

Project No. 228-02-2006

Streamflow and Channel Loss Analysis for Lake Creek and the Lake Creek Meadows Homeowners Association

Prepared for:

Lake Creek Home Owners Association
c/o James Speck
120 East Avenue, Second Floor
P.O. Box 987
Ketchum, ID 83340-0987

December 12, 2006

For information concerning this report, contact
Charles G. Brockway, Ph.D., P.E.
G. Erick Powell, Ph.D., E.I.T.



CHARLES E. BROCKWAY, PH.D., P.E.
CHARLES G. BROCKWAY, PH.D., P.E.
2016 WASHINGTON STREET NORTH
SUITE 4
TWIN FALLS, IDAHO 83301

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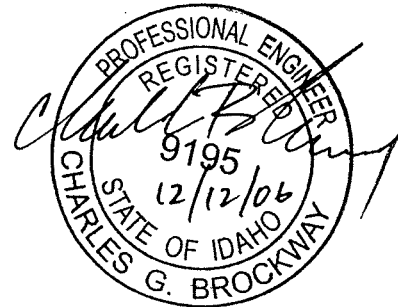
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Streamflow and Channel Loss Analysis for Lake Creek and the Lake Creek Meadows Homeowners Association

Brockway Engineering, PLLC
Charles G. Brockway, P.E.
G. Erick Powell, E.I.T.

December 12, 2006

A. Overview

Lake Creek, a tributary to the Big Wood River, is located 3.5 miles north of Ketchum, Idaho along Idaho State Highway 75. Two residential subdivisions are located along the creek, namely Lake Creek Subdivision and Lake Creek Meadows Subdivision. Lake Creek Subdivision contains thirty-nine residential lots; Lake Creek Meadows subdivision lies upstream of Lake Creek subdivision and contains seventeen residential lots. The remaining land within the Lake Creek watershed is public land, administered by the U.S. Forest Service, Sawtooth National Forest.

The Lake Creek watershed is approximately 13.4 square miles, which includes Taylor Canyon, Sawmill Gulch, and numerous other unnamed mountain canyons. The water source for Lake Creek during the irrigation season is primarily discharge from springs located at the creek headwaters in sections 17, 9, and 4 of Township 5 North, Range 18 East in unsurveyed National Forest Land. The creek also carries runoff during the spring snowmelt period, typically April through June. At the confluence of Lake Creek and the Big Wood River, the stream channel intersects the water table of the Big Wood River aquifer, which creates a permanent wetland area and causes additional inflow to the stream even if upstream reaches are completely dry.

Lake Creek Meadows Homeowners Association has requested that Brockway Engineering conduct a hydrologic investigation of the surface water discharge patterns to determine the nature of the hydrologic connection, if any, of Lake Creek to the Big

Wood River, and whether curtailment of the irrigation rights from Lake Creek would bring relief to senior water right holders on the Big Wood River.

Historically, Lake Creek has been known as an intermittent stream, or a stream that does not flow continuously during the summer months. Included in this report are historical documents that lend evidence to the intermittent nature of Lake Creek.

The investigation included the following general tasks:

1. Review of historical data with respect to the water right appropriations and field investigations, primarily from IDWR files.
2. Collection of anecdotal evidence from homeowners, system operators, and others with direct or indirect knowledge of the surface water flow patterns.
3. Multiple concurrent measurements of streamflow in Lake Creek to assess the magnitude of flow loss to bed seepage.

This report presents the results of flow measurements on Lake Creek and the Lake Creek Meadows Homeowners Association water diversion system. Flow measurements were obtained by using a pygmy-current meter, a trapezoidal flume, and a known volume container. Flow measurements were collected on three separate days (November 2, 6, and 10, 2006) to validate the stream flow, diversion system flow, and loss estimates under slightly different weather conditions at similar measurement times.

A.1. Lake Creek Meadows HOA Water Rights

The Lake Creek Meadows Homeowners Association owns surface water rights from the creek for irrigation and aesthetic uses throughout their residential property. These rights have been licensed by IDWR and were the subject of a transfer in 1990. No other irrigation water rights from Lake Creek have been perfected. The rights currently on record are described as follows:

Water right 37-2177 has an allowed diversion rate of 1.1 cfs for irrigation usage on 55 acres from April 1st through November 1st with a priority date of 5/21/1910. The original water right application was submitted by Amos Smith for irrigation and domestic uses. 37-2177 is currently licensed for irrigation use.

Water right 37-2418 has an allowed diversion rate of 0.47 cfs for aesthetic uses from January 1st through December 31st with a priority date of 10/16/1923. The original water right application was submitted by Walter G. Leflang for irrigation and domestic usage.

Water right transfer No. 3610 was approved in 1990 to provide for both irrigation and aesthetic usage within the ponds, to allow pumping from the ponds to irrigation, and to move the point of diversion upstream to its present location. The point of diversion for these water rights is located 2.5 miles upstream and water is delivered to the subdivision via a buried pipeline. Prior to the development of the Lake Creek Meadows subdivision, the pipeline system was constructed to transport water from the headwater of Lake Creek to lined ponds within the subdivision. The point of diversion is located well upstream of the subdivision in order to ensure that the sufficient surface water is available during the irrigation season. It had been observed that during the irrigation season, essentially all of the streamflow was lost to bed seepage upstream of the subdivision. Since the ponds are located within the stream channel of Lake Creek, they are considered part of the natural stream and the water rights therefore lists each pumping location as a point of diversion.

The combined annual volume of water under these two rights shall not exceed 169.3 acre-feet. Water right #37-2418 also allows storage for fire protection for the residences of the Lake Creek Meadows subdivision.

A.2. Frost Decree and Historical Documents

The Frost Decree, which established water right priority for the Big Wood River and its tributaries, does not include Lake Creek in any portion of the decree. Land owners along Lake Creek were using water prior to the Frost Decree; however no water right applications were submitted until 1910. The original water right application (No. 8897, see Appendix A) was prepared for Amos Smith by Agents Angel and Lamme. Within the application, Angel and Lamme reference the reason why Lake Creek was not part of the Frost Decree:

This claim is upon unsurveyed lands and has been owned, held, and cultivated by applicant since the year 1892. His filings for such claim appear in Book 3, Pa 84 of the Possessory claims Records of Blaine County. The accompanying maps show as nearly as can be shown his fenced land and ditches. His dams and ditches are complete and he has used this water since the year 1892, but has failed to have the same decreed. He was not a party defendant in Big Wood Water Suit, as Lake Creek was not considered a tributary of Big Wood River for the reason it is a dry stream the greater part of the irrigation season.

Thirteen years later, Walter Leflang also applied for Lake Creek surface water rights, the following statement is made in the original application (Appendix A):

Water has been used for irrigation on the land on the south side of the creek for twenty years or more, through the ditch on the south side. This stream during July and August goes dry in ordinary years and does not reach Wood River, to which it is a tributary except freshet season; by taking the ditches out the water is conserved for the land, by taking it past the sink. The land is gravelly and has heavy slope and requires at least two second feet to irrigate it.

Numerous additional historical documents indicate that the ground surface through the Lake Creek valley is gravelly and highly porous. Diversion structures and alternative channels were constructed historically throughout the Lake Creek Valley to eliminate the loss of stream flow from the headwaters to the place of application.

A.3. U.S. Forest Service Water Rights

In addition to the private water rights already discussed, the U.S. Forest Service holds four surface water rights in the Lake Creek system. These water rights are all for stockwater usage and have priority dates of 6/1/1890 (WR# 37-13443), 6/1/1890 (WR# 37-13551), 6/28/1934 (WR# 37-16945), and 3/24/1987 (WR# 37-8290). The water source for WR# 37-13551 is Lake Creek spring in Section 4, Township 5 North, Range 18 East, however it has no tributary since it sinks downstream of the place of use.

B. Lake Creek Meadows HOA Water Diversion System

B.1. Description

The Lake Creek Meadows subdivision constructed an irrigation water diversion system prior to the subdivision development. The purpose of the diversion system is to

minimize the stream loss to groundwater and preserve it for irrigation, fire suppression, and aesthetic uses. Figure 1 is a 2004 aerial photo showing components of the water diversion system. Water rights 37-2177 and 37-2418 have a point of diversion in the NENW quarter-quarter of section 20 Township 5 North, Range 18 East (Figure 1 point 2). This point of diversion is a 12-inch perforated PVC pipe buried under the stream channel (Figure 2). The inlet pipe connects with an 8-inch PVC pipe that conveys the captured water 0.7 miles where the flow is injected back into the stream channel (Figure 1 point 5). A re-diversion point is located 300 feet downstream of the injection point (Figure 1 point 7). The primary purpose of the injection and re-diversion is to ensure sufficient stockwater for sheep as required by the USFS. The re-diversion point is similar to the diversion point, a 12-inch perforated PVC pipe buried under the stream channel. The re-diversion pipe carries the captured water 1.7 miles downstream stream where the diverted water is re-introduced to the stream channel directly upstream of the Lake Creek Meadows subdivision property (Figure 1 point 10). A standpipe and valve is located on the pipe at Point X in Figure 1. When the valve is closed all water diverted through the pipe discharges through the standpipe and flows directly into the channel, but the normal operation is to discharge at Point 10.

In this manner the entire system operates essentially as a bypass mechanism to circumvent the portions of the stream bed which exhibit high seepage losses. Similar mechanisms have been constructed in the Big Wood Valley, e.g. the Rockwell Bypass canal and the Baseline Bypass Canal.

At the same time the diversion pipeline was constructed, the Lake Creek Meadows Homeowners Association constructed a series of six ponds (Figure 3) in the stream channel for irrigation and fire water storage downstream of the pipeline outlet. The ponds also serve to limit sediment transport during large runoff events. The first five ponds were lined to prevent storage water loss, while the sixth pond was initially left unlined to provide groundwater recharge. Since the original construction, the sixth pond has been lined to increase surface water transport downstream.

In addition, 0.7 miles of stream channel, downstream of the Lake Creek Meadows subdivision pond system, flows through Lake Creek subdivision. The Lake Creek channel joins the Big Wood River on the west side of Idaho Highway 75.

B.2. U.S. Forest Service Documentation

The U.S. Forest Service has granted the Lake Creek Homeowners Association a special use permit to construct and maintain the irrigation diversion system previously outlined. The documentation relating to this special use permit can be found in Appendix C. Within these historical federal documents, there are several references to the intermittent nature of Lake Creek.

In 1986, Butch Harper wrote a reply to the Sawtooth Forest Supervisor regarding the Lake Creek diversion system prior to developing the Lake Creek Meadows subdivision. The reply states, "The developer of the lake Creek property has decided not to reconstruct the dam but to install a plastic transmission line in one of the old ditches and cover it. These ditches were apparently installed many years ago and were never included in the permit. The diversion will only be necessary during the months of August and September when the lower portion of Lake Creek dries up."

In 1996, Valdon Hancock, a forest hydrologist with the US Forest Service, evaluated the restoration proposal for the Lake Creek diversion dam site in a letter to the District Ranger in Ketchum, Idaho. He estimated the base flow of Lake Creek to be 1.4 cfs under normal conditions at the point of diversion. Mr. Hancock states, "Maintenance of fish habitat in the lower reach [of Lake Creek] would require continuous and somewhat greater flow, but this is probably not realistic with the existing water right and the loss of flow to deep seepage within the channel."

These statements suggest that the flow in Lake Creek during the summer months below the point of diversion is not reliable and usually non-existent upstream of the Big Wood River. The forest service statements (Appendix C) correlate with the landowner statements (Appendix A) of the intermittent nature of Lake Creek.

C. Discharge Measurements

Discharge measurements throughout the system were collected using a pygmy current meter (Figure 4), a trapezoidal flume (Figure 5), or a calibrated volume container with three repetitions. Measurements were collected on three days (November 2, 6, and 10,

2006) under varying conditions. Measuring points included the following (refer to the point numbers on Figure 1). “Upstream” means immediately upstream and “Downstream” means immediately downstream.

- Point 1: Upstream of the point of diversion
- Point 2: Upper pipe discharge (inferred from Points 1 and 3)
- Point 3: Downstream of the point of diversion
- Point 4: Upstream of the point of injection
- Point 5a: Direct measurement of pipe outflow (11/10 only)
- Point 5b: Pipe outflow (inferred from Points 4 and 6)
- Point 6: Between the point of injection and point of re-diversion
- Point 7: Lower pipe discharge (inferred from Points 6 and 8)
- Point 8: Downstream of the point of re-diversion
- Point 9a: Standpipe flow into channel (11/2 only)
- Point 9b: Upstream of pipe outlet (channel dry for all measurements)
- Point 11: Downstream of pipe outlet (11/6 and 11/10)
- Point 12: Outlet of pond system (11/10 only)

The measurements were made within as short a time span as possible. Typically, a round of measurements required about 3 hours. Still, it appeared that significant variations were being observed in the stream discharge over the measurement periods (see below). Current meter measurement accuracy was rated as good (5% error) according to USBR criteria. The measurement with the trapezoidal flume at Point 11 was excellent (est. 2% error), and the measurements at Point 12 with the calibrated buckets were rated excellent (est. 2% error).

Field notes and other summary sheets for the measurement data collected are presented in Appendix D, and Table 1 outlines the flow summary. Site numbers in Table 1 correspond to the identified number on Figure 1.

Table 1. Summary of discharge measurements (**bold** = calculated from other measurements).

	November 2, 2006		November 6, 2006		November 10, 2006	
Location	Q (cfs)	Est. Time	Q (cfs)	Est. Time	Q (cfs)	Est. Time
1	3.48	13:00	3.55	17:15	2.89	10:30
2	1.17		1.82		0.07	
3	2.31	13:30	1.73	17:45	2.82	11:15
4	1.49	12:40	1.46	15:45	1.41	13:00
5a	--	--	--	--	0.67	12:30
5b	0.78		0.15		--	
6	2.27	12:00	1.61	16:15	2.08	
7	0.81		0.51		0.47	
8	1.46	12:20	1.10	16:45	1.61	13:30
9a	0.65	10:45	--	--	--	--
9b	0	11:30	0	15:00	0	14:00
11	0	11:30	0.34	15:15	0.29	14:00
12	--	--	--	--	0.14	14:30

There was no surface water in Lake Creek upstream of the lower pipe outlet on the days of measurement, including on November 2 when the water was discharging via the standpipe. All surface flow, with the exception of the water conveyed through the diversion system, was lost between upstream of the diversion point and upstream of pipe 2 outlet.

During the discharge measurement period, it was visually apparent that the natural discharge in the channel was changing significantly. On November 2 and 6, ice was observed to be melting as temperatures increased, contributing flow to the stream. At 14:00 on November 10, the channel in the vicinity of the standpipe (upstream of Point 9) was dry, but in the course of inspecting the dry channel at this location, water began slowly arriving from upstream. Thus, it was concluded that unsteady conditions were present and it was not possible to obtain perfectly concurrent flow measurements and as a result, several apparent inconsistencies are observed in the data. For example, the

upper pipe discharge was directly measured on November 10 to be 0.67 cfs. The difference between the discharge at Point 1 and Point 2 should be equal to the pipe discharge, which it is not, but the discrepancy is explained by an increasing natural flow, which is to be expected given the mid-morning measurement time. As another example, the upper pipe inflow on November 6 was calculated by the difference method to be 1.82 cfs, which is clearly an over-estimate. However, the decreasing natural flow which would likely be occurring during the 5:15 to 5:45 PM period due to decreasing temperatures could explain the discrepancy.

Most of the inconsistencies are too large to be explained by measurement error. All current meter measurements were made in reasonably uniform channels, with section widths of 0.8 foot or less. Therefore, the most likely factor is the unsteady natural flow as described above.

C.1. Seepage Loss Calculation

The unsteadiness in the streamflow complicates the interpretation of the data and seepage loss calculations for reaches internal to the diversion system, i.e. between the upper point of diversion and the lower injection point. However, because all flow was lost in the channel from the upstream measurement point (Point 1) to the pipe inflow (Point 9), a general calculation may be made of the overall seepage on each day. The seepage may be calculated as the inflow at Point 1 minus the pipe discharge plus tributary inflow. This seepage loss occurs over a reach length from Point 1 to the point at which the channel is dry, which varies depending on the discharge at the upper end.

The pipe discharge is assumed to be constant at 0.7 cfs in the upper pipe (direct measurement), and 0.6 cfs in the lower pipe. The weighted average pipe withdrawal from the entire reach is 0.63 cfs.

Minor tributary inflow was observed from Taylor Canyon. An estimated 20 gpm (0.04 cfs) was entering the Lake Creek channel and dissipating. This factor was deemed insignificant and ignored in the analysis. No other tributary inflow was observed.

Under these assumptions, the seepage loss calculations are shown in Table 2. Viewed in terms of the entire reach, the measured seepage rate is consistent across the three measurement days, with an average of 1.19 cfs/mile.

Table 2. Estimated seepage loss in Lake Creek from the point of diversion to the lower pipe outlet.

Date	Inflow (cfs)	Pipe withdrawal (cfs)	Seepage (cfs)	Distance to dry point in channel (miles)	Seepage rate (cfs/mi)
11/2/06	3.48	0.63	2.85	2.39	1.19
11/6/06	3.55	0.63	2.92	2.39	1.22
11/10/06	2.89	0.63	2.26	1.93	1.17
				Average	1.19

Seepage from the Lake Creek channel is primarily attributed to the porous nature of the parent material in the stream channel and the Lake Creek subsurface. The hydraulic conductivity of gravel ranges from 10 to 1000 ft/day; this range is on the very porous end of the hydraulic conductivity scale.

In addition to the stream channel, losses were found to be occurring within the pipe diversion and pond storage system. However, the flow loss through the pipe and pond diversion system was much less (one order of magnitude) than the flow loss occurring in the natural channel.

C.2. Current Seepage Losses

Based on the average seepage rate described above, seepage from the upper pipeline diversion to the upper end of the ponds is estimated to be 1.19 cfs/mile x 2.39 miles, or 2.84 cfs. Seepage through the pond system was measured to be 0.14 cfs, for a total of 2.98 cfs. Evaporation was assumed to be minimal due to the cold temperatures. The seepage rate in the stream channel from the lower end of the pond to the Big Wood

River is assumed to be similar to the upper reach. $1.19 \text{ cfs/mile} \times 3600 \text{ feet} = 0.81 \text{ cfs}$.
The total estimated channel loss with the creek in its current configuration is 3.79 cfs.

C.3. Historic Seepage Losses

The seepage rate that historically occurred in the Lake Creek channel from the upper pipeline diversion to the upper end of the ponds is assumed to be the same as current seepage. Historic seepage in the remainder of the channel to the Big Wood River is not directly measurable due to the presence of the series of lined ponds. Assuming the channel exhibited similar hydraulic characteristics so that the average loss rate of 1.19 cfs/mile applies, the seepage loss in the remainder of the channel, which has a length of 6200 feet, would be 1.40 cfs. Total historic seepage is therefore $2.84 + 1.40 = 4.24 \text{ cfs}$.

This analysis demonstrates that the total historical seepage from the upper point of diversion (Point 1) to the Big Wood River is approximately 4.24 cfs. Natural flow greater than this value at Point 1 would likely have reached the Big Wood River. Construction of the pipeline prevented a significant amount of water from being lost to seepage, and has caused flow to reach the Big Wood River during times when the natural flow would not have reached the river (see below).

C.4. Seepage Reduction Due to Pipeline and Ponds

Construction of the pipeline and lined pond system has reduced seepage losses and conserved water for the surface water supply. The amount of the conservation varies depending on the natural inflow to the system. The following table provides a comparison between historic and current scenarios based on the following assumptions. Historically, water flowed only in the natural channel and the seepage is assumed to be as described above. Currently, it is assumed that 1.57 cfs (based on the water rights) is diverted into the pipeline and into the ponds. In both cases, it is assumed that the same amount is used for irrigation so this factor does not represent a difference between the scenarios. The flows in the table are shown for zero irrigation withdrawal.

Table 3. Comparison of flow reaching the Big Wood River before and after construction of the current pipeline and pond system.

Natural flow at Point 1 (cfs)	Flow at Big Wood River (cfs)		
	Historical	Current	Difference
7.0	2.76	3.21	+0.45
6.0	1.76	2.21	+0.45
5.0	0.76	1.21	+0.45
4.24	0.0	0.62	+0.62
4.0	0.0	0.62	+0.62
3.0	0.0	0.62	+0.62
2.0	0.0	0.62	+0.62

Table 3 presents historical and current flow estimates that reach the Big Wood River. The historical flows were calculated by subtracting the estimated seepage loss from the entire Lake Creek channel system (4.24 cfs) from the natural flow at point 1. For example, if the natural flow at point 1 was 7.0 cfs, the flow that would reach the Big Wood River was estimated as $7.0 \text{ cfs} - 4.24 \text{ cfs} = 2.76 \text{ cfs}$.

The current flow calculations were a little more complex. The water right flow rate (1.57 cfs), being transported by the pipeline, was subtracted from the natural flow at point 1. The seepage along the stream channel (2.84 cfs) was also subtracted. The pipeline discharges the water right flow (1.57 cfs) back into the channel just upstream of the lined ponds. Seepage from the ponds (0.14 cfs) and the remaining Lake Creek channel (0.81 cfs) were then subtracted. The result is the current flow found in Column three. For example, if the natural flow at point 1 was 7 cfs, then after the diversion point the flow would be 5.45 cfs ($7.0 \text{ cfs} - 1.57 \text{ cfs} = 5.45 \text{ cfs}$). After seepage loss in the stream channel, the flow would be 2.59 cfs ($5.45 \text{ cfs} - 2.84 \text{ cfs} = 2.59 \text{ cfs}$). Here the pipeline flow is inserted back into the channel to result in a flow of 4.16 cfs ($2.59 \text{ cfs} + 1.57 \text{ cfs} = 4.16 \text{ cfs}$). The loss of flow to seepage in the ponds and the rest of the stream channel will subtract 0.14 cfs and 0.81 cfs respectively ($4.16 \text{ cfs} - 0.14 \text{ cfs} - 0.81 \text{ cfs} = 3.21 \text{ cfs}$). The flow estimate that will reach the Big Wood River would be 3.21 cfs.

The magnitude of conserved surface water is estimated to be 0.45 cfs if the natural flow would reach the ponds, and 0.62 cfs if all natural flow sinks upstream of the ponds. The analysis demonstrates that the pipeline and pond system has resulted in water reaching the Big Wood River during periods when historically, water would have been completely lost from the surface system.

D. Water Right Administration Implications

Although no systematic or spot measurements of discharge are known to exist, observational evidence from operator(s) of the system suggest that the natural flow likely exceeds the historic threshold of 4.24 cfs at the pipeline diversion during spring runoff. However, from July through September in most years it is unlikely that surface water would naturally reach the Big Wood River; observational and written evidence supports this assumption.

The water rights owned by Lake Creek Meadows HOA are late-priority rights relative to most irrigation rights on the Big Wood River. Unless the natural flow exceeds 4.24 cfs at the pipeline diversion, curtailment of the Lake Creek consumptive irrigation right of 1.1 cfs would not provide relief for senior water right holders in the Big Wood River during the same irrigation season. Further, curtailment of the aesthetic water right (0.47 cfs), which is not consumed, would never result in augmentation of the Big Wood River flow. Curtailment of this right would cause a reduction in the Big Wood River discharge since leaving it in the stream instead of the pipeline would cause most or all of the flow to be lost to seepage in the same irrigation season.

E. Conclusions

Based on the document review, flow measurements, and analysis detailed in this report, the following conclusions were made:

1. The current pipeline diversion system and lined ponds conserves surface water which would ordinarily be lost from the surface system via bed seepage.

2. The current seepage in the existing Lake Creek natural channel downstream of the upper pipeline point of diversion was determined to be 2.84 cfs, or 1.19 cfs per mile, and the additional loss through the pond system is 0.14 cfs. Estimated seepage in the remainder of the channel is 0.81 cfs, for a total of 3.79 cfs.
3. Prior to construction of the pipeline and pond system, historical seepage in the channel in the same reach was estimated to be 4.24 cfs.
4. Conservation of the surface water due to the pipeline and pond construction is estimated to range from 0.45 cfs to 0.62 cfs, depending on whether the natural flow reaches the pond system.
5. Based on observational and historical evidence, the Lake Creek natural flow likely does not exceed the historical threshold of 4.24 cfs during most of the irrigation season.
6. Based on the historical threshold, a call by senior water right holders on the Big Wood River on Lake Creek water rights would be futile unless the natural streamflow was larger than 4.24 cfs. However, even if the natural flow exceeded this threshold, only a fraction of the water not diverted from Lake Creek for irrigation would reach the Big Wood River.
7. Construction of the pipeline and pond system results in water reaching the Big Wood River during periods when it would not have reached the river historically. Curtailment of the water rights, particularly the aesthetic right, during these low-flow periods would reduce the surface water discharge to the river.

