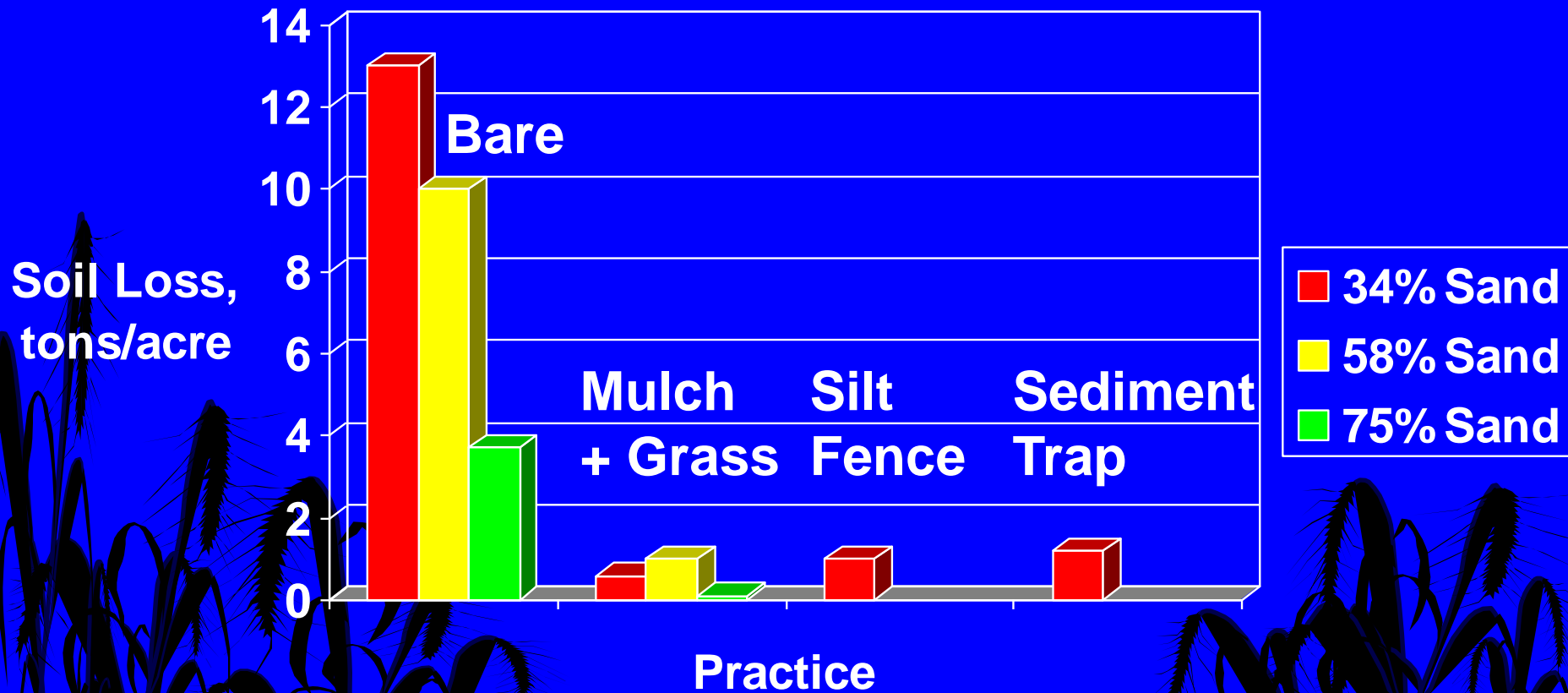


Soil and Practice Effects



Ground Covers: Protect From Droplets



Mulch Doesn't Work In Ditches



**Mulch piled up at
rock check dam.**

Erosion – Even on Flat, Sandy Sites!



