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Lee Sim

April 30, 1992

Dear Water Users:

It has been nearly a year since we held the first public meeting to announce the proposed distribution plan for the Utah Lake drainage basin. During this time we have held four public meetings and submitted two drafts of the plan to the water users for their comments. We have received some very good comments and we have reviewed them very carefully and incorporated them into the plan, as appropriate.

Based upon the input that we have received and the comments that were submitted regarding the October 15, 1991 draft of the proposed distribution plan, the State Engineer is proposing the following course of action:

- A final draft of the proposed distribution plan will be submitted to the water users for their review and comment (enclosed).
- The Division of Water Rights staff will ensure that all measuring devices are installed and operational which are necessary to implement the plan. In addition, the Division will provide training to the river commissioners to ensure that they understand their role and responsibility in distributing water under the plan.
- During the period from May through September, 1992, the Division will simulate the effects of the distribution plan on the hydrologic system using actual water supply data. The results of this study and any proposed modifications to the plan will be presented to the water users at a public meeting in the fall of 1992.
- All comments on the April 30, 1992 final draft of the distribution plan should be submitted by September 15, 1992.
- A public meeting will be held in late September or early October, 1992 to review the activities during the past six months. Any suggested modifications to the proposed distribution plan will be discussed.

Water Users  
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- Issue a final interim distribution plan to be implemented for a one year period from November 1, 1992 to October 31, 1993.
- The plan will be administered on a yearly interim basis over three to five years, depending upon the water supply conditions and data collected. At the end of each year, the State Engineer will evaluate the data and modify the interim plan as necessary.

Enclosed is a final draft of the proposed distribution plan for the Utah Lake drainage basin for your review and comment. Comments should be submitted to the Division of Water Rights by September 15, 1992. We have not made wholesale changes to the distribution plan or the attachments. From the comments which were submitted concerning the October 15, 1991 draft there appeared to be several issues that were unclear and we have attempted to clarify them.

We realize that the distribution plan does not resolve all of the issues. As we have indicated previously, this is NOT an adjudication and a number of the issues that have been raised will have to be addressed during the general adjudication procedure. We are very confident that the distribution plan will facilitate future water management. From our perspective, it makes more sense to begin trying to formulate solutions now, rather than wait until we are confronted with a crisis. We are hopeful that our proposed plan will update distribution practices to reflect current water use practices within the parameters of existing water rights.

As we work through the process as set forth above, we will be happy to meet with you to discuss any aspect of the proposed distribution plan. We appreciate your interest and participation in this process and will keep you apprised of any future developments concerning this matter.

Sincerely,



Robert L. Morgan, P.E.  
State Engineer

RLM/wk

Enclosure

**WATER DISTRIBUTION PLAN FOR THE  
UTAH LAKE DRAINAGE BASIN**

**1.0 Introduction**

1 Utah is experiencing significant growth in those counties  
2 located along the Wasatch Front. Associated with this growth we  
3 are seeing more demands being placed on our limited water  
4 resources, such as the conversion from irrigation to municipal  
5 water use.

6 With the projects currently under construction and those  
7 planned for the future, it would appear that Utah Lake and its  
8 major tributaries will be facing a number of changes in the manner  
9 in which these systems have historically been operated. This is  
10 not to imply that such changes will have a negative impact, rather  
11 with proper planning these changing water use practices can be  
12 handled and existing water rights protected. In addition, there  
13 are a number of major transbasin diversions into the Utah Lake  
14 drainage which need to be better regulated. Diversions between the  
15 basins or subbasins presently total over 300,000 acre-feet  
16 annually.

17 There have been a number of requests made of the State  
18 Engineer in recent years to make decisions on matters which  
19 significantly affect water distribution in the Utah Lake drainage  
20 basin. After reviewing this matter, it appears that some direction  
21 is needed to better clarify the relationship between water rights  
22 in the basin; particularly between storage rights in Utah Lake and  
23 storage rights on the upstream tributaries. The State Engineer  
24 believes that in order for the river commissioners to properly  
25 administer the numerous diversions, the extent of the rights and  
26 their relationship, one with another, needs to be fully understood  
27 by everyone involved. In simple terms, we need to begin to manage  
28 the water rights on the Provo River, Spanish Fork River, Utah Lake,  
29 Jordan River, and other sources in the basin as one system. The  
30 objective is not to remove local control or involvement in the  
31 management of the waters. Rather, the objective is to ensure the  
32 equitable distribution of water, according to the respective water  
33 rights, and to address problems from a more regional point of view.

34 The State Engineer is submitting this proposed distribution  
35 plan under authority of Sections 73-2-1, 73-5-1, -3, and -4, Utah  
36 Code Annotated 1953, to distribute the waters in the Utah Lake  
37 drainage basin. We realize that some of the issues which are  
38 presented in this document are beyond our administrative authority  
39 in distribution matters, and it is not our intent to resolve such  
40 issues in implementing this plan. Such items will be addressed and

1 ultimately resolved in the court adjudication process as set forth  
2 under Chapter 4, Title 73, Utah Code Annotated. This proposed  
3 distribution plan is NOT part of the adjudication process, nor will  
4 it prejudice anyone's claims during such action.

5 The future elevation of Utah Lake is of concern to many  
6 people. In this regard, the State Engineer does not have lake  
7 management authority. Under the distribution plan we are not  
8 requiring Utah Lake to be operated at a lower level. Rather, we  
9 are proposing to regulate the distribution of water according to  
10 existing water rights, as required by statutes.

11 This document is intended to establish a general framework  
12 within which the respective rights can be administered. The  
13 distribution guidelines follow the priority doctrine of "first in  
14 time, first in right"; and where rights are equal in priority, each  
15 of those rights receives a proportionate share of the total water  
16 available to divert under that priority. We realize that  
17 flexibility will be required as the plan is implemented, and many  
18 problems that arise will need to be handled on a case-by-case  
19 basis. We also note that there are many agreements between water  
20 users, and such agreements will be taken into account, when  
21 appropriate. Transbasin diversions (imported water) into the Utah  
22 Lake drainage will be administered in accordance with their  
23 individual water rights.

