

**SULTAN PLANNING BOARD
SULTAN CITY COUNCIL
JOINT MEETING
AGENDA ITEM COVER SHEET**

ITEM NO: D-2
DATE: November 18, 2010
SUBJECT: FEMA Floodplain Re-mapping
CONTACT PERSON: Robert Martin, Community Development Director



ISSUE: Update and discussion on the Federal Emergency Management Agency (FEMA) update of the Floodplain mapping of Skykomish and Sultan Rivers.

RECOMMENDATION:

Staff recommends that the Council review and ask questions as deemed appropriate to develop an understanding of the FEMA National Flood Insurance Program and Digital Flood Insurance Rate Map (DFIRM) project.

BACKGROUND:

Sultan Participates in the National Flood Insurance Program (NFIP)

Sultan is a "participating community" in the NFIP. This allows residents to purchase insurance against flood damage. The Federal program is the only insurance available to cover the cost of flood damage.

The City has a NFIP ranking of 7 out of 10 (1 is low, 10 is high, and basically no one gets a 10). The higher the community's ranking, the less a comparable premium costs community residents. Maintaining a high ranking is the best, and virtually the only thing that the City can do to benefit property owners on an ongoing basis. While property owners would often prefer not to pay flood insurance premiums, an uninsured flood loss is a most unexpected and devastating situation.

Very occasionally, the City is presented with another opportunity to benefit its citizens in their relationship with the NFIP. This opportunity has presented itself with the current FEMA project of re-mapping the flood hazards of the Skykomish River and Sultan River watersheds. The City was given the opportunity to be involved in the process that chiefly involves FEMA and Snohomish County. As explained in the **Changes to Sultan NFIP & DFIRM** section below, the community has benefitted significantly from the input opportunity that was given to the city.

Mapping Activity:

FEMA is charged by the US Congress with managing the National Flood Insurance Program (NFIP). Part of that mandate is to keep current maps of the floodplains of the nation's river systems and periodically adjust the boundaries and severity ratings of flood-prone areas.

The river systems of Snohomish County have been the focus of an updated mapping effort for the last two years. The new maps are intended to more accurately define the areas subject to flooding, to better define the type of hazard presented by flooding (moving water, ponding, surface runoff) and to take into account new environmental factors that contribute to flood potential (more impervious surface development, increased frequency of high volume storms).

One of the improvements to accuracy of the new maps is use of LIDAR (Light Detection and Ranging). LIDAR is a system that surveys the elevation of the earth's surface with a lasers mounted in aircraft. When compared to previous survey techniques, LIDAR gives a much more accurate elevation measurement and a denser network of measurement points that are used by computer systems to draw the flood maps.

The new mapping system is referred to as DFIRM (Digital Flood Insurance Maps). The Digital in DFIRM means that the whole county is on an integrated Geographic Information System (GIS) data base. Any part of the county can be called up in the computers to accommodate the needs of developers and property owners as well as watershed, transportation, environmental, land use planners.

Subject to the public process described below, the new DFIRM mapping will be adopted and any new designations will become effective in the first half of 2011. The City will be adopting the map components that apply inside the City Limits as part of the overall adoption process for Snohomish County.

Staff, Planning Board, and Council will need to be responsive to questions or able to make referrals to the appropriate level as the community becomes involved in the process leading up to adoption.

Public Review:

Federal law requires that the draft updated maps be available for review by the public prior to adoption at the Federal, State, County, and local levels. FEMA and Snohomish County are in the midst of this public review process at this time. City staff has had the opportunity to review the initial drafts of the DFIRM maps and paper copies are available for public viewing at City Hall.

On November 9, 2010, FEMA and Snohomish County sponsored an evening public meeting in Monroe to present the program to the communities of the Skykomish Valley. (City of Sultan staff had previously arranged for this meeting, one of two planned for the County, to be in Sultan, but that arrangement was overlooked at the last minute.)

About 200 people attended the Monroe meeting where they were able to tell GIS operators where their property was and receive a paper copy of the map as specifically applicable to their property. Sultan was the only municipality that sponsored and staffed a table at this meeting to help give specific information to its residents on city involvement in the NFIP program. Fifteen Sultan residents signed the attendance sheet at the Sultan table.

Despite a relatively good attendance of Sultan residents, city staff continues to be concerned that Sultan has not gotten sufficient information on this important project. Staff has requested support from Snohomish County staff to bring neighborhood level meetings to the community. County staff has agreed in principle to participate in this effort.

