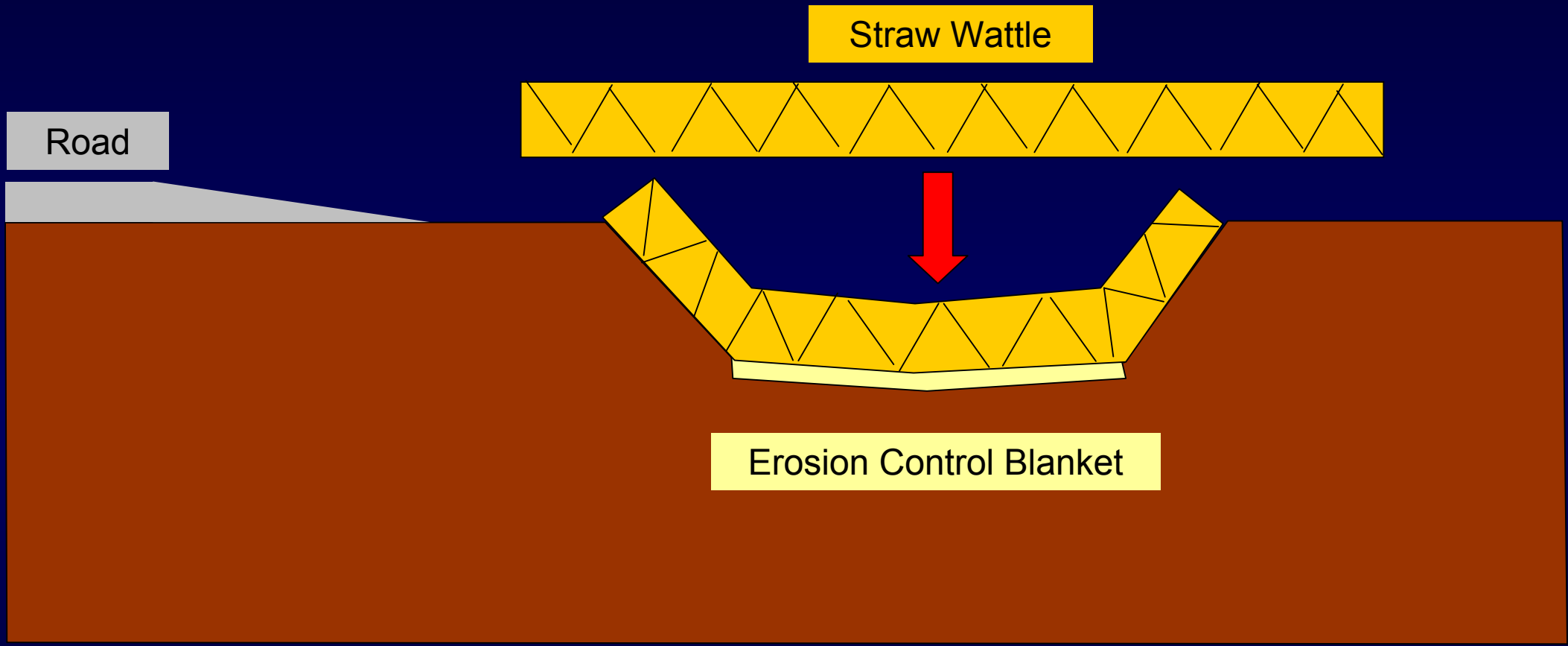
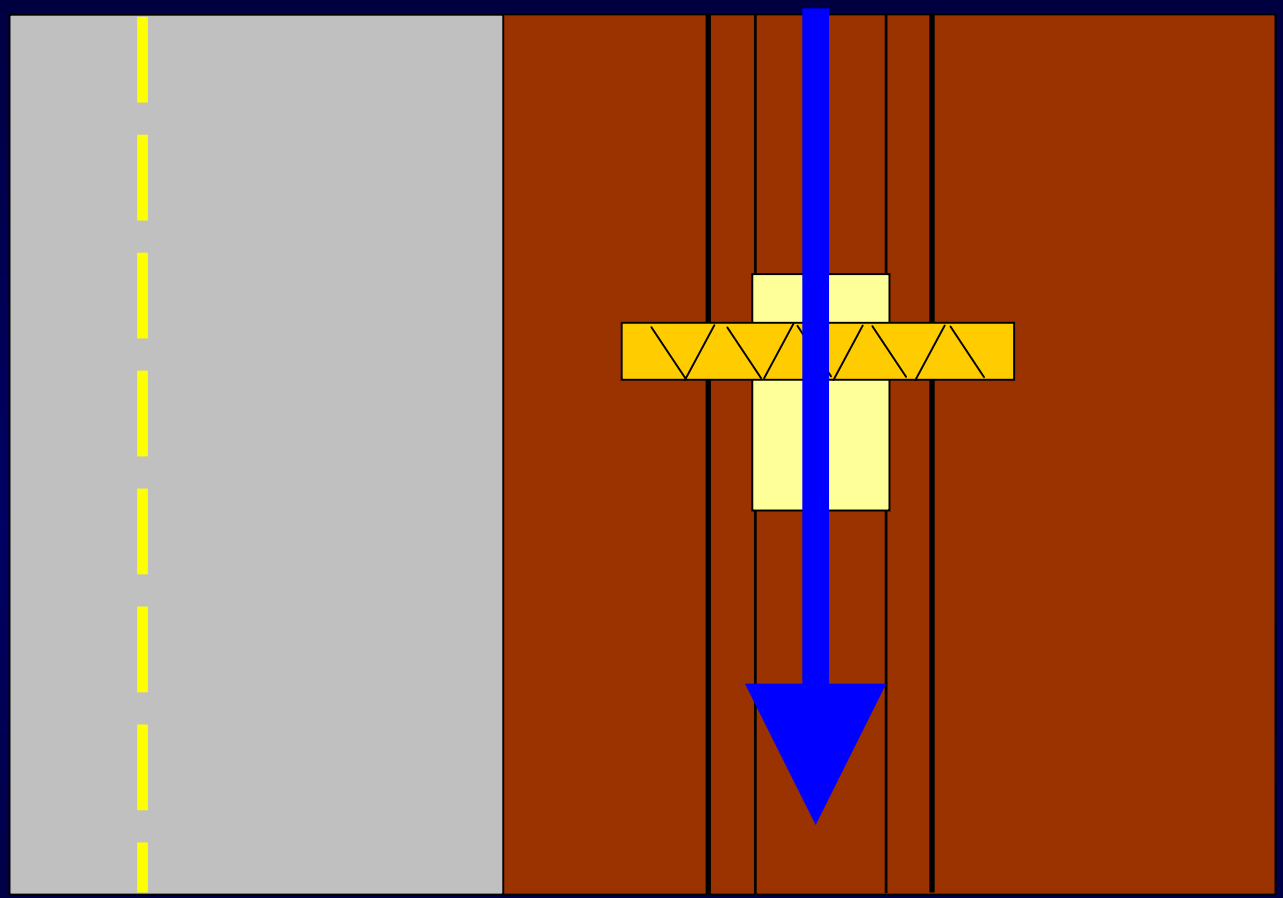
Straw Wattle Installation Guide for Roadway Projects