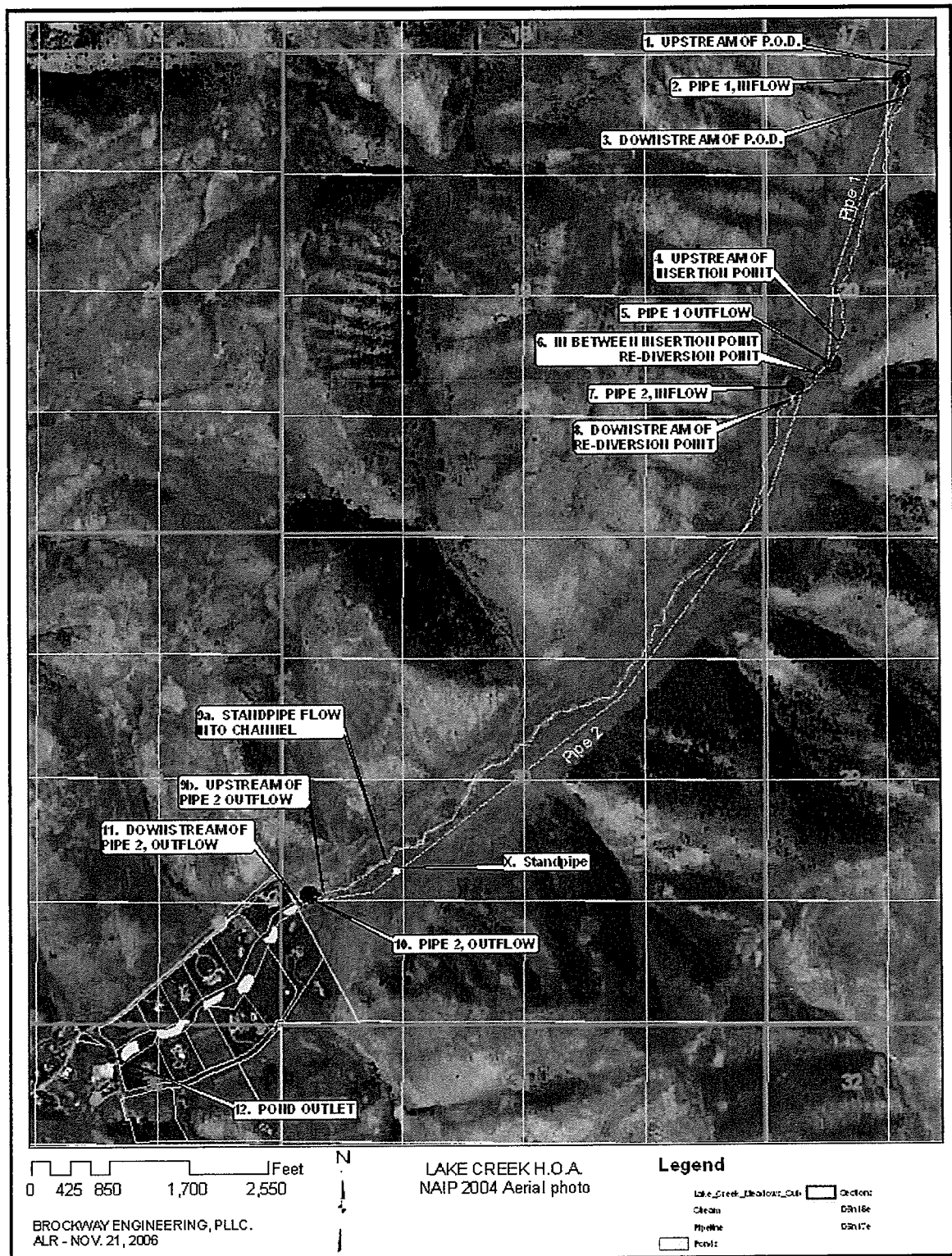


Figure 1: Lake Creek Meadows Homeowners Association Water Diversion System



Figure 2: Photograph of Point of Diversion

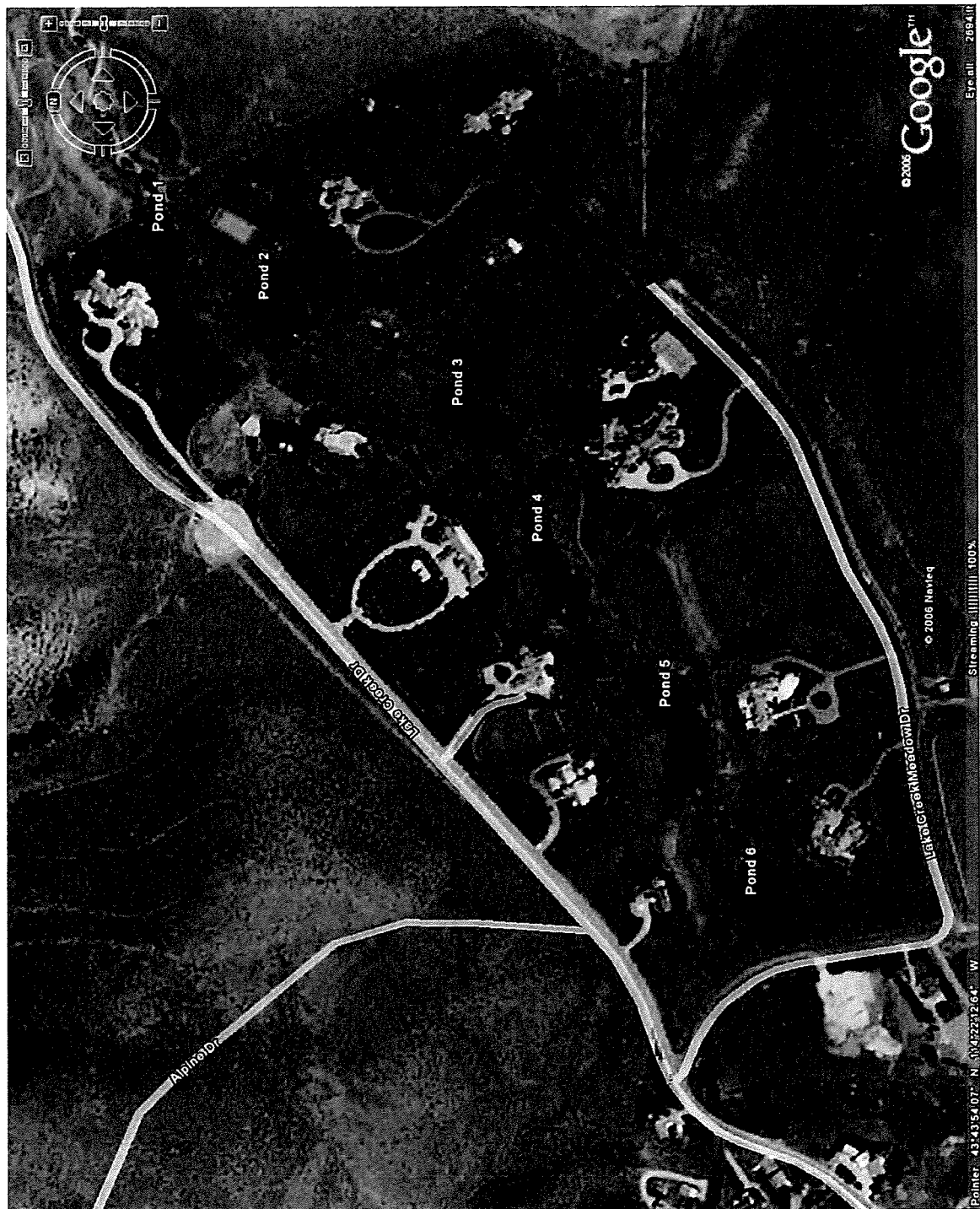


Figure 3: Aerial Photograph of Lake Creek Meadows Homeowners Association Pond System.



Figure 4: Photograph of Current Metering in Lake Creek.



Figure 5: Measuring flow rates in a stream channel using a trapezoidal flume.

F. References

Bear, J. 1972. Dynamics of Fluids in Porous Media. Elsevier. New York, New York.
764 pages.

Appendix A

Historical Documents

APPLICATION FOR PERMIT 37-2418

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF IDAHO

Application No. 22584
Permit No. 15893
District No. 7-B

1. Name of Applicant: Walter G. Leflang,

Postoffice address: Ketchum, County: Blaine, State: Idaho.

- I. If applicant is a corporation, give:
- (a) Date and place of incorporation:
 - (b) Amount of capital stock:
 - (c) Amount paid in:
 - (d) Names and addresses of directors:

- II. The financial resources of the applicant are:
- (b) Treasury stock:
 - (d) Other resources:

- (a) Cash on hand:
- (c) Bonds to be issued:

2. Quantity of water claimed: 0.9 cubic feet per second.

3. Source of water supply: Lake Creek which is a tributary of

4. Location of point of diversion: 5000 feet distant from the north corner of H. E. S. No. 328, in Sawtooth Forest Reserve, B. M., and is in the corner of Section , T. , R. , B. M., and is in the Unsurveyed, in Secs. 25, Twp. 5 N., R. 17 E. and 30, Twp. 5 N., R. 18 E., B. M. of Section , T. , R. , B. M., County of Blaine.

5. Water is to be used for: Irrigation and domestic purposes.

6. If for mining, milling, power or manufacturing purposes, give:

(a) Point of use of water: feet distant from corner of Section
T. , R. , B. M., in the of Section , T. , R. , B. M.

(b) Amount of power generated: H. P., under feet head.

(c) Water is to be returned to at a point feet
distant from the corner of Section , T. , R. , B. M., in the
of Section , T. , R. , B. M.

7. Estimated cost of works: \$ 500.00

8. Kind of works: Two small dams and ditches

9. Height of dams three feet; length of dam at top 10 feet; length of dam at bottom 5 feet; material used in dams brush, rock and earth.

10. Size of headgate: width feet; height feet

11. Ditch: Width at bottom two feet; width at water line three feet; depth of water one feet; dimensions of flume

Diameter of pipe inches; length of conduits each about 1 miles.

Average grade per mile 40-50 feet

12. The time required for the completion of such work is two years.

13. The time required for the complete application of the water to the proposed use is two additional years.

14. The land to be irrigated is described in the following tabulation: See Remarks.

Reinstated
Sept. 10, 1916

15. (a) Is reservoir to be used? No. If so, fill in (b) and (c) below.
 (b) Name of reservoir and number of Storage Permit;
 (c) Date of filing of Application for Storage Permit and Name of Applicant:

BE IT KNOWN THAT the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Walter G. Leflang. Applicant.

By _____ Agent.

Date of first receipt at Department of Reclamation. 9 A. M. October 5, 1923.

Returned to applicant for correction.

Corrected application received.

APPROVAL OF COMMISSIONER OF RECLAMATION

The number of this permit is 15893
Recorded in Book 56-7 Page 15893 Approved October 23, 1923.
This is to certify that I have examined the within application for a permit to appropriate the public waters of the State of Idaho,
and hereby approve the same, subject to the following limitations and conditions:
Bond in the sum of \$ to be filed on or before
Work to begin on or before December 22, 1923, and to continue diligently and uninterruptedly to completion,
unless temporarily interrupted by circumstances over which permit holder has no control.
One-fifth of the work above specified to be completed on or before October 23, 1924.
The whole of said work to be completed on or before October 23, 1925.
Beneficial use of water appropriated in accordance herewith, to be made on or before October 23, 1927.

Witness my hand this 23d day of October, 1923.

W. G. SWENDSEN.
Commissioner of Reclamation.

Remarks:

14 Twp.	Range	Sec.	NE¼				NW¼				SW¼				SE¼				Totals
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
			H. E. S. No. 328, 51.15 acres. For description see plat Water has been used for irrigation on the land on the South side of the Creek for twenty years or more, through the Ditch on the south side. This stream during July and August goes dry in ordinary years and does not reach Wood River, to which it is a tributary except freshet season; by taking the ditches out the water is conserved for the land, by taking it past the sink. The land is gravelly and has heavy slope and requires at least two second feet to irrigate it. STATE OF IDAHO DEPARTMENT OF RECLAMATION In the Matter of the Reinstatement) of Permit No. 15893, Under the) Provisions of Section 5194, Idaho) Compiled Statutes.) ORDER REINSTATING PERMIT WHEREAS, Permit No. 15893 lapsed through failure of the holder to make proof of completion of the works of diversion within the time specified in the Permit, to-wit: October 23, 1925; and, WHEREAS, On the 22nd day of December, 1925 notice to show cause why said permit should not be cancelled, under the provisions of Section 5194, Compiled Statutes of Idaho, was duly served on the holder of said permit; and, WHEREAS, On the 19th day of May, 1926 the holder filed notice of appearance to offer proof to show that the works of diversion under said permit were fully completed within the time required; and, WHEREAS, On the 21st day of September, 1926 depositions of the holder and two witnesses were received at the Department of Reclamation showing that the said works of diversion were completed within the time required in the permit; and, WHEREAS, After examination of the said depositions, the Commissioner of Reclamation of the State of Idaho, is fully satisfied that the works of diversion were completed as required under the terms of said Permit No. 15893, and that the holder has acted in good faith;																45

IT IS, THEREFORE, Hereby Ordered that said Permit No. 15893 be, and the same is, hereby reinstated, and that a certificate of completion of works be issued to the applicant herein.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of this Department, at Boise, Idaho, this 21st day of September, 1926.

W. G. SWENDBSEN
Commissioner of Reclamation

(SEAL)

Proof of Completion of Works Made 9-18-26 By Geo. H. Carter
Certificate of Completion of Works issued 9-21-26. Assistant.

Permit No. 15893

CERTIFICATE OF COMPLETION OF WORKS

To All Whom It May Concern:

This is to certify that Walter G. Lefflang of Ketchum, County of Blaine, and State of Idaho, the holder of Permit No. 15893, issued upon Application No. 22584, bearing date of priority of October 5, 1923, authorizing the diversion of 0.9 second feet of the waters of Lake Creek, County of Blaine, State of Idaho, for irrigation and domestic purposes, has fully complied with the provisions of the laws of the State of Idaho relating to the proof of completion of the works of diversion set out and described in said Permit; that said works are adequate for diverting and conveying to the place of intended use 0.9 second feet of the waters of Lake Creek; that the point of diversion of said waters is 5,000 feet distant from the North corner of N. E. S. No. 328, in Sawtooth Forest Reserve in Unsurveyed section 25, Twp. 5 N., Rge. 17 E., and Section 30, Twp. 5 N., Rge. 18 E., S. M. and that the lands proposed to be irrigated by the use of said water are described as follows, to-wit: a triangular tract of unsurveyed land in the Sawtooth Forest Reserve, patented Homestead of applicant containing 51.13 acres.

Witness my hand this 21st day of September, A. D. 1926.

W. G. SWENDBSEN
Commissioner of Reclamation

By Geo. H. Carter
Assistant.

LICENSE ISSUED FOR 0.9 SEC. FT.

p. 3847 Vol 7

The Depositions of Witnesses, in this form, taken separately, required in each case.

PERMIT No. 15893

Proof of Completion of Works

DEPOSITION OF WITNESS

Under Terms of H. B. 53, Laws 1917.

Ques. 1. State your name, age, residence, occupation and postoffice address.

Ans. James Obenchain. Age 58 years, resident of Ketchum, Idaho, occupation
Mining. P.O. Address - Ketchum, Idaho.

Ques. 2. Are you acquainted with I am acquainted with the holder of a permit, the holder of Permit No. 15893, authorizing the diversion of 0.9 second-feet of the waters of Lake Creek, emptying into Wood River, at Ketchum, Idaho for irrigation purposes? How long have you known him, and where does he reside?

Ans. I have known W.G. Leflang for about ten years, residing at Ketchum, Idaho.

Ques. 3. Have you read or heard read said Permit No. 15893, and are you familiar with its terms and conditions? I am acquainted with the terms of said permit.

Ans. _____

Ques. 4. (If for irrigation purposes). Are you acquainted with the land proposed to be irrigated under said permit? If so, describe same, state its character, and give your estimate of the amount of water required for its profitable cultivation.

Ans. It is gravelly sub with thin top soil, very porous, and mostly on heavy slope.
Would require nearly two second feet to keep it properly irrigated.

Ques. 5. Are the works of diversion fully completed and of sufficient capacity to convey the entire amount of water set out in the permit from point of diversion to place of use? If so, when were they so completed?

Ans. This project was completed in August 1925.

Ques. 6. Describe the works of diversion as they existed on the date stated in answer to Question 5, and give your estimate of their capacity on that date.

Ans. About one mile of Ditch, which should carry from 0.18 to 0.20 cubic feet
per second.

(Sign here)

James Obenchain

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in Ketchum, County

of Blaine, State of Idaho, on this Eighteenth day of

September A. D. 1926.

My commission expires August 28, 1930.

Edna Homan Notary Public.

15893

37-2177

No. 8897

APPLICATION FOR PERMIT
To Appropriate the Public Waters of the State of Idaho

1. Name of applicant: Amos E. Smith
Postoffice address: Ketchum, Idaho
County: Blaine State: Idaho
2. The quantity of water claimed is three cubic feet per second.
3. Source of water supply: Lake Creek
County of Blaine
4. Location of point of diversion: About one and three-quarters miles up said Creek from the point of its intersection with Big Wood River.
5. To be used for:
 - I. Irrigation and domestic use:
 - (a) Amount of land to be irrigated: one hundred & sixty acres.
 - (b) In the following legal subdivisions: Possessory claim, held for 8 years upon unsurveyed land.
6. Estimated cost of works:
7. Description of works for diversion:
 - I. Kind of works: Dam, ditch, flume, on creek in two places.
 - II. Dimensions of works:
 - (a) Height of dam three feet, length of dam at top ten feet, length of dam at bottom eight feet. Material used in construction: Earth, wood and stone
 - (d) Conduit ditch, width at bottom two feet, width at water line three feet, depth of water six inches. Average grade per mile is 45 feet. Length of conduit is one & one half miles, and it crosses the following quarter sections: Unsurveyed lands, to land described in 5 I (b) above which is the point of intended use.
8. Time required for the completion of the construction of such work is no years.
9. Time required for the complete application of the water to the proposed use is no additional years.

BE IT KNOWN, That the undersigned hereby makes application for a permit to appropriate the public waters of the State of Idaho as herein set forth.

Amos E. Smith,

Applicant

By Angel & Lamme, Agent

Remarks: This claim is upon unsurveyed lands and has been owned, held and cultivated by applicant since the year 1892. His filings for such claim appear in Book 3, Pa 84 of the Possessory claims Records of Blaine County. The accompanying maps show as nearly as can be shown his fenced land and ditches. His dams & ditches are complete and he has used this water since the year 1892, but has failed to have the same decreed. He was not a party defendant in Big Wood River Water Suit, as Lake Creek was not considered a tributary of Big Wood River for the reason it is a dry stream the greater part of the irrigating season.

He is and has been the only user of these waters & desires his right approved through your office.

Resp.

Angel & Lamme,

Said claim may be described as follows: Commencing at a point upon the wagon road about fifty feet easterly from where Lake Creek flows into Big Wood River, in high water season, running thence N.Westerly $1/8$ of a mile. Thence Northeasterly $3/4$ of a mile, thence S.Easterly $1/2$ mile, thence southwesterly $1/4$ mile, thence N.Westerly $1/4$ mile, thence southwesterly $1/2$ mile, thence northwesterly $1/8$ mile to place of beginning, said wagon road being on or about the Range line between Rgs. 17 & 18 E.B.M.

APPROVAL OF STATE ENGINEER

The number of this permit is 6132

Date of first receipt of application: 9.00 A.M. May 21, 1910.

Recorded in Book 18. Page 6132. Approved May 21, 1910

This is to certify that I have examined the within application for a permit to appropriate the public waters of the State of Idaho and hereby grant the same, subject to the following limitations and conditions:

Work to begin on or before July 20, 1910, and to continue diligently and uninterruptedly to completion, unless temporarily interrupted by circumstances over which permit holder has no control.

One-fifth of the work above specified to be completed on or before August 21, 1910.

The whole of said work to be completed on or before November 21, 1910.

The time for proof of beneficial use of water appropriated in accordance herewith, to extend to November 21, 1910.

Witness my hand this twenty-first day of May, 1910.

D.G. Martin,
State Engineer

STATE OF IDAHO
DEPARTMENT OF RECLAMATION
BOISE, IDAHO.

PERMIT NO. 15893

Proof of Application of Water to Beneficial Use

Deposition of Holder

Ques. 1. State your name, age, residence, occupation and postoffice address.

Ans. Walter G. Leflang, age 40--
stationery engineer at present, Petchum, Idaho.

Ques. 2. If acting in behalf of corporation, state its name, principal place of business (if a foreign corporation, give name of postoffice of statutory agent), your position with reference to same, and your authority for appearing in its behalf.

Ans. no corporation, for myself alone.

Ques. 3. State number and date of permit, and date of priority you propose to establish under the permit.

Ans. 15893 date of permit, Oct. 23, 1923--priority same.

Ques. 4. State source of water supply and give exact location of point of diversion.

Ans. Lake Creek, points of diversion near N. corner of
H E S No. 328 in Sawtooth Natl. Forest in Sec. 30, T. 5 N. R. 18 E.

Ques. 5. Describe your works of diversion, and state amount of water they are capable of conveying from point of diversion to place of use, and give name of canal or ditch or other works by which water is conducted to such place of use.

Ans. One ditch on E. side of Creek, about 5000 ft. long,
with laterals, width at water line 3 ft, at bottom 2 ft,
depth 1 ft will carry 2 second feet, with laterals
to carry over the land, small flume across creek.
Land very gravelly, and heavy slope, requires at
least 2 second feet.

Ques. 6. State for what purpose water is used and describe place of use. (If for irrigation name each subdivision in which used, and number of acres in each subdivision that have actually been irrigated with said water.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use.

Ans. Irrigation and domestic, on H E S. No. 328, in Sawtooth
National Forest, in Secs. 30 5 N 18 E and 25, 5 N 17 E.
have forty acres under cultivation.
Timothy hay

Ques. 7. If for other than for irrigation purposes; state how applied, amount of horse power generated, etc.

Ans. no

Ques. 8. What is the minimum amount of water required for the purpose specified above?

Ans. two second feet

Ques. 9. If you are not the person or representative of the corporation to whom above mentioned permit was originally issued, please state how ownership was acquired by present holder.

Ans. same person

Ques. 10. State when, how, in what amount and to what extent the water diverted under above mentioned permit has been used.

Ans. every year, 1924, 1925, 1926, 1927

have used two second feet

Ques. 11. State when, how, in what amount and to what extent waters other than those diverted under the above mentioned permit have been diverted and applied to beneficial use upon the lands herein described. Give full particulars regarding such other appropriations and rights claimed thereunder.

Ans. none.

(Sign) Walter S. Leffing

I hereby certify that the foregoing testimony was read to the above subscribed before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in Hailey, County of Blaine State of Idaho, on this 3rd day of November, A. D. 19 27

John T. [Signature]
Notary Public, residing at
Hailey, Idaho.

My commission expires Jan. 10, 1929.

15893

Page 1 of 8STATE OF IDAHO
DEPARTMENT OF WATER RESOURCESTransfer No. 3610

APPLICATION FOR TRANSFER OF WATER RIGHT

PART 1

APPROVED

Name of applicant Lake Creek Meadows Homeowners Assoc, Inc Phone 726-5023
Post Office address PO Box 3144, Ketchum, ID 83340

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 to reflect
2. Describe the reason for the proposed changes To update record of existing use, and to add pump rediversions from 6 ponds for irrigating pasture land, and add aesthetic and fire protection storage in ponds.