Changes to Sultan NFIP & DFIRM:

The City has not yet received detailed parcel-level maps of the proposed changes, but the large scale maps that have been provided to the City allow some general observations to be made. Overall, the changes to the flood mapping in the City of Sultan has a positive effect on the community. The apparent changes are listed as follows:

1. As many as 200 residential units in the residential area north-east of downtown, the middle school, and the south portion of the high school campus are being changed from 100-year floodplain designation to 500-year (less than 1-foot inundation) category. This

means that the properties will be able to opt-out of the flood insurance program and stop paying insurance premiums if they so choose.

This change resulted from city/county interaction leading to acceptance of the premise that flooding in areas approximating First St. to 8th St. north of Date St. was the result of surface runoff from higher elevations above the downtown area, and not from the Sultan or Skykomish Rivers.

Based on staff observations of county maps, this is the largest positive change in flood designation in Snohomish County. Detailed mapping of the specific properties involved in this change is forthcoming, but not available yet.

2. The type of flooding experienced in the downtown area of Sultan is changed to acknowledge how this flood water is generated. The level of the flood water is not changed.

The previous designation indicated that the water flows through downtown from the Sultan River into the Skykomish River. This would mean that the area is subject to inundation by flood water, and subject to the pressure of flowing water which is a serious added effect of flood water that is moving through an area.

The new designation in most of the downtown area downgrades the severity of the flooding problem by acknowledging that the water in the downtown area is the result of "ponding". This means that the water in the Sultan River is backed up and cannot exit the area when the Skykomish River is at flood stage. The effect is exactly the same as that experienced by a river that flows directly to the ocean. When the ocean tide is high, the river has nowhere to go. It backs up in its channel until the tide goes out.

"Ponded" water gets the buildings in downtown just as wet, but it does not exert lateral pressure that could further weaken and damage the structures. This categorization may result in a minimal drop of the NFIP risk level for those paying flood insurance premiums.

Staff appreciates that the county staff and the FEMA staff worked on this issue and accommodated the realities of the situation.

3. Sultan River floodway and floodplain along Trout Farm Road in the Sultan Urban Growth Area appears to have increases somewhat in depth and lateral area. A very few residents, if any, may be added to the NFIP due to this change.

This change results from environmental factors (projections of increased short-period heavy rainfall) and assessment of the legal operating requirements of the Snohomish PUD's Culmback Dam. Residents and city staff tried to make the case that the reservoir behind the dam provides meaningful flood protection by storing incoming surges from high in the watershed.

FEMA agreed that the reservoir has the capacity, and has, in fact, acted as a flood mitigation facility in the past. Nevertheless, the Federal Energy Regulatory Commission (FERC) license issued to PUD does not require PUD to operate the facility for flood control. It is only licensed for power production. PUD is not legally authorized, and could be in violation of its electrical generation responsibilities if it operated the facility to enhance flood control at the expense of its power generation potential.

For this reason, the storage capacity of Culmback Dam was not included in the calculations of flood level in the Sultan River and the flooding potential was increased somewhat on the DFIRM maps.

4. Change of "Datum" (how the flood elevation is measured) will be an issue for the residents of Sultan to understand, as it will be for all of the county, state, and nation. The previous maps established flood levels based on an average sea level calculated by the National Geodetic Vertical Datum (NGVD) established in 1929. The new map system is based on the North American Vertical Datum (NAVD) of 1988.

This change results in a new number for the same actual flood elevation. The new Datum results in a flood level that is expressed as being 3.6 feet deeper than the old number. All that this means is that the average sea level elevation calculated in the NAVD (1988) is 3.6 feet lower than the sea level calculated by the NGVD (1929). The change is comparable to changing from the English system of measurement to the metric system. One inch equals 2.54 centimeters, but they measure the same distance.

Residents will see a new flood elevation of 118.6 feet (for example) at the same location that the old maps indicate 115.0 feet. It is going to be difficult to communicate that this is just a different way to measure the same elevation, and that the new maps have not increased their flood level by another 3.6 feet.

Issues to be Resolved:

1. As mentioned above, Sultan has experienced a lot of change in this project. It is important to address the community's need to understand these changes. Most of the changes are positive, but that cannot be understood by the average resident without meaningful opportunity to become educated about the system.

Staff will continue to work with the county to bring small-group informational meetings to the community.

2. The NFIP program includes a process whereby individual property owners can do a highly accurate survey of their property to document that they are above the flood elevation that applies to their area. If FEMA accepts the results of the survey the property owner is issued a Letter of Map Amendment (LOMA).