Dr. Rich McLaughlin and Scott King
Soil Science Department
NC State University

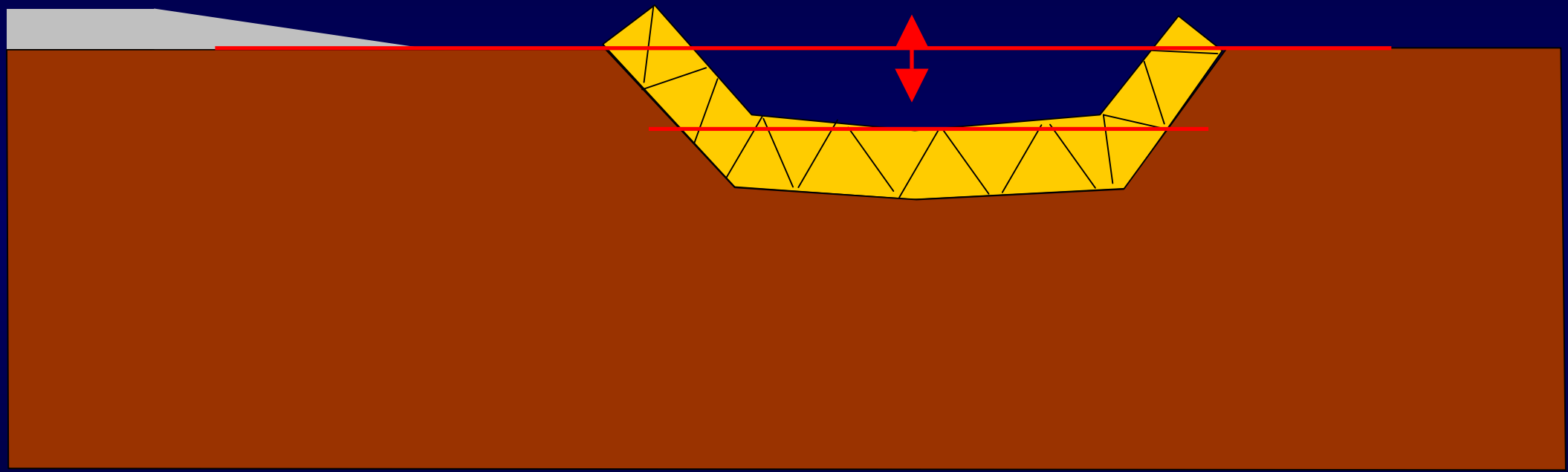
The Basics: Simply fit the straw wattle across the ditch with some erosion control blanket beneath it.



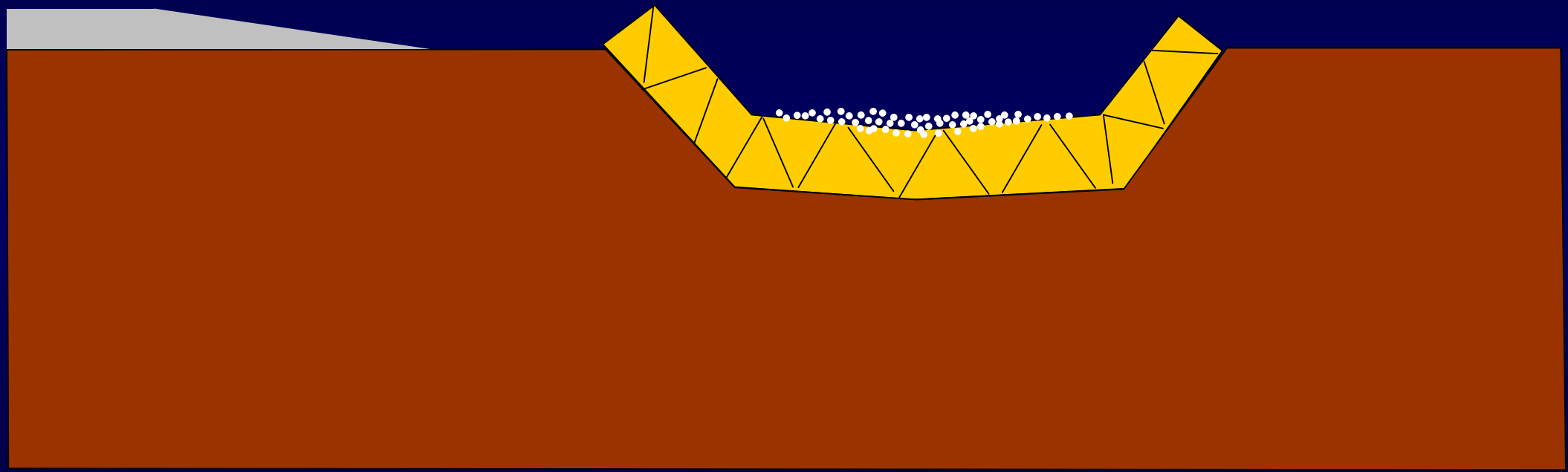
The erosion control blanket acts as a splash-pad for the water running over the wattle and helps prevent scouring.



Important! Make sure the lower spill point of the wattles is below the height of the roadway or you will back up water onto the road.