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

1. Right Number	Priority	Amount (cfs/ac-ft)	Nature of Use	Period of Use
<u>37-02418</u>	<u>10/16/1923</u>	<u>0.8 cfs</u>	<u>Aesthetic Storage</u>	<u>1/1</u> to <u>12/31</u>
		<u>42 ac-ft</u>	<u>Aesthetic Fire Storage</u>	<u>1/1</u> to <u>12/31</u>
<u>37-02177</u>	<u>5/21/1910</u>	<u>1.1 cfs</u>	<u>Irrigation</u>	<u>4/1</u> to <u>11/1</u>

2. Total amount of water being transferred 1.9 cfs cubic feet per second and/or _____ acre-feet per annum.
3. Source of water Lake Creek tributary to Big Lost River
4. Point(s) of Diversion:

Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Local name for diversion
	NW	NE	NW	20	5N	18E	Blaine	Head of pipe
	SW	NW	SW	20	5N	18E	Blaine	Rediversion into pipe
	NW	SW	SW	30	5N	18E	Blaine	Rediversion from 1 pond by pump
	SE	SE	SE	25	5N	17E	Blaine	Rediversion from 3 ponds by pumps
	NW	NE	NE	36	5N	17E	Blaine	Rediversion from 1 pond by pump
	NE	NW	NE	36	5N	17E	Blaine	Rediversion from 1 pond by pump

5. Lands irrigated or place of use:

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	
5N	18E	30											7						7
5N	17E	25														2	23		25
5N	17E	36	16	7															23

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APR 18 1990

Total acres 55

PART 1

6. General Information:

- a. Description of diversion system USFS special use permit for pipe system (existing). Returned to stream and rediverted near Sawmill Gulch. Returned to stream at property boundary to flow through series of 6 lined ponds with 6, 7 1/2 hp (70g p.m each) pumps
- 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:
At some point in history the use in tracts 2, 3, 4 in 37-2177 was moved upstream to the vicinity of HES 328. This filing officially accounts for the movement. Total land in Lake Cr HOA is 104 acres (Total P/U on 2177 & 2418 is 106ac), P/U will become 55 acre (net decrease in irrigation)
- d. Remarks:
Net decrease in irrigation to free up water for flow through aesthetics and storage for aesthetic and fire uses. After 1st filling only irrigation using inflow is planned.

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Transfer of Water Rights No. 37-2177/2418And said application is hereby APPROVED, subject to the following limitations and conditions:

1. The combined annual volume of water under Right Nos. 37-2177 & 37-2418 shall not exceed 169.3 afa.
 2. The maximum rate of diversion under Right 37-2418 shall not exceed 0.47 cfs.
 3. The maximum rate of diversion under Right 37-2177 shall not exceed 1.1 cfs.
 4. The watermaster must be given a right-of-way to the location of the points of diversion and re-diversion and the place of use.
 5. Use of water under these rights is subject to control by the watermaster of State Water District No. 37, Big Wood River.
- SEE ATTACHMENT "A" FOR ADDITIONAL CONDITIONS OF APPROVAL.

Witness my hand this

8th day ofMarch, 19 90

MICROFILMED

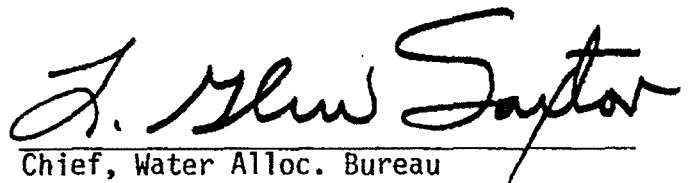
APR 18 1990

J. Glen Saxton
Chief, Water Alloc. Bureau

Attachment "A"
Conditions of Approval for Transfer of Water Right
Nos. 37-2177/2418

6. The Department of Water Resources retains jurisdiction over these water rights, and the uses approved by this transfer, to require a determination of losses in the delivery and pond systems by a method approved by the Director of Water Resources. Losses over and above losses that were incurred prior to this transfer, if they exceed 0.16 cfs, shall be replaced by mitigation water released to the Big Wood River. This mitigation water shall be in the form of an additional consumptive use right purchased by the owner of the property.
7. Use of water under this transfer shall comply with Idaho Water Quality Standards, both in effluent quality and in temperature.
8. The total volume of water diverted under this transfer shall not exceed 180 acre-feet per year.

Dated this 8th day of March, 1990.


Chief, Water Alloc. Bureau

MICROFILMED

APR 18 1990

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR TRANSFER OF WATER RIGHT
PART 2
(Attach one copy for each right)

A. DESCRIPTION OF RIGHT AS RECORDED

1. Right evidenced by:
- a. Decree No. _____ Decreed to _____
in case of _____ vs. _____
dated _____ in _____ county of _____
- b. License No. 37-2127 issued by the Idaho Department of Water Resources.
- c. Claim No. _____ on file with the Idaho Department of Water Resources.
- d. Transfer No. _____ which produced this right.
2. Attach a copy of last year's tax notice for the property to which the water right is appurtenant or other documents which show ownership. Label document as attachment A. Check appropriate box below:
- ☐ Tax Notice ☐ Warranty Deed ☐ Other _____
3. Source of water Lake Creek tributary to Big Wood River
4. Date or priority 5-21-1910
5. Water is used for the following purpose:
- amount 1.1 for Irrigation purposes from _____ to _____
(cfs/ac-ft)
amount _____ for Domestic purposes from _____ to _____
(cfs/ac-ft)
amount _____ for _____ purposes from _____ to _____
(cfs/ac-ft)
6. Total amount of water under right _____ cubic feet per second and/or _____ acre-feet per annum.
7. Point(s) of Diversion:

Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Local name for diversion
		SW	NE	30	5N	18E	Blaine	Dam & ditches

8. Lands irrigated or place of use: Tract 2, 3, 4 (Unsurveyed) Passesory Claim by Amos Smith, Blaine Co

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	
5N	17E	36	X	X			X	X	X	X									
		35															X	X	

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APR 18 1990

Total acres 55

9. Describe any other water rights used for the same purpose as described above _____

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

PART 2

(Attach one copy for each right)

A. DESCRIPTION OF RIGHT AS RECORDED

1. Right evidenced by:

- a. Decree No. _____ Decreed to _____
 in case of _____ vs. _____
 dated _____ in _____ county of _____
- b. License No. 37-2418 issued by the Idaho Department of Water Resources.
- c. Claim No. _____ on file with the Idaho Department of Water Resources.
- d. Transfer No. _____ which produced this right.

2. Attach a copy of last year's tax notice for the property to which the water right is appurtenant or other documents which show ownership. Label document as attachment A. Check appropriate box below:

☒ Tax Notice

☐ Warranty Deed

☐ Other _____

3. Source of water Lake Creek tributary to Big Wood River

4. Date or priority 10-16-1923

5. Water is used for the following purpose:

amount 0.8 for Irrigation purposes from _____ to _____
 (cfs/ac-ft)
 amount _____ for Domestic purposes from _____ to _____
 (cfs/ac-ft)
 amount _____ for _____ purposes from _____ to _____
 (cfs/ac-ft)

6. Total amount of water under right 0.8 cubic feet per second and/or _____ acre-feet per annum.

7. Point(s) of Diversion: Not recorded

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

8. Lands irrigated or place of use: HES 328 (unsurveyed)

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	
5N	17E	25													X		X	X	
	18E	30										X	X						

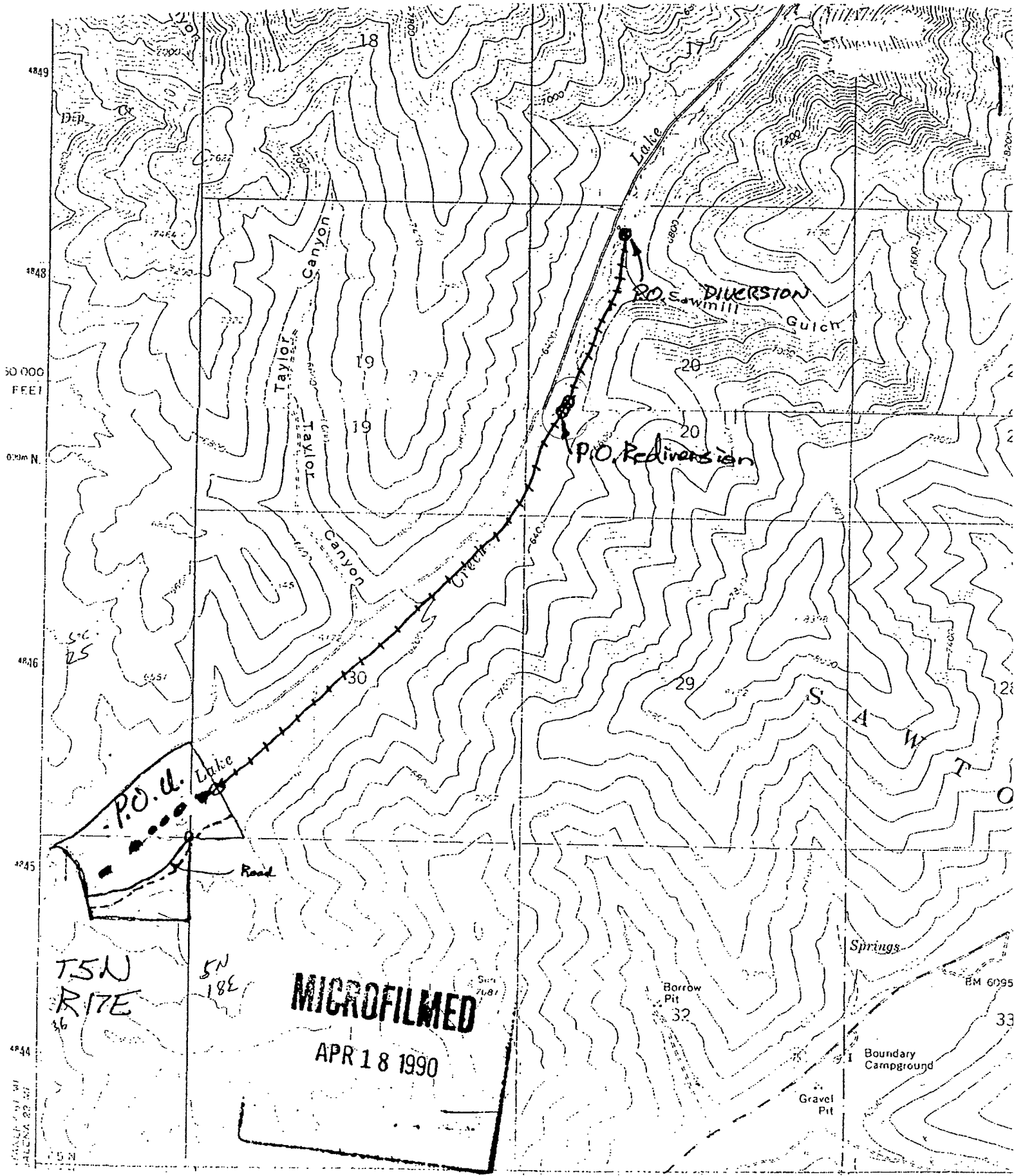
MICROFILMED

APR 18 1990

Total acres 51.13

9. Describe any other water rights used for the same purpose as described above _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES



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

1	New Nature of Use	Amount (cfs/ac-ft)	Hours/days/year	Period of Use
	<u>Aesthetic</u>	<u>.8 cfs</u>	<u>24/365 1/yr</u>	<u>1/1</u> to <u>12/31</u>
	<u>Aesthetic & Fire Storage</u>	<u>42 AF</u>	<u>24/365</u>	<u>1/1</u> to <u>12/31</u>

2. Quantity and quality of return flows and location of discharge:

Flows in excess of irrigation appropriation will continue to flow in Lake Creek. Quality is natural.

3. Describe effects on other water uses resulting from the proposed change:

Lake Cr. HOA are sole appropriators of surface water. Excess flow will provide more water to Big & Little River, consumptive use will decrease

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.

LAKE CREEK MEADOWS HOMEOWNERS ASSOC.

David Goodman by Barry J. Lubinski as attorney-in-fact
BY: DAVID GOODMAN (Signature of Applicant) **PRESIDENT**

Subscribed and sworn to before me this 3 day of August, 19 89.

Karen O. Hulme
(Notary Public)

My commission expires 2/21/93

FOR DEPARTMENT USE ONLY

Transfer contains 8 pages and 21 attachments (2 pending deals)
Received by DR1 Date 8/30/89 Protest filed by _____
Prelim. check by J. Stanton Fee \$5000 SDD7332 _____
Receipted by M. Baldwin Date 5/25/89 _____
Published in Wood River Journal Copies of protest forwarded by _____
Pub. dates 10/4 & 10/11/89 Hearing held by _____ Date _____
Watermaster recommendation requested on 9/25/89 Recommended for ☒ approval ☐ denial
_____ rec'd. 10/10/89 by Lak

Copy of transfer sent to lien holder _____

MICROFILMED

APR 18 1990

MEMORANDUM

TO: FILE

FROM: TIM LUKE *ok [signature]*

DATE: December 21, 1989

RE: TRANSFER APPLICATION NO. 3610

This transfer proposes a change in nature of use, period of use, place of use and points of diversion involving two licensed rights from Lake Creek, tributary to the Big Wood River. The two licensed rights have early priorities and are non-descriptive in terms of place of use. Much of the land was unsurveyed at the time the rights were licensed.

In reviewing the transfer, I developed some concern about extent of use under the two licensed rights. Our 1974 orthophoto provided no evidence of irrigation on the lands identified by the licenses. The department has no other available photography for this area. This land was not reviewed for the department's 1986 remote sensing report. Due to the lack of data here, I reviewed a 1984 NHAP photo at the state SCS office in Boise. Much of the land described by the transfer and licensed rights did appear to be irrigated in that year. From my review of the 1984 photo, I estimate that approximately 60 acres were irrigated at that time. (A schematic drawing of the photo has been placed in the transfer file). Since this is the only available data we have, the historical irrigation use should be limited to 60 acres for the purpose of reviewing the transfer. From review of the files, the two licensed rights appear to overlap one another. The transfer application appears to indicate that historical use was 106 acres. My review does not agree with that statement.

Analysis:

Historical Use/Before Transfer:

Consumptive Use Volume: 60 acres x 2.13 af/acre* = 127.8 af/yr

Field Headgate Volume: 60 acres x 3.0 af/acre = 180 af/yr

* Consumptive irrigation requirement for alfalfa at Hailey, Id.
Data from Brockway-Allen (1983)

Use After Transfer:

Consumptive Use Volume: 55 acres x 2.13 af/acre = 117.15 af/yr

Field Headgate Volume: 55 acres x 3.0 af/acre = 165 af/yr

Total Pond Evaporation: 2.0 acres x 2.13 af/acre* = 4.26 af/yr

* Total surface area of six ponds is 2 acres (determined from subdivision plat). As per Bill Ondrechen, IDWR hydrology section, alfalfa CIR is an acceptable estimate for lake evap.

Maximum Allowable Volume: 165 af + 4.26 af = 169.26 af
(after first filling of ponds)

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MAR 22 1990

The maximum allowable volume after the transfer is less than the field headgate consumptive use volume which would have been allowed before the transfer. The actual consumptive use volume is also less after the transfer.

Rate of diversion for right no. 37-2177:

This license allows irrigation on 55 acres with a diversion of 1.1 cfs. The rate of diversion and total number of acres should not change.

Rate of Diversion for right no. 37-2418:

Before Transfer: 0.9 cfs total. Assume 0.8 cfs for irrig. season.

After Transfer: Requesting 0.8 cfs for aesthetic purposes over full year.

$0.80 \text{ cfs} \times 1.983 \text{ af/day/cfs} \times 214 \text{ days/yr} = 339.49 \text{ af/yr}$

$339.49 \text{ af/yr} \times 1 \text{ cfs}/724 \text{ af/yr} = 0.47 \text{ cfs for } 1/1 \text{ to } 12/31$

Recommendations:

Right No. 37-02177

Allow 1.1 cfs for irrigation of 55 acres for POU, and from POD's as shown in transfer application. Period of use is 4/1 to 11/1

Right No. 37-02418

Allow 0.47 cfs for aesthetic use only from 1/1 to 12/31 (omit aesthetic storage and volume).

Conditions of Approval:

<<R04>>(edited) Use of water under this license is subject to control by the watermaster of State Water District No. 37. The watermaster must be given a right of way to the location of the points of diversion and redirection and the place of use.

<<R17A>>(edited) The combined annual volume of water under Right No(s). 37-2177 and 37-2418 shall not exceed 169.3 afa.

<<R17>>(edited) The maximum rate of diversion under Right No. 37-2418 shall not exceed 0.47 cfs. The maximum rate of diversion under Right No. 37-2177 shall not exceed 1.1 cfs.

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MAR 22 1990

26

30

TSN
R.17E



36

TSN
R.18E

TSN
25 3 2 5
44 10
16 8

MEMORANDUM

TO: Files Nos. 37-2177 and 37-2418
FROM: Gary Spackman *Gary*
DATE: March 7, 1990

RE: Transfer No. 3610 and Change of Nature of Use

I have reviewed transfer no. 3610 and Tim Luke's recommendations. I support Tim's proposal that we start with a base of 60 acres irrigated. It appears that the water rights are being delivered from a point of diversion to the same general place of use described in the licenses. Therefore, no additional losses will be incurred in the delivery of the aesthetic water. Nevertheless, the surface area of the water and possible seepage will increase. I do not anticipate, however, that the losses will be significantly greater than the amount of water saved by irrigating 55 acres instead of 60 acres. The transfer should be conditioned as follows:

The Department of Water Resources retains jurisdiction over these water rights, and the uses approved by this transfer, to require a determination of losses in the delivery and pond systems by a method approved by the Director of Water Resources. Losses over and above losses that were incurred prior to this transfer, if they exceed 0.16 cfs, shall be replaced by mitigation water released to the Big Wood River. This mitigation water shall be in the form of an additional consumptive use right purchased by the owner of the property.

Use of water under this transfer shall comply with Idaho Water Quality Standards, both in effluent quality and in temperature.

The total volume of water diverted under this transfer shall not exceed 180 acre-feet per year.

The determination of the flow rate above which losses must be compensated for was determined by adding 0.8 cfs to 1.1 cfs (the amounts of water approved for transfer of the application), and dividing these values into 60 acres. The quotient is a rate per acre. Multiplied by five acres, the reduction in irrigated acreage, the product is a flow rate of 0.16 cfs. The applicant should be entitled 0.16 cfs credit which can be lost through seepage or evaporation.

MICROFILMED

MAR 22 1990

Appendix B

Forest Service Documentation of Diversion System



United States
Department of
Agriculture

Forest
Service

Sawtooth National Forest
Supervisor's Office

2647 Kimberly Rd. E.
Twin Falls, ID. 83301
208-737-3200
Fax: 208-737-3236

File Code: 6270-1

Date: November 21, 2006

Erick Powell
Broadway Engineering, PLLC
2016 Washington St. N, Suite 4
Twin Falls, ID 83301

Dear Mr. Powell:

In response to your FOIA request for a copy of the special use permit file for the Lake Creek Homeowners pipeline, we have enclosed the documents from the file.

Please contact Jackie Richter, Forest FOIA Coordinator, (208) 737-3247 if you have additional questions.

Sincerely,

DOUGLAS E. GOCHMOUR
Acting Forest Supervisor

Enclosure

RECEIVED

NOV 22 2006



United States Department of Agriculture
Forest Service

SPECIAL USE PERMIT

Act of October 21, 1976 (PL 94-579)

a. Record no.(1-2)	b. Region(3-4)	c. Forest(5-6)
70	04	14
--	--	--
d. District(7-8)	e. User number(9-12)	f. Kind of use (13-15)
03	5717	913
--	----	----
g. State(16-17)	h. County(18-20)	k. Card no.(21)
16	013	1
--	---	-

Permission is hereby granted to Lake Creek Meadows Homeowners Assoc., Inc.
of P. O. Box 3144, Ketchum, Idaho 83340,
hereinafter called the holder, to use subject to the conditions set out below, the
following described lands or improvements:

Buried 8" pipe with small diversion in creek, 11,000 feet long and 20 feet
wide. Section 30, W1/2 Section 20, SE1/4 SE1/4 Section 19, T5N, R18E, .BM.
Pipeline will be at a depth necessary to protect from overhead traffic.

This permit covers 5.05 acres and/or 2.08 miles and is issued
for the purpose of:

Constructing, using, and maintaining a water transmission pipeline
and diversion for the purpose of irrigating.

1. Construction or occupancy and use under this permit shall begin immediately,
and construction, if any, shall be completed within -- months, from the
date of the permit. This use shall be actually exercised at least 365
days each year, unless otherwise authorized in writing.

2. This permit is accepted subject to the conditions set forth herein, and to
conditions 3 to 28 attached hereto and made a part of this permit.

	name of holder	*signature of authorized officer	date
HOLDER	LAKE CREEK MEADOWS HOMEOWNERS INC	ROD KEGLEY VICE-PRESIDENT	JULY 21 1987
	name and signature	TITLE	date
ISSUING OFFICER	Bob F. Smith	For Forest Supervisor	10/21/87

3. The holder shall pay annually in advance a sum determined by the Forest Service to be the fair market value of the use granted by this authorization. The initial payment is set at \$68.00 for the remainder of the calendar year. Subsequent payments shall be determined by the use of an annual fee schedule. The Forest Service may adjust the amount of payment annually by an appropriate factor to reflect more nearly the fair market value of the use, but at certain intervals the Forest Service shall review the fee and adjust the fee as necessary to assure that it is commensurate with the value of the rights and privileges authorized as determined by appraisal or other sound business management principles. Failure of the holder to make the annual payment, late payment charge, and any other charges when due shall cause this authorization to terminate.

"The Holder shall pay an interest charge on any fee amount not paid by the payment due date.

"Interest shall be assessed using the most current rate prescribed by the United States Department of Treasury Financial Manual (TFM-6-8025.20). Interest shall accrue from the date the fee payment was due. In addition, certain processing and handling administrative costs may be assessed in the event the account becomes delinquent and added to the amounts due.

"A penalty of 6 percent per year shall be assessed on any fee amount overdue in excess of 90 days from the due date of the first billing.

"Payments will be credited on the date received by the designated collection officer or deposit location. If the due date(s) for any of the above payments or fee calculation statements fall on a nonworkday, the charges shall not apply until the close of business of the next workday.

4. Development plans; lay-out plans; construction, reconstruction, or alteration of improvements; or revision of lay-out or construction plans for this area must be approved in advance and in writing by the forest supervisor. Trees or shrubbery on the permitted area may be removed or destroyed only after the forest officer in charge has approved, and has marked or otherwise designated that which may be removed or destroyed. Timber cut or destroyed will be paid for by the holder as follows: Merchantable timber at appraised value; young-growth timber below merchantable size at current damage appraisal value: **provided** that the Forest Service reserves the right to dispose of the merchantable timber to others than the holder at no stumpage cost to the holder. Trees, shrubs, and other plants may be planted in such manner and in such places about the premises as may be approved by the forest officer in charge.

5. The holder shall maintain the improvements and premises to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the forest officer in charge.

