



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

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October 22, 1992

Utah Lake Water Users

Re: Water Distribution Plan for the Utah Lake Drainage Basin

Dear Water Users:

At the public meeting held on September 29, 1992, I indicated that I would review the comments received on the April 30, 1992 final draft of the proposed distribution plan and let you know whether it is my intent to move ahead with implementing the plan this year or wait until next year. I realize the importance of this decision and have spent a great deal of time reviewing this matter.

I have carefully considered the comments and evaluated the current water supply situation in the basin. As you know, the present water supply conditions are at critical levels. At the public meeting, a number of water users expressed concern about implementing the plan under such extreme drought conditions. If we do not receive above normal precipitation during this winter, we will certainly experience significant water supply problems next summer. The major components of the plan come into effect during drought years. When the water supply is at or above normal conditions, we generally do not have significant distribution problems.

As State Engineer, it is my responsibility to ensure the fair and equitable distribution of water according to the priority dates of the water rights on file with my office. In my opinion, if I do not move ahead with the implementation of the distribution plan, I am not fulfilling my statutory duties. Therefore, it is my decision to direct the river commissioners to begin distributing water on November 1, 1992 under the criteria set forth in the plan. The plan will be implemented on a yearly interim basis. After each year's operation I will meet with the water users to evaluate the operation and will modify the interim plan as necessary. When we are comfortable with the plan, I will issue a final distribution order.

Two issues were raised in the comments which I believe need to be reviewed. The first issue concerns the inactive storage level set for Utah Lake, which was originally proposed at 9.2 feet below compromise. The other issue deals with the total quantity of

Utah Lake Water Users
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system storage required before converting system storage to priority storage which is set forth in Table 3 of the plan. From our experience this year, I believe that the elevation for the inactive storage level should be raised to 8.7 feet below compromise. At this elevation, the inactive storage capacity is 160,000 acre-feet. Increasing the inactive storage will mitigate some of the operational problems experienced at low lake levels. In reviewing the criteria by which system storage can be converted to priority storage, I realize that the numbers in Table 3 are very conservative. This is necessary in order to protect the prior storage rights in Utah Lake. Therefore, it is my decision that the approach used to calculate the values set forth in Table 3 is reasonable and should not be modified until additional data is collected. You will note that the values for the period from November through March have been changed. This change reflects the effects of changing the inactive storage level from 9.2 feet to 8.7 feet below compromise on the amount of system storage.

I believe that the distribution plan is an excellent approach to addressing the distribution issues within the basin. In my opinion it will promote the wise use of our limited water resources and ensure that vested water rights are protected. Enclosed is a copy of the interim distribution plan which I will be forwarding to the river commissioners with the direction to implement it beginning November 1. I appreciate your input in this process and look forward to working with you in implementing this plan.

Sincerely,



Robert L. Morgan, P.E.
State Engineer

RLM/wk

Enclosure

November 1, 1992

INTERIM 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 prepares this interim distribution plan
35 under authority of Sections 73-2-1, 73-5-1, -3, and -4, Utah Code
36 Annotated 1953, to distribute the waters in the Utah Lake drainage
37 basin. Some of the issues which are presented in this document are
38 beyond the State Engineers' administrative authority in
39 distribution matters, and it is not his intent to resolve such
40 issues in implementing this plan. Such items will be addressed and
41 ultimately resolved in the court adjudication process as set forth

1 under Chapter 4, Title 73, Utah Code Annotated. This interim
2 distribution plan is NOT part of the adjudication process, nor will
3 it prejudice anyone's claims during such action.

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

17 The issues presented in this document have been divided into
18 five subject areas:

- 19 • Water rights in Utah Lake
- 20 • Relationship between storage rights in Utah Lake and
21 upstream reservoirs
- 22 • Direct flow water rights
- 23 • Other distribution issues
- 24 • Issues to be resolved through the general adjudication
25 procedure

26 For each subject there is a background section and a distribution
27 guidelines section. The background section is intended to give the
28 reader some general information about the issue and some
29 justification for the distribution guidelines.