24 The issues presented in this document have been divided into  
25 five subject areas:

- 26 • Water rights in Utah Lake
- 27 • Relationship between storage rights in Utah Lake and  
28 upstream reservoirs
- 29 • Direct flow water rights
- 30 • Other distribution issues
- 31 • Issues to be resolved through the general adjudication  
32 procedure

33 For each subject there is a background section and a distribution  
34 guidelines section. The background section is intended to give the  
35 reader some general information about the issue and some  
36 justification for the distribution guidelines.

## 37 2.0 DEFINITIONS OF TERMS USED IN PROPOSED DISTRIBUTION PLAN

38 Active Storage (Utah Lake): The storage capacity of Utah Lake  
39 between compromise elevation and 9.2 feet below compromise (the  
40 maximum active storage is 741,700 acre-feet).

1 Adjudication: The judicial process by which all water right claims  
2 in a given hydrologic area are evaluated, defined and then  
3 established by court decree pursuant to Chapter 4, Title 73, Utah  
4 Code Annotated.

5 Booth Decree: A 1909 court case: Salt Lake City Corp., Utah and  
6 Salt Lake Canal Co., East Jordan Irrigation Co., North Jordan  
7 Irrigation Co. and South Jordan Canal Co. (Plaintiffs) versus J. A.  
8 Gardner and A. J. Evans (Defendants). The Booth Decree covered  
9 water rights in Utah Lake and the Jordan River.

10 Compromise Elevation: The maximum legal storage elevation in Utah  
11 Lake. Compromise elevation was first established in 1885, and was  
12 recently modified in 1985 to be 4489.045 feet above mean sea level.  
13 When the lake is at this elevation, the total storage capacity is  
14 approximately 870,000 acre-feet, of which 741,700 acre-feet is  
15 active storage capacity and 128,300 acre-feet is inactive storage  
16 capacity. Whenever the level of Utah Lake is above the compromise  
17 level, the control gates are required to be fully opened. The  
18 exception to this rule occurs when fully opening the control gates  
19 causes the Jordan River to exceed a maximum flow rate that is  
20 specified in the 1985 Compromise Agreement (Civil No. 64770)

21 Delivery Schedule: A schedule listing the allowable diversion rate  
22 in cubic feet per second per acre, for specific time periods during  
23 the irrigation season.

24 Direct Flow Right: A water right that diverts water from a surface  
25 source according to its respective priority date.

26 Distribution Plan: Guidelines for the distribution of water within  
27 a drainage basin or hydrologic system.

28 Diversion Requirement: The amount of water needed to satisfy the  
29 beneficial uses set forth under a water right.

30 Inactive Storage (Utah Lake): The portion of Utah Lake that is not  
31 accessible to the pumps, and therefore, cannot be diverted. The  
32 inactive storage is currently estimated to be 128,300 acre-feet  
33 (9.2 feet below compromise)

34 Irrigation Duty: The annual quantity of water in acre-feet per  
35 acre considered to be reasonably necessary to meet the beneficial  
36 use requirements of irrigated land. The irrigation duty takes into  
37 consideration the consumptive use requirements of crops, irrigation  
38 efficiency and conveyance losses.

39 Morse Decree: A 1901 decree resulting from a series of court  
40 cases: Case No. 2861 - Salt Lake City Corp. (Plaintiffs) versus  
41 Salt Lake City Water and Electrical Power Co. (Defendant); Case No.  
42 3449 - J. Geoghegan (Plaintiff) versus Salt Lake City  
43 Corp. (Defendant); and Case No. 3459- J. Geoghegan (Plaintiff)

1 versus Utah and Salt Lake Canal Co. (Defendant). This decree  
2 defined the water rights on the Jordan River with respect to each  
3 other.

4 Priority Storage: Legal storage under a water right. Such water  
5 stored is not subject to call by other right(s) and can be diverted  
6 and used in accordance with the right.

7 Primary Storage (Utah Lake): The first 125,000 acre-feet of active  
8 storage in Utah Lake which is set aside to satisfy the diversion  
9 requirement of the primary rights in Utah Lake in years of  
10 successive drought. See figure 1.

11 Primary Storage Rights (Utah Lake): The water rights defined in  
12 the Morse decree to have storage rights in Utah Lake.

13 Proposed Determination Book: The State Engineer's report and  
14 recommendation to the district court in general adjudication  
15 proceedings of all the water rights within the adjudication  
16 drainage area.

17 Provo River Decree: A 1921 decree resulting out of the court case:  
18 Provo Reservoir Company vs. Provo City (Case No. 2888). The Provo  
19 River decree defined certain water rights in the Provo River  
20 drainage.

21 Secondary Storage Rights (Utah Lake): The storage rights in Utah  
22 Lake established by applications to appropriate water and as  
23 confirmed by the Booth Decree.

24 Storage Right: The legal right to store water in accordance with  
25 a water right's respective priority date.

26 Subbasin: Individual drainage system within a larger drainage  
27 basin. For example, the Provo River system can be considered to be  
28 a subbasin within the larger Utah Lake drainage basin.

29 System Storage: The total active storage water in Utah Lake,  
30 excluding the primary storage, plus water stored in upstream  
31 reservoirs under junior priority date water rights. The maximum  
32 value of system storage is 616,700 acre-feet and varies during the  
33 year as shown in Table 3. System storage, whether in Utah Lake or  
34 upstream reservoirs, is subject to call to satisfy the diversion  
35 requirements of primary and secondary Utah Lake storage rights.

36 Real-time gages: A measuring device that allows instantaneous  
37 access to data.

38 Transbasin diversions: Imports or exports of water from one  
39 drainage basin or distribution system to another.

1 Welby-Jacob Memorandum Decisions: Seven memorandum decisions  
2 issued in 1989 by the State Engineer regarding change applications  
3 which provided for the transfer of high quality Provo River water  
4 from the Welby and Jacob districts of the Provo River Project for  
5 use by the Salt Lake County Water Conservancy District (SLCWCD).  
6 The water supply for the Welby and Jacob districts was replaced  
7 under both primary and secondary storage rights acquired in Utah  
8 Lake.

