

Erosion Prevention & Sediment Control

A hands on approach to a simple, yet real world problem

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What Is Erosion?

Simply put, it's what happens to the soil when it rains...it all runs down hill.

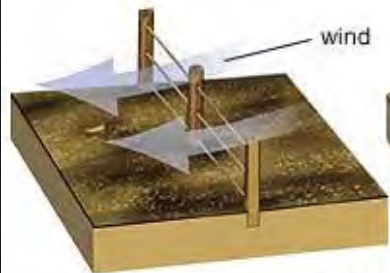
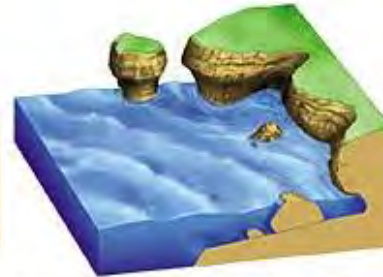
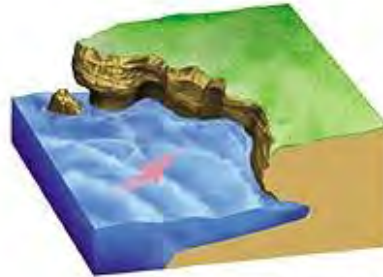
Types of Erosion



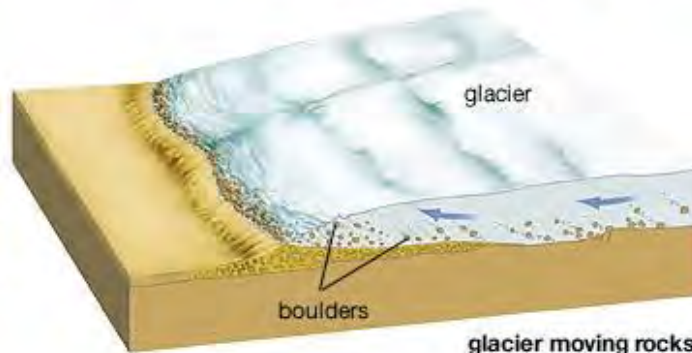
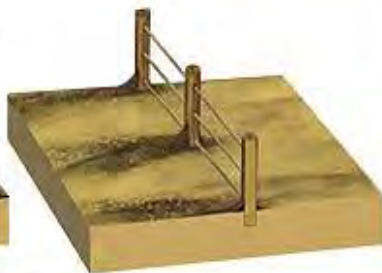
river carving a valley



waves cutting back cliffs



wind blowing topsoil



glacier moving rocks



landslide

On a grander scale...

Channel your best version of Miley

It comes in like a
wrecking ball
Takes millions of
years to fall
All it wanted was
to move the rocks
All its' ever done
was move me
Erosion moves me



Excerpt taken from: [The Erosion Song](#) by Jennifer Carpenter

<https://www.youtube.com/watch?v=aKO5aatgFgU>

Nothing new, everything you already know

How do we combat erosion?

What measures can be done to prevent it?

Is prevention even possible?

Is this going to stop development?

Will it cost too much?

Do I need to be an engineer to prevent erosion?

Tons of questions....

DO SOMETHING

There are multiple options to use that have been engineered & re-engineered to prevent erosion. Quit talking about it, quit stating something has to be done, just get out and do something.



Disclaimer: No horses were harmed in the making of this slide show.

Options are endless, but not always the best

Effective vs erosion? Yes



Effective vs erosion? Yes



Erosion Prevention on A Local Scale

Hardin County's attempt to build a real life show & tell project for developers & builders

