

RECEIVED

APPLICATION FOR TRANSFER OF WATER RIGHT

JAN 12 1998

PART 1

** Please send all notices to
Scott L. Campbell, ELAM & BURKE
PO Box 1539
Boise, ID 83701 Phone 208-344-2471

WATER RESOURCES
WESTERN REGION

Name of applicant

Settlers Irrigation District **

Post Office address

P.O. Box 7571, Boise, ID 83707

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A. PURPOSE OF TRANSFER

- 1.
- ☐
- Change point of diversion
- ☐
- Add diversion point(s)
- ☐
- Change place of use
-
- ☒
- Change nature of use
- ☒
- Change period of use
- ☐
- Other

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WATER RESOURCES
WESTERN REGION

2. Describe the reason for the proposed changes
- Provide more efficient way to use District water at proposed Blue Cross corporate office site. Project will include ponds for surface water storage and groundwater recharge. Reduced irrigation acreage. Water to be delivered during irrigation season only. See Attach. A

B. DESCRIPTION OF RIGHT(S) OR PORTION THEREOF, AFTER THE REQUESTED CHANGE

1. Right Number
- 63-00230-00
- Priority
- Oct. 17, 1884
- Amount (cfs/ac-ft)
- see Attachment B
- Nature of Use
- see Attachment B
- Period of Use
- to
-
- to
-
- to
-
- to
-
2. Total amount of water being transferred
- 0.35
- cubic feet per second and/or
- 12
- (storage) acre-feet per annum.
-
3. Source of water
- Boise River
- tributary to
- Snake River
-
4. Point(s) of Diversion:

Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Local name for diversion
07		SW	NE	09	3N	2E	Ada	Settlers Canal Div. Dam @ river see remarks and attachments

MAY 24 2000

5. Lands irrigated or place of use:

Department of Water Resources

Twp.	Rge.	Sec.	NE 1/4				NW 1/4				SW 1/4				SE 1/4				Totals
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
3N	1E	08				21												21	
		08				J, E													

COPY
entire document
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ORIGINAL DATA
63-230
JAN 12 2011
IN FILE #
21

Total acres

21

PART 1

6. General Information:

a. Description of diversion system Settlers Canal and diversion dam; headgate at south-east corner of property, pipe to ponds and water amenities, pressurized irrigation system. See attachments for details.

b. Are the lands from which you propose to transfer the water right subject to any liens, deeds of trust, mortgages, or contracts? _____ Yes X No. If yes, provide a notarized statement from the holder of the lien, deed of trust, mortgage or contract agreeing to the proposed changes.

c. Describe the affect on the land now irrigated if the place of use is changed pursuant to this transfer:

Before transfer - 35 acres irrigated with 0.35 cfs

After transfer - 21 acres irrigated, 2.5 acres ponds and water amenity stream, 11.5 acres non-irrigated (buildings, roads, and parking lots) See attachments for details.

d. Remarks:

The transfer changes the nature of use of a portion of the water right delivered to the property (35 acres in SENE Section 8, T3N, R1E) to meet the needs of the property owner, and authorizes those changed uses on that parcel. The transfer proposes to describe water use on the parcel as water right No. 63-00230"O" (0.35 cfs). Water right No. 63-00230"N" (97.02 cfs) will describe water use on District lands outside of the 35 acre parcel.

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Transfer of Water Rights No. _____

And said application is hereby _____, subject to the following limitations and conditions:

Witness my hand this _____ day of _____, 19 _____.

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PART 2

TRANS NO.

A. DESCRIPTION OF RIGHT AS RECORDED:

Water Right No. 63-00230L

STAGE: DECREED

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>
IRRIGATION	to	97.37 CFS

<u>SOURCE</u>	<u>TRIBUTARY OF</u>
BOISE RIVER	SNAKE RIVER

Priority: 10/17/1884

LOCATION OF POINT(S) OF DIVERSION:, Sec. 9, Township 03N, Range 02E
ADA CountyPLACE OF USE: See RemarksCONDITIONS/REMARKS:

1. For irrigation of lands under canal system.

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10. To your knowledge, has any portion of this water right undergone a period of five or more consecutive years of non-use?
no If yes, describe _____

B. DESCRIPTION OF PORTION OF RIGHT BEING TRANSFERRED No split in ownership
(If the entire right is to be changed by the applicant, omit part B and C.)