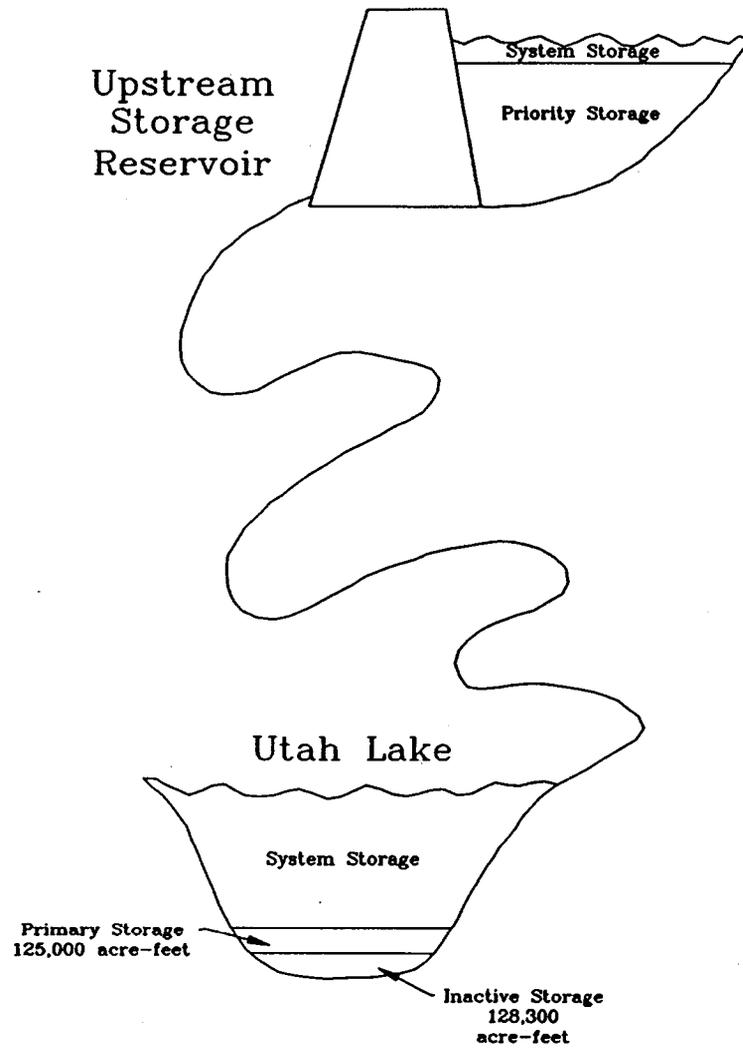


Figure 1 - Schematic drawing of various storage terms used in the Distribution Plan

### 3.0 Water Rights in Utah Lake

#### 3.1 Background

There is not a clear understanding of how the uses of Utah Lake water relate to the quantity of storage in Utah Lake. The approach set forth in this document looks at the water rights served from Utah Lake in terms of beneficial use, which is referred to as the "annual diversion requirement." Water in Utah Lake is stored in order for the users to meet their diversion requirement. Thus, the storage capacity of Utah Lake does not define the water rights. Rather, it is the quantity of water necessary to satisfy the beneficial uses that is the limit and measure of the water rights.

The relationship of one water right to another is also not generally understood. The water rights in Utah Lake were set forth in both the Morse (1901) and Booth (1909) decrees. The Morse decree identified two groups of water rights: 1) Direct flow rights on the Jordan River; and 2) Water rights in Utah Lake. The Booth decree (1909) allowed for additional appropriations of water from Utah Lake and set a maximum limit on the diversions under the storage rights that were set forth in the Morse decree. This maximum limit was 185,000 acre-feet annually and in part is based upon a 3.0 acre-feet per acre duty. In this proposed distribution plan, we refer to the rights that were defined in the Morse decree as primary storage rights, and all subsequent rights established under applications to appropriate water as secondary storage rights.

In 1989, the State Engineer approved a number of change applications, in conjunction with the so-called Welby-Jacob exchange, to transfer the use of water under the primary and secondary storage rights in Utah Lake. In evaluating these change applications, the sole supply irrigated acreage for each water right was determined. For the purposes of this document, the same sole supply acreages as set forth in the respective memorandum decisions, will be used to calculate the allowable annual diversion requirement. The acreage amounts used in this plan, and in the Welby-Jacob Exchange Project, are subject to adjudication by the court. This distribution plan does not purport to adjudicate these acreage amounts.

In the "Proposed Determination of Water Rights in Utah Lake and Jordan River Drainage Area, Salt Lake County, West Division" (Proposed Determination), the State Engineer has recommended an irrigation duty of 5.0 acre-feet per acre. This duty also appears reasonable for those lands located east of the Jordan River. The proposed determination book covering the west side of the Jordan River indicates that potential conveyance losses for canals over one mile in length are not included in the irrigation duty. Such losses are to be determined in a supplemental report to the court in conjunction with the general adjudication proceedings. Since

1 the potential conveyance losses have not been finalized, a  
2 diversion requirement of 5.0 acre-feet per acre is used to  
3 determine the total annual diversion requirement for the irrigation  
4 rights.

5 Before getting into the distribution guidelines, a review of  
6 some basic information on Utah Lake may be helpful. The total  
7 storage capacity of Utah Lake at compromise elevation (4489.045  
8 feet) is approximately 870,000 acre-feet. Of this, approximately  
9 128,300 acre-feet is inactive storage (verbal communication, Brad  
10 Gardner, Utah Lake-Jordan River Commissioner). The inactive  
11 storage elevation is 9.20 feet below compromise elevation. The  
12 active storage capacity of Utah Lake is 741,700 acre-feet. The  
13 average annual inflow (1951-90) to Utah Lake from all sources is  
14 about 726,000 acre-feet. Of this, 346,000 acre-feet is discharged  
15 to the Jordan River and about 380,000 acre-feet is lost to  
16 evaporation.

