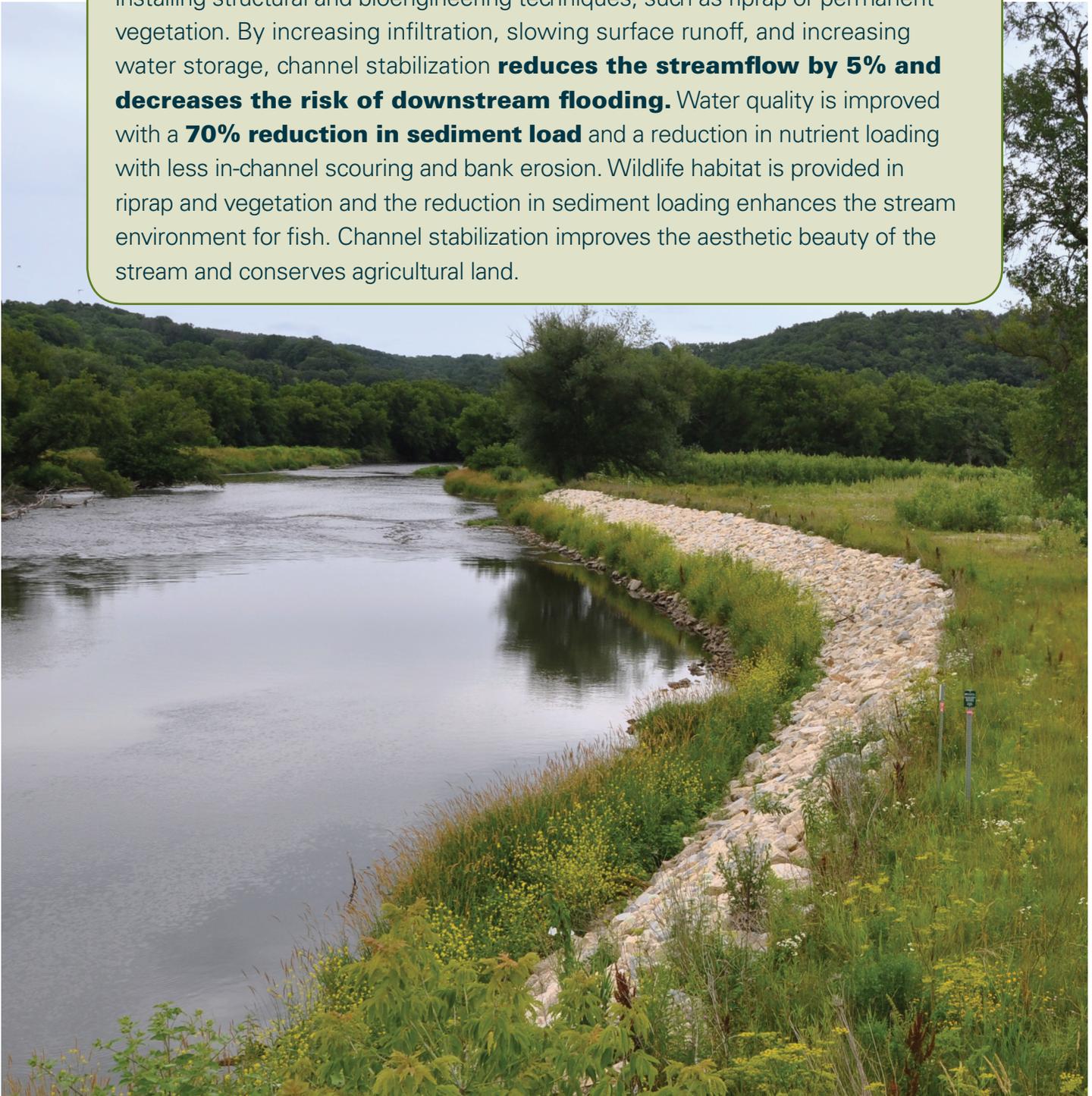


# The Iowa Watershed Approach

## Channel Stabilization

### What is channel stabilization?

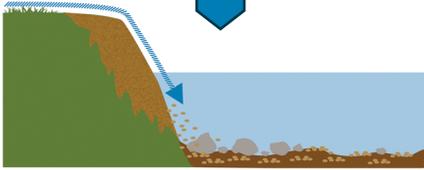
Channel stabilization involves reshaping a streambank with a stable slope and installing structural and bioengineering techniques, such as riprap or permanent vegetation. By increasing infiltration, slowing surface runoff, and increasing water storage, channel stabilization **reduces the streamflow by 5% and decreases the risk of downstream flooding**. Water quality is improved with a **70% reduction in sediment load** and a reduction in nutrient loading with less in-channel scouring and bank erosion. Wildlife habitat is provided in riprap and vegetation and the reduction in sediment loading enhances the stream environment for fish. Channel stabilization improves the aesthetic beauty of the stream and conserves agricultural land.



## Channel Stabilization and Flood Reduction

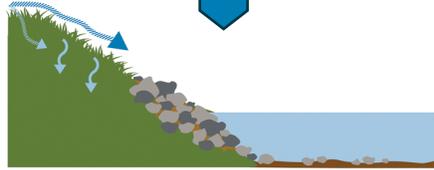
### THEIR IMPACT

1. Provides floodwater storage.



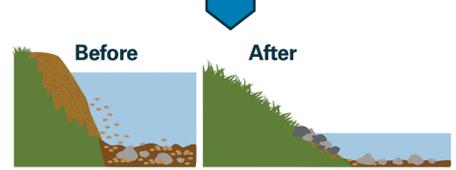
A stable streambank will increase infiltration and temporarily store precipitation runoff and drainage water.

2. Reduces peak streamflow after a storm event by 5%.



With increased infiltration and water storage, the volume and timing of downstream flood peaks are reduced.

3. Maintains streamflow capacity.



With less sediment loading into the stream bed, the stream capacity is conserved.

## Channel Stabilization and Water Quality

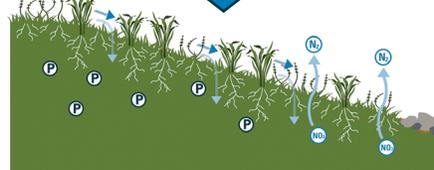
