STRATEGIC PLAN

- **Improve nutrient and pest management**
- **Pasture management and planned grazing**
- Timber stand improvement
- **Shallow water impoundment**
- **Filter/buffer strips and riparian development**
- Implement potential solutions to improve environmental quality and quality of life
- **Community education and technology transfer**
- **Science-based approach**

Encourage improved nutrient and pest management

- SFWA demo farm sites
- Crop consulting service
- ICM meetings (Integrated Crop Management)
- Hosted a nutrient management conference
- Manure calibration
- Manure management plots

Encourage pasture management and planned grazing

- EQIP funding for pasture renovations
- Planning assistance for grazers
- Pasture management/fencing tour planned summer 2003

Encourage pasture management and planned grazing

Encourage shallow water impoundment

1500 acres of wetlands have been restored through USDA – NRCS CRP (wetlands) program

Restored prairie pothole


Restoring America's Wetlands
NRCS
Natural Resources Conservation Service
Berndt Family in cooperation with Bruce Rastetter
Division of Soil Conservation
Hardin County Conservation District

Encourage filter/buffer strips and riparian development

- CRP buffer incentive program
- Partnered with Hardin County Conservation District on purchase of a no-till drill
- Streambank stabilization- demonstration project

STREAM BANK STABILIZATION DEMO SITE

Excavating to a 2:1 Slope

Tying willow bundles

Jetting holes for willow sprigs

300 ft. of restored stream bank

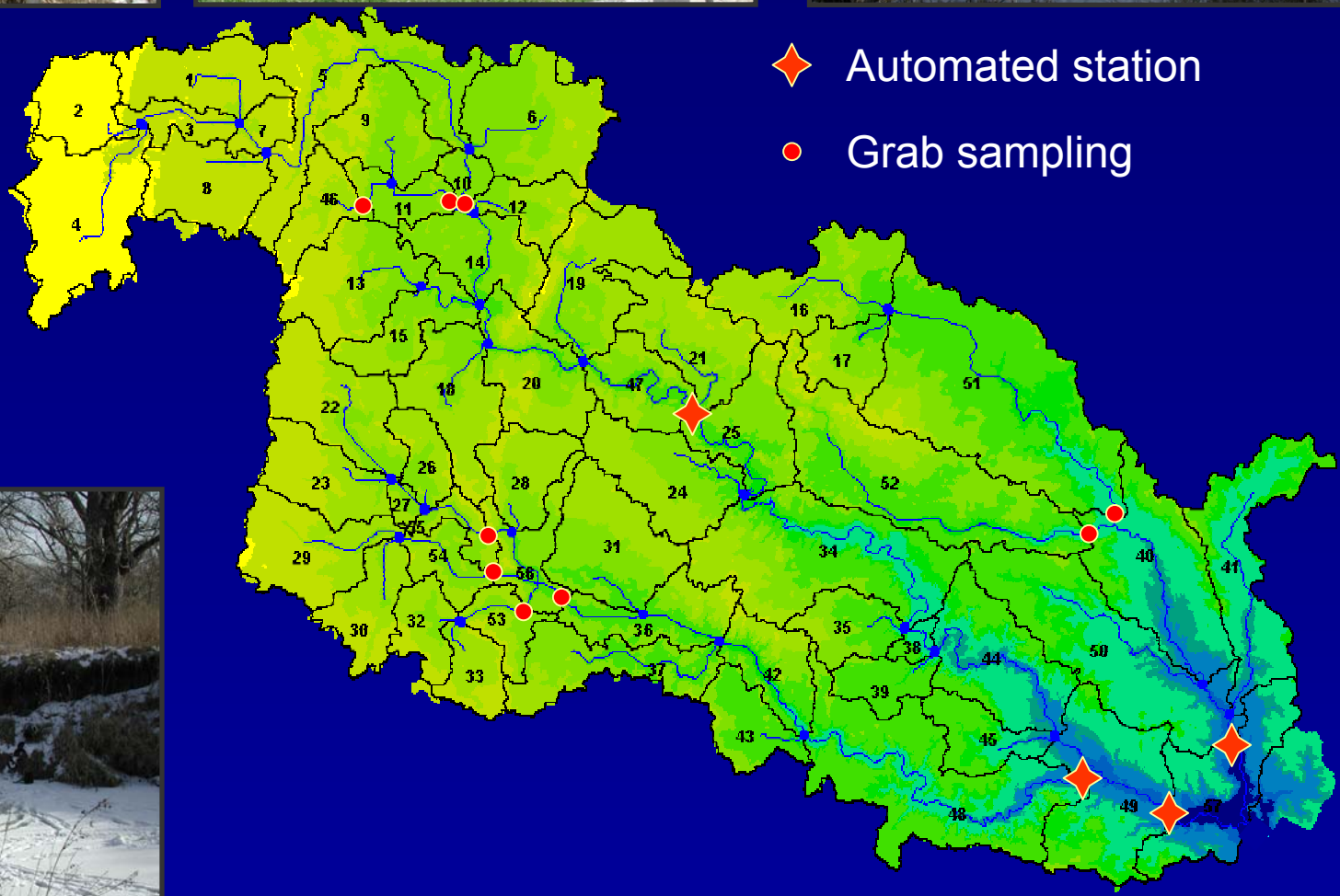
Community information

- Partner in a crop and land stewardship clinic
- Watershed walks and tours
- ICM meetings

Scientific research

- Sponsored training for local volunteers to monitor water quality
- IA-DNR and ISU fishery and fish habitat research
- Water monitoring: purchased 4 automated water samplers and installed 2 surface water flumes
- BMP placement strategies using terrain analyses
- Land cover assessment
- Decision support

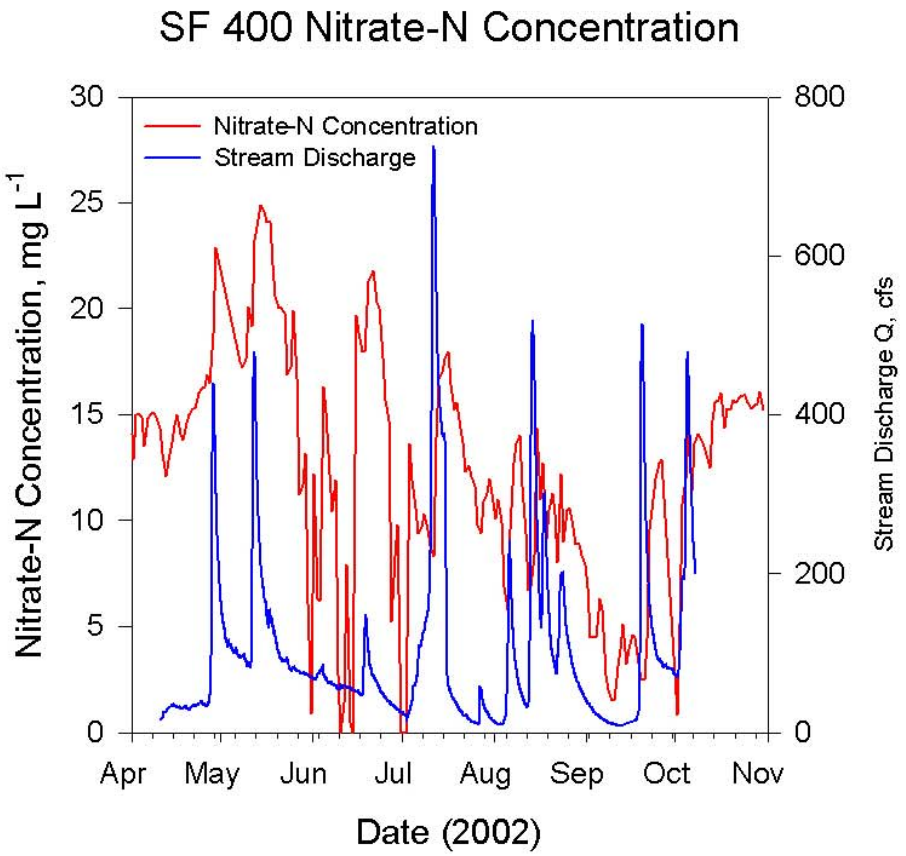
Stream flow and water quality monitoring

