

Mitigation and Aquifer Enhancement Plan of and for the Upper Big Lost River Ground Water Association Users

BACKGROUND

The Upper Big Lost River Ground Water Association (UBLRGWA Water Users) was formed and functions mainly for the purpose of mitigation and understand the purpose of mitigation is to augment the natural flow of the Big Lost River downstream from Mackay Dam to replace water that would be available in the river absent the diversion and use of ground water. This Plan is intended to meet the requirements of mitigation by augmentation of the natural flow of the Big Lost River. The Upper Big Lost River Ground Water Association Users ground water rights currently represent 12.67% of the total licensed Ground Water CFS in Basin 34.

Mitigation does not guarantee any particular surface water right will receive a full water supply in any year. The UBLRGWA Water Users are also actively involved in participating with managed recharge and other ground water resource conservation/sustainment activities.

MITIGATION PLAN

This mitigation plan is proposed pursuant (1) pursuant to Rule 50.04 of the Department's Water Distribution Rules for Water District 34 (IDAPA 37.03.12, (2) pursuant to the Department's Rules for Conjunctive Management of Surface and Ground Water Resources (CM Rules) (IDAPA 37.03.11)

SOURCES OF WATER FOR MITIGATION

This section describes categories from which water supplies may be obtained to mitigate withdrawal and use of ground water for consumptive purposes. No assurance is intended by this listing that water supplies will be available for purchase or lease from these sources. However, the Idaho Department of Water Resources (IDWR) does intend that the identification of the sources as viable for the purpose of mitigation of consumptive ground water uses will encourage holders of water rights to identify quantities of water available for this purpose to obtain the needed mitigation water. The options discussed below are not all-inclusive, and the suggestions are listed for illustration purposes. If the Association proposes a mitigation plan using a water supply not listed, the Association should discuss it with the IDWR in advance.

1. **Stored Water** - A mitigation plan may identify a quantity of stored water in the Mackay Reservoir with documentation that the Association has obtained the right to use the water by ownership, purchase or lease. If the authorized purpose of use for the stored water does not allow use for mitigation purposes, an application for transfer should be filed pursuant to Section 42-222, Idaho Code or the stored water should be assigned to the Water Supply Bank to allow the change in use and designated for UBLRGWA use for mitigation. The mitigation plan will provide for the stored water to be available to the District 34 Watermaster to release under a schedule approved by the IDWR to mitigate reductions in flow caused by diversion and use of ground water by the Association. (See Example below) The quantity of stored water made available through the mitigation plan must equal or exceed the quantity of depletion. UBLRGWA water users with more storage available than needed for their own mitigation needs may elect to make some of their space available to other UBLRGWA water users who need to provide mitigation.

2. **Natural Flow**. All or part of the water available from a valid existing right to divert the flow of Big Lost River may be identified as a source of water to mitigate reductions in flow resulting from diversion and use of ground water in the basin. The annual volume of water made available from the water right offered for mitigation to augment the flow of Big Lost River shall equal or exceed the annual volume of depletion resulting from diversion and use of ground water. The annual volume of depletion made available from the natural flow right used for mitigation shall take into consideration the availability of water under the priority of the water right, the existence and use of other water rights and water supplies for the same beneficial use, and other factors influencing the historic use of water under the right. The proposed mitigation plan shall include either an application for transfer filed pursuant to Section 42-222, Idaho Code, to change the use of the natural flow water right to UBLRGWA mitigation purposes or an application to place the water right into the Water Supply Bank for the designated purpose of UBLRGWA mitigation. The previous use of the right or part of the right offered for mitigation shall be terminated and not be resumed while the mitigation plan is operative; i.e., for a natural flow irrigation right, the place of use shall not be irrigated unless another water right is obtained authorizing irrigation to be resumed. The proposed mitigation plan shall include authorization for the Watermaster to distribute water under the right authorized for irrigation as directed by the IDWR to prevent injury to other water rights caused by diversion and use of ground water.

3. **Other Sources**. The UBLRGWA Water Users may, if the situation warrants, use other means of mitigation including, but not limited to, consumption reduction by crop management, irrigation pivot end gun use reduction or non-use, diversion limitation or other creative means.

