April 9, 2001

RE: Final draft of the Salt Lake Valley Ground-Water Management Plan; comments due June 8, 2001

Dear Water User:

In 1991 the Division of Water Rights (division) implemented an interim ground-water management plan for Salt Lake Valley. That plan was intended to address the over appropriation of ground-water rights and protect the quality of the resource until a permanent management plan could be created. For the past few years the division has been developing a final, permanent ground-water management plan that meets the original objectives of the interim plan and adds some measure of protection to existing water rights while promoting wise use of the resource. This has been a public process in which various drafts of the plan have been presented to the water users and then modified, following their responses and additional review by division staff.

The attached draft of the Salt Lake Valley Ground-Water Management Plan integrates several changes based upon water users' comments since the last public meeting held on May 17, 2000 as well as those changes proposed by division staff. It is presented here for your review and commentary. The significant changes made to the plan since the last draft are outlined below.

1. **Addition of restrictions for ground-water withdrawals in the southwestern portion of the valley**. This section (2.2.4) was added to the plan to allow for the ground-water remediation efforts planned by Kennecott Utah Copper Corporation.
2. **Addition of allowance for change applications that propose to transfer water rights from a restricted management square to another restricted management square with a lesser potential withdrawal**. Provided that certain criteria are met (see section 2.3(5)), allowing these point of diversion changes may help to better distribute withdrawals throughout the valley.
3. **Addition of allowance for change applications that propose to transfer water rights a limited distance**. This guideline (section 2.3(6)) was added to allow water users a sufficient distance to find replacement well locations.
4. **Elimination of requirement for total volume certification in proofs of appropriation and proofs of change**. From a water management point of view, it is important for the division to have a realistic accounting of the perfected water rights.

Although we have removed this specific provision from the plan, certification of proofs may still be subject to a volume limitation under certain circumstances.

5. **Elimination of critical review of segregation applications**. Segregation applications will still be subject to all relevant statutes. We have removed reference to segregation applications from the plan in order to shorten and simplify the plan.
6. **Elimination of water quality reporting requirement for water users that have a potential withdrawal of 250 acre-feet or more**. It was determined that enough water quality information is currently collected through other government agencies to adequately monitor water quality changes in Salt Lake Valley.
7. **Changes in Central Region boundaries.** The Central Region boundary was extended south to the Jordan Narrows along a narrow corridor enveloping the Jordan River (Figure 1). This change better represents the ground-water discharge area of the valley.
8. **Elimination of the "ten-feet-in-five-years" water level decline criterion for determining excessive localized withdrawals**. It was determined that this specific criterion is not applicable to all areas of the valley. That is, in some localized areas of the valley a drop in ground-water levels of ten feet in five years may be indicative of excessive withdrawals, but in other areas, may only indicate natural water level fluctuations. Subsequently, we have replaced the ten-feet-in-five-years rule with some general guidelines for determining where excessive withdrawals are occurring (2.2.2). Any restrictions on pumping would occur following a public hearing.

Please submit your comments and suggestions, in writing, before June 8, 2001. If there are serious concerns with any provisions of the plan, we are willing to meet with individual water users to try and resolve the issues before a final plan is implemented. If the water users do not have significant concerns with this proposed draft of the plan, we hope to implement it within the next ninety days.

Thanks for your interest and participation in developing a ground-water management plan for Salt Lake Valley. If you need additional information or have question about any aspect of the plan, please contact this office.

Sincerely,

Robert L. Morgan, P.E.
State Engineer

Enclosure: Salt Lake Valley Ground-Water Management Plan – Final Draft, April 9, 2001

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1.0 Introduction

The purpose of this document is to present the state engineer's proposed policy for the management of the ground-water resources of Salt Lake Valley. The objectives of this ground-water management plan are to promote wise use of the ground-water resource, to protect existing water rights, and to address water quality issues and over-appropriation of ground water in the valley. In proposing this ground-water management plan, the state engineer is using statutory authority to administer the measurement, appropriation, and distribution of the ground water of Salt Lake Valley. The intent of this plan is to provide specific management guidelines under the broader statutory provisions within Title 73 of the Utah Code.

