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June 1, 2004

Mr. Jay Engstrom
Idaho Department of Commerce and Labor
P.O. Box 83720
Boise, ID 83720-0093

RE: Rangen, Inc.
Applications for Aquifer Mitigation Assistance Grants

Dear Mr. Engstrom:

Rangen, Inc. operates an aquaculture facility with water rights in the Thousand Springs Reach. Like other springs in the Thousand Springs complex, the source of Rangen's water rights, the Curren Tunnel, has been in decline. Out of total rights for approximately 76 cfs, Rangen is currently receiving only approximately 10 cfs. This is far below the minimum necessary for the operation of Rangen's facility.

Rangen's water rights are senior in priority to many of the ground water rights on the Eastern Snake Plain Aquifer, which is hydrologically connected to the Thousand Springs and Curren Tunnel. As a result of the continuing decline in the water from the Curren Tunnel, Rangen was compelled in September 2003 to initiate a call for water to protect its senior rights. Rangen's call resulted in a February order from the Department of water resources curtailing junior ground water use in Water District 130 after April 1, 2004.

In an effort to avoid the harsh impact that the Director's order would have had on those subject to curtailment and to protect Rangen's interests and continuing operations, Rangen actively participated in the negotiation of the Eastern Snake Plain Aquifer Mitigation, Recovery and Restoration Agreement for 2004. This Agreement prevented the curtailment ordered by the Director and gave all parties a one year opportunity to seek more permanent solutions.

Rangen is fully committed to finding a long term solution to the situation that resulted in the Director's February 2004 order. Any water that can be developed at Rangen's facility will benefit not only Rangen, but also many other water users. Those junior ground water users above Rangen's facility that might be subject to curtailment

would be less likely to face future curtailment. Because Rangen's aquaculture use is nonconsumptive, any water developed for the facility will flow through and be available for use by water users below the facility.

As part of the ongoing effort to find long term solutions Rangen is evaluating several potential options for augmenting water supplies for the Rangen aquaculture facility. The initial list of options includes the following:

1. Divert Curren Tunnel water currently used for agricultural irrigation to the Rangen facility.
2. Withdraw water from a vertical well (or wells) located at the Rangen facility;
3. Construct a horizontal well (or wells) near the Curren Tunnel and at an elevation below the Curren Tunnel;
4. Augment Curren Tunnel flows using water from Weatherby Springs/Hoagland Tunnel;
5. Reduce, if present, downward vertical flow through existing wells in the area upgradient of the Curren Tunnel;
6. Treat and re-use water from the Rangen aquaculture facility.

Under this cover letter, Rangen is submitting applications for financial assistance as part of the Aquifer Mitigation Assistance Grant Program for the first three of these options.

The first application consists of piping water from the Sandy pipeline (constructed in 2003) to a small portion of land owned by Walter and Margaret Candy. The second proposal consists of evaluating the feasibility of withdrawing water from a vertical well located below the canyon rim at the Rangen facility. The third application proposes an evaluation of the feasibility of constructing a horizontal well located near, but below, the Curren Tunnel. The advantages of each of these potential projects, if successful, are that they would provide additional water for the Rangen facility, which would benefit both upgradient ground water users and downstream surface water users.

The fourth option, consisting of piping approximately 0.7 cfs (originating from the Hoagland Tunnel) to the Rangen facility prior to use for irrigation was found to be infeasible. It was originally believed that there might be as much as 4 or 5 cfs of spring water from this source that was not being utilized for aquaculture prior to being used for irrigation. Further research showed that only 0.7 cfs was potentially available, that it was only available at certain times, and that it was contemplated as part of a similar plan in a more proximate aquaculture facility. We believe that the fifth option – evaluation of potential downward flow in wells upgradient of the Curren Tunnel – has merit, and may be best accomplished by the Idaho Department of Water Resources. The sixth option, consisting of pump-back and treatment of water within the Rangen facility, also may have merit. Rangen is currently investigating the feasibility of this option.

Mr. . Jay Engstom
June 1, 2004
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Thank you for your assistance. If you have any questions, please contact me or our technical consultants SPF Water Engineering, LLC.

Very truly yours,

MAY, SUDWEEKS & BROWNING, LLP

A handwritten signature in black ink, appearing to read 'J. Justin May', with a long horizontal line extending to the right.