1. amount 0.35 for irrigation purposes from undefined in the decree
 (cfs/~~ac-ft~~)
 amount _____ for _____ purposes from _____ to _____
 (cfs/ac-ft)
 amount _____ for _____ purposes from _____ to _____
 (cfs/ac-ft)

2. Point(s) of Diversion:

Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Local name for diversion
				09	3N	2E	Ada	Settlers Canal ($\frac{11}{44}$ not defined
								in the decree)

3. Lands irrigated or place of use: This shows the tract that is being developed

Twp.	Rge.	Sec.	NE 1/4				NW 1/4				SW 1/4				SE 1/4				Totals
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
3N	1E	08				35													35

Total acres 35

C. DESCRIPTION OF UNCHANGED PORTION OF RIGHT *(omit if there is no change)*

1. amount 97.02 for irrigation purposes from undefined in the decree
 (cfs/~~ac-ft~~)
 amount _____ for _____ purposes from _____ to _____
 (cfs/ac-ft)
 amount _____ for _____ purposes from _____ to _____
 (cfs/ac-ft)

2. Point(s) of Diversion: As above

Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Local name for diversion

3. Lands irrigated or place of use: remaining lands within Settlers Irrigation District

Twp.	Rge.	Sec.	NE 1/4				NW 1/4				SW 1/4				SE 1/4				Totals
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	

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Total acres _____

PART 3**B. CHANGES IN NATURE OF USE**

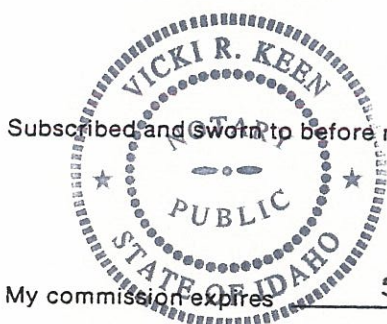
1.

<u>New Nature of Use</u>	<u>Amount (cfs/ac-ft)</u>	<u>Hours/days/year</u>	<u>Period of Use</u>
storage	12 ac-ft	365 days	_____ to _____
diversion to stg, aesthetic	0.35 cfs	as available	during irrig. season
2. Quantity and quality of return flows and location of discharge:
 return flows will spill back to Settlers Canal from upper pond or will seep into shallow aquifer at lower pond. No change in return flow quality is anticipated.
3. Describe effects on other water uses resulting from the proposed change:
 All of the water currently delivered to the tract will be routed to the upper pond. There will be no increase in the amount of water delivered to the site or used on the site. No negative impacts on other water users or water uses are anticipated. See attachments for more detail.

I hereby assert that no one will be injured by such change and that the change does not constitute an enlargement in use of the original right. The information contained in this application is true to the best of my knowledge.

I understand that any willful misrepresentations made in this application may result in voiding its approval.

Subscribed and sworn to before me this 11th day of December, 19 96.



My commission expires 5/21/2000

FOR DEPARTMENT USE ONLY

Transfer contains 6 pages and 4 attachments A, B, C1+2, D

Received by SL Date 1/12/98 Protest filed by _____

Prelim. check by SL Fee \$100 _____

Receipted by SL Date 1/13/98 W023363 _____

Published in Idaho Statesman Copies of protest forwarded by _____

Pub. dates 6-18 + 25-98 Hearing held by _____ Date _____

Watermaster recommendation requested on _____ Recommended for ☐ approval ☐ denial

_____ rec'd. _____ by _____

Copy of transfer sent to lien holder _____

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR TRANSFER OF WATER RIGHT
PART 3

- A. Draw a map or attach a USGS map indicating the new point(s) of diversion and/or the new place of use for rights described in part 1. Clearly depict the land by section, township and range number.**

See Attachment C

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ATTACHMENT A

MITIGATION PLAN AND CONCEPTUAL WATER SUPPLY DESIGN FOR IRRIGATION AND AESTHETIC USES AT THE MERIDIAN BLUE CROSS PROJECT

The following pages describe (1) the irrigation and aesthetic water supply system for the Blue Cross project site near Meridian, and (2) a mitigation plan to allow approval of a new water right permit during the current water right moratorium in the Boise River Basin.