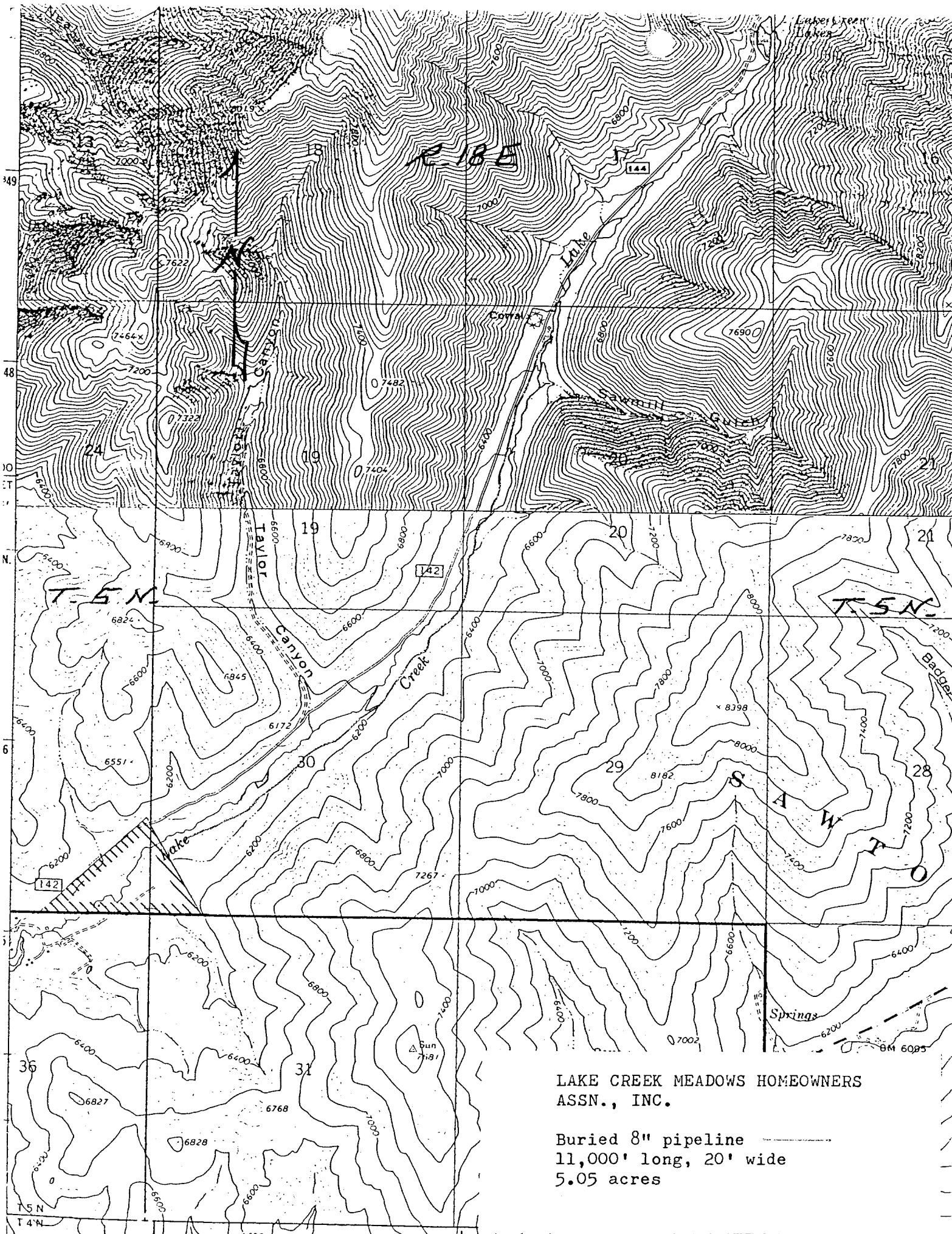
6. This permit is subject to all valid claims.

7. The holder, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this permit.

8. The holder shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the forest officer in charge or his authorized agent.

9. The holder shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and shall pay the United States for any damage resulting from negligence or from the violation of the terms of this permit or of any law or regulation applicable to the National Forests by the holder, or by any agents or employees of the holder acting within the scope of their agency or employment.
10. The holder shall fully repair all damage, other than ordinary wear and tear, to national forest roads and trails caused by the holder in the exercise of the privilege granted by this permit.
11. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom unless it is made with a corporation for its general benefit.
12. Upon abandonment, termination, revocation, or cancellation of this permit, the holder shall remove within a reasonable time all structures and improvements except those owned by the United States, and shall restore the site, unless otherwise agreed upon in writing or in this permit. If the holder fails to remove all such structures or improvements within a reasonable period, they shall become the property of the United States, but that will not relieve the holder of liability for the cost of their removal and restoration of the site.
13. Upon change in ownership of the facilities authorized by this authorization, the rights granted under this authorization may be assigned to the new owner upon application to and approval of the Authorized officer. The new holder must qualify and agree to comply with and be bound by the terms and conditions of the authorization."
14. In case of change of address, the holder shall immediately notify the forest supervisor.
15. The temporary use and occupancy of the premises and improvements herein described may be sublet by the holder to third parties only with the prior written approval of the forest supervisor but the holder shall continue to be responsible for compliance with all conditions of this permit by persons to whom such premises may be sublet.
16. This permit may be terminated upon breach of any of the conditions herein or at the discretion of the regional forester or the Chief, Forest Service.
17. In the event of any conflict between any of the preceding printed clauses or any provisions thereof and any of the following clauses or any provisions thereof, the following clauses will control.
18. (B-8) The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of National Forest lands under this permit.
19. (B-24) Avalanches, rising waters, high winds, falling limbs or trees, and other hazards are natural phenomena in the Forest that present risks which the holder assumes. The holder has responsibility of inspecting the site, lot, right-of-way, and immediate adjoining area for dangerous trees, hanging limbs, and other evidence of hazardous conditions and, after securing permission from the Forest Service, of removing such hazards.

20. (B-26) Holder shall take all measures necessary to protect the health and safety of all persons affected by its activities performed in connection with the construction, operation, maintenance, or termination of the right-of-way, and shall promptly abate as completely as possible any physical or mechanical procedure, activity, event, or condition, existing or occurring at any time: (1) that is susceptible to abatement by the holder, (2) which arises out of, or could adversely affect the construction, operation, maintenance, or termination of all or any part of the water transmission, and (3) that causes or threatens to cause: (a) a hazard to the safety of workers or to public health or safety, or (b) serious and irreparable harm or damage to the environment (including but not limited to areas of vegetation or timber, fish or other wildlife populations, or their habitats, or any other natural resource). Holder shall immediately notify the authorized officer of all serious accidents which occur in connection with such activities.
21. (D-3) The holder shall protect the scenic esthetic values of the area under this permit, and the adjacent land, as far as possible with the authorized use, during construction, operation, and maintenance of the improvements.
22. (D-9) The holder shall be responsible for prevention and control of soil erosion and gulying on lands covered by this permit and adjacent thereto, resulting from construction, operation, maintenance, and termination of the permitted use. The holder shall so construct permitted improvements to avoid the accumulation of excessive heads of water and to avoid encroachment on streams. The holder shall revegetate or otherwise stabilize all ground where the soil has been exposed and shall construct and maintain necessary preventive measures to supplement the vegetation.
23. (D-11) Seeding or planting will be done at a time of the year, in a manner, and with species which the District Ranger considers offer the best chance of success and will be repeated annually until such areas are accepted in writing by the District Ranger as satisfactorily revegetated and stabilized.
24. (E-2) Unless sooner terminated or revoked by the authorized officer, in accordance with the provisions of the authorization, this authorization shall expire and become void on December 31, 2007, but a new special-use authorization to occupy and use the same National Forest System land may be granted provided the holder will comply with the then-existing laws and regulations governing the occupancy and use of National Forest lands and shall have notified the authorized officer not less than six months prior to said date that such new authorization is desired.
25. (X-3) Nothing in this permit shall be construed to imply permission to build or maintain any structure not specifically named on the face of this permit, or approved by the authorized officer in the form of a new permit or permit amendment.
26. (X-19) The holder agrees to permit the free and unrestricted access to and upon the premises at all times for all lawful and proper purposes not inconsistent with the intent of the permit or with the reasonable exercise and enjoyment by the holder of the privileges thereof.
27. (X-49) This permit is not exclusive; that is, the Forest Service reserves the right to use or permit others to use any part of the permitted area for any purpose, provided such use does not interfere with the rights and privileges hereby authorized.
28. (X-74) This permit confers no right to the use of water by the holder.



LAKE CREEK MEADOWS HOMEOWNERS
ASSN., INC.

Buried 8" pipeline
11,000' long, 20' wide
5.05 acres

USDA-Forest Service SPECIAL-USE APPLICATION AND REPORT (Ref.: FSM 2712, 36 CFR 251.54)		FOREST SERVICE USE ONLY			
		Date Received (mo/day/yr) <u>04/02/87</u>	Region Number <u>04</u>	State Code <u>16</u>	County Code <u>013</u>
INSTRUCTIONS Applicant should request a meeting with the Forest Service representative responsible for processing the application, prior to completing this form. This meeting will allow a discussion of the form's requirements and identify those items to be omitted.		Congressional Dist. Number <u>02</u>		Forest Code (Admin. Unit No.) <u>14</u>	Unit ID Symbol (NFFID No.) <u>0157</u>
		Ranger Dist. No. (Resp. Dist.) <u>03</u>		User Number _____	Kind of Use Code <u>213</u>
PART I—APPLICATION (Applicant Completes)					
1. Applicant Name and Address (include Zip Code) Lake Creek Meadows Homeowners Assoc., Inc. Box 3144 Ketchum, ID 83340		2. Authorized Agent Name, Title and Address (include Zip Code) if different from Item 1. Rod Kegley Box 2063 Ketchum, ID 83340		3. Area Code and Telephone Number a. Applicant's (208) 726-0725 b. Authorized Agent's (208) 726-0725	
4. As applicant are you? (Mark one box with "X") a. ☐ Individual b. ☒ Corporation* c. ☐ Partnership/Association* d. ☐ State Government/State Agency e. ☐ Local Government f. ☐ Federal Agency * If marked "X", complete PART II.			5. Specify what application is for: (Mark one box with "X") a. ☐ New authorization* b. ☐ Renew existing authorization c. ☒ Amend existing authorization* d. ☐ Other* * If marked "X", provide details under Item 7.		
6. If you are an individual or partnership, are you also a citizen(s) of the United States? ☒ Yes ☐ No					
7. Describe in detail the land use, including: (a) type of use, activity, or facility; (b) related structures and facilities; (c) physical specifications (length, width, acres, etc.); (d) term of years needed; (e) time of year of use or operation; (f) duration and timing of construction; (g) temporary work areas needed for construction; and (h) anticipated need for future expansion. (If extra space is needed, use Page 3, REMARKS). A) Irrigation B) Buried ^{8"} pipe with small diversion in creek C) Length, 9200' width 40' D) 30 years ^{11,000'} ^{20'} E) April 1 to November 1 F) Fall two weeks G) None H) None					
8. Attach map covering area and show location of proposed use and/or furnish legal description of the land.					
9. Give statement of your technical and financial capability to construct, operate, and terminate the use for which authorization is requested, including the protection and restoration of Federal lands. (If extra space is needed, use page 3, REMARKS). We are the owner of the adjacent 104 acres of property.					

10a. Describe other reasonable alternative proposals considered.

No alternative route available

10b. Give explanation of why it is necessary to utilize Federal lands and why the alternatives in item 10a were not selected.

It's the only route to the water source.

11. Provide statement of need for proposed use, including the economic feasibility and items such as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits. (If extra space is needed, use page 3, REMARKS).

A) Cost of construction, \$10,000

B) None

C) Pipe line path will provide riding trail and wildlife watering trough.

12. Describe probable effects on the area population, including social and economic aspects, and rural lifestyles.

None

13. Describe likely environmental effects that the proposed use will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) control or structural change on any stream or other body of water; (e) existing noise levels; (f) land surface, including vegetation, permafrost, soil and soil stability; and (g) populations of fish, plant, wildlife and marine life, including threatened and endangered species. (If extra space is needed, use page 3, REMARKS).

Little environmental effect except the trough will help wildlife.

14. Describe what actions will be taken to protect the environment from the effects of the proposed use.

No effect

15. Name all Federal, State, County or other department(s)/agency(ies) where an application for this is being filed. Attach appropriate license, building permit, certificate or other approval document.

U.S. Forest Service
Box 2356
Ketchum, ID 83340

I HEREBY CERTIFY, that I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and that this information is correct to the best of my knowledge.

16a. Applicant's Signature (Sign in ink)

16b. Date

4/1/87

Title 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

REQUEST FOR TERMINATION OF AND APPLICATION FOR SPECIAL USE PERMIT
(Ref: FSM 2716)

This form is authorized by the Organic Act of June 4, 1897 for the purpose of evaluating the requested actions and no permit may be issued unless this form is completed.

PART I - REQUEST FOR TERMINATION (To be completed by Permittee)

TO: FOREST SUPERVISOR Sawtooth NATIONAL FORESTI (WE), THE UNDERSIGNED PERMITTEE(S) UNDER THAT CERTAIN SPECIAL USE PERMIT, DATED October 21, 1986AUTHORIZING ME (US) TO Maintain dam and reservoir of approx. 3 acre-feet capacity, and two
irrigation ditches approximately .3 mi. long from dam to permittee's private land. HAVE

• [CONVEYED ALL MY (OUR) RIGHT, TITLE, AND INTEREST IN AND TO THE IMPROVEMENTS LOCATED ON THE PARCEL COVERED BY SAID PERMIT.]

OR

• [ENTERED INTO A CONTRACT FOR THE SALE OF THE IMPROVEMENTS LOCATED ON THE PARCEL COVERED BY SAID PERMIT BUT HAVE
RETAINED TITLE TO SAID IMPROVEMENTS UNTIL COMPLETION OF PAYMENTS UNDER SAID CONTRACT] WITH:

(NAME OR NAMES)

(ADDRESS)

ACCORDINGLY, I (WE) REQUEST THAT SAID SPECIAL-USE PERMIT BE TERMINATED. THE REMAINING BALANCE OF ANY FEES PREVIOUSLY
PAID SHOULD BE CREDITED TO THE APPLICANT NAMED BELOW.DATE: October 9, 1985George C. Castle

*STRIKE OUT INAPPLICABLE ALTERNATIVES

(SIGNATURES OF ALL PERMITTEES LISTED ON PERMIT)

PART II - APPLICATION (To be completed by Applicant)

APPLICATION IS HEREBY MADE FOR A SPECIAL-USE PERMIT TO COVER THE SAME PARCEL OF LAND COVERED BY THE PERMIT REFERRED TO
IN THE ABOVE REQUEST, AND FOR THE SAME PURPOSE OF SAID PERMIT, SUBJECT, HOWEVER, TO SUCH NEW CONDITIONS AND STIPULA-
TIONS AS THE CIRCUMSTANCES MAY WARRANT.I (WE) ACKNOWLEDGE THAT WHEN A NEW PERMIT IS ISSUED, A TRANSFER FEE OF \$ _____ IS CHARGED. IT WILL BE INCLUDED IN THE
INITIAL PAYMENT FOR THE NEW PERMIT.DATE: October 9, 1985David P Goodman

(TYPE IN NAMES OF PROPOSED PERMITTEES)

BY

(SIGNATURE)

Box 3144, Ketchum Idaho 83340

(ADDRESS)

(Over)

PART III - RANGER'S REPORT ON APPLIC

1. IS SITE NEEDED FOR HIGHER USE? DESCRIBE TENURE RECOMMENDATION. IF TERMINATION IS RECOMMENDED, ATTACH JUSTIFICATION PER FSM 2712.

No

2. WHAT IS THE CONDITION OF EXISTING IMPROVEMENTS?

Fair. Some improvement needed.

3. IS THE FEE FOR THE PERMIT APPROPRIATE? (Attach fee computation sheet if required)

Yes

4. IS THE PERMITTED AREA PROPERLY DESCRIBED? IF NOT, SHOW PROPER DESCRIPTION:

Yes

5. IS CURRENT MAP OF THE USE ATTACHED? Yes IS IT ADEQUATE? _____ IF NOT, EXPLAIN

6. DESCRIBE UNDESIRABLE SITUATIONS TO BE CORRECTED.

Dam must meet state and federal standards.

7. LIST MANDATORY AND SUGGESTED SPECIAL CLAUSES NOT PRINTED ON THE PERMIT FORM.

REMARKS:

Signature letter to Mr. Goodman needs to indicate no approval until all plans reviewed and approved.

SUBMITTED (Signature)	TITLE	RANGER DISTRICT	DATE
<i>John Phipps</i>	DISTRICT RANGER	Ketchum	11/4/85
APPROVED (Signature)	TITLE	FOREST	DATE
	FOREST SUPERVISOR		

United States
Department of
Agriculture

Forest
Service

Ketchum Ranger District

Reply to: 2720/7530

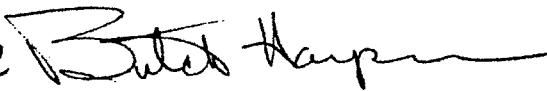
Date: September 15, 1986

Lake Creek Dam and Reservoir Transfer

Forest Supervisor

The developer of the the Lake Creek property has decided not to reconstruct the dam but to install a plastic transmission line in one of the old ditches and cover it. These ditches were apparently installed many years ago and were never included in the permit. The diversion will only be necessary during the months of August and September when the lower portion of Lake Creek dries up. The stream diversion will be made with a small headgate and will divert the water into an 8" pipe. An outlet and small water trough will be installed on the south side of Lake Creek for wildlife. The old dam will be breached and all concrete and debris removed from the site. For fee purposes, the transmission line will be 9200 feet long and require a 10 foot easement, this approximates two acres. All of the Lake Creek water rights are in Mr. Goodman's name. We recommend that a new permit be issued to Mr. Goodman for a water transmission line.

If you have any questions, please contact us.

For 

JOHN E. PHIPPS
District Ranger

HOLD-UP
UNTIL WE HERE
FROM BUTCH-MORE
9/30/86 INFO COMING

Application

LAKE CREEK DAM
DAVID GOODMAN
WATCH FOR
D-3



United States
Department of
Agriculture

Forest
Service

Ketchum Ranger

Reply to: 2720/7530

Date:

11-26-85
To be transferred
19-60
Do not Bill
Bill GOODMAN

Lake Creek Dam and Reservoir Transfer

Forest Supervisor

The developer of the the Lake Creek property has decided not to reconstruct the dam but to install a plastic transmission line in one of the old ditches and cover it. These ditches were apparently installed many years ago and were never included in the permit. The diversion will only be necessary during the months of August and September when the lower portion of Lake Creek dries up. The stream diversion will be made with a small headgate and will divert the water into an 8" pipe. An outlet and small water trough will be installed on the south side of Lake Creek for wildlife. The old dam will be breached and all concrete and debris removed from the site. For fee purposes, the transmission line will be 9200 feet long and require a 10 foot easement, this approximates two acres. All of the Lake Creek water rights are in Mr. Goodman's name. We recommend that a new permit be issued to Mr. Goodman for a water transmission line.

If you have any questions, please contact us.

FOR *Butcher*
JOHN E. PHIPPS
District Ranger

Peggy
Make copy to file
in 7560 Current
Project File.

Jim

*Dee,
See me about this.
Jim*

Received Sawtooth N.F.
Copies Received
Copies Sent Rqrs.

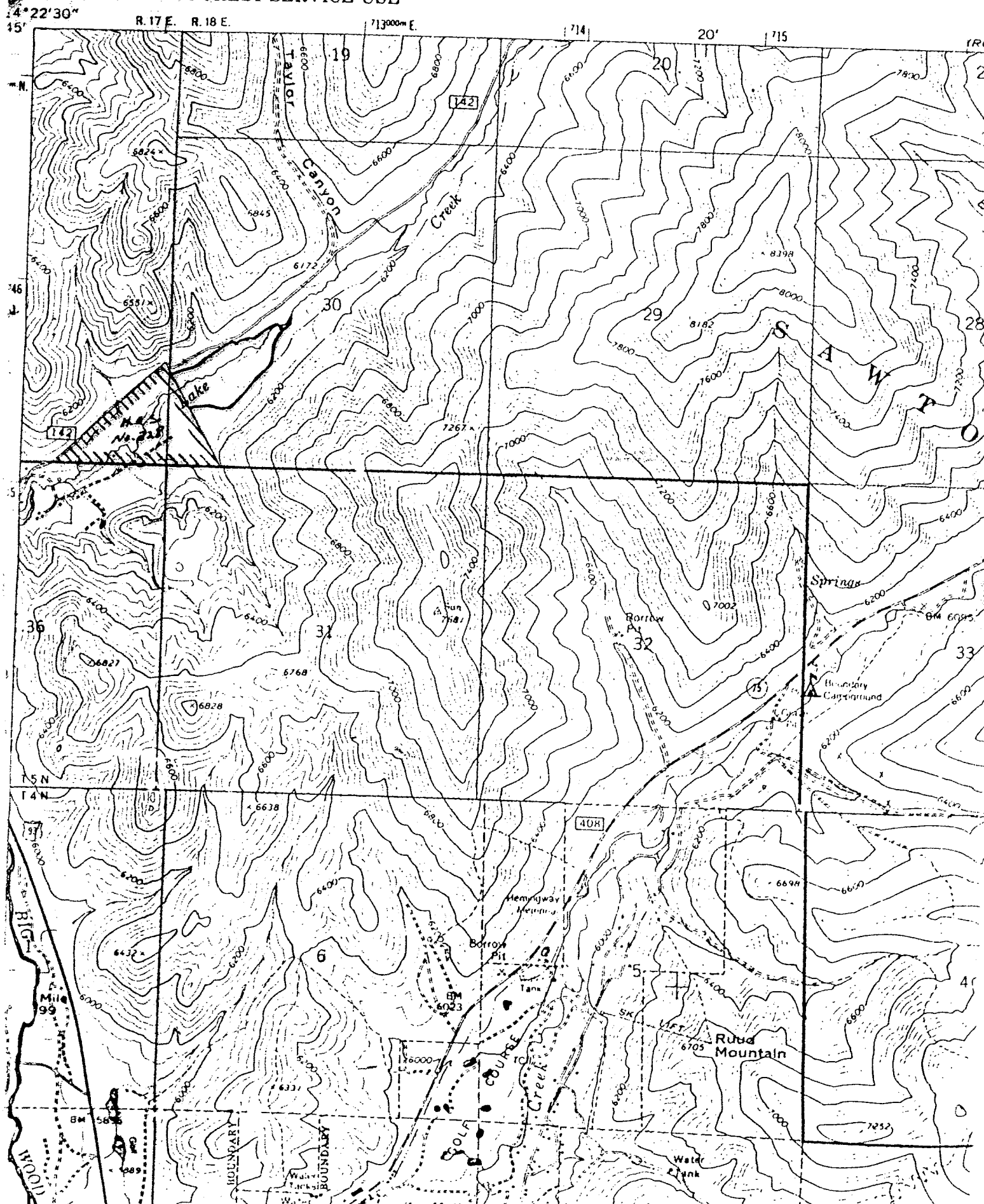
SEP 17 '80

st	Info
FS	
AO	
Planning	
R & L	
RM, WL, WS	
Eng	
Inv, FM	
P.O.	
AA-S&F	
AA-PM	
AA-AS	
AA-RS	
AA-CS	

Simpson/S&F
STRENGTH



EXHIBIT B



2. Construction or occupation and use under this permit shall begin in completed months, construction, if any, shall be completed within _____ months, from the date of the permit. This use shall be actually exercised at least 6 months each year, unless otherwise authorized in writing.

3. Development plans; lay-out plans; construction, reconstruction, or alteration of improvements; or revision of lay-out or construction plans for this area must be approved in advance and in writing by the forest supervisor. Trees or shrubbery on the permitted area may be removed or destroyed only after the forest officer in charge has approved, and has marked or otherwise designated that which may be removed or destroyed. Merchantable timber cut must be paid for by the permittee. Trees, shrubs, and other plants may be planted in such manner and in such places about the premises as may be approved by the forest officer in charge.

4. The permittee shall maintain the improvements and premises to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the forest officer in charge.

5. This permit is subject to all valid claims.

6. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this permit.

7. The permittee shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the forest officer in charge or his authorized agent.

8. The permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and shall pay the United States for any damage resulting from negligence or from the violation of the terms of this permit or of any law or regulation applicable to the national forests by the permittee, or by any agents or employees of the permittee acting within the scope of their agency or employment.

9. The permittee shall fully repair all damage, other than ordinary wear and tear, to national forest roads and trails caused by the permittee in the exercise of the privilege granted by this permit.

10. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom unless it is made with a corporation for its general benefit.

11. Upon abandonment, termination, revocation, or cancellation of this permit, the permittee shall remove within a reasonable time all structures and improvements except those owned by the United States, and shall restore the site, unless otherwise agreed upon in writing or in this permit. If the permittee fails to remove all such structures or improvements within a reasonable period, they shall become the property of the United States, but that will not relieve the permittee of liability for the cost of their removal and restoration of the site.

12. This permit is not transferable. If the permittee through voluntary sale or transfer, or through enforcement of contract, foreclosure, tax sale, or other valid legal proceeding shall cease to be the owner of the physical improvements situated on the land described in this permit and is unable to furnish adequate proof of ability to redeem or otherwise reestablish title to said improvements, this permit shall be subject to cancellation. But if the person to whom title to said improvements shall have been transferred in either manner above provided is qualified as a permittee, and is willing that his future occupancy of the premises shall be subject to such new conditions and stipulations as existing or prospective circumstances may warrant, his continued occupancy of the premises may be authorized by permit to him if, in the opinion of the forest supervisor, issuance of a permit is desirable and in the public interest.