J. Justin May

Enclosures
cc: Wayne Courtney

Eastern Snake Plain Aquifer Mitigation Program

**APPLICATION FOR FINANCIAL
ASSISTANCE TO
CONSTRUCTION OF A SUPPLEMENTAL
CONVEYANCE FOR WATER RIGHTS 36-
134A AND 36-135B**

Submitted to:

**The Idaho Department of Commerce and Labor
Division of Economic Development**

**P.O. Box 83720
Boise, ID 83720-0093**

Submitted by:

Rangen, Inc.

**P.O. Box 706
Buhl, ID 83316**

June1, 2004

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ESPAM ASSISTANCE GRANT APPLICATION

Applicant: Rangen, Inc. Phone: 208-543-6421

Address: P.O. Box 706, Buhl, ID 83316

Application Prepared By: SPF Water Engineering, LLC Phone: (208) 383-4140

Address: 600 East River Park Lane, Suite 105, Boise, ID 83706

Technical Service Provider: SPF Water Engineering, LLC Phone: (208) 383-4140

Address: 600 East River Park Lane, Suite 105, Boise, ID 83706

Water Right Number(s): 36-15501, 36-02551, 36-07694

Amount of Water Supply Reduction: Approximately 80%

PROJECT FINANCING OVERVIEW: ESPAM: \$ 37,375
Private: \$ _____
Federal: \$ _____
Other: \$ _____
TOTAL: \$ 37,375

DESCRIBE PRIVATE/FEDERAL/OTHER MATCHING FUNDS: _____

BRIEF PROJECT DESCRIPTION:
Enable all irrigation water for water rights 36-134A and 36-135B to be drawn from the Sandy Pipeline (instead of occasional diversions from the Curren Tunnel).

APPLICATION CERTIFICATION: The data in this application is true and correct. The undersigned has the authority to submit this application on behalf of the Applicant and will comply with all required certifications, laws, and regulations if the application is approved and selected for funding.

Name: (typed) J. Wayne Courtney Title: Executive Vice President

Signature:  Date: 6/1/2007

Name: (typed) May, Sudweeks & Browning Title: Attorneys for Rangen, Inc.

Signature: _____ Date: _____

ESPAM ASSISTANCE GRANT APPLICATION

Applicant: Rangen, Inc. Phone: 208-543-6421

Address: P.O. Box 706, Buhl, ID 83316

Application Prepared By: SPF Water Engineering, LLC Phone: (208) 383-4140

Address: 600 East River Park Lane, Suite 105, Boise, ID 83706

Technical Service Provider: SPF Water Engineering, LLC Phone: (208) 383-4140

Address: 600 East River Park Lane, Suite 105, Boise, ID 83706

Water Right Number(s): 36-15501, 36-02551, 36-07694

Amount of Water Supply Reduction: Approximately 80%

PROJECT FINANCING OVERVIEW: ESPAM: \$ 37,375
Private: \$ _____
Federal: \$ _____
Other: \$ _____
TOTAL: \$ 37,375

DESCRIBE PRIVATE/FEDERAL/OTHER MATCHING FUNDS: _____

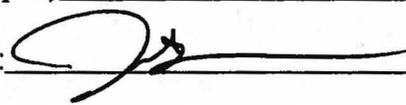
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Name: (typed) J. Wayne Courtney Title: Executive Vice President

Signature: _____ Date: _____

Name: (typed) May, Sudweeks & Browning Title: Attorneys for Rangen, Inc.

Signature:  Date: 6-1-04

ATTACHMENT A - BUDGET

Grantee: Rangen, Inc. Project No.: _____
Project: Construction of a Supplemental Conveyance for Water Rights 36-134A and 36-135B

LINE ITEMS	AMOUNTS				
	ESPAM Grant	Private	Federal	Other	Total
Construction and Project Improvement	\$27,500				\$27,500
Professional/Engineering Fees	\$5,000				\$5,000
Contingency	\$4,875				\$4,875
Total Costs	\$ 37,375	\$	\$	\$	\$ 37,375

1) Project Description

a) Background

Rangen, Inc. ("Rangen") is one of the largest suppliers of high-yield, low waste feeds for the aquaculture industry. Rangen conducts on-going nutrition research to improve aquaculture feeds and husbandry practices. Rangen feeds are then tested in its aquaculture facility near Hagerman, Idaho to measure performance under practical conditions.

