Project No. 075-11-2008

Expert Report in the Matter of Clear Springs Foods, Inc., Snake River Farms Mitigation

Prepared for:

Clear Springs Foods, Inc.
Buhl, Idaho

November 21, 2008

For information concerning this report, contact
Charles E. Brockway, Ph.D., P.E.

BROCKWAY ENGINEERING PLLC

CHARLES E. BROCKWAY, PH.D., P.E.
CHARLES G. BROCKWAY, PH.D., P.E.

2016 NORTH WASHINGTON, SUITE 4
TWIN FALLS, IDAHO 83301

Table of Contents

List of Tables

Exhibits

Following Report Text

Exhibit 1	Clear Spring Foods – Snake River Farm Area NAIP 2004 Aerial
Exhibit 2	Water Right 36-4076 State of Idaho, Idaho Fish and Game Commission
Exhibit 3	Description of Infrastructure Associated with the Delivery of Replacement Water to Snake River Farms, June 2008; AMEC Earth and Environmental
Exhibit 4	Flow Data: 360410213 Spring at Clear LK Grade, 2000 – 2007, C. Yenter, Watermaster District 36
Exhibit 5	Clear Spring Foods Area Well Locations NAIP 2004 Aerial
Exhibit 6	Ground Water Well Logs Clear Springs Area
Exhibit 7	Ground Water Pumping Impacts ESPA, and Predicted Steady State Reach Accruals by Curtailment Period
Exhibit 8	Hydrogeology of the Thousand Springs to Malad Reach of the Enhanced Snake Plain Aquifer Model, Ralston Hydrologic Services, Inc., Sept. 2008
Exhibit 9	Relationships Between Spring Discharge and Aquifer Water Levels in the Thousand Springs Region, Idaho, by Laura L. Janczak, October 2001
Exhibit 10	Evaluation of Localized Spring Flow Source Areas From Crystal Spring to Box Canyon Spring, HRS Water Consultants, Inc., Sept. 200
Exhibit 11	Techniques of Water-Resources Investigations of the USGS, Computation of Continuous Records of Streamflow, 1983
Exhibit 12	Techniques of Water-Resources Investigations of the USGS, Discharge Measurements at Gauging Stations, 1984

Expert Report in the Matter of Clear Springs Foods, Inc., Snake River Farms Mitigation

Prepared by: C. E. Brockway, Ph.D., P.E.
Brockway Engineering, PLLC

November 21, 2008

A. BACKGROUND

Proposed plans by the Idaho Ground Water Appropriators (IGWA), the Magic Valley Ground Water District and the North Snake Ground Water District, for mitigation of injury to springs serving as the water supply for the Snake River Farm (SRF) aquaculture facility owned and operated by Clear Springs Foods Inc. include several hydraulic and hydrologic alternatives to provide replacement water for decreases in SRF spring flows as ordered by the Director of the Idaho Department of Water Resources in his July 8, 2005 order.

The Snake River Farm facility is located at the base of the Snake River Canyon north of Buhl, Idaho as shown on Exhibit 1. The springs serving as the water supply issue from the basalt at an elevation sufficient to serve the entire facility by gravity flow. The Director determined that Clear Springs' means of diversion was reasonable and the water rights for the SRF facility were injured by junior ground water pumping on the Eastern Snake Plain Aquifer (ESPA). Mitigation must be provided by the junior ground water pumpers causing depletions to flows to SRF. The July 8, 2005 Order indicates that acceptable mitigation must be provided for water rights 36-04013B and 36-07148 (Snake River Farm water rights) as described in the conjunctive management rules, on a phased delivery schedule or there would be administrative curtailment. The July 8, 2005 order requires increases in the average discharge of springs in the Buhl to Thousand Springs Reach for steady-state conditions of 31 cfs for 2008 and 38 cfs for 2009 and years thereafter. The Order also determined that the SRF springs accounted for 7 percent of the measured reach gains in the Buhl to Thousand Springs Reach or 2.17 cfs in 2008 and 2.66 cfs in 2009 in order to avoid curtailment of ground water pumping.

Accounting for the depletion reductions of 9.7 cfs in the Buhl to Thousand Springs Reach by CREP and conversions anticipated for 2008 and 2009, the required direct replacement by NSGWD and MVGWD to SRF is 1.5 cfs in 2008 and 2.0 cfs in 2009.

B. PURPOSE OF REPORT

This report was prepared to evaluate the hydrologic and hydraulic feasibility of the mitigation plan alternatives proposed by the North Snake Ground Water District (NSGWD) and the Magic Valley Ground Water District (MVGWD) and the effect of implementation of the proposed plan on the water supply and operations of the Snake River Farm facility. Specific concerns are: potential impact on Snake River Farm spring diversions and other adjacent springs, water quality impacts, and future impairment of the water supply for Snake River Farm. This report was requested by John Simpson, attorney with the firm Barker, Rosholt, and Simpson Boise, Idaho, representing Clear Springs Foods Inc. Initial contact with Clear Springs Foods and Mr. Simpson relative to this concern was approximately in July 2008.

Data reviewed included geology of the Snake River basalts, hydrology of the Eastern Snake Plain Aquifer, response of springs in the Thousand Springs reach of the Snake River, water use and diversion by Snake River Farm, and specific data on wells in the area of Snake River Farm.

Information reviewed and utilized included pertinent hydrologic and geologic publications, U.S. Geological survey water level data, University of Idaho publications, Idaho Department of Water Resources well driller's log database, design and construction data for the Clear Springs Foods processing plant water well, and water quality data secured by Brockway Engineering, PLLC.

C. PROPOSED MITIGATION PLAN

The proposal by North Snake Ground Water District (NSGWD) and Magic Valley Ground Water District (MVGWD) for mitigation of SRF spring discharge reductions under CM Rule 43 includes combinations of: 1) furnishing direct replacement water for the SRF

water rights using a transfer of water right 36-4076 and credit for depletion reduction by CREP, conversions from ground water irrigation to surface water irrigation within NSGWD delivered by the Northside Canal Company (NSCC); 2) drilling of a well and combining the delivery of water from the well with actions on the ESPA; or 3) re-circulating effluent discharge from the Snake River Farms through a unspecified pump-back system.

Under an agreement with the Idaho Department of Fish and Game (IDFG), the Ground Water Districts have apparently leased 3.59 cfs of water right 36-4076 with a priority date of January 1, 1893 for use as the sole source of direct replacement for SRF shortages. A copy of water right 36-4076 is included as Exhibit 2. The agreement requires the Ground Water Districts to provide replacement water to the IDFG for continued wetlands maintenance in an amount provided to SRF. An *Amended Plan filed September 8, 2008* proposes a direct pump back of SRF effluent near the outlet of the Snake River Farm as the applicants' first option to provide water for mitigation, whereas the initial plan filed June 13, 2008 identified this pump back alternative as an option to be pursued if other options did not prove viable.

The proposed replacement water alternatives are outlined in the AMEC Earth and Environmental Report of June 2008, Exhibit 3. All of the proposed alternatives are based on replacement of up to 2.66 cfs to SRF from various sources. Exhibit 1 shows the locations of springs and proposed mitigation facilities as outlined in the AMEC report.

C.1. IDFG Alternate 1

The June 13, 2008 Mitigation Plan indicates that, if the flow of Spring 1 is insufficient to meet the replacement discharge requirement, then the "Ground Water Districts will immediately proceed upon approval of the Mitigation Plan to improve the points of diversion as necessary to secure the full mitigation requirement." Development of groundwater by drilling a well adjacent to Spring 1 and pumping the ground water to the inlet of the SRF facility is proposed as the preferred method of "improving the point of diversion of Spring 1 to the east of the Snake River Farm's raceway, near the Clear Lake Country Club spring pump station". The proposed Mitigation Plan states that "Such

improvements will not result in an enlargement of the water right and will simply secure the amount of water that is authorized under the water right and that has historically been used and developed under the water right as required under CM Rule 43.03.01.

C.2. IDFG Alternate 2

This alternative includes a well and well pump at Spring 1, a pumping station at Alternate 2 site (Spring 2) and a pressure pipeline from Alternate 2 pump station to the SRF raceway inlet. The Alternate 2 pumping station is proposed at the confluence of the two channels conveying Spring 1 and Spring 2 water, Exhibit 1.

C.3. IDFG Alternate 3

This alternative includes a well and pump plus a gravity pipeline from the inlet to Clear Lake Grade Culvert to an Alternate 3 pump station and a gravity pipeline from the Alternate 2 diversion to the Alternate 3 pump station and a pressure pipeline from the Alternate 3 pump station to the SRF raceway inlet.

