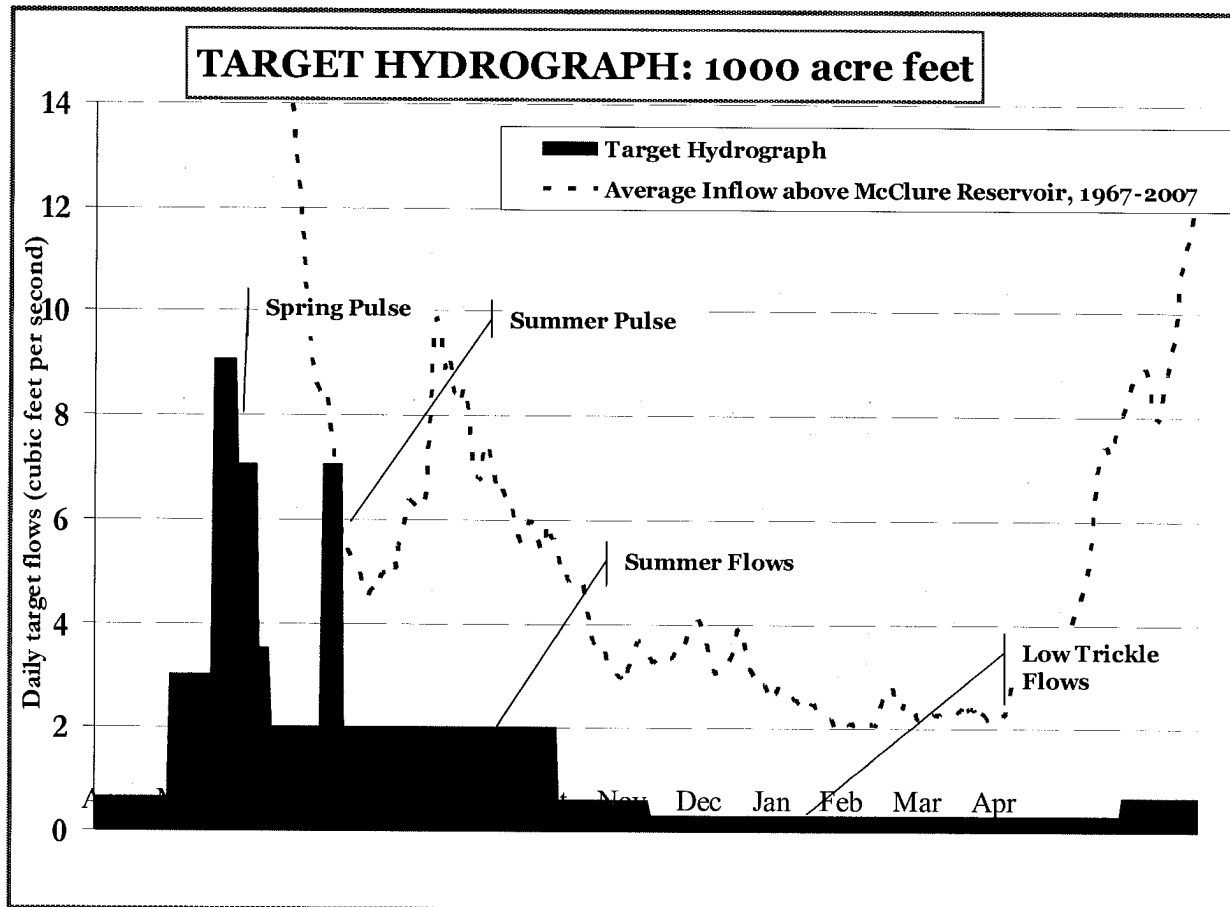


Figure 1



4.3 Dry and Critical-Dry Year Target Flow Reductions

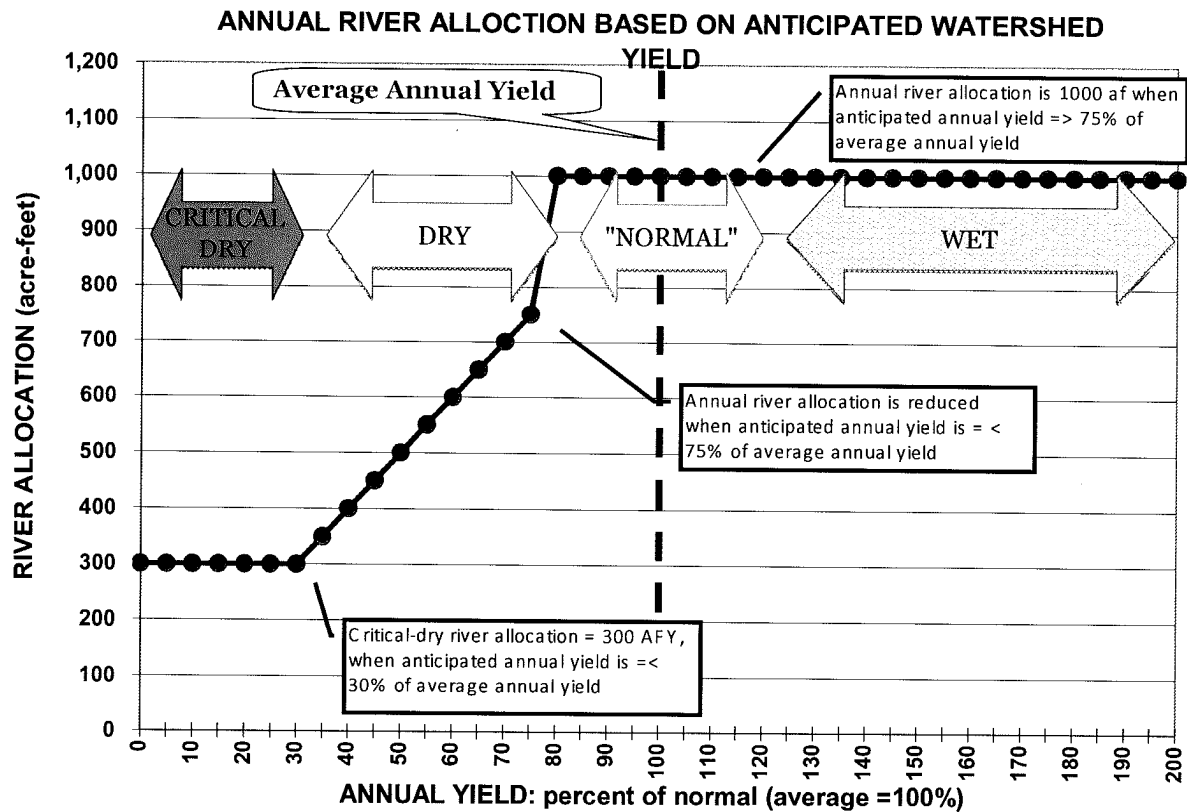
4.3.1 Reduction of Target Flows in Dry and Critically Dry Years

A dry year is defined as a year in which the anticipated watershed yield is equal to or less than 75% but greater than 30% of historical average. A critical-dry year is a year in which the anticipated watershed yield is equal or less than 30% of the historical average. In dry and critical-dry years, the total volume of the target hydrograph (1,000 af) will be reduced, by multiplying 1,000 by the percentage of the anticipated watershed yield:

$$\text{TargetHydrograph} \times \text{AnticipatedWatershedYield}_{\text{yearX}} = \text{target flows}_{\text{yearX}}$$

For example, in a year where the anticipated watershed yield is 65% of average, the target flow for the target year is calculated by 1,000 afy x 65% = 650 af. The reduction calculation is depicted graphically in Figure 2.

Figure 2



4.3.2 Dry Year Hydrographs

In dry years, the flow manager will allot the timing and magnitude of the daily target flows in a manner consistent with the following guidelines:

- (a) reduction in summer flows,
- (b) scaling-down – but not eliminating – the spring pulse and,
- (c) reduction in low flows from 0.30 cfs to 0.15 cfs.

The timing and magnitude of dry year target flows for 700 af, 600 afy, 500 afy, and 400 afy are described in the Dry Year Hydrographs in Appendix A.

While scaling back the quantity of the annual target flow in dry years, the priority is to provide for spring and summer pulses to fulfill the purposes of the pulses as outlined for the 1000 afy target flow in section 4.2.1 above.

