



# Washoe County

## COMMUNITY SERVICES DEPARTMENT

### *Engineering and Capital Projects*

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July 29, 2014

Dear Washoe County Resident:

This letter is being sent to you for informational purposes only because our records show that your property is very likely located in the floodplain. The County is working on ways to improve and increase its circulation of and accessibility to information that pertains to the floodplain, in an effort to better educate and assist its citizens about developing and living in the floodplain. Please take the time to read the information below and if you have further questions, or would like additional information, a variety of contact information has been supplied at the end of this document.

### **Overview**

The Truckee River is incorporated throughout most of the Truckee Meadows in Washoe County along with several smaller streams and tributaries that are susceptible to annual flooding events. The flooding events pose threats to life and safety and have caused significant property damage. Washoe County has close to 105,000 acres of floodplain and nearly 4,400 individual parcels that are partially or entirely located within the floodplain. Snowmelt from the Sierra Nevada mountain range contributes substantially to flooding, as well as ongoing development that has displaced natural areas that have historically functioned as flood storage.

### **Recent Flooding Events**

The Truckee River has had one major flood event per decade, on average. Fourteen major floods have occurred in the Truckee Meadows since 1862 when records were first kept. Our region has experienced major flood events every decade since the 1950s.

While some types of seasonal flood-related damage occurs every year, the flooding events of 1986, 1997, and 2005 represent the most recent significant flooding. In 1997, prolonged precipitation accompanied by an early snowmelt, caused by a warm-weather trend known as the "Pineapple Express" caused the Truckee River, Steamboat Creek, Boynton Slough, North Truckee Drain and several other tributaries throughout the Truckee Meadows to rise above 100-year flood levels, causing flooding in both rural and urban areas. Over 7,000 acres of land were flooded and damages were estimated to be over 700 million throughout the Truckee Meadows region and over 1 billion over six counties. Washoe County estimated that the flood of 1997 affected over one-half of the overall County population.

### **Causes of Flooding**

Flooding occurs when climate (or weather patterns), geology and hydrology combine to create

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conditions where river and stream waters flow outside of their normal course and “overspill” beyond their banks. In Washoe County, the combination of these factors create chronic seasonal flooding conditions.

Flooding is most common December through March in Washoe County when storms encompassed with warmer temperatures and heavy rainfall come over the snow-packed Sierra Nevada mountains. Larger floods result from the heavier rains that continue over the course of several days, incorporated with snowmelt at a time when the soil is near saturation from previous precipitation.

Riverine flooding and urban flooding are the two types of flooding that primarily affect Washoe County. Riverine flooding is the overbank flooding of rivers and streams, the natural process of which adds sediments and nutrients to fertile floodplain areas. Urban flooding results from the conversion of land from fields or vacant land to buildings, parking lots and roads, though which the land loses its ability to absorb rainfall and the water runoff from the storms causes increased water in the low-lying areas.

## **Flood Insurance**

Washoe County participates in the National Flood Insurance Program (NFIP) that makes available federally backed flood insurance for all structures, whether or not they are located within the floodplain. NFIP has claims that are filed by properties located outside the 100-year floodplain, also known as the Special Flood Hazard Area (SFHA). Following the purchase of flood insurance, NFIP imposes a 30-day waiting period, so residents should purchase insurance before the onset of the rainy season to insure coverage during the flooding season.

Membership within NFIP (and thus the availability of flood insurance to County residents) requires the County to manage its floodplain in ways that meet or exceed standards set by FEMA. NFIP insures building with two types of coverage: structural and contents. Structural coverage includes walls, floors, insulation, furnace and other items permanently attached to the structure. Contents coverage may be purchased separately to cover the contents of an insurable building. Flood insurance also pays a portion of the costs of actions taken to prevent flood damage.

