

MEMORANDUM

To: File nos. 63-03002, 63-3071, 63-3166, 63-3152, 63-7108, 63-11528; Transfer no. 5180 in the name of Capitol Water Corp.

From: Gary Spackman *Gary*

Date: November 7, 2002

Re: Recommended Conditions of Approval

Capitol Water Corp filed application for transfer no. 5180 proposing to: (1) Add all six existing points of diversions to each of the water rights; (2) Add a new point of diversion to each of the water rights; (2) Change the nature of use of some of the water rights so all the rights authorize a municipal use; (3) Change the place of use to a generally described place of use, or service area, of Capitol Water.

This filing is somewhat similar to the IMAP filing by United Water because of the request to add all the points of diversion to each water right, change the nature of use, and change the place of use. The filing is dissimilar because Capitol Water is not seeking water for future anticipated needs. The area served by Capitol Water is, for the most part, unfilled with homes and businesses, and there is very little opportunity for further expansion of the Capitol Water system.

As with IMAP, the total system capacity is less than the sum of the individual flow rates authorized by each of the water rights. I asked Capitol Water, through Ed Squires, to measure the maximum flow rate for the system on the highest water demand day of the summer prior to drilling the new well. Shortly thereafter, Capitol Water experienced some difficulty with other wells and stated it needed the new well to satisfy its upcoming summer demands. IDWR issued a drilling permit with the understanding that the transfer would be approved prior to pumping from the new well. The system capacity was never measured, the new well was connected to the system, and the new well became one of the more reliable wells on the system. This was the subject of an enforcement action against Capitol Water.

Because the system configuration has changed, and the old capacity cannot be directly measured, I asked Ed Squires to theoretically estimate the capacity. Ed submitted a multipage report. The flows for most of the wells were not measured operating under system pressure. As a result, Ed analyzed a lot of secondary information and estimated a peak pumping capacity of 5,685 gallons per minute (12.67 cfs). I believe the flow of 4,534 gpm, although characterized as peak season production, was the production when the Capitol Water was having difficulty with its wells.

The Squires report documented that wells one and six operated at or near the licensed amount. The Squires report also concluded that wells two, three, and five operated at less than their capacity, but well no. four made up for the loss of capacity in the earlier wells. As a result, the flow rate for water right no. 63-7108 must be reduced to compensate for the retention of the

licensed flow rates for the earlier priority water rights that are protected through the accomplished transfer.

Squires calculated a maximum system flow of 1250 gpm for well no. four. He correctly points out that this is an average flow over an approximate 24 hours period, and that instantaneous flow was probably higher. He also argues that, under low pressure, fire protection flows, the rate would be higher.

The reductions in flow capacity of wells two, three, and five are estimated to total about 320 gpm. It is difficult to determine from where this reduction should be taken. If subtracted from the 1250 gpm, we would ignore additional fire flow diversion. If subtracted from the maximum of 2200 gpm licensed, the flow would be too high. The compromise flow of 1499 gpm suggested by Ed Squires is a good compromise. **I recommend a system capacity of 5,685 gpm (12.67 cfs). I also recommend flow rates for each of the individual water rights as set forth in Table 3 of the "Tables" section of the appendix to the Squires Report.**

Water right no. 63-7108 was limited to an annual volume of 960 acre-feet, which is far less than what the pump will produce annually. IDWR suggested that the flow rate for this water right be reduced so the flow rate diverted continuously cannot exceed the volume. Flow rate, however, is more important to Capitol during peak times than the total volume. As a result, to prevent an enlargement, diversion under the rights in total must be limited to a total volume. **The total volume should be limited to 7711 acre-feet annually.**

Other standard conditions should apply.