



Public Works Department
MEMORANDUM

DATE: November 13, 2015
TO: Jamie Goldstein, City Manager
FROM: Steve Jesberg, Public Works Director
SUBJECT: Soquel Creek Lagoon Management

The City of Capitola has managed and maintained the lagoon at the mouth of Soquel Creek dating back to the 1930's. Originally done to provide recreational opportunities during the summer months for beach visitors, the work became regulated by several resource agencies including State Fish and Wildlife, National Marine Fisheries, and Corps of Engineers in the late- 1980's. The lagoon has proven to provide important habitat for fish and wildlife in addition to the recreational value. As a result of forming the lagoon and diverting the creek into the flume during the summer, the City is able to maximize the depth of the lagoon which greatly assists in maintaining cooler water temperatures and protection for juvenile fish from predators.

The key to the City's ability to maintain the lagoon is the concrete flume which runs from the lagoon to the surf line under the sand. The inlet of the flume, in the lagoon, controls the water depth during the summer. The flume has the capacity to handle 30 cubic feet per second (cfs) of water. Typical non-drought year flows in the creek during the summer range from 5-15 cfs. This summer the flows were less than 1 cfs. The opening of the lagoon by breaching the sandy berm is directly related the flume's capacity. The City's permits require the lagoon to remain in place until such time that the flows in the creek exceed the capacity of the flume. The City is required to manage the lagoon by lowering the water level and opening up the inlet so that small rain events can pass through the flume without breaching the lagoon. City Public Works closely monitors the weather and creek flows to anticipate the need to open the creek prior to flooding over the banks.

This year the rains on November 9 resulted in flash flooding throughout the City. The flow in Soquel Creek at 6 a.m. was 1.9 cfs. The early morning rain raised the flow in the creek to 11 cfs at 10:00 a.m., after which the flows diminished to 6 cfs at 11:00 a.m. The next storm cell hit at 11:00 a.m. and again resulted in localized flooding. Soquel Creek reacted much quicker this time with the flows going from 13 cfs at 11:15 to 45 cfs at 11:30. Public Works mobilized crews and opened the creek at 11:45 a.m. At the time the lagoon was opened the water level in the creek was approximately 6 inches below flood level. While the creek began emptying the creek continued to rise and ultimately peaked approximately 3 inches over flood level. The flood waters entered into yards along Soquel Creek and inundated the pathway, but did not enter into any buildings. By 12:15 the flows in the creek had receded to 21 cfs and the water levels had receded below flood levels. The creek will now remain open until next May when the lagoon will be reformed.