C.4. Alternate 4 Backup

In the event adequate water is not secured at Spring 1, 2, and 3 with surface diversion and drilling of a new well, a backup alternative which would pump leased Clear Lakes Country Club (CLCC) irrigation water, currently diverted from the SRF spring location to the SRF raceway inlet is proposed.

C.5. Alternate 5 Backup

Alternative 5 would apparently be pursued in the event Alternative 4 does not prove to be viable. Ground Water Districts would pursue a direct pump back of water near the outlet of the SRF raceways. A pumping plant at the lake and a pressure pipeline parallel to the CLCC current pipe would be constructed. This alternative, although listed as the preferred alternative in the Amended Plan, is apparently not now under consideration by the Director.

As a component of this Mitigation Plan, the Districts are asking that the magnitude and pattern of deliveries through the NSCC for ground water-surface water conversions should be assumed to be the same as actual deliveries in 2006 and 2007 and that all water delivered to the conversion acres should also be assumed to offset the consumption of ground water with any excess water percolating to the aquifer at the location of the converted acres. However, the plan is to phase out conversion acres because of rising costs of obtaining conversion water and the alleged growing resistance of NSCC to enter into Conveyance Agreements with the Ground Water Districts. Instead the Districts would provide direct delivery of water to Snake River Farm. Absent from the Mitigation Plan is a documentation of the proposed credit for CREP and aquifer recharge which may take place outside of the trim line area such as in the Wood River area. Further absent from the Mitigation Plan is any alternative for mitigation through curtailment of junior ground water pumping should the proposed replacement water alternatives fail.

The proposed Mitigation Plan apparently would provide replacement water only up to the discharge amounts outlined in the July 16, 2005 order and does not address mitigation amounts which IGWA failed to provide in 2006, 2007, and 2008. Exhibit 17 of the deposition of Timothy Luke, IDWR taken on October 21, 2008 indicates the amount of mitigation required for 2005-2007, the amount provided and the shortfall as shown in the following table.

Table 1. IGWA Mitigation Requirement and Shortfall 2005-2007*

Year	Mitigation Required (cfs)	Mitigation Provided (cfs)	Mitigation Shortfall (cfs)
2005	8	8.02	0
2006	16	9.5	6.5
2007	24	14.4	9.6
2008	32		

*Deposition Exhibit 17, Timothy Luke

The Mitigation Plan should not be approved without provisions to address the shortfalls in 2006, 2007 and 2008.

The control and responsibility for facilities and operation of any approved mitigation plan should remain with IGWA to assure that the quantity and quality of replacement water is maintained.

At this point in the proceedings given the lack of understanding regarding the hydraulics of the re-circulating pump back, this report will generally focus on the hydraulics and hydrology associated with other alternatives, to the extent information has been provided. Water quality issues will be noted.

D. DEVELOPMENT OF SPRING DIVERSIONS

The documentation and hydrologic justification for development of alternatives for direct delivery of replacement water for SRF by IGWA and the ground water districts is not complete. Based on the available information, these alternatives are deficient both for hydraulic and water quality reasons and several topics related to assumptions in analysis, procedures and data utilization need to be addressed.

D.1. Adequacy of Spring Flow

Current spring water availability to meet the replacement requirements is not documented. A field examination of the proposed Spring 1 indicates that not more than 1.0 cfs may be currently available from this source. The Watermaster, Cindy Yenter, indicates that discharge measurements made by IDWR indicate approximately 1.1 cfs flowing from Spring 1 and that the combination of flows from all springs is likely less than the required replacement water discharge (personal communication, Cindy Yenter, November 14, 2008). Flow data supplied by Ms. Yenter titled Spring at Clear Lk Grade for Calendar Years 2000 through 2007 as shown in Exhibit 4 is not applicable to the mitigation discharge since it includes additional springs and flow from the IDFG ditch east of the Clear Lakes Grade road (C. Yenter, personal communication, Nov. 14, 2008). The flow data provided for the period 2001 through 2007, which includes the flow from Springs 1, 2, 3, and 4 and the IDFG ditch shows discharge during the June-August period from 0.74 to 2.72 cfs. This data, since it is a combination of all four springs and water from the IDFG ditch, does not allow determination of the quantity of spring water

available as a source for replacement water for SRF. **Therefore, the current discharge of the springs identified as the sole source of replacement water for SRF is inadequate** and will require development of additional water from some source, either the proposed well, the CLCC irrigation water, or pumping from the SRF effluent. It is likely that the fluctuations in spring flows will result in Clear Springs being able to utilize not more than a minimum of possibly 0.74 cfs on a continuous basis since aquaculture facilities require stable flows for load management. The Director noted in his July 8, 2005 Order that fluctuations are part of spring development and Clear Springs Foods could not claim injury to a right unless flows were present year round. **From a flow utility perspective, mitigation is only adequate if it is present year round.**

D.2. Surface Spring Development

Proposed alternatives 2 and 3 apparently contemplate additional development of the existing springs to improve the collection efficiency at the current spring sites. This would likely involve extensive excavation and installation of collection facilities at one or more of the spring sites. Experience with surface development of springs in the talus environment indicates that the potential for additional discharge development is low and at best requires extensive additional excavation and construction. Since all alternatives proposed in the Mitigation Plan contemplate the use of a new well, the applicants are apparently aware of the low potential for additional spring source development. **Further development of existing springs increases the potential for injury to other spring sources through required excavation.**

D.3. Well Source

The aquifer at the proposed site of the well near Spring 1 is typical basalt flows of the Snake River Basalt with spring outflow elevations controlled by inter-flow deposits of lower permeability. The talus and alluvium which has accumulated sometimes masks the actual elevation of spring outflow from the canyon wall and this is the case at the springs identified for replacement water. Deeper formations will be similar in character to wells developed in the alluvium and/or talus slopes adjacent to the Snake River Canyon wall. Exhibit 5 includes a list of well driller's logs in the vicinity of Clear Lakes

and copies of the driller's logs are included as Exhibit 6. The development of a ground water well at or near the site of Spring 1 will likely encounter formations consisting of clays, gravel and sand, potentially basalt flows and interbed material, with the gravels primarily providing the yield from the well as shown on well driller's logs for adjacent wells in Exhibit 5. In particular, the driller's log for the Clear Springs test well in T9S R14E Sec 2, NW1/4 SE1/4 is probably representative of the formations likely to be encountered.

The proposed Mitigation Plan indicates that a well depth of 200 feet would be planned but that a 100 foot deep well would likely suffice. **Based on the Clear Springs well log, the static water level was 104.5 feet below ground surface so a 100 ft well is unlikely to yield any significant flow and adequate water yielding formations may not be encountered even with a 200 ft well.**

The Mitigation Plan states that "Such improvements, *i.e. drilling a new well* ,will not result in an enlargement of the water right and will simply secure the amount of water that is authorized under the water right that has historically been used and developed under the water right as required under CM Rule 43.03.01" **However, it has not been shown in the Mitigation Plan and can not be determined with available data whether or not a new well will, in fact, not dry up Spring 1 or impact other springs in the area, namely Snake River Farm springs.** No analysis has been performed and no monitoring plan proposed for determining the impact of the 'diversion improvements'. Moreover, based upon my understanding of the IDWR appropriation rules and consulting on numerous new applications for the withdrawal of groundwater from the ESPA, the existence of the ESPA moratorium requires mitigation for any new withdrawal. To my knowledge there have been no exceptions to this criteria where the water is to be put to beneficial uses other than municipal, industrial or commercial. Further, I have never seen a water right granted for an alleged beneficial use described as "mitigation."

If the proposed new well is 100 feet deep there is high likelihood that the existing springs will be impacted, particularly Spring 1. If the new well is deep enough, it is possible that local springs will not be significantly impacted. However, it is highly unlikely that a well yield of 2 to 3 cfs can be secured from a 100 ft deep well or a 200 ft deep well in this

environment. The Clear Springs Foods production well has an effective yield of 600 gpm (1.34 cfs- and is 400 feet deep (drillers log Exhibit 5). It will likely be necessary to drill several wells to secure the necessary additional discharge to meet SRF replacement requirements.

Verification of the impact of any proposed well should be performed with an adequate pumping test on a test well at the proposed site. The duration of any pumping test should be sufficiently long and measurements on adjacent wells and spring discharges adequate to assure that no impact will occur before approval of any mitigation plan utilizing the well as a source.

D.4. Limitations on Water Right 36-4076

Water right 36-4076 is limited to an annual volume of 826 acre feet and the 1/1/1893 priority date is valid only during the irrigation season. During the non-irrigation season the priority date is 10/6/1997. If the annual volume of 826 acre feet is distributed uniformly over 365 days, the average discharge would limit the water right to 1.14 cfs which is considerably below the proposed replacement discharge of 2.66 cfs. Any change in the diversion rate to meet proposed replacement discharge will necessitate an expansion of the water right which should not be allowed.