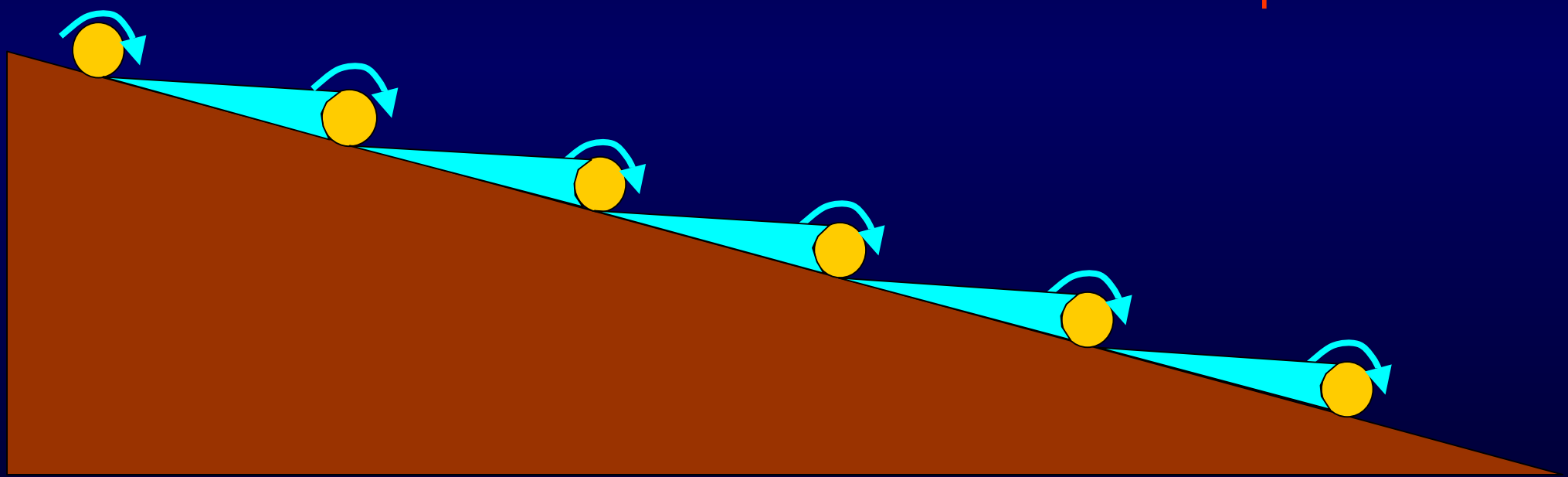
Sprinkle 100 grams of PAM over the lower center portion of the wattle where the water is going to flow over.



Ideal BMP Spacing

- BMPs theoretically spaced such that flow goes from pool to pool…

This slows water velocity down and gives more time for water to infiltrate into the ground and causes sediment to fall out of suspension!



