



FLOODPLAIN MANAGEMENT PLAN ANNUAL PROGRESS REPORT

October 2007

The City of Burlington participates in the Community Rating System program offered by the Federal Emergency Management Agency for communities located in the floodplain. Participation in the program has resulted in a 20% reduction in flood insurance premiums in the City. This is a brief report to the City Council, the Mayor and the local media on the progress made in implementing the City of Burlington's Floodplain Management Plan over the past year.

In the fall of 2006, a Flood Insurance Survey was sent to every property owner located in the Skagit River Floodplain. This is part of the regional Natural Hazard Mitigation Plan program. It is critical to conduct consumer outreach as part of a "Get With The Program" marketing campaign to get floodplain properties insured. There were not enough respondents to make this a statistically significant survey, but here are a few points that stand out in the survey results:

- 24% of respondents indicate they do not have flood insurance - this suggests the need for more education and marketing
- When asked why consumers would choose not to purchase flood insurance, knowing that they are a risk of flooding, the two primary responses were 1) perceived lack of risk, and 2) cost for insurance
- 60% of respondents have homes built before the Flood Insurance Rate Maps were available for this region (1981), suggesting that there is a large proportion of higher risk, PreFIRM homes
- Comments made throughout the survey make it clear that the on-going public education program should cover, at the very least:
 1. How the National Flood Insurance Program works
 2. Rights and responsibilities of property owners and tenants before and after a flood
 3. How premiums are calculated and what homeowners can do to lower premiums
Ways to prevent repetitive flood damage
 4. Why dredging the Skagit River is not a viable solution to flooding
 5. What claimants may realistically expect benefits to cover

The major issue facing every property owner located in the Skagit River Floodplain is the Federal Emergency Management Agency's proposal to change the Flood Insurance Rate Maps and significantly raise the required elevation for new construction and substantial renovations. The overall federal map modernization project is simply a matter of updating topographic data and making digitized maps, but in the Skagit River corridor, there has been a Corps of Engineers General Investigation study underway for a number of years and that information is proposed to be included in the map modernization project.

Gages Slough property owners who are interested in having the Slough permanently reserved as Open Space now have a new opportunity to donate land without subdividing, and benefit in other areas as well. The procedure is just being put together to implement the new ordinance.

The current estimated timeline for the release of draft revised Flood Insurance Rate Maps with revised Base Flood Elevations is late November to early December. These dates are contingent on successful inclusion of the Samish River study, revisions to floodplain boundaries based on new topography provided by the County, and factoring in the USGS conclusion to officially revise the peak discharge.

There may be a significant adverse impact on Burlington from increases in Base Flood Elevations. An appeal will probably be filed because it is the position of Burlington and Mount Vernon that the Federal Emergency Management Agency is using incorrect assumptions about how much water will actually reach Burlington in a 100-year flood. The City of Burlington and Mount Vernon are preparing an independent proposal utilizing newly acquired technical data and will request this independent analysis be considered by the Federal Emergency Management Agency. It is the position of the Federal Emergency Management Agency that the cities proposal will only be considered through a request for a Letter of Map Revision or a formal appeal that provides data that show the proposed base flood elevations to be scientifically or technically incorrect.

Work is in process on updating the Burlington Natural Hazard Mitigation Plan to set the goal for 100-year Levee Certification around the Urban Areas and develop the detailed implementation work program. Release date for the Draft Environmental Impact Statement and updated Natural Hazard Mitigation Plan is currently estimated for the end of the year by Burlington.

The Federal Emergency Management Agency's position on establishing a regulatory floodway in the Skagit River delta area is that the issue is significant and that efforts at least comparable to the actions taken with adoption of the Flood Insurance Rate Maps in the mid-1980's are needed. With this in mind, Burlington would keep Gages Slough as a Special Flood Risk Zone and keep an area of 300 feet behind the levees designated as Special Flood Risk Zone. Burlington will also take action to protect overbank flow paths across farmland around the city through supporting farmland preservation efforts. The existing floodway path for the River is through the Nookachamps and Sterling area, and once the railroad is overtopped, the water moves north to the farmland.

