



Floodplain Management Assessment

Chehalis River Basin Flood Authority

Floodplain Management Assessment

Project Timetable

March – May	Research
June	Community visits
August	Draft reports: <ul style="list-style-type: none">→ Community reports→ Repetitive loss report→ CRS report→ Basin-wide report
September	Report feedback, revised drafts
October	Final reports
October –	Technical assistance



Floodplain Management Assessment

DRAFT

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Floodplain Mapping

6 – Corporate limits not up to date

7 – Old data, should be restudied (primarily Grays Harbor County)

Recommendations

→ Pursue new maps as noted in the community reports

→ Regulate to the flood of record where $>$ BFE



Floodplain Development

Floodplain varies from 5% to 75% of the community

6 – Floodplains have significant open areas that could be developed

7 – Comprehensive plans do not address floodplain development

5 – Zoning ordinances do not have floodplain or low density uses

5 cities' urban growth areas are mostly out of floodplain



Floodplain Development

Recommendations: three part approach

1. Preserve areas as open space using public ownership, tax incentives, regulations, and other means
2. When plans and zoning ordinances are up for revision, add criteria to guide damage-prone development away from the floodplain
3. Set effective flood protection standards for new construction in the floodplain



Flood Hazard Area Regulations

A community's floodplain construction regulations can be found in its

- Flood hazard area ordinance
- Building code
- Critical areas ordinance
- Shoreline management regulations

12 – Standards differ in the different ordinances

6 – Regulations do not meet all current NFIP requirements

11 – Regulatory provisions above NFIP criteria

Chapter 14.38 - DEVELOPMENT IN FLOOD HAZARD AREAS

Sections:

[14.38.010 - Intent and purpose.](#)

[14.38.020 - Definitions.](#)

[14.38.030 - General provisions.](#)

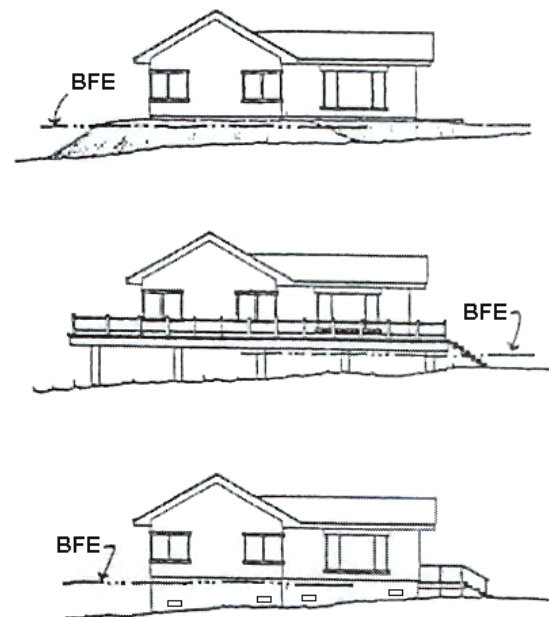
[14.38.040. - Administration.](#)

[14.38.050 - Standards.](#)

Flood Hazard Area Regulations

Basic NFIP standards:

- All “development” needs a permit
- Cannot obstruct flows
- New buildings protected to the BFE
- Existing buildings brought up to code if substantially improved or damaged



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Flood Hazard Area Regulations

Possible higher standards

- Freeboard
- Critical facilities protection
- Cumulative substantial damage/improvements
- Floodwater storage lost to filling must be compensated
- Storage of hazardous materials

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Flood Hazard Area Regulations

**PREMIUM AT
BASE FLOOD ELEVATION**

\$1,410/year
\$14,100/10 years



B F E

**PREMIUM AT 3 FEET ABOVE
BASE FLOOD ELEVATION**

\$427/year
\$4,270/10 years



B F E

Flood Hazard Area Regulations

Recommendations

→ Flood Authority:

- Sponsor a meeting to review appropriate standards
- Develop example ordinance language

→ Communities:

- Bring ordinances up to NFIP requirements
- Add appropriate higher standards
- Get all regulations to be consistent

Chapter 14.38 - DEVELOPMENT IN FLOOD HAZARD AREAS

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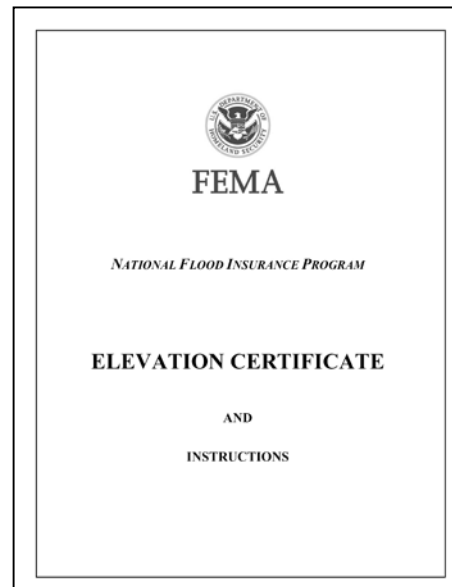
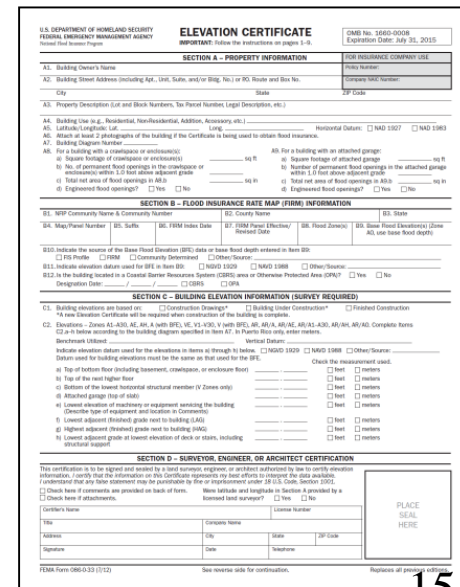
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Regulations Administration

