

MEMORANDUM

To: File 22-13220
From: L. Glen Saxton *LS*
RE: **PROPOSED MITIGATION**
Date: August 8, 2002

This memo summarizes the contents of the memos from Shane Bendixson dated August 6 and August 7, 2002. The applicant plans to cease irrigating 70 acres in Basin 31 near Mud Lake to mitigate a proposed new diversion of ground water in Basin 22. The following is a brief analysis of the effect of the changed location of the ground water diversion and the adequacy of the proposed mitigation plan.

The transfer will have the same effect on the ESPA as moving from response zone I-3 to I-1. The Shelley to Neeley reach of the Snake River will gain approximately 41 percent of the amount transferred to Basin 22 while the Henrys Fork will lose 47 percent. The effect on the other two reaches of the Snake River is negligible.

The amount of water available for use in Basin 31 and proposed as mitigation is as follows:

Consumptive use volume: 175 AF/yr = 70 ac (2.5AF/ac)

Of the volume in Basin 31, only 53% of undiverted ground water would reach the Henry's Fork of the Snake River. Hence, only 53% of the ground water available in Basin 31 can be diverted in Basin 22 due to the response zone effects to the Henry's Fork of the Snake River. The amount of water available for consumptive use in Basin 22 using only this parameter is as follows:

Consumptive use: 93 AF/yr = 175 AF/yr (0.53)

The amount of water desired for consumptive use in basin 22 is as follows:

Consumptive use: 21 AF (evaporation from ponds)
+92 AF/yr = 54 ac (1.7 AF/ac)
Total 113 AF/yr

The difference of 20 AF (113 - 93) AF is offset by the difference in natural consumptive use in the two basins during the May to September growing season. This difference is approximately 0.27 AF/acre less in Basin 22 and is about 0.27 (54) = 15 AF. This difference of 5 (20-15) AF is within the margin of error making the offered mitigation sufficient for the proposed uses in the application.

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