For the purposes of this plan, the Salt Lake Valley consists of the unconsolidated basin-fill material generally bounded by the Wasatch Range to the east, Oquirrh Range to the west, Great Salt Lake to the north, and Traverse Mountains to the south. This area is illustrated in Figure 1.

2.0 Proposed Salt Lake Valley Ground-Water Management Plan

The following policy guidelines are hereby proposed:

2.1 New Appropriations

The Salt Lake Valley is closed to new appropriations of ground water from the principal aquifer with the exception of single-family uses in non-subdivision areas where water is not available from a public water supply system. Applications to appropriate water will be limited to a maximum annual diversion of 1.0 acre-foot. The uses under such applications shall not exceed the in-house 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.

2.2 Ground-Water Withdrawal Limits

In order to fulfill the objectives of this management plan, guidelines are being proposed to help distribute ground-water withdrawals. If excessive withdrawals occur, the state engineer will distribute the water in accordance with the priority dates of the applicable water rights using the following guidelines:

2.2.1 Safe Yield from the Principal Aquifer

Salt Lake Valley has been divided into four regions: western, eastern, central, and

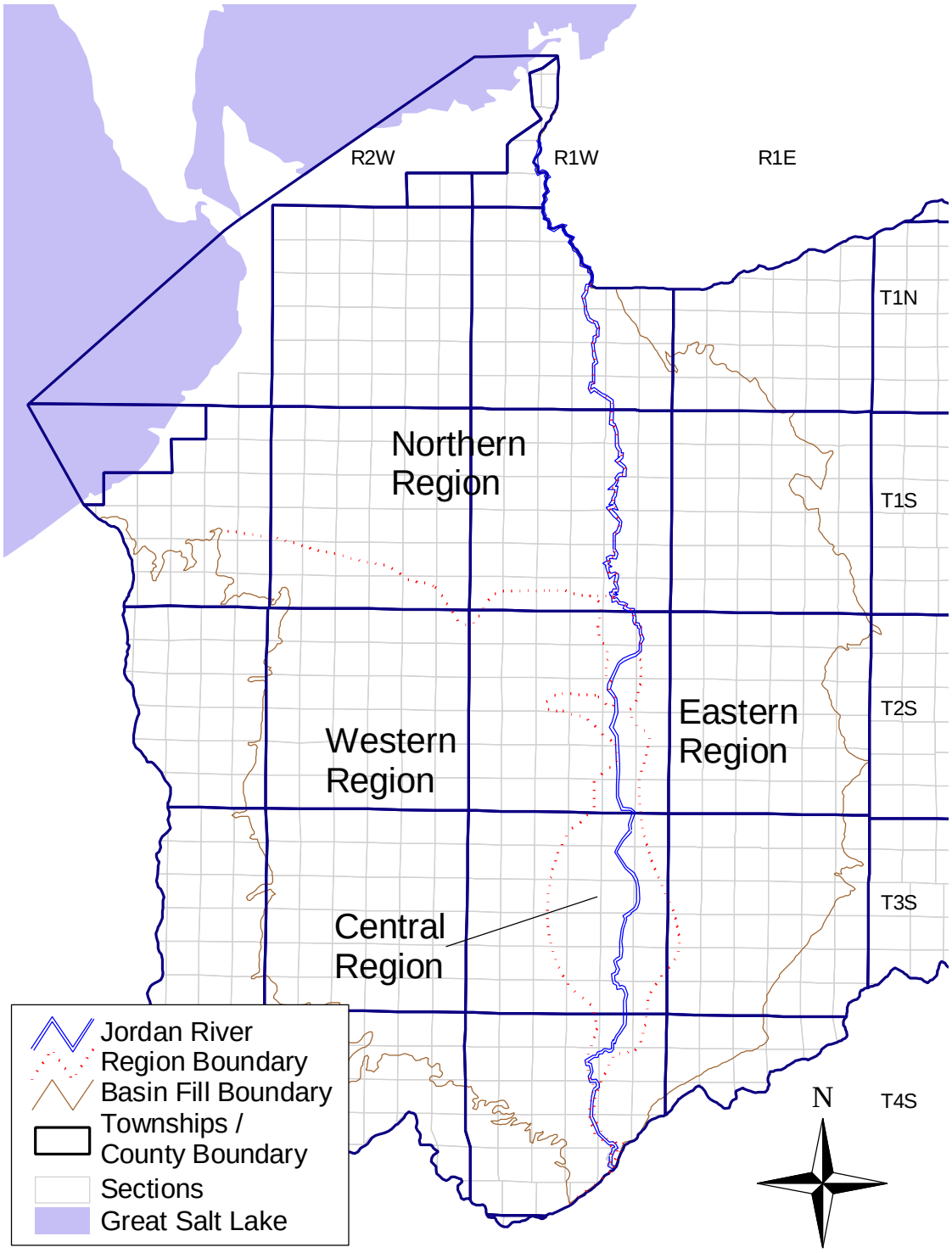

Figure 1. Salt Lake Valley Groundwater Management Plan Regions

northern as shown on Figure 1. The state engineer may limit the quantity of water withdrawn in these regions so that the average amount of water withdrawn over the long term does not exceed the safe yield. The safe yield of each region has been estimated and is shown in Table 1 below.

Table 1. Regional Safe Yields

Region	**Safe Yield (acre-feet per year)**
Western	25,000
Eastern	90,000
Central	20,000
Northern	30,000

2.2.2 Localized Ground-Water Withdrawals

The state engineer may limit withdrawals in any area of the valley where excessive withdrawals are causing definite and significant harm to the aquifer system. The state engineer recognizes that there are many different factors to consider in determining when and where this is occurring. Some of the relevant factors to consider are:

- ground-water level trends
- trends in ground-water withdrawal quantities
- changes in water quality
- recent climatic conditions
- local hydrogeologic conditions
- impact on existing water rights

Upon identifying areas where excessive withdrawals may be causing harm to the aquifer and after public review and commentary on applicable data, the state engineer may limit the withdrawals in that area according to the priority dates of each applicable water right and all applicable state statutes. The total quantity of ground water restricted from withdrawal will correspond to at least the quantity necessary to preclude further harm to the aquifer system. Further pumping restrictions may be imposed if harm to the aquifer system worsens. Pumping restrictions may also be lifted in part or in whole after the aquifer system has recovered to an acceptable level, provided no future reoccurrences of the conditions which caused the harm are anticipated.