E. RELIABILITY CONSIDERATIONS

Use of spring water for aquaculture requires a water source which is consistent, reliable and of specific water temperature and quality. The proposed alternatives included in the Mitigation Plan contemplate use of existing spring water from one or more springs collected at the confluence of the two existing channels that currently convey water from IDF&G Spring 1 and 2 (AMEC 2008). This concept implies that the spring water would be conveyed in open channels down stream to the confluence of the two existing channels. **The plan does not outline the nature of the conveyance channels, whether open earthen channels, concrete channels, or pipeline.** Any conveyance system exposing the spring water to earthen channels or exposure in unprotected open

ponds or channels increases the potential for contamination from sediment and/or sediment borne fish pathogens.

No water quality data was provided in the Mitigation Plan or the Amended Plan to confirm that any of the proposed sources of replacement water are suitable for fish production or would be protected from contamination upon development.

All commercial aquaculture facilities in Idaho of which I am aware depend on gravity flow collection and conveyance systems for their water supplies. Utilization of pumped water supplies, using either electrical or fossil fuel, imposes a risk factor which fish producers have been unwilling to assume. Because of the sensitivity of rainbow trout and other commercial species of fish to dissolved oxygen levels, the additional risk from curtailment of flow in raceways and hatcheries is not tolerable. Curtailment of flow for as little as 20-30 minutes can result in loss of a crop (Randy MacMillan, personal communication) and the incidence of disease is increased by stress caused by oxygen depletion. All of the proposed alternatives in the Mitigation Plan contemplate pumping of replacement water to SRF.

Recent trends in one of the springs supplying water to Clear Springs Foods facilities in the Clear Lakes area indicates that, at least in that spring, concentrations of nitrate-nitrite nitrogen have been rising and have, in some instances, reached levels above the MCL for drinking water. No data or evidence has been presented in the Mitigation Plan to assure that the proposed new replacement supplies would not be prone to elevated nitrate-nitrite nitrogen levels or other contaminants.

Alternative 5 Backup, as identified in the AMEC report and identified in the Amended Plan as the preferred alternative, contemplates direct pump back of lake water near the outlet of the SRF raceways back to the SRF inlet. **This option should never be recommended, both for reliability reasons and potential water quality and disease risks.** This proposed water source may be subject to commingling with Clear Lake waters and exposed to fish escaping from other facilities thereby increasing the potential for spreading disease in the entire SRF system. The increased risk due to power failure in the pumping system also adds an element of concern that would not be prudent.

F. FUTURE TRENDS IN SPRING FLOWS

To the extent the proposed Mitigation Plan depends on existing spring flows for current and future replacement water as outlined on pg 10 of the Plan, there is no assurance that these springs will continue to produce at current levels or will ever produce at discharge rates outlined in the water rights. Recent and historical measured spring flow data on indicator springs such as Box Canyon and Blue lakes and Crystal Springs show that declining trends are continuing even though some efforts at aquifer recharge and depletion reductions have occurred (D. Shaw, Review of Allocation of Replacement Water in the Thousand Springs Area, 2008). USGS observation well data also indicate that water level declines are continuing even though some interpretations of simulated responses with the Eastern Snake Plain Aquifer Model may indicate otherwise. Further, based upon the groundwater model curtailment scenario, pumping which occurs outside of the trim line created by the Director does reduce flows to the area, see Exhibit 6. There is no reason to expect spring flows to stabilize based upon these model runs. **There is no contingency provision offered in the Mitigation Plan if spring discharges or well yield decreases except the CLCC option 4 or direct pump back of SRF effluent.**

G. MITIGATION PLAN ASSUMPTIONS

Deficiencies in the procedure utilized to estimate replacement water requirements in the July 8, 2005 Order relate to the hydraulic suitability or water quality suitability of proposed mitigation procedures, such as pumping of replacement water at SRF, utilization of effluent for primary water replacement and development of ground water for replacement supplies and to the hydrologic analysis used to determine the quantity of mitigation required under the Orders.

The Mitigation Plan proposed is based on the estimated replacement water requirements outlined in the Directors Order of July 8, 2005. This estimate is based on the ESPAM model of estimated reach gain depletion from junior ground water pumping and an estimate from historical flow data on the total spring flow in the reach. This

analysis resulted in the calculation that the SRF springs contribute 7 percent of the estimated Snake River reach gain in the Buhl to Thousand Springs reach. There is no provision in the Order to re-evaluate the assumptions utilized in the estimates or to incorporate new and better data or procedures when available. However, the hearing officer in the springs case identified the lack of data to support the percentage impact but indicated he used the 7 percent number because there was no better data in the record. The assumption that the percent of reach gain for SRF springs is fixed at 7 percent perpetually is not documented and, in fact, is not supported by good science. Based on the general understanding of the hydraulics of spring flow response to water levels in the aquifer, it is entirely conceivable that the response of specific springs varies with aquifer water levels and varies between springs in a specific reach. The MODFLOW code for the ESPAM model incorporates an algorithm for treatment of spring outflow called the Drain Module (McDonald and Harbaugh, 1988) where the relationship between spring discharge and aquifer water level is given by

$Q_d = C_d(h-d)$

where

Q_d = spring discharge or flow to a drain

C_d = drain conductance constant value

h = head in the aquifer

d = elevation of the drain

This equation is a linear equation which assumes that the coefficient C_d does not change with elevation and that the discharge changes linearly with the change in aquifer water level compared to the spring elevation. McDonald and Harbaugh (1988) indicate that the constant drain conductance incorporates converging flow lines, aquifer hydraulic conductivity and other hydraulic considerations of the spring geology. This relationship may or may not adequately represent the hydraulics of the spring aquifer systems in the SRF area and raises considerable doubt and uncertainty as to the universality of the conceptual treatment for all springs and whether or not the linear algorithm is the most suitable representation. The drain module equation shows the dependence on an accurate determination of spring elevation in correctly modeling the response of a spring to water level elevations in the aquifer. Analyses contained in the report by (Ralston 2008, Exhibit 8) on the Hydrogeology of the Thousand Springs to Malad Reach of the Enhanced Snake Plain Aquifer Model indicates that the drain elevations used in the

model to represent springs in the Thousand Springs to Malad reach are as much as 100 feet lower than the mapped contact at the base of the aquifer. It is highly likely that the same configurations are present in the Buhl to Thousand Springs reach and in the Devil's Washbowl to Buhl reach. The drain elevations used in the ESPAM model were adjusted in order to effect a better calibration of the model. Further analysis is warranted since the model is becoming increasingly relied upon for guidance and decisions in conjunctive management of the ESPA. Janczak 2001, Exhibit 9) presents evidence on differences in Relationships Between Spring Discharge and Aquifer Water Levels in the Thousand Springs Region, Idaho. Data presented by HRS Water Consultants, 2007, Exhibit 10, indicate that responses of historical spring flows to water levels indicated by different observation wells are not uniform and may not be adequately represented universally by linear relationships. Conclusions and recommendations by Janczak and HRS Water Consultants are presented in Exhibits 9 and 10.

H. ADDITIONAL CONCERNS RELATIVE TO MITIGATION REQUIREMENTS

With the increased use of the ESPAM model for conjunctive administration in the ESPA, the model needs to be continually updated and justifiable procedures and hydrologic interpretations adopted for use of the model. Some concerns and questions which need to be addressed include:

H.1. Ground Water Model Uncertainty

The ESPMC (modeling committee) has indicated by consensus that model uncertainty is no basis for use of a trim line. A definition of uncertainty and some measure of uncertainty is being evaluated by the ESPMC as part of the update for the enhanced ground water model. Even if uncertainty is defined for the model, a sound statistically defensible decision should be reached relative to the use of model uncertainty as a basis for exclusion of specific junior ground water pumpers. The use of a trim line as defined by the Director as a surrogate for a zone of exclusion or zone of non-influence is inappropriate (W. Schreuder, Ground Water Model Uncertainty and Trim Line, 2008). The use of estimated variability of a single ground water model parameter such as USGS stream gage estimates of accuracy and/or repeatability is not a valid measure of

the uncertainty of the ground water model. The use of a trim line as defined in the Director's July 8, 2005 Order to limit responsibility for pumping impact based on location is really a quasi futile call. Due to long response times to pumping or aquifer stress in the ESPA, junior ground water pumpers have and are continuing to contribute to spring flow depletions. The collective impact, spatially and temporally, of all junior ground water pumping from the ESPA should be evaluated and a more equitable and statutorily defensible method of allocation of impact should be researched and applied.

