Assessing Impacts to Floodplains

- Identify Source of Potential Impacts
  - Encroachment
  - Fill
  - Pilings/ Bridge Abutments
  - Infrastructure

- Determine Study Area
  - Generally Direct impact

- Determine Existing Conditions
  - Maps of Designated Floodplains (FEMA)
  - State Agencies
  - U.S. Army Corps of Engineers
  - USGS
  - Local flood insurance studies

- Identify Standard
  - Federal Standards
  - State/ Local Standards
Floodplain Basics

• Executive Order 11988
  – Requires measures to minimize, restore and preserve
    • Lives/property
    • Natural/beneficial values

• Definitions
  – Regulated Floodway – encroachment limits
  – 100-year flood – 1% chance of being exceed in any given year
Floodplains (cont.)

• Impact Prediction
  Direct filling (encroachment) of floodplain
  Calculations of changes in flood levels, runoff quantity, velocity,

• Assess Significance of Impacts
  1 foot rise in flood elevation in flood fringes at any location along stream for 100-yr flood
  Risk to life and property (flood levels, flood-related erosion, mudslides)

State/Local Policies

• Mitigation
  No floodplain encroachment is permitted unless no practicable alternative
  Avoidance
  Minimization
  Compensate for conveyance and storage capacity