Flooding Event on Westshore Dr & Serene Rd in Serene Lakes on 1/31/16

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On January 31st 2016 the Donner Summit area experienced very heavy rainfall (4 inches in a 24 hr period) that resulted

in flooding in several areas of the Serene Lakes community. Especially hard hit were areas along Westshore Dr and Serene Rd on the west side of the subdivision (See Figure 1). There are two drainage corridors that come together in this area. Normally the drainage is sufficient to convey the runoff into Lake Serena. However, because of heavy snowfall during the preceding two months, there was a snow base of approximately 6-8 ft on the ground. In addition to the nascent snowfall, the level of snow around homes was heightened by the blowing of snow to clear driveways and streets. In some areas the banks were 12-15 ft high.



Westshore Dr was flooded with 3-4 ft of water



Figure 1. Drainage area where flooding event occurred. Two drainage creeks converge.



Figure 2. Flooded Westshore Dr-Serene Rd area. Blockage of the drainage creeks caused water to back up on streets.

The Sequence of Events

Steady rain fell all of Jan 30. The rain water drained down the creeks and started jumping the banks of the drainage creeks and flooding streets very early on the morning of Jan 31. Unfortunately, the creeks on Westshore Dr and Serene Rd had been filled with compacted snow from the Placer County snow blower and/or private driveway blowers. The snow coming out of the high powered blowers can be problematic because it is very compacted and can form thick

dense snow banks that are impermeable to water. This was the case the Westshore Dr-Serene Rd area where the built up banks along the roads blocked the drainage corridors. The water was diverted into the streets and driveways and flooding the houses in the area (see Figure 3). In the worst case waters diverted from the creek severely flooded the ground floor of a cabin on Westshore with water levels of 3-4 ft. Extensive damage was done to the cabin.

A 3 am on Jan 31st a 911 call was placed to the Truckee Fire Department by residents on Westshore. After a quick response the fire department brought up two pieces of heavy equipment to try to break down the snow blocking the drainage creek. Despite their best



Truckee Fire could not break through the snow back to relieve the flood.+

efforts they could not break through the dense snow bank that was blocking the creek. Flood waters continued to rise

and the ground floors of two more cabins were flooded. The flood waters persisted until the following day when the

waters finally eroded under the snow bank and and drainage was restored.

There was a similar situation on Serene Rd where the drainage creek crosses and empties into Lake Serena. Snow banks blocked the flow on both sides of Serene Rd. The block on the west side caused a pond to the form in the area between Westshore Dr and Serene Rd. The block on the east side caused Serene Rd to flood over an area of 100 yards to a depth of 1-2 ft. Backhoes had to be used to punch holes in the snow banks to clear the drainage and relieve the flood waters.

Conclusion – Drainage corridors must not be impeded

It is clear that the rain event that occurred was an extreme weather event. The Donner Summit area is famous for its extreme weather as residents are well aware. The Serene Lakes Subdivision was constructed with this extreme weather in mind and the community has an extensive drainage infrastructure. It is a testament to that infrastructure that an event like this has not occurred before in the Westshore-Serene area. However, it is also clear that this event was in large part due to the failure to keep the drainage infrastructure clear of snow. Moreover, the problem was exacerbated by the depositing of snow into the drainage by snow removal operations. In



The drainage creek on Westshore was filled with snow that a backhoe could not remove.

light of the predictions that winters will get warmer in the Donner Summit area and these heavy rain events may become more frequent, it seems logical that the following steps should be taken to prevent a repeat of this flooding event.

- Drainage corridors should be kept clear of any obstructions, especially at intersections with streets.
- Snow removal operations by both county and private agencies should not blow snow into drainage corridors. The corridors should be well marked for the snow removal personnel and they should be instructed not to blow snow into those areas.
- When heavy rain events are forecast, drainage corridors should be checked to make sure they are clear. This can be done by the county, the Sierra Lakes County Water District and even residents.

Hindsight is of course 20-20 and this report is not meant to point fingers or assign blame. With 4 years of drought and low snow it is understandable that we were all lulled into complacency as far as extreme weather events go. This event should be a wakeup call for everyone to be more vigilant and put the proper procedures in place to prevent future emergencies.