# Sleepy Hollow Drainage Improvements Scenario Discussion

March 4, 2021

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# Agenda

Findings in the field

Potential Scenarios

Recommendations

# Basin and Berm

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# Area of Deposition

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# Bank Erosion

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# Headcut

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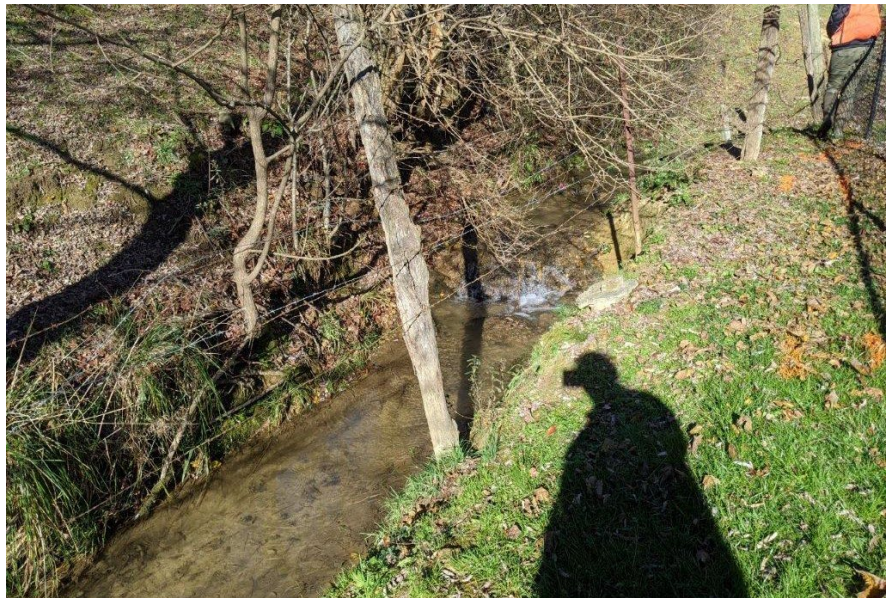
# Stable

Stable section between headcut downstream and erosion at utilities upstream

Canopy cover and dense rooting adding to overall stability of reach

Could provide reference for stable stream cross section if designing new channel

# Pinch Point



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# Stable

## Artificially Stable: Foreground

Extensive stone placement provides protection from erosion along banks

Stream flow maintained, but lack of low-flow channel can cause temperature fluctuations

## Natural Stability: Background

Wetland established on either side of stream channel, floodplain vegetation providing sediment trapping and energy dissipation at higher flows

Low-flow channel connectivity naturally formed and maintained

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# Active Spring

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# Pocket Erosion

# Stormwater Conveyance

- Repaired in the past
- Current solution uses extensive stone
- Need to verify if issues have been fully addressed

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# Utility Impacts

# Two Scenarios to Evaluate for Stream

- Structural Solution
  - Focus on stability
  - Costly
  - Significant work along entire length
  - Structure (stone) driven
- A Lighter Touch
  - Focus on homeowner concerns and structural stability
  - Cost-effective
  - Work on problem areas only
  - Vegetation driven

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# Structural Design

Dependent on stone for stability

Costly design and costly implementation

Can maintain tighter corridor – largely temporary impacts to adjacent lawns

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# Light Touch

Focus on problem areas

Cost effective

Vegetation key – stability and aesthetics

Will need to convert some currently mowed lawn to native vegetation with denser, deeper root systems

Native vegetation provides more diverse habitat while reducing and absorbing some of the stormwater flow

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# Considerations

Protect infrastructure

Address landowner concerns

Long-term viable solution(s)