In order to protect the long term public interest, the City is proceeding to amend the Natural Hazard Mitigation Plan to add the goal and implementation strategy of upgrading the levees and adding components as needed to certify the levees for one hundred year flood protection so that the levees will count in the computer modeling for determining the Base Flood Elevations in the Burlington urban area. This is expected to take a number of years to accomplish. Only 100-year Certified Levees qualify for credit in the mapping process.

Elevation Certificate Program

Citywide certified elevation benchmark information is available in the Building Department, to help keep costs of hiring a licensed engineer to complete the Elevation Certificate to a minimum. The new requirements include more information about the location of ductwork and other project elements that can affect the performance of a structure in a flood event and it is hoped that these additional requirements will further limit potential damage. Elevation certificates from new

construction for the year and the pre-FIRM certificates that have been issued are submitted annually to the Federal Emergency Management Agency in an automated format.

Property owners need to carefully check into flood insurance rates. Anyone purchasing a home in the floodplain should get elevation certificate information early in the process and check out flood insurance requirements with a reliable insurance agency BEFORE buying. Some insurance premiums have gone up because crawl spaces over 2 feet below grade may be reclassified as a basement. You may also want to determine that the insurance agent has received training on flood insurance, verify that their map determination is accurate by checking with the city yourself, and make sure that there is a complete and accurate disclosure of your location on all documents.

People who do not have mortgages are faced with the choice of getting flood insurance; mortgage holders are required to have it. In either case, the Elevation Certificate is your document that spells out the condition of your building with respect to potential flood damage.

Map Determinations

Because the City of Burlington is located mostly in the 100-year floodplain, flood map determinations are made on every project, and determinations are requested by phone and in person from a variety of people on a regular basis. Map determinations consist of identifying all relevant flood information about a parcel of land, including existing elevation, relationship to the 100-year flood elevation and required elevation for new construction, which is one foot above the 100-year flood elevation for the first occupied floor. Properties located in Special Flood Risk Zones are also identified with additional requirements for break-away walls, and a prohibition on further subdivision.

There is an annual mailing to real estate agents, lenders and insurance agents, completed each year in the fall, reminding those in the business that there are resources available to them in the City, and of their obligation to disclose flood hazard information to their clients. Of particular importance is access to the Flood Maps and Elevation Certificate information. The City maintains copies of all FIRM maps in Skagit County, facilitating access to this public information. A log of general inquiries is kept, and every permit application is reviewed for consistency with FIRM map elevation information.

Flood Hazard Information Bulletins and other Public Outreach

Burlington is located almost 100% in the 100 year floodplain and it is one of the City's tasks to keep its citizens informed about the special conditions and responsibilities of living here. Each year, in the spring and fall, a new edition of the Flood Hazard Information Bulletin is mailed to the entire community of Burlington, in hopes that people will plan ahead for possible emergencies, building flood hazard protection into each home, and keeping an up-to-date emergency preparedness kit on hand.

Burlington has a Flood Evacuation Plan in place, ready to implement for the flood season, if it is needed. Copies are available at the Burlington Permit Center at 833 South Spruce Street. Permanent signage is installed on the evacuation routes to heighten public awareness on a daily basis. With this information, family emergency preparedness plans can now include the route to evacuate, and plans can be made to set up a meeting location for household members not on site. The community is very aware of the serious flood hazard in Burlington, the need to keep an Emergency Preparedness Kit on hand and to keep the entire family up to date with a family emergency plan. Every member of the community has the opportunity to be prepared for an emergency.

It is through the public outreach tools that the public is made aware of progress on flood hazard mitigation projects, the elevation certificate program, the materials available in the library, and some of the natural and beneficial functions of floodplains. Each edition of the Flood Bulletin is updated to provide the community with the latest status information on current issues, projects and programs. This is also available on line at the City of Burlington website, www.ci.burlington.wa.us.

There is also a flood hazard mitigation topic on each Neighborhood Planning Committee Agenda. The Neighborhood Planning Committees meet each spring and fall, and provide an informal opportunity to discuss issues and make recommendations to the city. This fall will include a status report on the federal map revision program, discussion of the levee certification program and the Gages Slough restoration project. Following implementation of regular water quality monitoring, and adoption of the update to the Surface Water Management Plan in 2005, the focus is now shifting to identifying specific opportunities for restoration projects in the field. Another element of the program is designing and implementing a long term maintenance program for the publicly owned property in the Gages Slough corridor.

