

## Focus on Flood Plain Management Assistance Program



Aerial view of Chehalis River floodplain, December 2007

### Assistance for Communities

As many Washington communities grow, flood plains have become desirable areas to develop. Flood plain management aims to reduce losses to life and property – while protecting the natural resources and functions of a flood plain. Communities can reduce risks with proper planning, regulations, and mitigation measures when they develop in flood plains. The Federal Emergency Management Agency (FEMA) and Washington State Department of Ecology (Ecology) can also provide assistance to these communities. The National Flood Insurance Program (NFIP) is one resource for communities with flood plain areas.

### Flood Plain Management

When a community builds in a flood plain, it should:

- Adopt local land use regulations, including construction practices, based on the traits of each flood plain.
- Take steps to put planning and mitigation measures in place to offset the possible adverse effects of developing in a flood plain.
- Raise awareness among property owners and the public to help them understand the potential risks of flood hazards – and what they can do to reduce the threat to human life, safety, property, and public health

### BACKGROUND

A flood plain is the flat or nearly flat land that borders a stream, river, or other water body and experiences occasional floods in typically dry areas. It includes:

- The floodway or stream channel and adjacent areas that carry higher velocity flows.
- The flood fringe or the area on either side of the floodway that floodwaters inundate, but generally flow more slowly.

Flood plains perform vital functions. They store flood waters, recharge aquifers and provide habitat for wide variety of fish and wildlife. Wet flood plain soils also can contain nutrients that provide rich, fertile farm land.

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## National Flood Insurance Program (NFIP)

Flooding can cause great damage to dwellings, buildings and other development in a flood plain. The National Flood Insurance Program (NFIP) run by FEMA helps lower the economic effects of flooding.

NFIP lowers flood-related disaster costs by shifting the burden from general taxpayers to the property owners and businesses in a flood plain. The federal program provides coverage for flood damages not usually available on the private market.

NFIP ties insurance rates and flood plain management activities to the “base flood elevation” in each unique flood plain. Some people call the base flood elevation the “100-year flood” elevation – a term that might seem a bit misleading. A 100-year flood means that the water in a flood plain has a 1 percent chance of reaching the base flood elevation in any given year. It does not mean that a 100-year flood only happens every 100 years.

Under NFIP, local communities must adopt building and land use regulations that meet minimum federal and state standards. While the federal standards are minimum standards that apply nationally, Washington urges local governments to adopt higher standards to address the flood risks unique to their community. To get NFIP coverage, communities must agree to follow federal flood plain development rules. For example:

- Federal rules don’t allow communities to build lower than the base flood elevation. The state encourages communities to place buildings in a flood plain at least one foot above the base flood elevation level.
- Federal rules allow any method, such as compact dirt pads, concrete, rock and sand, to raise structures in a flood plain to meet the base flood elevation level. The state encourages communities to use “flow through” construction such as posts and pilings to keep flood damage to a minimum, reduce environmental impacts, and maintain flood storage capacity.
- Federal rules place no restrictions on the type of facilities that communities can build in a flood plain, such as homes, businesses and important infrastructure. A U.S. Presidential executive order prohibits federally-funded infrastructure such as government buildings, hospitals, and electrical stations from being built in flood plains – unless there are no other viable options.

Local jurisdictions with better land use controls for flood plains get lower premiums on flood insurance

### December 2007 Chehalis River Flood photos



I-5 at Chamber Way exit in Centralia



Louisiana Avenue in Chehalis



I-5 at exit 81 in Centralia

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## State and Federal Roles in the NFIP

In addition to managing the NFIP, the federal government conducts engineering studies and publishes maps that identify the flood hazard areas in each community. In Washington the state coordinating agency for the NFIP is the Department of Ecology (Ecology). Ecology works with FEMA and local governments to address state concerns. The state provides technical assistance to local communities regarding flood plain management issues. The state also assists FEMA by evaluating community flood plain management programs, and reviewing and approving local ordinances. Property owners must purchase and maintain NFIP insurance for any structures in regulated flood hazard areas if they have any federally-backed loans or mortgages. Policy holders can buy coverage and make claims through any licensed insurance agent handling NFIP policies.

## Regulatory Measures

Local, state, and federal government develop regulations to address flood plain concerns. Communities face tough choices about developing in flood plains. In some cases, local topography, past development patterns, and other land use decisions can deeply affect how and if communities can develop in a flood plain. Local flood plain development rules can include flood damage prevention ordinances, critical areas ordinances, and building codes. Other local duties include:

- Requiring permits for all flood plain development.
- Ensuring specific measures are met regarding land alteration and construction.
- Obtaining elevation and “flood proofing” certification.
- Maintaining records
- Enforcing compliance



Home destroyed by floods in the Upper Cowlitz watershed in November 2006

## Hazard mitigation

To offset the physical changes to the environment that building and development can cause in a flood plain, communities should also adopt mitigation measures to reduce potential flood damages. They should tailor these to address the specific hazard and hydrogeologic conditions in a particular area. Flood hazard mitigation can include building levees, dikes, floodwalls, dams, bank armoring, and diversion channels. Other tools also might include buying flood-prone properties, or relocating and elevating structures. Communities should base these measures on in-depth planning including creating:

- **Comprehensive Flood Hazard Management Plans** to determine the need for flood hazard management work, assess alternatives, analyze environmental impacts, evaluate problems and proposed solutions, and prioritize recommendations through Ecology.
- **Community Hazard Mitigation Plans**, which FEMA and the state Department of Military’s Emergency Management Division (EMD) require for FEMA hazard mitigation funding.
- **Flood damage reduction project feasibility studies** that involve a specific engineering analysis of an identified local condition – and the benefits and impacts of the proposed measure.

Other projects can include:

- Emergency flood-related projects. Communities should limit these to flood-related work that requires immediate action to protect public health, safety, and property.
- Hazard mapping.
- Flood warning systems.
- Bank stabilization projects.
- Purchasing property.

## **Federal, State and Local Assistance**

FEMA and the U.S. Army Corps of Engineers (Corps) usually complete an in-depth analysis of known major flood risks after federally-declared flood disasters. FEMA and the Corps typically provide financial and technical resources, while also seeking varying levels of matching local funds. Ecology and EMD coordinate between federal and local agencies, provide technical consultation, match funding support for federal projects, and sometimes contribute significant funds for non-federal projects. Local governments provide data and site-specific expertise, labor for project implementation, and funding for the local share portion. Perhaps most importantly, local governments work to raise public awareness about flood plain hazards.

## **Public Awareness**

Raising public awareness about local flood risks in each community is crucial. Local governments must identify the awareness needs of their citizens and coordinate with state and federal authorities to develop programs tailored to their unique flood hazard issues. Local governments can use an array of education and outreach tools, including classes and workshops, printed materials, and public service announcements. At the national level, FEMA markets its NFIP using radio and television commercials. FEMA also produces a wealth of flood plain management materials for states, communities, schools, and interest groups. Find these at: [www.floodsmart.gov](http://www.floodsmart.gov). Ecology and EMD help distribute these materials and also develop their own materials. They also hold meetings and workshops to help local governments meet their communities' specific needs. You can find information about flood plain management and hazards at local libraries and schools.