

# The Iowa Watershed Approach

## Terraces

### What are terraces?

A terrace is an earthen embankment constructed across a field slope, typically following the contour, and can be designed to temporarily store runoff or convey runoff to waterways. Terraces break up the slope length of the field into multiple shorter slope sections, slowing the flow rate of runoff, **reducing sheet and rill erosion** and **preventing the formation of ephemeral gullies**. As terraces temporarily store and slowly infiltrate or discharge runoff, they conserve soil moisture, **reduce streamflow by 5%**, allow sediment to settle out, and **reduce phosphorus loads by 77%**. Terraces improve the ability to farm slopes and are designed based on equipment needs. Additionally, terrace vegetation can provide cover for wildlife. Terraces should be used in conjunction with other soil conservation practices on the landscape to prevent sedimentation.





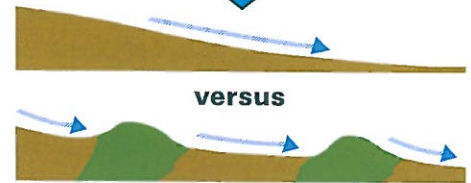
## Terraces and Flood Reduction

### THEIR IMPACT

1. Provides floodwater storage.

2. Reduces surface runoff and can reduce downstream streamflow by 5%.

3. Reduces peak runoff flow rate.



Terraces can temporarily retain surface runoff, allowing it to slowly infiltrate through the soil or releasing it through a stable outlet.

Holding back runoff can promote infiltration and conserve soil moisture.

Terraces reduce the slope length of the field, slowing runoff and delaying the timing of downstream flood peaks.

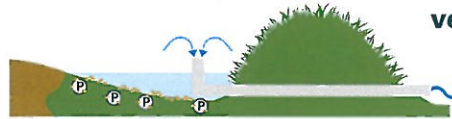
## Terraces and Water Quality

### THEIR IMPACT

1. Prevents erosion from sloping ground.

2. Reduces the sediment load.

3. Reduces the phosphorus load to surface waters by 77%.



Slowing down runoff with reduced slope lengths prevents sheet and rill erosion and the formation of ephemeral gullies.

Sediment carried in surface runoff settles out when retained by a terrace.

Phosphorus-laden sediment remains in the field or settles out of runoff at the terrace.

## Financial Incentives of Terraces

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



## Additional Benefits of Terraces

- ▶ When used in combination with no-till and cover crops, terraces help keep soil in place and improve soil health.
- ▶ Terraces can conserve soil moisture within a field.
- ▶ Vegetation within a grassed frontslope or backslope can provide cover and nesting habitat for small animals and birds.
- ▶ Terraces improve the ability to farm slopes.
- ▶ Spacing and orientation of terraces can be designed to accommodate equipment size.

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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