Typical tools and products needed for installation


Metal sod staples and mallet


24” long wooden stakes

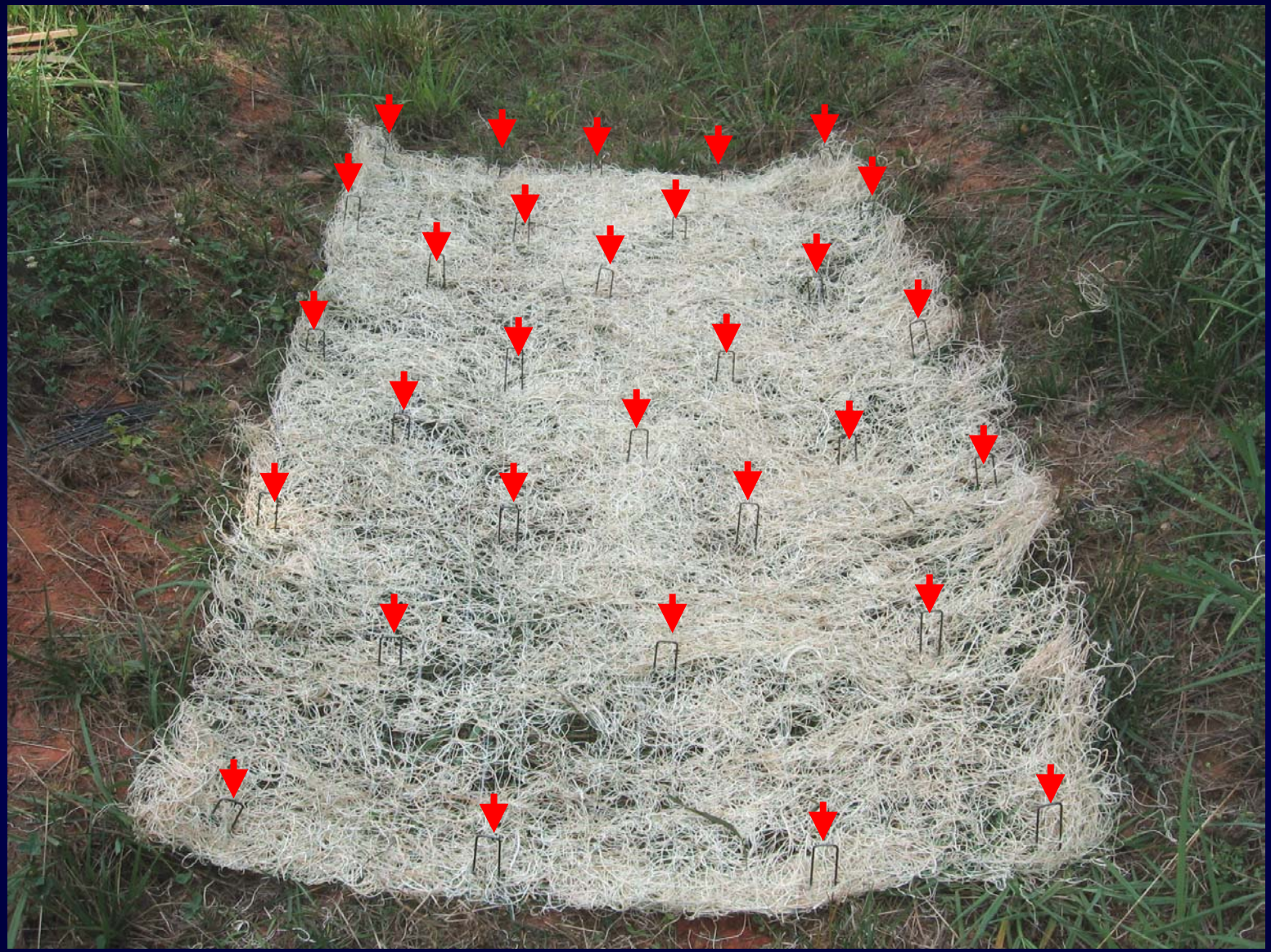

Erosion control blanket


straw wattle

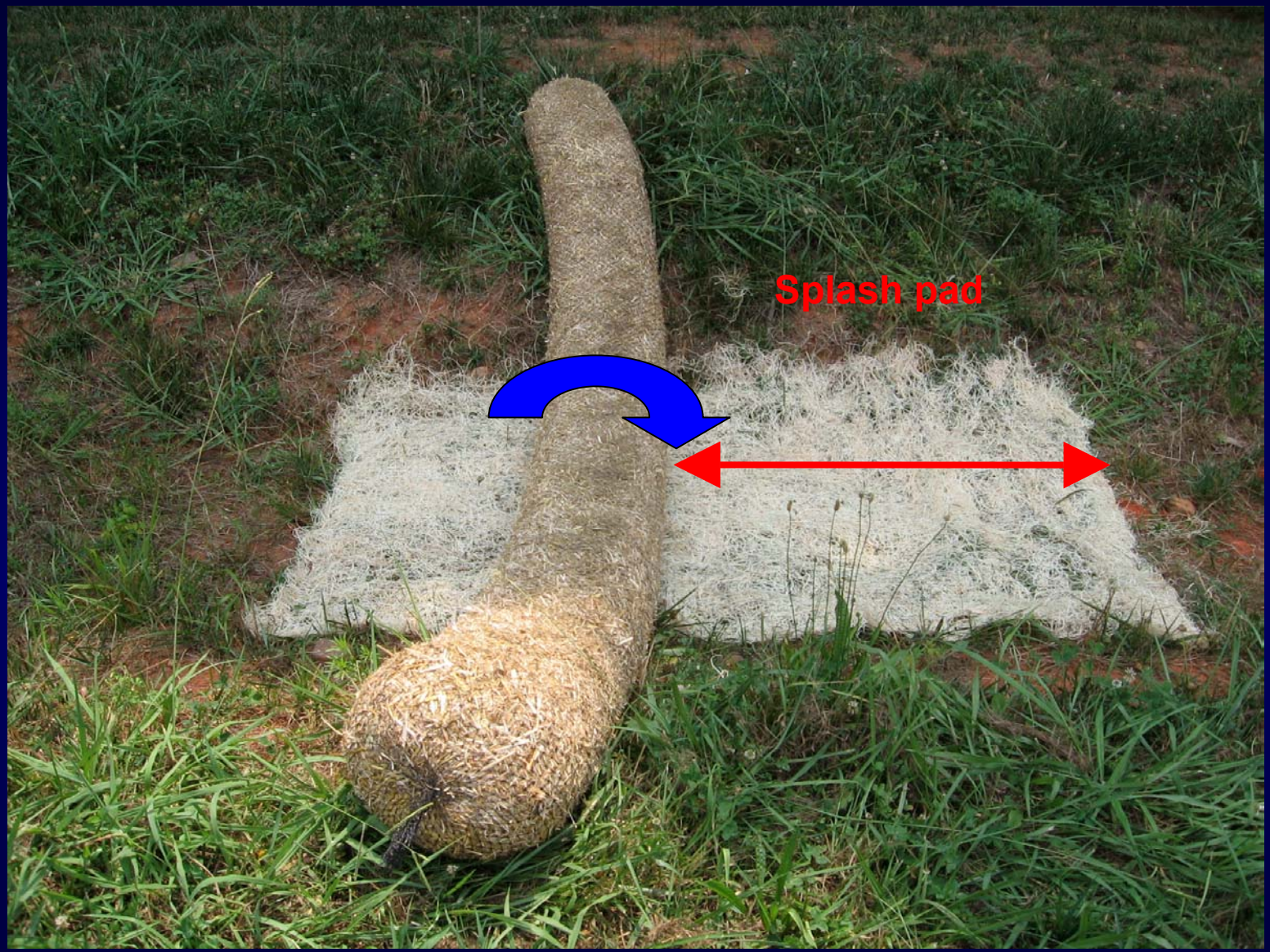

Close up of the mesh

Typical roadside ditch dimensions here