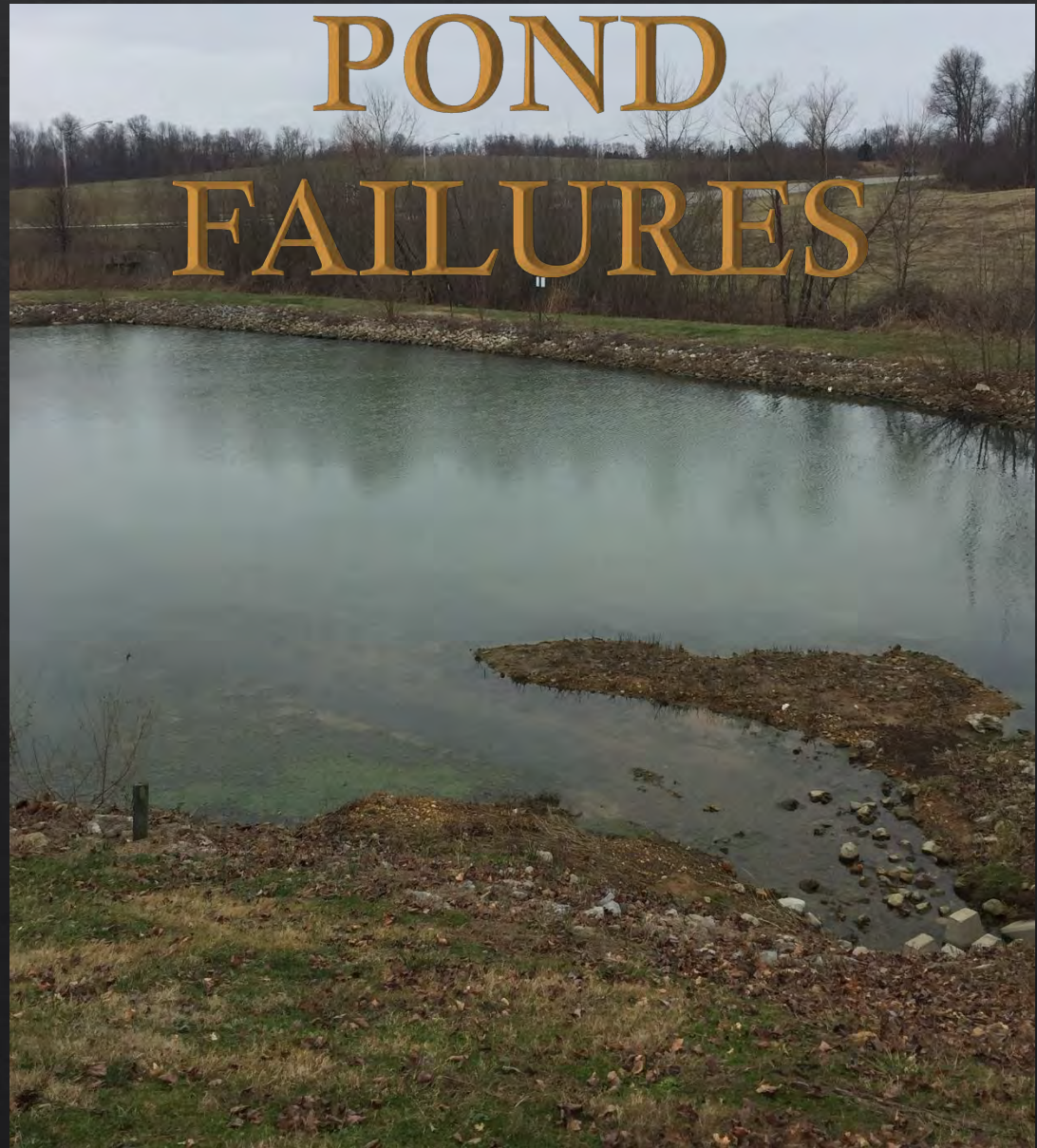