30 2.0 DEFINITIONS OF TERMS USED IN PROPOSED DISTRIBUTION PLAN

31 Active Storage (Utah Lake): The storage capacity of Utah Lake
32 between compromise elevation and 8.7 feet below compromise (the
33 maximum active storage is 710,000 acre-feet).

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

38 Booth Decree: A 1909 court case: Salt Lake City Corp., Utah and
39 Salt Lake Canal Co., East Jordan Irrigation Co., North Jordan
40 Irrigation Co. and South Jordan Canal Co. (Plaintiffs) versus J. A.
41 Gardner and A. J. Evans (Defendants). The Booth Decree covered
42 water rights in Utah Lake and the Jordan River.

1 Compromise Elevation: The maximum legal storage elevation in Utah
2 Lake. Compromise elevation was first established in 1885, and was
3 recently modified in 1985 to be 4489.045 feet above mean sea level.
4 When the lake is at this elevation, the total storage capacity is
5 approximately 870,000 acre-feet, of which 710,000 acre-feet is
6 active storage capacity and 160,000 acre-feet is inactive storage
7 capacity. Whenever the level of Utah Lake is above the compromise
8 level, the control gates are required to be fully opened. The
9 exception to this rule occurs when fully opening the control gates
10 causes the Jordan River to exceed a maximum flow rate that is
11 specified in the 1985 Compromise Agreement (Civil No. 64770)

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

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

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

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

21 Inactive Storage (Utah Lake): The portion of Utah Lake that is not
22 accessible to the pumps, and therefore, cannot be diverted. The
23 inactive storage is currently estimated to be 160,000 acre-feet
24 (8.7 feet below compromise)

25 Irrigation Duty: The annual quantity of water in acre-feet per
26 acre considered to be reasonably necessary to meet the beneficial
27 use requirements of irrigated land. The irrigation duty takes into
28 consideration the consumptive use requirements of crops, irrigation
29 efficiency and conveyance losses.

30 Morse Decree: A 1901 decree resulting from a series of court
31 cases: Case No. 2861 - Salt Lake City Corp. (Plaintiffs) versus
32 Salt Lake City Water and Electrical Power Co. (Defendant); Case No.
33 3449 - J. Geoghegan (Plaintiff) versus Salt Lake City
34 Corp. (Defendant); and Case No. 3459- J. Geoghegan (Plaintiff)
35 versus Utah and Salt Lake Canal Co. (Defendant). This decree
36 defined the water rights on the Jordan River with respect to each
37 other.

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

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

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

7 Proposed Determination Book: The State Engineer's report and
8 recommendation to the district court in general adjudication
9 proceedings of all the water rights within the adjudication
10 drainage area.

11 Provo River Decree: A 1921 decree resulting out of the court case:
12 Provo Reservoir Company vs. Provo City (Case No. 2888). The Provo
13 River decree defined certain water rights in the Provo River
14 drainage.