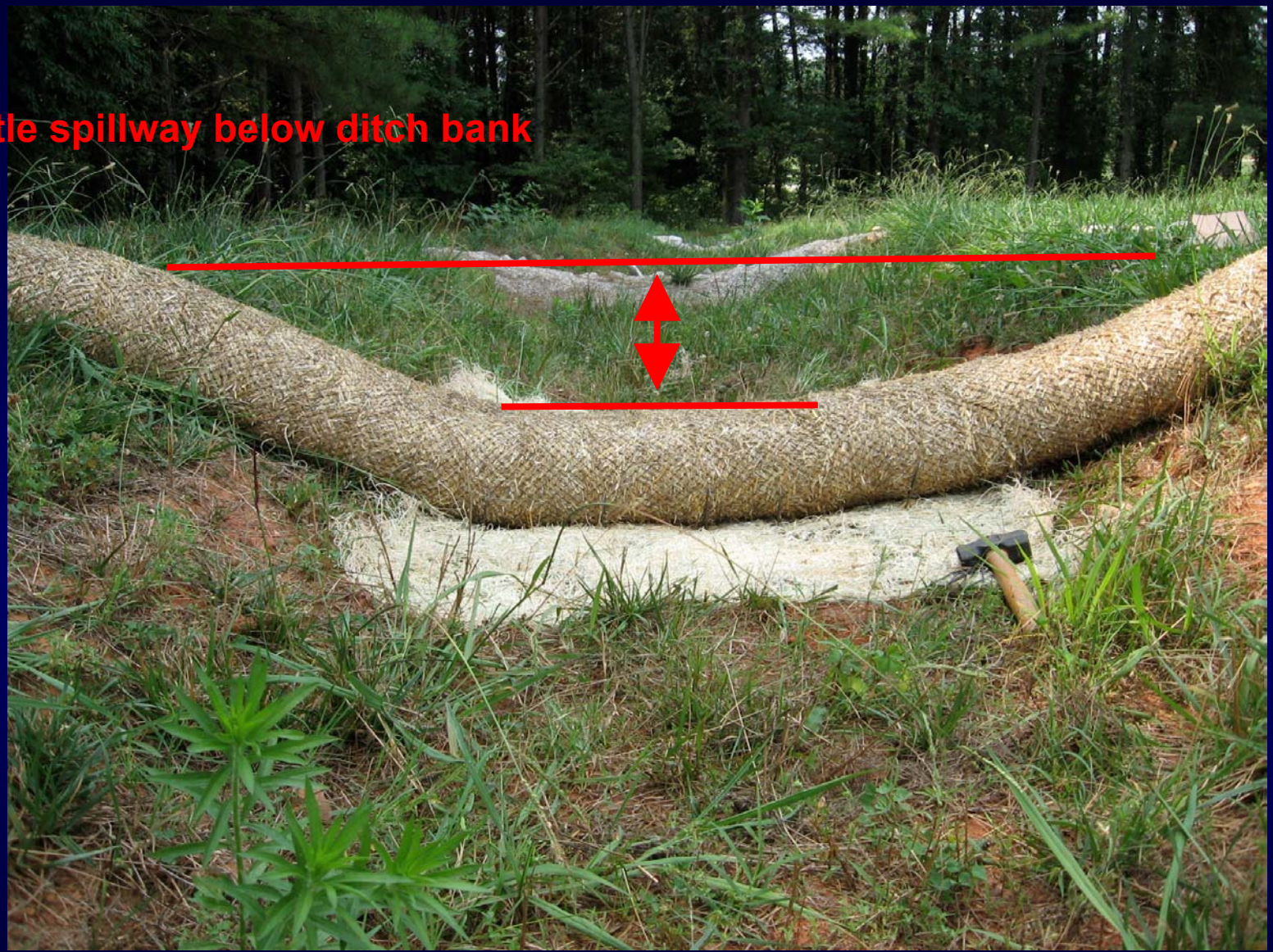
Diamond staple pattern




Covers the ditch centerline


Splash pad

Wattle spillway below ditch bank

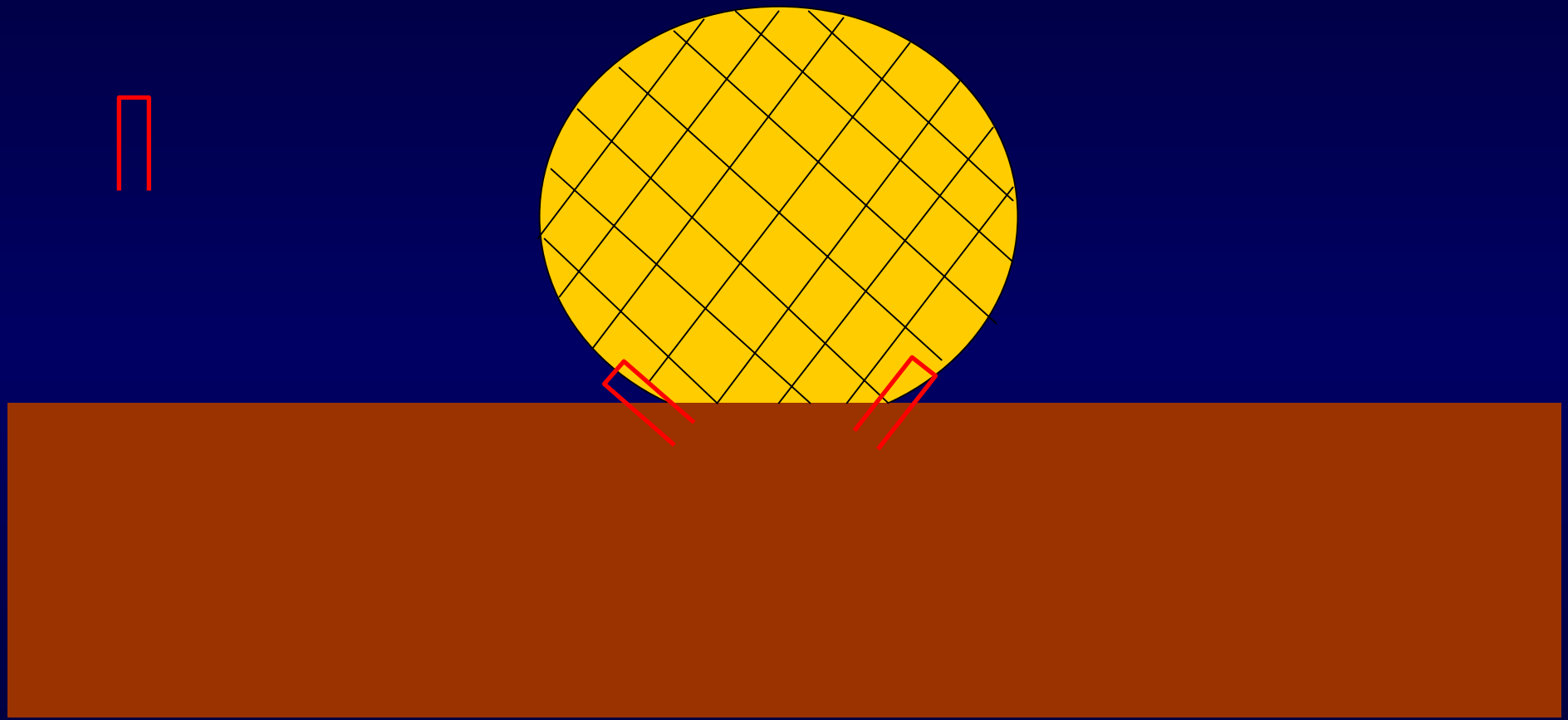


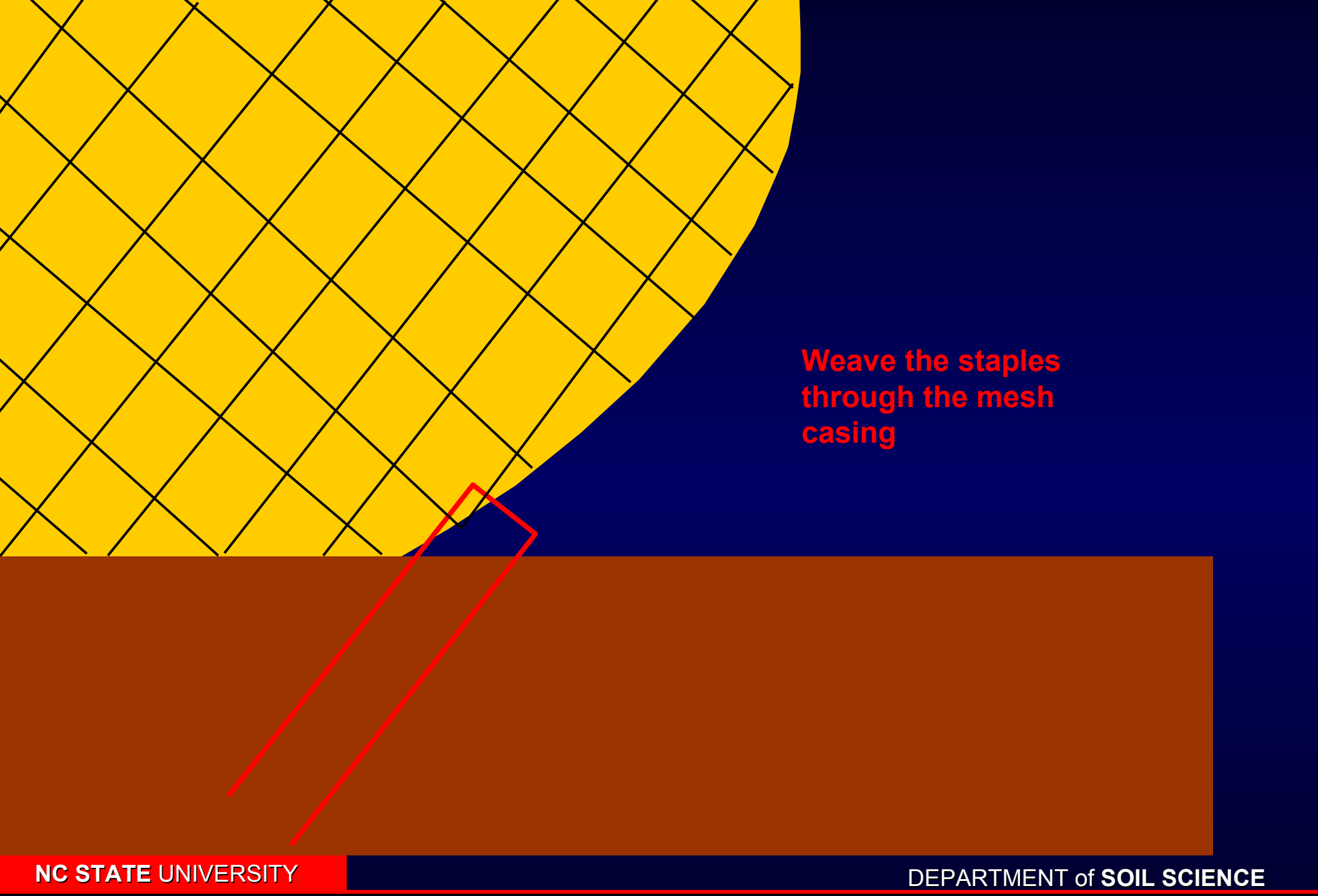
Use sod staples to hold wattle to the ground