The city continues to coordinate with Skagit County and Dike District #12 on the plans to set the dike back through the south side of Burlington and to implement the connected open space plan and urban wildlife habitat corridor through that area, along three bridge corridor from the Railroad Bridge to the end of Gages Slough near Pulver Road. Funding to complete environmental review and move forward with some additional land acquisition and design work is in place through a small federal appropriation.

Public disclosure at time of sale is the responsibility of Realtors

Local Realtors are very cooperative because of the significance of location in the floodplain in today's real estate transactions, particularly in light of the mandatory flood insurance requirement. State legislation on flood hazard disclosure is supported by the City.

However, because of the issues that have been identified through research on specific properties, it is strongly recommended that the seller and the buyer also do their own research through the Burlington Permit Center. There appear to be communication gaps and this may prevent problems for purchasers in the future.

Flood Protection Library available in City Library

The Library collection is up to date and it includes the Skagit County Natural Hazard Mitigation Plan that was formally approved in late 2003, and many publications from the Federal Emergency Management Agency on a wide variety of flood hazard mitigation topics. A comprehensive supply of all FEMA and local documents is reflected in the Library collection, ranging from the original flood studies conducted to establish the FEMA mapping system to the most current data.

Technical Information is available at Permit Center

The most current technical reference material is available to assist project proponents in developing the design details for flood proofing and structural and non-structural measures necessary to fully comply with the flood plain regulations. Technical information for flood hazard mitigation related to construction is necessary with every building permit and pre-application conference for projects located in Burlington. Information on the best ways to floodproof, how to handle mechanical equipment and ductwork, and many other topics is available. The latest technical bulletins on handling crawl spaces and basements and the current elevation certificate forms are available at the Permit Center. The City of Burlington has adopted the 2006 International Codes for construction standards, as part of a statewide mandate.

Gages Slough and the Skagit River Shorelines

The Gages Slough Management Plan is being updated to identify opportunities for restoration projects along its course through Burlington, as the next step in implementing the surface water quality plan. Regular water quality monitoring in Gages Slough has identified key water quality issues and review of the data by the Department of Ecology indicates that the Slough, while it is polluted in some areas, is not as bad as previously thought. With a long term plan in place for Gages Slough upgrade and maintenance, it is feasible to clean up the water quality. Some ideas include innovative concepts such as constructed wetlands next to the Slough to clean water using natural means. This will in turn mitigate the impact of water quality on listed species under the Endangered Species Act in the Skagit River, which is the outfall of Gages Slough.

The focus on public acquisition of Gage Slough continues with a new program that provides for donation of land for open space without subdivision. There are other benefits for land donation and it is hoped that this program will create new opportunities for restoration. The construction of the new bridge over Gages Slough included a major wetland restoration project completed in 2005 to improve habitat quality and wetland functions. The project is very successful so far, based on the first year's report. Maintenance and monitoring of the new plantings will continue for a total of ten years, and this project will truly demonstrate the ability to control invasive species such as reed canary grass.

The Gages Slough Management Plan is a long range program that focuses on educating property owners and businesses to use Best Management Practices to improve water quality. There is also a major component of the project that involves cleaning up existing road runoff, over a long

period of time. The Public Works department is working with other local governments in the area to receive training and implement new best management practices to mitigate the impact of road maintenance work on endangered species. Regulatory approaches are combined with continued public education and positive encouragement, to maximize the effectiveness of the program.

Drainage Utility update; Surface water management projects proceed

Planning is underway for an innovative surface water quality treatment program, utilizing the natural functions of Gages Slough as the starting point for “green infrastructure”, combining engineering techniques with native plantings to clean the water. The North Burlington Boulevard transportation project is linked with a new regional stormwater system for the north end that is under construction in 2007-2008. The entire system is designed to meet the rigorous standards of the Department of Ecology for storm water quantity and quality.

