

MEMORANDUM

TO: File 94-7570

FROM: Daniel Nelson – Staff Hydrologist

DATE: June 26, 2014

SUBJECT: Diversion Rate Analysis

The field examiner properly determined that the flow rate for this permit should be 0.01 cfs based on the maximum allowable rate per acre. After discussing this permit with staff, it was determined that limiting this diversion rate would not reasonably represent the water right. Therefore, we will give the owner an increased diversion rate not to exceed the 0.03 cfs, which is the rate the permit was approved. The pump information supplied by the owner states that the maximum capacity of the pump is 898 gallons per hour or 0.03 cfs. The theoretical the field examiner performed stated that the pump could produce 0.03 to 0.05 cfs.

I worked through several theoretical calculations, and I couldn't determine the efficiency or the lift and pressure the pump manual used to determine the 898 gallons per hour flow rate. Since I couldn't determine what the actual flow rate was for this system at the lift and pressure the system uses, I can only recommend the 0.03 cfs determined in the theoretical sheet and the pump manual. A diversion rate of 0.03 cfs is equal to 13 gallons per minute. This flow rate would adequate for 2 to 6 sprinklers depending on the nozzle size and pressure. I feel it would reasonable to allow a 0.03 cfs diversion rate.

I have made the changes in the diversion rate on the license and in the database.