

Floodplain and Tree Buffer

Discussion

Presented by:

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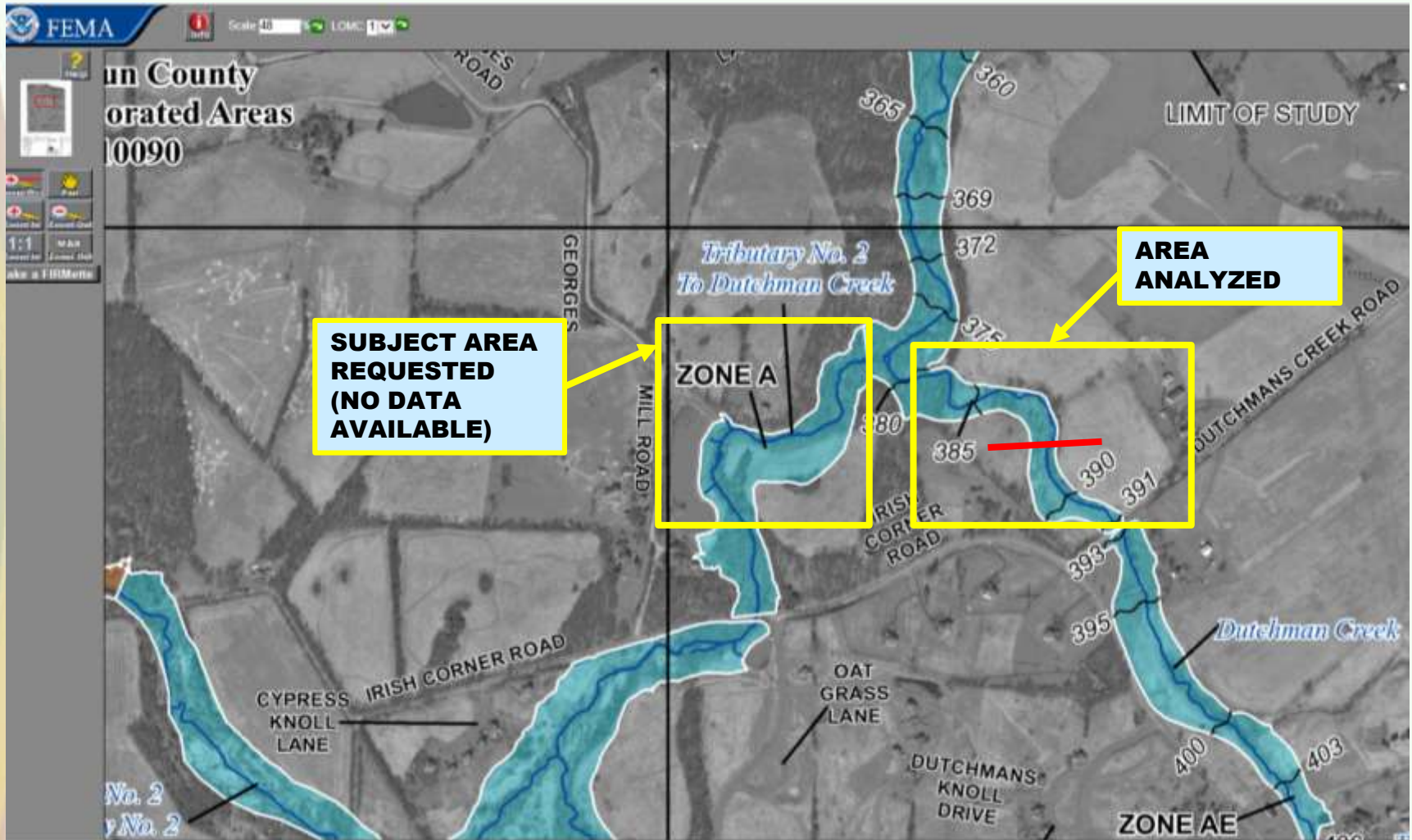
Mike Marsala

P.E., C.F.M.



