

# Understanding Agricultural Drain Tile Repair

Traditionally, broken tiles were repaired using a top soil as the pipeline ditch was backfilled. However, it quickly became obvious that settling soils allowed the tile to settle and create a wet spot in the field.

Broken agricultural drain tile repairs are necessary to prevent future problems for both landowners and pipeline operators. Problems can appear years after pipeline construction has been completed, and these problems have expensive consequences for all parties.

## Sandbags were the first option

In order to maintain the appropriate grade on a permanent basis, bridges or stanchions were designed to provide support to the drain tile and to ensure separation between the drain tile and the pipeline. The most common form of bridge was a sand bag bridge. On large pipelines, 30" and larger, 100 or more sandbags are stacked from the bottom of the trench up to the required level to make drain tile repair.

[SEE PICTURE 1.1]

Unfortunately, these types of bridges require a significant amount of labor & materials and are not stable during backfilling operations. If the sandbag bridge collapses during backfill, the trench needs to be re-excavated again.

## Bridges are the next innovation

In an effort to reduce labor costs and to speed up installation, various types of aggregate containment units have been designed. These units are designed to be quickly installed with a minimum number of sandbags, typically less than 15. These units can be installed by 2 laborers in less than 1 hour under normal conditions.

[SEE PICTURE 1.2]

The cost savings from using these bridges over sandbags can be significant when large numbers of broken drain tiles need to be repaired. Below is a chart that compares the cost of building sand bag bridges versus the cost of using Mad Dog Foam Bridges on 42" gas pipeline.

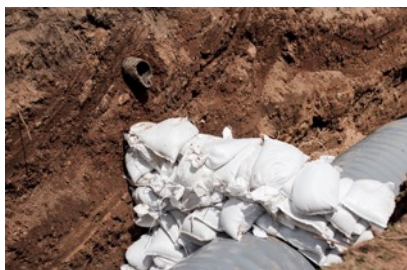


This graph of a pipeline installation shows the cost difference when repairing 50 water drain tile breaks with 200 sandbags vs. a Mad Dog Foam Bridge. A typical project can have up to 18 tile repairs per mile.

See for yourself, use our full ROI calculator: <https://goo.gl/QmJhwb>

To learn more about fixing broken agricultural drain tile see **Watershed Materials Fact Sheet 3**.

### 1.1: TYPICAL SANDBAG REPAIR



### 1.2: MAD DOG FOAM BRIDGE

