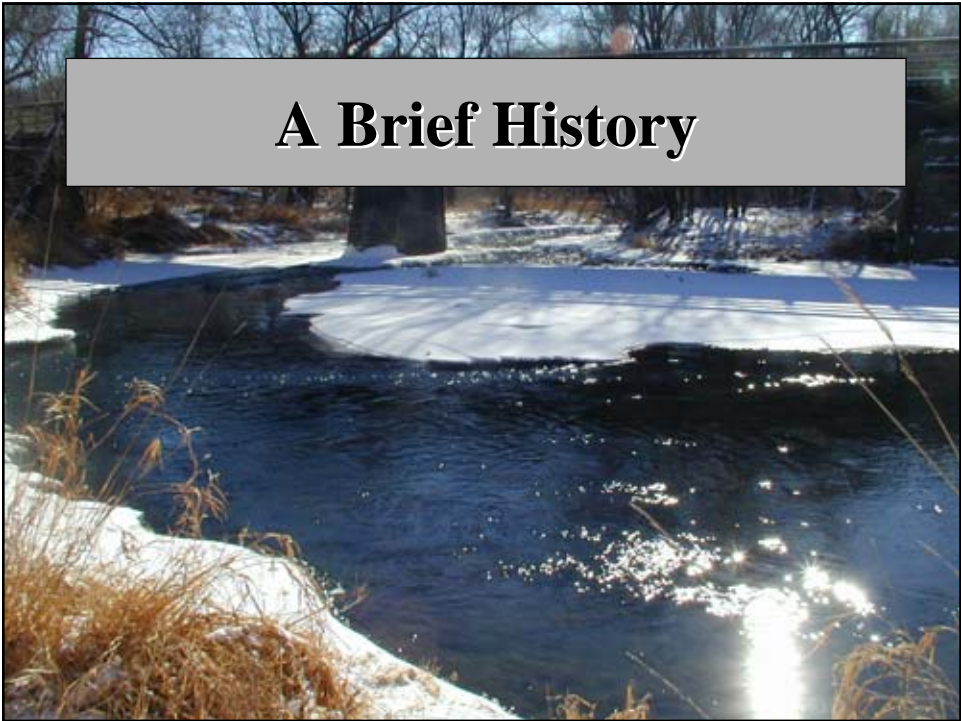




**COLD WATER STREAMS:  
THEN AND NOW**



**A Brief History**

## When the Settlers Arrive:

- The landscape is well-vegetated
- Water is absorbed on the land rather than running off into streams



## Streams are:

- Deep
- Clear
- Cold
- Rich in diversity



## Settler Numbers Swell:



Between 1850 and 1900, settlers flock to the inviting landscape of southeastern Minnesota

## Initially, Change is Gradual:

- Most settlers are small-scale farmers
- Wheat is the primary crop
- People/animals provide the needed power
- Soil structure remains good





## Over time, the landscape is altered as:

More...

- Land is put under the plow
- Roads are built
- Homes and other buildings are constructed



## Problems Appear

Between 1900 and the 1940's:



- Permanent vegetation begins to disappear
- Soil holds less water
- Run-off increases
- Flooding becomes more frequent

## **Streams Suffer:**



**Streams are now becoming:  
shallow, warm and less diverse**

## **As Streams Change:**



- **Vital stream insects are lost**
- **Brook trout disappear**

## **The Dawn of Conservation: (1930's)**

### **Soil/Water Concerns Prompt Action:**



- **Soil Conservation Service comes into being**
- **Civilian Conservation Corp is established**
- **The first watershed project is begun in SE Minnesota**
- **Fisheries management begins**

## **Conservation Practices Include:**



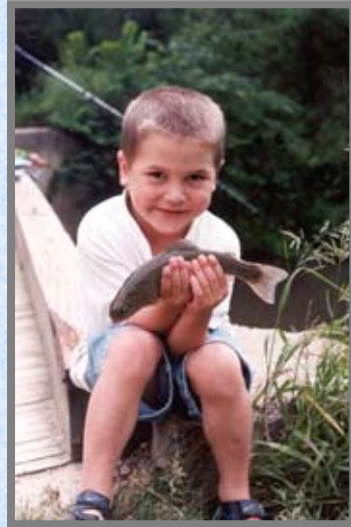
- **Removing livestock from steep slopes**
- **Tree plantings**
- **Contour strips and crop rotation**
- **Water retention structures**



## **Streams Respond:**

**As run-off is reduced:**

- **Water quality and habitat improve**
- **Fish populations begin to respond**



## **(1950's-1980's) Row Crop Acreage Steadily Increases**



**Despite the increase in row crops:**

- **Conservation efforts outweigh negative impacts**
- **Water quality improves**

## Conservation Victories (1950s – 1980s)

- Fisheries programs accelerate
- Critical pollution sources are corrected
- Programs such as CRP result in more tree/grass plantings



1990's to Present

Population Impacts  
Escalate



## Threats to Streams Rise As:



- Rural and urban sprawl spreads rapidly
- Row crop acreage continues to expand
- Fertilizer and chemical use increases
- Run-off worsens

## Streams at a Crossroads

### Troubling Signs:

- Population growth will continue to impact streams
- Row crops will remain dominant
- Conservation funding will likely decrease



## Can We Avoid Going Backwards?



Avoiding the problems of yesterday will require:

- An informed and caring public
- Expanded fisheries management and research
- Effective and targeted conservation programs
- Wise and careful planning

A person wearing a green jacket, dark pants, and a cap is crouching on the bank of a stream. They are looking down at something in their hands, possibly a sample or a small animal. The stream is shallow and flows over rocks. The surrounding area is rocky and has some vegetation.

**Next Step**

**Public Input to Develop Our Strategic Plan**