The implementation of an arbitrary 10% trim line to delineate spatially the responsibility for junior pumping impact on spring flows neglects over 90 percent of the total acres irrigated by junior ground water pumpers which contribute to spring impacts but are outside the trim line. The July 8, 2005 order assumed that 53,470 acres within the trim line could potentially be curtailed to provide a 38 cfs increase in spring flow or reach gain in the Buhl to Thousand Springs reach of the Snake River. The IWRRI Curtailment Scenario predicted that, with a 1964 priority curtailment, 590,000 acres of junior ground water pumping would be curtailed resulting in an increase in flow in the Buhl to Thousand Springs reach of 73 cfs. Exhibit 7 shows the comparison of acres curtailed and the impact on the reach-gain in the Buhl to Thousand Springs reach of the Snake River due to junior pumping on the ESPA compared to the impact utilized by the Director assuming the trim line (July 8, 2005 Order).

The assignment of a ground water model uncertainty of 10% to define a trim line as implemented by the Director in the July 8, 2005 Order is purportedly based on the designation by the U.S. Geological Survey of a stream gauging accuracy of 'good' for the Snake River stream gages used in the compilation of target reach gains for the ESPAM model calibration. The U.S. Geological Survey provides a Station Analysis for each stream gauging station which includes a discussion of the general accuracy of the record. The record refers to the compilation of discharge estimates made using discharge rating curves which are prepared from periodic individual current meter measurements of the stream. According to the USGS, "a rating of excellent means that about 95 percent of the daily discharges are correct within 5 percent; good within 10 percent; and fair, within 15 percent. Poor means that daily discharges have less than fair accuracy" , USGS (1983), Exhibit 12. There is apparently no rigorous statistical

analysis of the stream gage record for the determination of a rating of 'excellent', 'good', 'fair', or 'poor'. This rating does not mean that any individual current meter measurement is within 5, 10, or 15 percent of the actual flow at the time of the measurement. In fact, individual current meter discharge measurements have a different accuracy rating than daily discharge records, USGS 1984, Exhibit 13. For individual current meter measurements which are utilized to develop discharge rating curves, the stated measurement ratings are: excellent (2%), good (5%), fair (8%), and poor (>8%). Nor does a stated accuracy of the record mean that any subset of the published discharges for the period of record has the same rating.

A designation that means "about 95 percent of the daily discharges are correct to within 10 percent" essentially defines confidence limits around any single data point. For instance, if the adjusted discharge rating curve indicates a discharge of 1000 cfs and the overall rating for that gage is 'good' then the actual discharge is likely (95% probable) to be within the range of 900 cfs and 1100 cfs. That 'good' rating does not mean that the model cannot calculate any discharge below 1000 cfs. which is analogous to the net affect of the use of a 10% trim line.

H.2. Individual Spring Impacts

What is the best procedure to determine impacts or benefits to individual spring contributions compared to specific reach gains? The percent impact for individual springs as determined for the July 8, 2005 Order using compilations of spring flow data over long record periods and sometimes single measurements or estimates of spring flow is not statistically defensible (D. Shaw, 2008). Alternative methods to make these determinations should be developed and implemented.

H.3. Ground Water Model Input Changes

Use of simulated steady-state ground water model output for determining current impact on spring flows from junior ground water pumping does not adequately reflect the current impact or near future impact on reach-gains or individual spring flows. A more defensible application of model simulations should be developed and implemented. Similar

arguments for updating data or developing more justifiable interpretations of ground water model output are warranted. Examples of specific types of time-sensitive model data that should be re-evaluated are irrigated acreage, crop distribution, and crop ET (J. Koreny, Memo to Dan Steenson, November 18, 2008). Tributary underflow, precipitation, and river/aquifer exchange also need to be updated.

Current studies by the Idaho Water Resources Research Institute are exploring updating of specific model input and hopefully will determine whether recent and current crop ET adequately reflect current depletions from the ESPA, if current ET is greater than ET used in model calibration and, if the ground water model is run in superposition mode, does it matter if ET and other inputs have changed? Similarly a determination of whether or not variability in external input (ET, tributary underflow, river conductance et al.) makes a significant difference in model aquifer property calibration should be explored. ET trend data shows an increase in ET over the calibration period and specifically in recent years, i.e. 2006 (J. Koreny, Memo to Dan Steenson, November 18, 2008). Should this be considered in developing mitigation plans, especially adaptive management requirements to utilize periodic re-evaluation of simulated reach-gains?

I. SUMMARY AND CONCLUSIONS

1. NSGWD, MVGWD, and IGWA submitted a plan for mitigation of depleted flows from springs supplying water for fish production at the Clear Springs Foods Inc. Snake River Farm facility as required under CM Rule 43.
2. Five alternatives were proposed using either spring water from springs authorized under Idaho Fish and Game water right 36-4076 or additional ground water from a new well to be drilled as an improvement to the spring diversion
3. The preferred alternative, No 1 as outlined in the AMEC report, and alternatives 2 and 3 involve the drilling of a new 100 to 200 foot deep well near the primary spring.
4. Alternative 4, termed a backup alternative, involves the use of Clear Lakes Country Club irrigation water rights. AMEC alternative 5, which has been

proposed as the preferred alternative in the Amended Plan involves direct pump back of effluent from the SRF raceways.

5. Use of water by the Districts under the IDFG water right for replacement water for SRF will require replacement of the IDFG water for wetlands mitigation either from the Snake River or other sources.
6. The District's Mitigation Plan assumes that the magnitude and pattern of 2006 and 2007 CREP and conversions within the NSCC will be continued with full credit for ESPA ground water depletion reduction. The Districts' stated plan is to phase out conversion acres and rely primarily on replacement water for the SRF mitigation. Therefore, whatever justifiable credit is recognized for the past will not be the level recognized in the future and required replacement water discharge will, of necessity, increase.
7. The documentation and hydrologic justification for development of alternatives for direct delivery of replacement water for SRF is not complete and is deficient both for hydraulic and water quality reasons.
8. Current spring water availability to meet the replacement requirements is not documented and, based on available information, the current spring discharge is inadequate and will require additional water from a new well or other sources.
9. Additional significant discharge improvement from the existing springs is not likely and will require that the limitations of water right 36-4076 be overcome
10. Development of a new well at the proposed site to secure an additional 2 cfs of replacement water will likely not be possible with the proposed depth of 100 to 200 feet.
11. Development of additional replacement water from a deep ground water source which does not impact adjacent springs will be extracting water from a new source that is not authorized for diversion under water right 36-4076.
12. At a minimum, a plan for verification of the impact of any proposed well should be required including an adequate pumping test on a test well prior to approval of any plan.

13. Implementation of any proposed alternative plan for replacement of water for fish production which proposes using pumped water imposes new risks on Clear Springs Foods Inc. and should not be considered. Use of pumped water from the Clear Lakes stream or effluent from the SRF raceways should not be considered because of the increased risk of disease.

14. No monitoring plan for water levels or spring flow impacts resulting from implementation of any of the proposed replacement alternatives is offered in the Mitigation Plan.

15. Utilization of replacement water from springs or other sources which require transport of water in unlined open channels or through areas exposing the flowing water to contaminants should not be considered.

16. No water quality information or data on proposed replacement water sources is offered in the Mitigation Plan to assure that the sources are suitable for fish propagation. Recent data indicates that at least one spring source in the area is experiencing high nitrate-nitrite nitrogen levels.

17. No provision is made in the Mitigation Plan for contingencies such as continued declines of springs in the area even though measured trend data indicates that no reduction in the rate of decline of spring flows or aquifer water levels is occurring.

18. With the increased dependence on the ESPAM ground water model for conjunctive administration, provision should be made for evaluation and implementation of new and more justified data and procedures in the model. Additional analyses and more recent data on spring flow/aquifer water level relationships should be incorporated in guidelines and processes for evaluation of spring flow impacts and benefits from mitigation.

19. Continued evaluation and policy development on the use of the ESPA ground water model for conjunctive administration of water rights should be pursued.