The annual inspection of the detention ponds has proven very effective. Property owners are very cooperative in cleaning up problems. The program includes inspection of manholes and pipes as well as detention/retention ponds. Enforcement action on illegal use of storm drains is handled on a complaint basis, through the Code Enforcement Officer. Installation of “No Dumping” signs has provided an additional code enforcement tool, eliminating that famous excuse of ignorance. The Stormwater Management program in Burlington is expanding because of the rapid pace of growth and development in the community. The focus on acquiring the Gages Slough corridor from Anacortes Street to the Skagit River continues, for the purpose of improving water quality, maintenance and flood hazard mitigation.

Mapping features an automated data base and the Flood Evacuation Plan

The Geographic Information System is continuing to expand and provide additional useful applications for individual parcels and the city as a whole. A new aerial flight was completed in the spring of 2004, providing a much needed update of the topographic maps that are now in Autocad along with a number of other layers, such as assessor’s data, parcel layout, right of way and utilities. Parcel data includes elevation information in the database with more detail to assist property owners. Surveyed elevation benchmarks are located throughout Burlington and that information is available at the Building and Planning Departments.

City Flood Planning is part of Skagit County Natural Hazards Mitigation Plan

The Federal Disaster Mitigation Act of 2000 requires development of a revised Floodplain Management Plan to include all natural hazards. The multi-jurisdictional all natural hazard mitigation plan was completed on schedule in 2003 and approved by the State Department of Emergency Management and the Federal Emergency Management Agency. This plan is a prerequisite for access to future Hazard Mitigation Grant funds that are critical to the area following a disaster. The Skagit County Natural Hazard Mitigation Plan includes the Burlington Floodplain Management Plan and the Flood Emergency Plan.

The Flood Emergency Plan is operational and is tested annually. The citywide fire alarm is tested monthly; it is used in the evacuation procedure in the event of a flood. Formalizing the Flood Evacuation Plan is a major step forward for the community. The fall exercise to test the overall Flood Emergency Plan is scheduled for Flood Awareness Week, and the local flood committee meets as needed to fine-tune the new Evacuation Plan to insure full preparedness for the flood season.

Dike District #12 maintains the best dike system in Skagit County

Substantial improvements are continuing to the dike system, with major upgrades at the eastern end of the dike system, and west at the river bend area where the Anacortes Water Treatment Plant is located. The dikes have been widened from 14 feet to 35 feet at the top and the back-slope increased from a 2:1 slope to a 6-8:1 slope. This will allow for overtopping of the dikes in a major flood event, with a smooth, slow flow. Evacuation would occur well in advance of that event.

A major focus for the Dike District and the City of Burlington is the acquisition of land that is located directly adjacent to the dikes. The interim controls establishing the new dike setback line are continued each year, since planning is not yet complete for the project to acquire the land located within the designated dike setback area in the three-bridge corridor along the south edge of the City.

Active work to upgrade the Levee system began in 1996 and continues today. Because of the grave consequences of the proposal by the Federal Emergency Management Agency to increase the theoretical 100-year base flood elevations in Burlington, the Dike District is now working to upgrade the levee system to become Certified Levees that provide 100-year flood protection. The goal is 100-year levees in the urban area, and 80-year levees in the rural area, to preclude encouraging development in rural areas while protecting the City of Burlington. Overbank flow paths will be preserved to allow a place for floodwater to go. The result will also protect the community against future changes in federal rules that appear to be based on poor data, incorrect assumptions and political agendas that are unpredictable. While this will take time, it appears to be the only path that protects the public interest over the long term.

Conclusion

There are several significant cornerstones in the Burlington Floodplain Management Plan, including Elevation Certificates, on-going Public Education and Community Involvement, long range planning for the future of Gages Slough and the Skagit River Shorelines, and strong emergency management procedures including preparing for emergencies in advance and educating the community on evacuation routes. This is an on-going program that is vital to minimizing future losses in the event of a major flood. The Burlington Natural Hazard Mitigation Plan is being updated to add 100-year Levee Certification with a continued emphasis on hazard mitigation actions with a broad spectrum of public involvement that will link the City's efforts very closely with those of other jurisdictions.