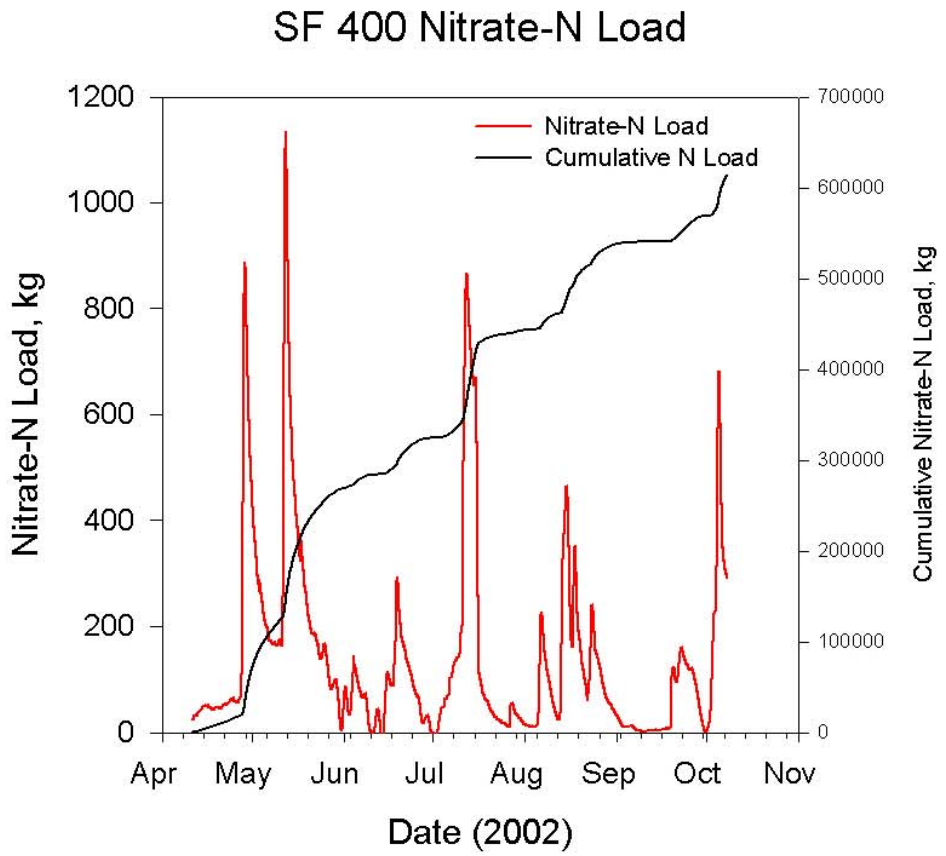


Monitoring activities by ARS

- Automated sites (unattended daily and event sampling):
  - Flow
  - Sediment
  - Total P
  - NO_3-N
  - In-stream monitoring of temp, DO, conductivity
  - Exploring event sampling for *E. coli*
- Manual sites
  - Sediment, total P and NO_3-N as above
  - Dissolved P
  - *E. coli* and antibiotics
- Soil monitoring
  - Soil properties under manure applications
  - Movement and survival of *E. coli*
  - Movement and degradation of antibiotics

Concentrations and total loads: NO_3-N





ARS research objectives in the South Fork Watershed

- Evaluate spatial and temporal patterns in water quality across an agricultural watershed containing livestock production facilities.
- Develop planning tools that identify optimal locations to place specific conservation practices.
- Encourage implementation of new practices and identify their water quality impacts.