On behalf of our residents, the City needs to verify with the county and FEMA that existing LOMA's that are valid under the new mapping system are carried forward and don't need to be re-surveyed. The NFIP rules indicate that this is the case, but we have not received specific verification of the issue for the City of Sultan.

The second issue related to this topic is anyone who may be newly included in a flood designation. These residents need to be made aware of the process and receive some guidance as to whether they may benefit from pursuing an application for a LOMA. This need can be met to some degree by the neighborhood meetings discussed above. Individual mailings may also be appropriate to inform residents of changes and the potential costs and benefits of the LOMA process.

3. The availability of appeals to the process needs to be understood so that residents do not have a mis-impression about the "top down" nature of this system. In the land use world, people are generally accustomed to filing an appeal because they do not agree with a decision. Their reason for appealing is that they "don't agree", and their burden of proof is that there is another way to look at the facts.

In the flood mapping system, appeals cannot be filed or supported on the basis that you "don't agree or believe in" the system. The basis for an appeal to be excluded from the flood designation assigned by the DFIRM is that you have better science and physical evidence than that possessed by FEMA. Your scientific evidence needs to be developed by hydraulic engineering and watershed modeling that is sufficient to document a mistaken set of environmental assumptions and hydraulic calculations by FEMA. The appellant essentially needs to do the same level of scientific analysis of the Skykomish River watershed and come to a different conclusion supported by the evidence. The expense of this burden of proof is, needless to say, out of the reach of the City of Sultan, let alone the typical home owner.

RECOMMENDATION:

Staff recommends that the Council review and ask questions as deemed appropriate to develop an understanding of the FEMA National Flood Insurance Program and Digital Flood Insurance Mapping project.

ATTACHMENT:

Attachment A: Copy of FEMA hand-out on basics of the NFIP

Who needs flood insurance? Everyone!

And almost everyone in a participating community of the National Flood Insurance Program (NFIP) can buy flood insurance. Nationwide, more than 20,000 communities have joined the Program. In some instances, people have been told that they cannot buy flood insurance because of where they live. To clear up this and other misconceptions about National Flood Insurance, the NFIP has compiled a list of common myths about the Program, and the real facts behind them, to give you the full story about this valuable protection.

MYTH: You can't buy flood insurance if you are located in a high-flood-risk area.

FACT: You can buy National Flood Insurance no matter where you live if your community participates in the NFIP, except in Coastal Barrier Resources System (CBRS) areas. The Program was created in 1968 to make federally backed flood insurance available to property owners who live in eligible communities. Flood insurance was then virtually unavailable from the private insurance industry. The Flood Disaster Protection Act of 1973, as amended, requires federally regulated lending institutions to make sure that mortgage loans secured by buildings in high-flood-risk areas are protected by flood insurance.

Lenders should notify borrowers, prior to closing, that their property is located in a high-flood-risk area and that National Flood Insurance is required.

MYTH: You can't buy flood insurance immediately before or during a flood.

FACT: You can purchase National Flood Insurance at any time. There is usually a 30-day waiting period after premium payment before the policy is effective, with the following exceptions:

1. If the initial purchase of flood insurance is in connection with the making, increasing, extending, or renewing of a loan, there is no waiting period. Coverage becomes effective at the time of the loan, provided application and payment of premium is made at or prior to loan closing.
2. If the initial purchase of flood insurance is made during the 13-month period following the effective date of a revised flood map for a community, there is a 1-day waiting period. This applies only where the Flood Insurance Rate Map (FIRM) is revised to show the building to be in a Special Flood Hazard Area (SFHA) when it had not been in an SFHA.

The policy does not cover a "loss in progress," defined by the NFIP as a loss occurring as of 12:01 a.m. on the first day of the policy term. In addition, you cannot increase the amount of insurance coverage you have during a loss in progress.



FEMA

ATTACHMENT A

MYTH: Homeowners insurance policies cover flooding.

FACT: Unfortunately, many home and business owners do not find out until it is too late that their homeowners and business multiperil policies do not cover flooding. The NFIP offers a separate policy that protects the single most important financial asset, which for most people is their home or business. Homeowners can include contents coverage in their NFIP policy. Residential and commercial renters can purchase contents coverage. Business owners can purchase flood insurance coverage for their buildings and contents/inventory and, by doing so, protect their livelihood.

MYTH: Flood insurance is only available for homeowners.