The information in these documents has been prepared in support of (1) an application for permit to allow use of groundwater for supplemental water supply for irrigation and aesthetic uses and (2) a companion transfer of the Settlers Irrigation District water right to allow use of surface water for irrigation, aesthetic storage, and groundwater recharge.

SECTION 1 - CONCEPTUAL WATER SUPPLY DESIGN

Description Of The Site

The site covers approximately 35 acres, of which approximately 21 acres will be irrigated. The site is located in the SENE of Section 8, T3N, R1E. The property is approximately one-quarter mile south of Fairview Avenue, and is bounded on the east by Eagle Road and on the south by Pine Street. The site will be developed for office buildings, with access drives, parking lots, landscape, and water amenities (ponds and stream). Water supply system components are shown conceptually on the attached figures.

Water Supply System Requirements

The following are water supply system requirements.

1. Provide irrigation to approximately 21 acres at peak pumping rate of 250 gpm and a pump discharge pressure of 75 psi.
2. Provide pond water amenities year around.
3. Provide a year-around flowing water amenity stream of approximately 450 gpm (1 cfs) through the site. The majority of the stream flow will be recirculated.

Water Sources

Primary Supply. The existing irrigation water source to the site consists of 17.5 miners inches (157.5 gpm) of continuous flow from the Settlers Canal. Settlers Canal water is available, on average, for 158 days per season (April 21 through September

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* See 5-4-1998 Letter from Terry M. Scanlon, Scanlon Engineering.
Simplified Mitigation Plan

25). The shortest canal delivery season in recent years was 124 days (April 6 through August 8, 1992).

Supplemental Supply. A supplemental water source (groundwater) is needed when Settlers Canal water is not available. The supplemental water source will provide irrigation supply early and late in the irrigation season. The supplemental water source will also provide aesthetic water supply during the non-irrigation season to replace water lost to evaporation and seepage from water amenities.

The supplemental groundwater supply will be diverted from either the lower pond or a shallow well. The lower pond will be used if an adequate supply can be obtained from groundwater inflow into the pond. A well will be used if pond inflow is inadequate to support site irrigation needs or if aquatic growth in the lower pond becomes problematic for irrigation use.

Water System Components

There are several interrelated components to this water supply system, including an upper pond (5 acre feet capacity), lower pond (7 acre feet capacity), water amenity stream between the upper and lower ponds, recirculating pump (1 cfs) at the lower pond for the water amenity stream, pressurized irrigation pump (0.56 cfs) at the upper pond, shallow well (75 feet deep) with submersible pump (0.30 cfs) at the upper pond, flow meters, and canal gates. These components, as currently proposed, are described in more detail below.

Upper Pond. The upper pond will provide the following functions:

- short-term irrigation storage
- water amenity
- intake site for the irrigation pump.

Assuming a surface area of one acre, the maximum daily fluctuation of the pond surface will be less than 6 inches. Average water depth (at full pool) will be about 5 feet, for a total storage volume of 5 acre feet. The upper pond will be lined with a membrane or amended soil to reduce seepage losses. The inlet to the upper pond will be a pipe from the Settlers Canal. Overflows from the pond will be provided to the Settlers Canal (to be used during canal delivery season) and to the water amenity stream (to be used during supplemental water supply season).

Lower Pond. The lower pond will provide the following functions:

- point of storm water disposal
- point of groundwater recharge

- point of groundwater inflow for supplemental supply
- water amenity
- source of gravel fill material for project construction
- intake site for the water amenity pump.

The lower pond will be unlined and will be in direct hydraulic connection with the shallow water table. The water table depth is anticipated to vary from about 10 feet below ground surface (April) to about 5 feet below ground surface (October). During the canal delivery season, Settlers Canal water will be pumped (via the irrigation pump and water amenity stream) from the upper pond into the lower pond for aquifer recharge purposes. During the supplemental water supply season, the lower pond will be supplied by groundwater inflow from the shallow aquifer. There will be no surface overflow from the lower pond. The pond surface area will be approximately one acre, and average water depth (at full pool) will be approximately 7 feet, for a full pond water volume of about 7 acre feet.