Place staples in at an angle to the wattle

Weave staples through the mesh casing of the wattle

Nail into the ground, ensuring that the wattle is held down snugly



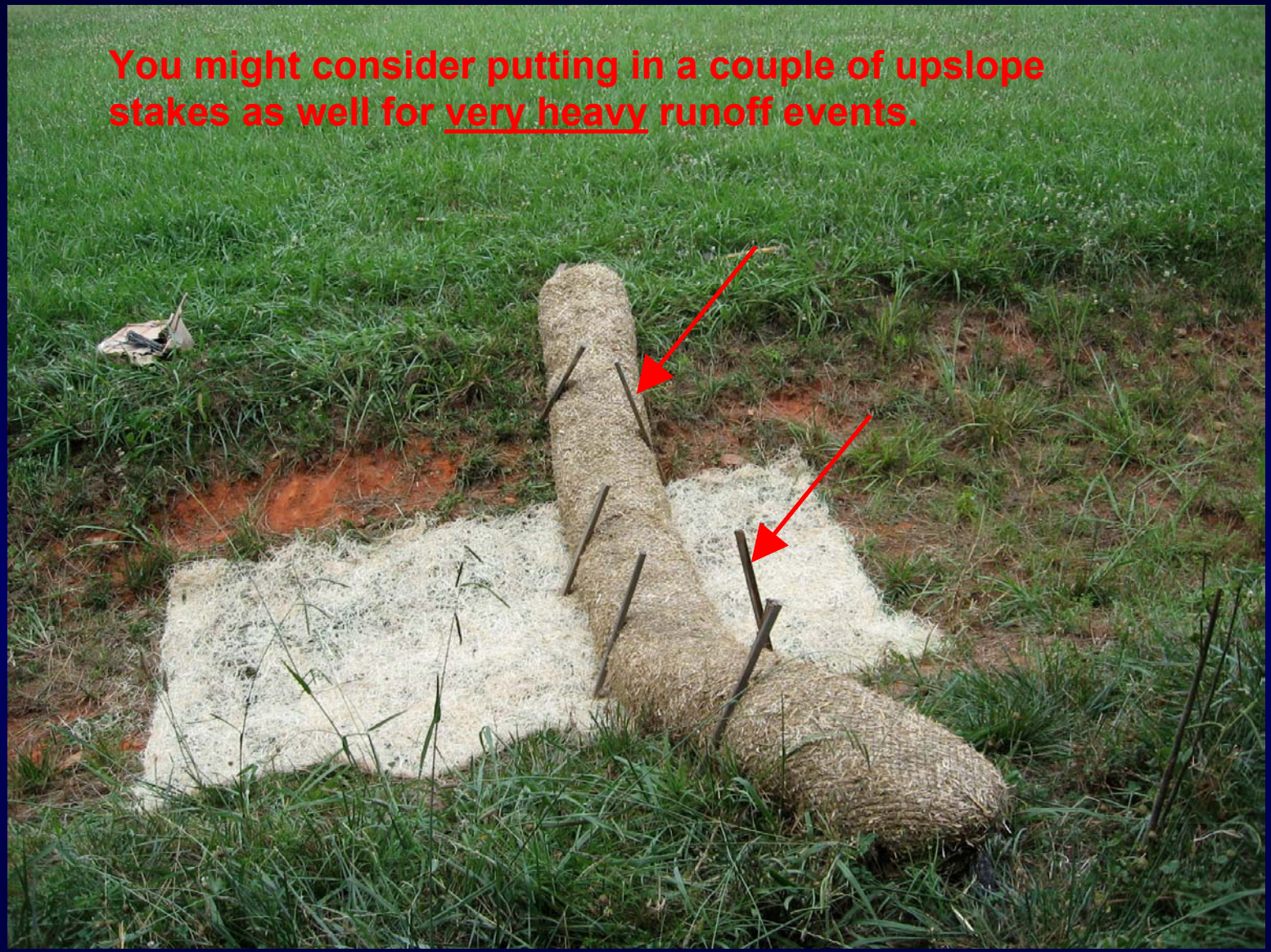

Weave the staples
through the mesh
casing


Is there a gap at the upturned edge of the wattle?

Take a bit of leftover erosion control blanket to fill the gap.