2.2.3 Ground-Water Withdrawals From the Shallow Aquifer

Additional withdrawals above the allowable withdrawal limits set forth in this section will

be allowed if such withdrawals are from the shallow aquifer, provided that such withdrawals do not have an adverse affect on the aquifer or on other underground or surface-water rights.

2.2.4 Ground-Water Withdrawals From the Southwestern Portion of the Valley
A portion of the aquifer in the Southwestern part of the valley is being remediated by the removal of contamination associated with past mining practices. As part of the remediation effort, Kennecott Utah Copper Corporation (KUCC) has committed to assist affected water users obtain adequate replacement water if adversely affected. Applications in this area which propose to appropriate water, change the point of diversion, or drill a replacement well will be critically reviewed so as not to interfere with the remediation process. In conjunction with this, KUCC has committed to work with applicants to determine if there is a feasible well location, depth, and pumping rate for future wells in the contaminated area. The contaminated area is defined as extending 3000 feet from the known 250 mg/l sulfate isoconcentration contour. The approximate boundary for this area is shown on Figure 2.

2.3 Applications to Change the Point of Diversion, Place of Use, and/or Purpose of Use
Each change application will be evaluated based upon its own merits and in accordance with applicable statutes. In addition, the evaluation may consider – but will not necessarily be limited to – potential impact on existing water rights, the aquifer system as a whole, and overall water quality. The following guidelines will be used when evaluating change applications:

1) Change applications that propose to transfer water rights historically supplied from the shallow aquifer to the principal aquifer will not be approved.
2) Change applications that propose to transfer water rights into the eastern region from another region or into the western regions from another region will not be approved.
3) Change applications that propose to transfer water rights into a restricted area[1] will not be approved.
4) Change applications that propose to transfer water rights into a two section by two section management square[2] where the potential withdrawals, under the existing water rights, exceed the limits set forth in Table 2 below and shown in Figure 2 will only be considered if the applicant can show that:
    a) There is reason to believe that existing water rights will not be impaired.
    b) Compensation and/or adequate replacement water will be provided to existing water rights if impairment occurs.
    c) Additional ground-water withdrawals will not significantly reduce water levels, degrade the water quality, or otherwise negatively impact the aquifer.