20. Use of a trim line to delineate areas of the ESPA where ground water pumping impacts to affected spring flows should not be considered is not justified. Use of a trim line, as outlined in the July 8, 2005 order neglects the cumulative impact

on spring flows of the Snake River Farm from over 90 percent of ground water pumpers on the ESPA

J. REFERENCES

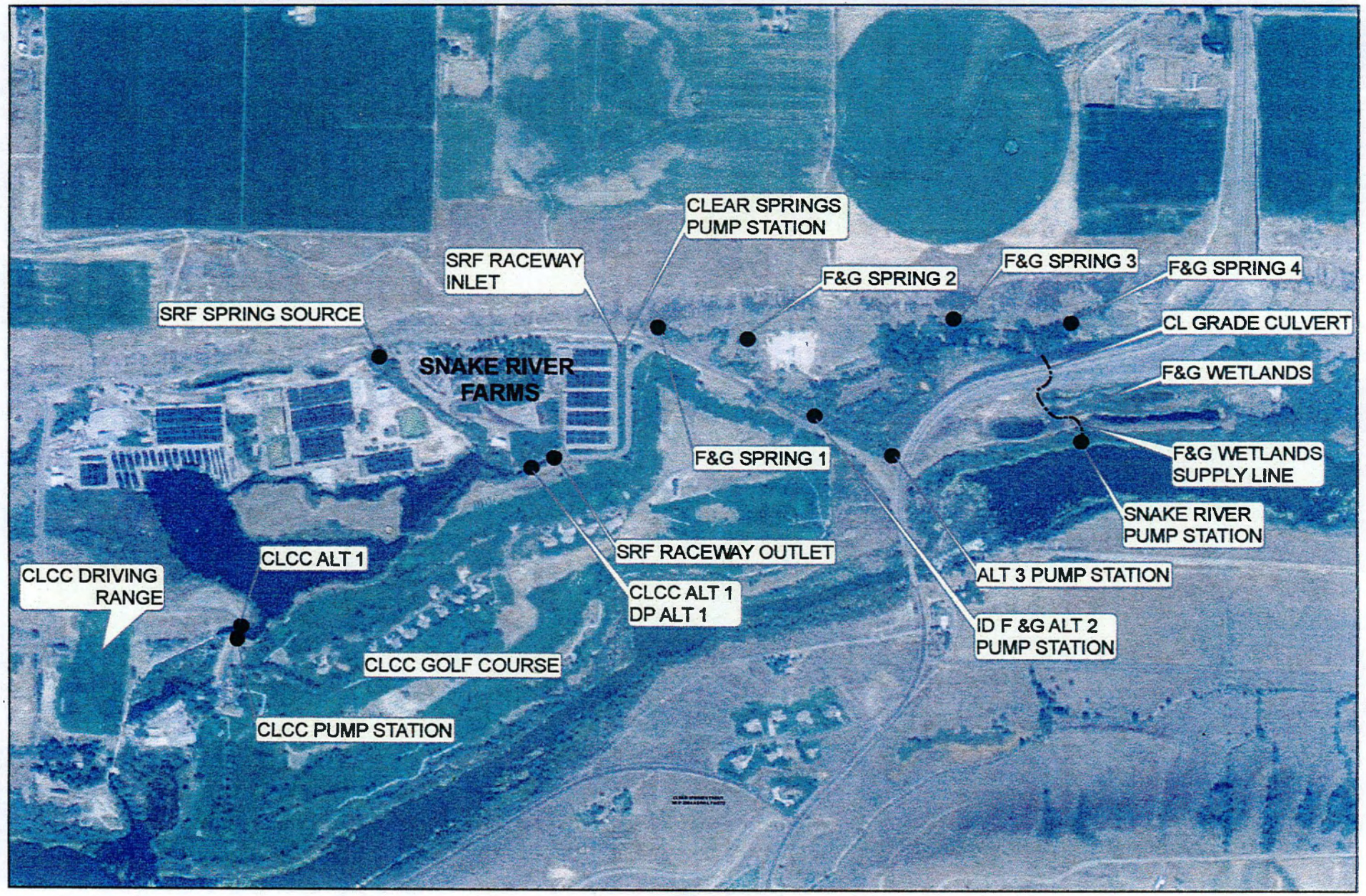
1. Ralston Hydrologic Services, Inc, Hydrogeology of the Thousand Springs to Malad Reach of the Enhanced Snake Plain Aquifer Model, September 2008
2. Janczak, Laura L. Relationships between Spring Discharge and Aquifer Water Levels in the Thousand Spring Region, Idaho, M.S. Thesis, University of Idaho, October 2001.
3. HRS Water Consultants, Inc Evaluation of Localized Spring Flow Source Areas from Crystal Spring to Box Canyon Spring, September, 2007
4. AMEC Earth and Environmental, Description of Infrastructure Associated with the Delivery of Replacement Water to Snake River Farms, June 2008
5 .Shaw, David "Review of Allocation of Replacement Water in the Thousand Springs Area", Memo to John Simpson, November 2008
6 Koreny, John "Research on ESPA Ground Water Conditions and Eastern Snake Plain Aquifer Model in Preparation for the Blue Lakes Trout Farm Delivery Call", Memo to Dan Steenson, November 2008
7. Schreuder, Willem, Groundwater Model Uncertainty and Trim line, November 2008.
8. Cosgrove, D.M., Contor, B.A, and G.S. Johnson, Enhanced Snake Plain Aquifer Model Final Report, Idaho Water Resources Research Institute, Technical Report 06-002, July 2006.
9 US Dept. of the Interior, Techniques of Water-Resources Investigations of the USGS, Discharge Measurements at Gauging Stations: Book 3, Chapter A8 pg 3, 1984
10. US Dept. of the Interior, Techniques of Water-Resources Investigations of the USGS, Computation of Continuous Records of Streamflow : Book 3 Chapter A13 pgs 45-52, 1984

Exhibit 1

Clear Spring Foods

Snake River Farm Area

NAIP 2004 Aerial



1 inch equals 920 feet

FACILITY LOCATION BASED ON AMEC
REPORT, 2008
BROCKWAY ENGINEERING, PLLC.
ALR - DEC. 1, 2008

FIGURE #
CLEAR SPRING FOODS - SNAKE RIVER FARM AREA
NAIP 2004 AERIAL

N

Exhibit 2

Water Right 36-4076

State of Idaho

Idaho Fish and Game Commission

Close

DAHO DEPARTMENT OF WATER RESOURCES
Vater Right Report

1/25/2008

VATER RIGHT NO. 36-4076

Owner Type	Name and Address
Current Owner	STATE OF IDAHO IDAHO FISH & GAME COMMISSION PO BOX 25 BOISE, ID 83707-0025 (208)334-3700
Directors Report Owner	LOUIS MADALENA C/O LUDELL WALDRON CONSERVATOR 1112 MAIN ST BUHL, ID 83316 (208)543-4242
Original Owner	STATE OF IDAHO DEPT OF TRANSPORTATION PO BOX 486 SHOSHONE, ID 83352 (208)886-7515

Priority Date: 01/01/1893
Basis: Decreed
tatus: Active

Source	Tributary
SPRINGS	CLEAR LAKES
SPRINGS	SNAKE RIVER

Beneficial Use	From	To	Diversion Rate	Volume
WILDLIFE	01/01	12/31	3.59 CFS	826 AFA
WILDLIFE STORAGE	01/01	12/31		23.9 AFA
RECREATION	01/01	12/31	3.59 CFS	826 AFA
RECREATION STORAGE	01/01	12/31		23.9 AFA
AESTHETIC	01/01	12/31	3.59 CFS	826 AFA

AESTHETIC STORAGE	01/01	12/31		25.9 AFA
Total Diversion			3.59 CFS	

Location of Point(s) of Diversion:

SPRINGS	SWSWNE Lt 7	Sec. 01	Township 09S	Range 14E	GOODING County
SPRINGS	SWSENE Lt 8	Sec. 01	Township 09S	Range 14E	GOODING County
SPRINGS	SESENE Lt 8	Sec. 01	Township 09S	Range 14E	GOODING County
SPRINGS	SESWNW Lt 5	Sec. 01	Township 09S	Range 14E	GOODING County
SPRINGS	SESENW Lt 13	Sec. 01	Township 09S	Range 14E	GOODING County
SPRINGS	SESENE Lt 5	Sec. 02	Township 09S	Range 14E	GOODING County
SPRINGS	SWSWNW Lt 5	Sec. 06	Township 09S	Range 15E	GOODING County

Place(s) of use:

Place of Use Legal Description: WILDLIFE GOODING County

Township	Range	Section	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres
09S	14E	1	7	SWNE		8	SENE							
			11	NESE		14	NWSE							
	15E	6	5	SWNW		6	SENW							
			16	NWSW										

Place of Use Legal Description:RECREATION same as WILDLIFE

Place of Use Legal Description:AESTHETIC same as WILDLIFE

Conditions of Approval:

1.	T07	The right holder shall accomplish the change authorized by this transfer within one (1) year of the date of this approval.
2.		Right 36-04076 is limited to a total annual maximum diversion volume of 826.0 af. The portion of Right 36-04076 used for conveyance losses is 0.38 cfs. The pond system authorized under this approval shall not exceed a 7.0 acre surface area and 1.5 acres of emergent vegetation. No valid water right with a priority date of October 6, 1997 or earlier from the same source or a conjunctively administered source, shall be subject to reduced diversion and beneficial use of water in order to satisfy a call or other action based on Right 36-04076 outside of its historic irrigation season. Rights 36-02048, 36-02703, 36-04013A, 36-04013B, 36-04013C, 36-04076 and 36-04148B when combined shall not exceed a total diversion rate of 116.0 cfs.
3.	067	The right holder shall measure and annually report diversions of water and/or other pertinent hydrologic and

		system information as required by Section 42-701, Idaho Code.
4.	C18	THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. SECTION 42-1412(6), IDAHO CODE.
5.	T08	Failure of the right holder to comply with the conditions of this transfer is cause for the Director to rescind approval of the transfer.