The UBLRGWA Water Users propose to use water stored in Mackay Reservoir as the primary source of mitigation water to be turned over to the Watermaster. This storage

water will be delivered by the Watermaster to augment the flow of the Big Lost River below Mackay Dam, which does not violate the limitation of storage water use outside the Big Lost River Irrigation District Boundary since the augmentation water will be delivered downstream as natural flow. UBLRGWA members located above the Mackay reservoir, outside the BLRID boundary, may on a temporary basis pay for or rent storage water for the specific purpose of mitigation which shall only be delivered as river augmentation below the reservoir and delivered *only* within the boundaries of the BLRID. The use of space in the reservoir for storage water for mitigation purposes will only be with the consent of the BLRID for UBLRGWA water users who wish to participate in the mitigation plan. A list of participating UBLRGWA water users is attached as appendix A.

MITIGATION FLOW AUGMENTATION EXAMPLE

The UBLRGWA Water Users understanding of the implementation of mitigation through flow augmentation is as illustrated by the following example. The UBLRGWA water users have committed 774 ac-ft (the UBLRGWA water users proportional share of the total mitigation required) of storage water for mitigation and turned the use of that space over to the Watermaster for mitigation purposes. Mitigation will only occur during the period May 1 through October 15 of any year and then only for water rights from the Big Lost River downstream from the Mackay Dam with priority dates of 1905 and earlier. For purposes of this example, assume all 1905 water rights are being filled through June 5. If mitigation has been called for, on June 6 the Watermaster determines there are 132 days remaining in the mitigation period (June 6 through October 15). Rule 50.04.c.i provides $\frac{1}{3}$ of the mitigation water will be available to augment natural flow for the first half of the augmentation period and the remaining $\frac{2}{3}$ of the mitigation water will be available to augment natural flow for the second half of the augmentation period.

Based on this example, the first half augmentation rate is:

$$Q = \frac{774}{3 \times 66 \times 1.9835} = 1.97 \text{ cfs}$$

That is, $\frac{1}{3}$ of 774 ac-ft delivered in $\frac{1}{2}$ of 132 days. The second half augmentation rate is twice that of the first half since it is computed as $\frac{2}{3}$ of 774 ac-ft delivered in the second half of the augmentation period or 3.94 cfs.

OTHER MITIGATION CONSIDERATIONS

Rule 50.04.c.ii states if a water user calling for mitigation could make use of the computed augmentation amount, the Watermaster would make delivery up to the amount of the water rights(s) calling for mitigation or the computed amounts of available augmentation, whichever is less.

It is the UBLRGWA Water Users expectation and belief that mitigation water will not be used to augment the natural flow of the Big Lost River unless doing so will make water

available to a senior surface water user calling for mitigation. If a portion of the mitigation period passes (June 6 through October 15 in the example above) and mitigation water is not required to be released because it would not benefit a water user calling for mitigation, the proportionate amount of storage water being held for mitigation will be released by the Watermaster for use by the UBLRGWA Water Users who committed that storage for mitigation purposes. The UBLRGWA Water Users expect adjustments in the required amount of mitigation water will be made at reasonable intervals by the Watermaster but in no event will the adjustment period be longer than 15 days.

River flush water as contemplated by Rule 40.02.d.iii will also be considered recharge for mitigation purposes if the flush water is provided from the UBLRGWA proportional share of mitigation water or if the water used for the river flush is paid for by the UBLRGWA Water Users participating in the mitigation plan. All river flush water not delivered to field headgates for the first 5 days after releasing the flush from Mackay Dam will be considered recharge mitigation and will reduce the UBLRGWA proportional share mitigation obligation on an acre-foot for acre-foot basis applicable to the augmentation component for the first half of the irrigation season.

This plan is designed to meet the mitigation requirements of all UBLRGWA Water Users in the basin, but will not preclude or discourage individual ground water users or other groups of ground water users from offering their own mitigation plans.

Ground water rights not covered by an acceptable mitigation plan must not be allowed to divert if a call for mitigation is placed on the basin.