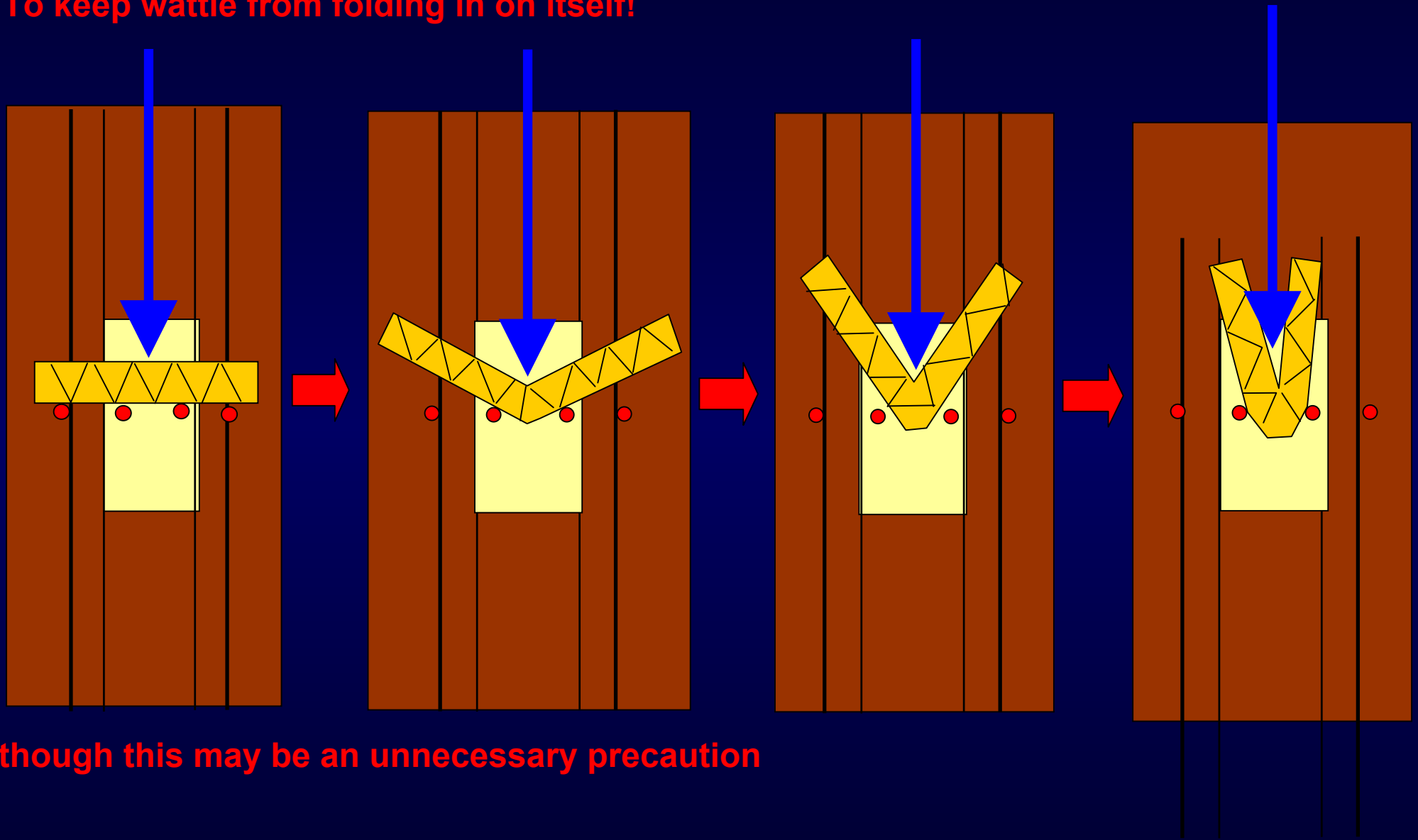
Wedge the blanket into the gap, sealing the wattle to the ground.

Hammer in several 24” wooden stakes to help with heavy runoff events


You might consider putting in a couple of upslope stakes as well for very heavy runoff events.

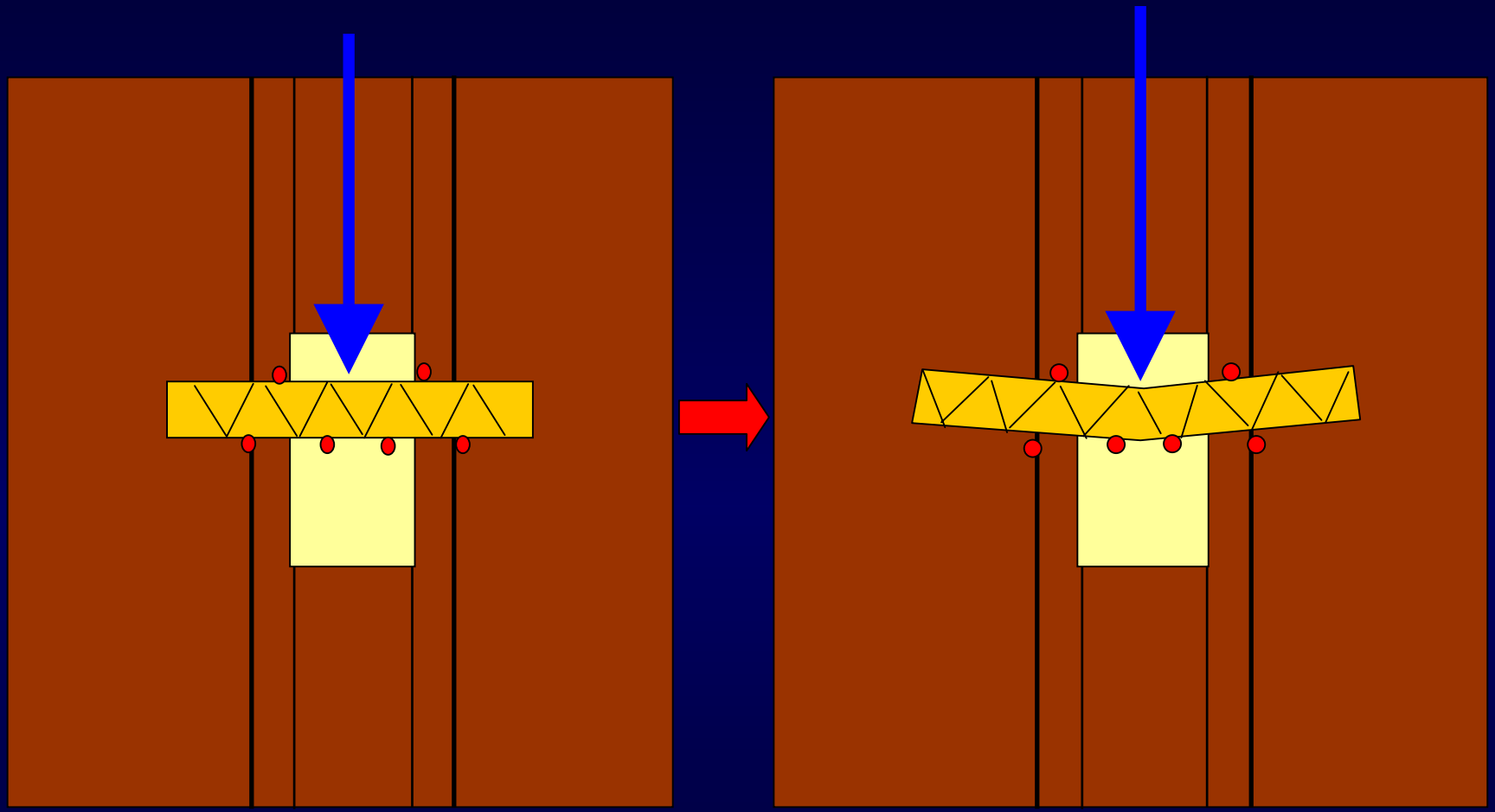
Why the upslope stakes?

