

Bonaparte River Watershed

Summary

Practices Code within the Bonaparte River Watershed. The community watershed covers 66.3km² (1.2%) of the entire Bonaparte drainage basin (MELP 2000)

There is a large amount of ongoing agricultural activity between Clinton and Cache Creek, as well as within the Hat Creek drainage. The total licensed demand on the Bonaparte River is approximately 33,660 acres-feet. Ninety-one percent of this demand is dedicated to irrigation licenses and another 8 percent is to waterworks licenses (MELP 2000). Approximately 40 percent of the Bonaparte watershed has been logged and about half of this activity has occurred recently (MOE 2001).

A fishway was constructed downstream of Cache Creek to allow salmon to migrate past a natural 7 meter high waterfall. Prior to the fishway construction, anadromous fish only had access to the lowest reaches (2.6km) of the river. Currently they have access to the majority of the watershed (MELP 2000).

Fisheries Values:

The Bonaparte River has historically been an important producer of Chinook, coho, and pink salmon, as well as kokanee, steelhead, and rainbow trout. Other species that rear and live in parts of the watershed include mountain whitefish, bull trout, and brook trout. The anadromous salmon species primarily use the lower mainstem of the Bonaparte River; whereas kokanee are found mainly in the lakes and their inlet streams (MELP 2000).

Trout and salmon spawning activity in the Bonaparte system begins in the late summer to early fall (August to September) and can continue up to December depending on the species and stream elevation (MELP 2000). This timing coincides with natural low flow periods and as a result extreme low flows could be detrimental to the success of spawning and incubation during this time period.

2000). Excluding conservation, the total licensed storage in the watershed is 10,292 acre-feet, which is mainly for irrigation purposes (MELP 2000).

Hydrologic Information

The Bonaparte River hydrograph is based on data from the Water Survey of Canada gauging station, 08LF002. This station is located upstream of the mouth of the Bonaparte River and has 24 years of reliable year-round data and 13 years of partial data (mainly April to October) (MELP 2000). Figure 2 and 3 display the hydrograph of the Bonaparte River and the demand within the Bonaparte River Watershed.

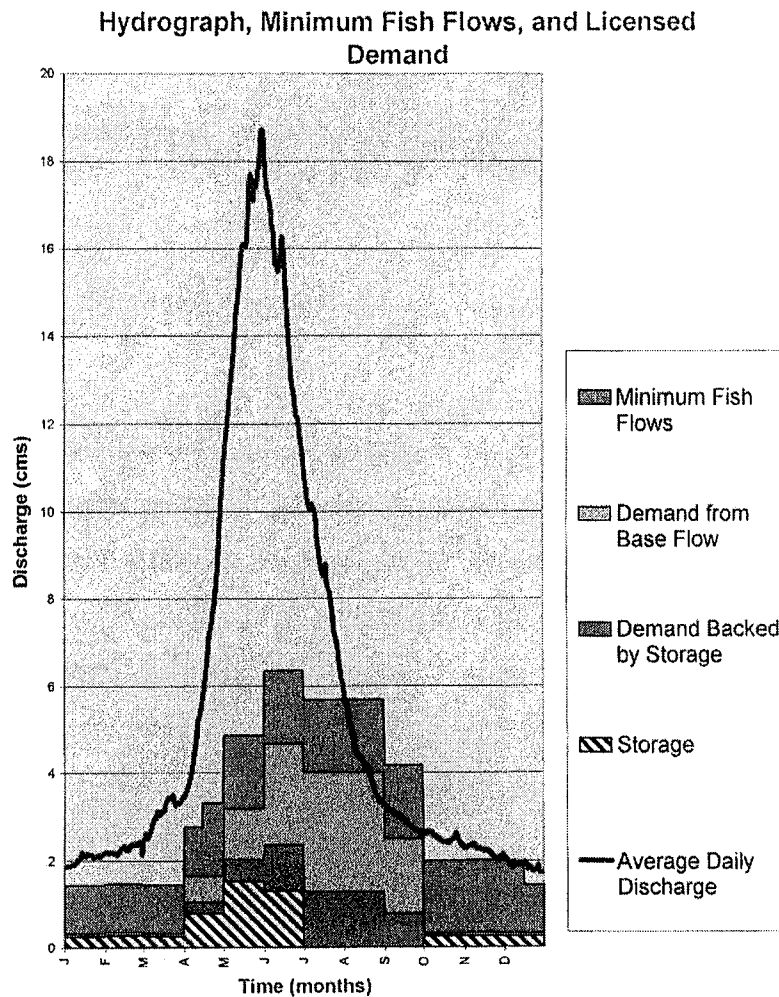


Figure 2: Bonaparte River Hydrograph, displaying minimum fish flows, demand from base flow, demand backed by storage, and the average daily discharge.

