Erosion Control Strategies for Runoff & Erosion Control

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Soil Erosion Types:

- Raindrop Splash
- Sheet and Rill
- Ephemeral
- Gully
- Streambank
- Slope Instability
Factors That Influence Soil Erosion

- Soil Type
- Slope/Topography
- Vegetation
- Rainfall
  - (Amount & Intensity)
- Human Impacts
Farming ("Human") Activities Influencing Runoff

- Infrastructure
- Land Grading
  - Affects natural drainage, soil & plant conditions...
- Impervious Surfaces
- On-going Operations
  - Soil compaction, water mgt, maintenance, etc
Runoff Control Strategies

“Runoff Control Reduces Erosion”

- 4-D Formula:
  - Decrease
  - Detain
  - Dissipate
  - Divert
Decrease Volume and Concentration of Runoff

- Capture & Reuse
- Reduce Slope Length
- Water Mgt
- Reduce Impervious/Compacted Surfaces
- Vegetation
- Increase Infiltration
Detain (and/or Retain) Runoff

- Detention v.s. Retention
- Detain & Meter Runoff
- Retain, Clean & Reuse
Dissipate Runoff

- Reduce Erosive Velocities
- Improve Infiltration
- Protect Water Quality
Divert Runoff

Use with Caution

Diversions Cause

Concentration &

Increased Volume

- Redirect
  To a Safe Outlet
- Divert & Spread
- Divert & Capture
Erosion Control Strategies

- Management
- Vegetative
- Structural
- Combination
- Temporary/Emergency
Management Practices

- Irrigation Water Management
- Nutrient Management
- Pest Management
- Wildlife Habitat Management
- Ag Energy Management
- Conservation Practice Operation & Maintenance
Vegetative Practices

- Vegetated Treatment System
- Stream Habitat & Riparian Restoration
- Grass Waterway
- Critical Planting
- Hedgerow
- Cover Crop
- Windbreak
Structural Practices

- Water Developments
- Irrigation Systems, Pumps
- Access Roads
- Drainage Systems
- Tail Water Recovery
- Water Filtration Systems
- Water & Sediment Control Structures
Temporary/Emergency Practices

*Use with Caution*

- Can cause other problems
- Makes problem worse
- Waste of time & money
- Short lived
- High maintenance
- False sense of security
For More Information

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