

# Floodplain Considerations During Design

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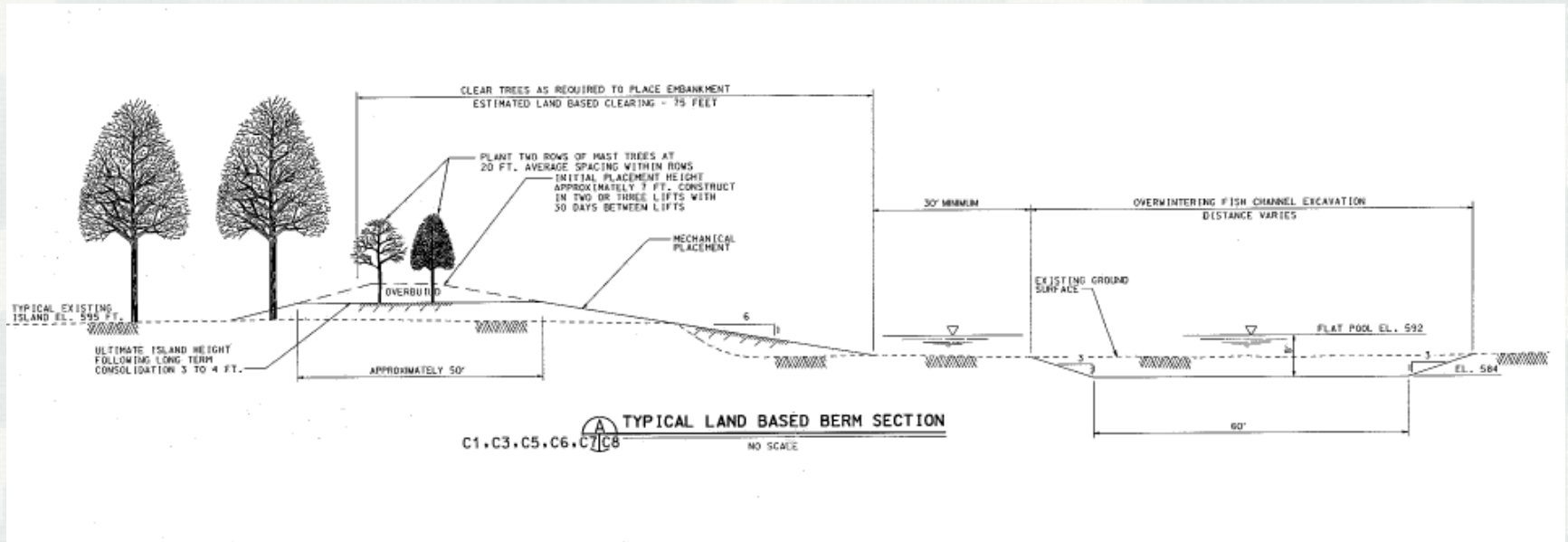
27 September 2016



US Army Corps of Engineers  
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# Why do I need a permit?



