

Capitola Releases Findings on What Caused Village Flood

Old Corrugated Steel Pipe Blamed for Rupture

by Mary Bryant

Floods

The rupture of a nearly 50-year-old corrugated steel pipe carrying storm water under Capitola's Pacific Cove Mobile Home Park was most likely the cause of two days of flooding in the Village that has left some businesses closed, park owners worried about the future, and others facing major renovations. These include more than \$1 mil-

lion in expenses to the city – or eventually Capitola's insurance fund if the state and federal governments don't help.

The stretch of storm drain, about 72 inches in diameter, has cost the city about \$750,000 to repair, again likely covered by the city's insurance fund that is shared with other municipalities.

These conclusions are part of a recently released report prepared for the city's public works director.

Exactly why did the pipe fail? That

requires a bit longer explanation.

On Mar. 24, after a month of rain, storm clouds dumped what was equivalent to a 25-year flood on the county – meaning a lot more water ran off from mountains than in a typical storm.

That massive volume of water collected in the Noble Creek Gulch culvert nearby to the mobile home park.

Capitola resident Richard Tessen

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watched the water collect at the culvert from his property next door.

As usual in a big storm, debris collected at the culvert grate, which Tessen attempted to clear until the water – which he estimated to be some 22 feet deep – caused him to seek dry ground.

While he was concerned about the culvert backing up, he wasn't aware of any problems looming in the Village. He was more alarmed about what might happen closer to home.

"When it rains heavily, the water runs over the curb and comes into my garage," he said.

Engineers from URS Corporation, under contract with Capitola, inspected the broken pipe after the flood, the Noble Gulch culvert and the entire line that empties finally to Soquel Creek.

They believe that the juncture between the 72-inch concrete pipe and the corrugated metal pipe installed under the Pacific Cove Mobile Home Park in 1963 is where the break occurred.

The concrete pipe had been repaired by workers installing a sleeve inside the pipe, shoring up any areas that had eroded over time

and allowing soil to seep into the drain pipe.

This is done to prevent the pipe from collapsing and rupturing. It is also necessary to avoid sink holes from occurring above ground.

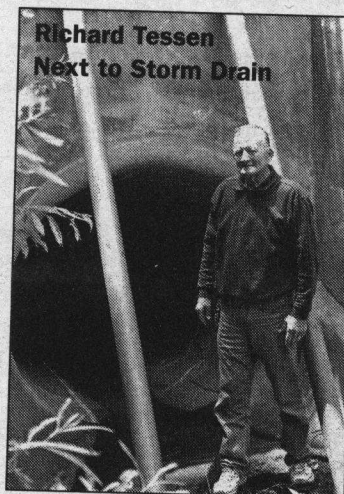
Many people involved in the flood inquiry knew where the pipe broke before the report; however, why was the more pressing question.

The engineers think that debris travelling along the pipe at rushing speeds caught the edge of the corrugated metal at the junction with the concrete, pulled and bent the edge of the pipe inward, causing the water to escape at the juncture seam.

At that point, the entire corrugated pipe separated from the concrete pipe carrying the storm runoff from upstream.

It wasn't long before the soil that buried the pipe washed away. A mobile home and pavement above the pipe then fell into the sink hole created when the soil was washed downstream, and the water began gushing through the city's parking area and onto Capitola Avenue.

Two days later the same flood repeated, except with much more disastrous results. Instead of the break occurring as the storm was clearing, the water rushed from the



Richard Tessen
Next to Storm Drain

exposed pipe immediately and lasted six hours before that storm was exhausted.

Who Was Responsible?

Capitola owns the Pacific Cove Mobile Home Park. However, the city didn't develop the park.

Dan Hill is Santa Cruz County's assistant public works director. He said, and Capitola's Public Works Director Steve Jesberg agrees, that the pipe under the mobile home park is not part of an easement, and general thinking would suggest that it belongs to the property owner. In this case, the city.

A similar concern is playing out at the Snug Harbor Mobile Home Park in Live Oak, where the property owner is responsible for replacing a similarly aged

storm pipe.

Are there circumstances in which the rupture could have been avoided?

Tessen believes if the grate had been kept clear of debris that the pipe downstream might not have ruptured.

The day of the first storm Tessen called Hill's department for a maintenance crew as well as the city's public works agency.

Eventually, as the water kept getting higher and he couldn't clear a rubbish container from the grate, he dialed 9-1-1.

Only the police showed up. He said he appreciated the attention, but that officers weren't able to clear the obstruction.

Who should have helped? The county's Hill said that his crew should have responded if called, and available, but he didn't know the circumstances of the incident and couldn't answer if the call was received or his crew dispatched.

"He's right to call us. ... We want to know about it," Hill added.

Tessen said that he left the area for a while and when he returned the rubbish bin was gone. Could someone have come by and removed the bin? He isn't completely sure. He's just certain he doesn't want to experience the results of a 100-year storm, since the culvert is only designed for a

10-year event.

What's Next?

For Capitola's part, Jesberg says that the pipe is completely repaired and now even features a manhole to allow future inspections.

Should the pipe be made bigger for bigger storms?

Because the final section of the storm pipe runs under the Riverview Avenue development and into Soquel Creek, installing a bigger pipe would be very expensive. This leg of the pipe is also concrete, and is likely to last longer than the corrugated metal pipe that was under the Pacific Cove Mobile Home Park.

Hill said chasing the rare storm events can be nearly impossible.

"Theoretically, there's always going to be some storm out there that's going to be bigger," he said.

The question of who's going to pay for the replacement remains. The county has written the city a letter saying that the county isn't responsible. However, Hill acknowledges that talks are presently ongoing to determine who will pay what.

"We've been exchanging documents," Hill said. "At this time, we feel it's the city's responsibility. [But] we're talking." ■