13. In case of change of address, the permittee shall immediately notify the forest supervisor.

14. The temporary use and occupancy of the premises and improvements herein described may not be sublet by the permittee to third parties without the prior written approval of the forest supervisor and the permittee shall continue to be responsible for compliance with all conditions of this permit by persons to whom such premises may be sublet.

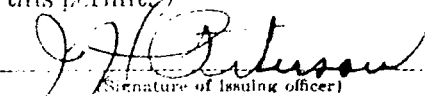
15. This permit may be terminated upon breach of any of the conditions herein or at the discretion of the regional forester or the Chief, Forest Service.

16. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provision thereof, the preceding printed clauses will control.

17. This permit is subject to the conditions set forth above and to conditions 18

to 1920 attached hereto and made a part of this permit.

Date July 7, 1958


(Signature of Issuing officer)

Acting Forest Supervisor
(Title)

USES, Sawtooth
Castle, George C.
Reservoir & Conduit
7/7/58



SPECIAL USE PERMIT

Sawtooth National Forest.

Permission is hereby granted to George C. Castle

of Box 47, Ketchum, Idaho

hereinafter called the permittee, to use, subject to the conditions set out below, the following-described lands or improvements:

Dam and reservoir of approx. 3-acre-feet capacity. Irrigation ditch approx. .3 mile long from dam to permittee's private land. Located in Lake Creek, SW $\frac{1}{4}$ Sec. 30; T. 5 N., R. 18 E. B.M.

(Transferred from Dan Ruffinen)

This permit covers _____ acres and/or _____ miles for the purpose of:

Maintenance of reservoir and conduit, for irrigation purposes.

The exercise of any of the privileges granted in this permit constitutes acceptance of all the conditions of this permit.

1. In consideration for this use, the permittee shall deposit with the Regional Fiscal Agent, Forest Service, Free Under Regulation U-11-G, a check, draft, or money order made payable to the Treasurer of the United States in the sum of _____ dollars (\$_____) for the period from _____, 19____, to _____, 19____, and thereafter annually on _____,

_____ dollars (\$_____). The charges for this use may be readjusted from time to time to place this permit on a basis consistent with the charge to other permittees for like privileges.

United States Department of Agriculture Forest Service	a. Record no. (1-2) 70	b. Region (3-4) 04	c. Forest (5-6) 14
SPECIAL USE PERMIT Act of October 21, 1976 ~~XXXXXX~~	d. District (7-8) 03	e. User number (9-12) 5236	f. Kind of use (13-15) 912
This permit is revocable and nontransferable (Ref. FSM 2710)	g. State (16-17) 16	h. County (18-20) 013	i. Card no. (21) 1

Permission is hereby granted to George C. Castle
3070
of P. O. Box 47, Ketchum, ID 83340
hereinafter called the permittee, to use subject to the conditions set out below, the following described lands or improvements:

Dam and reservoir of approx. 3 acre-feet capacity. Two irrigation ditches approximately .3 mile long each from dam to permittee's private land. Located in Lake Creek, SW $\frac{1}{4}$ Sec. 30, T. 5 N., R. 18 E., B.M., as shown on plats, Exhibits A and B, attached and made a part hereof.

This permit covers 3 acres and/or 0.36 miles and is issued for the purpose of:

Maintenance of reservoir and conduit for irrigation purposes.

1. Construction or occupancy and use under this permit shall begin within --- months, and construction, if any, shall be completed within --- months, from the date of the permit. This use shall be actually exercised at least 365 days each year, unless otherwise authorized in writing.

2. In consideration for this use, the permittee shall pay to the Forest Service, U.S. Department of Agriculture, the sum of Twenty-five and no/100 Dollars (\$ 25.00) for the period from January 1 1985, to December 31, 1985, and thereafter annually on January 1.

Twenty-five and no/100 Dollars (\$ 25.00):
Provided, however, Charges for this use may be made or readjusted whenever necessary to place the charges on a basis commensurate with the value of use authorized by this permit.

3. This permit is accented subject to the conditions set forth herein, and to conditions 18 to 34 attached hereto and made a part of this permit.

PERMITTEE	NAME OF PERMITTEE <u>George C. Castle</u>	SIGNATURE OF AUTHORIZED OFFICER <u>George C. Castle</u> TITLE <u>owner</u>	DATE <u>5/23/85</u>
ISSUING OFFICER	NAME AND SIGNATURE <u>N. Harg</u>	TITLE <u>Forest Supervisor</u>	DATE <u>5/29/85</u>

USDA - Forest Service

REQUEST FOR TERMINATION OF AND APPLICATION FOR SPECIAL USE PERMIT

(Ref: FSM 2716)

This form is authorized by the Organic Act of June 4, 1897 for the purpose of evaluating the requested actions and no permit may be issued unless this form is completed.

PART I - REQUEST FOR TERMINATION (To be completed by Permittee)TO: FOREST SUPERVISOR Sawtooth NATIONAL FORESTI (WE), THE UNDERSIGNED PERMITTEE(S) UNDER THAT CERTAIN SPECIAL USE PERMIT, DATED October 21, 1976,

AUTHORIZING ME (US) TO Maintain dam and reservoir of approx. 3 acre-feet capacity, and two
irrigation ditches approximately .3 mi. long from dam to permittee's private land. HAVE

* [CONVEYED ALL MY (OUR) RIGHT, TITLE, AND INTEREST IN AND TO THE IMPROVEMENTS LOCATED ON THE PARCEL COVERED BY SAID PERMIT.]

OR

* [ENTERED INTO A CONTRACT FOR THE SALE OF THE IMPROVEMENTS LOCATED ON THE PARCEL COVERED BY SAID PERMIT BUT HAVE
 RETAINED TITLE TO SAID IMPROVEMENTS UNTIL COMPLETION OF PAYMENTS UNDER SAID CONTRACT] WITH:

(NAME OR NAMES)

(ADDRESS)

ACCORDINGLY, I (WE) REQUEST THAT SAID SPECIAL-USE PERMIT BE TERMINATED. THE REMAINING BALANCE OF ANY FEES PREVIOUSLY PAID SHOULD BE CREDITED TO THE APPLICANT NAMED BELOW.

DATE: October 9, 1985George C Castle

*STRIKE OUT INAPPLICABLE ALTERNATIVES

(SIGNATURES OF ALL PERMITTEES LISTED ON PERMIT)

PART II - APPLICATION (To be completed by Applicant)

APPLICATION IS HEREBY MADE FOR A SPECIAL-USE PERMIT TO COVER THE SAME PARCEL OF LAND COVERED BY THE PERMIT REFERRED TO IN THE ABOVE REQUEST, AND FOR THE SAME PURPOSE OF SAID PERMIT, SUBJECT, HOWEVER, TO SUCH NEW CONDITIONS AND STIPULATIONS AS THE CIRCUMSTANCES MAY WARRANT.

I (WE) ACKNOWLEDGE THAT WHEN A NEW PERMIT IS ISSUED, A TRANSFER FEE OF \$ _____ IS CHARGED. IT WILL BE INCLUDED IN THE INITIAL PAYMENT FOR THE NEW PERMIT.

DATE: October 9, 1985David P Goodman

(TYPE IN NAMES OF PROPOSED PERMITTEES)

BY David P Goodman

(SIGNATURE)

Box 3144, Ketchum Idaho 83340

(ADDRESS)

(Over)

FS-2700-3a (9/82)

PART III - RANGER'S REPORT ON APPLICATION

1. IS SITE NEEDED FOR HIGHER USE? DESCRIBE TENURE RECOMMENDATION. IF TERMINATION IS RECOMMENDED, ATTACH JUSTIFICATION PER FSM 2712.

No

2. WHAT IS THE CONDITION OF EXISTING IMPROVEMENTS?

Fair. Some improvement needed.

3. IS THE FEE FOR THE PERMIT APPROPRIATE? (Attach fee computation sheet if required)

Yes

4. IS THE PERMITTED AREA PROPERLY DESCRIBED? IF NOT, SHOW PROPER DESCRIPTION:

Yes

5. IS CURRENT MAP OF THE USE ATTACHED? Yes IS IT ADEQUATE? Yes IF NOT, EXPLAIN

6. DESCRIBE UNDESIRABLE SITUATIONS TO BE CORRECTED.

Dam must meet state and federal standards.

7. LIST MANDATORY AND SUGGESTED SPECIAL CLAUSES NOT PRINTED ON THE PERMIT FORM.

REMARKS:

Signature letter to Mr. Goodman needs to indicate no approval until all plans reviewed and approved.

SUBMITTED (Signature)	TITLE	RANGER DISTRICT	DATE
<i>John Phipps</i>	DISTRICT RANGER	Ketchum	11/4/85
APPROVED (Signature)	TITLE	FOREST	DATE
	FOREST SUPERVISOR		

7/14/67

Lee

Pipeline crosses the following described N.F.
Land.

T. 5N., R. 18E., B.M.

SE 1/4 SE 1/4 Section 17

W 1/2 Section 20

Section 30

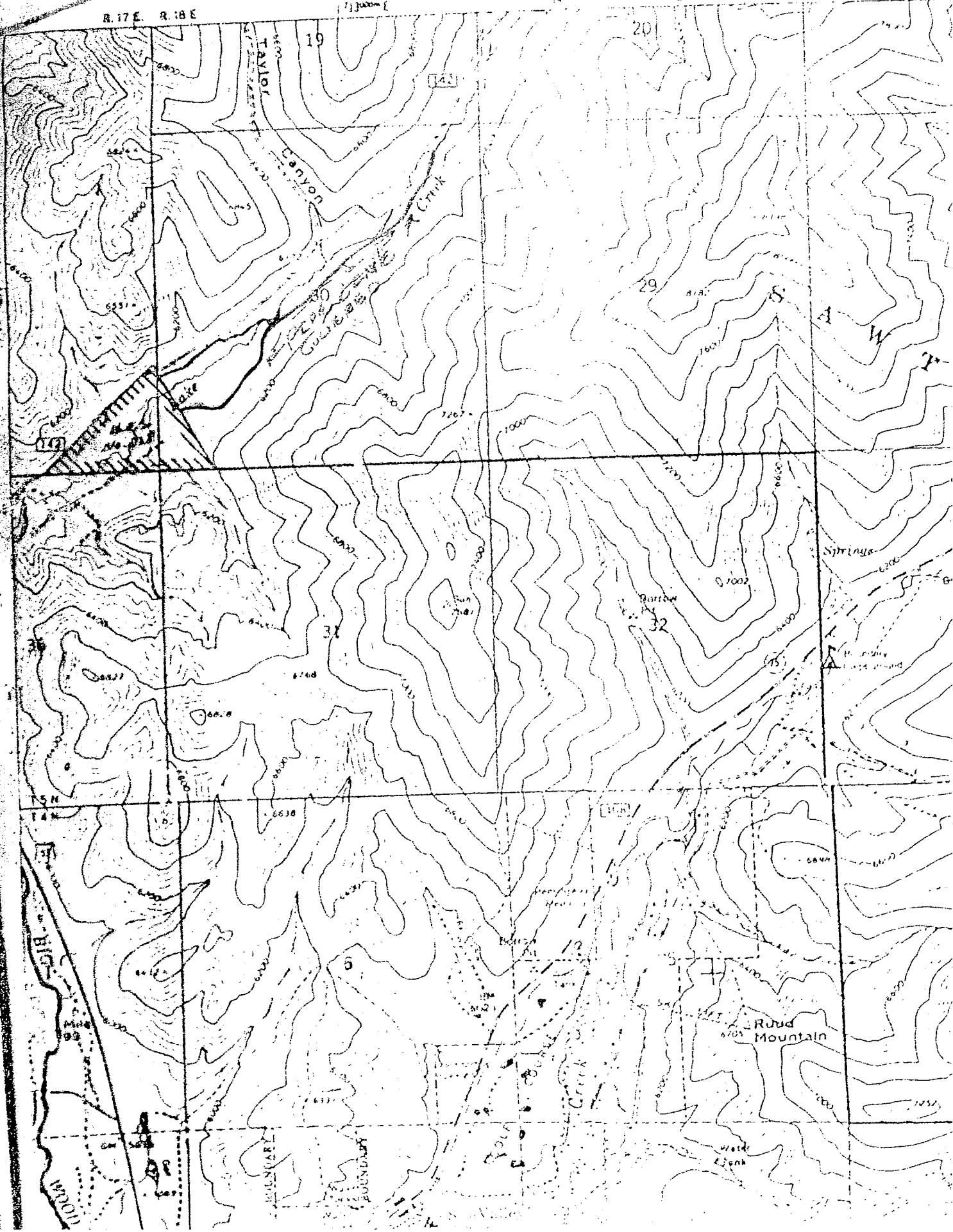
- 4 Maps enclosed

FOR FOREST SERVICE USE

R. 17 E. R. 18 E

1:25,000

20' 115



DECISION NOTICE,
CATEGORICAL EXCLUSION, AND
FINDING OF NO SIGNIFICANT IMPACT
FOR THE LAKE CREEK WATER PROJECT

Sawtooth National Forest
Ketchum Ranger District

David Goodman has submitted a proposal to install a water transmission line located in Section 30, Township 5 North, Range 18 East. The proposal consists of:

- Burying 9200 feet of transmission line.
- Removing all debris from old dam site.
- Breaching old dam.
- Installing transmission line and water trough for wildlife.
- Reseeding all disturbed areas.

The attached map shows the location for the proposed work and access routes.

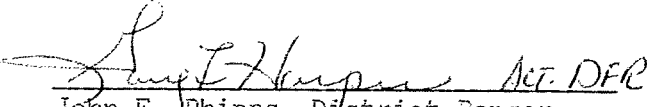
The proposal has been analyzed by an ID Team consisting of a District Ranger, Range Conservationist, and Recreation Staff. Concerns that could not be mitigated were identified. The proposal conforms with all existing land management direction for the area. No threatened or endangered plants or animals have been identified in the area. No wildlife or riparian problems have been identified, nor will any floodplains or wetlands be impacted. A cultural resource inventory will be completed prior to ground disturbing work. The operator has been notified that they cannot begin work until this cultural resource inventory is completed. Ground disturbing activities will be located so that no cultural resource conflicts occur.

Based on the analysis and previous experience, this proposal was identified to be limited in context and intensity and would produce little or no environmental effects to either the biological or physical component of the human environment and, therefore, constitutes a categorical exclusion from the need to prepare a formal environmental assessment. It is my decision to approve the plan subject to the following bonding and reclamation requirements.

1. reseeding all disturbed areas
2. installation of water trough and transmission line

The responsible official is John E. Phipps, District Ranger, Ketchum Ranger District, Sawtooth National Forest, P. O. Box 2356, Ketchum, Idaho, 83340.

This decision is subject to administrative review pursuant to 36 CFR 211.18.


John E. Phipps, District Ranger

9/17/86
Date



United States
Department of
Agriculture

Forest
Service

Ketchum Ranger District

Reply to: 2720/7530

Date: September 15, 1986

Lake Creek Dam and Reservoir Transfer

Forest Supervisor

The developer of the the Lake Creek property has decided not to reconstruct the dam but to install a plastic transmission line in one of the old ditches and cover it. These ditches were apparently installed many years ago and were never included in the permit. The diversion will only be necessary during the months of August and September when the lower portion of Lake Creek dries up. The stream diversion will be made with a small headgate and will divert the water into an 8" pipe. An outlet and small water trough will be installed on the south side of Lake Creek for wildlife. The old dam will be breached and all concrete and debris removed from the site. For fee purposes, the transmission line will be 9200 feet long and require a 10 foot easement, this approximates two acres. All of the Lake Creek water rights are in Mr. Goodman's name. We recommend that a new permit be issued to Mr. Goodman for a water transmission line.

If you have any questions, please contact us.

For *Butch Harper*

JOHN E. PHIPPS
District Ranger

Received Sawtooth N.F.
Copies Received
Copies Sent Rqrs.

SEP 10 '86

FS	
AO	
Planning	
R & L	
RM, WL, WS	
IM, PM	
P.O.	
AA-SRF	
AA-PM	
AA-AS	
AA-RS	
AA-OS	

Simpson

Act. Strickling



Appendix C

Flow Measurements

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/2/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 1
 REMARKS: 34° F
 Downstream of Standpipe

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			
									V SECT.	DELTA AREA	DELTA Q	SUM Q
1-Bank	0.00	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.00
2	0.64	0.05	0		50	1.000	0.00	NM	0.00	0.03	0.00	0.00
3	1.28	0.15	20		50	1.000	0.40	NM	0.40	0.10	0.04	0.04
4	1.92	0.05	0		50	1.000	0.00	NM	0.00	0.03	0.00	0.04
5	2.56	0.17	72		50	1.000	1.44	NM	1.44	0.11	0.16	0.20
6	3.20	0.18	27		50	1.000	0.54	NM	0.54	0.12	0.06	0.26
7	3.84	0.10	64		50	1.000	1.28	NM	1.28	0.06	0.08	0.34
8	4.48	0.33	37		50	1.000	0.74	NM	0.74	0.19	0.14	0.48
9	5.02	0.32	39		50	1.000	0.78	NM	0.78	0.19	0.15	0.63
10	5.66	0.15	9		50	1.000	0.18	NM	0.18	0.10	0.02	0.65
11-Bank	6.30	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	0.65
											AVG. VEL.	0.69 FPS
											AREA	0.94 SQ FT
											DISCHARGE	0.65 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V=
 0.68 V=
 1.00 *N+
 1.00 *N+
 0
 0

DISCHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA			Project: LAKE CREEK IRRIGATION			
Party: EP			Meter: Pygmy			
Location: LAKE CREEK NORTH OF KETCHIKAN						
Location (numeric) <i>upstream</i> Downstream 0		Meter Code 2	Date 11/6/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	1.46	0.00	0		50	
2	2.25	0.40	68		↓	
3	3.10	0.55	3			
4	3.95	0.50	108			
5	4.80	0.60	85			
6	5.65	0.70	61			
7	6.50	0.36	47			
8	7.40	0.30	25			
9	8.25	0.30	5			
10	9.10	0.30	20			
11	9.80	0.00	0			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks: 5:15 PM

DISCHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: EP				Meter: Pygmy		
Location: LAKE CREEK NORTH OF KETCHIKAN						
Location (numeric) <i>Downstream of Diversion</i> 7		Meter Code 2	Date 11/6/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. 6 or 2	Rev. 0.8	Time (sec)	Angle Correction
1	2.00	0.00	0	NA	50	
2	2.60	0.22	7			
3	3.20	0.41	45			
4	3.80	0.45	60			
5	4.40	0.54	63			
6	5.00	0.62	65			
7	5.60	0.65	38			
8	6.20	0.51	18			
9	6.80	0.25	3			
10	7.40	0.21	2			
11	8.00	0.00	0			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Meter Codes: 1 = TYPE AA. 2 = PYGMY. 3 = OTT 47966

Remarks: 5:45 PM

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/10/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 4
 REMARKS: 38° F
 After re-diversion point

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

Flurries

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q	
									V SECT.	DELTA AREA	DELTA Q		
1-Bank	1.95	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	0.00	
2	2.50	0.20	0		50	1.000	0.00	NM	0.00	0.11	0.00	0.00	
3	3.00	0.37	0		50	1.000	0.00	NM	0.00	0.19	0.00	0.00	
4	3.50	0.33	2		50	1.000	0.04	NM	0.04	0.17	0.01	0.01	
5	4.00	0.50	9		50	1.000	0.18	NM	0.18	0.23	0.04	0.05	
6	4.40	0.58	29		50	1.000	0.58	NM	0.58	0.23	0.13	0.18	
7	4.80	0.59	45		50	1.000	0.90	NM	0.90	0.24	0.21	0.39	
8	5.20	0.61	45		50	1.000	0.90	NM	0.90	0.24	0.22	0.61	
9	5.60	0.59	45		50	1.000	0.90	NM	0.90	0.24	0.21	0.83	
10	6.00	0.57	44		50	1.000	0.88	NM	0.88	0.23	0.20	1.03	
11	6.40	0.60	41		50	1.000	0.82	NM	0.82	0.24	0.20	1.22	
12	6.80	0.66	29		50	1.000	0.58	NM	0.58	0.26	0.15	1.38	
13	7.20	0.56	37		50	1.000	0.74	NM	0.74	0.22	0.17	1.54	
14	7.60	0.41	15		50	1.000	0.30	NM	0.30	0.16	0.05	1.59	
15	8.00	0.26	10		50	1.000	0.20	NM	0.20	0.10	0.02	1.61	
16-Bank	8.40	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	1.61	
											AVG. VEL.	0.56	FPS
											AREA	2.88	SQ FT
											DISCHARGE	1.61	CFS

*CALIBRATION

FOR N(REV/T)<

0.68 V=

1.00 *N+

0

FOR N(REV/T)>

0.68 V=

1.00 *N+

0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/2/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 3
 REMARKS: 38° F
 After Re-insertion point
 Upstream of re-diversion
 Flurries

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			
									V SECT.	DELTA AREA	DELTA Q	SUM Q
1-Bank	0.00	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.00
2	0.73	0.04	0		50	1.000	0.00	NM	0.00	0.03	0.00	0.00
3	1.46	0.23	48		50	1.000	0.96	NM	0.96	0.17	0.16	0.16
4	2.19	0.50	112		50	1.000	2.24	NM	2.24	0.37	0.82	0.98
5	2.92	0.38	124		50	1.000	2.48	NM	2.48	0.28	0.69	1.67
6	3.65	0.45	42		50	1.000	0.84	NM	0.84	0.33	0.28	1.94
7	4.38	0.30	18		50	1.000	0.36	NM	0.36	0.22	0.08	2.02
8	5.11	0.30	11		50	1.000	0.22	NM	0.22	0.22	0.05	2.07
9	5.84	0.15	31		50	1.000	0.62	NM	0.62	0.11	0.07	2.14
10	6.57	0.35	26		50	1.000	0.52	NM	0.52	0.26	0.13	2.27
11-Bank	7.30	0.00	0		50	1.000	0.00	NM	0.00	0.03	0.00	2.27

AVG. VEL. 1.13 FPS
 AREA 2.01 SQ FT
 DISCHARGE 2.27 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/2/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 4
 REMARKS: 38° F
 After re-diversion point

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

Flurries

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V SECT.	DELTA AREA	DELTA Q	
1-Bank	0.00	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.00
2	0.61	0.01	0		50	1.000	0.00	NM	0.00	0.01	0.00	0.00
3	1.22	0.17	50		50	1.000	1.00	NM	1.00	0.10	0.10	0.10
4	1.83	0.36	83		50	1.000	1.66	NM	1.66	0.22	0.36	0.47
5	2.44	0.40	79		50	1.000	1.58	NM	1.58	0.24	0.39	0.85
6	3.05	0.43	86		50	1.000	1.72	NM	1.72	0.26	0.45	1.30
7	3.66	0.38	25		50	1.000	0.50	NM	0.50	0.23	0.12	1.42
8	4.27	0.27	13		50	1.000	0.26	NM	0.26	0.16	0.04	1.46
9	4.88	0.02	0		50	1.000	0.00	NM	0.00	0.01	0.00	1.46
10	5.49	0.03	0		50	1.000	0.00	NM	0.00	0.02	0.00	1.46
11-Bank	6.10	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	1.46

AVG. VEL. 1.16 FPS
 AREA 1.27 SQ FT
 DISCHARGE 1.46 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/2/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 5
 REMARKS: 38° F
 Upstream of re-insertion point
 Upstream of re-diversion point
 Flurries

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V SECT.	DELTA AREA	DELTA Q	
1-Bank	0.00	0.00	0		50	1.000	0.00	NM	0.00	0.03	0.00	0.00
2	0.67	0.36	19		50	1.000	0.38	NM	0.38	0.22	0.08	0.08
3	1.24	0.52	87		50	1.000	1.74	NM	1.74	0.32	0.56	0.65
4	1.91	0.43	95		50	1.000	1.90	NM	1.90	0.29	0.55	1.19
5	2.58	0.41	25		50	1.000	0.50	NM	0.50	0.27	0.14	1.33
6	3.25	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	1.33
7	3.92	0.02	0		50	1.000	0.00	NM	0.00	0.01	0.00	1.33
8	4.59	0.05	0		50	1.000	0.00	NM	0.00	0.03	0.00	1.33
9	5.26	0.02	0		50	1.000	0.00	NM	0.00	0.01	0.00	1.33
10	5.93	0.27	44		50	1.000	0.88	NM	0.88	0.18	0.16	1.49
11-Bank	6.60	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	1.49

