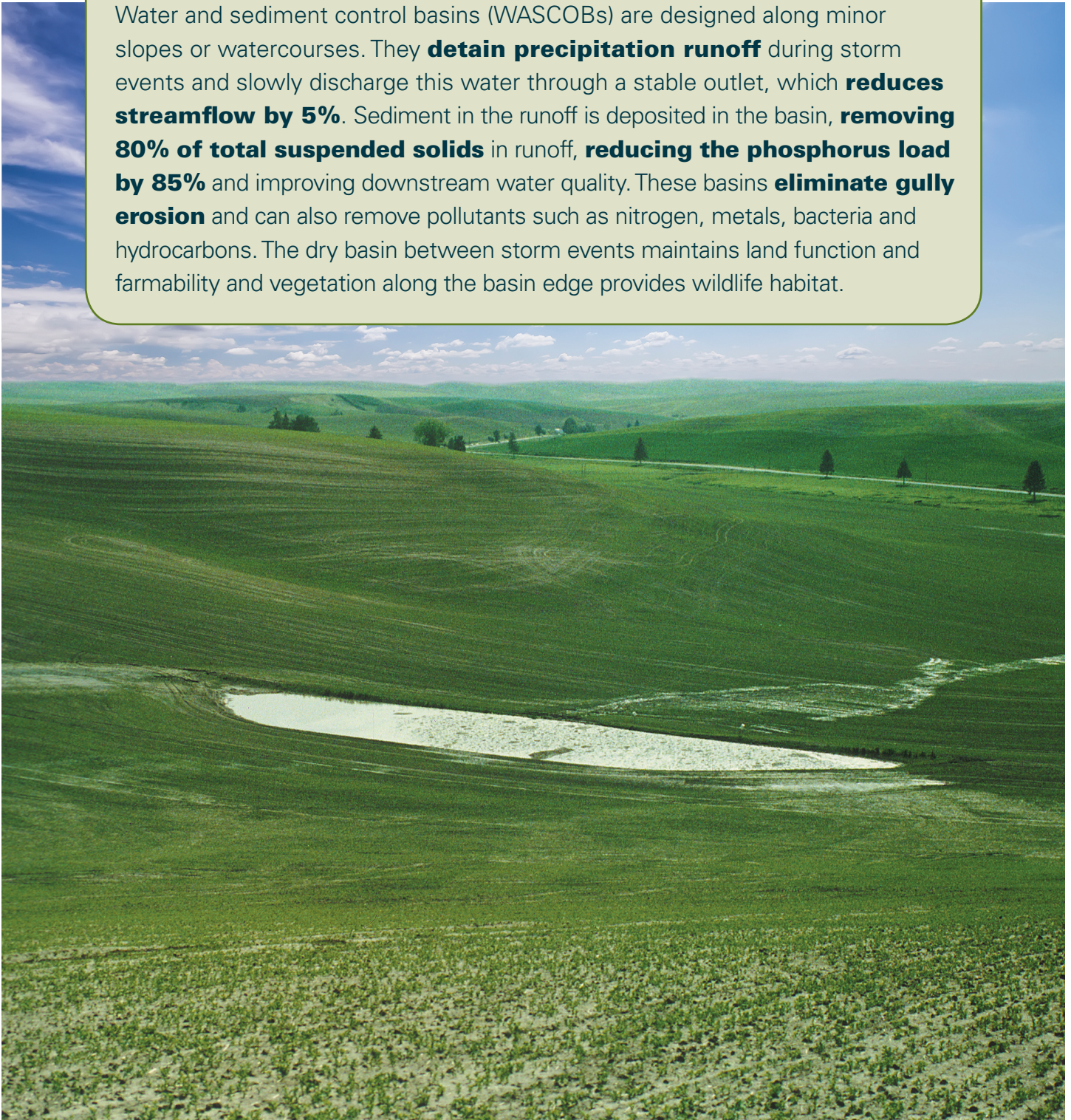


The Iowa Watershed Approach

Water and Sediment Control Basins

What are water and sediment control basins?

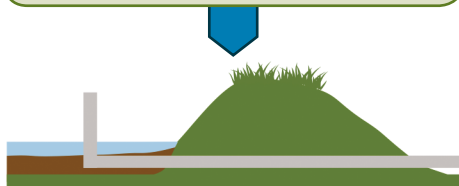
Water and sediment control basins (WASCOBs) are designed along minor slopes or watercourses. They **detain precipitation runoff** during storm events and slowly discharge this water through a stable outlet, which **reduces streamflow by 5%**. Sediment in the runoff is deposited in the basin, **removing 80% of total suspended solids** in runoff, **reducing the phosphorus load by 85%** and improving downstream water quality. These basins **eliminate gully erosion** and can also remove pollutants such as nitrogen, metals, bacteria and hydrocarbons. The dry basin between storm events maintains land function and farmability and vegetation along the basin edge provides wildlife habitat.



Water and Sediment Control Basins and Flood Reduction

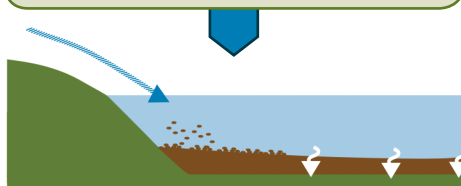
THEIR IMPACT

1. Provides floodwater storage.



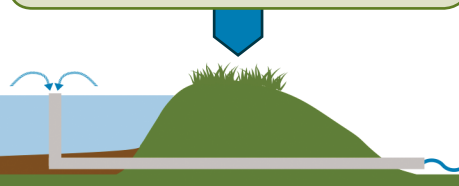
The basin will temporarily store precipitation runoff.

2. Reduces and manages runoff.



Infiltration of surface runoff is promoted as it is detained and slowly released through a stable outlet.

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



Runoff rates are reduced by traveling through the basin which delays the timing of flood peaks.

Water and Sediment Control Basins and Water Quality

THEIR IMPACT

1. Reduces total suspended solids in runoff by 80% and phosphorus load to surface waters by 85%.

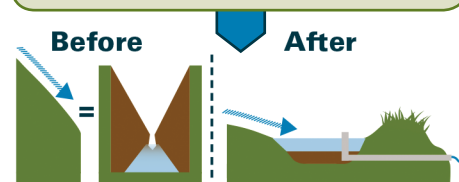


Sediment and phosphorus falls out of runoff and is deposited in the basin before it can reach surface water bodies.

2. Can reduce the load of pollutants, such as nitrogen, metals, bacteria and hydrocarbons, to streams.

Pollutants in runoff are deposited or removed within the basin as runoff is captured and slowly released.

3. Reduces gully erosion.



Basins reduce concentrated flow and runoff on-site and downstream.

Financial Incentives of Water and Sediment Control Basins

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

Additional Benefits of Water and Sediment Control Basins

- ▶ Grass and other vegetation surrounding the basin provides wildlife habitat.
- ▶ This practice can be used to improve land that has been impacted by concentrated runoff and erosion.
- ▶ The basin remains dry between flooding events, leaving the area usable and farmable.
- ▶ Dry stormwater detention basins cost less than wet stormwater ponds for similar flood storage capacity.

For more information on the Iowa Watershed Approach visit: <http://www.iihr.uiowa.edu/iwa/>

www.extension.iastate.edu/waterquality

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