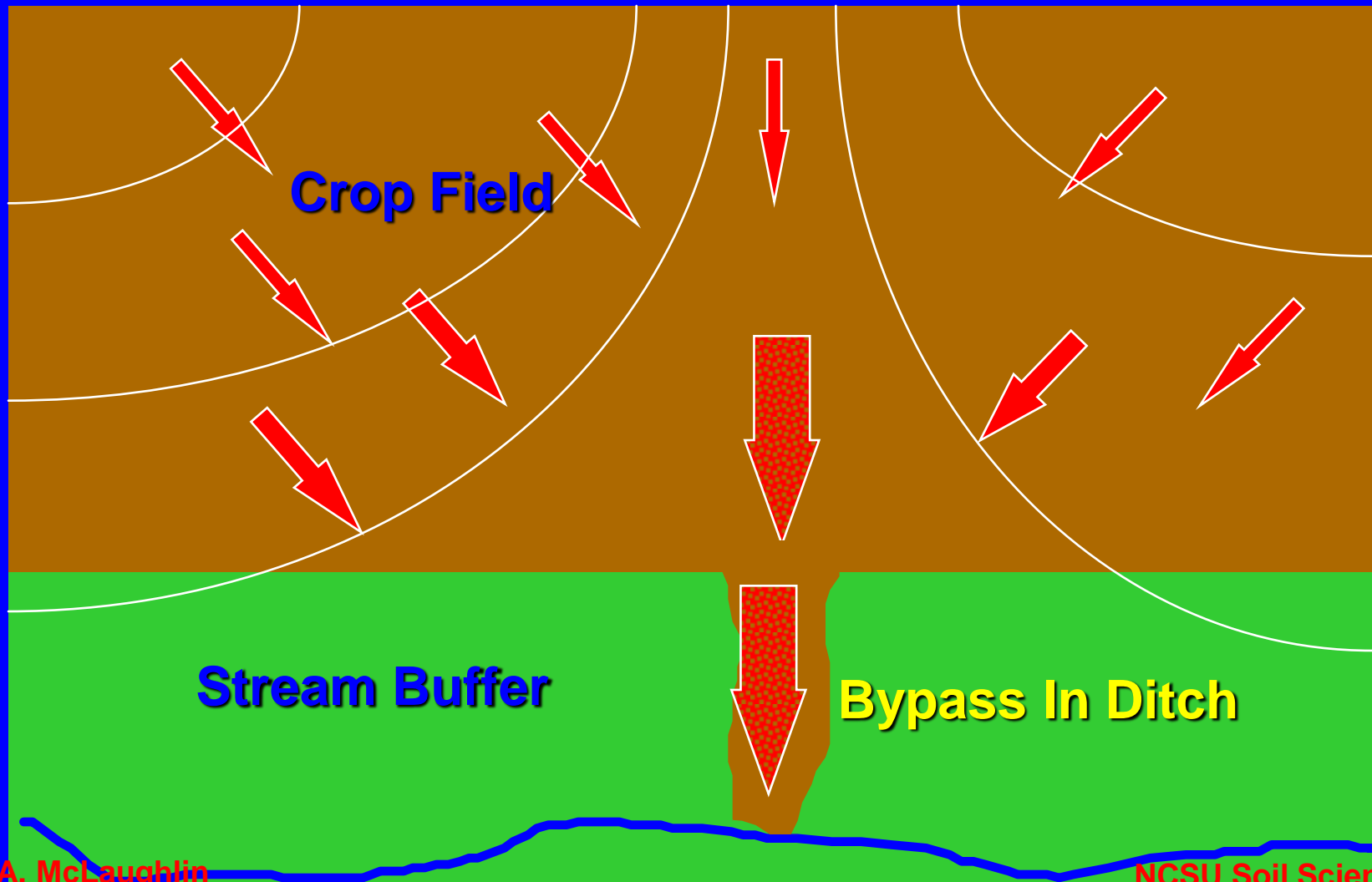
Soft Armor for Gentle Slopes



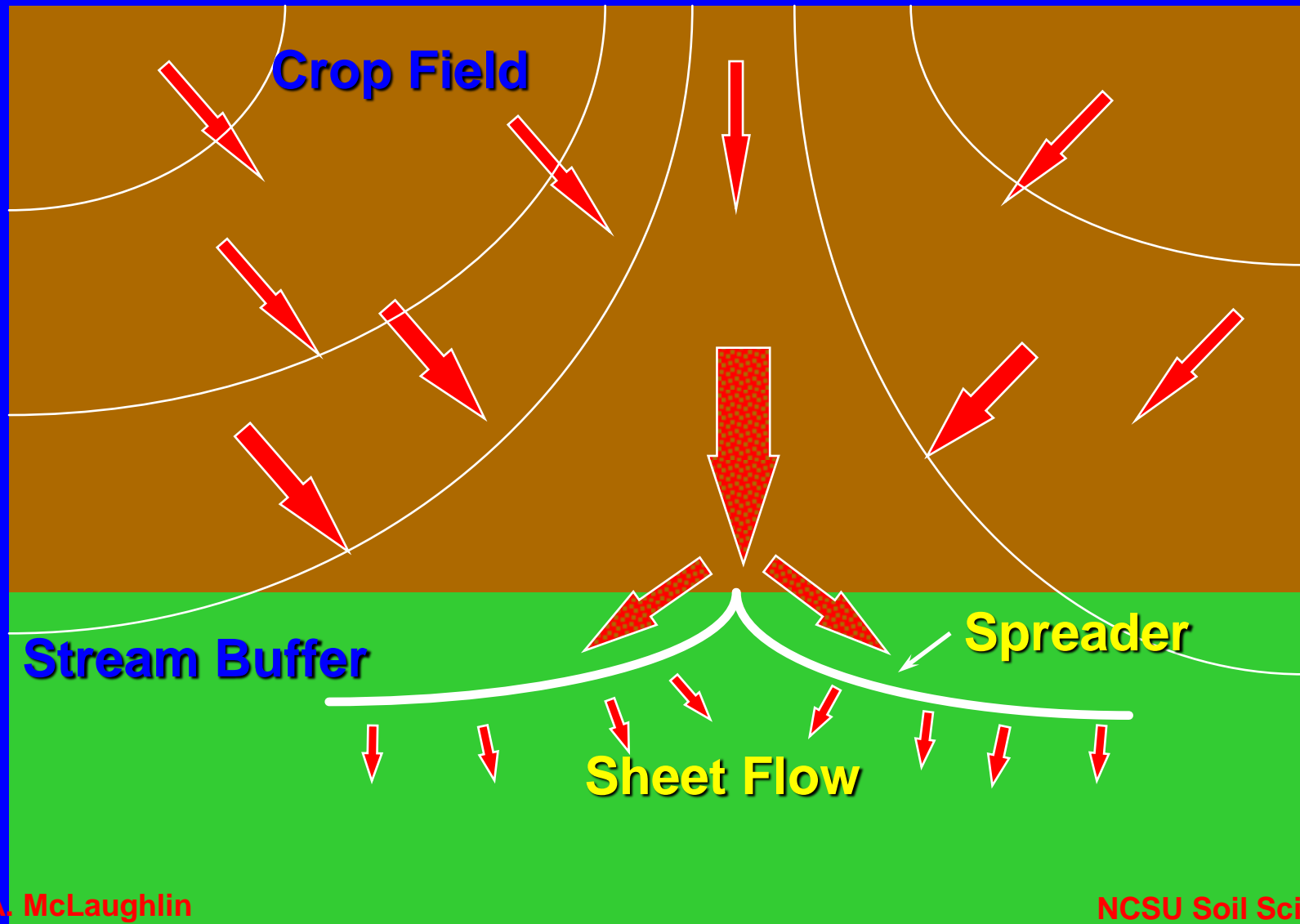
