National Flood Insurance Program (NFIP)

• A voluntary program based on a mutual agreement between the Federal government and the local community:

• In exchange for adopting and enforcing floodplain management regulations, Federally-backed flood insurance is made available to property owners throughout the community.
In 1968, Congress passed the National Flood Insurance Act to correct the shortcomings of traditional flood control programs.

1) Guide future development away from flood hazard areas;
2) Required that new and substantially improved buildings be constructed to resist flood damage;
3) Provided financial aid
4) Transferred some of the costs of flood losses from the taxpayers to the property owners.
NFIP Reforms

- 1973 Flood Disaster Protection Act
  - Flood insurance required for federally-backed loans
  - Limited federal disaster assistance for communities without flood insurance
- 1994 Flood Insurance Reform Act
  - CRS Program
  - Mitigation grant programs
- 2004 Flood Insurance Reform Act
  - Map Modernization
  - Repetitive Loss and Severe Repetitive Loss programs
- Biggert-Waters Flood Insurance Reform Act of 2012
  - Reduce flood insurance subsidies
- Homeowners Flood Insurance Affordability Act of 2014
  - Reinstates grandfathering
NFIP Components

- Mapping
  - Flood Insurance Rate Maps
- Insurance
  - Federally-backed flood insurance made available in participating communities
- Regulations
  - Ensure communities adopt and enforce floodplain management regulations
Floodplain Regulations

Level of Regulations (and corresponding section) dictated by level of detail on FEMA map

Primary section of concern for floodplain regulations:
44 CFR 60.3(a-e)
- 60.3(a) – no map or data
- 60.3(b) – Approximate A zones only
- 60.3(c) – BFE’s provided on at least one reach
- 60.3(d) – BFE’s and floodway provided on at least one reach
- 60.3(e) – coastal zone (not applicable to Colorado)
<table>
<thead>
<tr>
<th>Standard</th>
<th>Colorado Rules</th>
<th>NFIP Minimums</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeboard</td>
<td>1 foot</td>
<td>No freeboard required</td>
</tr>
<tr>
<td>Floodway</td>
<td>½ foot surcharge</td>
<td>1 foot surcharge</td>
</tr>
<tr>
<td>Critical Facilities</td>
<td>2 foot freeboard</td>
<td>No specific standards</td>
</tr>
<tr>
<td>LOMR-F areas</td>
<td>New structures must have freeboard above previous BFE</td>
<td>Area is removed from SFHA and no standards apply</td>
</tr>
</tbody>
</table>
Common questions

- 0.5-foot Floodway Surcharge
  - New studies that begin after January 14, 2011 should use new criteria
  - LOMRs can continue to use surcharge of effective map
  - 0.5-foot surcharge should be applied to Zone AE reaches without a floodway designated
  - Does not require mapping of floodways on approximate Zone A reaches
- Communities can exceed State standards
Where do Regulations Apply?

- At a minimum, SFHA’s as shown on effective FEMA maps
  - If map data is disagreed with, a map change should be submitted
- Areas where better available data indicates a flood risk
- In LOMR-F areas (new State rule)

As long as the local ordinance enables it, ANY area can be regulated at a community’s discretion.
Where to find mapping data

- [http://arcgis/1J7AF01](http://arcgis/1J7AF01)
- Map Service Center
- FEMA Engineering Library
- Urban Drainage and Flood Control
- Local floodplain administrators
- CWCB hazard mapping – coming soon!
What is development?

- Any human-caused change to improved or unimproved real estate including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials
Floodplain Development

- Permits required for development in floodplains
- Buildings will be protected from damage by the base flood
- New floodplain development will not aggravate existing flood problems or increase damage to other properties
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.

Natural Floodplain:...

Obstructed With Fill:...

This is the basic premise of what happens when the floodplain is encroach upon.
Permit Information

- Description of Activity
- A site map
- The flood zone, BFE and floodway information for the site
- Elevation of the ground site prior to development
- Elevation of the lowest floor
- Floodproofing elevation (non-residential)
- Conditions of the development (i.e., elevation certificate or inspection requirements)
- A space for approving or denying the permit
Definitions

- Encroachment Review – an informal term for the hydraulic analysis performed to evaluate the effects of proposed development and artificial obstructions on the 100-year water surface elevation (i.e. BFE) and water velocities.

