

AMFM 13th Annual Conference
“Preparation, Mitigation and Recovery”

Hilton Garden Inn, Kalispell, MT

March 7, 2012



ASSOCIATION OF
Montana
FLOODPLAIN
MANAGERS

Floodplain Engineering 101 Session



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DNRC Website: www.mtfloodplain.mt.gov

Floodplain Engineering 101 Course

Session Agenda

Floodplain Technical Session:

Theme: **Floodplain Encroachment**



Part I: 1:00 – 3:00

- Basic Floodplain Concepts (**Larry Schock/DNRC**)
- Floodplain Encroachment Review (**John Connors/DNRC**)
- Floodway Encroachment “No-Rise” Analysis (**Steve Story/DNRC**)

Part II: 3:15 – 5:15

- Stream Restoration Structures (**Mitch Price/River Design Group**)
- Bank Stabilization & Riprap Design (**Paul Sanford/Allied Eng.**)

Q&A : 5:15 – 6:00

Floodplain Engineering 101 Course

Session Agenda

Before we get started:

- Sign-In Sheet: PE/CFM Credits
- Course Presentations & Materials available on DNRC Website
- Course Evaluation Sheet – Training Topic Recommendations??

Are the important concepts getting through??

Let us know if you had a “light bulb” moment..

- Target Audience...



Floodplain Engineering 101 Course

Session Agenda

Before we get started:

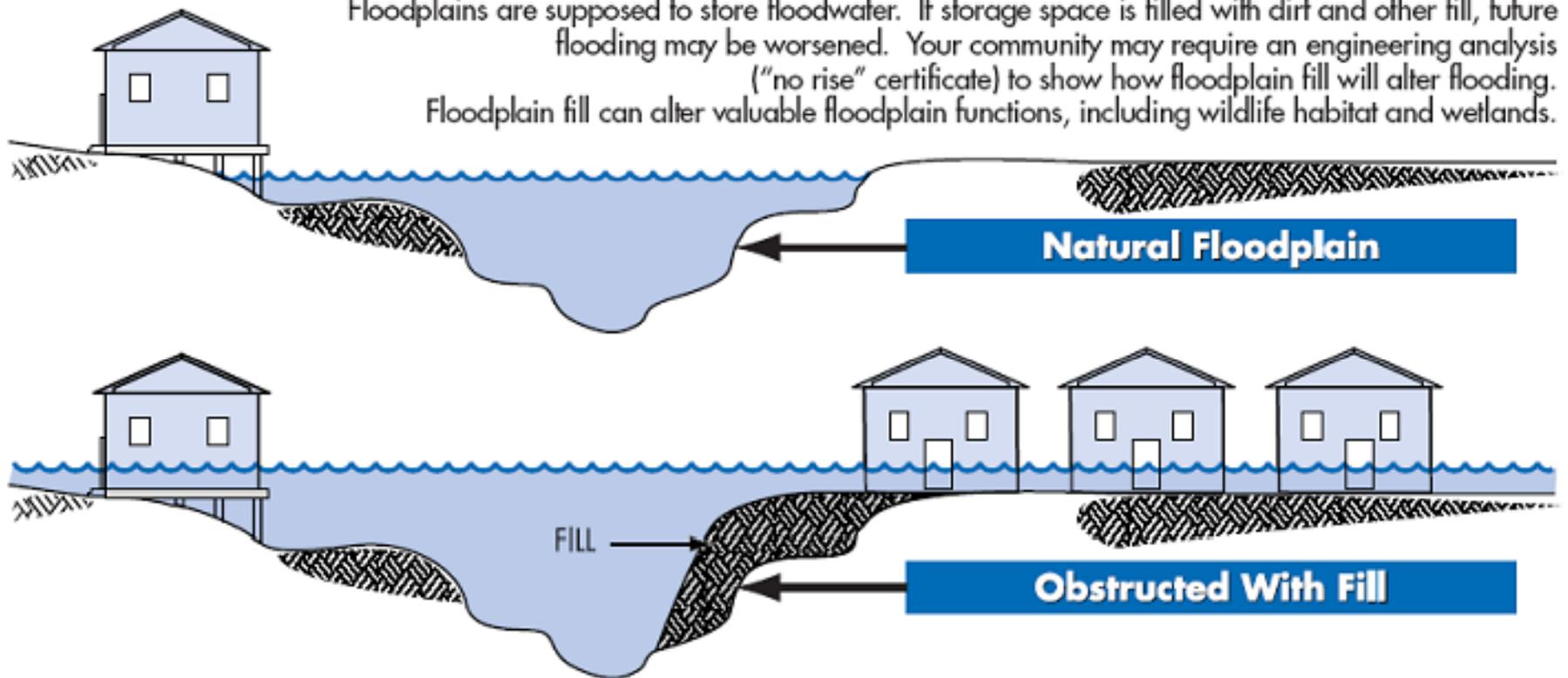
- State Roles: Technical Assistance Program

State Adoption/Designation of Floodplains (Not a FEMA Review)



Allowing Fill in the Floodplain Today May Worsen Impacts of Future Flooding...

Floodplains are supposed to store floodwater. If storage space is filled with dirt and other fill, future flooding may be worsened. Your community may require an engineering analysis ("no rise" certificate) to show how floodplain fill will alter flooding. Floodplain fill can alter valuable floodplain functions, including wildlife habitat and wetlands.



