CSREES Conservation Effectiveness Assessment for the Bear River Basin

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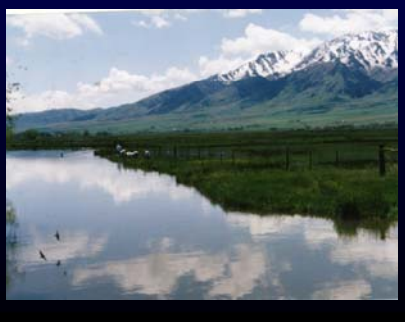


WQ efforts in Little Bear

- Hydrologic Unit Area Project
- TMDL Project, 319 funds
- Additional cost share programs
- Other planning (eg Phase II, Source Water Protection)


Little Bear River
Hydrologic Unit Area


Utah Department of Environmental Quality
Division of Water Quality
TMDL Section

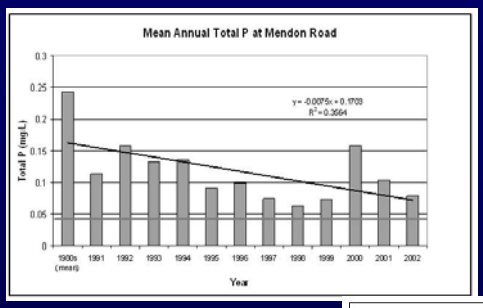
Little Bear River Watershed TMDL

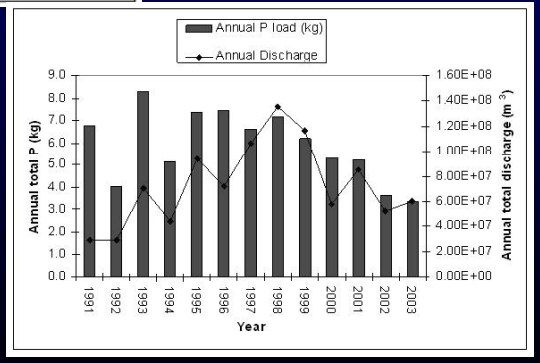
Description/history

- Approximately 74,000 ha of primarily agricultural lands.
  - 70% grazing/forest
  - 19% is irrigated cropland, and
  - 7% dry cropland.
  - Over 50 dairies, (6000 cows).
  - 32% human population increase 1990 - 2000.
- Late 1980's, identified as having significant water quality impairment.
- 1990s, state and federal cost share for conservation practices
  - USDA/HUA funds $3.75 million 1992-1996
  - Other funds from EPA (319), CRP (USDA), WHIP (NRCS), and others

HUA project

- 100 farmers voluntarily (with cost sharing) implemented conservation practices to reduce nutrient and sediment runoff to the river from dairies, rangeland, and pastures.
  - Animal waste management systems on (>45 farms)
  - Stream bank revegetation (>5 miles of river/tributaries)
  - Dumpsite cleaned up at McMurdie Hollow
  - Improved vegetation and grazing management to reduce erosion from 7500 acres of rangeland.





Objective 1. Determine if programs to promote adoption of best management practices have reduced P loads at a watershed scale.

- Evaluate formal program participation and actual practice implementation
- Evaluate spatial relationships and time lags between BMP use and improved water quality
- Evaluate influence of exogenous factors on phosphorus loads

Objective 2. Critically examine strengths and weaknesses of different water quality monitoring techniques.

- Are current techniques adequate?
  - How can the most info be derived from available data?
  - Are there innovative approaches when data are scarce?
- Evaluate predictive abilities of original modeling efforts
- How well do alternative wq indicators correlate with traditional approaches?

Objective 3. Develop recommendations on the most effective and socioeconomically viable agricultural bmps.

- What social and economic factors within the watershed facilitate or impede implementation of conservation practices.
- How can future wq protection efforts be most effectively designed to maximize benefits while minimizing economic impacts