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April 5, 1991

Salt Lake Valley Ground Water Users:

Enclosed is a final version of the interim ground-water management plan for Salt Lake Valley. In preparing this version of the plan, we have attempted to incorporate many of the comments that were submitted. The comments that were submitted reflect a great deal of thought and interest and we appreciate them very much.

There were many good comments made and issues raised which cannot be specifically included or addressed, but which are governed by existing water law. For example, several agencies questioned whether it is fair to those water suppliers with later priority rights who have drilled and developed their wells to be impacted or denied water when earlier priority water rights are finally developed. Strict adherence to the appropriation doctrine and current law would require the rights to be administered in accordance with their priority dates-- which, for pre-1935 rights, would be the date the water was placed to beneficial use; and, for rights 1935 and after, generally the date of the application. The Division has no choice to do otherwise, unless the law is changed or all ground-water users agree to another distribution method.

In this version of the plan, we have taken out the three year moving average in distributing the allowable withdrawals. Several entities requested that we increase the three year moving average to five or six years. We agree with this suggestion and would anticipate using the concept after the U.S. Geological Survey study is complete. With the interim plan covering only 3 to 5 years, this concept will not be applicable during this period. In reviewing the allowable withdrawal figures which we presented in the earlier version of the plan, they are perhaps somewhat optimistic, and will be adjusted accordingly depending upon the results from the current study. During this interim period, it is our proposal that the figures set forth on the map which accompanies the plan be the maximum withdrawals that shall be allowed from any particular management area during any calendar year.

Several entities suggested that a standard form be developed for the annual reporting requirement. The Division of Water Rights currently conducts the annual Water Use Survey for the major public and industrial water suppliers in the state. Under the provisions set forth under paragraph No. 8 of the interim plan addressing the annual reporting requirements, it would appear that those who annually submit an accurate and complete Water Use Data Form would fulfill the requirements under this paragraph. Enclosed is a copy of the water use form that is presently being used. If you have any problem with this approach please let us know.

Some of the water users suggested that the reporting of water levels should be mandatory. However, several entities expressed concern that their wells are not equipped to measure water levels, and we also have some reservations about the quality of the data. Therefore, we are asking the water users to provide us with water level data if it is readily available and such measurements should be made on or about the first of each month. We will evaluate the quality of the data over the next two years, after which a decision will be made whether to make it a part of the annual data report.

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During this next year, we will attempt to improve our data collection and reporting for Salt Lake Valley. Hopefully, we will be able to provide you additional data and analysis concerning water use and other important ground-water issues throughout the valley. We are also examining our monitoring network which we operate in conjunction with the U.S. Geological Survey and plan to make modifications to ensure that the data necessary to administer this plan is collected. We plan to hold annual updates to review the progress of the study and the data collected during the previous year. You will be notified of these meetings and they will be held in early spring, beginning next year.

Several water suppliers expressed concern about the possibility of a "drilling war" in the valley. We are also very concerned about this and do not want to encourage the needless drilling of additional wells or promote excessive ground-water withdrawals. In fact, we would caution that before any new large production wells are drilled, the need for such wells be critically reviewed.

We encourage the water users to work together in finding valley wide solutions to everyone's problems. For example, there may be opportunities for the conjunctive use of surface and ground-water supplies and also artificial ground-water recharge projects. If such efforts are done in such a manner as to promote the wise use of our water resources, while at the same time protecting the water rights of others, we are very supportive of such efforts.

We intend to manage and administer the ground-water resources in Salt Lake Valley according to the enclosed interim ground-water management plan. Although we believe it lays a good foundation for such management, undoubtedly there is a great deal of judgment which will have to be used as this plan is implemented. We will strive to do so in a fair and equitable manner. If at any time you would like to discuss any aspect of the plan or the manner in which it is being administered, please feel free to contact the Division.

Sincerely,

  
Robert L. Morgan, P.E.  
State Engineer

RLM/wk

Enclosures

April 5, 1991

SALT LAKE VALLEY  
INTERIM GROUND-WATER MANAGEMENT PLAN

BACKGROUND

The ground-water aquifer in Salt Lake Valley is an important source of water. Currently, ground water provides approximately 130,000 acre-feet annually for municipal, industrial, irrigation, domestic and stock watering purposes. The ground water in the principal aquifer is generally of excellent quality on the east side of the valley, with the quality becoming poorer as it moves towards the Great Salt Lake.

During the past several years, the State Engineer has been studying the ground-water resources and water rights in Salt Lake Valley. Based upon the State Engineer's review, it is his opinion that certain actions need to be taken now to ensure that the resource does not become contaminated as a result of excess withdrawals. A study is currently being conducted by the U. S. Geological Survey in cooperation with the Division of Water Rights, Division of Environmental Health, and the public water suppliers in the valley. The purpose of this study is to determine the effects of ground-water withdrawals on water quality and improve the existing ground-water model. This study is scheduled to be completed in 1994. Because of the importance of this resource and the substantial economic investment that has been made and is planned, the State Engineer believes that an interim ground-water management plan is needed to provide protection and guide development of the ground-water resource during the next four to five years.