October 6, 2017

Floodplains in Rural Loudoun County



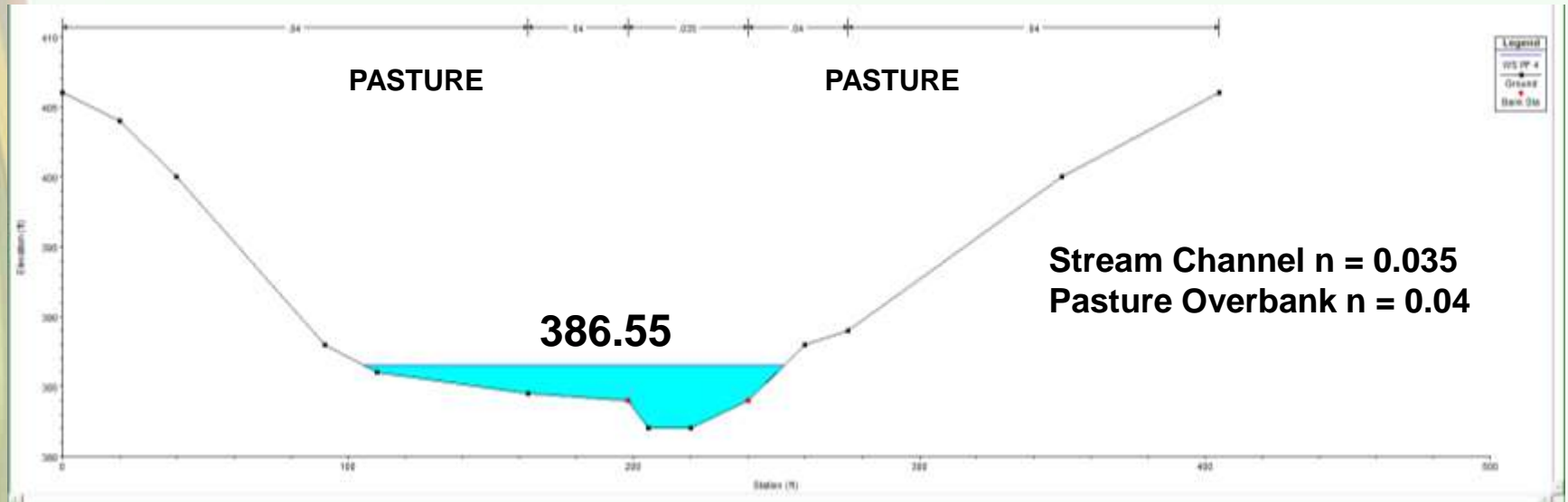
Dutchman Creek Example



- Cross-section cut from Loudoun County 2-ft contour interval GIS topography (not field run survey)
- 100-yr flow = **2,280 CFS**