Since July 1, 1997, all NFIP policies include Increased Cost of Compliance coverage that assists with bringing structures into compliance with current building standards, such as elevating structures 1 foot or more above the height of the 100-year flood. **The limit of this coverage is \$30,000.**

Federal financial assistance requires the purchase of flood insurance for buildings located within the SFHA—a requirement that affects nearly all mortgages financed through commercial lending institutions. This mandatory requirement stipulates that structural coverage be purchased equal to the amount of the loan, or other financial assistance, or for the maximum amount available, which is currently \$250,000 for a single family residence. While the mandatory flood insurance purchase requirement has been in effect for many years, not all lending institutions required flood insurance in the past. Today, however, most institutions are now requiring the flood insurance purchase, and some are reviewing all mortgage loans to determine whether flood insurance is required and should have been required in the past. Upon refinancing a loan, nearly all lending institutions will enforce the flood insurance requirement.

It is the lender's responsibility to check the Flood Insurance Rate Map (FIRM) to determine whether a structure is within the SFHA.

### **Flood plain Operations**

The mandatory flood insurance purchase requirement does not apply to loans or financial assistance for items that are not eligible for flood insurance coverage, such as vehicles, business expenses, landscaping and vacant lots. The requirement also does not apply to loans for structures not located in a SFHA, even though a portion of the lot may be within a SFHA. Persons located within SFHA's who received disaster assistance after Sept. 23, 1994 for flood losses to real or personal property must purchase and maintain flood insurance coverage, otherwise future disaster assistance will be denied.

Maintaining the flow capacity in streams that cross County properties requires cooperation and assistance to prevent flooding and bank erosion. Following are some suggestions and information for understanding the ways that floodplains function and how the County regulates the floodplain in order to protect property and lives, while affording County citizens the ability to obtain floodplain insurance.

***Do not dump or throw anything into ditches or streams:*** A plugged channel cannot carry water, and when it rains, the excess water must go somewhere. Trash and vegetation dumped into a stream degrades water quality of both the stream itself and its receiving waters, and every piece of trash contributes to flooding. The County has adopted and enforces regulations that prohibit the illegal dumping of material, including material dumped into ditches, streams of other drainage ways. Please report any observations of the dumping of debris or other objects into streams, drainage ways, or rivers to Washoe County Public Works Department at (775) 328-2040.

***Remove debris, trash, loose branches and vegetation:*** Keep banks clear of debris to help maintain an unobstructed flow of water in stream channels. Do not remove vegetation that is actively growing on a stream bank. Streamside vegetation is tightly regulated by local, state and federal regulations. Before undertaking any removal of streamside vegetation, contact the Washoe County Public Works Department at (775) 328-2040 and the Corp of Engineers at (775) 784-5307. Please report any observations of the clearing of vegetation or trees on stream banks to the Washoe County Public Works Department.

***Obtain a grading permit and/or building permit, if required:*** To minimize damage to structures during flood events, the County requires all new construction in the floodplain to be anchored against movement by floodwaters, resistant to flood forces, constructed with flood-resistant materials and flood-proofed or elevated so that the first floor of living space, as well as all mechanical services, is at least 1 foot above the elevation of the 100-year flood. These standards apply to new structures and to substantial improvements of existing structures. The County defines a Substantial Improvement as any reconstruction, rehabilitation, or addition to an existing structure, the cost of which exceeds 50 percent of the structure's appraised or market value. Additionally, most other types of development within the floodplain also require a grading permit which includes cut and fill, installation of riprap and other bank stabilization techniques. County staff is available to undertake site visits, if requested, to review flood, drainage and grading issues. Contact the Washoe County Public Works

Department at (775) 328-2040 for information and prior to undertaking any activity within the floodplain or if you see non-permitted building or filling in the floodplain.