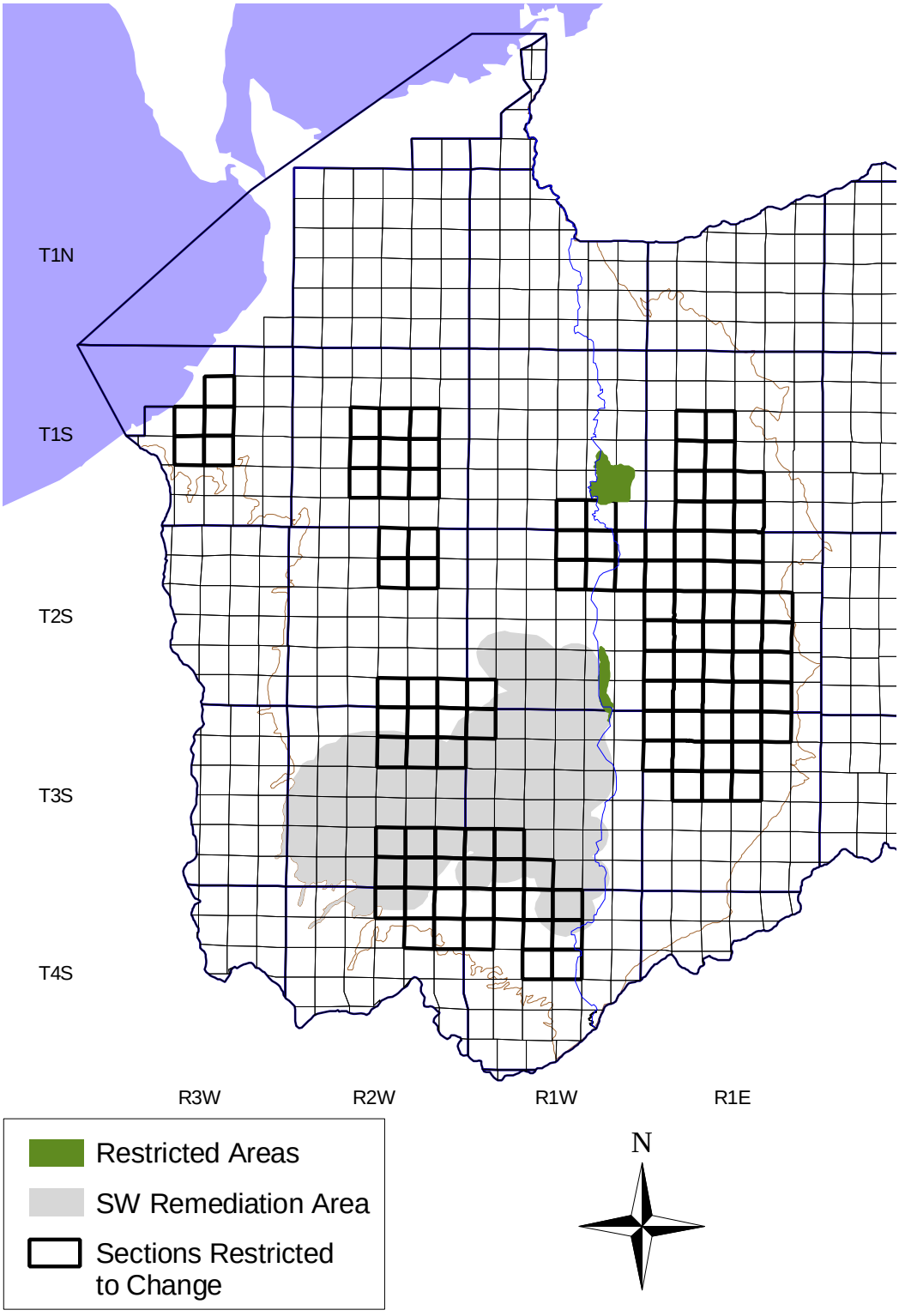

Figure 2. Restricted Areas, SW Remediation Area, and Sections Restricted to Change