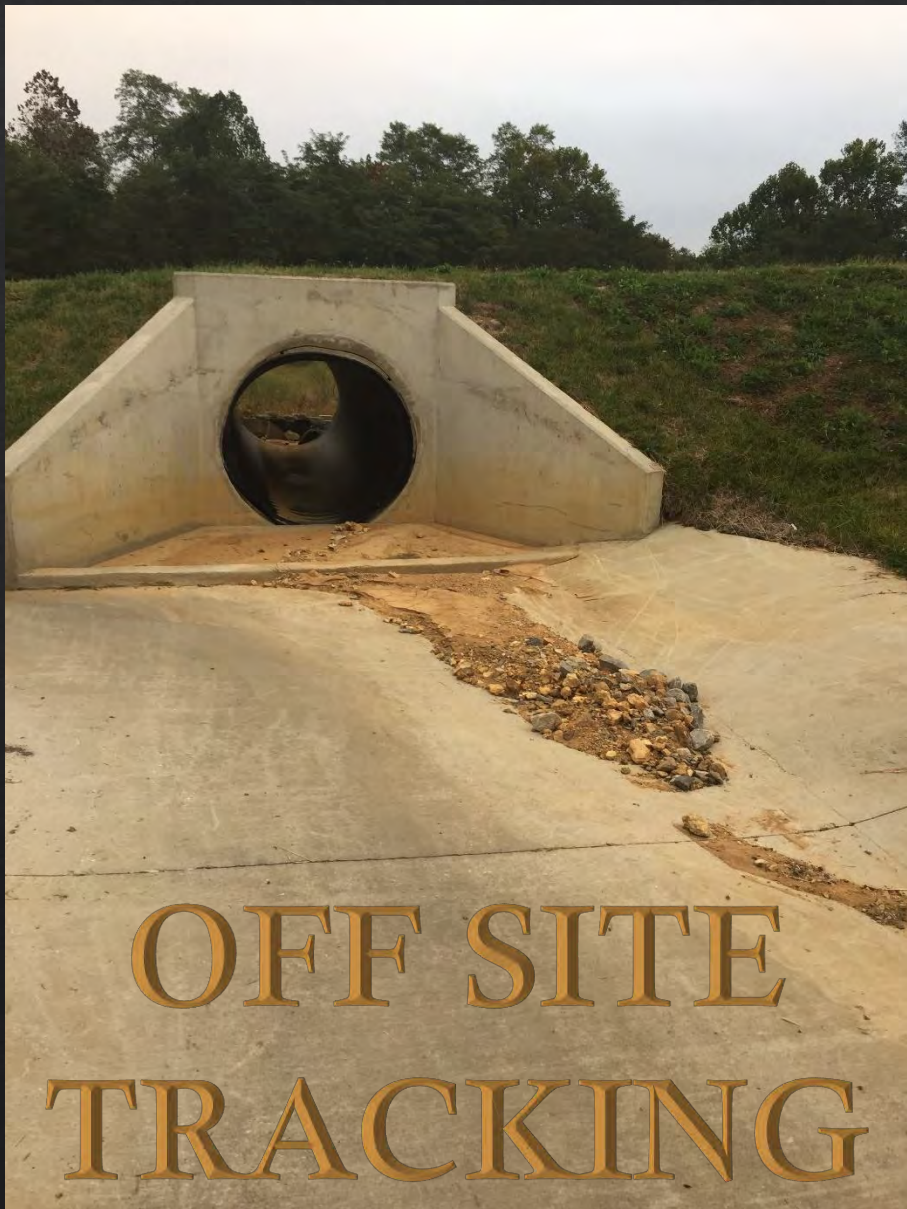