***Recognize the natural and beneficial functions of floodplains to help reduce flooding:***

Floodplains are

a natural component of the Washoe County environment. To understand and protect the natural functions of floodplains helps reduce flood damage and protect resources. When flooding spreads out across the floodplain, its energy is dissipated, which results in lower flood flows downstream, reduced erosion of the stream bank and channel, deposition of sediments higher in the watershed and improved groundwater recharge. Floodplains are scenic, valued wildlife habitat, and suitable for farming. Poorly planned development in floodplains can lead to stream bank erosion, loss of valuable property, increased risk of flooding to downstream properties and degradation of water quality.

***Reduce Risk of damage to homes:*** Practical and cost-effective methods for reducing or eliminating the risk of flooding are available to property owners whose homes have experienced damage from flooding in the past, or may experience damage in the future. Such techniques include elevation of the home, relocating the home to higher ground and protecting utilities. For further information, contact the Washoe County Public Works Department at (775) 328-2040. During times of flooding, homes that have not been retrofitted can be protected during emergencies by the installation of sandbags. For further information about sandbags and the locations of sites where sandbags are available during flooding, contact Washoe County Public Works Department or visit our Web site at: [www.washoecounty.us](http://www.washoecounty.us) . In case of an emergency, call 911.

***County floodplain Information Services:*** The County can determine the relationship of a particular property to the floodplain, including: 1) whether the property is located within the Special Flood Hazard Area; 2) Flood Insurance Rate Map (FIRM) Zone for the property; 3) Base Flood Elevation for a property, if available; and 4) whether the property is located within the Floodway. The County also maintains elevation certificates for review, if available. Contact the Washoe County Public Works Department at (775) 328-2040 for information.

The County has flood warning information available that can be accessed through our Web site at: [www.washoecounty.us](http://www.washoecounty.us). The Web site includes information about sandbag locations and ways to contact and listen to the National Weather Service. It also has an informational brochure that explains how people can prepare for an emergency.

**Consideration During Flooding Events**

***Prepare an evacuation plan:*** Before the floodwaters hit, develop an evacuation plan among all members of a household that includes a meeting place outside of the house, as well as an escape route out of the floodplain and away from floodwaters.

***Do not walk through flowing water:*** Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive; six inches of moving water can knock you off your feet. If you walk in standing water, use a pole or stick to ensure that the ground is still there.

***Do not drive through a flooded area:*** More people drown in their cars than anywhere else. Don't drive around road barriers; the road or bridge may be washed out.

***Stay away from power lines and electrical wires:*** The number two flood killer after drowning is electrocution. Electrical current can travel through water. Report downed power lines to the Sierra Pacific Power Company or your utility provider.

***Shut off gas and electricity and move valuable contents upstairs:*** Be prepared in advance with a detailed checklist because warning of an impending flood may provide little time for preparation prior to evacuation.

***Look out for animals, especially snakes:*** Small animals that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke and turn things over and scare away small animals.

***Look before you step:*** After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery.

***Be alert for gas leaks:*** Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns or open flames unless you know that the gas has been turned off and the area had been ventilated.

## **Contact Information**

If you would like to learn more about flood information, insurance and/or safety, please contact or visit the website links of the different organizations:

- 1) **Washoe County**  
Phone: (775) 328-2040  
Web: <http://www.washoecounty.us/>
- 2) **Washoe County Internet Floodplain Information**
- 3) **Federal Emergency Management Agency (FEMA)**  
Phone: (425) 487-4600  
Web: <http://www.fema.gov/nfip/>
- 4) **Truckee Meadows Flood Awareness**  
Web: <http://www.floodawareness.com/>
- 5) **Truckee River Flood Project**  
Web: <http://www.truckeeflood.us/>
- 6) **Floodplain Management Association**  
Web: <http://www.floodplain.org/>
- 7) **Association of State Floodplain Managers**  
Web: <http://www.floods.org/>

**8) U.S. Army Corps of Engineers**

Web: <http://www.lrl.usace.army.mil/>

**9) Nevada Floodplain Management Program**

Phone: (775) 687-4380 ext. 232

Web: <http://water.nv.gov/Flood/index.cfm>