)ates:
.icensed Date:
)ecreed Date: 08/27/2001
:nlargement Use Priority Date:
:nlargement Statute Priority Date:
Vater Supply Bank Enrollment Date Accepted:
Vater Supply Bank Enrollment Date Removed:
.pplication Received Date:
'rotest Deadline Date:
lumber of Protests: 0

)ther Information:
.tate or Federal: S
)wner Name Connector:
Vater District Number:
Jeneric Max Rate per Acre:
Jeneric Max Volume per Acre:
'ombined Acres Limit: 116
:ombined Volume Limit:
:ombined Rate Limit:
'ivil Case Number:
)ld Case Number:
)ecree Plantiff:
)ecree Defendant:
wan Falls Trust or Nontrust:
Swan Falls Dismissed:
)LE Act Number:
'ary Act Number:
Mitigation Plan: False

Close

Exhibit 3

Description of Infrastructure Associated with the Delivery of Replacement Water to Snake River Farms June 2008, AMEC Earth and Environmental

Description of Infrastructure Associated with the Delivery of

Replacement Water
to
Snake River Farms

Prepared for:
Idaho Ground Water Appropriators

June 2008

Prepared by:
AMEC Earth and Environmental
1002 Walnut Street, Suite 200
Boulder, CO 80302

IMPORTANT NOTICE

This report was prepared exclusively for the Idaho Ground Water Appropriators by AMEC Earth & Environmental, Boulder Office (AMEC). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in AMEC's services and based on: i) information available at the time of preparation, ii) data supplied by outside sources and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by the Idaho Ground Water Appropriators only, subject to the terms and conditions of its contract with AMEC. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

AMEC Earth & Environmental
Boulder Office
1002 Walnut Street, Ste. 200
Boulder, CO 80302
Phone: 303.443.7839
Fax: 303.442.0616

Principal Investigators:
Charles M. Brendecke, P.E
Courtney A. Peppler, P.E
303.443.7839
chuck.brendecke@amec.com
courtney.peppler@amec.com

CONTENTS

TABLES

FIGURES

1.0 INTRODUCTION

A variety of direct replacement water options have been developed that could offset the depletive effect of junior-priority ground water withdrawals on the Snake River Farm's (SRF) water rights. These alternatives involve collaboration with the Idaho Department of Fish and Game (IDF&G) and/or the Clear Lakes Country Club (CLCC). This report presents a series of IDF&G, CLCC, and direct pump back alternatives that could direct replacement water to the SRF hatchery.

2.0 DELIVERY OF IDF&G WATER RIGHT NO: 36-4076 TO SNAKE RIVER FARM

The IDF&G owns and manages the Clear Lake Grade wetland mitigation site neighbouring SRF to the east. The North Snake and Magic Valley Ground Water Districts entered a Lease Agreement on May 28, 2008 (provided in Exhibit 1) with the IDF&G where the Ground Water Districts leased IDF&G's Decreed Water Right No. 36-4076, for the purpose of providing mitigation and replacement water to SRF.

The IDF&G currently receives water from four spring areas at the northern rim of the Snake River Canyon near the Clear Lakes Grade, as shown in Figure 1 at the end of this report. The following three alternatives have been developed for conveying these waters to the SRF hatchery in order to help meet SRF water right entitlements. Figure 1 provides a conceptual illustration of these alternatives.

- *IDF&G Alternative 1 (IDF&G Alt 1) (Preferred)* – This alternative involves the drilling of a well near IDF&G Spring 1 to a maximum of 200 feet in depth to enhance production from this spring. An evaluation of groundwater wells in the area, (See Exhibit 4), indicates that average static ground water levels are approximately 36 to 105 feet below the surface. This well would provide up to 2.66 cfs to the SRF raceway inlet. A new well and well pump and approximately 200 feet of 10 inch diameter pipe would be constructed to convey the water to the SRF raceway inlet.

- *IDF&G Alternative 2 (IDF&G Alt 2)* – If IDF&G Alt 1 does not provide the full mitigation requirement for SRF, IDF&G Alt 2 could provide additional flows from IDF&G Spring 2. As shown in Figure 1 water would be diverted at the confluence of two channels that currently convey IDF&G Spring 1 and 2 water. A 20 HP pump and 1,100 feet of 10 inch diameter pipe would be needed to convey water to the SRF raceway inlet.

- *IDF&G Alternative 3 (IDF&G Alt 3)* – This alternative would be constructed if IDF&G Alt 1 could not provide the full requirement for mitigation water for SRF and IDF&G Alt 2 was projected to be unable to make up the shortfall. Similar to IDF&G Alt 2, supplies would be diverted at the confluence of the existing channels conveying IDF&G Spring 1 and 2 water. These supplies would be gravity fed to the Alt 3 Pump Station. Water from IDF&G Springs 3 and 4 would be diverted near the inlet of the Clear Lake Grade culvert and also gravity fed to the Alt 3 Pump Station. Supplies would be pumped from this pump station through approximately1,850 feet of 10 inch diameter pipe to the SRF raceway inlet.

All IDF&G alternatives would be connected to the inlet of the SRF raceways. Additionally 2.66 cfs (or the amount of water supplied to SRF, if less) would be provided as replacement water to the IDF&G in order to sustain equivalent flows in the wetland mitigation site. This water would be pumped from the Snake River to the inlet of the IDF&G wetlands south of the highway, as shown in Figure 1. Depending on the final configuration of alternatives, IDF&G replacement water may also be needed closer to the actual point of diversion (IDF&G Alt 1 and/or IDF&G Alt 2) to maintain aquatic habitat near the drainage ditches. If this is the case, water could either be conveyed from the Snake River or the lake located at the outlet of the SRF hatchery. Additional infrastructure not shown on Figure 1 would be needed to convey this additional replacement water.

Table 1 summarizes the other major components for each IDF&G alternative. This is a preliminary conceptual estimate of infrastructure requirements and does not include diversion boxes, power supply, connections to the SRF raceway inlet, and other minor components. A more detailed design will be prepared upon completion and testing of the well described in IDF&G Alt 1.

Table 1 Major Components of IDF&G Alternatives		
Alternative	**Major Components[1]**	**Estimated Component Size**
IDF&G Alternative 1	Well and Well Pump	Maximum of a 200' deep well
	Pressure Pipeline to the SRF Raceway Inlet	10 inch diameter
		200 linear feet
IDF&G Alternative 2	Well and Well Pump	Maximum of a 200' deep well
	Pressure Pipeline from Alt 2 Pump Station to the SRF Raceway Inlet	10 inch diameter
		1100 linear feet
	Alt 2 Pump Station	20 HP
IDF&G Alternative 3	Well and Well Pump	Maximum of a 200' deep well
	Gravity Pipeline from Alt 3 Diversion (Inlet to Clear Lake Grade Culvert) to the Alt 3 Pump Station	10 inch diameter
		1300 linear feet
	Gravity Pipeline from Alt 2 Diversion to Alt 3 Pump Station[2]	10 inch diameter
		850 linear feet
	Pressure Pipeline from the Alt 3 Pump Station to the SRF Raceway Inlet	10 inch diameter
		1850 linear feet
	Alt 3 Pump Station	30 HP
Principle Method of Replacement to IDF&G Wetlands[3]	Snake River Pump Station	20 HP
	Pressure Pipeline from the Snake River to the IDF&G Wetland (IDF&G Wetland Supply Line)	10 inch diameter
		500 linear feet

[1] All infrastructure is preliminarily sized for 2 cfs.
[2] This pipeline would be constructed if the Alt 2 Pump Station is not developed to convey flows from the the IDF&G Alt 2 Diversion to the Alt 3 Pump Station. This eliminates the need for the Alt 2 Pump Station.
[3] This is the principle method for replacing flows to the IDF&G wetlands downstream of the Clear Lakes Grade Culvert. If IDF&G water is replaced further upgradient at the IDF&G Alt 1 and/or IDF&G Alt 2 Diversions, the replacement of water may need to occur close to the point of diversion in order to maintain aquatic habitat. If this is the case, additional infrastructure would be needed to convey the replacement water.