How many failed attempts have been made?

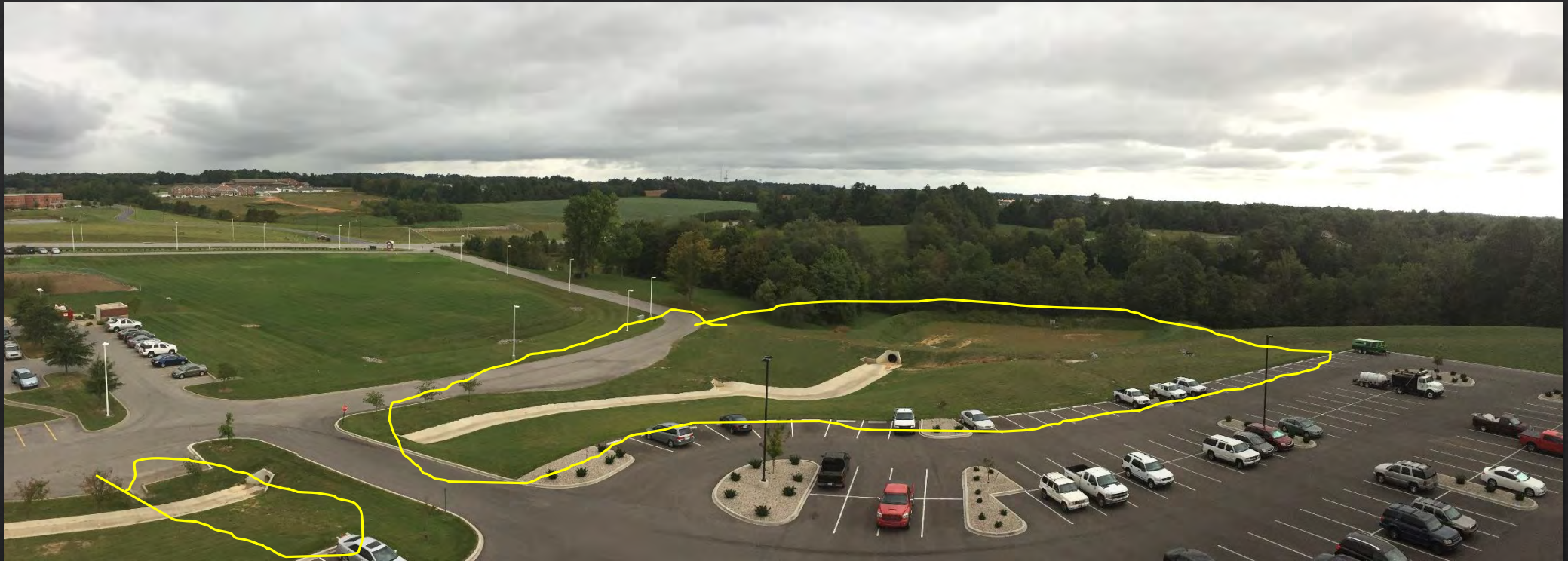


What do failed attempts lead to?



MORE FAILURES





How To Solve the Issues

A better plan????

A better plan doesn't equal success!!

After all, the plans were “engineered” and signed off by licensed engineers.
So the plan was a good plan.

- Where is the break down? **YES**
- Implementation? **YES**
 - Lack of property owner maintenance?
 - Contractor cut corners? **YES**
 - Owner not enforcing proper installation? **YES**

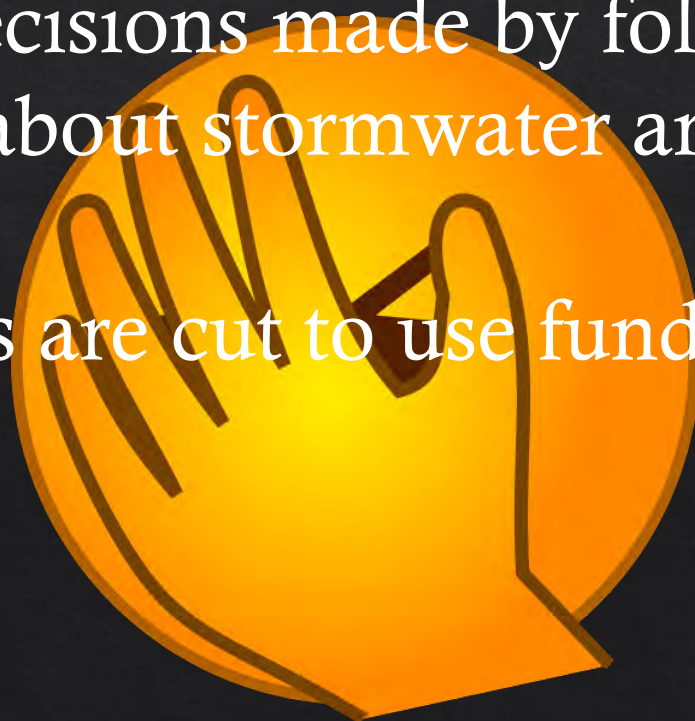


It's a combination of many factors.

Some known decisions made that could affect the area.

Some unknown decisions made by folks who don't know much if anything about stormwater and erosion.

Sometimes corners are cut to use funding elsewhere.



Where do you go from here?



Hardin County's Approach

Let's do something different!



Obviously after 3 attempts at rip rap and rock check dams this wasn't the best solution.

What do we do????



ROLLED EROSION CONTROL

SYSTEMS BROCHURE



Tensar.

