Emergency Erosion Control Techniques:
Dealing With Severe Weather Conditions During an Active Timber Harvest

Practical, cost-effective techniques
University of New Hampshire
Cooperative Extension

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Emergency BMP online publication

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Best Management Practices – Minimize the effects of logging on water quality

“Standard” BMPs – effective when used in “normal” circumstances

2016 Evaluation of BMP implementation – conducted by UNH Extension
Stable soil at stream crossings 82% of the time (up from 77% in 2005)

University of Wisconsin research – Frozen ground conditions shortened by 2-3 weeks from 1948 – 2012
Increasingly unpredictable and severe weather events

- Heavy rains
- Open winters – little or no snow
- Frequent freezing and thawing
• Suggested techniques are meant to augment, not replace NH BMPs for Erosion Control on Timber Harvesting Operations

• Techniques are to be used before closeout, or as temporary closeout
It’s all about planning

Plan for the unpredictable
✓ Stockpile brush
✓ Timber mats or skidder bridge panels on hand
✓ Silt fence in truck

The alternative:
Idle time, lost production
Ask these questions:

- Where will the water come from and where will it go?

- What will that frozen ground do during the unpredicted thaw? *Unpredicted, but not unplanned for*

- What will happen when the frozen skid trails and truck roads thaw in the spring?
Water Diverters

- Log-barrier water-diverter
- Snow and ice water-diverter
- Slash water-diverter
Straw wattle water-diverter
Compost sock water-diverter
Salt and sand to melt ice for water bar installation
Silt fence – using sand to secure bottom
Interesting use of rope
Soil Stabilization

- Round bales – unroll across area to be stabilized – equipment needed
- Wood chips and slash
- Leave woody material in place on skid trails and landings
Catching Sediment

Brush and tree tops
“Hitches in Ditches”
Preventing Rutting and Compaction

Brush mats
Corduroy
Timber mats
Case Study - Dorchester Site

- 80 acre timber sale
- 50 acres harvested first winter - 2018
- One large brook, several intermittent streams
- Soils – moderately well to somewhat poorly drained
- Old skid trails provide access
- Mid-February thaw
Case Study - Errol Site

• 289 acre timber sale
• 1st entry: Summer-fall – 91 acres, 900 cords
• 2nd entry: Winter – 198 acres, 1950 cords
• Large stream crossing – two locations
• Used old truck road for main skid trail
Ditch

Skid Road
Questions?
Thank You!

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Emergency Erosion Control Techniques
publication:
www.nhwoods.org – Woodlot management – Forestry Field Notes

https://extension.unh.edu/resource/forestry-field-notes