### 17 3.2 Distribution Guidelines

18 In distributing the waters of Utah Lake among the primary and  
19 secondary storage rights in the Lake, the following guidelines will  
20 be followed:

21 3.2.1 The annual diversion requirement for the primary and  
22 secondary storage rights in Utah Lake are as set forth in Table 1.

23 3.2.2 The water users of Utah Lake are responsible to maintain the  
24 pumps and channels in Utah Lake to allow water to be withdrawn from  
25 the lake down to 9.20 feet below compromise elevation.

26 3.2.3 In order to protect the primary storage rights during  
27 consecutive years of drought, the first 125,000 acre-feet of active  
28 storage capacity in Utah Lake shall be dedicated solely for the use  
29 of the primary storage rights when all other active storage has  
30 been used. This 125,000 acre-feet of storage is hereafter  
31 referred to as "primary storage".

32 3.2.4 The remaining 616,700 acre-feet of active storage in Utah  
33 Lake up to compromise level, which may be stored in Utah Lake or in  
34 upstream reservoirs (subject to call by Utah Lake water rights, as  
35 set forth under Section 4.2 of this document), shall be referred to  
36 as "system storage". System storage is to be used to supply the  
37 annual diversion requirements of both primary and secondary storage  
38 rights.

1 **Table 1 - Annual diversion requirement for primary and secondary**  
 2 **storage rights in Utah Lake. The quantities of water for the**  
 3 **irrigation rights are based on the irrigated acreages (sole supply**  
 4 **acreage) set forth in the Welby-Jacob memorandum decisions and an**  
 5 **irrigation duty of 5.0 acre-feet per acre. For the municipal and**  
 6 **industrial rights the allowable annual diversion as set forth under**  
 7 **the water right(s) was used.**

WR NUMBER	Primary Storage Rights (1870)	Irrigated Acreage	Acre-feet
59-3499	Utah and Salt Lake Canal Company	7,063.65	35,318
59-5269	SLCWCD <sup>1</sup> - Salt Lake County Water Conservancy District	2,071.01	10,355
59-3500	South Jordan Canal Company	4,850.05	24,250
59-5270	SLCWCD <sup>1</sup>	1,076.92	5,385
57-7637	East Jordan Irrigation Company	8,092.96	40,465
59-5268	SLCWCD <sup>1</sup>	1,587.04	7,935
59-3496	North Jordan Irrigation Company	1,069.99	5,350
57-5272	SLCWCD	2,099.72	10,499
5722	SLCWCD <sup>1</sup>		
57-7624	Salt Lake City	Municipal	11,000
57-7624	CUWCD	Municipal	25,000
59-3517	Kennecott Utah Copper Corporation	Ind	13,750
Total for Primary Rights			189,307
	Secondary Storage Rights	Acreage	Acre-feet
59-13	Utah Lake Distributing Co. (1908)	7,945.37	39,727
59-5271	SLCWCD <sup>1</sup>	687.81	3,439
57-23	Draper Irr. Co. & Sandy Canal Co. (1908)	2,100	10,500
59-5273	SLCWCD	400	2,000
59-14, 15 & 20	Central Utah Water Conservancy Dist. (Kenn. Storage Rights 1912) <sup>2</sup>	Ind	57,073
Total for Secondary Rights			112,739
Overall Total			302,046

28 <sup>1</sup> Rights/shares held by respective irrigation companies in behalf of Salt Lake County Water Conservancy  
 29 District by agreement dated September 19, 1988.

30 <sup>2</sup> Does not include any storage which may be claimed/allowed under 59-23

1 3.2.5 All water stored upstream which is subject to call under the  
 2 priority of the Utah Lake rights (system storage) shall be  
 3 delivered to Utah Lake, according to priority, when either the  
 4 active storage in Utah Lake is at or below 125,000 acre-feet or the  
 5 diversion requirements of earlier priority water rights in Utah  
 6 Lake are not satisfied.

7 3.2.6 When all the system storage in Utah Lake and upstream  
 8 reservoirs has been used, the secondary rights shall cease  
 9 diversions. At such time, the active storage in Utah Lake shall be  
 10 at or below 125,000 acre-feet.

11 3.2.7 After all of the system storage in Utah Lake and in upstream  
 12 reservoirs has been used, and secondary rights have ceased  
 13 diversions, the primary storage shall be allocated to the primary  
 14 rights in the following percentages and will be available on demand  
 15 within the constraints of the respective water rights:

16 Table 2 - The percentage of primary storage in Utah Lake allocated to each  
 17 primary water right.

WATER RIGHT NUMBER(S)	OWNER	
59-3499	Utah and Salt Lake Canal Company	18.7%
59-3500	South Jordan Canal Company	12.8%
57-7637	East Jordan Irrigation Company	21.4%
59-3496	North Jordan Irrigation Company	2.8%
57-7624	Salt Lake City	5.8%
59-5268/5273, 5722	Salt Lake County Water Conservancy District	18.0%
57-7624	Central Utah Water Conservancy District	13.2%
59-3517	Kennecott Utah Copper Corporation	7.3%

27 **4.0 Relationship of Storage Rights in**  
 28 **Utah Lake and Upstream Reservoirs**

29 **4.1 Background**

30 The relationship between upstream storage water rights and  
 31 storage rights in Utah Lake must be clarified so all of the storage  
 32 reservoirs within the Utah Lake drainage basin can be regulated in  
 33 accordance with their respective priority dates. The upstream  
 34 storage reservoirs have a unique relationship with Utah Lake  
 35 storage rights. This section addresses only the storage rights.  
 36 Direct flow rights are addressed independently in Section 5.

37 The upstream storage rights generally have later priority  
 38 dates than the Utah Lake storage rights, with only a few  
 39 exceptions. However, in analyzing the storage rights within the

1 basin, it appears that in most years, the existing storage  
2 reservoirs can divert and use water without impairing the prior  
3 rights in Utah Lake. Although during drought years, this has not  
4 always been the case.