- Regulatory staff ranges from 1 part time to 4 full time
- 2 Communities' staff have been to floodplain management training
- 2 Certified Floodplain Managers (CFM)
- Lowest BCEGS staffing, training scores: 16% - 70%

Recommendations

- Use procedures and checklists
- Maintain Elevation Certificates
- Go to training
- On call assistance

The image shows the back of the FEMA Elevation Certificate form, which is a detailed survey form. It is divided into several sections:

- SECTION A - PROPERTY INFORMATION:** Includes fields for Building Owner's Name, Building Street Address, City, State, ZIP Code, and Property Description.
- SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION:** Includes fields for WFP Community Name & Community Number, County Name, State, and Flood Zone.
- SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED):** Contains a checklist of items to be surveyed, such as building elevations, lowest adjacent grade, and structural members.
- SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION:** A section for the professional to certify the accuracy of the information provided.

 The form includes checkboxes for various options and a designated area for a signature and seal.

**Chehalis River Basin
Repetitive Flood Loss
Strategy**

August 18, 2014 DRAFT



French & Associates, LTD.
2601 Havelock Court
Steilacoom, WA 98388

Introduction

The problem:

Repetitive Loss Data

Repetitive Loss Areas

The tools:

Regulatory Tools

Flood Control Measures

Retrofitting

Public Information

Recommendations

Findings

- 55 repetitive flood loss areas in the Chehalis Basin
- In cities and rural areas
- 90% are subject to overbank flooding by a large river or creek
- Approximately 1,770 buildings
 - Most of the buildings are single family homes
 - Most are on crawlspace or elevated foundations
 - 82% are considered in “good” or “fair” condition
 - 55% of the areas already have some mitigated buildings
- These factors make elevation and retrofitting viable solutions

Recommendations for Communities

→ Use all the tools:

- Regulations
- Flood control
- Retrofitting
- Public information

→ Prepare repetitive loss area analyses

→ Maximize measures done by property owners

→ Coordinate with CRS activities

→ Coordinate with outside funding support

Recommendations for the Flood Authority

The Authority has \$1.5 million to address flooding losses

→ Develop a master strategy with basin-wide project priorities

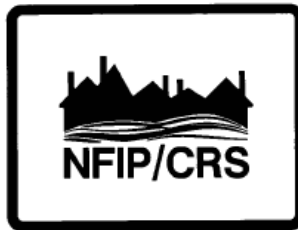
→ Use the following criteria:

- Priority to communities that have done area analyses
- Priority to communities and property owners ready to proceed
- Ensure benefits > costs
- No retrofitting support if area slated for flood control project
- Priority to areas that have not done any mitigation

→ Prepare model materials for communities to help their residents

→ Provide feedback to state and federal funding agencies

**Chehalis River Basin
Community Rating System
Program Review**



August 18, 2014 DRAFT



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- 100 Introduction
- 200 Procedures
- 300 Public Information Activities
- 400 Mapping and Regulations
- 500 Flood Damage Reduction
- 600 Flood Warning and Response
- 700 Community Classification
- Summary and Recommendations

Floodplain Management Assessment

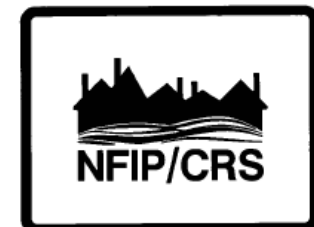
Costs

- Starting new activity
- Implementing the activity
- CRS documentation



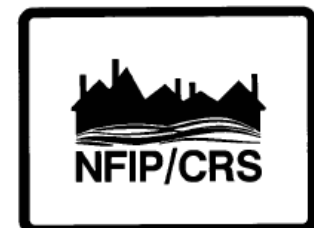
Benefits

- Direct dollar savings
- Better organized programs
- New programs, especially public information
- Reason to keep implementing good programs



Findings

- All communities can benefit from participating
 - Direct savings in flood insurance premiums
 - Better organized and managed programs
- All can participate (Napavine must be in NFIP > 1 year)
- All could be a Class 9 or better based on existing activities
- Will need a Community Assistance Visit
- Repetitive loss communities have additional work
- 4 communities in CRS can expect changes with the 2013 *Manual*



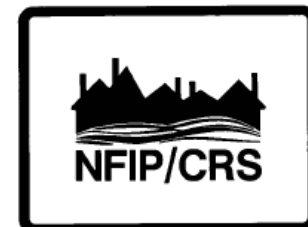
Recommendations

→ Flood Authority:

- Sponsor a meeting of interested officials
- Prepare model materials that can receive credit
- Help common or coordinated efforts

→ Communities:

- Learn more about the CRS
- Consider the non-quantifiable benefits
- Then decide



What is the Status of Floodplain Management?

- Not bad, but could be better
- Different levels of map quality
- Different regulatory standards
- 50% need a revision to meet Federal or State regulatory standards
- Other activities exceed national norms
- Different levels of expertise
- 50% have problems with administration
- All of the shortcomings can be fixed

Overall Recommendations

- Coordinate regulatory standards (internally and with the others)
- Improve regulatory standards
- Train staff
- Provide templates, models, examples
- Implement cooperative efforts
- Use public information to involve property owners
- Use all the tools to reduce repetitive losses
- Provide on call assistance
- Use Authority funds and the CRS to support these efforts