The Rangen Aquaculture Research Facility (Figure 1) is located in Gooding County approximately 3 miles from Hagerman, Idaho. The primary water source for the Rangen facility (Table 1) is spring discharge from the Curren Tunnel¹. This is one of many springs in the Milner to King Hill reach of the Snake River (Figure 2) that collectively form a primary discharge area for the Eastern Snake River Plain (ESRP) aquifer.

Numerous springs in the Milner – King Hill reach have experienced decreased flows in recent years (Bendixsen, 1995; Johnson et al., 2002). Average annual diversion rates (based on average monthly diversions) to the Rangen facility from the Curren Tunnel were over 50 cfs during the 1960s and early 1970s, but have decreased to less than 15 cfs in recent years (Figure 3).

b) Project Description

Water rights listing the Curren Tunnel as point of diversion (in addition to those held by Rangen – see Table 1) are listed in Table 2. The places of use for these rights are shown in Figure 4. A pipeline (Sandy Pipeline) carrying Northside canal water was constructed in 2003 to supply water to these and other irrigation rights in the vicinity. Each of the users listed Table 2 draws water from a diversion vault (Figure 5); the approximate location of the vault is shown in Figure 6.

Water to irrigate approximately 7 acres of pasture with a set of hand lines owned by Walter and Margaret Candy apparently can only be drawn from the Sandy Pipeline under certain conditions. Water can only be supplied when a pump supplying water to the field just north of the vault is operating (Jeff Martin, North Snake Ground Water District, personal communication, 2004). Thus, one way of augmenting water supplies to the Rangen facility would be to provide all water for Candy irrigation through the Sandy Pipeline (to the extent that water is available in the Sandy pipeline).

¹ Also known as the Martin-Curren Tunnel.

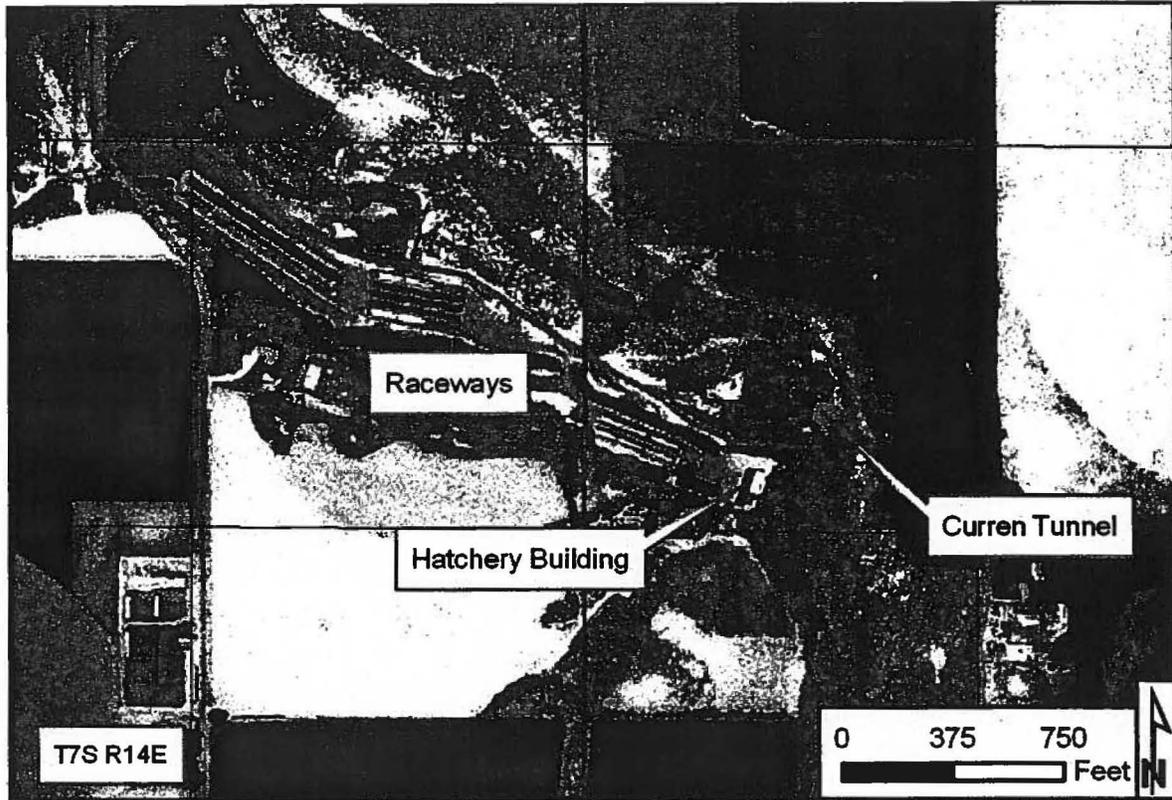


Figure 1: Rangen aquaculture facility.