5 The State Engineer has studied the historical practices and  
6 water supply conditions in the basin. From these studies, it  
7 appears that adequate safeguards can be developed to allow upstream  
8 reservoirs to divert and store water during most periods of time  
9 without impairing prior water rights. However, these safeguards  
10 generally require that predictions of the total water supply be  
11 made early in the year. Predicting whether the rights in Utah Lake  
12 will receive their full annual diversion requirement is difficult  
13 early in the year. As the year progresses, and the water supply  
14 conditions become more apparent, these predictions can be made with  
15 a higher degree of confidence. In order to allow later priority  
16 upstream rights to store water, criteria are needed to determine  
17 when the rights in Utah Lake will likely be satisfied. Until the  
18 prior storage rights in Utah Lake are satisfied, water stored  
19 upstream will be held as system storage, subject to call by water  
20 rights in Utah Lake. Also, provisions to replace or exchange water  
21 to Utah Lake during drought periods to allow storage upstream will  
22 be considered.

23 Applying the following guidelines will ensure with a high  
24 degree of certainty that the rights in Utah Lake will be satisfied.  
25 These guidelines dictate when the upstream reservoirs can convert  
26 their system storage to what is referred to as priority storage.  
27 After the water is converted to priority storage, it is no longer  
28 subject to call to Utah Lake and can then be released from the  
29 reservoir and used.

30 Under this proposal, storage waters will be accounted for  
31 based on a November through October period. The irrigation season  
32 in much of the Utah Lake drainage runs from about April through  
33 October, except in the higher elevations. During the non-  
34 irrigation season, the water demand is much lower than during the  
35 irrigation season and generally the storage season begins in  
36 November.

#### 37 4.2 Distribution Guidelines

38 In order to maximize the beneficial use of the water and still  
39 protect prior rights, the State Engineer will use the following  
40 criteria to govern the distribution of water between storage rights  
41 in Utah Lake and reservoirs on upstream tributaries.

42 4.2.1 Upstream storage rights junior to Utah Lake water rights may  
43 store water under their respective priority dates relative to each  
44 other and subject to the conditions set forth in this section.

45 4.2.2 System storage is defined as the top 616,700 acre-feet of  
46 active storage capacity in Utah Lake and is used to satisfy the

1 diversion requirement of both primary and secondary rights. Any  
2 portion of this 616,700 acre-feet stored upstream which is subject  
3 to call by Utah Lake, as provided for under paragraph 4.2.5, shall  
4 also be accounted for as system storage.

5 4.2.3 Priority storage is defined to be the legal storage under a  
6 reservoirs' water right and is not subject to call by any other  
7 water right.

8 4.2.4 Any water stored by junior appropriators before the total  
9 system storage in or available to Utah Lake exceeds the quantities  
10 set forth in Table 3, is subject to call by the rights served from  
11 Utah Lake.

12 4.2.5 System storage held in upstream reservoirs shall not be  
13 diverted for use and must be held in storage and available for  
14 release to Utah Lake, until such storage is converted to priority  
15 storage according to the criteria in Table 3 or replacement water  
16 is provided.

17 4.2.6 Whenever the total system storage exceeds the values set  
18 forth in Table 3, any excess system storage shall be converted to  
19 priority storage. Water is converted from system to priority  
20 storage according to the priority dates of the respective rights,  
21 and in accordance with any other restrictions applicable to a  
22 particular water right.

23 4.2.7 Once water has been converted to priority storage or is  
24 designated as priority storage by the river commissioner at the  
25 time it is stored, it can be released from the reservoir and used  
26 as provided for under the respective water right.

27 4.2.8 Any time the storage capacity in Utah Lake drops below the  
28 primary storage capacity (the first 125,000 acre-feet of active  
29 storage capacity), upstream storage rights with later priority  
30 dates will not be allowed to divert water to storage.

31 4.2.9 Any time the active storage capacity in Utah Lake drops  
32 below the primary storage level (125,000 acre-feet), the Utah Lake  
33 rights may call on the system storage water which has been held  
34 upstream. The quantity subject to call is limited to the lesser of  
35 either the quantity of system storage held upstream or the amount  
36 needed to satisfy the diversion requirements and bring Utah Lake up  
37 to the primary storage level.

1 **Table 3 - Quantity of total system storage required before upstream**  
 2 **storage reservoirs can convert system storage to priority storage.**

Date	System storage in Utah Lake and/or Upstream Reservoirs (units: ac-ft)
November 1	616,700
December 15	616,700
January 15	616,700
February 15	616,700
March 15	615,000
April 15	575,000
May 15	475,000
June 15	400,000
July 15	350,000
August 15	250,000
September 15	200,000
October 31	125,000

16 NOTE: Values can be interpolated from the table to determine system storage on any particular day.

17 4.2.10 System storage in upstream reservoirs can be replaced in  
 18 Utah Lake with waters from other sources or other rights. Once  
 19 such replacement is made, a like quantity of system storage can be  
 20 converted to priority storage and used. Such replacement or  
 21 exchange of water shall have prior approval of the State Engineer.

## 22 5.0 Direct Flow Rights

### 23 5.1 Background

24 One of the objectives of this proposed distribution plan is to  
 25 administer the waters within the basin as one system. In so doing,  
 26 we need to take into account what the effects of diversion and  
 27 water use from a source may have on other rights in the basin. The  
 28 distribution of water between all rights, except those rights  
 29 specifically denoted in Sections 3.0 and 4.0 as among themselves,  
 30 shall be done based upon priority. This approach distributes the  
 31 water in accordance with the priority doctrine on a basin wide  
 32 basis.

### 33 5.2 Distribution Guidelines

34 In distributing water among the water rights in the basin,  
 35 except those rights addressed in Sections 3.0 and 4.0 as among  
 36 themselves, the following guidelines will be used:

1 5.2.1 The direct flow water rights on all tributaries will be  
2 administered according to the respective priority dates. The  
3 affect that diversions from one source may have on diversions from  
4 another source will be taken into account.

