# Effects of NRCS Conservation Practices - National

## Field Border

A stripe of permanent vegetation established at the edge or around the perimeter or a field.

### Soil Erosion

<table>
<thead>
<tr>
<th>Effect</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Erosion - Sheet and Rill Erosion</td>
<td>Permanent vegetation planted across the slope reduces erosive water energy.</td>
</tr>
<tr>
<td>Soil Erosion - Ephemeral Gully Erosion</td>
<td>Vegetation across the slope reduces erosive energy of concentrated flows where they exit the field.</td>
</tr>
<tr>
<td>Soil Erosion - Classic Gully Erosion</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Soil Erosion - Streambank, Shoreline, Water Conveyance C</td>
<td>Increased vegetation can reduce concentrated runoff flowing over streambanks.</td>
</tr>
</tbody>
</table>

### Soil Quality Degradation

<table>
<thead>
<tr>
<th>Effect</th>
<th>Rationale</th>
</tr>
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<tbody>
<tr>
<td>Organic Matter Depletion</td>
<td>Permanent cover and lack of soil disturbance reduces decomposition of soil organic materials such as roots and allows accumulation.</td>
</tr>
<tr>
<td>Compaction</td>
<td>Root penetration and organic matter helps restore soil structure.</td>
</tr>
<tr>
<td>Subsidence</td>
<td>Drainage has the predominant impact on subsidence.</td>
</tr>
<tr>
<td>Concentration of Salts or Other Chemicals</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

### Excess Water

<table>
<thead>
<tr>
<th>Effect</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess Water - Seeps</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Excess Water - Runoff, Flooding, or Ponding</td>
<td>Permanent vegetation will reduce runoff and increase infiltration.</td>
</tr>
<tr>
<td>Excess Water - Seasonal High Water Table</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Excess Water - Drifted Snow</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

### Insufficient Water

<table>
<thead>
<tr>
<th>Effect</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient Water - Inefficient Use of Irrigation Water</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Insufficient Water - Inefficient Moisture Management</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

### Water Quality Degradation

<table>
<thead>
<tr>
<th>Effect</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticides in Surface Water</td>
<td>The action reduces runoff and erosion. Also, the borders may attract beneficial insects or trap insect pests, reducing the need for pesticide applications.</td>
</tr>
<tr>
<td>Pesticides in Groundwater</td>
<td>The action may attract beneficial insects or trap insect pests, reducing the need for pesticide applications.</td>
</tr>
<tr>
<td>Nutrients in Surface water</td>
<td>Permanent vegetation will take up available nutrients and increase organic matter. The increased organic matter will increase cation exchange capacity which will hold nutrients.</td>
</tr>
<tr>
<td>Nutrients in Groundwater</td>
<td>Permanent vegetation will take up available nutrients and increase organic matter. The increased organic matter will increase cation exchange capacity which will hold nutrients.</td>
</tr>
<tr>
<td>Salts in Surface Water</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Salts in Groundwater</td>
<td>The action will result in increased uptake by plants.</td>
</tr>
<tr>
<td>Excess Pathogens and Chemicals from Manure, Bio-solic</td>
<td>Less erosion and runoff reduces delivery of pathogens. More moist environment in permanent vegetation may slow pathogen mortality, however.</td>
</tr>
<tr>
<td>Excess Pathogens and Chemicals from Manure, Bio-solic</td>
<td>Permanent vegetation increases soil organic matter and microbial activity, which competes with pathogens. However, permanent vegetation may delay mortality of some pathogens by slowing desiccation.</td>
</tr>
<tr>
<td>Environmental Impact</td>
<td>Rating</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Excessive Sediment in Surface Water</td>
<td>2</td>
</tr>
<tr>
<td>Elevated Water Temperature</td>
<td>0</td>
</tr>
<tr>
<td>Petroleum, Heavy Metals and Other Pollutants Transported</td>
<td>0</td>
</tr>
<tr>
<td>Petroleum, Heavy Metals and Other Pollutants Transported</td>
<td>0</td>
</tr>
<tr>
<td>Air Quality Impacts</td>
<td></td>
</tr>
<tr>
<td>Emissions of Particulate Matter (PM) and PM Precursors</td>
<td>1</td>
</tr>
<tr>
<td>Emissions of Ozone Precursors</td>
<td>0</td>
</tr>
<tr>
<td>Emissions of Greenhouse Gases (GHGs)</td>
<td>1</td>
</tr>
<tr>
<td>Objectionable Odors</td>
<td>0</td>
</tr>
<tr>
<td>Degraded Plant Condition</td>
<td></td>
</tr>
<tr>
<td>Undesirable Plant Productivity and Health</td>
<td>5</td>
</tr>
<tr>
<td>Inadequate Structure and Composition</td>
<td>5</td>
</tr>
<tr>
<td>Excessive Plant Pest Pressure</td>
<td>4</td>
</tr>
<tr>
<td>Wildfire Hazard, Excessive Biomass Accumulation</td>
<td>0</td>
</tr>
<tr>
<td>Fish and Wildlife - Inadequate Habitat</td>
<td></td>
</tr>
<tr>
<td>Inadequate Habitat - Food</td>
<td>2</td>
</tr>
<tr>
<td>Inadequate Habitat - Cover/Shelter</td>
<td>2</td>
</tr>
<tr>
<td>Inadequate Habitat - Water</td>
<td>4</td>
</tr>
<tr>
<td>Inadequate Habitat - Habitat Continuity (Space)</td>
<td>2</td>
</tr>
<tr>
<td>Livestock Production Limitation</td>
<td></td>
</tr>
<tr>
<td>Inadequate Feed and Forage</td>
<td>0</td>
</tr>
<tr>
<td>Inadequate Shelter</td>
<td>0</td>
</tr>
<tr>
<td>Inadequate Water</td>
<td>0</td>
</tr>
<tr>
<td>Inefficient Energy Use</td>
<td></td>
</tr>
<tr>
<td>Equipment and Facilities</td>
<td>0</td>
</tr>
<tr>
<td>Farming/Ranching Practices and Field Operations</td>
<td>0</td>
</tr>
</tbody>
</table>

**CPPE Practice Effects:**

- 0: No Effect
- 1: Slight Improvement
- 2: Slight to Moderate Improvement
- 3: Moderate Improvement
- 4: Moderate to Substantial Improvement
- 5: Substantial Improvement
- 6: Substantial Worsening
- 7: Moderate to Substantial Worsening
- 8: Moderate Worsening
- 9: Slight to Moderate Worsening
- 10: Slight Improvement
- 11: No Effect