Number	Priority Date	Decreed Date	Source	Maximum Diversion Rate	Maximum Diversion Volume
36-135A	Apr 1 1908	Aug 27 2001	Martin-Curren Tunnel	0.050	0.000
36-15501	Jul 1 1957	Dec 29 1997	Springs	1.460	0.000
36-2551	Jul 13 1962	Dec 29 1997	Martin-Curren Tunnel	48.540	0.000
36-10269	Aug 5 1976	Nov 22 1996	Ground Water	0.040	0.000
36-7694	Apr 12 1977	Dec 29 1997	Springs	26.000	0.000
36-8048	Dec 21 1981	Aug 27 2001	Ground Water	0.410	80.800
36-134B	Oct 9 1884	Aug 27 2001	Martin-Curren Tunnel	0.090	0.000

Table 1: Rangen water rights.

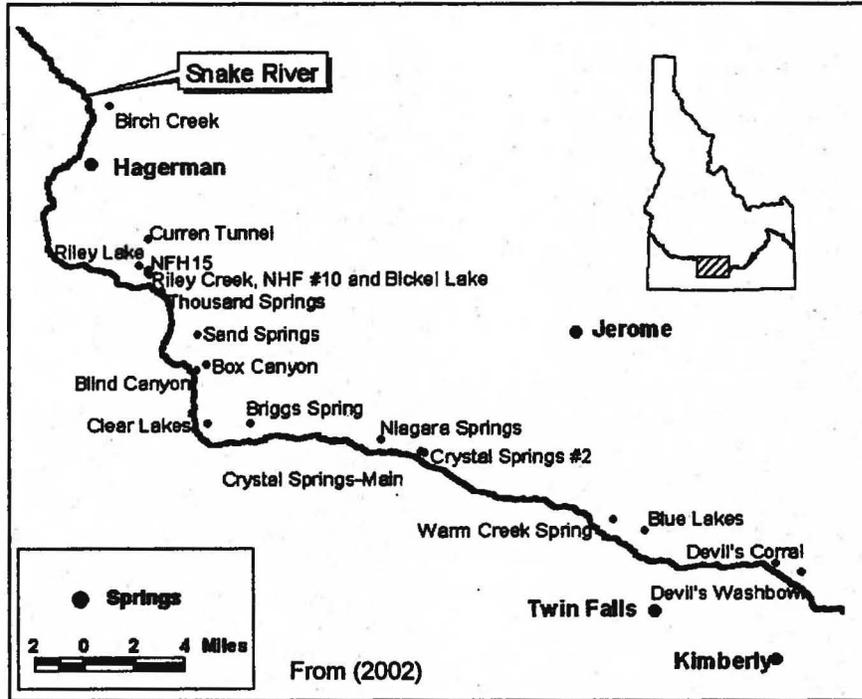


Figure 2: Major springs in the Milner to King Hill reach of the Snake River.