5 5.2.2 The primary direct flow rights on the Jordan River as set  
6 forth in the Morse decree shall have a call on the water in Utah  
7 Lake if the accretionary flows to the Jordan River are insufficient  
8 to satisfy their rights.

9 **6.0 Other Distribution Issues**

10 6.1 Background

11 The State Engineer believes that there are several other  
12 issues that should be considered when examining better ways to  
13 manage and distribute water in the basin. Most of these issues are  
14 directly related to improving the record keeping of imported water  
15 and enhancing the communication between the five river  
16 commissioners who are affected by this plan.

17 One issue that deserves special discussion is a proposed 5,000  
18 acre-feet regulation pool in Jordanelle Reservoir (Section 6.2.4)  
19 to be used by the Provo River commissioner in distributing water.  
20 Based upon past experiences, calculating the natural flow of the  
21 Provo River from reservoir stage readings at Deer Creek Reservoir  
22 has presented numerous problems for the commissioners. It is  
23 important that the river commissioner not waste his time dealing  
24 with such problems. Because the direct flow rights on the Provo  
25 River are senior to nearly all the storage rights it is necessary  
26 for the commissioner to compute natural flow in the river. The  
27 precision of reservoir content measurements on Deer Creek, and  
28 presumably on Jordanelle, are inadequate for daily calculation of  
29 natural flow based on changes in reservoir content. Just .10 foot  
30 error in measurement when Deer Creek Reservoir is nearly full  
31 represents about 300 acre-feet. Thus, when the wind is blowing it  
32 can substantially affect the natural flow calculation. The result  
33 is a wide fluctuation in the natural flow available to the class A  
34 rights on the Lower Provo River. With Jordanelle Reservoir now  
35 being built, the natural flow computation for both Heber Valley  
36 rights and the Lower Provo River will be even more complicated. If  
37 the commissioner had a regulation pool he could smooth out the  
38 natural flow bypasses as they should be.

39 The administration of exchange applications is another  
40 important distribution issue. The basic purpose of exchange  
41 applications is to facilitate distribution. Under such an  
42 application a water user is required to measure the quantity of  
43 water released to a stream and then a like quantity can be diverted  
44 at another location. In regulating exchange applications, the  
45 State Engineer attempts to have releases and subsequent diversions  
46 occur as concurrently as possible to insure that other water rights  
47 are not adversely effected. Some exchange applications involve

1 waters from more than one distribution system. In such cases, the  
2 State Engineer needs to establish lines of authority and/or  
3 coordination between the river commissioners.

4 The State Engineer has reviewed the water rights covering the  
5 transbasin diversion into and out of the basin. Nearly all of  
6 these water rights are certificated and the rights are generally  
7 well defined. Thus, the major issue regarding transbasin  
8 diversions is to implement better accounting procedures.

9 Although not addressed in the distribution guidelines, the  
10 future water quality of Utah Lake is another important issue that  
11 must be considered. Currently there are many unknowns over what  
12 the future operation of Utah Lake and upstream storage reservoirs  
13 will be. This makes it very difficult to predict the future  
14 salinity concentrations in the Lake. Under Utah water law, a water  
15 user is entitled to have his right protected as to both quantity  
16 and quality. We believe that the Central Utah Water Conservancy  
17 District and the Bureau of Reclamation could significantly affect  
18 the future salinity levels of Utah Lake by the decisions they will  
19 be making in the near future. It appears they are very aware of  
20 this problem and are looking at alternatives to control the  
21 salinity level of Utah Lake.

## 22 6.2 Distribution Guidelines

23 The State Engineer is proposing that the following  
24 recommendations be implemented to facilitate the distribution of  
25 water:

26 6.2.1 All exports of water from a river system shall be regulated  
27 by the duly appointed river commissioner for the system from which  
28 the export is made. Such diversions shall be regulated in  
29 accordance with the individual water right.

30 6.2.2. River commissioners shall report diversions on all systems  
31 on a water rights basis.

32 6.2.3 All transbasin diversions shall be equipped with real-time  
33 gages. Such data shall be accessible via a computer using a modem  
34 or other method as approved by the State Engineer.

35 6.2.4 The State Engineer is recommending that a 5,000 acre-foot  
36 regulation pool be established in Jordanelle Reservoir to be used  
37 by the commissioner for distribution system regulation. Such a  
38 regulation pool would be subject to space availability.

39 6.2.5 In regulating exchange applications, they will be  
40 administered as closely to a concurrent release and diversion basis  
41 as is feasible. Under no circumstances will deficits or credits be  
42 allowed to be carried over from year to year.

## 7.0 Adjudication Issues

### 7.1 Background

There are a number of issues that are beyond the scope of the distribution plan and will need to be addressed in the general adjudication. However, ultimately any actions taken in the adjudication will affect the distribution of water. Therefore, several adjudication issues are discussed in this document in order to apprise the water users of potential recommendations which may be made by the State Engineer to the court.

On the Provo River system there are no priority dates assigned to the class A rights on the Lower Provo River or class 1 through 17 on the Upper Provo River. The distribution of water has worked well under this system for over 70 years, and if conditions did not change we could continue to operate under the class system. However, we are beginning to see significant changes in the water use practices within the drainage basin, especially on the Provo River. To assess the potential impact as a result of a change in water use, and in order to properly administer the water rights on a basin-wide basis, it is imperative that the respective priority dates between the water rights be established. Therefore, as part of the general adjudication process, the State Engineer is proposing that priority dates for all water rights in the basin be determined.

Another issue that needs to be carefully analyzed and considered is the irrigation diversion requirement (duty) for irrigated lands in the basin. In conjunction with the proposed determination of water rights that the State Engineer must submit to the court for its consideration, an irrigation duty is recommended. In making this recommendation the State Engineer calculates the consumptive use requirements of the crops and considers the on-farm efficiency, canal losses and other related factors. The irrigation duty is expressed in terms of acre-feet per acre.