3.0 DELIVERY OF CLEAR LAKES COUNTRY CLUB WATER TO SNAKE RIVER FARM (BACK-UP ALTERNATIVE)

If the IDF&G alternatives do not prove to be a viable replacement option, direct replacement using CLCC water is a back-up option. The CLCC owns a golf course immediately southeast of SRF. Water is diverted from the same spring source as SRF for irrigation of the golf course. The Ground Water Districts have been engaged in discussion with CLCC regarding the possibility of leasing CLCC irrigation water rights for use as replacement water to SRF.

Leased CLCC water would be diverted from the shared spring source and conveyed directly to SRF's raceway inlet using SRF's existing infrastructure. In exchange the CLCC would use SRF return flows and/or water from the adjacent lake for irrigation purposes. Figure 1 shows the location of CLCC's main existing pipeline and the diversion locations of the following CLCC alternatives:

- *CLCC Alternative 1 (CLCC Alt 1)* - The CLCC Alt 1 would involve upgrading CLCC's existing Lake Pump Station at the southern end of the lake to pump existing diversions as well as the additional replacement water. The pump upgrade would need to be of sufficient capacity to deliver water throughout CLCC's entire golf course irrigation system.

- *CLCC Alternative 2 (CLCC Alt 2)* – CLCC Alt 2 would involve a new pump station and diversion structure at the CLCC Alt 2 Diversion shown on Figure 1. A connection into CLCC's existing 8 inch line would also be needed to convey the pumped lake water into the irrigation system.

CLCC currently uses a dual screening process at their Lake Pump Station to remove algae that is present in the lake water. This helps to minimize clogging and other operational problems in their irrigation system. If CLCC Alt 1 is implemented, the existing treatment screens would likely need to be upgraded for additional flows. CLCC Alt 2 would require a screened treatment system similar to the existing system.

4.0 DIRECT PUMPBACK TO SNAKE RIVER FARM (BACK-UP ALTERNATIVE)

If the CLCC replacement option does not prove to be viable, the Ground Water Districts may pursue a direct pump back alternative (DP Alt 1) of lake water near the outlet of the SRF. The layout of infrastructure associated with this alternative would be very similar to CLCC Alt 2. Lake water could be pumped at the same location proposed for CLCC Alt 2 and conveyed through a pipeline parallel to CLCC's existing pipeline to the SRF raceway inlet. See Figure 1.

This alternative would involve collaboration with CLCC in obtaining the easement(s) necessary to construct a conveyance pipeline on CLCC land. Screening would also likely be needed to at a minimum remove algae from the lake water.

Figure 1

Proposed Mitigation Alternatives
Snake River Farm Delivery Call

amec

EXHIBIT 7

NSCC CONVEYANCE AGREEMENT
DATED APRIL 23, 2008

WATER CONVEYANCE AGREEMENT

BETWEEN THE NORTH SNAKE AND MAGIC VALLEY GROUND WATER DISTRICTS AND THE NORTH SIDE CANAL COMPANY

THIS AGREEMENT is made and entered into this 23 day of April, 2008, by and between the North Snake Ground Water District and the Magic Valley Ground Water District ("Districts"), and the North Side Canal Company, Ltd. ("NSCC").

WITNESETH:

WHEREAS, the Districts have requested NSCC to facilitate the diversion and conveyance of up to 35,000 acre feet of storage water obtained by the Districts into NSCC's canal system during the irrigation season of 2008 (March 1, 2008 to November 1, 2008) to deliver to designated landowners in the Districts who can be served by NSCC's system (approximately 9,300 acres) so to irrigate with surface water delivered by NSCC while curtailing an equal amount of groundwater diversions so that spring flows and aquifer levels of the Eastern Snake Plain Aquifer below the NSCC tract in water District 130 will be enhanced and stabilized to partly mitigate for the Districts' groundwater pumping impacts; and

WHEREAS, the parties wish to delineate their agreement in writing for the period of 3/1/08 through 11/1/08, recognizing that neither party shall be obligated to renew, and any extension shall be by additional written Agreement with terms and conditions as the parties may then negotiate.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, and other good valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

(1) Within seven (7) days of the date of storage allocation identified by Water District 01, the Districts shall cause the 35,000 acre-feet of storage water they have obtained through the Water District 01 Rental Pool or otherwise to be transferred to NSCC's storage account.

(2) Provided the conditions set forth in this Agreement are met, including the requirement that the Districts' storage water is transferred to NSCC's account as specified in Paragraph (1), NSCC shall use it best efforts to divert and convey up to 35,000 acre feet of the Districts' water into NSCC's main canal at Milner Dam between 3/1/08 and 11/1/08; provided that such diversion of any water of the Districts may be curtailed in the

discretion of NSCC for whatever reason.

(3) Water diverted for the Districts, shall be measured at Milner Dam. Losses between Milner Dam and the designated farm deliveries shall be measured by NSCC and only net amounts delivered. Nothing in the Agreement shall be construed as other than NSCC's consent to divert the Districts' water into NSCC's system.

(4) The Districts shall pay NSCC for diverting and conveying water through the NSCC system at the rate of Eight Dollars ($8.00) per acre foot measured at NSCC's diversions at Milner Dam. The Districts will pay Five Thousand Dollars ($5,000.00) in advance to NSCC to initiate the diversions and conveyance. NSCC will first credit the $5,000.00 against the total diversion and conveyance fee, and then will bill the Districts at the end of each month for the Districts' water diverted at Milner Dam, payment to be due within 20 days of the receipt of NSCC's invoice.

(5) The Districts shall designate one (1) representative and one (1) alternate for the purposes of communication with NSCC and NSCC shall only be authorized to divert water or turn off water when requested by said designated representative of the Districts or his alternate, but only if NSCC is then agreeable. The Districts representative will request water deliveries at least forty-eight (48) hours in advance, including the requested amount in c/f/s. The Districts will give NSCC twenty-four (24) hours notice of a requested turn-off. NSCC will give the Districts twenty-four (24) hours notice of NSCC's intended shut-off of the Districts' water. All diversions shall be approved by the Watermaster of W.D. 01.

(6) The Districts expressly and knowingly waive any rights or claims under Article 15, Section 4 of the Idaho Constitution and Idaho Code Section 42-914 to compel NSCC to continue to divert water into NSCC's system after the termination of this Agreement. The Districts represent that they have knowledge of the existence of Article 15, Section 4 of the Idaho Constitution and Idaho Code Section 42-914, understands and agrees with the interpretation herein stated, and further understands that the waiver contained in this paragraph is a condition precedent to NSCC's execution of the Agreement.

(7) The Districts shall be responsible for complying with any applicable water quality standards and requirements for all the Districts water diverted into NSCC's system. The Districts agree to indemnify and hold NSCC harmless from any claim or claims of any third party claiming injury or damage by reason of diversion and conveyance of the Districts' water pursuant to this Agreement, including attorneys' fees, and to further indemnify, including attorneys' fees, for any NSCC costs associated with meeting federal or state laws or regulations due to the diversion and

conveyance of the Districts' water.

(8) It is understood that NSCC has been approached by several entities to divert water into NSCC's system and convey it to various points in the NSCC system for rediversion to various other purposes. The NSCC Board of Directors has determined that if they elect to facilitate such requests, they shall approve such requests in the following preferential order:

1. First Preference. North Snake Groundwater District and the Magic Valley Goundwater District for conveyance of storage water to the conversion acres subject to this Agreement within Water District #130 (approximately 9,300 acres) pursuant to this Agreement.

2. Second Preference. Idaho Dairyman's Association for conveyance of mitigation water in NSCC's canal pursuant to a separate Agreement.

3. Third Preference. Idaho Water Resource Board (IWRB) for conveyance of storage water in NSCC's system to a recharge site near Wendell on NSCC's W canal pursuant to a separate Agreement.

4. Fourth Preference. IGWA for the conveyance of water in NSCC's system pursuant to the terms of a separate Agreement.

All agreements for diversions and conveyance by NSCC shall be in NSCC's discretion and be considered in the above preferential order...e.g. if First Preference takes all NSCC's available capacity in a given year, no other conveyances for other preferences shall be made; if First Preference takes 50% of available capacity, Second Preference could take the other 50% on such terms as are agreed. If Second Preference only takes 25% and capacity is still then available, Third Preference would be entitled in such terms as would be agreed, or to Fourth Preference if Third Preference doesn't elect to agree, to the extent of capacity not committed to those of higher preference.

All arrangements for conveyance must be in writing and formalized prior to May 20th of 2008 or fall to last preference if an agreement after that date is sought. All preferences shall be subordinated to higher preferences (e.g. Second Preference subordinated to First Preference) if all have formal agreements for conveyance finalized.