FACT: Most people who live in NFIP participating communities, including renters and condo unit owners, are eligible to purchase federally backed flood insurance. A maximum of \$250,000 of building coverage is available for single-family residential buildings; \$250,000 per unit for residential condominiums. The limit for contents coverage on all residential buildings is \$100,000, which is also available to renters.

Commercial structures can be insured to a limit of \$500,000 for the building and \$500,000 for the contents. The maximum insurance limit may not exceed the insurable value of the property.

MYTH: You can't buy flood insurance if your property has been flooded.

FACT: You are still eligible to purchase flood insurance after your home, apartment, or business has been flooded, provided that your community is participating in the NFIP.

MYTH: Only residents of high-flood-risk areas need to insure their property.

FACT: All areas are susceptible to flooding, although to varying degrees. If you live in a low-to-moderate flood risk area, it is advisable to have flood insurance. Approximately 25 percent of the NFIP's claims come from outside high-flood-risk areas. Residential and commercial property owners located in low-to-moderate risk areas should ask their agents if they are eligible for the Preferred Risk Policy, which provides very inexpensive flood insurance protection.

MYTH: National Flood Insurance can only be purchased through the NFIP directly.

FACT: NFIP flood insurance is sold through private insurance companies and agents, and is backed by the federal government.

MYTH: The NFIP does not offer any type of basement coverage.

FACT: Yes it does. The NFIP defines a basement as any area of a building with a floor that is below ground level on all sides. While flood insurance does not cover basement improvements (such as finished walls, floors, or ceilings), or personal belongings kept in a basement (such as furniture and other contents), it does cover structural elements and essential equipment.

The following items are covered under building coverage, as long as they are connected to a power source, if required, and installed in their functioning location:

- Sump pumps
- Well water tanks and pumps, cisterns, and the water in them
- Oil tanks and the oil in them, natural gas tanks and the gas in them
- Pumps and/or tanks used in conjunction with solar energy

- Furnaces, water heaters, air conditioners, and heat pumps
- Electrical junction and circuit breaker boxes and required utility connections
- Foundation elements
- Stairways, staircases, elevators, and dumb-waiters
- Unpainted drywall walls and ceilings, including nonflammable insulation
- Cleanup

The following items are covered under contents coverage:

- Clothes washers and dryers
- Food freezers and the food in them

The NFIP recommends both building and contents coverage for the broadest protection.

MYTH: The NFIP encourages coastal development.

FACT: One of the NFIP's primary objectives is to guide development away from high-flood-risk areas. NFIP regulations minimize the impact of structures that are built in SFHAs by requiring them not to cause obstructions to the natural flow of floodwaters. Also, as a condition of community participation in the NFIP, those structures built within SFHAs must adhere to strict floodplain management regulations enforced by the community.

In addition, the Coastal Barrier Resources Act (CBRA) of 1982 relies on the NFIP to discourage building in fragile coastal areas by prohibiting the sale of flood insurance in designated CBRA areas. While the NFIP does not prohibit property owners from building in these areas, any Federal financial assistance, including federally backed flood insurance, is prohibited. However, the CBRA does not prohibit privately financed development or insurance.

MYTH: Federal disaster assistance will pay for flood damage.

FACT: Before a community is eligible for disaster assistance, it must be declared a federal disaster area. Federal disaster assistance declarations are issued in less than 50 percent of flooding events. The premium for an NFIP policy, averaging a little over \$500 a year, can be less expensive than the monthly payments on a federal disaster loan.

Furthermore, if you are uninsured and receive federal disaster assistance after a flood, you must purchase flood insurance to remain eligible for future disaster relief.

MYTH: The NFIP does not cover flooding resulting from hurricanes or the overflow of rivers or tidal waters.

FACT: The NFIP defines covered flooding as a general and temporary condition during which the surface of normally dry land is partially or completely inundated. Two properties in the area or two or more acres must be affected. Flooding can be caused by:

- Overflow of inland or tidal waters, or
- Unusual and rapid accumulation or runoff of surface waters from any source, such as heavy rainfall, or
- Mudflow, i.e., a river of liquid and flowing mud on the surfaces of normally dry land areas, or
- Collapse or subsidence of land along the shore of a lake or other body of water, resulting from erosion or the effect of waves, or water currents exceeding normal, cyclical levels.

For more information about the NFIP and flood insurance, call 1-800-427-4661, or contact your insurance company or agent.

For an agent referral, call 1-888-435-6637 • TDD 1-800-427-5593

<http://www.fema.gov/business/nfip> • <http://www.floodsmart.gov>