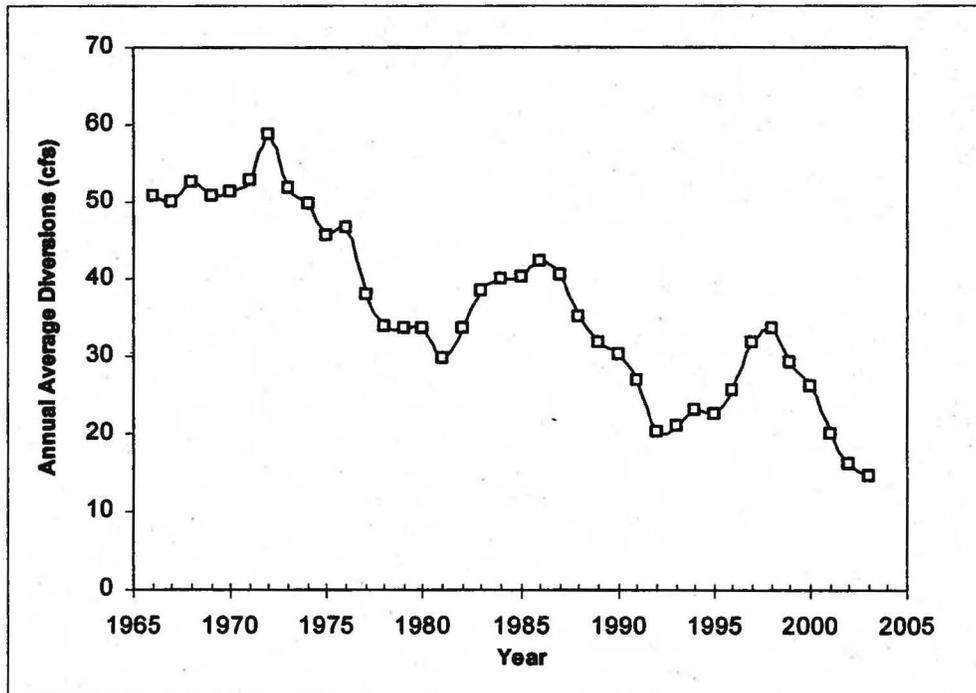


Figure 3: Average annual discharge rates from the Rangen, Inc., Aquaculture Facility.

Water Right	Priority Date	Owner	Irrigation Diversion (cfs)	Stockwater Diversion (cfs)	Domestic Diversion (cfs)	acres
134A	10/9/1884	Walter and Margaret Candy	0.49	0.04	-	36
135B	4/1/1908	Walter and Margaret Candy	0.51	-	-	36
134D	10/9/1884	Howard and Rhonda Morris	1.58	0.06	-	143
135D	4/1/1908	Howard and Rhonda Morris	1.58	0.06	-	143
10141A	12/1/1908	Howard and Rhonda Morris	0.82	0.03	-	143
134E	10/9/1884	Howard and Rhonda Morris	0.82	0.04	-	75
135E	4/1/1908	Howard and Rhonda Morris	0.82	0.02	-	75
10141B	12/1/1908	Howard and Rhonda Morris	0.43	0.02	-	75
102	4/1/1892	J Alvin Musser	4.1	0.07	0.04	205
Totals			11.15	0.34	0.04	931
Total diversion (cfs)					11.53	

Table 2: Irrigation water rights showing the point of diversion as Curren Tunnel.