Technical Training and Outreach

DNRC Floodplain Resource Seminar

This Year: Between July 17-19, 2012

Floodplain Technical Session:

- 1 Day Course in Helena
- Instructors:
Regional Eng. Specialists
- Multiple 30-60 minute topics
- Free Technical Training!
- Agenda Forthcoming
- **BYOB**



State Guidelines & Standards

In the Works

- HEC-RAS Model Guidelines:



Standardized requirements for:

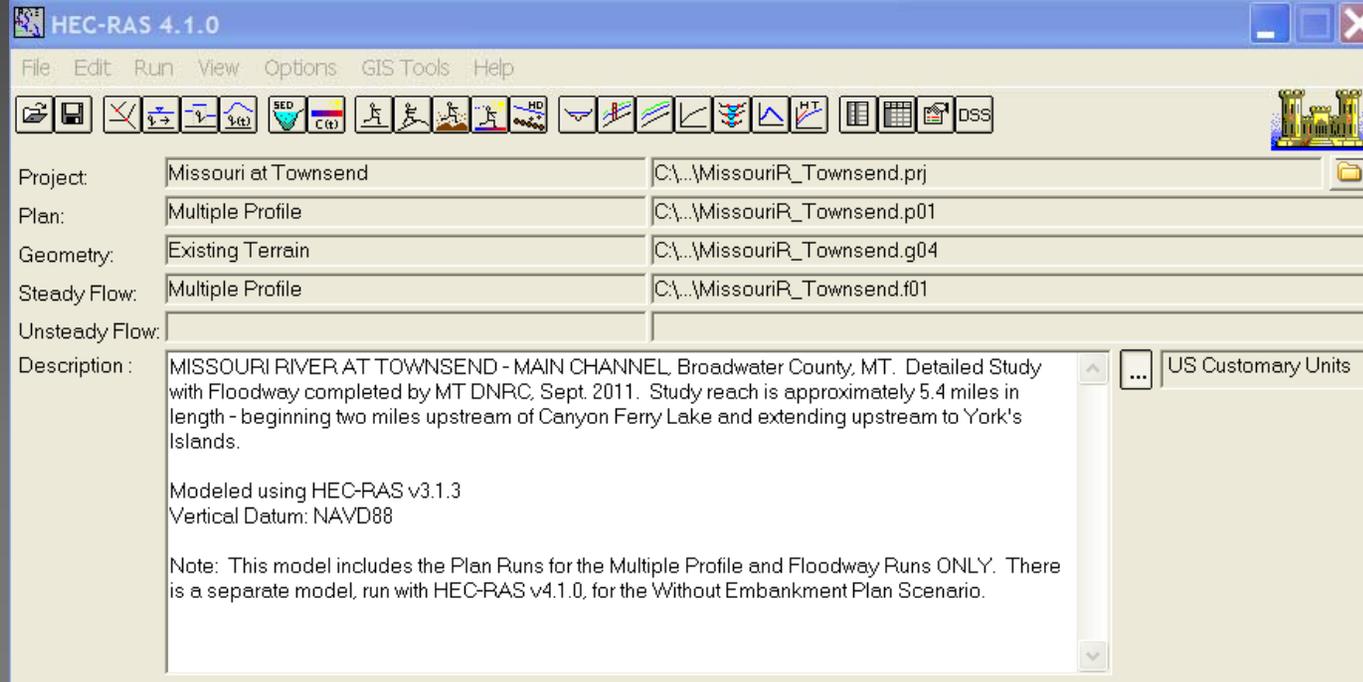
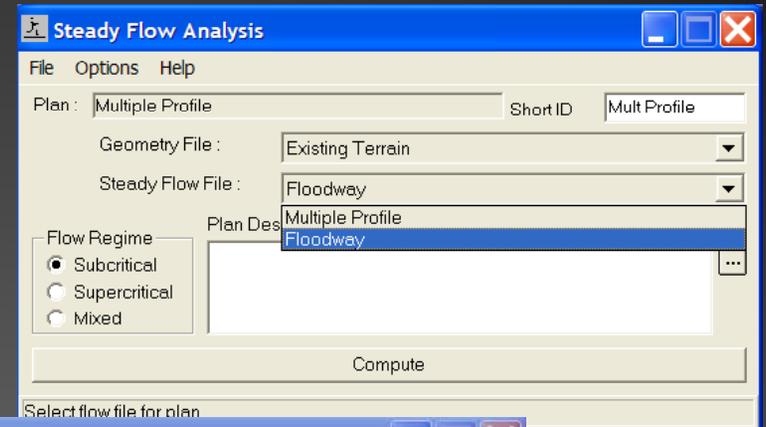
- Description Information:
 - Date; Version; Datum; Location; Project Description; Purpose; Modeler; etc.
- Terminology & Naming Conventions for:
 - Plan-Steady Flow-Geometry Files
 - Profile Names
 - Channel and River Station Assignments/XS Labeling

State Guidelines & Standards

HEC-RAS



Model Guidelines:



State Guidelines & Standards

In the Works

- HEC-RAS Model Guidelines:



Guidance Document will list detailed requirements

Will be required for all models:

- Submitted for State Review/Adoption
- Includes Encroachment Review models

State Guidelines & Standards

In the Works

- Derivative products of Big Hole R. Approximate Study
 - Approximate Level Study – State H&H and Mapping Standards: will require to be Hydraulic Model framework (HEC-RAS)
 - A Community's How-To Guide for Scoping and Completing new Approximate Level Floodplain Studies (meeting State and FEMA standards)

An aerial photograph showing a river meandering through a landscape. In the foreground, a large reservoir with a dark blue center and a lighter greenish-blue shoreline is visible. The river flows from the top center towards the bottom right, winding through a mix of green grassy areas, brownish soil, and dense evergreen forests. The sky is clear and blue.

Let's Do
This!!



Image Courtesy Watershed Sciences, Inc.