- It is a comparison of the Existing vs. Proposed conditions that control the 100-year water surface profiles*

- It may require application of hydraulic modeling techniques with modeling programs such as HEC-RAS.

The requirements for an encroachment review in each of the three special flood hazard areas are covered in the following sections.

The encroachment review does not cover other considerations such as stability of materials and scour during a 100 year flood event.
SFHA is defined on the FIRM.
No BFEs or Floodway on the FIRM.
No Hydrologic or Hydraulic data available (most of the time).

An Approximate Study (Zone A) does not have BFEs on the FIRM and in most cases it does not have an associated FIS report, hydrologic data, or hydraulic models.

Models have to be developed from scratch.

This is somewhat helpful in that you do not have to work with the existing effective models but there is additional work associated with the development of the hydrologic and hydraulic data.
Approximate Zone A Requirements

- Regulations require that all proposed building sites are reasonably safe from flooding
- Ensure that the flood carrying capacity of altered watercourse is maintained
- Any channelization or flow diversion project must evaluate the impact on regulatory floodplain
- Developments of over 50 lots or 5 acres must develop a BFE
- Encroachment review recommended on fill projects
The SFHA is defined on the FIRM.
- There are BFEs on the FIRM and in the FIS report.
- FIS report with H&H data and effective models.
- No mapped regulatory floodway.

There are very few limited detail studies in Montana.

Still looking at the entire floodplain as a floodway.
Zone AE Requirements

- Regulations for an Limited Detail Zone AE require that encroachment into the SFHA not cause a rise in the BFE greater than 0.5 feet.
- If a project proposes raising the BFE in a Limited Detail Zone AE by more than 0.5 feet a CLOMR must be submitted before a permit can be issued and work can commence.
- The SFHA is defined on the FIRM.
- BFEs on the FIRM and in the FIS report.
- FIS report with H&H data and effective models.
- Mapped regulatory floodway and floodway fringe area.
Floodway Permitting

- Communities shall not approve permits for Floodway Encroachment development activities without demonstrating Zero (0.00) increase in the 100-year water surface.

- Permit Applications must include an Encroachment review "No-Rise Analysis".

- The "No-Rise Analysis" is a Hydraulic Analysis that is:
  - Based on the Effective Hydraulic Model used for the study
  - Must be completed and certified/sealed by a CO P.E.

- If a project proposes encroachment that raises the BFE in the floodway greater than 0.00 feet, a CLOMR must be submitted and approved by FEMA prior to permit approval and subsequent construction.

- Encroachment into the floodway fringe does not require an encroachment review.
If proposing BFE increase, then must prepare & submit CLOMR application to FEMA. Note that:

- The Community must endorse and sign the CLOMR application
- The Permit Application cannot be approved until the CLOMR is approved by FEMA. [i.e. the project work cannot proceed without the CLOMR approval].

Must satisfy the requirements of 44 CFR 65.12 which include:

- CLOMR Application Fee
- An Alternatives Evaluation; legal notice; no structures impacted; BFE & floodway revisions; follow-up LOMR
- FEMA to respond within 90 days of receiving application.
Regulatory Requirements - LOMR

- 44 CFR 65.3
- When BFEs increase or decrease, communities are required to notify FEMA of the changes and submit new technical data to update the maps
- It may be possible to incorporate changes into new map projects
- Coordination, coordination, coordination!
Enforcement

- Fair and uniform enforcement of the local ordinance will reduce flood losses.
- The community is responsible for compliance with its floodplain regulations.
- Communities that do not enforce the ordinance may be suspended from the NFIP and legally vulnerable.
- Violations can also happen due to:
  - Incorrect interpretation of ordinance
  - Program/ordinance flaws
  - Disregard of regulations
More Information

www.cwcb.state.co.us
- Rules and Regulations for Regulatory Floodplains in Colorado, dated November 17, 2010
- Colorado Floodplain Damage Prevention Ordinance, dated September 6, 2011