AVG. VEL. 1.06 FPS
 AREA 1.40 SQ FT
 DISCHARGE 1.49 CFS

*CALIBRATION
 FOR N(REV/T)< 0.68 V= 1.00 *N+ 0
 FOR N(REV/T)> 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/2/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 6
 REMARKS: 40° F
 Upstream of diversion point
 Flurries

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			
									V SECT.	DELTA AREA	DELTA Q	SUM Q
1-Bank	0.00	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	0.00
2	0.81	0.23	76		50	1.000	1.52	NM	1.52	0.19	0.28	0.28
3	1.62	0.19	78		50	1.000	1.56	NM	1.56	0.15	0.24	0.52
4	2.43	0.38	43		50	1.000	0.86	NM	0.86	0.31	0.26	0.79
5	3.24	0.37	72		50	1.000	1.44	NM	1.44	0.30	0.43	1.22
6	4.05	0.40	71		50	1.000	1.42	NM	1.42	0.32	0.46	1.68
7	4.86	0.65	97		50	1.000	1.94	NM	1.94	0.53	1.02	2.70
8	5.67	0.45	51		50	1.000	1.02	NM	1.02	0.36	0.37	3.07
9	6.48	0.28	70		50	1.000	1.40	NM	1.40	0.23	0.32	3.39
10	7.29	0.15	38		50	1.000	0.76	NM	0.76	0.12	0.09	3.48
11-Bank	8.10	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	3.48

AVG. VEL. 1.37 FPS
 AREA 2.55 SQ FT
 DISCHARGE 3.48 CFS

*CALIBRATION
 FOR N(REV/T)< 0.68 V= 1.00 *N+ 0
 FOR N(REV/T)> 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/2/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 7
 REMARKS: 40° F
 Downstream of Diversion
 Flurries

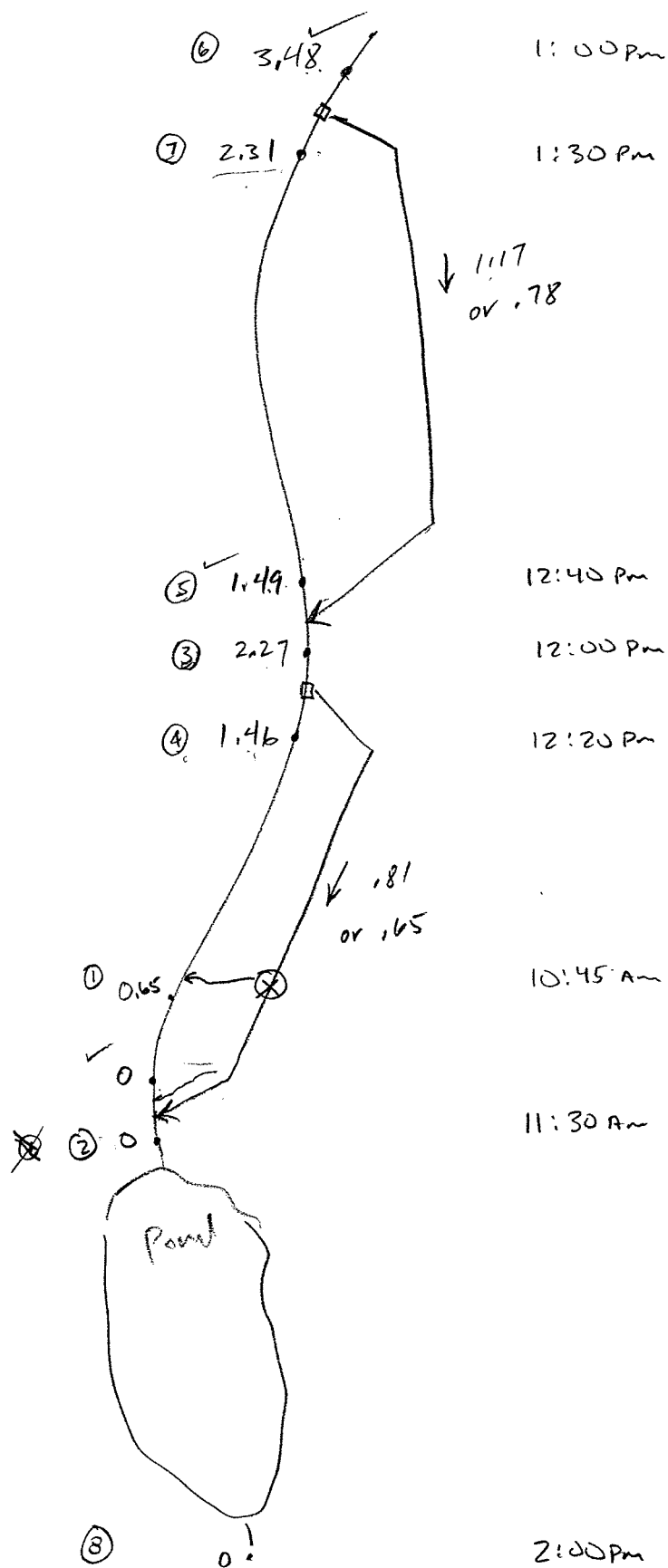
TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

BuRec method:													
SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	V SECT.	DELTA AREA	DELTA Q	SUM Q	
1-Bank	0.00	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	0.00	
2	0.60	0.07	0		50	1.000	0.00	NM	0.00	0.04	0.00	0.00	
3	1.20	0.37	39		50	1.000	0.78	NM	0.78	0.22	0.17	0.17	
4	1.80	0.42	51		50	1.000	1.02	NM	1.02	0.25	0.26	0.43	
5	2.40	0.52	77		50	1.000	1.54	NM	1.54	0.31	0.48	0.91	
6	3.00	0.52	58		50	1.000	1.16	NM	1.16	0.31	0.36	1.27	
7	3.60	0.53	64		50	1.000	1.28	NM	1.28	0.32	0.41	1.68	
8	4.20	0.55	54		50	1.000	1.08	NM	1.08	0.33	0.36	2.04	
9	4.80	0.48	34		50	1.000	0.68	NM	0.68	0.29	0.20	2.23	
10	5.40	0.30	23		50	1.000	0.46	NM	0.46	0.18	0.08	2.31	
11-Bank	6.00	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	2.31	
											AVG. VEL.	1.01	FPS
											AREA	2.28	SQ FT
											DISCHARGE	2.31	CFS
*CALIBRATION													
FOR N(REV/T)<			0.68 V=		1.00 *N+		0						
FOR N(REV/T)>			0.68 V=		1.00 *N+		0						

11/2/04

22-141 50 SHEETS
22-142 100 SHEETS
22-143 200 SHEETS

WAMPAL



DISCHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK		
Party: EP				Meter: Pygmy		
Location: LAKE CREEK - NORTH OF KETCHIKAN						
Location (numeric) <i>Downstream of sandpile A</i>		Meter Code <i>2</i>	Date <i>11/2/06</i>	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. <i>(6 or 2)</i>	Rev. 0.8	Time (sec) <i>50</i>	Angle Correction
1	0	0.0	0	NA	50	
2	0.64	0.05	0		50	
3	1.28	0.15	20		50	
4	1.92	0.25	0		50	
5	2.56	0.17	72		50	
6	3.20	0.18	27		50	
7	3.84	0.10	64		50	
8	4.48	0.33	37		50	
9	5.02	0.32	39		50	
10	5.66	0.15	9		50	
11	6.30	0.0	0		50	
12						
13						
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25						

Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks: 34°F 12:45 AM

DIK LARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: EP				Meter: PYGMY		
Location: LAKE CREEK NORTH OF KETCHIKAN						
Location (numeric) 2 BEFORE POND 1 AT PIPE OUTLET.		Meter Code 2	Date 11/2/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. 6 or 2	Rev. 0.8	Time (sec)	Angle Correction
1	0.0	0	0	NA	50	
2	0.61	0	0	↓	50	
3	1.22	0	0		50	
4	1.83	0	0		50	
5	2.44	0	0		50	
6	3.05	0	0		50	
7	3.66	0	0		50	
8	4.27	0	0		50	
9	4.88	0	0		50	
10	5.49	0	0		50	
11	6.11	0	0		50	
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966						
Remarks: 34° F 11:30 AM NO FLOW IN STREAM. ICE COVER (THIN)						

DI CHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: CESP				Meter: PYGMY		
Location: LAKE CREEK NORTH OF KETCHIKAN						
Location (numeric) AFTER RE-INSULATION POINT UPSTATION OF 3		Meter Code 2	Date 11/2/06	Gage Start		Gage End
Sec. #	Red. Distance	Depth	Rev. 6 or 2	Rev. 0.8	Time (sec)	Angle Correction
1	0.00	6.0	0	NA	50	.
2	0.73	0.04	0		50	.
3	1.46	0.23	48		50	.
4	2.19	0.50	112		50	.
5	2.92	0.38	124		50	.
6	3.65	0.45	42		50	.
7	4.38	0.30	18		50	.
8	5.11	0.30	11		50	.
9	5.84	0.15	31		50	.
10	6.57	0.35	26		50	.
11	7.30	0.0	0		50	.
12	.	.	.		.	.
13	.	.	.		.	.
14	.	.	.		.	.
15	.	.	.		.	.
16	.	.	.		.	.
17	.	.	.		.	.
18	.	.	.		.	.
19	.	.	.		.	.
20	.	.	.		.	.
21	.	.	.		.	.
22	.	.	.		.	.
23	.	.	.		.	.
24	.	.	.		.	.
25	.	.	.		.	.

Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks: 38°P 12:00 pm - FLURRIES

DI CHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HSA				Project: LAKE CREEK IRRIGATION		
Party: CWP				Meter: Pygmy		
Location: LAKE CREEK NORTH OF KETCHIKAN						
Location (numeric) AFTER RE-DIVERSION 4		Meter Code 2	Date 4/2/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	0.0	0.0	0	NA	50	
2	0.61	0.01	0		50	
3	1.22	0.17	50		50	
4	1.83	0.36	83		50	
5	2.44	0.40	79		50	
6	3.05	0.43	86		50	
7	3.66	0.38	25		50	
8	4.27	0.27	13		50	
9	4.88	0.02	0		50	
10	5.49	0.03	0		50	
11	6.10	0.0	0		50	
12						
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Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks: 12:20 pm 38°F

D. CHARGE MEASUREMENT - CUFFLENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: GEP				Meter: Pygmy		
Location: LAKE CREEK NORTH OF KETCHIKAN						
Location (numeric) UPSTREAM OF RE INSERTION 5		Meter Code 2	Date 6/2/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. 6 or 2	Rev. 0.8	Time (sec)	Angle Correction
1	0.00	0	0	NA	50	
2	0.67	0.34	19		50	
3	1.24	0.52	87		50	
4	1.91	0.43	95		50	
5	2.58	0.41	25		50	
6	3.25	0	0		50	
7	3.92	0.02	0		50	
8	4.59	0.05	0		50	
9	5.26	0.02	0		50	
10	5.93	0.27	44		50	
11	6.60	0	0		50	
12						
13						
14						
15						
16						
17						
18						
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20						
21						
22						
23						
24						
25						
Meter Codes: 1 = TYPE AA. 2 = PYGMY. 3 = OTT 47966						
Remarks: 12:40 pm about 38°F						

D CHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: GEP				Meter: Pygmy		
Location: LAKE CREEK NORTH OF KETCHUM						
Location (numeric) UPSTREAM OF DIVERSION 6		Meter Code 2	Date 11/2/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	6.0	0	0	NA	50	
2	0.81	0.23	76		50	
3	1.62	0.19	78		50	
4	2.43	0.38	43		50	
5	3.24	0.37	72		50	
6	4.05	0.40	71		50	
7	4.86	0.65	97		50	
8	5.67	0.45	51		50	
9	6.48	0.28	70		50	
10	7.29	0.15	38		50	
11	8.10	0.0	0		50	
12						
13						
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23						
24						
25						
Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966						
Remarks: 40° F 1:00 pm						

D. CHARGE MEASUREMENT - CUF ENT METER

Client: LAKE CREEK HOA			Project: IRRIGATION SYSTEM			
Party: GGP			Meter: PYGMY			
Location: LAKE CREEK NORTH OF KETCHUM						
Location (numeric) Downstream of Diversion 7		Meter Code 2	Date 11/2/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. 6 or 2	Rev. 0.8	Time (sec)	Angle Correction
1	0.00	0.00	0	NA	50	
2	0.60	0.07	0		50	
3	1.20	0.37	38		50	
4	1.80	0.42	51		50	
5	2.40	0.52	77		50	
6	3.00	0.52	58		50	
7	3.60	0.53	64		50	
8	4.20	0.55	54		50	
9	4.80	0.76	34		50	
10	5.40	0.30	23		30	
11	6.00	0.00	0	V	50	
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks: 40°F 1:30 pm

DISCHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HUN				Project: LAKE CREEK IRRIGATION		
Party: GRT				Meter: PYGMY		
Location: LAKE CREEK NORTH OF KETCHUM						
Location (numeric) DOWNSTREAM OF POND 8		Meter Code 2	Date 11/2/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1		0	0	NA	50	
2		0	0		50	
3		0	0		50	
4		0	0		50	
5		0	0		50	
6		0	0		50	
7		0	0		50	
8		0	0		50	
9		0	0		50	
10		0	0		50	
11		0	0		50	
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Meter Codes: 1 = TYPE AA. 2 = PYGMY. 3 = OTT 47966

Remarks: No Flow From Ponds
2:00pm

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/6/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 1
 REMARKS: 58° F
 Downstream of Pipe Outlet

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V	DELTA	DELTA	
									SECT.	AREA	Q	
1-Bank	1.00	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	0.00
2	1.58	0.22	18		50	1.000	0.36	NM	0.36	0.13	0.05	0.05
3	2.16	0.36	8		50	1.000	0.16	NM	0.16	0.21	0.03	0.08
4	2.74	0.38	10		50	1.000	0.20	NM	0.20	0.22	0.04	0.12
5	3.32	0.28	39		50	1.000	0.78	NM	0.78	0.16	0.13	0.25
6	3.90	0.19	37		50	1.000	0.74	NM	0.74	0.11	0.08	0.33
7	4.48	0.20	4		50	1.000	0.08	NM	0.08	0.12	0.01	0.34
8	5.06	0.10	0		50	1.000	0.00	NM	0.00	0.06	0.00	0.34
9	5.64	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.34
10	6.22	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.34
11-Bank	6.80	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.34

AVG. VEL. 0.33 FPS
 AREA 1.02 SQ FT
 DISCHARGE 0.34 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/6/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 3
 REMARKS: 54° F
 After Re-insertion point
 Upstream of re-diversion

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V SECT.	DELTA AREA	DELTA Q	
1-Bank	0.00	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	0.00
2	0.66	0.14	3		50	1.000	0.06	NM	0.06	0.09	0.01	0.01
3	1.32	0.20	4		50	1.000	0.08	NM	0.08	0.13	0.01	0.02
4	1.98	0.29	24		50	1.000	0.48	NM	0.48	0.19	0.09	0.11
5	2.64	0.32	37		50	1.000	0.74	NM	0.74	0.21	0.16	0.26
6	3.30	0.35	45		50	1.000	0.90	NM	0.90	0.23	0.21	0.47
7	3.96	0.40	36		50	1.000	0.72	NM	0.72	0.26	0.19	0.66
8	4.62	0.53	49		50	1.000	0.98	NM	0.98	0.35	0.34	1.01
9	5.28	0.43	61		50	1.000	1.22	NM	1.22	0.28	0.35	1.35
10	5.94	0.60	33		50	1.000	0.66	NM	0.66	0.40	0.26	1.61
11-Bank	6.60	0.00	0		50	1.000	0.00	NM	0.00	0.05	0.00	1.61

AVG. VEL. 0.73 FPS
 AREA 2.21 SQ FT
 DISCHARGE 1.61 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/6/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 4
 REMARKS: 54° F
 After re-diversion point

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			
									V SECT.	DELTA AREA	DELTA Q	SUM Q
1-Bank	1.00	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	0.00
2	1.70	0.25	6		50	1.000	0.12	NM	0.12	0.18	0.02	0.02
3	2.40	0.33	40		50	1.000	0.80	NM	0.80	0.23	0.18	0.21
4	3.10	0.39	26		50	1.000	0.52	NM	0.52	0.27	0.14	0.35
5	3.80	0.30	52		50	1.000	1.04	NM	1.04	0.21	0.22	0.57
6	4.50	0.22	59		50	1.000	1.18	NM	1.18	0.15	0.18	0.75
7	5.20	0.16	47		50	1.000	0.94	NM	0.94	0.11	0.11	0.85
8	5.90	0.16	59		50	1.000	1.18	NM	1.18	0.11	0.13	0.99
9	6.60	0.70	15		50	1.000	0.30	NM	0.30	0.39	0.12	1.10
11-Bank	7.00	0.00	0		50	1.000	0.00	NM	0.00	0.04	0.00	1.10
AVG. VEL.											0.64	FPS
AREA											1.71	SQ FT
DISCHARGE											1.10	CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/6/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 5
 REMARKS: 54° F
 Upstream of re-insertion point
 Upstream of re-diversion point

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

BuRec method:												
SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	V SECT.	DELTA AREA	DELTA Q	SUM Q
1-Bank	1.00	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	0.00
2	1.50	0.20	53		50	1.000	1.06	NM	1.06	0.10	0.11	0.11
3	2.00	0.34	20		50	1.000	0.40	NM	0.40	0.17	0.07	0.17
4	2.50	0.37	71		50	1.000	1.42	NM	1.42	0.19	0.26	0.44
5	3.00	0.32	63		50	1.000	1.26	NM	1.26	0.16	0.20	0.64
6	3.50	0.28	77		50	1.000	1.54	NM	1.54	0.14	0.22	0.85
7	4.00	0.30	74		50	1.000	1.48	NM	1.48	0.15	0.22	1.08
8	4.50	0.28	73		50	1.000	1.46	NM	1.46	0.14	0.20	1.28
9	5.00	0.29	3		50	1.000	0.06	NM	0.06	0.15	0.01	1.29
10	5.50	0.25	9		50	1.000	0.18	NM	0.18	0.13	0.02	1.31
11	6.00	0.18	52		50	1.000	1.04	NM	1.04	0.09	0.09	1.41
12	6.50	0.22	18		50	1.000	0.36	NM	0.36	0.11	0.04	1.44
13	7.00	0.15	9		50	1.000	0.18	NM	0.18	0.08	0.01	1.46
14	7.50	0.16	0		50	1.000	0.00	NM	0.00	0.08	0.00	1.46
15	8.00	0.10	0		50	1.000	0.00	NM	0.00	0.05	0.00	1.46
16-Bank	8.40	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	1.46
AVG. VEL.										0.84	FPS	
AREA										1.73	SQ FT	
DISCHARGE										1.46	CFS	

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/6/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 6
 REMARKS: 50° F
 Upstream of diversion point

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V	DELTA	DELTA	
									SECT.	AREA	Q	
1-Bank	1.40	0.00	0		50	1.000	0.00	NM	0.00	0.04	0.00	0.00
2	2.25	0.40	68		50	1.000	1.36	NM	1.36	0.34	0.46	0.46
3	3.10	0.55	3		50	1.000	0.06	NM	0.06	0.47	0.03	0.49
4	3.95	0.50	108		50	1.000	2.16	NM	2.16	0.43	0.92	1.41
5	4.80	0.60	85		50	1.000	1.70	NM	1.70	0.51	0.87	2.28
6	5.65	0.70	61		50	1.000	1.22	NM	1.22	0.60	0.73	3.00
7	6.50	0.36	47		50	1.000	0.94	NM	0.94	0.32	0.30	3.30
8	7.40	0.30	25		50	1.000	0.50	NM	0.50	0.26	0.13	3.43
9	8.25	0.30	5		50	1.000	0.10	NM	0.10	0.26	0.03	3.45
10	9.10	0.30	20		50	1.000	0.40	NM	0.40	0.23	0.09	3.55
11-Bank	9.80	0.00	0		50	1.000	0.00	NM	0.00	0.03	0.00	3.55

AVG. VEL. 1.02 FPS
 AREA 3.47 SQ FT
 DISCHARGE 3.5472 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/6/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 7
 REMARKS: 50° F
 Downstream of Diversion

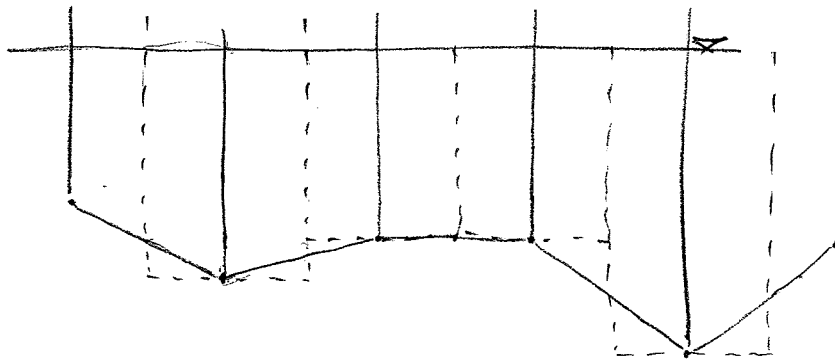
TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V	DELTA	DELTA	
									SECT.	AREA	Q	
1-Bank	2.00	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	0.00
2	2.60	0.22	7		50	1.000	0.14	NM	0.14	0.20	0.03	0.03
3	3.80	0.41	45		50	1.000	0.90	NM	0.90	0.25	0.22	0.25
4	3.80	0.45	60		50	1.000	1.20	NM	1.20	0.14	0.16	0.41
5	4.40	0.54	63		50	1.000	1.26	NM	1.26	0.32	0.41	0.82
6	5.00	0.62	65		50	1.000	1.30	NM	1.30	0.37	0.48	1.30
7	5.60	0.65	38		50	1.000	0.76	NM	0.76	0.39	0.30	1.60
8	6.20	0.51	18		50	1.000	0.36	NM	0.36	0.31	0.11	1.71
9	6.80	0.25	3		50	1.000	0.06	NM	0.06	0.15	0.01	1.72
10	7.40	0.29	2		50	1.000	0.04	NM	0.04	0.17	0.01	1.73
11-Bank	8.00	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	1.73