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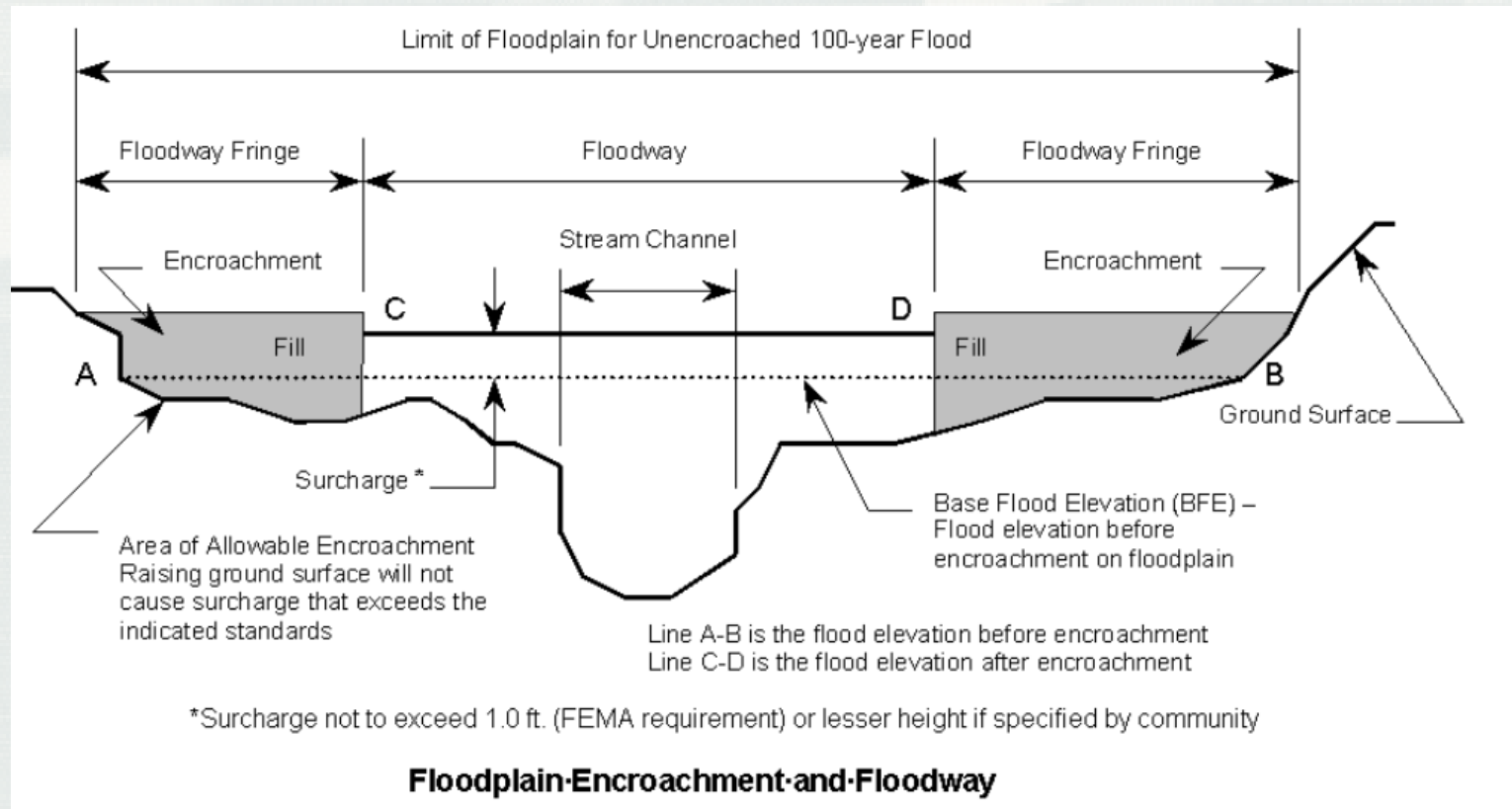