Cost effective

Aesthetically pleasing

Does not negatively impact downstream properties

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# Recommendation

Coordinate a stakeholder/public meeting

- In-person with Video Conference
- Stream walk

# Discussion and Q&A

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# Contact Information


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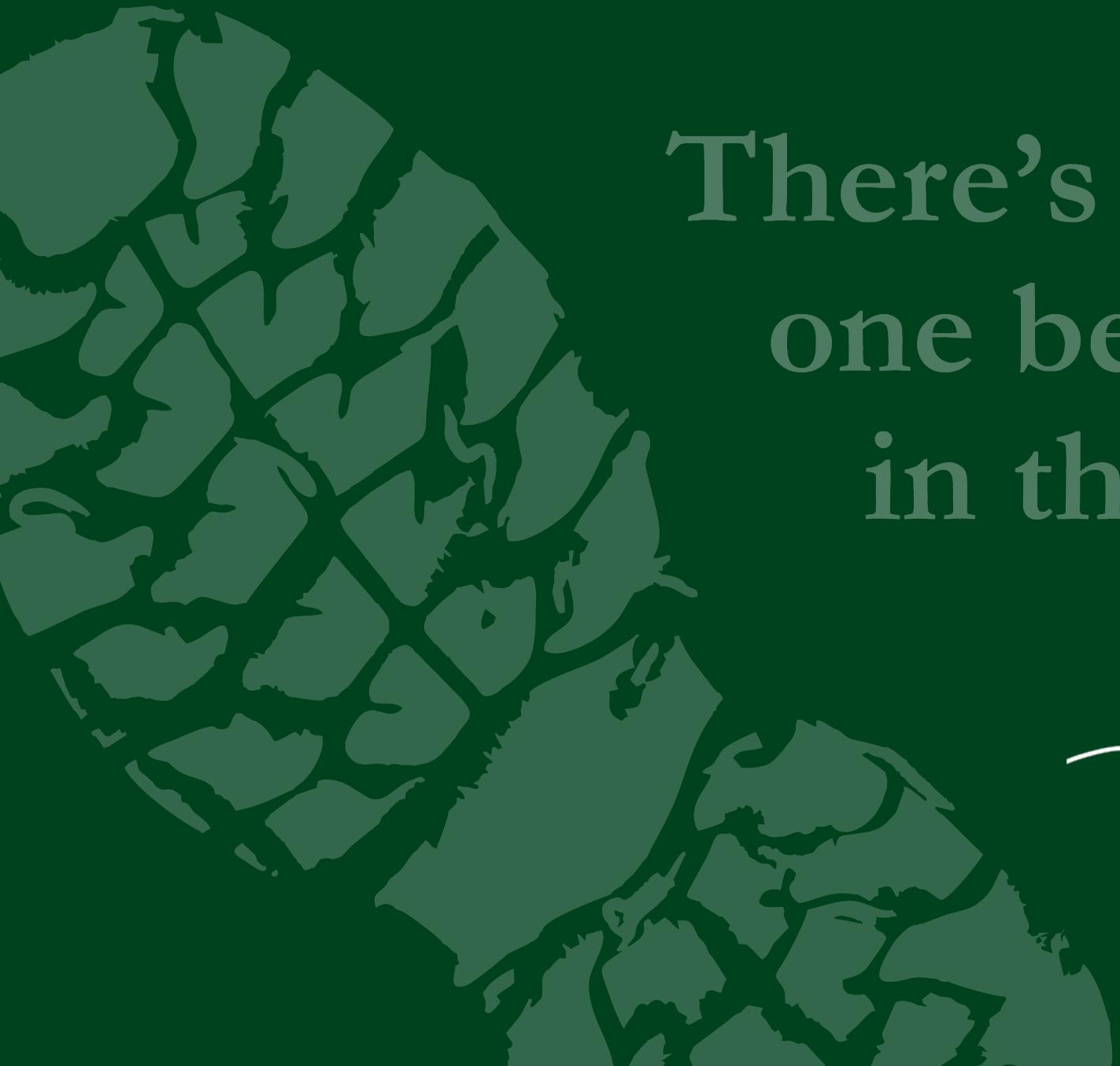

# There's no one better in the field!

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