Water Amenity Stream. The water amenity stream will flow through the site from the upper pond to the lower pond. Average flow velocity through the stream will be about 0.3 feet per second, assuming an average depth of 6 inches, an average width of 6 feet, and a flow rate of 450 gpm (1 cfs).

The stream will be supplied from a water amenity pump located at the lower pond inlet. The pump will discharge at a rock water fall structure or fountain located near the upper end of the water amenity stream. The stream will be separated (with a gate) from the upper pond during the canal delivery season and connected to the upper pond through an overflow spillway during the supplemental water supply season.

Irrigation Pump. The irrigation pump will be sized to provide approximately 250 gpm at 75 psi. During the peak irrigation demand, a 250 gpm pump can provide an irrigation of 0.3 acre inches per acre to the 21 irrigated acres in approximately 11.4 hours.

The irrigation pump will also pump canal water into the water amenity stream for a short period each day. Pumping into the water amenity stream will provide aquifer recharge water to the lower pond and a flushing action to the stream.

The irrigation pump will be a 15 or 20 horsepower centrifugal. The pump supplied should have a relatively flat performance curve, with a shut-off head slightly above the desired discharge pressure. At low discharge pressures, the pump can provide high flow rates to groundwater recharge.

Flow Meters. Flow meters will be installed in the system as described below. Each flow meter will be equipped with a totalizer.

- The irrigation pump would be equipped with a flow meter. Flow meter readings will be needed at the beginning of the irrigation season, start of canal delivery, end of canal delivery, and end of the irrigation season. These flow meter readings will allow calculation of the volume of groundwater used for supplemental irrigation.
- The pipe from the irrigation pump into the water amenity stream also will be equipped with a flow meter. Reading this meter at the start and end of the canal delivery season will allow calculation of annual groundwater recharge volume.
- Other flow meters may be installed as needed, or if alternative methods for calculation of groundwater recharge and discharge are used. For instance, a meter on the discharge pipe into the irrigation pond from the well and recharge pond could be used to determine groundwater discharge.

Water Amenity Pump. The water amenity stream will be supplied by a pump designed for a high flow rate at a low discharge pressure. The pump will lift water from the lower pond (water surface elevation of about 2610) to a water fall or fountain structure (discharge elevation of about 2628). With friction loss of 10 to 20 feet, the total head required from the pump is less than 40 feet.

The water amenity pump could either draw water directly from the lower pond or from a wet well in the water amenity stream at the entrance to the pond. The wet well approach would allow the amenity pump to be separated from the pond if a well is used for supplemental supply instead of the pond. It would also keep the pump intake isolated from water level fluctuations in the pond and from stormwater contained in the pond.

Groundwater Well and Pump. A well will be drilled at the upper pond to supply the following conditions: (1) if inflow into the lower pond is inadequate to meet site irrigation needs, or (2) if aquatic growth in the lower pond is problematic for pressurized irrigation use, or (3) if warmer water is needed during winter months to minimize freezing of the pond surface and water amenity stream. The well would discharge into the upper pond. The well pump would be a nominal 135 gpm (1.5 hp) submersible, controlled by a float switch at the upper pond.

The proposed well depth is 75 feet. This well depth is based on the log for the nearby Yellow Freight Company well. The Yellow Freight well did not penetrate any significant confining layers between 0 and 75 feet. All clay layers reported on the Yellow Freight well log were relatively thin, so that hydraulic connection is anticipated between the surface and 75 feet.

Water System Operation

The system will operate in two modes: canal-on mode and canal-off mode. Switching between modes will be a matter of opening or closing the two gates at the pond overflows.

Canal-On Mode. When canal water is available, the system will operate with the upper pond isolated from the water amenity stream. Water will flow into the upper pond from the Settlers Canal on a continuous flow basis. When the pond is full, water will spill back to the canal at a point north of the Blue Cross property headgate. The irrigation pump will operate 6 to 10 hours per day. One station (30 to 60 minutes) will pump to the water amenity stream for recharge purposes.

Canal-Off Mode. When canal water is not available, the system can operate with the upper pond overflowing to the water amenity stream. The overflow gate to the Settlers Canal will be closed. Water will flow into the upper pond from either the lower pond or from the well. Flow in excess of the irrigation requirement can flow down the water amenity stream.

