

# WASCoB - Erosion Control Structure

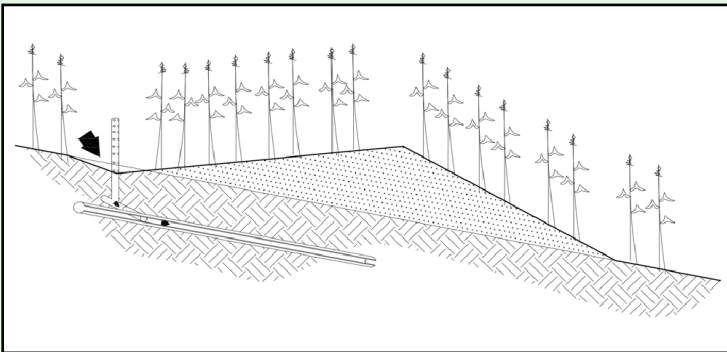


Broad-based WASCoB (Source: Houston Engineering, Inc.)

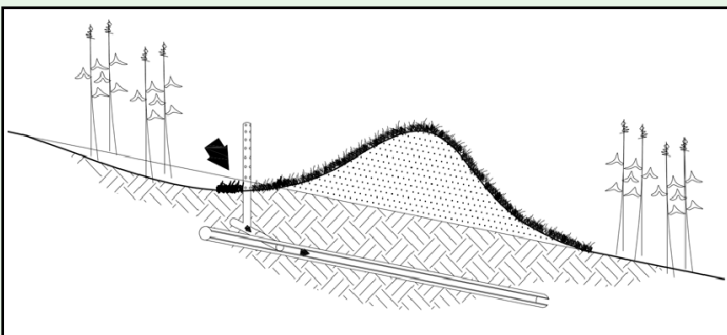
## What is a WASCoB?

WASCoB stands for **Water And Sediment Control Basin**, an embankment sediment erosion control structure. WASCoBs are commonly built in a series across areas prone to gulying or with a high concentration of overland flow. The small earth embankments store overland flow and slowly release it through an underground outlet, typically via a hickenbottom connected to a tile. By storing the water before slowly releasing it, the suspended sediment can settle, and the reduced speed of overland flow reduces gully erosion.

## Berms can be broad based or narrow based.

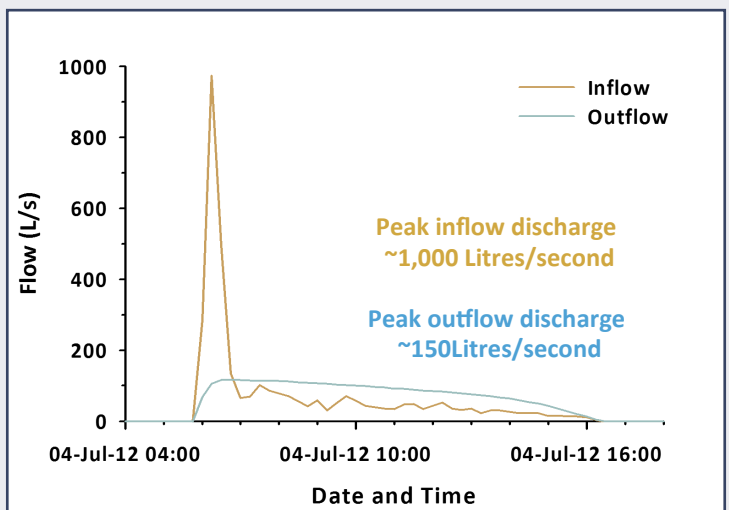


Broad based berms can be used for crop production.



Narrow based berms are permanently vegetated, crops can be grown on either side.

## Field-scale monitoring example



In the above example, it was found that WASCoBs reduced the magnitude of peak flow by about 85%. The duration of outflow was also increased from less than 1.5 hours to 9 hours with the installation of the WASCoB, a time period that won't cause flood damage to crops.



# Case Study: The MacKellar Project

## Concerns

Dave MacKellar found that his grassed waterway wasn't enough to prevent gully erosion in his fields.

## First Steps

McKellar reached out to SCRCA for direction and to seek cost-share funding to create erosion control structures. SCRCA worked with Brad Glasman of Upper Thames Region Conservation Authority to develop engineered WASCoBs that would slow the water velocity as it moved over the field.

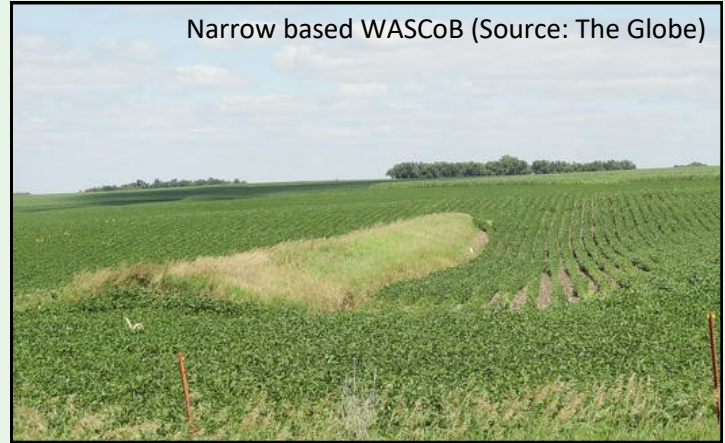
## Solution

A total of eight berms were constructed in one field. The berms were built perpendicular to the eroding gully and a hickenbottom that tied into existing tile. Three of the berms were constructed with a broad-base so MacKellar can farm over them, the remaining berms will be grassed and MacKellar can farm on either side of the berms.

## Benefits

1. Reduce soil loss by storing water giving the sediment time to settle.
2. Prevent gully erosion by reducing the speed of overland flow.

Narrow based WASCoB (Source: The Globe)



*The MacKellar erosion control project was completed with funding support from SCRCA. If you are experiencing erosion problems in your fields and are interested in doing an erosion control project please contact,*

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