### THEIR IMPACT

1. Stabilizing eroding streambanks can reduce the sediment load into a watershed by 70%.



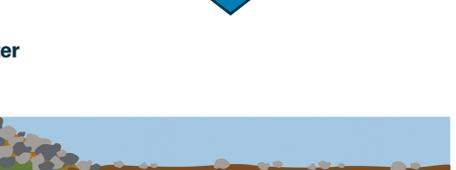
A stable slope, riprap, and vegetation holds bank sediment in place against the forces of flowing water.

2. Reduced phosphorus load to surface waters.



Phosphorus-laden sediment is held to the streambank rather than eroding into the stream.

3. Potential to reduce nitrogen loading to streams.



A riparian buffer zone can remove nitrogen in runoff and drainage water before it can enter the stream.

## Financial Incentives of Channel Stabilization

The **Iowa Watershed Approach** provides **90% cost share** for channel stabilization projects. See your Soil and Water Conservation District or Natural Resources Conservation Service for other cost share opportunities.

## Additional Benefits of Channel Stabilization

- ▶ Provides wildlife benefits:
  - Improves stream habitat for fish.
  - Riprap and vegetation provides wildlife habitat.
  - Riparian buffers keep the stream temperature cool, improving conditions for fish and insects.
  - Pollinator species may be incorporated in riparian buffer.
- ▶ Enhances the stream corridor to create an aesthetically pleasing and natural appearance and allows for recreational activities.
- ▶ Preventing streambank erosion will conserve agricultural land and other land neighboring the stream.

For more information on the Iowa Watershed Approach visit: [www.iowawatershedapproach.org](http://www.iowawatershedapproach.org)

[www.extension.iastate.edu/waterquality](http://www.extension.iastate.edu/waterquality)

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