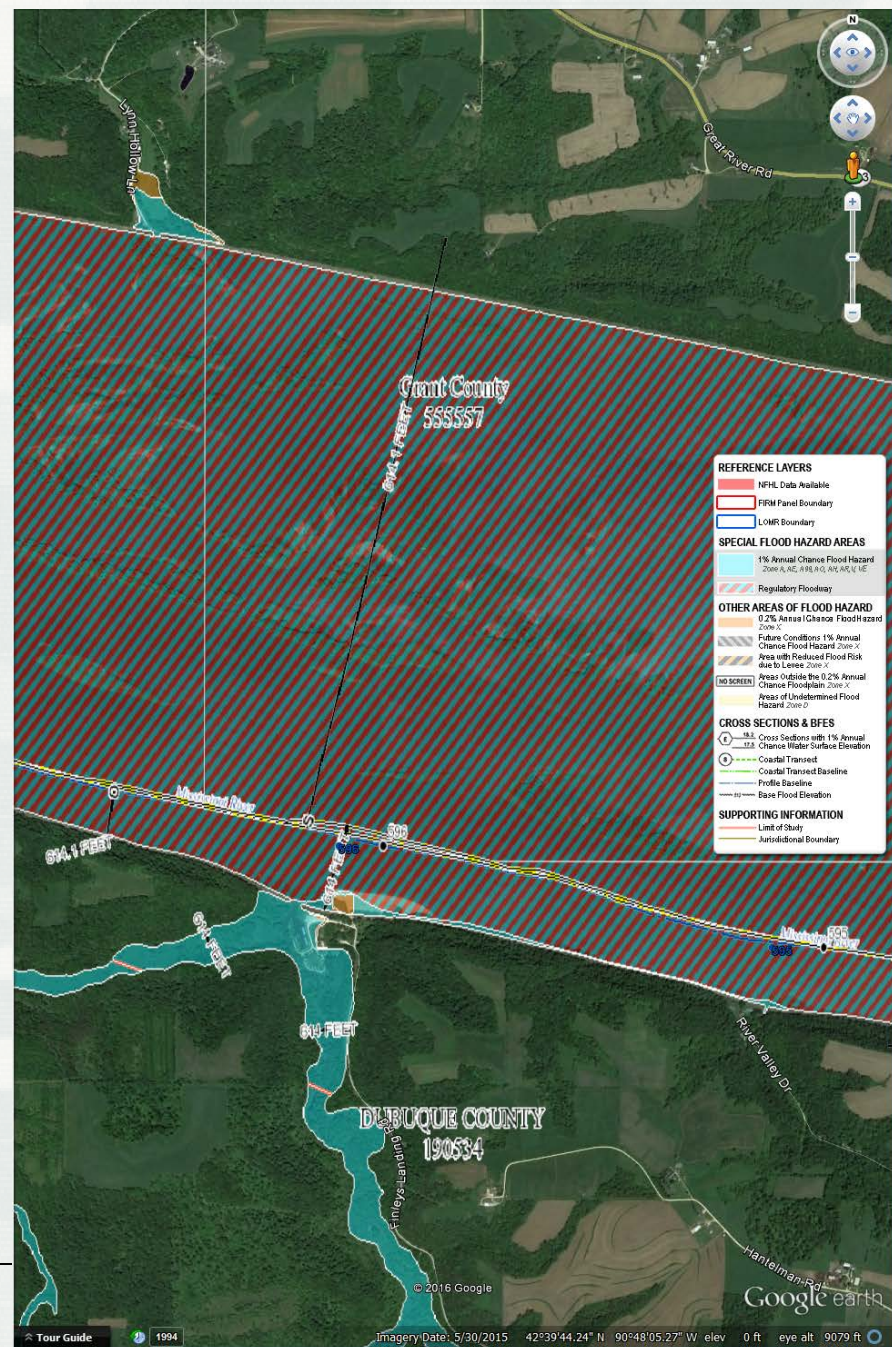
# Terms

- Floodplain
- Floodway
- No-Rise
- Flood Insurance Study (FIS)



# Floodway





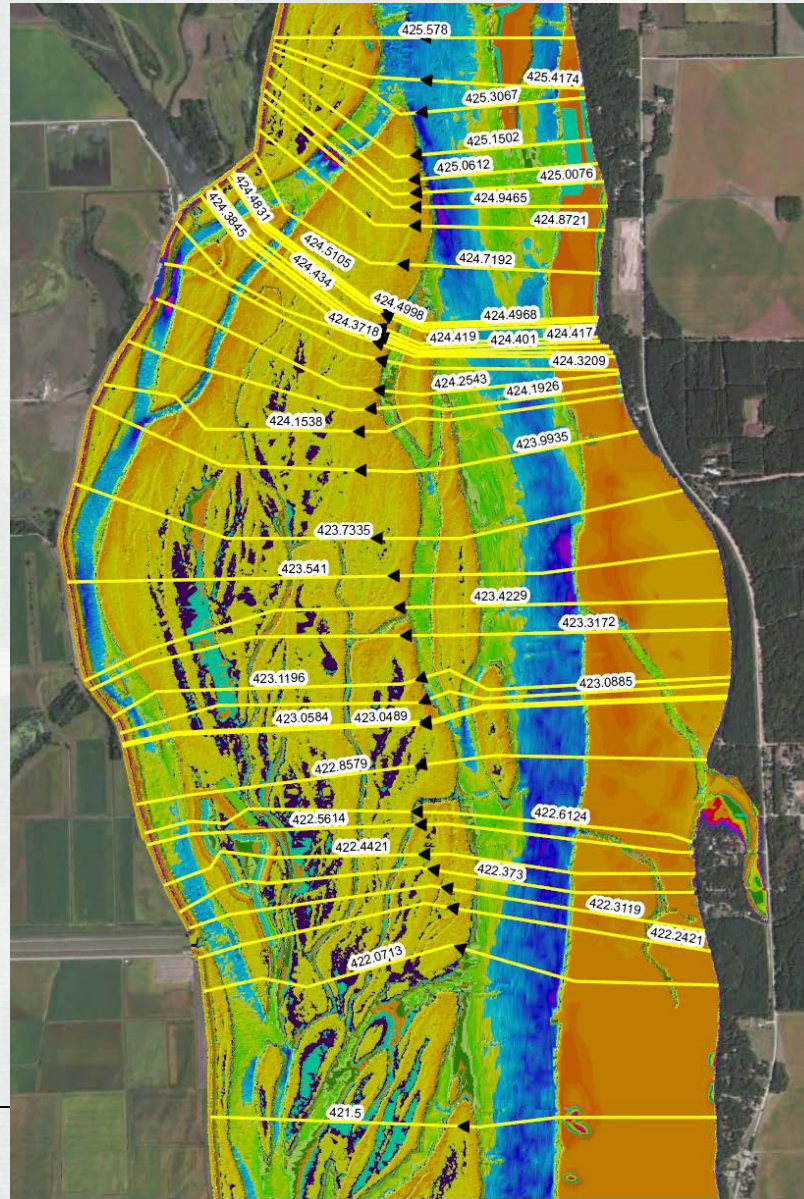
# Flood Insurance Study (FIS) Report

Report that documents the effective:

- Community's flood problems
- Estimates flood **flow frequency**
- Establishes base flood **elevations**
- Delineate floodway and floodplain
- Establishes insurance risk zones
- NFIP communities = no rise = 0.00' for 1% annual chance exceedance flow



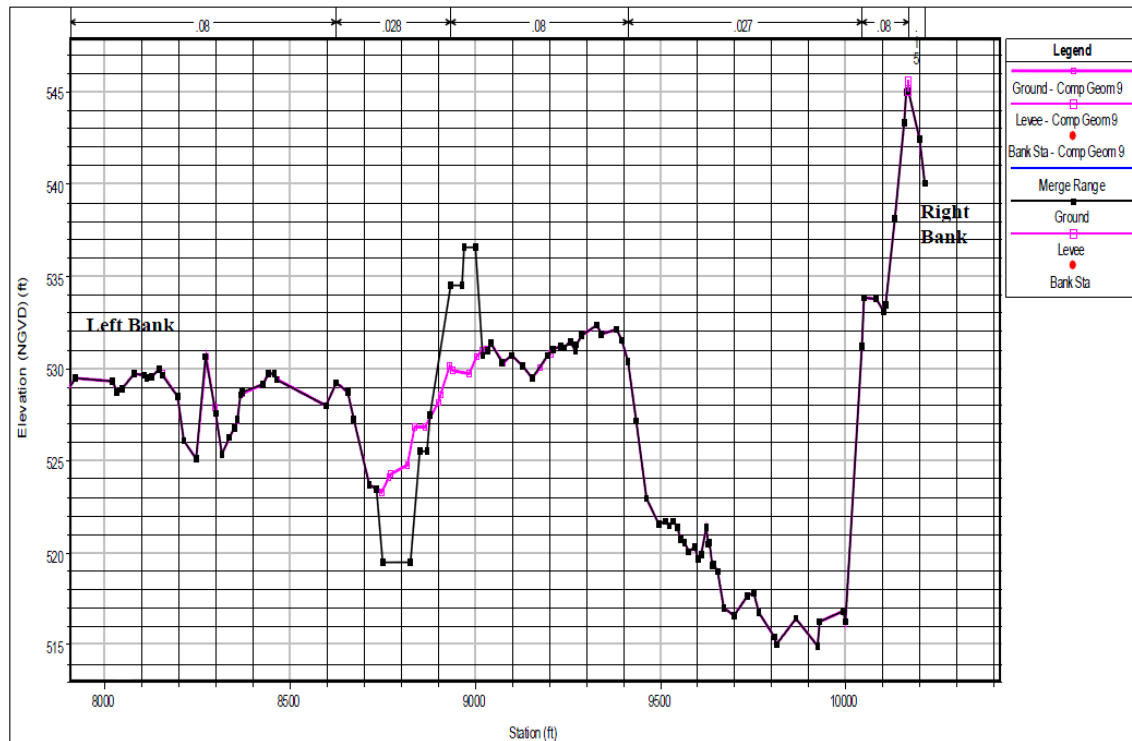
# Analysis Procedure



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# Analysis Procedure

Mississippi River Mile 422.3119  
(With Project and Existing Conditions Cross-sections looking Downstream)



# Application Package

- Joint Application Package
- Exhibits / Tables
  - ▶ Description of project and modeling approach
  - ▶ HEC-RAS cross section locations
  - ▶ Existing and Proposed Conditions
  - ▶ Output table
  - ▶ HEC-RAS model
  - ▶ Construction Drawings





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# Keys for Success

- Incorporate the permit(s) into project schedule
- Identify jurisdiction and regulations
- Consider and assess floodplain impacts during the feasibility study
- Evaluate project as a whole; then scale back to contract packages
- State DNR's moving away from accepting feasibility drawings for permit package submission.





# Keys for Success

- Ensure final design PDT includes H&H member
  - Communicate design changes from Feasibility Study
  - Regulations for NFIP communities vs. rural areas
  - Identify a single POC to coordinate the permit with the state.
- Allow sufficient time to update model and State agency (permit) reviews in the project schedule



# Questions?

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