To keep wattle from folding in on itself!



Although this may be an unnecessary precaution

Upslope stakes would help hold wattle in place during such an event.

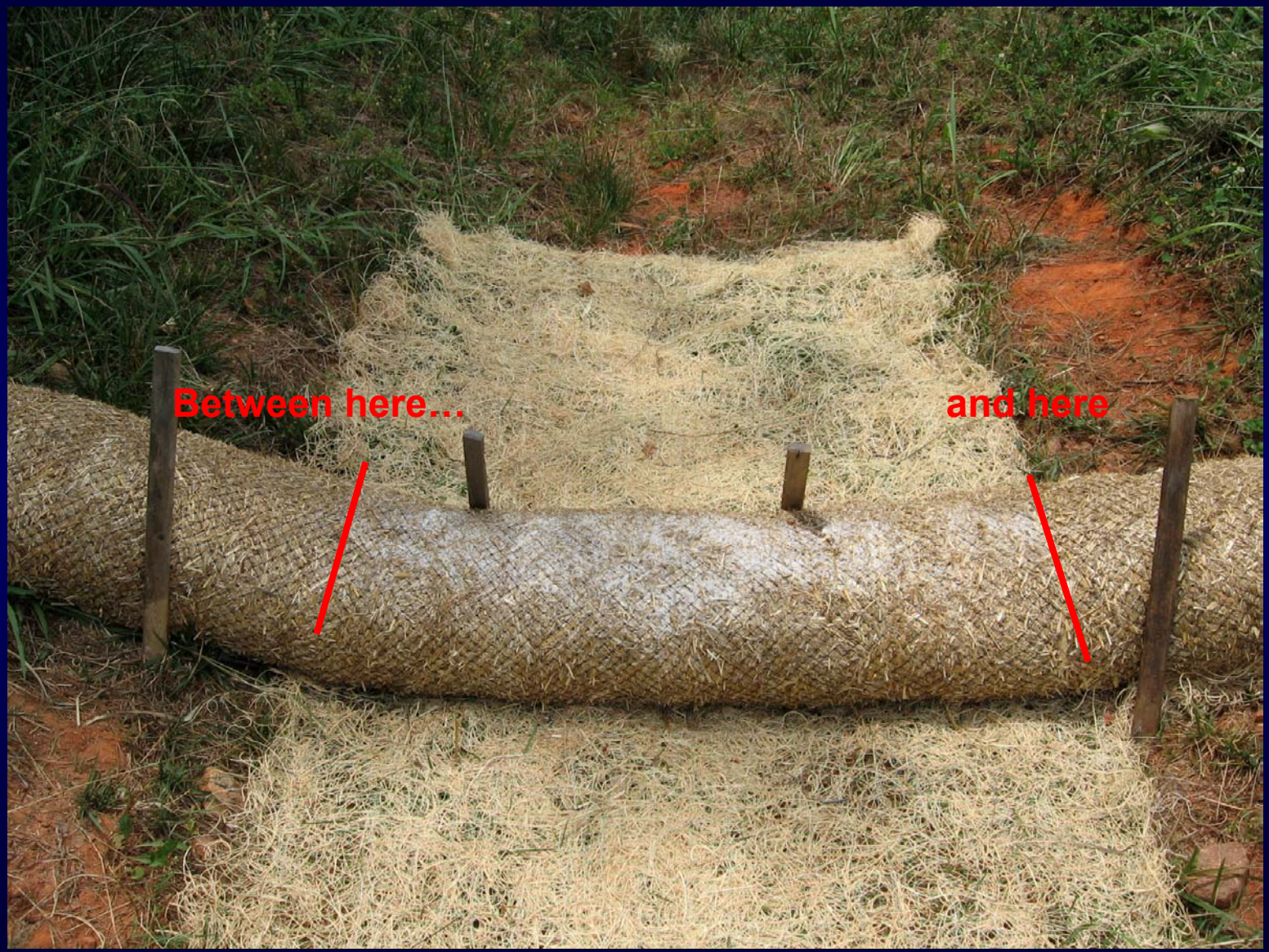


Finally, sprinkle 100 grams of PAM 705 on the lower, center portion of the wattle where water is going to flow over.

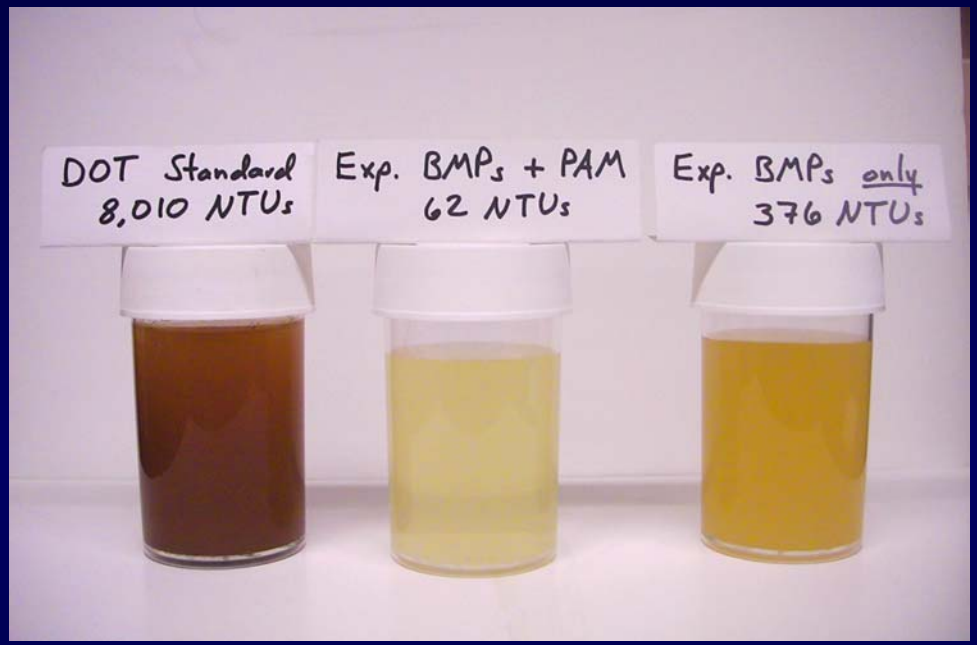
This is not a lot of PAM – only this much!

Sprinkle 100 grams of PAM 705 on the lower, center portion of the wattle where water is going to flow over.

Sprinkle 100 grams of PAM 705 on the lower, center portion of the wattle where water is going to flow over.



Very good previous results




Any Questions?