The objective of this interim ground-water management plan is to allow full utilization of the resource, within the constraint that water quality is not unreasonably affected. In proposing this interim management plan, the State Engineer has taken into account his statutory authority and has attempted to work within these limits. These are interim guidelines and are subject to amendment as additional data becomes available.

1. Volume of Withdrawals. Ground-water withdrawals from the principal aquifer in each management area, as denoted and set forth on the attached map, shall not exceed the allowable annual withdrawal in any calendar year. The combined allowable annual withdrawals for management areas 1 through 5, inclusive, is approximately the amount of high quality recharge from bedrock and other sources. Withdrawals should be distributed over the valley to ensure that localized interference and water quality problems do not result. In administering the water rights in the ground-water

basin, the State Engineer will distribute the water in accordance with the priority dates of the respective rights. In distributing the water in accordance with priority, the State Engineer will also consider the following factors:

- A) Cumulative Effects of Withdrawals. The cumulative effects of withdrawals from wells in a particular area on both water quantity and quality will be considered. If it is determined that such withdrawals unreasonably affect the water quality of the principal aquifer, withdrawals in that area may be limited even though total withdrawals in the management area do not exceed the allowable withdrawal limit.
- B) Isolated Wells. A well located in an isolated area and which does not significantly affect other water rights or the water quality of the principal aquifer may be permitted to divert water, even though in other portions of the management area or valley, wells with an earlier priority date have been ordered to stop diverting water.
- C) Withdrawals from Shallow Aquifer. Additional withdrawals above the allowable withdrawal limits set forth on the map will be allowed if such withdrawals are from the shallow aquifer, provided that such withdrawals do not have an adverse affect on other water rights.

2. Applications to Appropriate Water and Segregation Applications. Applications to appropriate water from the principal aquifer will be considered for single family uses in non-subdivision areas where water is not available from a water supply system. Applications to appropriate water will be limited to a maximum annual diversion of 1.0 acre-foot. The uses under such application shall not exceed the domestic purposes of one family, the irrigation of 0.10 acres, and/or the stock watering of a maximum of 10 head of livestock. Such rights shall be approved as fixed time applications for a ten-year period and upon the condition that when a public water system is available, the users will connect to the system, the well will be sealed, and the water right abandoned. Upon expiration of the ten-year period, if a public water supply system is still not available, such application will be extended upon proper filing of a request for extension.

All future segregation applications will be critically reviewed on their individual merits, according to current statutory provisions.

3. Extensions of Time for Applications to Appropriate Water. The State Engineer will critically review all future extension requests on approved applications to appropriate water pursuant to Section 73-3-12 of the Utah Code. In reviewing extension requests,

if the State Engineer finds unjustified delays or a lack of due diligence, he may grant the request in part (including a reduction in the quantity of water available under the application), reduce the priority date, or deny the extension of time request.

4. Change Applications. Change applications will be considered and evaluated on their own individual merits. In considering change applications, the State Engineer will quantify and determine, among other statutory considerations, whether the proposed change will adversely affect the water quality of the ground-water basin. Change applications which propose to transfer water rights historically supplied from the shallow aquifer to the principal aquifer will not be approved.

The secondary objective of the interim ground-water management plan is to guide future development and to uniformly distribute the ground-water withdrawals over the valley. In accordance with this objective, the State Engineer has developed a map showing the maximum allowable withdrawals for nine management areas throughout the valley. The allowable withdrawal figures set forth on this map will be used as a guide to determine whether transfers will be allowed into a particular area.

5. Proof of Appropriation/Change. In conjunction with all proof of appropriation or proof of change, the State Engineer shall require that the total volume of water to be certificated has in fact been developed and placed to beneficial use. The requirement shall apply to all applications regardless of use. The State Engineer will review the total operation of a system or water user to ensure the intent of this requirement is met.

6. Well Spacing and Flow Rate. Well spacing and maximum flow rates of wells drilled after the adoption of this management plan shall be determined and shall be regulated so a well, when pumped at its maximum permitted flow rate, will not cause more than 12 feet of drawdown on any well with an earlier priority date. Users in a particular area may enter into an agreement to provide a variance from this requirement if it does not interfere with third party rights and also subject to approval by the State Engineer.

7. Metering. All wells which withdraw or could potentially withdraw, within the water right limitations, 50 acre-feet or more annually shall be equipped with a meter capable of measuring the instantaneous flow rate and total volume pumped through the meter. For wells which withdraw or could potentially withdraw, within the water right limitations, 250 acre-feet or more annually, the owner shall also submit an annual water quality report for total inorganics. If monthly well water levels are taken, it is requested that such measurements also be submitted. Water level measurements should be made on or about the first day of each month.

8. Annual Reporting. All water users meeting the criteria under number 7 above shall submit an annual report to the State Engineer by March 1 of each year setting forth the quantity of water diverted for each of their wells during the previous calendar year, along with the water quality reports, if applicable. Such reports shall summarize the monthly withdrawals for each well operated. If the water user submits an accurate and complete annual Utah Water Use Data Form it shall fulfill this requirement.

# Proposed Distribution of Ground-water Withdrawals in Salt Lake Valley, Principal Aquifer

