

HAZARD IDENTIFICATION AND VULNERABILITY ANALYSIS (HIVA)

Walla Walla County, Washington

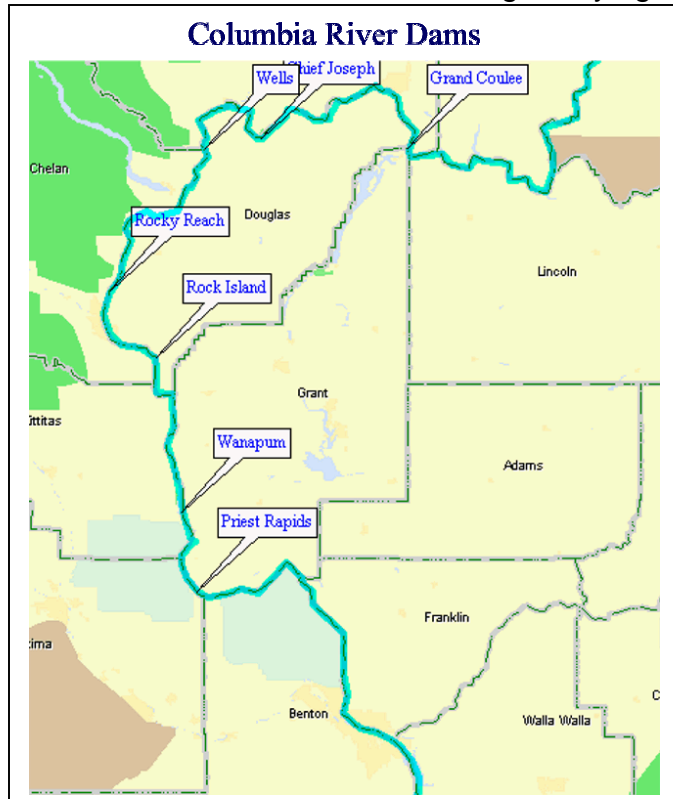
COLUMBIA RIVER DAM FAILURE

Hazard Overview

Upstream from Walla Walla County on the Columbia River there are seven dams. Two of which are of sufficient size or proximity to the county to represent a flood hazard should they fail. Failure of either Grand Coulee Dam or Priest Rapids Dam would send floodwater down the Columbia River flooding low-lying areas. Burbank, Wallula and the Western portion of Walla Walla County along the Columbia River could be threatened by such an event.

Inundation maps have been prepared for these two dams indicating the worst possible case scenario. Should a dam be breached, the amount of floodwater reaching Walla Walla County would not exceed the estimates on the inundation maps. These maps indicate a rise in river level from the normal 343 feet above sea level to as much as 380 feet above sea level.

Should an upriver dam fail, the downriver dams are expected to immediately begin to release water to lower the pool above the dam in an effort to mitigate the effect as the floodwater travels downstream. This release of water can also cause flooding before the actual dam failure floodwater arrives.



History and Probability of Occurrence

There have been no failures of Columbia River Dams. Grand Coulee Dam is the oldest. Construction began in 1933. It impounds over 12 million acre-feet of water in Lake Roosevelt and represents the most severe dam failure hazard. Other dam failures may require evacuation of certain areas, but the worst-case scenario for Walla Walla County would be the failure of Grand Coulee Dam.

A terrorist's attempt to breach a Columbia River dam with explosives is not likely to be successful.

Walla Walla County HIVA - COLUMBIA RIVER DAM FAILURE

There is little likelihood that a Columbia River Dam will fail in the next 25 years. The probability of occurrence is LOW.

Vulnerability

The low-lying areas of Burbank, Wallula and the Western portion of Walla Walla County along the Columbia River could be threatened by such an event. The Columbia River water level in the McNary pool is about 343 feet above sea level. Should a dam failure occur, the pool could rise to as much as 380 feet above sea level. This depth of water would flood the community of Burbank, portions of Highway 12, the railway along the corridor, schools, businesses and port facilities. Water would backup the Snake River reaching Ice Harbor Dam. Water would also backup the Walla Walla River toward Touchet about seven miles until it reached elevation 380 feet, which is about one mile up river from the Nine-mile Bridge on Highway 12.

Damage to homes, business, port and transportation facilities in the flooded areas of Burbank, Wallula, Port Kelley and along the Columbia River would be great. Infrastructure damage to roads, rail, communication and bridges would have an impact on most of Walla Walla County. Economic damage to the entire county would be significant.



An important segment of Walla Walla County's population, property, commerce, infrastructure or service would be exposed to the effects of this hazard. In a worse case scenario, there could be a disaster of moderate to major proportions. The vulnerability of Walla Walla County is MEDIUM.

Risk Rating

The probability is LOW and our vulnerability is MEDIUM, so a risk rating of LOW is assigned. There is little potential for a Columbia River dam failure disaster during the next 25 years. The threat is such as to warrant little special effort to prepare for, respond to, recover from, or mitigate against this hazard. This hazard need not be specifically addressed in the county's emergency management training and exercise program except as generally dealt with during hazard awareness training.