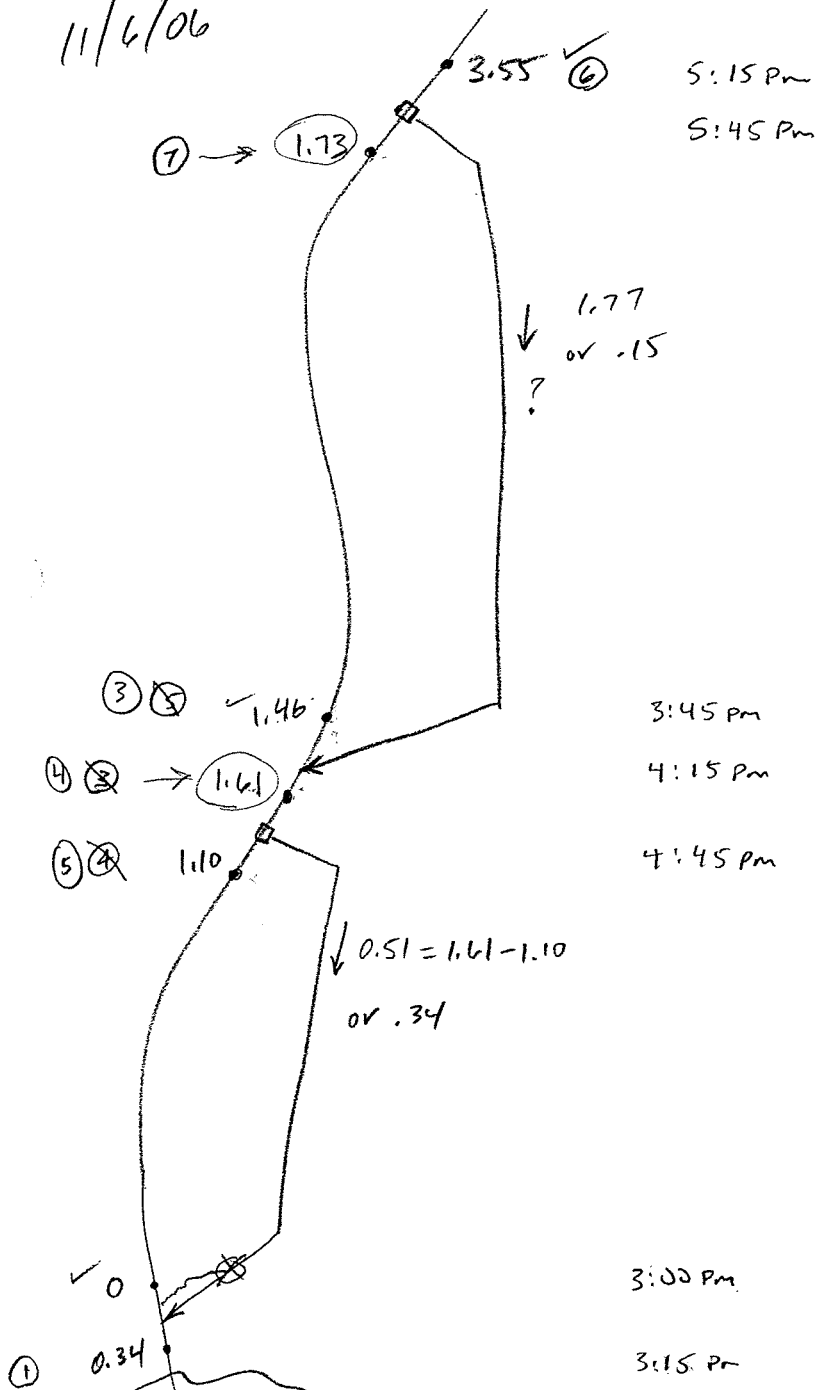
AVG. VEL. 0.74 FPS
 AREA 2.33 SQ FT
 DISCHARGE 1.73 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0



11/6/06



DI. CHARGE MEASUREMENT - CUR INT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: EP				Meter: PYGMY		
Location: LAKE CREEK NORTH OF KETCHUM						
Location (numeric)		Meter Code	Date	Gage Start		Gage End
1 AND 2		2	11/6/06			
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	UPSTREAM OF PIPE		OUTFLOW	3:00 PM		
2	- NO FLOW -					
3						
4						
5	DOWNSTREAM OF PIPE		OUTLET	3:15 PM		
6	1.0	0.0	0		50	
7	1.58	0.22	18	*		*
8	2.16	0.36	8			
9	2.74	0.38	10	*		
10	3.32	0.28	39			
11	3.90	0.19	37			
12	4.48	0.20	4			
13	5.06	0.10	0			
14	5.64	0.0	0			
15	6.22	0.0	0			
16	6.80	0.0	0			
17						
18						
19						
20						
21						
22						
23						
24						
25						

END OF PIPE

Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks:

DISCHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: EP				Meter: PYGMY		
Location: LAKE CREEK NORTH OF KETCHUM						
Location (numeric) Upstream of 3 Reinsertion Point		Meter Code 2	Date 11/6/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	1.0	0.0	0		50	
2	1.5	0.20	53			
3	2.0	0.34	20			
4	2.5	0.37	71			
5	3.0	0.32	63			
6	3.5	0.28	77			
7	4.0	0.30	74			
8	4.5	0.28	73			
9	5.0	0.29	3			
10	5.5	0.25	9			
11	6.0	0.18	52			
12	6.5	0.22	18			
13	7.0	0.15	9			
14	7.5	0.16	0			
15	8.0	0.10	0			
16	8.4	0.0	0			
17						
18						
19						
20						
21						
22						
23						
24						
25						

Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks: 3:45 pm

DISCHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRAWADDI		
Party: EP				Meter: PYGMY		
Location: LAKE CREEK NORTH OF KETCHUM						
Location (numeric) 4 MIDDLE Re-dwoson		Meter Code 2	Date 11/6/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	0.6	0.0	0		50	
2	0.66	0.14	3			
3	1.32	0.20	4			
4	1.98	0.21	24			
5	2.64	0.32	37			
6	3.30	0.35	45			
7	3.96	0.40	36			
8	4.62	0.53	49			
9	5.28	0.43	61			
10	5.94	0.60	33			
11	6.60	0.0	0			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
Meter Codes: 1 = TYPE AA. 2 = PYGMY. 3 = OTT 47966						
Remarks: 4:15 PM						

DISCHARGE MEASUREMENT - CURRENT METER

Client: LAKE CREEK HOA				Project: LAKE CREEK IRRIGATION		
Party: EP				Meter: Pygmy		
Location: LAKE CREEK NORTH OF KETCHIKAN						
Location (numeric) 5 Downstream Redirection		Meter Code 2	Date 11/6/06	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	1.00	0.0	0		50	
2	1.70	0.25	6			
3	2.40	0.33	40			
4	3.10	0.39	26			
5	3.80	0.30	52			
6	4.50	0.22	59			
7	5.20	0.16	47			
8	5.90	0.16	59			
9	6.60	0.07	15			
10	7.00	0.0	0			
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966						
Remarks: 4:45 PM						

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/10/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 5
 REMARKS: 38° F
 Upstream of re-insertion point
 Upstream of re-diversion point
 Flurries

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V SECT.	DELTA AREA	DELTA Q	
1-Bank	2.10	0.00	0		50	1.000	0.00	NM	0.00	0.05	0.00	0.00
2	3.00	0.42	0		50	1.000	0.00	NM	0.00	0.29	0.00	0.00
3	3.50	0.41	4		50	1.000	0.08	NM	0.08	0.21	0.02	0.02
4	4.00	0.44	21		50	1.000	0.42	NM	0.42	0.22	0.09	0.11
5	4.50	0.47	17		50	1.000	0.34	NM	0.34	0.24	0.08	0.19
6	5.00	0.42	22		50	1.000	0.44	NM	0.44	0.21	0.09	0.28
7	5.50	0.34	16		50	1.000	0.32	NM	0.32	0.17	0.05	0.34
8	6.00	0.41	13		50	1.000	0.26	NM	0.26	0.21	0.05	0.39
9	6.50	0.51	32		50	1.000	0.64	NM	0.64	0.26	0.16	0.55
10	7.00	0.50	27		50	1.000	0.54	NM	0.54	0.25	0.14	0.69
11	7.50	0.42	19		50	1.000	0.38	NM	0.38	0.21	0.08	0.77
12	8.00	0.53	33		50	1.000	0.66	NM	0.66	0.24	0.16	0.92
13	8.40	0.74	24		50	1.000	0.48	NM	0.48	0.30	0.14	1.07
14	8.80	0.66	28		50	1.000	0.56	NM	0.56	0.26	0.15	1.21
15	9.20	0.65	17		50	1.000	0.34	NM	0.34	0.26	0.09	1.30
16	9.60	0.53	16		50	1.000	0.32	NM	0.32	0.21	0.07	1.37
17	10.00	0.33	18		50	1.000	0.36	NM	0.36	0.12	0.04	1.41
18-Bank	10.35	0.00	0		50	1.000	0.00	NM	0.00	0.01	0.00	1.41

AVG. VEL. 0.38 FPS
 AREA 3.71 SQ FT
 DISCHARGE 1.41 CFS

*CALIBRATION
 FOR N(REV/T)< 0.68 V= 1.00 *N+ 0
 FOR N(REV/T)> 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/10/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 6
 REMARKS: 40° F
 Upstream of diversion point

TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	BuRec method:			SUM Q
									V SECT.	DELTA AREA	DELTA Q	
1-Bank	1.90	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	0.00
2	2.50	0.27	3		50	1.000	0.06	NM	0.06	0.15	0.01	0.01
3	3.00	0.27	15		50	1.000	0.30	NM	0.30	0.14	0.04	0.05
4	3.50	0.35	10		50	1.000	0.20	NM	0.20	0.18	0.04	0.08
5	4.00	0.42	22		50	1.000	0.44	NM	0.44	0.21	0.09	0.18
6	4.50	0.41	16		50	1.000	0.32	NM	0.32	0.21	0.07	0.24
7	5.00	0.45	22		50	1.000	0.44	NM	0.44	0.23	0.10	0.34
8	5.50	0.61	26		50	1.000	0.52	NM	0.52	0.31	0.16	0.50
9	6.00	0.69	42		50	1.000	0.84	NM	0.84	0.35	0.29	0.79
10	6.50	0.62	50		50	1.000	1.00	NM	1.00	0.31	0.31	1.10
11	7.00	0.55	66		50	1.000	1.32	NM	1.32	0.28	0.36	1.46
12	7.50	0.61	39		50	1.000	0.78	NM	0.78	0.31	0.24	1.70
13	8.00	0.48	63		50	1.000	1.26	NM	1.26	0.24	0.30	2.00
14	8.50	0.45	85		50	1.000	1.70	NM	1.70	0.23	0.38	2.39
15	9.00	0.47	37		50	1.000	0.74	NM	0.74	0.24	0.17	2.56
16	9.50	0.52	43		50	1.000	0.86	NM	0.86	0.26	0.22	2.78
17	10.00	0.46	23		50	1.000	0.46	NM	0.46	0.18	0.08	2.87
18	10.30	0.38	7		50	1.000	0.14	NM	0.14	0.13	0.02	2.89
19-Bank	10.70	0.38	0		50	1.000	0.00	NM	0.00	0.08	0.00	2.89

AVG. VEL. 0.72 FPS
 AREA 4.01 SQ FT
 DISCHARGE 2.89 CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

CURRENT METER CALCULATIONS

LOCATION: Lake Creek - North of Ketchum
 DATE: 11/10/2006
 HYDROGRAPHER: GEP
 METER: Pygmy
 MEASUREMENT NO.: 7
 REMARKS: 40° F
 Downstream of Diversion
 Flurries

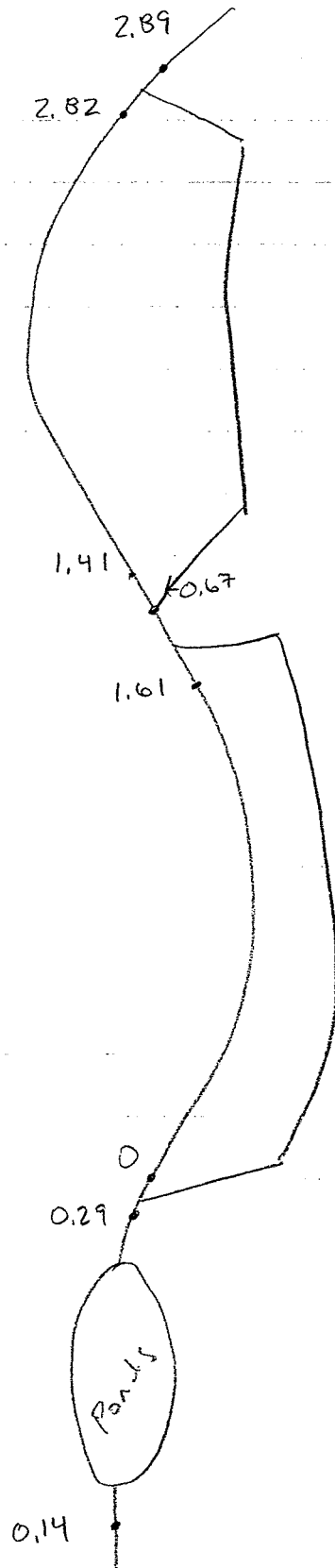
TIME START:
 TIME END:
 GAUGE START:
 GAUGE END:

BuRec method:												
SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	V SECT.	DELTA AREA	DELTA Q	SUM Q
1-Bank	1.80	0.29	0		50	1.000	0.00	NM	0.00	0.10	0.00	0.00
2	2.40	0.50	2		50	1.000	0.04	NM	0.04	0.25	0.01	0.01
3	2.80	0.53	5		50	1.000	0.10	NM	0.10	0.21	0.02	0.03
4	3.20	0.62	17		50	1.000	0.34	NM	0.34	0.25	0.08	0.12
5	3.60	0.63	41		50	1.000	0.82	NM	0.82	0.25	0.21	0.32
6	4.00	0.66	59		50	1.000	1.18	NM	1.18	0.26	0.31	0.63
7	4.40	0.72	47		50	1.000	0.94	NM	0.94	0.29	0.27	0.90
8	4.80	0.77	45		50	1.000	0.90	NM	0.90	0.31	0.28	1.18
9	5.20	0.75	64		50	1.000	1.28	NM	1.28	0.30	0.38	1.57
10	5.60	0.73	79		50	1.000	1.58	NM	1.58	0.29	0.46	2.03
11	6.00	0.71	69		50	1.000	1.38	NM	1.38	0.28	0.39	2.42
12	6.40	0.66	45		50	1.000	0.90	NM	0.90	0.26	0.24	2.66
13	6.80	0.50	31		50	1.000	0.62	NM	0.62	0.20	0.12	2.78
14	7.20	0.31	12		50	1.000	0.24	NM	0.24	0.15	0.04	2.82
15-Bank	7.75	0.00	0		50	1.000	0.00	NM	0.00	0.02	0.00	2.82
AVG. VEL.											0.82	FPS
AREA											3.43	SQ FT
DISCHARGE											2.82	CFS

*CALIBRATION
 FOR N(REV/T)<
 FOR N(REV/T)>

0.68 V= 1.00 *N+ 0
 0.68 V= 1.00 *N+ 0

11/10/06



10:30 Am

11:15 Am

1:00 Pm

12:30 Pm

1:30 Pm

2:00 Pm

2:30 Pm

FIELD RECORD FORM

Page of



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics
—
Hydrology
—
Water Resources

2016 NORTH WASHINGTON STREET • SUITE 4
TWIN FALLS, IDAHO 83301
208 • 736 • 8543 FAX 736 • 8506

Project/Client: *Lebo Creek*

Location:

Logged By: *CLB*

Date: *11/14/06*

Weather:

Time	FIELD NOTES - DESCRIPTION OF WORK			
	<i>Injection pipe.</i>			
	<i>5.46-gal bucket</i>			
	<i>Meas</i>	<i>Time (sec)</i>	<i>Q (gpm)</i>	
	<i>1</i>	<i>1.25</i>		
	<i>2</i>	<i>1.28</i>		<i>24-72-178 E</i>
	<i>3</i>	<i>1.09</i>	<i>301</i>	<i>13-94-331 N</i>
	<i>4</i>	<i>1.15</i>	<i>285</i>	<i>6294 Ft</i>
	<i>5</i>	<i>1.09</i>	<i>301</i>	
	<i>6</i>	<i>1.06</i>	<i>309</i>	
	<i>Q = 299 = 0.67 cfs</i>			
	<i>12:00 pm</i>			
	<i>ABOVE INTERVIEW POINT</i>			
	<i>FLUME 0.77"</i>			
	<i>WITH 100 gpm leak</i>			
	<i>Stream was dry at</i>			
	<i>12:30 pm</i>			<i>24-70-988 E</i>
				<i>13-92-765 N</i>
				<i>6139 ft.</i>

FIELD RECORD FORM

Page of



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics
—
Hydrology
—
Water Resources

2016 NORTH WASHINGTON STREET • SUITE 4
TWIN FALLS, IDAHO 83301
208 • 736 • 8543 FAX 736 • 8506

Project/Client: *Lake Creek*

Location:

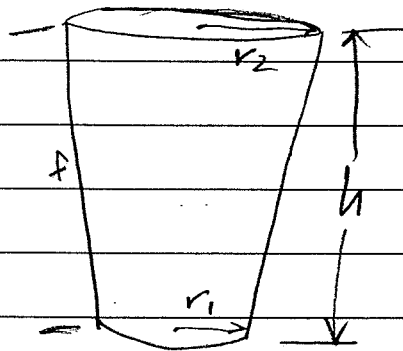
Logged By: *CLB*

Date: *11/10/06*

Weather:

Time

FIELD NOTES - DESCRIPTION OF WORK



$$V = \frac{1}{3} \pi h (r_1^2 + r_2^2 + r_1 r_2)$$

$$d_1 = 10 \frac{1}{16}''$$

$$r_1 = 5.03'' = 0.419'$$

$$d_2 = 11 \frac{7}{32}''$$

$$r_2 = 5.61'' = 0.4675'$$

$$h = 14 \frac{3}{16}'' = 14.19'' = 1.182'$$

$$V = \frac{1}{3} \pi (1.182) [(0.419^2 + 0.4675^2 + 0.419(0.4675))]$$

$$V = 0.7303 \text{ ft}^3 = 5.46 \text{ gal}$$

DISCHARGE MEASUREMENT - CURRENT METER

Client:				Project:			
Party:				Meter:			
Location:							
Location (numeric)		Meter Code	Date 11/10/06	Gage Start		Gage End	
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction	
1			Inflow T. Stream				
2			24-71-300E				
3			13-92-220N				
4			6175 FT				
5			Est. Flow 20 gpm (Not More Than)				
6							
7							
8							
9							
10							
11							
12	FLUME @ PIPE OUTLET.						
13				No Flow Above Pipe @			
14					2:00 PM		
15					2:40 PM		
16							
17	Leak is less than 10 gpm						
18							
19		0.46					
20		0.47					
21							
22							
23							
24							
25							

Meter Codes: 1 = TYPE AA. 2 = PYGMY. 3 = OTT 47966

Remarks: 24-70-527E
13-92-628N
6086 FT.

FIELD RECORD FORM

Page of



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics
Hydrology
Water Resources

2016 NORTH WASHINGTON STREET • SUITE 4
TWIN FALLS, IDAHO 83301
208 • 736 • 8543 FAX 736 • 8506

Project/Client: Lulu Cr.

Location:

Logged By: CB

Date: 11/10/06

Weather:

Time

FIELD NOTES - DESCRIPTION OF WORK

Culverts at roadway - outlet of ponds 5.46 gal bucket

Time

Time

S- Culvert Q

N- Culvert Q

10.53 sec 31.1

10.00 32.8

10.41 31.5

9.94 33.0

10.50 31.2

10.16 32.2

$\bar{Q} = 31.3 \text{ gpm}$

$\bar{Q} = 32.7 \text{ gpm}$

$Q_{\text{TOTAL}} = 64.0 \text{ gpm} = 0.14 \text{ cfs}$ 2:30 PM

DISCHARGE MEASUREMENT - CURRENT METER

Client: <u>Lake Creek</u>			Project: <u>Lake Creek</u>			
Party: <u>CLB/CEP</u>			Meter:			
Location:						
Location (numeric) <i>Downstream of Re-Diversion</i>		Meter Code <u>2</u>	Date <u>11/10/06</u>	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	1.95	0.0	0		50	
2	2.5	0.20	0		}	
3	3.0	0.37	0			
4	3.5	0.33	2			
5	4.0	0.50	9			
6	4.4	0.58	29			
7	4.8	0.59	45			
8	5.2	0.61	45			
9	5.6	0.59	45			
10	6.0	0.57	44			
11	6.4	0.60	41			
12	6.8	0.66	29			
13	7.2	0.56	37			
14	7.6	0.41	15			
15	8.0	0.26	10			
16	8.4	0	6			
17						
18						
19						
20						
21						
22						
23						
24						
25						
Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966 <i>Rediversion</i>						
Remarks: <u>27-72-130 E</u> <i>1900m</i>			<u>27-72-146 E</u> <i>1:30pm</i>			
<u>13-94 294 N</u>			<u>13-94-302 N</u>			
<u>6275 FT</u>			<u>6286 FT</u>			

DISCHARGE MEASUREMENT - CURRENT METER

Client: <u>Lake County</u>				Project:		
Party: <u>CLB/GEP</u>				Meter:		
Location:						
Location (numeric) <u>ABOVE INJECTION POINT</u> <u>3</u>		Meter Code <u>2</u>	Date <u>11/10/06</u>	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. 6 or 2	Rev. 0.8	Time (sec)	Angle Correction
1	2.1	.0	0		50	
2	3.0	0.42	0		}	
3	3.5	0.41	4			
4	4.0	0.44	21			
5	4.5	0.47	17			
6	5.0	0.42	22			
7	5.5	0.39	16			
8	6.0	0.41	13			
9	6.5	0.51	32			
10	7.0	0.50	27			
11	7.5	0.42	19			
12	8.0	0.53	33			
13	8.4 ~~8.5~~	0.74	24			
14	8.8 ~~9.0~~	0.66	28			
15	9.2 ~~9.5~~	0.65	17			
16	9.6 ~~10.00~~	0.53	16			
17	10.0	0.33	18			
18	10.35	0.0	0			
19						
20						
21						
22						
23						
24						
25						

Meter Codes: 1 = TYPE AA, 2 = PYGMY, 3 = OTT 47966

Remarks: 24-72-137E 12:30 1:00pm
13-94-336 N 6287 FT.

DISCHARGE MEASUREMENT - CURRENT METER

Client: <u>Lake Creek</u>	Project:
Party: <u>CEB/GER</u>	Meter:
Location:	

Location (numeric) UPSTREAM OF DIVERSION		Meter Code	Date	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	1.9	0.0	0		50	
2	2.5	0.27	3			
3	3.0	0.27	15			
4	3.5	0.35	10			
5	4.0	0.42	22			
6	4.5	0.41	16			
7	5.0	0.45	22			
8	5.5	0.61	26			
9	6.0	0.69	42			
10	6.5	0.62	50			
11	7.0	0.55	66			
12	7.5	0.61	39			
13	8.0	0.48	63			
14	8.5	0.45	85			
15	9.0	0.47	37			
16	9.5	0.52	43			
17	10.0	0.46	23			
18	10.7	0.88	0			VERTICAL BANK
19	10.7	0.0	0			
20						
21	10.3	0.39	7			
22						
23						
24						
25						

Meter Codes: 1 = TYPE AA. 2 = PYGMY. 3 = OTT 47966

Remarks: 24-72-531 E

10:30 AM

13-95-271 N

6400 FT.

USER GRID

DISCHARGE MEASUREMENT - CURRENT METER

Client: <u>Lake Creek</u>				Project:		
Party: <u>COB/GER</u>				Meter:		
Location:						
Location (numeric) <u>Downstream of Diversion</u>		Meter Code	Date	Gage Start		Gage End
Sec. #	Distance	Depth	Rev. .6 or .2	Rev. 0.8	Time (sec)	Angle Correction
1	0.8	0.29	0		50	
2	2.4	0.50	2			
3	2.8	0.53	5			
4	3.2	0.62	17			
5	3.6	0.63	41			
6	4.0	0.66	59			
7	4.4	0.72	47			
8	4.8	0.77	45			
9	5.2	~~0.75~~ 0.80	64			
10	5.6	0.73	79			
11	6.0	0.71	69			
12	6.4	0.66	45			
13	6.8	~~0.50~~ 0.55	31			
14	7.2	0.31	12			
15	7.45	0.0	0			
16	~~8.0~~					
17						
18						
19						
20						
21						
22						
23						
24						
25						

Meter Codes: 1 = TYPE AA. 2 = PYGMY. 3 = OTT 47966

Remarks:	AT CROSS SECTION
AT DIVERSION POINT	24-72-491 E 11:15 AM
24-72-487 E	13-95-242 N
13-95-246 N 6373 FT	6368 FT

VERTICAL BANK

PART II—SUPPLEMENTAL INFORMATION (Applicant Completes)

MARK "X" IN APPROPRIATE BOX BELOW

I—PRIVATE CORPORATIONS

ATTACHED

FILED*

a. Articles of Incorporation

☐
☐

b. Corporation Bylaws

☐
☐

c. A certification from the State showing the corporation is in good standing and is entitled to operate within the State.

☐
☐

d. Copy of resolution authorizing filing

☐
☐

e. The name and address of each shareholder owning 3 percent or more of the shares, together with the number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote and the name and address of each affiliate of the entity together with, in the case of an affiliate controlled by the entity, the number of shares and the percentage of any class of voting stock of that affiliate owned, directly or indirectly, by that entity, and in the case of an affiliate which controls that entity, the number of shares and the percentage of any class of voting stock of that entity owned, directly or indirectly, by the affiliate.