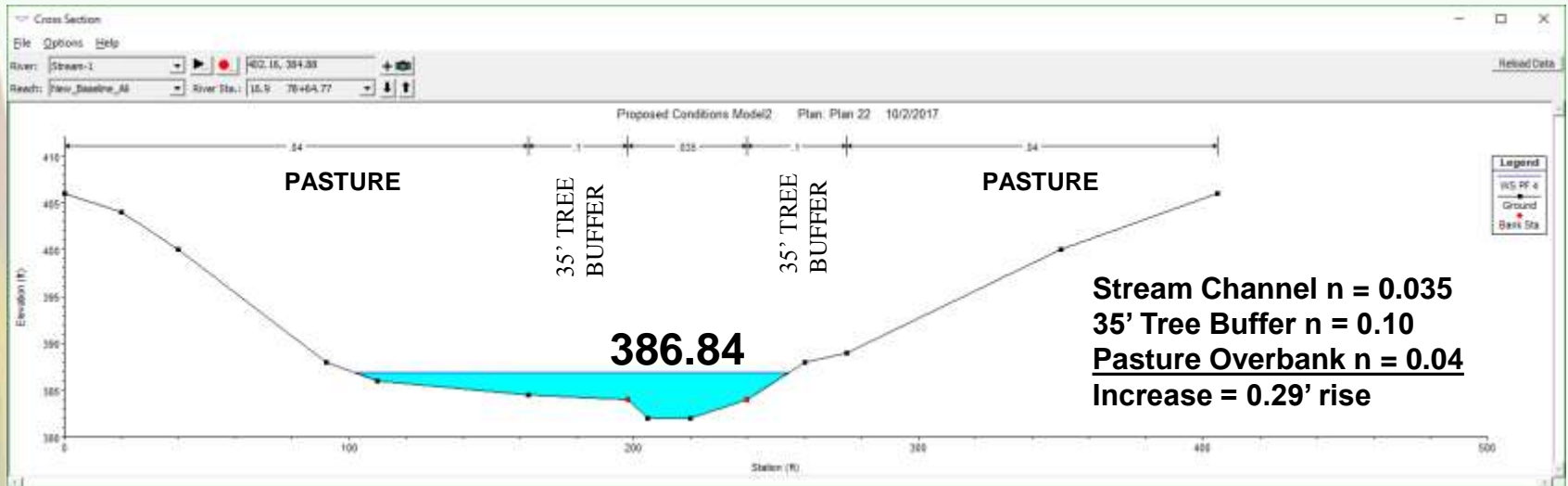
Dutchman Creek Example

Assume all pasture

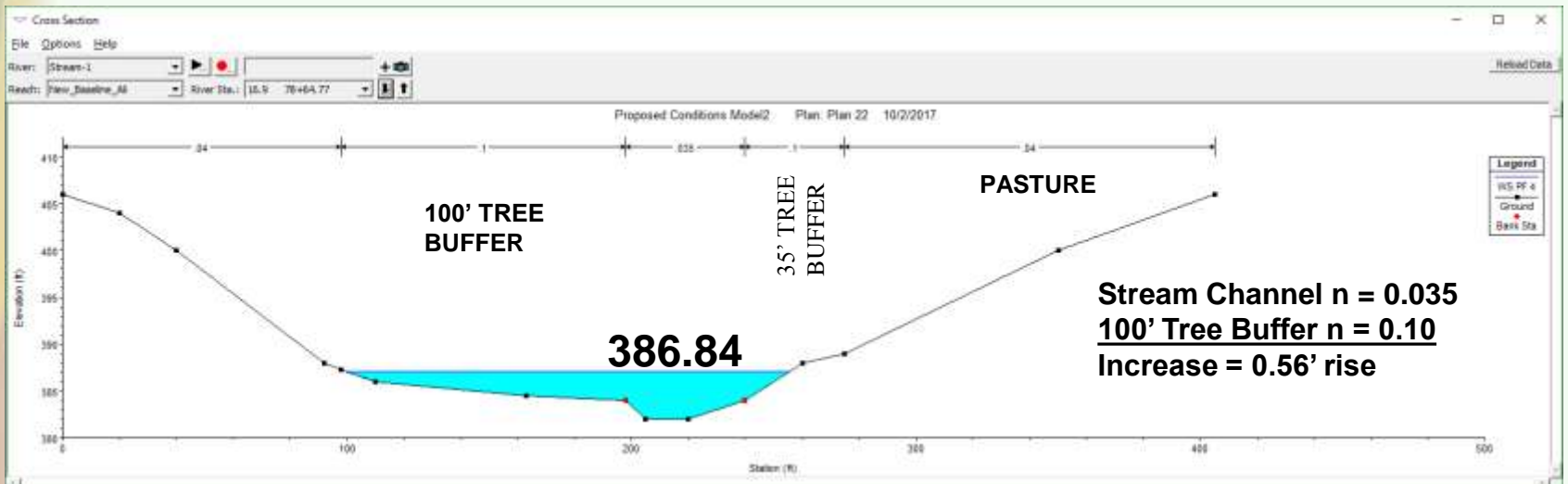


Dutchman Creek Example

35' Tree Buffer Addition

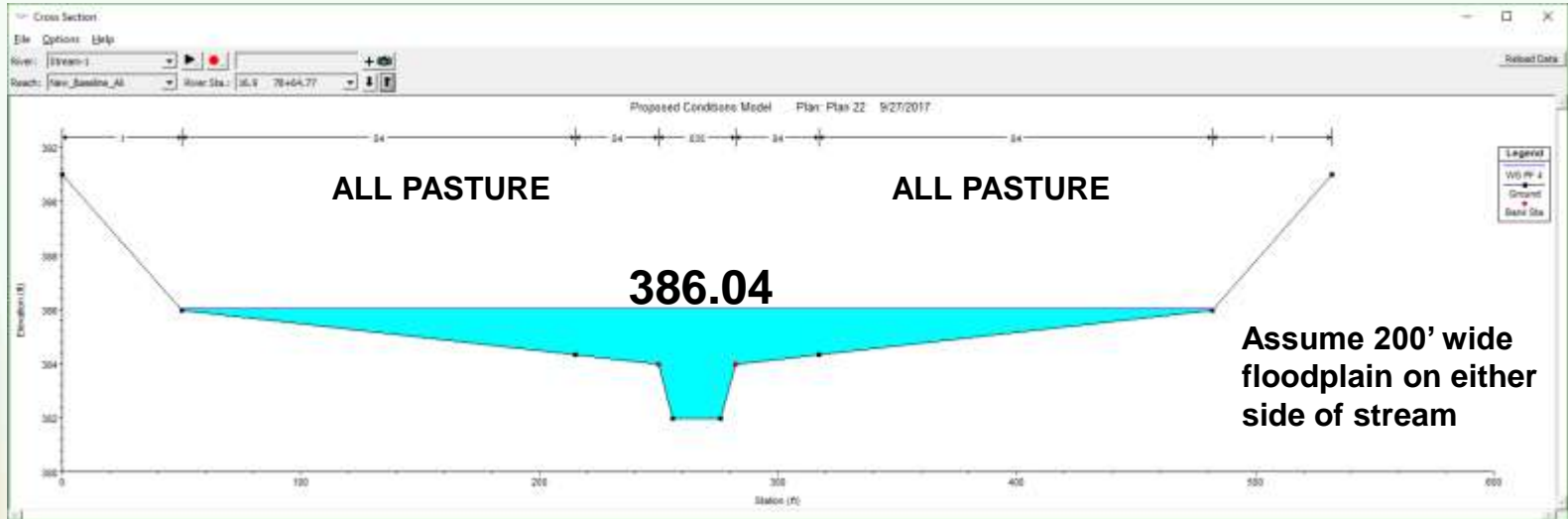