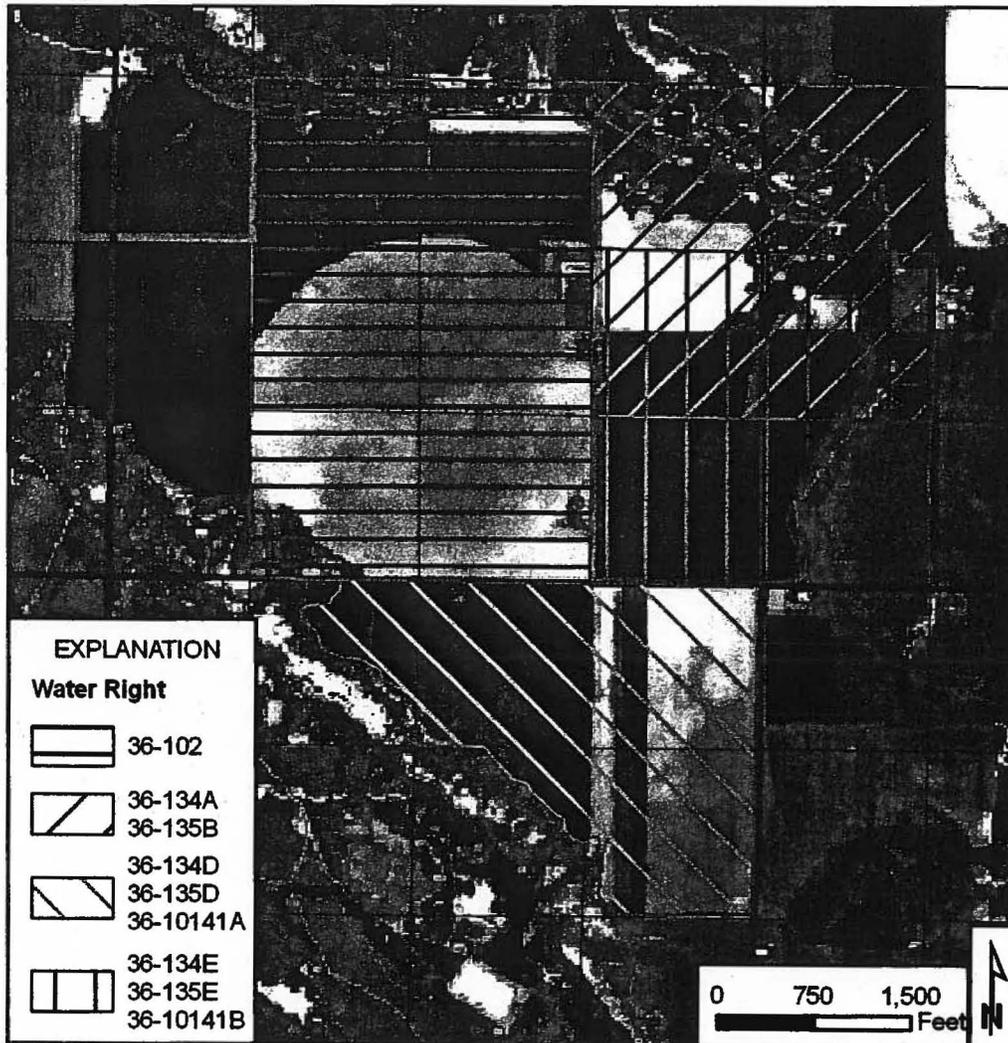


Figure 4: Places of use for water rights shown in Table 2.

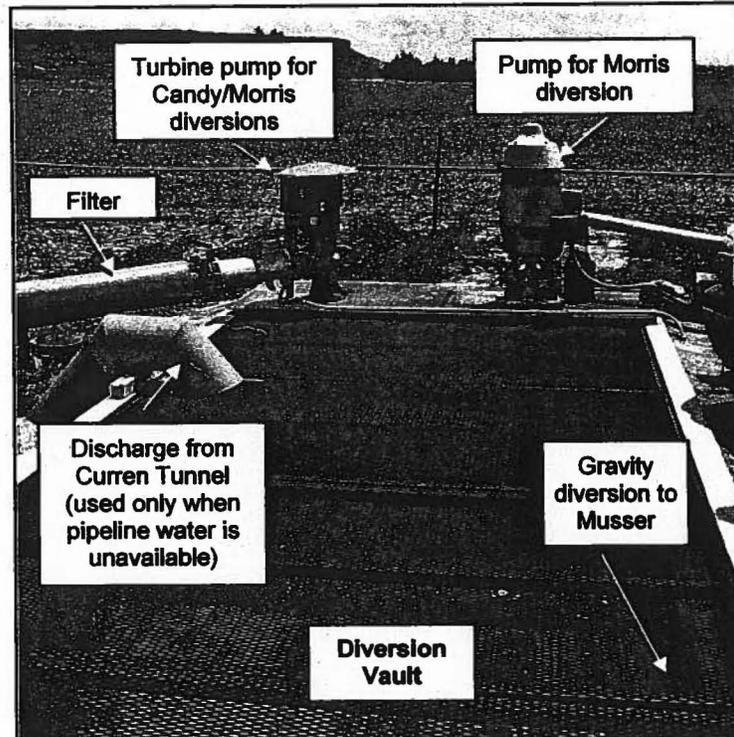


Figure 5: Diversion vault, looking east.

2) Purpose and Objectives

The purpose of this proposed project is to provide increased flow to the Rangen aquaculture facility. The general objective is to minimize the amount of irrigation water drawn from the Curren Tunnel. Specific objectives include the following:

- a. Determine the precise nature of diversion from the diversion vault to all of the Candy places of use.
- b. Enable diversion of water for the portion of Candy property currently receiving occasional water from the Curren Tunnel.

3) Project Tasks

The first task will be to confirm (a) the occasional use of Curren Tunnel water with Walter and Margaret Candy, and (b) the locations of subsurface piping from the diversion vault to the area receiving occasional Curren Tunnel water. The latter will be confirmed with Butch Morris and Walter and Margaret Candy. An initial site visit with Frank Irwin (Watermaster, Basin 36A) was conducted on May 27, 2004 to discuss the options outlined below.

