Don Williams Lake Water Quality and Watershed Conditions

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Current Water Quality Conditions

- DW Lake is on Iowa's Impaired Waters List
  - Sedimentation (since 1998)
  - Nutrient Enrichment (since 1998)
  - Bacteria (new in 2010)
- Recent data suggests sedimentation and nutrient enrichment impairments could be removed
- Localized problems still exist

Watershed Assessments

- Watershed assessments provide an estimate of what is entering the lake
- Assessments focused on soil erosion
- Phosphorous is often attached to soil so reducing soil erosion should reduce phosphorous entering the lake
- All data has been collected by visual inspections

Assessment Results

- Soil erosion occurs in many ways
  - Sheet and rill erosion
  - In-field gully erosion
  - Gully erosion in other areas
  - Shoreline erosion
  - Streambank erosion
- All eroded soil does not reach the lake at once, the amount that does is called sediment delivery

Sheet and Rill Erosion

Erosion: 23,315 tons per year or 2,027 dump trucks

Sediment Delivery: 855 tons per year or 73 dump trucks

Ephemeral Gully Erosion

Erosion: 1,798 tons per year or 156 dump trucks

Sediment Delivery: 639 tons per year or 55 dump trucks

Gully Erosion

Erosion: 68 tons per year or 6 dump trucks

Sediment Delivery: 61 tons per year or 5 dump trucks

Streambank Erosion

Erosion: 992 tons per year or 86 dump trucks

Sediment Delivery: 893 tons per year or 78 dump trucks

Shoreline Erosion

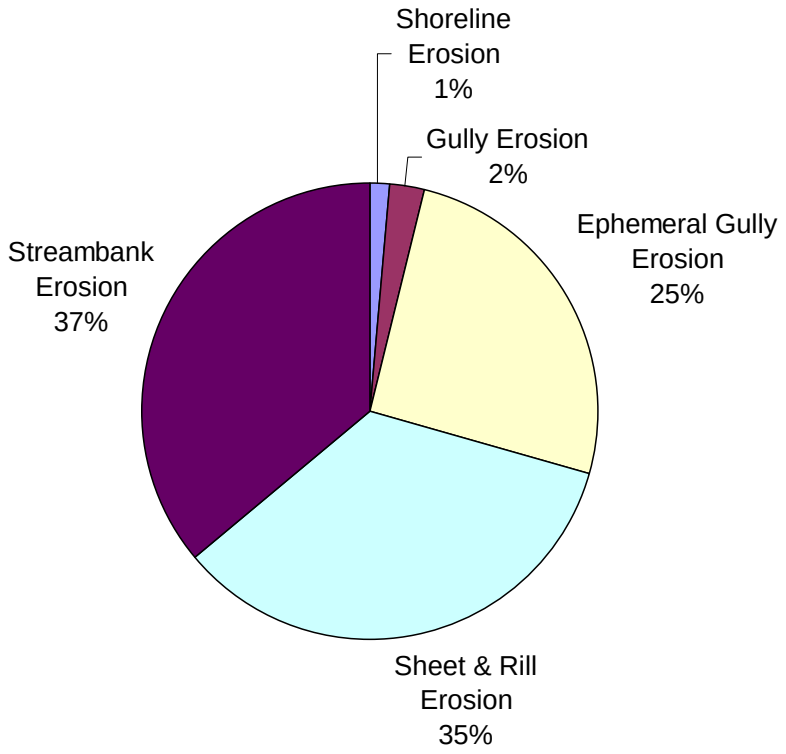
Erosion: 35 tons per year or 3 dump trucks

Sediment Delivery 35 tons per year

Totals

Total Erosion: 26,208 tons per year or 2,279 dump trucks

Total Sediment Delivery: 2,473 tons per year or 215 dump trucks



Questions