Flow

If you get a chance to sit by the river for a while, especially on an overnight trip, think for a while about the water that has brought you there, where it came from, and how it keeps flowing, careless to your arrival or departure, coursing onward to the Central Valley and the Pacific Ocean.

Where does that water come from? On the Tuolumne, it starts as snow, groundwater, or sometimes rain, high in the Sierras and the tributary foothills. As it falls from peaks over 13,000 feet high, it gains volume as each tributary adds its share to the expanding flow. Most of this water gets stopped up at Hetch Hetchy by O'Shaughnessy Dam, but eventually it makes its way downstream with dam operators’ blessings.

Sometimes we tame the river to a few hundred CFS, other times we do everything in our power to keep it from spilling over the top. In either event and all between, that water keeps moving, unrelenting and undeterred.

I’m constantly reminded of this on our three-day trip, as every thought and every activity is accompanied by the sound of water gushing by. I paddle, it carries me. I stop to eat, it charges onward. I sleep, it flows on through the night. The water just goes.

In 1997, heavy precipitation and fast snowmelt drove the T up to 100,000 CFS. One hundred thousand cubic feet per second. Picture a normal rafting day, where the flows can be a few thousand CFS, and 10,000 CFS can get to be dangerous. Now picture 10 to 100 times more water raging down these channels, at depths up to 20 or 30 feet above your head.

Now consider that a cubic foot of water is almost seven and a half gallons, and that CFS is measured with respect to the amount of water passing a cross-sectional slice of the river every second. That means that on our trip at 1400 CFS, about 10,500 gallons sweeps past one spot every second, and the flood of 1997’s flow was equivalent to almost three-quarters of a million gallons of water every second. That’s two and a half acre-feet in the blink of an eye! A ten-foot long section of the river contained seven and a half million gallons of water, and a hundred-foot stretch, less than a sixth of the length of Indian Bar, could hold almost 75 million gallons of water. Astounding.

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