Scenario 5

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Scenario 5

- General Approach
- Types of the Management Practices

Sediment Sources in Minnesota River System

- Three Major Sources
  - Upland
  - Ravines
  - Bed, Bank & Bluff
- Each source *roughly* contributing 1/3 of the total sediment load

Scenario 4 Overview

- Key Elements
  - Increased perennial vegetation
  - Controlled drainage <1% slope
  - Creating storage for half of first 2.0 inches of runoff
- Realistic in applying agronomic practices on landscape
- Aim to achieve loads reductions from *both* upland & ravine sources

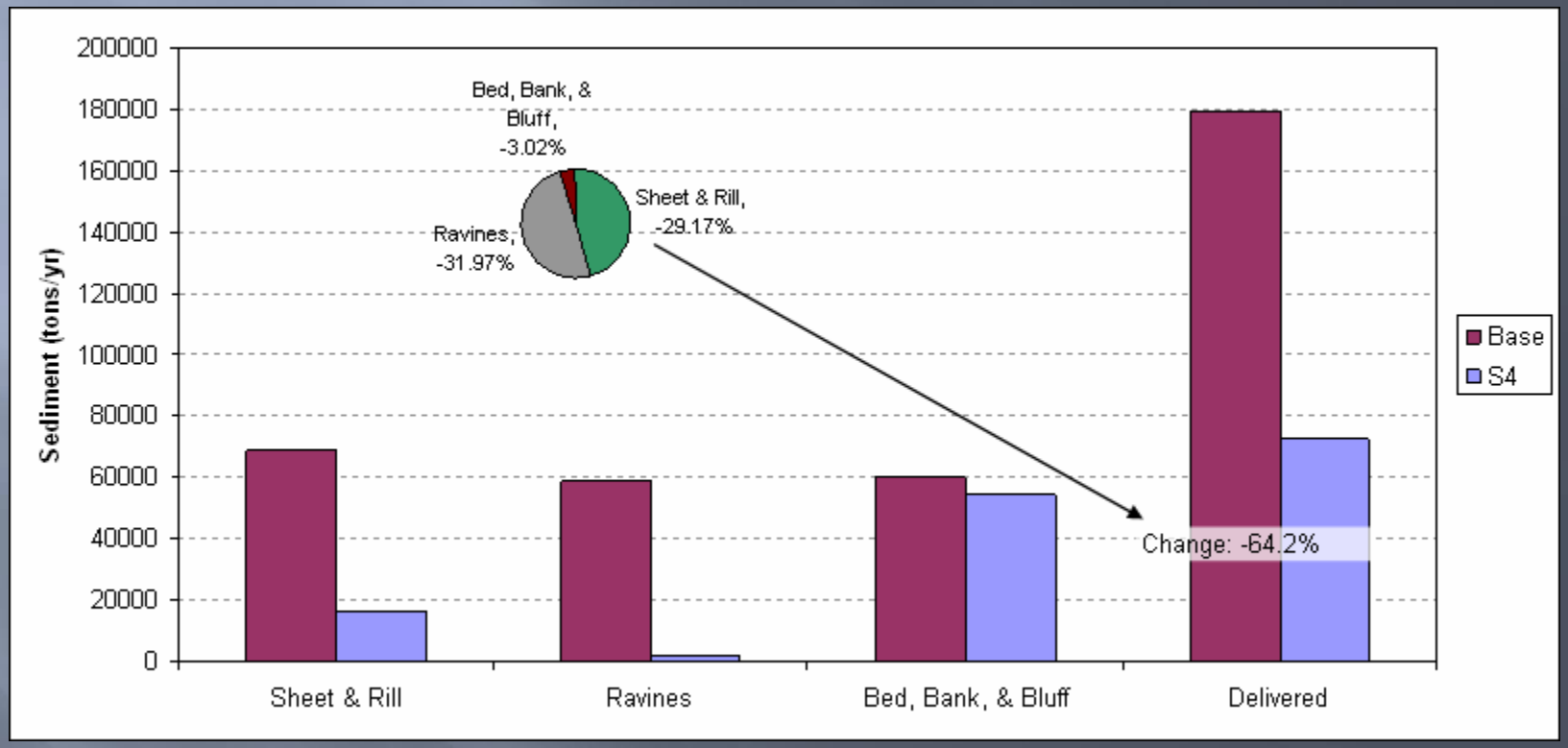
Scenario 4 – What did we learn?

- Sediment load reduction of ~50% for most watersheds
- Le Sueur river delivered 25% of the observed load at Jordan
- Decreased flow about 6% - increase ET
- Meet the turbidity standards most of the time at watershed outlets and the mainstem Minnesota

Scenario 4 – What did we learn?

- Scenario 4 achieved major reductions from upland and ravine sources
- Major contributions from bed, bank and bluff
- Little change in bed, bank, & bluff loads in scenario 4

For Cottonwood



Scenario 5 Framework

- All upland management practices will be carried forward
- Potential further reductions from bed, bank, and bluff
- These reductions are necessary to meet turbidity targets

Scenario 5 Framework

- Geomorphic evaluation of Blue Earth and Le Sueur systems
- Segment strategically and develop detailed stabilization plans
- Predefine scale and scope of restoration efforts
- Use ecological engineering concepts already proven and tested

Scenario 5 Framework

- Types of Management Practices:
  - Earthen benches – against steep walls
  - Grade controls measures
  - Vegetative management
  - ------
- Existing materials and resources
- Goal is to reduce the bed, bank, & bluff contributions


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Photo by Joe Magner


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Questions?