☐
☐

f. If application is for an oil or gas pipeline, describe any related right-of-way or temporary use permit applications, and identify previous applications.

☐
☐

g. If proposed land use involves other Federal lands identify each agency impacted by proposal.

☐
☐

II—PUBLIC CORPORATIONS

a. Copy of law forming corporation

☐
☐

b. Proof of organization

☐
☐

c. Copy of Bylaws

☐
☐

d. Copy of resolution authorizing filing

☐
☐

e. If application is for an oil or gas pipeline, provide information required by Item "I-f" and "I-g" above.

☐
☐

III—PARTNERSHIP OR OTHER UNINCORPORATED ENTITY

a. Articles of association, if any

☐
☐

b. If one partner is authorized to sign, resolution authorizing action is

☐
☐

c. Name and address of each participant, partner, association, or other

☐
☐

d. If application is for an oil or gas pipeline, provide information required by Item "I-f" and "I-g" above.

☐
☐

* If the required information is already filed with the Forest Service and is current, check box titled "Filed." Provide the file identification information (e.g., number, date, code, name and office at which filed). If not on file or current, attach requested information.

REMARKS: (This space is provided for more detailed responses to PART I.) Please indicate the item numbers to which these responses apply. Attach sheets, if additional space is needed.

PART III—REPORT ON APPLICATION (Forest Officer Completes)

1. General description of the area and adaptability for the proposed use. Outline area on separate map if needed to clarify proposed use.

AREA PREVIOUSLY UNDER PERMIT TO GEORGE CASTLE FOR
DAM & IRRIGATION DITCH. WATER RIGHTS TO LAKE CR.
ARE HELD BY LAKE CR. MEADOWS, HOMEOWNERS ASSOCIATION

2. If previously under authorization indicate:

a. Name of Holder

GEORGE CASTLE

b. Date Authorized

7/58

c. Date Closed

TO BE TRANSFERRED

3. Describe any encumbrances on the land, such as withdrawals, power projects, easements, rights-of-way, mining claims, leases, etc. Show on map provided.

4. State approximate amount and kinds of timber to be cut, recommended stumpage prices, method of scaling; include recommendation on disposal of merchantable timber: (a) to holder at current damage appraisal or (b) to others than holder under regular timber sale procedure.

NONE

5a. Will proposed use conform to Forest Land and Resource Management Plan?

☒ Yes ☐ No

b. Has an Environmental Assessment been prepared?

☒ Yes (Attach) ☐ No

c. Has an Environmental Impact Statement (P.L. 91-190, 42 USC 4321) been prepared?

☐ Yes (Attach) ☒ No

(Note: If "No" is marked with an "X" in any of the above questions, explain in item 6 below.)

6. Recommendations, including any factors which might affect the granting of the authorization or future use of the land.

REMOVE ALL DEBRIS FROM OLD DAM SITE, BREACH DAM SITE
& RESTORE STREAM TO ORIGINAL CHANNEL, RESEED ALL
DISTURBED AREAS.

7. List mandatory and optional clauses which should be made a part of this authorization (See FSM 2780).

8. Fee recommendation (Describe here or on computation sheet attached).

AS PER Z710 ROW SCHEDULE

2.08 miles

11,000' x 20' = 5.05 ACRES

Fee Schedule #13.46/AC/YR x 5.05 = \$67.97 (\$68.00 Rounded)

9a. RECOMMEND Approval* or Disapproval*

b. Signature (Sign in ink)

John Phipps

c. Title

District Ranger

d. Date

4/2/87

10a. FINAL Approval* or Disapproval*

b. Signature (Sign in ink)

John Phipps

c. Title

John Phipps

d. Date

7/1/87

United States Department of Agriculture
Forest Service

SPECIAL USE PERMIT

Act of October 21, 1976

~~XXXXXX~~

This permit is revocable and nontransferable
(Ref. FSM 2710)

a. Record no. (1-2)

70

b. Region (3-4)

04

c. Forest (5-6)

14

d. District (7-8)

02

e. User number (9-12)

5236

f. Kind of use (13-15)

91

g. State (16-17)

16

h. County (18-20)

013

i. Card no. (21)

Permission is hereby granted to George C. Castle
of P. O. Box 47, Ketchum, ID 83340
hereinafter called the permittee, to use subject to the conditions set out below, the following described land or improvements:

Dam and reservoir of approx. 3 acre-feet capacity. Two irrigation ditches approximately .3 mile long each from dam to permittee's private land. Located in Lake Creek, SW $\frac{1}{4}$ Sec. 30, T. 5 N., R. 18 E., B.M., as shown on plats, Exhibits A and B, attached and made a part hereof.

This permit covers 3 acres and/or 0.36 miles and is issued for the purpose of
Maintenance of reservoir and conduit for irrigation purposes.

1. Construction or occupancy and use under this permit shall begin within — months, and construction, if any, shall be completed within — months, from the date of the permit. This use shall be actually exercised at least 365 days each year, unless otherwise authorized in writing.

2. In consideration for this use, the permittee shall pay to the Forest Service, U.S. Department of Agriculture, the sum of Twenty-five and no/100 Dollars (\$ 25.00) for the period from January 1 1985 to December 31 1985, and thereafter annually on January 1 Twenty-five and no/100 Dollars (\$ 25.00) Provided, however, Charges for this use may be made or readjusted whenever necessary to place the charges on a basis commensurate with the value of use authorized by this permit.

3. This permit is accepted subject to the conditions set forth herein, and to conditions 18 to 34 attached hereto and made a part of this permit.

PERMITTEE	NAME OF PERMITTEE <u>George C. Castle</u>	SIGNATURE OF AUTHORIZED OFFICER <u>George C. Castle</u>	DATE <u>5/23/85</u>
ISSUING OFFICER	NAME AND SIGNATURE <u>N. Harg</u>	TITLE <u>Forest Supervisor</u>	DATE <u>5/29/85</u>

Designation:
USES, Sawtooth
Castle, George C.
Reservoir & Conduit
7/7, '58



SPECIAL USE PERMIT

Sawtooth National Forest.

Permission is hereby granted to George C. Castle

of Box 47, Ketchum, Idaho

hereinafter called the permittee, to use, subject to the conditions set out below, the following-described lands or improvements:

Dam and reservoir of approx. 3-acre-foot capacity. Irrigation ditch approx. .3 mile long from dam to permittee's private land. Located in Lake Creek, SW $\frac{1}{4}$ Sec. 30; T. 5 N., R. 18 E. B.M.

(Transferred from Dan Ruffinen)

This permit covers _____ acres and/or _____ miles for the purpose of:

Maintenance of reservoir and conduit, for irrigation purposes.

The exercise of any of the privileges granted in this permit constitutes acceptance of all the conditions of this permit.

1. In consideration for this use, the permittee shall deposit with the Regional Fiscal Agent, Forest Service, Free Under Regulation U-11-G, a check, draft, or money order made payable to the Treasurer of the United States in the sum of _____ dollars (\$_____) for the period from _____, 19____, to _____, 19____.

19____, and thereafter annually on _____ dollars (\$_____). The charges for this use may be readjusted from time to time to place this permit on a basis consistent with the charge to other permittees for like privileges.

2. Construction or occupancy and use under this permit shall be completed in completed months, construction, if any, shall be completed within 6 months from the date of the permit. This use shall be actually exercised at least 6 months each year, unless otherwise authorized in writing.

3. Development plans; lay-out plans; construction, reconstruction, or alteration of improvements; or revision of lay-out or construction plans for this area must be approved in advance and in writing by the forest supervisor. Trees or shrubbery on the permitted area may be removed or destroyed only after the forest officer in charge has approved, and has marked or otherwise designated that which may be removed or destroyed. Merchantable timber cut must be paid for by the permittee. Trees, shrubs, and other plants may be planted in such manner and in such places about the premises as may be approved by the forest officer in charge.

4. The permittee shall maintain the improvements and premises to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the forest officer in charge.

5. This permit is subject to all valid claims.

6. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this permit.

7. The permittee shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the forest officer in charge or his authorized agent.

8. The permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and shall pay the United States for any damage resulting from negligence or from the violation of the terms of this permit or of any law or regulation applicable to the national forests by the permittee, or by any agents or employees of the permittee acting within the scope of their agency or employment.

9. The permittee shall fully repair all damage, other than ordinary wear and tear, to national forest roads and trails caused by the permittee in the exercise of the privilege granted by this permit.

10. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom unless it is made with a corporation for its general benefit.

11. Upon abandonment, termination, revocation, or cancellation of this permit, the permittee shall remove within a reasonable time all structures and improvements except those owned by the United States, and shall restore the site, unless otherwise agreed upon in writing or in this permit. If the permittee fails to remove all such structures or improvements within a reasonable period, they shall become the property of the United States, but that will not relieve the permittee of liability for the cost of their removal and restoration of the site.

12. This permit is not transferable. If the permittee through voluntary sale or transfer, or through enforcement of contract, foreclosure, tax sale, or other valid legal proceeding shall cease to be the owner of the physical improvements situated on the land described in this permit and is unable to furnish adequate proof of ability to redeem or otherwise reestablish title to said improvements, this permit shall be subject to cancellation. But if the person to whom title to said improvements shall have been transferred in either manner above provided is qualified as a permittee, and is willing that his future occupancy of the premises shall be subject to such new conditions and stipulations as existing or prospective circumstances may warrant, his continued occupancy of the premises may be authorized by permit to him if, in the opinion of the forest supervisor, issuance of a permit is desirable and in the public interest.

13. In case of change of address, the permittee shall immediately notify the forest supervisor.

14. The temporary use and occupancy of the premises and improvements herein described may not be sublet by the permittee to third parties without the prior written approval of the forest supervisor and the permittee shall continue to be responsible for compliance with all conditions of this permit by persons to whom such premises may be sublet.

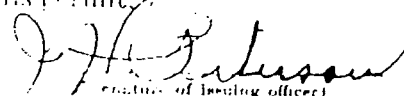
15. This permit may be terminated upon breach of any of the conditions herein or at the discretion of the regional forester or the Chief, Forest Service.

16. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or any provision thereof, the preceding printed clauses will control.

17. This permit is subject to the conditions set forth above and to conditions 18

to 19.20 attached hereto and made a part of this permit.

Date July 7, 1953


Chief, Forest Service

Acting Forest Supervisor
(Title)

DECISION NOTICE,
CATEGORICAL EXCLUSION, AND
FINDING OF NO SIGNIFICANT IMPACT
FOR THE LAKE CREEK WATER PROJECT

Sawtooth National Forest
Ketchum Ranger District

*New Lake Creek Meadows
Homeowners Association, Inc -
(All other information remains the same)*

David Goodman has submitted a proposal to install a water transmission line located in Section 30, Township 5 North, Range 18 East. The proposal consists of:

- Burying 9200 feet of transmission line.
- Removing all debris from old dam site.
- Breaching old dam.
- Installing transmission line and water trough for wildlife.
- Reseeding all disturbed areas.

The attached map shows the location for the proposed work and access routes.

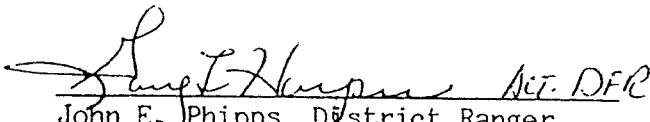
The proposal has been analyzed by an ID Team consisting of a District Ranger, Range Conservationist, and Recreation Staff. Concerns that could not be mitigated were identified. The proposal conforms with all existing land management direction for the area. No threatened or endangered plants or animals have been identified in the area. No wildlife or riparian problems have been identified, nor will any floodplains or wetlands be impacted. A cultural resource inventory will be completed prior to ground disturbing work. The operator has been notified that they cannot begin work until this cultural resource inventory is completed. Ground disturbing activities will be located so that no cultural resource conflicts occur.

Based on the analysis and previous experience, this proposal was identified to be limited in context and intensity and would produce little or no environmental effects to either the biological or physical component of the human environment and, therefore, constitutes a categorical exclusion from the need to prepare a formal environmental assessment. It is my decision to approve the plan subject to the following bonding and reclamation requirements.

1. reseeding all disturbed areas
2. installation of water trough and transmission line

The responsible official is John E. Phipps, District Ranger, Ketchum Ranger District, Sawtooth National Forest, P. O. Box 2356, Ketchum, Idaho, 83340.

This decision is subject to administrative review pursuant to 36 CFR 211.18.


John E. Phipps, District Ranger

9/17/86
Date

United States
Department of
Agriculture

Forest
Service

Sawtooth
National Forest

2647 Kimberly Road East
Twin Falls, ID 83301-7976

Reply To: 2720

Date: July 14, 1987

Lake Creek Homeowners Association, Inc.
P.O. Box 3144
Ketchum, ID 83340

Dear Holders:

Enclosed are two copies of a water transmission special use permit for maintaining a pipeline for the purpose of irrigation. Please sign both copies and return them to this office for the Forest Officer's signature. A signed copy will be returned to you.

We have also enclosed a bill for collection for the 1987 fee.

Sincerely,


ROLAND M. STOLESON
Forest Supervisor

Enclosures

cc:

D-3

Letter 6-21-87

United States
Department of
Agriculture

Forest
Service

Sawtooth
National Forest

2647 Kimberly Road East
Twin Falls, ID 83301-7976

Reply To: 2720

Date: September 29, 1987

Lake Creek Meadows
Homeowners Assoc., Inc.
Box 3144
Ketchum, ID 83440

Dear Holders:

On July 14, 1987, we sent you two copies of your water transmission special use permit. As of this date, we have not received signed copies back from you.

This permit is not in effect until signed by you and the Forest Service official in charge. If the previous copies have been misplaced, please notify us, and we will forward you two more permits.

Thank you for your prompt attention to this matter.

Sincerely,

John G. Robatsek

ROLAND M. STOLESON
Forest Supervisor

cc:
D-3

^{CS}
Smith: ae: 09-28-87





United States
Department of
Agriculture

Forest
Service

Sawtooth
National Forest

2647 Kimberly Road East
Twin Falls, ID 83301-7976

Reply To: 2720

Date: July 14, 1987

Lake Creek Homeowners Association, Inc.
P.O. Box 3144
Ketchum, ID 83340

Dear Holders:

Enclosed are two copies of a water transmission special use permit for maintaining a pipeline for the purpose of irrigation. Please sign both copies and return them to this office for the Forest Officer's signature. A signed copy will be returned to you.

We have also enclosed a bill for collection for the 1987 fee.

Sincerely,

ROLAND M. STOLESON
Forest Supervisor

Enclosures

cc:
D-3

SORRY I
OVER LOOKED
RETURNING
THESE PAPERS
WITH MY
CHECK FOR \$600.
R. Stoleson



United States
Department of
Agriculture

Forest
Service

Sawtooth
National Forest

2647 Kimberly Road East
Twin Falls, ID 83301-7976

Reply To: 2720

Date: October 20, 1987

Lake Creek Homeowners Association, Inc.
P.O. Box 3144
Ketchum, ID 83340

Dear Holders:

We have enclosed your signed copy of a water transmission special use permit
for the purpose of irrigation.

Sincerely,

ROBT F. WEBSTER

ROLAND M. STOLESON
Forest Supervisor

Enclosure

cc:
D-3

Smith: j b - 10/20/87
* FOR D. BOND

We have enclosed a question and answer packet to help you decide if you are eligible and want to change your permit to an easement.

If you have questions, please contact mDISTRICTn, telephone mTELEPHONEn.

Sincerely,

John G. Robatek

ROLAND M. STOLESON
Forest Supervisor

Enclosures

cc:

mDISTRICT NUMBERn

I concur, E.Bloedel, 8/5/88

Letter mailed to the enclosed listing of permittees, 8/9/88 - *Allen 8-9-88*

United States
Department of
Agriculture

Forest
Service

Sawtooth
National Forest

2647 Kimberly Road East
Twin Falls, ID 83301-7976

Reply To: 2720

Date: August 8, 1988

mNAME

Lake Creek Meadows Homeowners Assoc.

mSALUTATION:

The Secretary of Agriculture is now authorized to issue conditional permanent easements without charge for certain water systems now under charge special use permits.

Systems that are eligible for such easements must meet all of the following criteria:

1. The water system is being used solely for agricultural irrigation or livestock watering purposes.
2. The facilities to be authorized were constructed and in use prior to October 21, 1976, and have been in operation continuously since construction.
3. The user has a valid existing water right under applicable state law.
4. The use served by the water system is not located solely on Federal land.
5. The user provides the Forest Officer with a recordable survey and other information the Forest Officer considers necessary for the proper management of National Forest lands.
6. The user applies for a conditional permanent easement prior to December 31, 1996.

Once granted, such conditional permanent easements, will be transferable and not subject to a fee. A complete application includes all of the following:

1. A completed Special Use Application (FS 2700-3, enclosed) or a letter containing the equivalent information.
2. Recordable survey.
3. Proof of existing water right.

United States
Department of
Agriculture

Forest
Service

Sawtooth
National
Forest

2647 Kimberly Road East
Twin Falls, Idaho 83301
(208) 737-3200

File Code: 2500
Route To: 2720

Date: October 18¹³, 1996

Subject: Restoration of Lake Creek Diversion Dam Site
Water Transmission Permit, Lake Creek Meadows Homeowners Association

To: District Ranger, Ketchum RD

As you are aware, the abandoned dam on Lake Creek, located in the SW 1/4 of Section 30, T. 5 N., R. 18 E., is currently eroding severely, through a deep gully that breaches the dam and is causing severe sedimentation to downstream ponds. I had observed the severe erosion on June 6, 1995 during high runoff and again on September 10, 1996 when there was no flow. On September 12, 1996, I accompanied Mike O'Farrell to meet with a representative of the homeowners at the site; their concern is that their downstream private ponds are full of sediment as a result of the erosion. The homeowners association is willing to pay for equipment to do the stabilization work but want the Forest Service to provide the design (with firm cost figures), apply for the necessary permits, and provide the follow-up revegetation, notably of willow planting.

On October 9, 1996, I reviewed the site with Jim Simpson, Forest Engineer, as some survey work would be necessary preparatory to design. He noted that the dam had recently been under special use permit, and the permittee should be liable for the restoration. Further, he had no funds available for survey.

Our Special Use file (2720) for water transmission by the Lake Creek Meadows Homeowners Association, Inc. (hereafter referred to as LCMHA) shows that LCMHA acquired the permit to maintain the subject dam and reservoir in 1985-86. In 1987, LCMHA applied for and received an amended authorization for special use, for a buried pipeline from a diversion point two miles upstream, thus abandoning the dam. The report on the application recommends that the stream be restored to the original channel and all disturbed areas be reseeded. Both the original permit and the amended permit require the permittee to restore the site when use is discontinued.

LCMHA should be completely responsible for the restoration of the dam site. LCMHA should first provide a survey and design for our review, then submit the plans to IDWR and the Corps of Engineers, with our authorization. They already have made contact with Tristate Excavation; specialty contractors for survey and design are available. The IDWR have provided a list of consultants that can work with stream stabilization in this area. Revegetation must include willow planting after they pull back the banks during willow dormancy, in late fall or early spring, including Geyer's willow as is present. I see 3 possible alternatives to stabilize the channel after pulling the banks back: 1) grade the channel to a natural, stable grade, and reinforce with log/rock side structures with willow bundles, 2) reinforce the existing channel with lots of rock, much as a dam spillway, or 3) install a set of step-down structures, mostly of large rock, as they will tend to get undercut.

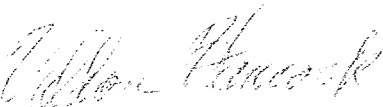
I favor the first alternative because it is more natural and gets the eroding material out of the way (such that it is unlikely to erode onto them) with a natural grade. This alternative will require a lot of earth moving but will provide more permanent stability with probably no future maintenance. Activity within the stream channel in any alternative should be done when there is no flow, if possible.

The stream channel and riparian area below the diversion, and particularly in the area around the abandoned dam, is in a severely deteriorated condition. The channel is normally dry and riparian vegetation is very limited: willows are sparse and decadent. Significant values of the riparian area for wildlife, aesthetics, and recreation, are being lost. The main cause of the deterioration appears to be sheep grazing, but the dewatering of the channel for about a mile and a half is also causing the loss of the riparian community, including willows. Any willow planting is likely to fail if sheep grazing is not strictly controlled, but planting might not succeed without some additional flow at times, to sustain the willows. The ends of the willow cuttings must be in moisture throughout the growing season, in order to successfully grow.

Water rights for the water that was diverted by the dam were transferred to the present diversion system in 1990 (Idaho Department of Water Resources, Transfer No. 3610, for Water Right Numbers 37-2177 and 37-2418), after application by LCMHA. The approval of the transfer limits the diversion rate to 1.57 cfs, not to exceed a total volume of water diverted of 180 acre-feet per year. At the allowable rate of 1.57 cfs, this volume of water would be diverted in 91 days. The approved application by LCMHA to transfer the water rights indicate that the diverted flow is returned to the stream at the property boundary to flow through series of 6 lined ponds with pumps. The diversion, then, is intended to reduce the loss of flow to the channel, in the lower 2 miles.

The average annual flow of Lake Creek at the point of diversion is 5.7 cfs, with a base (normal minimum) flow of 1.4 cfs. Guidelines for instream flows for channel maintenance indicate a need for the base flow (1.4 cfs) at all times when available. (More flow is necessary when the actual flow exceeds the average annual flow, but filling that need is probably not a problem here. Maintenance of fish habitat in the lower reach would require continuous and somewhat greater flow, but this is probably not realistic with the existing water right and the loss of flow to deep seepage within the channel.)

Allowance for bypass of the diversion with all of the base flow remaining in the channel may not always be possible given the existing water right, but the limitations on the volume plus the needs of the resource and of the permittee for a stable channel requires some modification. This means that we need at least some bypass flow through the stream channel, at least sufficient to sustain the willows, with all of the stream flow (or at least the base flow) being kept in the channel perhaps every weekend. Maintenance of a channel will help to accomodate peak flows and floods without excessive erosion and excessive debris transported downstream to private land. The maintenance favorable conditions of water flow such as this is one of the primary purposes for the establishment of the National Forest.


VALDON HANCOCK
Forest Hydrologist

LEE Look @ THESE
IF you AGREE LETS
PUT THEM IN.

OUT OF 2709.11

53.4-3

9. (D-9)

53.4-4

11 (D-11)

THATS ALL I CAN

SEE -

Butch.

WE COULD PREPARE THE
COURT LETTER IF you
LIKE?

B

Hand.

A-6

B-36

C-31

D-33

E-49

F-74

$$11,000' \times 20' = 5.05 \text{ acres}$$

$$\text{Fee Schedule } \$13.46/\text{ac}/\text{yr} \times 5.05 = \$67.97 (\$68.00, \text{rounded})$$

2.08 miles

LEE -

THE LAKE CR. PERMIT SHOULD BE
PUT INTO THE NAME OF
"LAKE CR. HOME OWNERS ASSOCIATION"
ALSO THE ROW DISTANCE IS 11,000' &
WILL BE 20' WIDE. I THINK THAT YOU
HAVE EVERYTHING YOU NEED TO ISSUE
THE PERMIT.

Butch

RECEIVED

U.S. DEPARTMENT OF AGRICULTURE

SPEED MEMO

PART NUMBER

DATE

TO *LEE SMITH*

APR 03 1987

1

4/2/87

FROM *BUTCH HARPER*

PAWTOOTH NATIONAL FOREST
TWIN FALLS, IDAHO

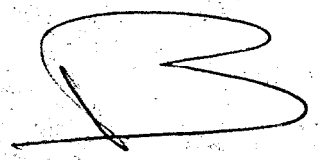
D-3

SUBJECT

LAKE CR. WATER TRANSMISSION

MESSAGE (WRITE CONCISE MESSAGE SIGN AND FORWARD PARTS 1 AND 3 TO ADDRESSEE RETAIN PART 2.)

*LEE. HERE IS A NEW APPLICATION FROM
THE LAKE CR. PEOPLE THAT REFLECTS WHAT IS
GOING ON. I HAVE INCLUDE THE PREVIOUS
INFORMATION AS WELL.*



SIGNATURE

REPLY (USE THIS SPACE FOR REPLY. SIGN AND DATE. RETURN PART 3 TO SENDER. RETAIN PART 1.)

SIGNATURE

DATE