Related closely to the issue of duty is the issue of whether a delivery schedule should be implemented to specify an allowable diversion rate (Example - 1 cubic foot per second per 60 acres) during any period of the irrigation season. The total volume of water that can be diverted under the delivery schedule is the annual irrigation duty that is established.

### 7.2 Recommendations for the Adjudication

The State Engineer will consider making the following recommendations in his report to the court in the general adjudication:

7.2.1 All water rights within the basin shall have a priority date determined and assigned to it as part of the adjudication process.

1 7.2.2 An irrigation diversion requirement (duty) and delivery  
2 schedule shall be determined and submitted to the court for each  
3 subbasin or distribution system.

April 30, 1992

ATTACHMENT 1  
STORAGE RIGHTS GREATER THAN OR EQUAL TO 100 ACRE-FEET  
UTAH LAKE DRAINAGE BASIN DISTRIBUTION PLAN

PRIORITY DATE	RESERVOIR NAME AND CAPACITY	WRNUM	NAME	CFS	ACRE-FEET
1850/00/00	Utah Lake 869584.0				
		59-3518	Kennecott Copper Corp.	30.00	21719.3
1851/00/00	Silver Lake Reservoir 200.0				
		55-6951	Lehi Irrigation Company	66.60	
		55-6953	Pleasant Grove Irr. Co.		38.0
		55-7199	American Fork Irr. Co.		95.2
1853/00/00	Utah Lake 869584.0				
		59-3496	North Jordan Irr. Co.	27.54	5350
		59-3517	Kennecott Copper Corp.	38.40	13750.0
		59-5272	North Jordan Irr. Co. (SLCWCD)	51.49	10000.0
		59-5722	North Jordan Irr. Co. (SLCWCD)	2.57	498.62
1858/00/00	Goshen Reservoir 200.0				
		53-988	Goshen Irr. and Canal Co.	19.30	
	Silver Lake Flat Reservoir 1040.0				
		55-6954	American Fork Irr. Co.		920.0
		55-7062	Lehi Irr. Co.		920.0
		55-7198	Pleasant Grove Irr. Co.	441.00	
1900/00/00 <sup>1</sup>	Kenneth Anderson Reservoir 132.0				
		55-5621	Kenneth Anderson	4.00	
1870/00/00	Utah Lake 869584.0				
		53-1031	South Jordan Canal Company		345.73
		53-1032	South Jordan Canal Company		145.21
		59-3499	Utah & S. L. Canal Co.	188.36	35318
		59-3500	South Jordan Canal Company	116.20	23138.87
		59-5269	Utah & S. L. Canal Co. (SLCWCD)	55.50	10355.04
		59-5270	South Jordan Canal Co. (SLCWCD)	25.80	5384.6
1875/00/00	Smith Reservoir 106.6				
		51-65	Pace, David Joseph	0.50	
1877/00/00	Utah Lake 869584.0				
		57-7637	East Jordan Irr. Co.	142.13	40465
		59-5268	East Jordan Irr. Co. (SLCWCD)	27.87	7935.18
1879/00/00	Utah Lake 869584.0				
		57-7624	Salt Lake City	45.83	11000.0
			Central Utah Water Cons. Dist.	104.17	25000.0

STORAGE RIGHTS  
PAGE 2

PRIORITY DATE

RESERVOIR NAME AND CAPACITY		CFS	ACRE-FEET
WRNUM	NAME		
1880/00/00 (estimated)			
Deer Creek Reservoir 152564.0			
55-7060	USA Bureau of Reclamation	7.90	2900.0
55-7061	USA Bureau of Reclamation	1.43	500.0
1887/00/00			
Center Creek Reservoir #5 166.4			
unnamed reservoir 86.2			
Center Creek Reservoir #2 61.2			
Center Creek Reservoir #1 267.4			
55-1440	Center Creek Irr. Co.		581.2
1890/00/00			
Smith Reservoir 106.6			
51-67	Park, Boyd L. & Margaret F. Johnson, Hal C. & Madge L. Jensen, Grant C.	0.40	
1891/00/00			
Witt's Lake Reservoir 853.0			
55-1494	Lake Creek Irr. Co.		853.0
1893/00/00			
Deer Valley Reservoir 172.0			
55-1495	Lake Creek Irr. Co.		172.0
1895/01/12			
Mona Reservoir 21078.0			
53- 995	Currant Creek Irr. Co.		21078.0
1898/00/00 <sup>1</sup>			
Big East Lake 670.0			
Decree	Payson City		
1899/00/00?			
Tibble Fork Reservoir 259.0			
55-6955	Pleasant Grove Irr. Co.		178
55-7071	Lehi Irrigation Company		178
55-7200	American Fork Irr. Co.		178
1900/00/00			
Center Creek Irrig. Reservoir #4 150.0			
55-1491	Baird, William H.		26.94
Smith Reservoir 106.6			
51-4356	Park, Boyd L. & Margaret F. Johnson, Hal C. & Madge L. Jensen, Grant	1.50	
1902/00/00			
Mill Hollow Reservoir 316.7			
55-7321	USA Forest Service		
1902/00/00 <sup>2</sup>			
Box Lake 300			
Decree	Payson City		300.0