References:

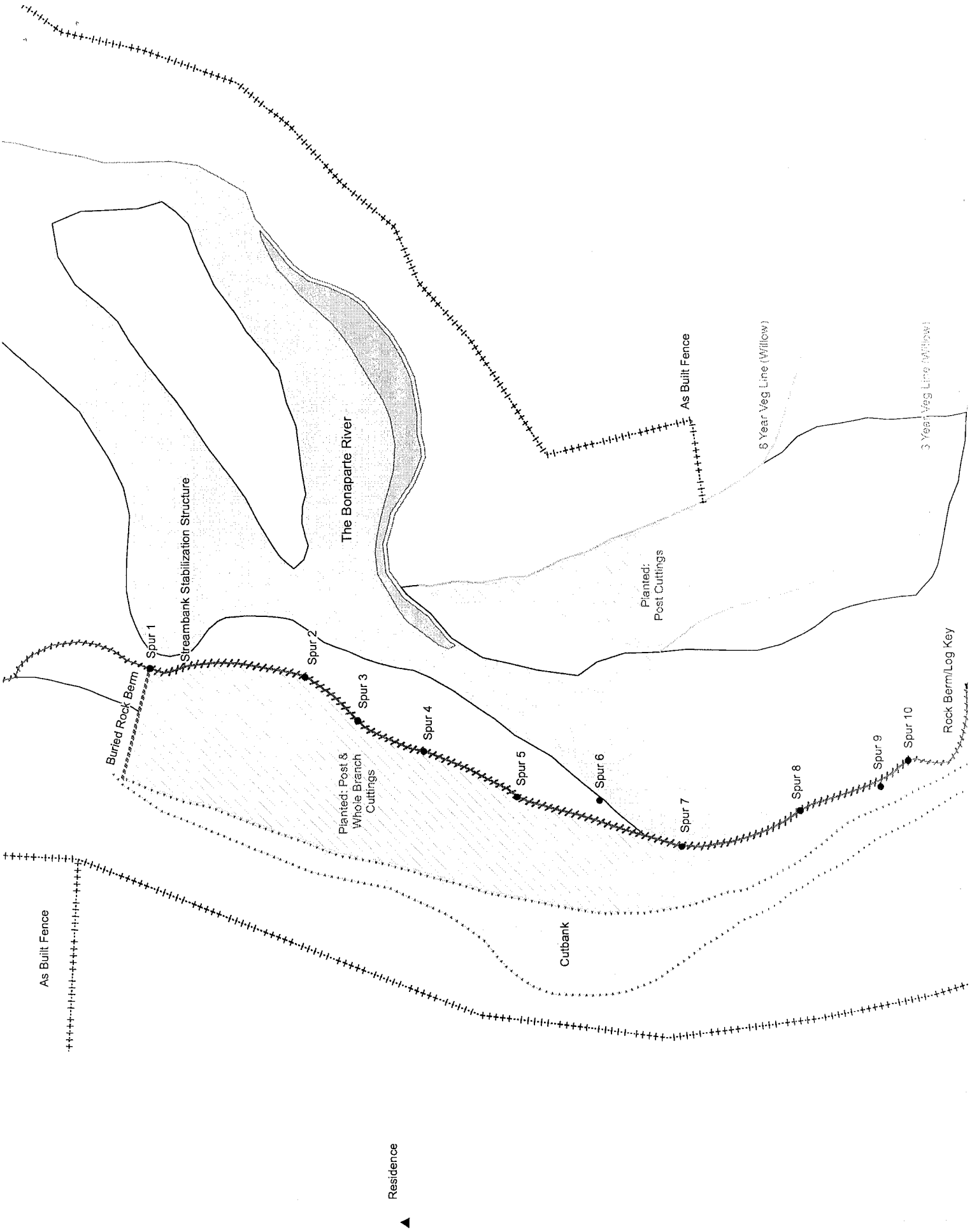
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Residence