Hard Armor for Steep Slopes



Field Runoff: Bypass Through Buffer



Field Runoff: Spread Across Buffer For Treatment



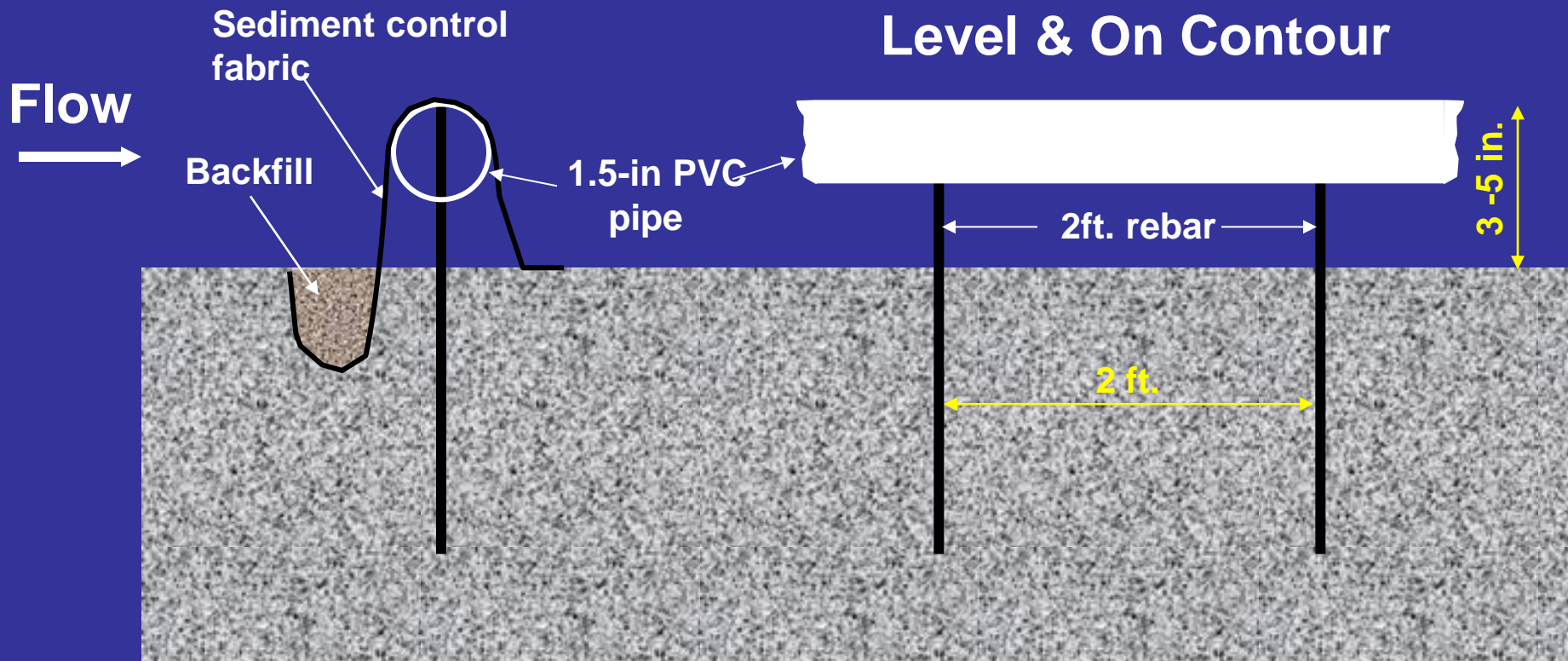
Silt Fence: Works but Needs Maintenance!