STORAGE RIGHTS  
PAGE 3

PRIORITY DATE

RESERVOIR NAME AND CAPACITY

WRNUM	NAME	CFS	ACRE-FEET
-----			
1904/00/00 <sup>2</sup>			
	Jones Reservoir 176.0		
55-8162	Lake Creek Irr. Co.		176.0
1905/08/22			
	Trial Lake 830.0		
	Wall Lake 1015.0		
	Washington Lake 1360.0		
55-11108	Timpanogos Irrigation Co.		3205.0
	Wasatch Irrigation Company		
55-11558	Provo Reservoir Company		3205.0
1908/09/15			
	North Fork Lake #1 (or Weir Lake) 116.0		
	North Fork Lake #2 (or Pot Lake) 46.0		
55-11110	Provo Reservoir Water User's Co.		162.0
	North Fork Lake #3 (or Long Lake) 824.1		
55-11111	Provo Reservoir Co.		824.1
	North Fork Lake #4 (or Island Lake) 97.7		
55-11112	Provo Reservoir Water User's Co.		97.7
	North Fork Lake #5 108.0		
55-11113	Provo Reservoir Water User's Co.		108.0
	North Fork Lake #6 420.0		
55-11114	Timpanogos Irr. Co.		227.0
55-11116	Timpanogos Irr. Co.		192.5
	Lost Lake (or Fire Lake) 1155.0		
55-11115	Provo Reservoir Co.		368.76
	Lost Lake #2 (or Tea Pot Lake) 140.0		
55-11117	Provo Reservoir Co.		140.0
	Star Lake 313.9		
55-11118	Provo Reservoir Co.		313.9
	Marjorie Lake 285.0		
55-11119	Timpanogos Irr. Co.		175.9
55-11560	Timpanogos Irr. Co.		84.1
	Washington Lake #3 38.0		
55-11120	Provo Reservoir Water User's Co.		38.0
	Lost Lake Reservoir 1155.0		
55-11559	Provo City Corporation		321.78
1908/10/27			
	Utah Lake 869584.0		
57-23	Draper Irr. Co./Sandy Canal Co.	50.40	10500
59-13	Utah Lake Dist. Co.	124.24	39727
59-5271	Utah Lake Dist. Co. (SLCWCD)	10.76	3439.03
59-5273	Draper I.C./Sandy C.C. (SLCWCD)	9.60	2000.0
1909/08/06			
	Utah Lake 869584.0		
59-14	Central Utah Water Cons. Dist.		43739.0
59-15	Central Utah Water Cons. Dist.		10984.0
1909/11/12			
	Big Elk Lake Reservoir 500.0		
55-11550	Washington Irr. Co.		500.0

STORAGE RIGHTS  
PAGE 4

PRIORITY DATE

RESERVOIR NAME AND CAPACITY		CFS	ACRE-FEET
WRNUM	NAME		
1911/02/28	Utah Lake 869584.0		
59-20	Central Utah Water Cons. Dist.		2350.0
1917/02/03	Big Elk Lake Reservoir 500.0		
55-11551	Washington Irr. Co.		371.1
1924/08/25	Deer Creek Reservoir 152564.0		
35-8737	USA Bureau of Reclamation	1000.00	136500.0
55-80			
1936/00/00 <sup>1</sup>	Maple Lake 130.0		
	Decree Payson City		
1936/04/03	Deer Creek Reservoir 152564.0		
55-262	USA Bureau of Reclamation		30000.0
1936/06/25 <sup>3</sup>	Deer Creek Reservoir 152564.0		
43-341	USA Bureau of Reclamation		50000.0
43-343	USA Bureau of Reclamation	50.00	5000.0
1944/08/31	Deer Creek Reservoir 152564.0		
43-344	USA Bureau of Reclamation	21.00	4288.0
1945/06/11	Deer Creek Reservoir 152564.0		
55-295	USA Bureau of Reclamation		100000.0
1947/05/01	Summit Creek Reservoir 841.0		
51-1161	Summit Creek Irr. & Canal Co.		841.0
1951/05/08	Deer Creek Reservoir 152564.0		
55-577	USA Bureau of Reclamation	1.50	
1959/11/30	Mill Hollow Reservoir 316.7		
55-965	State of Utah Div. of Wild. Res.	1.00	
1964/11/19	Hayes Reservoir 70000.0		
	Mona Reservoir Enlargement 70000.0		
	Utah Lake 869584.0		
	Jordanelle Reservoir 335020.0		
43-3822	USA Bureau of Reclamation		499937.46
1971/03/18	Jordanelle Reservoir 335020.0		
55-4494	USA Bureau of Reclamation		300000.0

STORAGE RIGHTS  
PAGE 5

PRIORITY DATE

RESERVOIR NAME AND CAPACITY		CFS	ACRE-FEET
WRNUM	NAME		
-----			
1976/08/17			
	Lost Lake Reservoir 1155.0		
	55-5789 Provo City		538.0
1976/12/09			
	Lindsay Reservoir 175.0		
	55-5846 Christensen, Carole Lee		50.0

<sup>1</sup> Date dam was built.

<sup>2</sup> Date of Decree.

<sup>3</sup> Deliveries via Duchesne Tunnel

Note: There are several small reservoirs covered by the 1898 Center Creek Decree, the 1902 Peeteetneet Creek Decree, and the 1904 Lake Creek Decree for which no priority dates are given.

April 30, 1992

**ATTACHMENT 2  
DIRECT FLOW RIGHTS ON THE JORDAN RIVER  
UTAH LAKE DRAINAGE BASIN DISTRIBUTION PLAN**

Priority Date	Canal/Ditch	Flow (cfs)	Water Right Numbers
1850	Utah & Salt Lake/North Jordan	30.0	59-3518
1850	Bennion Mill Race	5.0	59-3512, 59-3525 59-3532, 59-3522 59-3530, 59-3503 59-3495, 59-3533 59-3521
1850	Gardner Mill Race	5.3	59-3491, 59-3509 59-3529, 59-3504 59-3535, 59-3510 59-3507, 59-3540
1853	North Jordan Canal	38.4	59-3517
1855	Galena Canal	0.5	57-7644, 57-7657
1855	Galena Canal	1.4	57-7646, 57-7660 57-1802
1855	Galena Canal	2.8	57-7630, 57-7641 57-8925, 57-7645 57-7640, 57-7647 57-7648
1855	Galena Canal	0.6	57-7620, 57-7638
1859	Beckstead Ditch	12.0	59-3924
1864	Mousley Ditch	2.0	57-7636, 57-7658 57-7629
1873	Galena Canal	8.0	57-7625
1873	Galena Canal	9.0	57-7626
1874	Galena Canal	0.7	57-7634, 57-7633 57-7649, 57-7643
1878	Galena Canal	1.2	57-7632
1878	Galena Canal	1.4	57-7642
1912	Utah & Salt Lake/North Jordan	100.0	59-23
1918	Utah & Salt Lake/North Jordan	50.0	59-30