FEH Mapping Concepts

MAPPING PROCEDURE

EXAMPLES

• Middle Fork Salt Creek above Story, Ind.
• E. Fork White R. at Brownstown, Ind.

**Input Variables:** Use set-back distances and landscape features to identify **avoidance** zones
FEH Avoidance Strategy

Wabash R.

E. Fork White R.

New Harmony, Ind.

Brownstown, Ind.
“Over time, channels attempt to develop a form and slope adjusted to transport the water and sediment derived from their drainage basin.”
Input Variables: Use set-back distances and landscape features to identify avoidance zones.

Meander Belt Width

Williams, 1986:
MBW = 6 x Bankfull Width (W_{bnkf})

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West Fork White River; Daviess and Knox County Line
White Lick Creek near Plainfield, Ind.

Most likely will require more room to reach equilibrium

Avoidance Concept

“Ignore set-back distances and you set yourself up for a battle with Mother Nature!”
Factor of Safety

$MBW = 6 \times W_{bnkf}$

Add a Safety Buffer on each side
Buffer = $W_{bnkf}$

Total Corridor Width

$TCW = 8 \times W_{bnkf}$
MBW = 6 \times W_{bnkf}

TWC = 8 \times W_{bnkf}

Caution: Not much security added if buffers lack tree cover!

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FEH Mapping Example

• Middle Fork Salt Creek
  (Upstream of Story Ind.)

**Input Variables:** Use set-back distances and landscape features to identify avoidance zones
Middle Fork Salt Creek; above Story, Ind
DA = 28 mi$^2$
$W_{bnkf} = 70$ ft
Setback 8x: TCW = 560 ft

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FEH Avoidance Zone
(Based on set-back distances)

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FEH Mapping Example

East Fork White River
(At Brownstown Ind.)

**Input Variables:** Use set-back distances and landscape features to identify avoidance zones
East Fork White River; at Brownstown, Ind.
Landscape Features

- Meander scars
- Soils

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Current Research

IUPUI

• The Polis Center
• Center for Earth and Environmental Science

Exploring processes to automate some elements of FEH mapping
FEH Mapping

Questions?

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