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

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

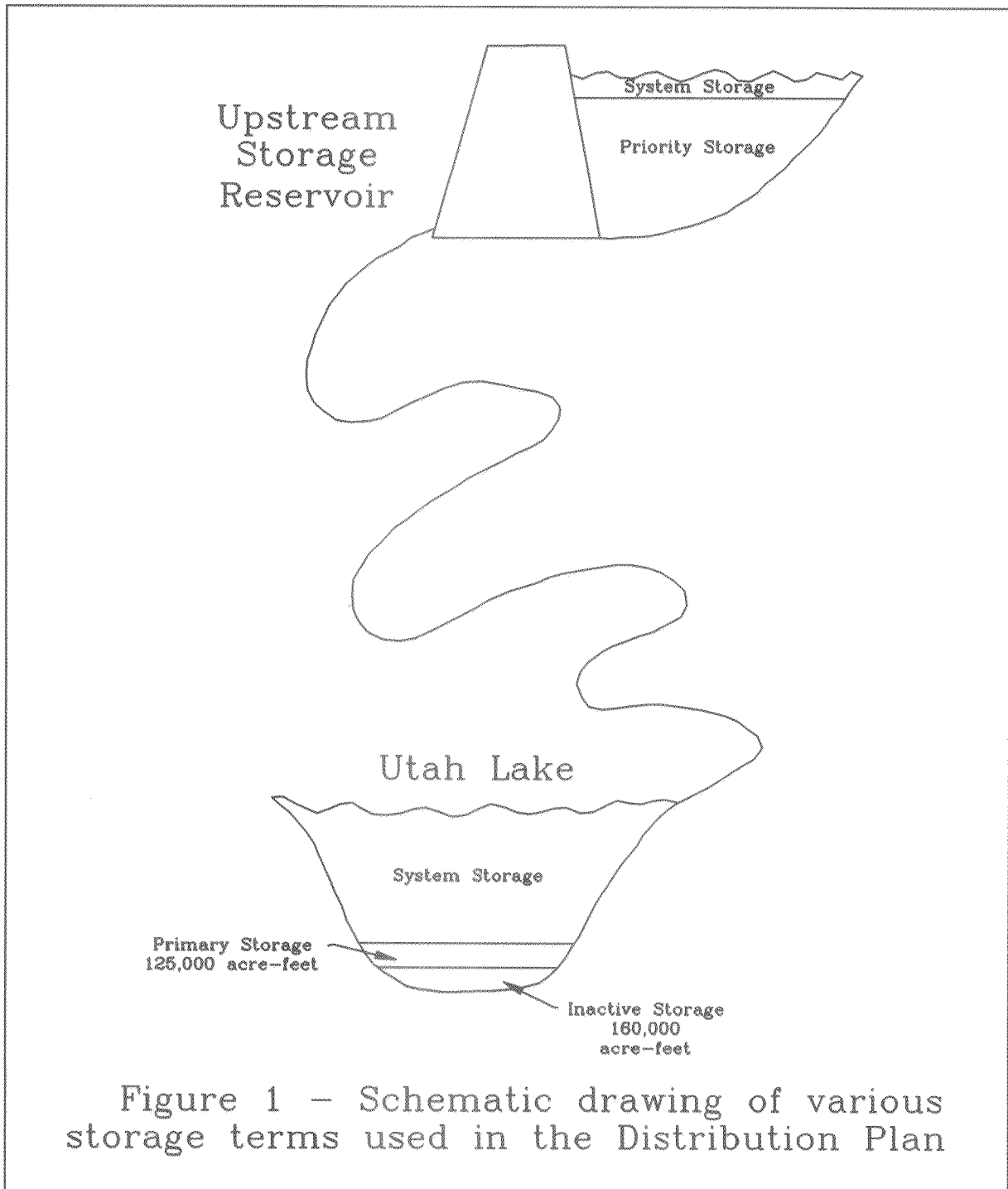
20 Subbasin: Individual drainage system within a larger drainage
21 basin. For example, the Provo River system can be considered to be
22 a subbasin within the larger Utah Lake drainage basin.

23 System Storage: The total active storage water in Utah Lake,
24 excluding the primary storage, plus water stored in upstream
25 reservoirs under junior priority date water rights. The maximum
26 value of system storage is 585,000 acre-feet and varies during the
27 year as shown in Table 3. System storage, whether in Utah Lake or
28 upstream reservoirs, is subject to call to satisfy the diversion
29 requirements of primary and secondary Utah Lake storage rights.

