

MEMORANDUM

To: Files 63-145, 63-31134, 63-31135, 63-31136

From: Cynthia Bridge Clark

Date: December 30, 2003

Re: Determination of Recharge or Mitigation Requirements Due to Creation of Ponds

On March 20, 2001, the department received three applications for permit, numbers 63-31134, 63-31135, and 63-31136, filed for use of water for aesthetic storage in a series of ponds fed by groundwater. The applicant, Larry R. Shideler, proposes to mitigate evaporative losses from the ponds by drying up 10.5 acres of historically irrigated land and supplementing it with surface water delivered to the property by the Eureka Water Company. The total surface area of the proposed ponds is 8.1 acres.

Mr. Shideler was notified in a letter, dated April 17, 2001, that the permits could not be approved unless he retained ownership of the canal company shares. Additionally, he would be not be able to use the portion distributed through the pond system for irrigation, and in order to prevent forfeiture of the canal company's water right, the nature of use of the right would need to be changed through a transfer from irrigation the new use.

The Eureka Canal Company, through negotiations with the applicant's attorney, Mike Creamer, filed an application for transfer of a portion of water right number 63-145. The original transfer application, received by the department on August 29, 2002, proposed changing 0.15 cfs and 7.5 acres from irrigation use to groundwater recharge (the application specifies that 7.5 canal company shares are equivalent to 7.5 irrigated acres.) To verify the amount of water required for mitigation of the three permit applications, documentation of historical use was requested and provided by Mike Creamer.

Calculations of the anticipated loss due to evapotranspiration, determination of the historical beneficial use on the land, and the number of historically irrigated acres required to be retired for mitigation are shown on the attached spreadsheet (Eureka Canal Company Transfer Application Review). These calculations were reviewed by Mr. Creamer, who indicated that an amended transfer application would be filed in accordance with these findings. He also noted that additional acres would be dried up due to conversion to roads and building pads, however, the applicant would prefer to only offer the required number of acres as mitigation for the evaporative losses from the ponds.

The results of the calculations and mitigation requirements are summarized below:

Total surface area of the proposed ponds	= 8.1 acres
Estimated evaporative losses from ponds	= 29.7 acre-feet per year per acre (afy/ac)
Historical IR	= 2.85 acre-feet (af)
Dried up acres for required for mitigation	= $29.7 \text{ afy} / 2.85 \text{ afy/ac} = 10.4 \text{ ac}$
Acres historically irrigated designated by applicant to be retired	= 10.5 ac

An amended transfer application was received by the department on December 30, 2003. The new application proposes to change 0.21 cfs and 10.5 acres from irrigation use to groundwater recharge. The Eureka Canal Company claimed 33.32 cfs and 1826 acres under right 63-145 in the SRBA. In accordance with the claim, transfer of a rate of 0.19 cfs is required to account for a change of use of 10.5 acres.

Other issues related to this transfer application have not been reviewed by the department.