Due to NPDES considerations, it is mandatory that no stormwater be spilled back to the Settlers Canal. Therefore, the overflow gate to the Settlers Canal must be closed if water is being pumped from the lower pond to the upper pond. If water from the lower pond is pumped into the upper pond, the pond must be completely drained before reopening the overflow spillway to the Settlers Canal.

SECTION 2 - MITIGATION PLAN

The applicant for the permit (Blue Cross) proposes to mitigate removal of groundwater from the aquifer by recharging the aquifer each year with an amount of Settlers Canal water that is equal to, or in excess of, the amount of groundwater consumptively used each year (i.e., evaporated or transpired) by landscape irrigation and water amenities.

Historic Water Use at the Property

According to the Settlers Irrigation District, the 35-acre property has historically been irrigated with 0.5 miners inches of water, for a total delivery of 17.5 miners inches. The Secretary of the Settlers Irrigation District reports that Settlers Irrigation District water has not been sold or transferred from the property.

Consumptive Water Use Changes Resulting from the Project

No increase in consumptive water use will occur as a result of the proposed Blue Cross Project. In fact, the annual consumptive use of water from the property is anticipated to decrease by more than 30 percent. The decrease in consumptive water use will occur primarily from the decrease in irrigated area. The irrigated and open water surface areas will total 23.5 acres, which is only 67 percent of the previously irrigated area.

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Furthermore, the landscape irrigation proposed for the project will consumptively use less water per acre than the agricultural crops previously raised on the property.

Monitoring of Mitigation

Site irrigation personnel will record flow meter readings to determine the amount of water that must be mitigated each year. The flow records will be available for review by the Department of Water Resources upon request. There are many ways to monitor the mitigation water flow. Two alternative methods are provided below.

Method 1. Using method 1, the amount of surface water that must be recharged for mitigation will be based on the sum of the metered volume of groundwater pumped to the irrigation pond and the calculated volume of water lost from water amenities. These two components are described below.

- Annual consumptive groundwater use for landscape irrigation will be estimated based on the metered irrigation pumping that occurs when surface water is not available from the Settlers Canal. This estimate will be conservative because a small portion of the applied irrigation will percolate back to the aquifer.
- Annual consumptive groundwater use for aesthetic purposes will be estimated based on the open water surface area (i.e., water amenity stream and ponds) multiplied by the estimated annual evaporation from free water surfaces in the Boise area. The estimated annual evaporation in the Boise area is 3.0 feet per year (Map M23, Idaho Water Resources Inventory, Idaho Water Resources Board, 1968). The open water surface area for project water amenities is proposed to be about 2.5 acres. Therefore, the consumptive groundwater use associated with water amenities will be about 7.5 acre feet. This estimate of evaporated groundwater is conservative, as most of the water evaporated from the upper pond will occur during the canal delivery season, when pond water is derived from the Settlers Canal rather than groundwater.

Method 2. Method 2 is simpler than Method 1. Method 2 would consist of (1) metering the discharge of groundwater pumped into the irrigation pond (from the well and the recharge pond) and (2) metering the volume of water pumped into the recharge pond from the irrigation pond. The annual volume pumped into the recharge pond must equal or exceed the volume of groundwater pumped into the irrigation pond.