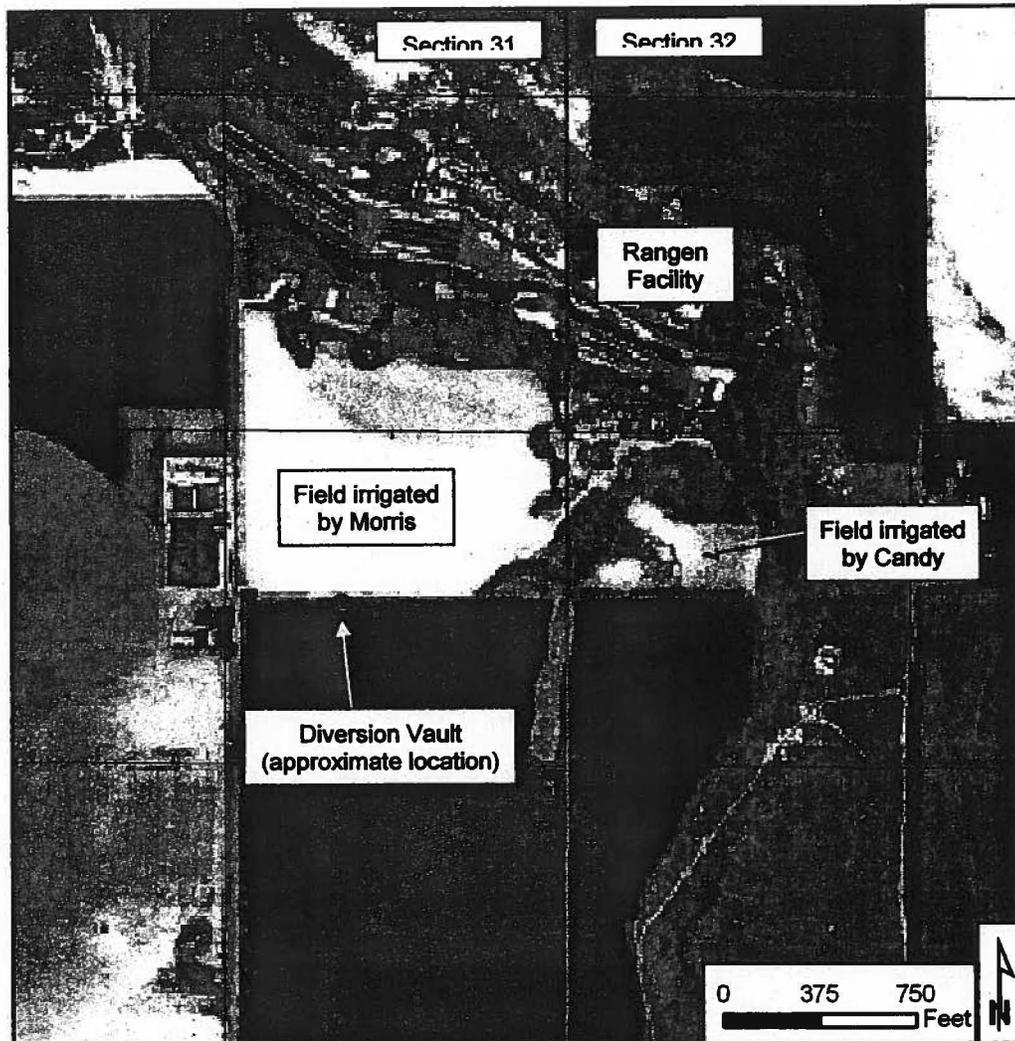


Figure 6: Approximate location of diversion vault.

There are two alternatives for providing water to the portion of land that appears to be irrigated occasionally with Curren Tunnel water ("Candy Pasture"). The first alternative is to install a separate pump at the diversion vault that can pressurize the current line leading through the field irrigated by Morris (just north of the vault) and to the Candy pasture. This would require re-plumbing the piping currently connected to the short-coupled turbine pump and accompanying filter shown in Figure 5. At a minimum, this approach would require check valves to prevent backflow into the pump that is not being used, and perhaps additional valves to control flows to other irrigation points.

The second alternative would be to install a separate pressurized irrigation line, with dedicated pump and filter, from the vault to the Candy pasture. An average irrigation rate of 90 gpm is adequate for 10 acres during peak conditions. A 4-inch pipe is

appropriate for a 90 gpm flow rate. However, assuming Candy irrigates the entire property at the same time (rather than rotating through the 10 acres all week long), the irrigation rate may be significantly higher. For instance, assuming irrigation for 2 days each week, the applied rate would be $7/2 \times 90$ gpm, or 315 gpm. Therefore, it might make sense to oversize the system somewhat and use 6-inch pipe, which can carry flows of up to about 500 gpm without excessive head loss. Installed cost for a 6-inch pipeline with a total length of 1450 feet should be in the range of \$10,000 to \$14,500, based on an installed cost of \$7 to \$10 per foot for pipe, valves, and appurtenances.

