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WATER RIGHTS
SALT LAKE

MEMORANDUM

TO: Robert L. Morgan, State Engineer
Kent L. Jones, Assistant State Engineer - Appropriations
Lee Sim, Assistant State Engineer - Distribution
John Mabey, Jr., Assistant Attorney General - Natural Resources

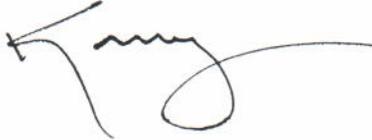
FROM: Kerry Carpenter, Southwestern Regional Engineer

DATE: 1 April 1998

RE: Minersville-Milford Flood Control/Groundwater Recharge Reservoir

For you information, attached is a letter from Dennis Strong of Water Resources to Joey Leko, Chair of the group pursuing the captioned project. I would especially direct your attention to the second paragraph on page two. I have suggested to Joey by phone that either his attorney (Steve Clyde, I think) or Warren Peterson make a close review of the Groundwater Recharge and Recovery statute (73-3b) and then call John Mabey to discuss interpretations.

I hope Joey's enthusiasm is prepared for the formidable technical, economic, legal and (alas) bureaucratic obstacles that stand between him and his vision.

A handwritten signature in black ink, appearing to be 'Kerry Carpenter', with a long horizontal flourish extending to the right.



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RESOURCES

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WATER RIGHTS
CEDAR CITY

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

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March 30, 1998

Joe Leko
Chairman
Beaver County Flood and Resource Reservoir Committee
Minersville, Utah 84752

Joe:

I appreciated the opportunity to meet with you and other members of your committee and community earlier this month to review your proposed groundwater recharge and flood control project. Last week Dan Aubrey of my staff was down and did additional investigation. He ran some percolation tests, was involved in the digging and analysis of some test pits, and looked over the proposed project area in general. After talking to Dan, I believe it is appropriate to put in writing some of our observations, concerns, and recommendations.

Based on our visits to the site and a fairly brief and limited technical view of your project, we believe there is potential to recharge groundwater. You make us uncomfortable with the speed at which you want to proceed. Our concern is we have a general knowledge and belief that what you propose works, but we need additional time to analyze and to test specific impacts of groundwater recharge. That is to say, it works but to what degree we don't yet know.

Dan's work last week indicated a high infiltration rate; however, we believe it is important to run a longer test and would like to be able to open up an area in Section 13, maybe 15 or 20 acres, and run water from the river into that area for a period of time to see what the saturated long-term impacts are. In this process we would like to dig some test pits down-gradient to determine how fast the water moves into the ground and to see if there is an impact to the homes near the recharge area.

In looking at the available water supply, we have used the stream gage north and west of Minersville. We have records for 1951-1955 on that gage and have correlated it with the Beaver River gage above Minersville Reservoir. From our analysis the average annual supply is about 8,000 acre-feet at the gage. As you have told us, there are about four or five years in 10 where water reaches the point it could be diverted into the proposed recharge area. Also, in looking at the flood control potential of the proposed project, we see it has a significant flood control element except in years like 1983-1984. It appears to us the maximum amount of water that could be recharged over the spring runoff period of time is 12 to 15 thousand acre-feet, which would have had a minimal impact in 1983 and 1984.

Joe Leko
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To enhance flood control, we suggest the county work with the owners of the Rocky Ford Reservoir Company; the reservoir could be operated to reduce flow from the reservoir in the spring runoff period by releasing water earlier when the flows are lower. The flow at the gage north and west of Minersville averages less than 400 acre-feet per month from January thru April. With the information available now from the NRCS and the National Weather Service, the reservoir level could be lowered in those early winter and spring months in anticipation of runoff. Doing this could also enhance the groundwater recharge that takes place naturally in the Beaver River channel below the dam.

It appears to me you have a decision to make and a couple of ways you can go. You can decide to simply divert the river, move it to the recharge area, strip and clear the area, and see what happens. To do this you need to work with the State Engineer's office to get a right to divert the water and also with land owners involved in the canal and recharge area. Or, you could move a little more cautiously and prepare a test recharge area and under a controlled situation move water into that area, increasing or decreasing to determine the maximum amount, and monitor what happens.

As you decide what you're going to do, you have a number of resources; we continue to be a resource for you as are the NRCS and the county. You've done a good job in keeping agencies and people informed and I would encourage you to continue doing that. We are waiting for well logs from you that we will analyze and also we'll obtain well logs from the State Engineer so we can plot a geologic profile. This will help us to determine the nature of the alluvial fill between Minersville and Milford and what the potential is for recharging the areas from which you pump.

Please let me know the direction you choose to proceed and what we can do to help you.

Respectfully,



Dennis J. Strong, P.E.
Assistant Director

cc: Doug Carriger
Howard Roper
Harold Shirley
Warren Peterson
Kerry Carpenter