on the contour and not up and down the slope. | Reduce sheet and rill erosion Manage runoff water Reduce fuel consumption | Operational |
| **Cover Crops** | A green crop including grasses, cereal grains, legumes or forbs seeded in early fall to protect the soil surface from erosion and reduce sediment and nutrient loss during the “brown” winter months between growing seasons. | Hold soil in place over the winter Suppress winter annual and early-season weeds Reduce soil erosion, even in no-till Reduce nitrate leaching, improve soil health and productivity Increase soil organic matter content Insect Control | Operational |
| **Crop Rotation** | Growing different revenue-generating crops in a repeated  sequence on the same field. | Reduce sheet, rill and wind erosion Maintain or improve soil organic matter content Manage the balance of plant nutrients Manage plant pests (weeds, insects and diseases) Provide food for domestic livestock Provide food and cover for wildlife | Operational |
| **Managed Grazing (Prescribed Grazing)** | Managing the planting of forage and using grazing rotations among different fields. | Reduce soil erosion and runoff Improve forage quality Improve livestock health Improve water quality Increase carrying capacity of the fields | Operational |
| **Nutrient Management** | Careful management of the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. | Reduce fertilizer cost Protect water quality Maintain or improve the physical, chemical and biological condition of soil | Operational |
| **Integrated Pest Management** | Implementing various management strategies that identify specific pests on specific areas to economically protect the crop. | Reduce adverse effects on plant growth, crop and forage production Prevent overuse of chemicals | Operational |
| **Erosion Control** | **Description** | **Purpose** | **Operational or Structural** |
| **Residue and Tillage Management** | Soil and residue is left undisturbed from harvest to planting except for nutrient injection. Planting, drilling or nutrient application is done in a narrow seedbed or slot created by coulters, row cleaners, or disk openers. No full-width tillage operations are done. | Reduce sheet, rill and wind erosion Improve soil organic matter content and soil structure Increase plant-available moisture Provide food and escape cover for wildlife | Operational |
| **Diversion** | Channel or earthen embankment constructed across a slope generally with a supporting ridge on the lower side; similar to a terrace. | Collect water and redirect to a stable outlet | Structural |
| **Field Borders** | Strip of perennial vegetation established at the edge or around the perimeter of a field. Used with contour or cross slope farming patterns. | Reduce erosion from wind and water Protect soil and water quality Manage pest populations Provide wildlife food and cover Improve air quality and increase carbon storage | Structural |
| **Grassed Waterways** | Areas planted to grass or other permanent vegetative cover where water usually concentrates as it runs off a field. | Slows water and guides it off the field Prevents gullies from forming | Structural |
| **Buffer Strip** | Strips of grass, shrubs or trees planted along ditches, streams, wetlands or other water bodies. | Filters nutrients Traps sediments        Protect water quality Provide habitat and corridors for fish | Structural |
| **Stream Bank and Shoreline Stabilization** | Treatments used to stabilize and protect banks of streams, reservoirs, estuaries or constructed channels. | Prevent loss of land Improve or enhance stream Prevent bank erosion | Structural |
| **Terraces** | Earthen embankment that follows contour of a hillside, breaking a long slope into smaller segments. Often land is formed into multiple terraces, giving a stepped appearance. | Reduce rate of runoff and allow soil particles to settle, cleaner water is carried off in a non-erosive manner | Structural |
| **Erosion Control** | **Description** | **Purpose** | **Operational or Structural** |
| **Windbreak** | Rows of trees and shrubs planted around a farmstead, field or feedlot. | Protect from wind erosion Act as snow fence Provides wildlife food and cover Conserves energy used for heating and cooling Acts as a sound barrier | Structural |
| **Water and Sediment Control Basin** | Earth embankment constructed along the bottom of a drainageway to form a sediment trap and temporarily store runoff. | Improve farmability of sloping land Reduce erosion Trap sediment and reduce and manage water runoff | Structural |

Resources:

* Iowa State Extension: <http://www.extension.iastate.edu/agdm/crops/html/a1-41.html>
* NRCS: <http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/null/?cid=nrcs143_026849>