100' Tree Buffer Addition

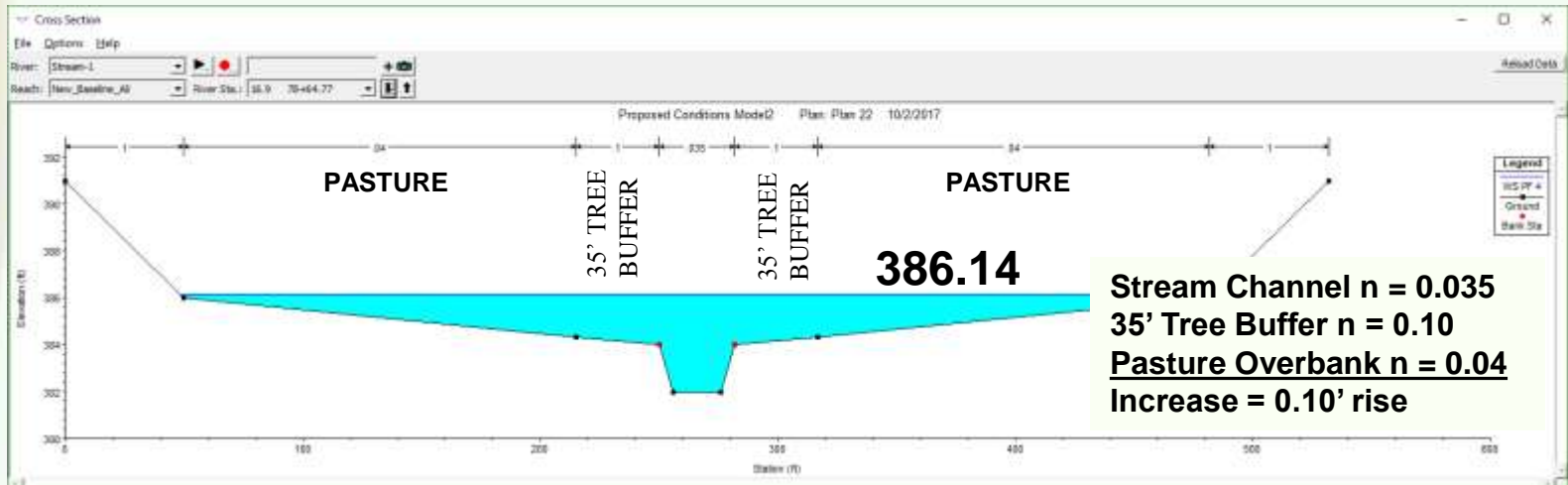


Hypothetical Example

Wider Floodplain, Same Location

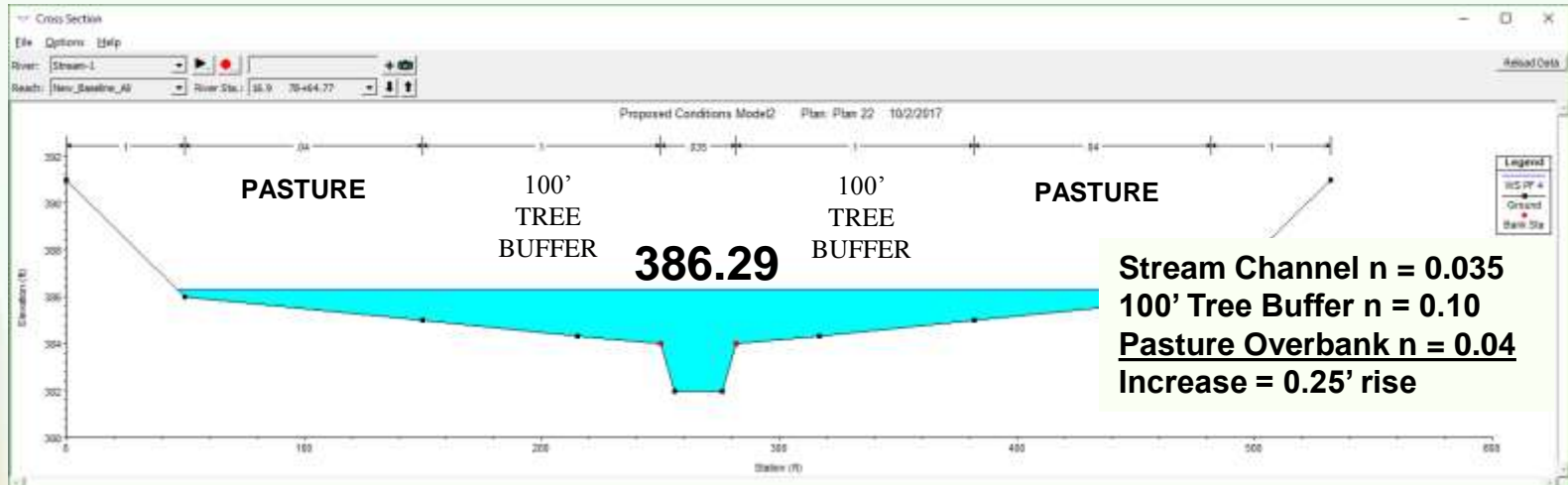


35' Tree Buffer Addition