30 Real-time gages: A measuring device that allows instantaneous
31 access to data.

32 Transbasin diversions: Imports or exports of water from one
33 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.



1 3.0 Water Rights in Utah Lake

2 3.1 Background

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

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

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

39 In the "Proposed Determination of Water Rights in Utah Lake
40 and Jordan River Drainage Area, Salt Lake County, West Division"
41 (Proposed Determination), the State Engineer has recommended an
42 irrigation duty of 5.0 acre-feet per acre. This duty also appears
43 reasonable for those lands located east of the Jordan River. The
44 proposed determination book covering the west side of the Jordan
45 River indicates that potential conveyance losses for canals over
46 one mile in length are not included in the irrigation duty. Such
47 losses are to be determined in a supplemental report to the court
48 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
9 160,000 acre-feet is inactive storage (verbal communication, Brad
10 Gardner, Utah Lake-Jordan River Commissioner). The inactive
11 storage elevation is 8.70 feet below compromise elevation. The
12 active storage capacity of Utah Lake is 710,000 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 8.70 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 585,000 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 ¹ - 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 ¹	1,076.92	5,385
57-7637	East Jordan Irrigation Company	8,092.96	40,465
59-5268	SLCWCD ¹	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 ¹		
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 ¹	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) ²	Ind	57,073
Total for Secondary Rights			112,739
Overall Total			302,046

28 ¹ Rights/shares held by respective irrigation companies in behalf of Salt Lake County Water Conservancy
 29 District by agreement dated September 19, 1988.
 30 ² 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 585,000 acre-feet of
46 active storage capacity in Utah Lake and is used to satisfy the
47 diversion requirement of both primary and secondary rights. Any

1 portion of this 585,000 acre-feet stored upstream which is subject
2 to call by Utah Lake, as provided for under paragraph 4.2.5, shall
3 also be accounted for as system storage.

4 4.2.3 Priority storage is defined to be the legal storage under a
5 reservoirs' water right and is not subject to call by any other
6 water right.

7 4.2.4 Any water stored by junior appropriators before the total
8 system storage in or available to Utah Lake exceeds the quantities
9 set forth in Table 3, is subject to call by the rights served from
10 Utah Lake.

11 4.2.5 System storage held in upstream reservoirs shall not be
12 diverted for use and must be held in storage and available for
13 release to Utah Lake, until such storage is converted to priority
14 storage according to the criteria in Table 3 or replacement water
15 is provided.

16 4.2.6 Whenever the total system storage exceeds the values set
17 forth in Table 3, any excess system storage shall be converted to
18 priority storage. Water is converted from system to priority
19 storage according to the priority dates of the respective rights,
20 and in accordance with any other restrictions applicable to a
21 particular water right.

22 4.2.7 Once water has been converted to priority storage or is
23 designated as priority storage by the river commissioner at the
24 time it is stored, it can be released from the reservoir and used
25 as provided for under the respective water right.

26 4.2.8 Any time the storage capacity in Utah Lake drops below the
27 primary storage capacity (the first 125,000 acre-feet of active
28 storage capacity), upstream storage rights with later priority
29 dates will not be allowed to divert water to storage.

30 4.2.9 Any time the active storage capacity in Utah Lake drops
31 below the primary storage level (125,000 acre-feet), the Utah Lake
32 rights may call on the system storage water which has been held
33 upstream. The quantity subject to call is limited to the lesser of
34 either the quantity of system storage held upstream or the amount
35 needed to satisfy the diversion requirements and bring Utah Lake up
36 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	585,000
December 15	585,000
January 15	585,000
February 15	585,000
March 15	585,000
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.

1 7.0 Adjudication Issues

2 7.1 Background

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

10 On the Provo River system there are no priority dates assigned
11 to the class A rights on the Lower Provo River or class 1 through
12 17 on the Upper Provo River. The distribution of water has worked
13 well under this system for over 70 years, and if conditions did not
14 change we could continue to operate under the class system.
15 However, we are beginning to see significant changes in the water
16 use practices within the drainage basin, especially on the Provo
17 River. To assess the potential impact as a result of a change in
18 water use, and in order to properly administer the water rights on
19 a basin-wide basis, it is imperative that the respective priority
20 dates between the water rights be established. Therefore, as part
21 of the general adjudication process, the State Engineer is
22 proposing that priority dates for all water rights in the basin be
23 determined.

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

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

40 7.2 Recommendations for the Adjudication

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

44 7.2.1 All water rights within the basin shall have a priority date
45 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.