A 10-hp or 15-hp centrifugal pump is appropriate for either alternative. The existing sprinkler system is likely configured to operate on relatively low pressure by gravity flow from the tunnel. Therefore, the discharge pressure from the pump (located less than 100 feet in elevation below the tunnel, and approximately 20 feet above the fields) would not need to be more than about 45 psi. A 10-hp pump will produce 250 gpm at 50 psi. A 15-hp pump will produce 350 gpm at 50 psi. The pump system discharge should be equipped with a check or chemigation valve, filter (Clemons 475A), butterfly valve, air-vac, priming pump, and pressure gage. Installed cost for the pump system described above will likely range from \$8,000 to \$13,000.

Total construction costs for the project will likely range from \$16,000 to \$27,500. Allowing for contingency, a budget of \$30,000 is appropriate. Engineering (15%) should be less than \$5,000. If the project is not competitively bid, detailed plans, specifications, and a bid package would not be required, reducing engineering costs to less than \$3,000.

It is assumed that a water right transfer, purchase of Northside Canal Company shares, and an easement acquisition are unnecessary because water to the Candy pasture currently is being delivered during a portion of the irrigation season (e.g., when the field to the north of the vault is being irrigated). Additional costs would be incurred if these assumptions are incorrect.

4) Project Schedule

A tentative project schedule is shown in Table 3. The schedule assumes a start time of August 2004.

5) Potential Benefits and Risks

a) Potential Benefits

Reducing diversions from the Curren Tunnel, even for small amounts, would help provide much-needed water to the Rangen facility. This project would replace occasional withdrawals from the Curren Tunnel with water from the Sandy pipeline. This represents a non-consumptive use – any water diverted through the Rangen facility would be available to downstream users.

Tentative Schedule				
Task	Aug 2004	Sep 2004	Oct 2004	Nov 2004
a) Discuss options and assumptions with Candy, Morris, and Watermaster Frank Irwin	x			
b) Design piping, pump, and appurtenances, as described above; solicit bid(s) for work.		x		
c) Install system			x	
c) Submit Final Report				x

Table 3: Tentative project schedule.

b) Potential Risks or Constraints

This project would not affect local ground water levels or the amount of water delivered to other users, because water for occasional irrigation of the Candy pasture is currently drawn from the Sandy pipeline. It is assumed that this project would not require water right transfers, purchases of Northside Canal Company shares, or easement acquisitions (this assumption will be confirmed prior to the start of construction).

6) Cost Details

The cost for this project will depend on whether a pump installed in the current line to the Candy pasture will suffice, or whether a buried pipeline will also be required. The cost of the pump, valves, and other appurtenances should be in the range of \$8,000 to \$13,000. The additional cost of pipe could range between \$10,000 to \$14,500 (see above). The most likely scenario would require simply the cost of the pump and appurtenances. A more precise estimate of project costs will be made upon commencement of the project.

7) Summary Discussion

This proposed project consists of constructing an alternative way in which to provide water to the Candy pasture all of the time during the irrigation season. Reducing diversions from the Curren Tunnel, even for small amounts, would help provide much-needed water to the Rangen facility.

Task	SubTasks	Engineering Costs	Construction and Indirect Costs	Total Costs
a) Initial review, engineering				
	Prepare well design specifications	3,500		3,500
	Subtotal	\$3,500		\$3,500
b) Construct and install pump and/or pipeline				
	Pump and appurtenances		13,000	13,000
	Presentation with client, discussion with Interim Committee		14,500	14,500
	Engineering	1,000		1,000
	Subtotal	\$1,000	\$27,500	\$28,500
b) Summary Report				
	Summary Report	500		500
	Subtotal	\$500		\$500
Subtotal				\$32,500
Contingency				\$4,875
Total				\$37,375

Table 4: Budget details

8) References

- Bendixsen, S., 1995. Summary of Ground Water Conditions at the Curren Tunnel near Hagerman, Idaho, Idaho Department of Water Resources (Draft Report).
- Johnson, G.S. et al., 2002. Spring discharge along the Milner to King Hill Reach of the Snake River, Idaho Water Resources Research Institute.