4.3.3 Critical-Dry Year Hydrograph

In critical-dry years, in which the total target flows equal 300 af per target year, the daily target flows will be managed in a manner consistent with the following guidelines and as illustrated by Figure 3:

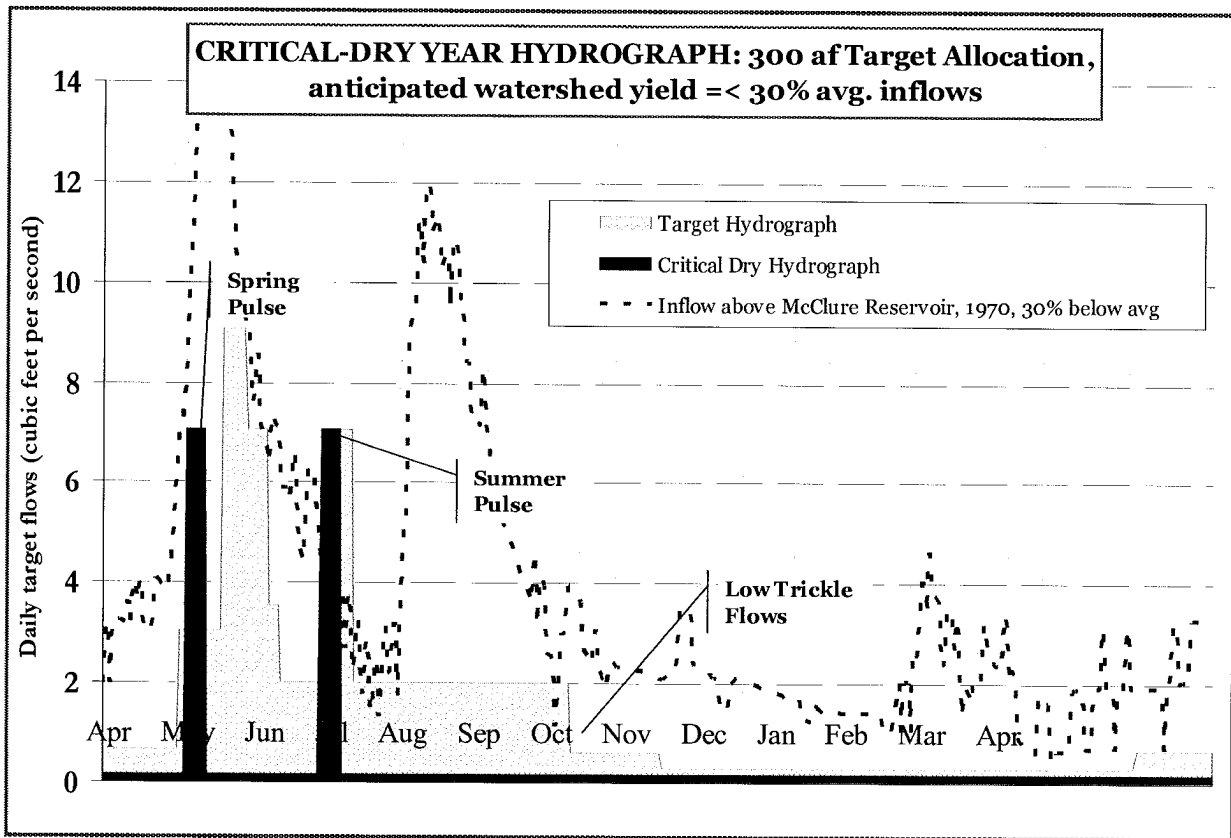
- a) sustained low flows of 0.15 cfs,
- (b) one spring and one summer pulse, each of approximately 100 afy.

The schedule of the pulses shall generally follow the timing of the pulses in the target

hydrograph. The magnitude of the pulses shall be approximately 7 cfs, provided that the daily target flows are within the bypass constraint. The river shall retain flows of at least 300 afy barring an emergency or unforeseen infrastructure constraint (e.g., failure of Nichols’s Reservoir outfall structure). The purpose of the critically dry year hydrograph is to maintain a wet corridor in the upper river for riverine and riparian ecological benefit while providing two downstream pulses for the purposes of the pulses as outlined for the 1000 afy target flow in section 4.2.1 above.

In critical-dry years, since the daily target flows for the Fishing Derby cannot be reliably met, the Fishing Derby will be suspended.

Figure 3



4.4 Wet Year Flows

During wet years, defined as when the anticipated watershed yield is greater than the historical average, the river will be allocated water according to the target hydrograph (e.g., 1,000 afy) in the target year. In wet years, the actual daily flows will likely be greater because of flow contributions from reservoir flood management, and because of greater flows within the urban watershed. These greater daily flows will meet many of the objectives described in Article 4.1. Furthermore, the irrigation needs of the river corridor will be supplemented by the above-average spring precipitation. By not increasing the target hydrograph in a wet year, in wet years the City may be able to put the full amount of the City’s Santa Fe River water rights under License 1677 to beneficial use and thus rest the City’s well fields and use of local groundwater resources.