Table 2. Potential Withdrawal Limit Guidelines for Evaluation of Change Applications

Region	Maximum Potential Withdrawal per Management Square (acre-feet per year)
Western	4,000
Eastern	12,000
Central	6,000
Northern	6,000

5) Change applications that propose to transfer water rights from a restricted management square with a greater potential diversion to a restricted management square with a lesser potential diversion may be approved provided that the potential diversion in the hereafter management square is at most 75% of the potential diversion of the heretofore management square and the criteria listed under items 1-4 above have been met.

6) Change applications that propose to drill a replacement well within a distance of 2640 feet from the original point of diversion may be approved provided that the criteria listed under items 1-4 above have been met.

2.4 Well Spacing and Flow Rate

Each new well shall be designed, constructed, and operated so that, when pumped at its maximum flow rate, it will not cause more than 12 feet of draw down on an existing well. 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 upon approval of the variance by the state engineer.

2.5 Extensions of Time for Water Right Applications

The state engineer will critically review all future extension requests on approved applications to appropriate or change water pursuant to Section 73-3-12 of the Utah Code. When reviewing extension requests, if unjustified delays or a lack of due diligence is found, the state engineer may reduce the priority date, grant the request in part, or deny the extension of time request.

2.6 Ground-Water Remediation Projects

The state engineer will evaluate each proposed ground-water remediation project based upon its own merits. In order to allow for remediation of ground water the state engineer may support withdrawal amounts in excess of those withdrawal limits outlined in Table 1 above, or allow changes that would exceed the limits set forth in Table 2 above if it is determined to be in the best interest of the public and has a specific project life.

2.7 Aquifer Storage Recovery (ASR)

The state engineer will evaluate each proposed ASR project based upon its own merits. In general, withdrawals credited from aquifer injection will not count towards the withdrawal limits outlined in Table 1 above.

2.8 Monitoring Activities and Aquifer Status Update

The Division of Water Rights will monitor water quality reports submitted by water users to the Division of Environmental Quality and periodically give an updated, valley-wide water quality summary. Additionally, the division will provide water use information and will update the water rights priority lists periodically. Finally, the division will review new pertinent data that further, or more accurately, defines the hydrogeology of Salt Lake Valley and will modify the plan if necessary. Any modifications to the plan would occur in consultation with water users and other interested parties.

Endnotes

1. *Restricted Areas*
There are two restricted areas currently in the plan that are associated with the following contaminated sites as shown in Figure 1:

- Vitro Tailings Site
- Sharon Steel Site

In order to protect the quality of the water by preventing changes in the hydraulic gradient and mobilization of contaminants at these contaminated sites, the transfer of water rights into these areas will not be allowed. Restricted areas are based on available data and may change as new data is obtained. New restricted areas may be added to the plan upon request to the state engineer if an evaluation of the data supports such designation, and the public has had an opportunity to review the data and comment on the proposed designation.

2. *Management Squares*
A management grid has been set up based on the U.S. Public Land Surveys system. Under this system, the land is divided into township, range, and section. Each section is a square measuring approximately one mile on each side. In this management plan, one management square consists of any four sections, in a two section by two section configuration. Using this method, the management squares overlap each other such that each section is actually part of four different management squares. Figure A, below, illustrates how section 11 is part of four different management squares. In the evaluation of change applications, the maximum potential withdrawal of the four management squares will be considered.

3	2	1
10	11	12
15	14	13

3	2	1
10	11	12
15	14	13

3	2	1
10	11	12
15	14	13

3	2	1
10	11	12
15	14	13

Figure A. Management Squares for Evaluating Change Applications