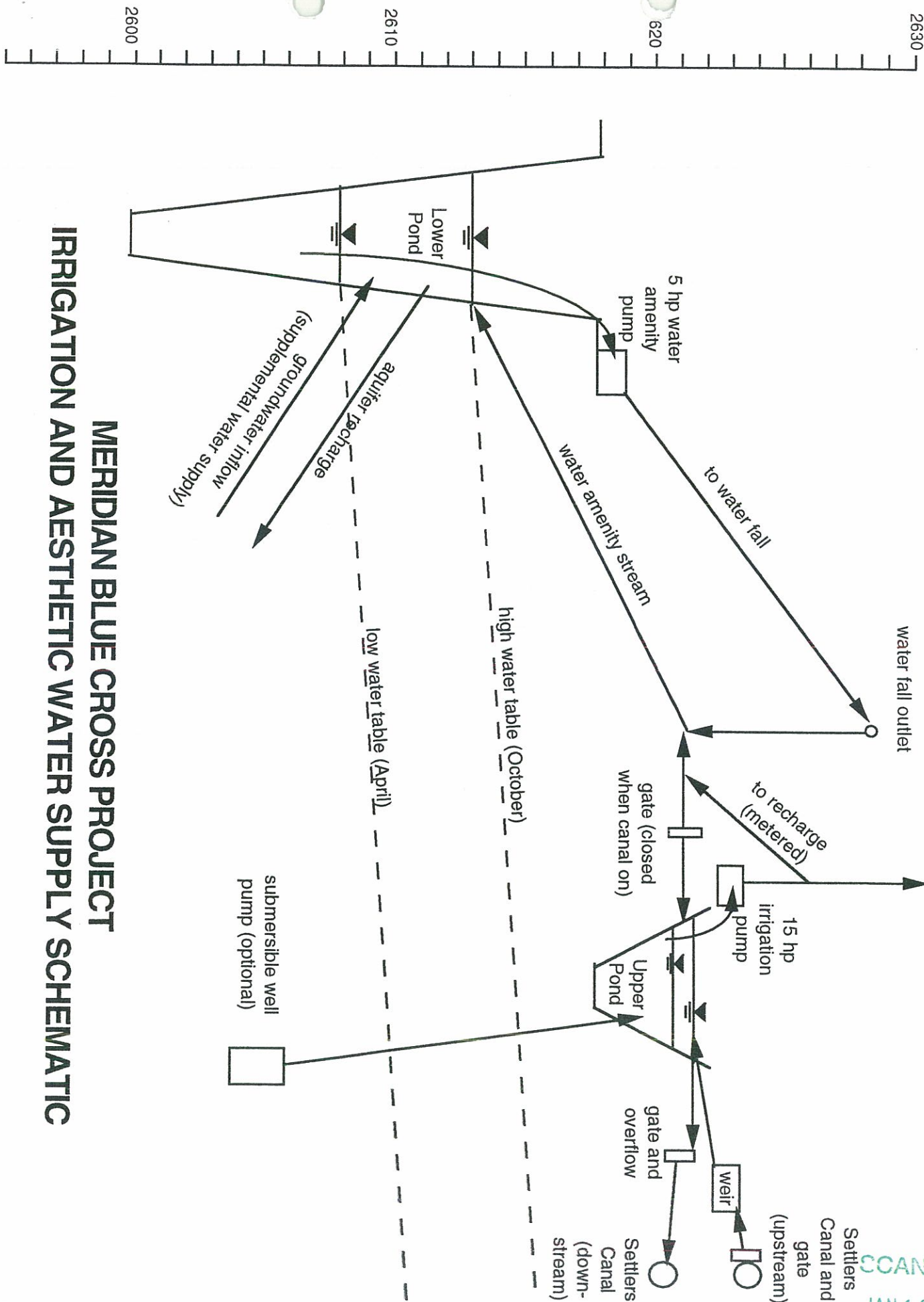
MERIDIAN BLUE CROSS PROJECT IRRIGATION AND AESTHETIC WATER SUPPLY SCHEMATIC - PLAN VIEW

approx.
elevation

NW

SE

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MERIDIAN BLUE CROSS PROJECT IRRIGATION AND AESTHETIC WATER SUPPLY SCHEMATIC

ATTACHMENT B

Part 1, B.1.

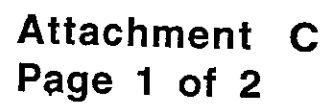
Right Number	Priority	Amount	Nature of Use	Period of Use
63-00230"O"	10/17/1884	0.35 cfs	Diversion to Storage	3/15 to 11/15
		0.25 cfs	Irrigation	3/15 to 11/15
		0.10 cfs	groundwater recharge	3/15 to 11/15
		0.10 cfs	aesthetic	3/15 to 11/15
		12 AF	Irrigation Storage	1/1 to 12/31
		12 AF	Irrigation from Storage	3/15 to 11/15
		12 AF	Aesthetic Storage	1/1 to 12/31

Total 0.35 cfs and 12 AF

The 0.35 cfs of irrigation water for 35 acres currently in use will be reconfigured to allow two ponds (12 AF total) and continued irrigation of 21 acres. No increase in consumptive use or irrigation deliveries beyond the amount historically provided will occur. See Attachment A for more detail.

Place of Use
T3N, R1E

T3N, R1E



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