	TEMPORARY			PERMANENT			
	BIONET			ERONET	VMAX		
	S150BN	SC150BN	C125BN	P300	SC250	C350	P550
Longevity	12 mo.	18 mo.	24 mo.	Permanent	Permanent	Permanent	Permanent
Applications	Moderate Flow Channels 3:1-2:1 Slopes	Medium Flow Channels 2.1:1 Slopes	High-Flow Channels 1:1 and Greater Slopes	High-Flow Channels 1:1 Slopes	High-Flow Channels 1:1 and Greater Slopes	High-Flow Channels 1:1 and Greater Slopes	Extreme High-Flow Channels 1:1 and Greater Slopes
Design Permissible Shear Stress lbs/ft ² (Pa)	Unvegetated 1.85 (88)	Unvegetated 2.10 (100)	Unvegetated 2.35 (112)	Unvegetated 3.0 (144) Vegetated 8.0 (383)	Unvegetated 3.0 (144) Vegetated 10.0 (480)	Unvegetated 3.2 (153) Vegetated 12.0 (576)	Unvegetated 4.0 (191) Vegetated 14.0 (672)
Design Permissible Velocity ft/s (m/s)	Unvegetated 6.00 (1.83)	Unvegetated 8.00 (2.44)	Unvegetated 10.00 (3.05)	Unvegetated 9.00 (2.7) Vegetated 16.0 (4.9)	Unvegetated 9.5 (2.9) Vegetated 15.0 (4.6)	Unvegetated 10.5 (3.2) Vegetated 20.0 (6.0)	Unvegetated 12.5 (3.8) Vegetated 25.0 (7.6)
Top Net	Leno woven, 100% biodegradable jute fiber 9.30 lbs/1000 ft ² (4.53 kg/100 m ²) approx wt	Leno woven, 10.0% biodegradable jute fiber 9.30 lbs/1000 ft ² (4.53 kg/100 m ²) approx wt	Leno woven, 100% biodegradable jute fiber 9.30 lbs/1000 ft ² (4.53 kg/100 m ²) approx wt	Heavyweight UV-stabilized polypropylene 5.0 lbs/1000 ft ² (2.44 kg/100 m ²) approx wt	Heavyweight polypropylene 5.0 lbs/1000 ft ² (2.44 kg/100 m ²) approx wt	Extra heavyweight polypropylene 8.0 lbs/1000 ft ² (3.91 kg/100 m ²) approx wt	Ultra heavyweight polypropylene 24.0 lbs/1000 ft ² (11.7 kg/100 m ²) approx wt
Center Net	N/A	N/A	N/A	N/A	Ultra heavyweight polypropylene - corrugated 24.0 lbs/1000 ft ² (11.7 kg/100 m ²)	Ultra heavyweight polypropylene - corrugated 24.0 lbs/1000 ft ² (11.7 kg/100 m ²)	Ultra heavyweight polypropylene - corrugated 24.0 lbs/1000 ft ² (11.7 kg/100 m ²)
Fiber Matrix	Straw fiber 0.50 lbs/yd ² (0.27 kg/m ²)	70% Straw 0.35 lbs/yd ² (0.19 kg/m ²) 30% Coconut 0.15 lbs/yd ² (0.08 kg/m ²) Straw/coconut matrix	Coconut fiber 0.50 lbs/yd ² (0.27 kg/m ²)	UV-stabilized polypropylene fiber 0.70 lbs/yd ² (0.38 kg/m ²)	70% Straw 0.35 lbs/yd ² (0.19 kg/m ²) 30% Coconut 0.15 lbs/yd ² (0.08 kg/m ²) Straw/coconut matrix	Coconut fiber 0.50 lbs/yd ² (0.27 kg/m ²)	UV-stabilized polypropylene fiber 0.50 lbs/yd ² (0.27 kg/m ²)
Bottom Net	Woven, 100% biodegradable jute fiber 7.70 lbs/1000 ft ² (3.76 kg/100 m ²) approx wt	Woven, 10.0% biodegradable jute fiber 7.70 lbs/1000 ft ² (3.76 kg/100 m ²) approx wt	Woven, 100% biodegradable jute fiber 7.70 lbs/1000 ft ² (3.76 kg/100 m ²) approx wt	Heavyweight UV-stabilized polypropylene 3.0 lbs/1000 ft ² (1.47 kg/100 m ²) approx wt	Heavyweight UV-stabilized polypropylene 5.0 lbs/1000 ft ² (2.44 kg/100 m ²) approx wt	Extra heavyweight polypropylene 8.0 lbs/1000 ft ² (3.91 kg/100 m ²) approx wt	Ultra heavyweight polypropylene 24.0 lbs/1000 ft ² (11.7 kg/100 m ²) approx wt
Thread	Biodegradable	Biodegradable	Biodegradable	UV-stabilized polypropylene	UV-stabilized polypropylene	UV-stabilized polypropylene fiber	UV-stabilized polypropylene





BE FLEXIBLE!!





Mother Nature's last attempt









The struggle is Real



10/20/2016



11/1/2016



12/07/2016



12/29/2016



1/30/2017



Self-Repairing Turf

- Quickly fills in damaged or open spots with new shoots of grass
- High level of traffic tolerance
- Dense turf without open areas prevents weed growth



Not all Grass is the Same

RTF® is the only Tall Fescue with True Rhizomes. Rhizomes help the RTF quickly fill in damaged and bare spots in your lawn with new shoots of grass. This results in less over-seeding, fewer weed problems and no wide-leaved ugly clumps of grass like other tall fescues can form.



Questions? Comments?

Direct those to Vicki Meredith

Come see the project in person

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