This mitigation plan meets the requirements of Rule 50.04.c and the mitigation water will be turned over to the Watermaster for use as contemplated in Rule 50.04.d. This Mitigation Plan has been reviewed and agreed to by Water District 34 Water Master.

AQUIFER ENHANCEMENT PLAN

CURRENT AQUIFER STABILIZATION/ENHANCEMENT EFFORTS

UBLRGWA enables reasonable people from within the Association to make responsible decisions concerning public and private investments in the water resources of the basin. Association members currently promote and practice methods of use and conservation of the ground water resource to preserve and improve that resource to safely meet current and future demands.

1. Ground water conservation. Association members do not, on average, utilize their full annual licensed diversion rate in any given year. Annual diversion rate is contingent on seasonal precipitation and climate conditions. This promotes ground water conservation, which contributes to the stabilization of the aquifer.
2. Managed Recharge. UBLRGWA Water Users are intensely engaged in managed recharge efforts and proactive in managing up to 15 recharge sites in the upper valley when water/precipitation conditions allow and occur. The recharge effort requires much coordination with other water administrative entities within the basin.

POTENTIAL AND FUTURE STABILIZATION/ENHANCEMENT METHODS

The Association is enthusiastic regarding practices to stabilize and enhance the Basin 34 Aquifers. The Association will proportionally participate based on its member's total diversion license rate as a percentage of the total Basin diversion license rates.

1. Ensure accurate metrics. The Association endorses accurate and comprehensive diversion monitoring, which is the exclusive means of truly understanding the demand on the water supply. Inaccurate or nonexistent records result in inaccurate decisions by administrative entities and a misunderstanding of the true water resource situation. Current measured usage records by licensed user and licensed diversion rate should be publicly posted. This would allow errors to be recognized and rectified.
2. The Association desires to determine, or participate in the determination, of a basin 34 water budget which then can make possible the means to understand the Association's proportional role and responsibility in rectifying any determined total diversion deficit.

The Association is considering other means and methods to achieve ground water demand reductions through:

1. Ground water to surface water conversions. The Association has discussed and encourages it's members to utilize surface water diversions, if available, in lieu of ground water diversions when and where feasible and appropriate.
2. Surface water conservation. The Association encourages best practices for all surface water utilization allowing potential gains in the river reaches.
3. Crop management. On any given year considering climatic conditions Association members may consider alternate crops requiring reduced irrigation.
4. Conservation Reserve Enhancement Program (CREP).
5. Drought Conditions Management. Define and implement drought and extreme drought condition triggers and corresponding diversion proportional adjustments.
6. Adaptive Management. The Association intends to be nimble in analyzing all parameters of conditions of available water at any point in time to appropriately address water management issues, remaining flexible to adapt as conditions change.

Appendix A

List of UBLRGWA Water Users participating in this plan:

Owner	License #	Basis	Priority Date	CFS	Acres
BINGHAM, MAX, BINGHAM, CHERYL	34-14528	Decreed	9/13/1961	1.95	113.0
BINGHAM, MAX, BINGHAM, CHERYL	34-14529	Decreed	4/1/1977	0.31	113.0
MC CASLIN, NANCY	34-2269	Decreed	1/30/1945	0.69	105.1
MC CASLIN, NANCY	34-4070	Decreed	8/1/1961	1.80	105.1
MC CASLIN, NANCY	34-7248	Decreed/Sup	7/8/1980	0.97	46.4
MC AFFEE, GAIL; MC AFFEE, SCOTT	34-235	Decreed	7/20/1959	2.90	145.0
MC AFFEE, GAIL; MC AFFEE, SCOTT	34-7227	Decreed	5/3/1979	0.71	39.0
BELL SMITH LLC	34-2321	Decreed	2/8/1955	6.00	738.0
BELL SMITH LLC	34-2322	Decreed	2/8/1955	4.20	319.0
BELL SMITH LLC	34-2367	Decreed	5/12/1960	2.87	221.0
BELL SMITH LLC	34-2378	Decreed	8/2/1960	1.78	319.0
BELL SMITH LLC	34-7015	Decreed	4/17/1970	4.67	738.0
RIVER PARK GOLF COURSE & CAMPGROUND	34-7089	Decreed	1/3/1975	0.19	20.5
NELSON MACKAY RANCH LLC	34-2325	Decreed	3/9/1955	6.50	482.0
NELSON, HEATHER	34-2356	Decreed	3/24/1960	3.20	160.0
NELSON, HEATHER	34-2415	Decreed	5/15/1961	0.36	18.0
ZOLLINGER, BRET L; ZOLLINGER, JOLENE	34-7146A	Decreed	4/22/1976	2.19	161.0
ZOLLINGER, BRET L; ZOLLINGER, JOLENE	34-12413A	Decreed	4/12/1994	0.28	161.0
CRAWFORD, HARRY J	34-2413A	Decreed	5/12/1961	1.67	148.0