Dissipated Flow Deposits Sediment



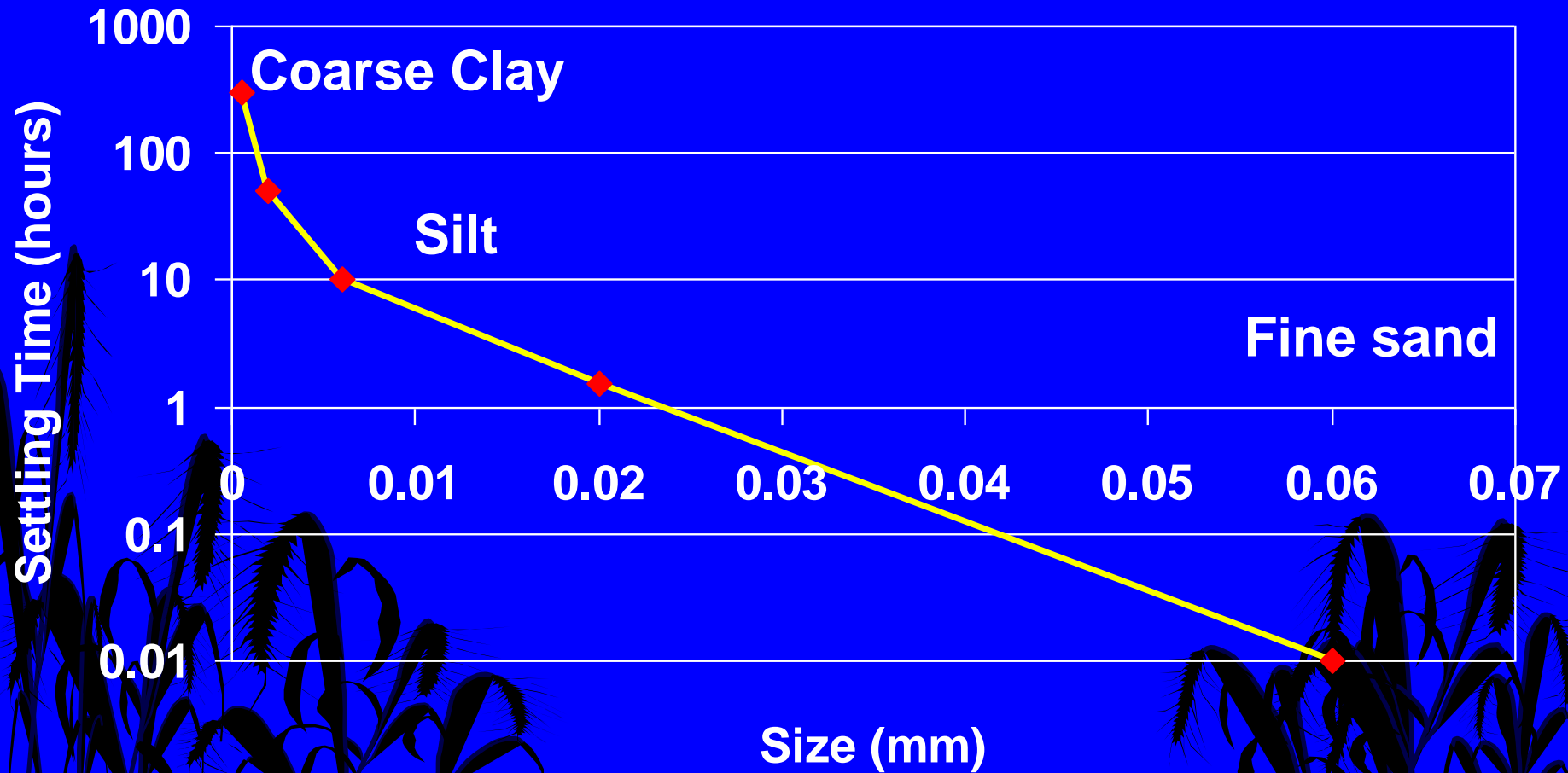
Level Spreaders Can Dissipate Flow: Example



Simple Math for Sedimentation

- $V = ((4/3)\pi(r^3) \cdot (d_1 - d_2) \cdot g) / (2\pi r z^3)$
- OR...larger particles fall faster once flow is slowed/stopped.

Sedimentation: Size Matters



Sediment Trap (full)



Sediment Deposit at Basin Inlet



In Conclusion...

- **Sediment is the #1 cause of surface water degradation.**
- **Soil has to become detached to erode: cover it up!**
- **Water always gathers and becomes more erosive: protect those waterways!**
- **Slow water holds less sediment than fast water: keep the flows low and ponded wherever possible!**