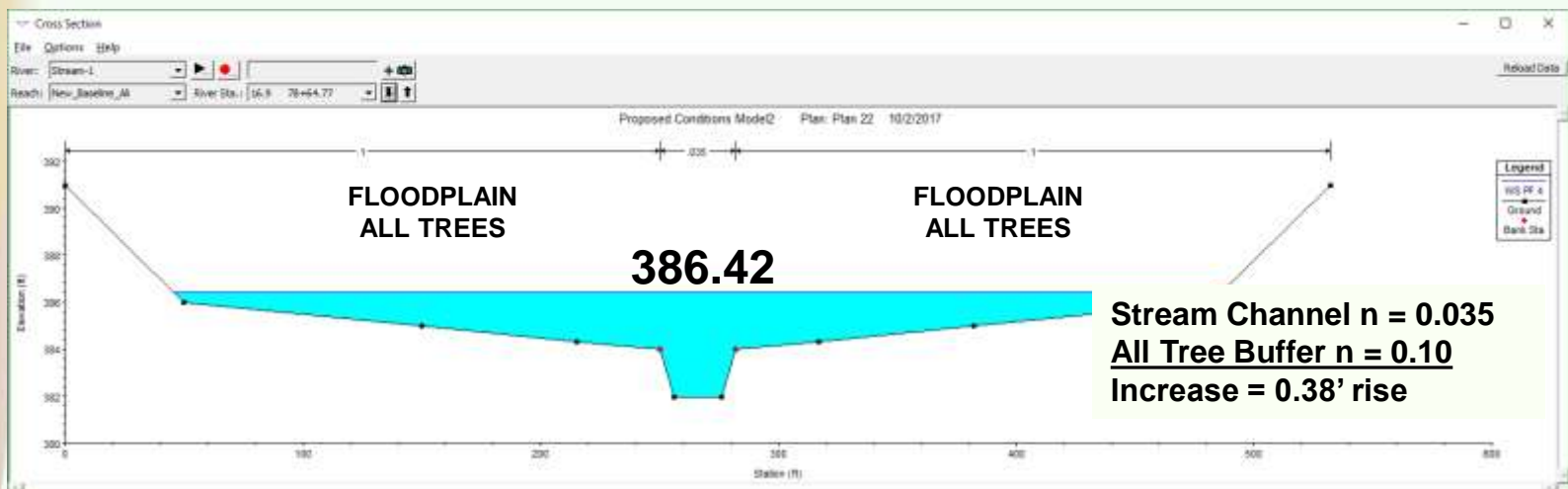


Hypothetical Example

100' Tree Buffer Addition



All Tree Buffer Addition



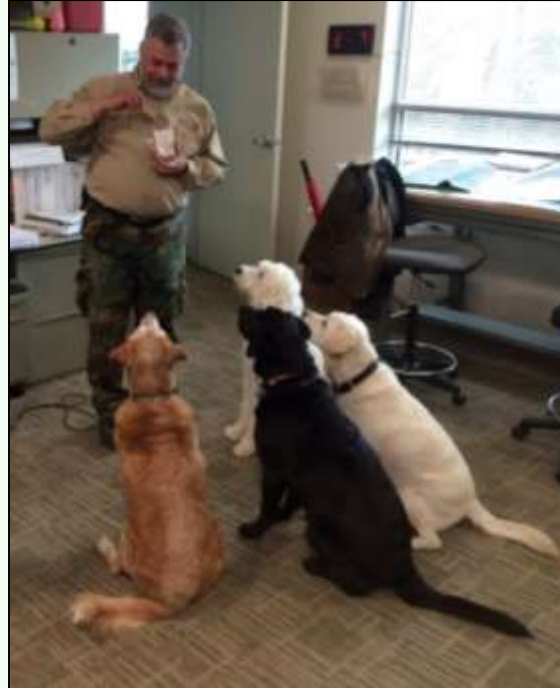
Difficulties with Flood Studies in Rural Areas

Difficulties:

- Rainfall intensities have changed
- Old models use “odd” Manning’s “N”
- Most often in Zone A (approximate) Flood Zones...



Thank You For Your Attention



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