PEHRSON, BYRON; PEHRSON, LOY	34-4010	Decreed	8/1/1961	3.41	171.6
PEHRSON, BYRON; PEHRSON, LOY	34-12378	Decreed	6/9/1966	1.03	252.0
PEHRSON, BYRON; PEHRSON, LOY	34-13829	Decreed	9/2/1961	3.64	252.0
PEHRSON, BYRON; PEHRSON, LOY	34-10581	Decreed	5/1/1920	0.65	0.0
PEHRSON, BYRON; PEHRSON, LOY	34-2304	Decreed	5/18/1953	7.18	359.0
PEHRSON, BYRON; PEHRSON, LOY	34-7025	Decreed	5/5/1972	5.62	416.0
PEHRSON, BYRON; PEHRSON, LOY	34-7056	Decreed	1/20/1974	3.96	233.0
HOLBROOK, DOUG	34-13876	Decreed	1/30/1961	1.96	249.3
HOLBROOK, DOUG	34-14334	Decreed	1/30/1961	0.22	194.5
HOLBROOK, DOUG	34-14335	Decreed	8/31/1976	3.34	194.5
MC AFFEE, RYAN; MC AFFEE, RUTH	34-10323	Decreed	4/18/1975	2.62	148.0
HINTZE, MELVIN MARX; HINTZE, DARLA ANN	34-7194	Decreed	5/16/1977	3.12	168.6
HINTZE, MELVIN MARX; HINTZE, DARLA ANN	34-13761	Decreed	11/28/1952	0.21	168.6
HINTZE, MELVIN MARX; HINTZE, DARLA ANN	34-14342	Decreed	4/1/1987	0.02	168.6
HINTZE FARMS	34-2323C	Decreed	2/11/1955	2.85	180.2
NOLAN SAYER FARMING AND RANCHING	34-10150	Decreed	3/30/1955	5.40	165.0
PAT POWERS	34-7239A	License	1/22/1980	2.12	431.0
PAT POWERS	34-2365	Decreed	5/4/1960	2.70	431.0
ELLWEIN, MELVIN	34-2323F	Decreed	2/11/1955	0.23	14.8
ELLWEIN, MELVIN	34-7179B	Decreed	6/10/1977	1.34	155.0
RAMSHORN GRAZING ASSOCIATION	34-2479	Decreed	7/27/1966	4.58	410.0
PEHRSON, RANDY; PEHRSON, PEGGY	34-2380	Decreed	8/23/1960	3.89	203.0
PEHRSON, RANDY; PEHRSON, PEGGY	34-2407	Decreed	3/27/1961	3.33	306.0
PEHRSON, RANDY; PEHRSON, PEGGY	34-7160	Decreed	2/21/1981	1.92	156.0
PEHRSON, RANDY; PEHRSON, PEGGY	34-7182	Decreed	4/18/1977	3.68	313.0
PEHRSON, RANDY; PEHRSON, PEGGY	34-14391	Decreed	2/11/1955	0.63	39.4

SIMMONS, DWIGHT	34-2310	Decreed	10/24/1953	2.00	115.0
ANDERSON, MAURICE	34-7183	Decreed	4/25/1977	0.74	80.0
MC KELVEY, JAMES	34-2456c	Decreed	11/3/1964	0.25	10.0