(9) The Districts agree to pay to NSCC actual legal fees incurred by NSCC for the preparation of this Agreement, not to exceed $2,000.00.

(10) The Districts agree to pursue the withdrawal of any and all objections to NSCC's water right claims filed in the SRBA by IGWA or any other ground water district by August 1, 2008 If the Districts fail to obtain the withdrawal of these objections to NSCC's water right claims in the SRBA by August 1, 2008, NSCC may refuse any future agreement for diversion and conveyance of the Districts' water for these conversion acres in future irrigation seasons.

(11) Should any dispute or disagreement as to the terms or conditions of this Agreement arise, the prevailing party shall be entitled to recover reasonable attorney fees and costs incurred in defending or pursuing their respective legal rights.

IN WITNES WHEREOF, the parties hereto have executed this Agreement on the day and year first written above.

NORTH SNAKE GROUNDWATER DISTRICT

By: _____

Its: Chairman

Date: May 10, 2008

MAGIC VALLEY GROUNDWATER DISTRICT

By: Robert L. Naughton

Its: Chairman

Date: May 10, 2008

NORTH SIDE CANAL Company, LTD.

By: Ted Diehl

Its: Watermaster

Date: April 23, 2008

Exhibit 4

Flow Data: 360410213 Spring at Clear LK Grade

2000 – 2007

C. Yenter, Watermaster District 36

36-4076

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2007

MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.7	2.4	2.82	2.41	2.26	1.56	1.3	1.44	1.47	1.42	1.8	2.13
2	1.71	2.4	2.76	2.41	2.2	1.52	1.3	1.47	1.43	1.46	1.83	2.13
3	1.72	2.5	2.81	2.41	2.15	1.49	1.3	1.5	1.4	1.49	1.88	2.13
4	1.73	2.61	2.87	2.41	2.1	1.45	1.3	1.5	1.37	1.53	1.93	2.13
5	1.74	2.71	2.92	2.41	2.15	1.42	1.29	1.5	1.34	1.56	1.99	2.13
6	1.75	2.82	2.98	2.41	2.19	1.38	1.29	1.5	1.3	1.56	2.04	2.13
7	1.75	2.92	3.03	2.25	2.24	1.35	1.29	1.5	1.27	1.56	2.09	2.05
8	1.76	3.03	3.09	2.09	2.28	1.31	1.28	1.5	1.3	1.56	2.14	1.97
9	1.77	3.13	3.14	1.93	2.33	1.31	1.28	1.5	1.34	1.56	2.14	1.89
10	1.78	3.08	3.14	1.78	2.37	1.31	1.28	1.5	1.37	1.56	2.14	1.82
11	1.79	3.02	3.14	1.62	2.42	1.31	1.28	1.5	1.4	1.56	2.14	1.74
12	---	2.97	3.14	1.46	2.47	1.31	1.27	1.5	1.43	1.56	2.14	1.66
13	1.99	2.92	3.14	1.3	2.52	1.31	1.27	1.5	1.47	1.56	2.14	1.58
14	2.18	2.87	3.14	1.3	2.57	1.31	1.27	1.5	1.5	1.56	2.14	1.58
15	2.37	2.81	3.14	1.3	2.62	1.31	1.27	1.5	1.51	1.56	2.14	1.59
16	2.56	2.76	3.14	1.3	2.67	1.28	1.27	1.5	1.52	1.57	2.14	1.59
17	2.75	2.82	3.09	1.3	2.72	1.25	1.27	1.5	1.53	1.57	2.14	1.59
18	2.94	2.87	3.03	1.3	2.77	1.22	1.27	1.47	1.53	1.57	2.14	1.59
19	3.13	---	2.98	1.3	2.56	1.19	1.27	1.43	1.54	1.57	2.14	1.6
20	3.03	2.98	2.92	1.3	2.36	1.16	1.27	1.4	1.55	1.57	2.14	1.6
21	2.92	3.04	2.87	1.44	2.15	1.13	1.27	1.36	1.56	1.57	2.14	1.6
22	2.82	3.09	2.81	1.58	1.95	1.1	1.28	1.33	1.53	1.58	2.14	1.52
23	2.71	3.15	2.76	1.72	1.74	1.13	1.28	1.29	1.49	1.58	2.14	1.45
24	2.61	3.09	2.71	1.86	1.54	1.16	1.28	1.26	1.46	1.58	2.14	1.37
25	2.5	3.04	2.66	1.99	1.33	1.19	1.28	1.29	1.42	1.58	2.14	1.29
26	---	2.98	2.61	2.13	1.36	1.22	1.29	1.33	1.39	1.61	2.13	1.22
27	2.4	2.93	2.56	2.27	1.4	1.25	1.29	1.36	1.35	1.64	2.13	1.14
28	2.4	2.87	2.51	2.41	1.43	1.28	1.32	1.4	1.32	1.67	2.13	1.14
29	2.4	---	2.46	2.36	1.46	1.31	1.35	1.43	1.35	1.71	2.13	1.14
30	2.4	---	2.41	2.31	1.49	1.31	1.38	1.47	1.39	1.74	2.13	1.14
31	2.4	---	2.41	---	1.53	---	1.41	1.5	---	1.77	---	1.14
TOTAL	65.7	77.8	89.2	56.1	65.3	38.8	40.1	44.7	42.8	48.9	62.7	50.8
MEAN	2.3	2.9	2.9	1.9	2.1	1.3	1.3	1.4	1.4	1.6	2.1	1.6
MIN	1.7	2.4	2.4	1.3	1.3	1.1	1.3	1.3	1.3	1.4	1.8	1.1
MAX	3.1	3.2	3.1	2.4	2.8	1.6	1.4	1.5	1.6	1.8	2.1	2.1
AC-FT	130.3	154.3	176.9	111.3	129.5	77.0	79.5	88.7	84.9	97.0	124.4	100.8

CALENDAR YEAR 2007 TOTAL CFS:682.9 TOTAL AC-FT: 1,355

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2006

MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.76	1.47	1.56	1.8	1.79	1.08	0.79	0.82	0.8	1.29	1.39	1.56
2	1.69	1.45	1.54	1.8	1.81	1.09	0.81	0.87	0.8	1.29	1.41	1.59
3	1.63	1.44	1.53	1.8	1.81	1.09	0.83	0.88	0.8	1.29	1.43	1.61
4	1.56	1.44	1.55	1.75	1.81	1.1	0.85	0.88	0.8	1.29	1.45	1.63
5	1.49	1.44	1.57	1.7	1.81	1.11	0.88	0.89	0.8	1.29	1.47	1.65
6	1.31	1.44	1.59	1.65	1.81	1.11	0.9	0.9	0.8	1.29	1.48	1.68
7	1.13	1.44	1.61	1.6	1.81	1.12	0.89	0.9	0.8	1.3	1.5	1.7
8	0.96	1.48	1.63	1.6	1.81	1.12	0.89	0.91	0.8	1.3	1.52	1.7
9	0.78	1.51	1.65	1.61	1.81	1.13	0.88	0.92	0.83	1.3	1.54	1.7
10	0.6	1.55	1.67	1.61	1.81	1.13	0.87	0.92	0.85	1.3	1.55	1.7
11	0.42	1.58	1.68	1.61	1.81	1.13	0.86	0.93	0.88	1.3	1.57	1.7
12	0.52	1.62	1.7	1.62	1.81	1.13	0.86	0.91	0.9	1.3	1.59	1.7
13	0.62	1.66	1.72	1.62	1.81	1.12	0.85	0.89	0.93	1.3	1.61	1.7
14	0.72	1.69	1.74	1.62	1.81	1.12	0.84	0.87	0.95	1.3	1.62	1.7
15	0.82	1.73	1.76	1.63	1.81	1.12	0.8	0.84	0.98	1.29	1.64	1.7
16	0.91	1.76	1.78	1.63	1.81	1.09	0.76	0.82	1	1.29	1.66	1.7
17	1.01	1.8	1.8	1.63	1.81	1.07	0.72	0.8	1.03	1.29	1.65	1.7
18	1.11	1.78	1.8	1.63	1.81	1.04	0.68	0.8	1.05	1.29	1.64	1.7
19	1.21	1.75	1.8	1.64	1.81	1.01	0.64	0.8	1.08	1.29	1.63	1.7
20	1.31	1.73	1.8	1.64	1.79	0.98	0.6	0.8	1.1	1.29	1.63	1.7
21	1.34	1.7	1.8	1.64	1.76	0.96	0.56	0.8	1.13	1.29	1.62	1.7
22	1.38	1.68	1.8	1.65	1.74	0.93	0.57	0.8	1.15	1.29	1.61	1.7
23	1.41	1.65	1.8	1.65	1.71	0.9	0.58	0.8	1.18	1.29	1.6	1.7
24	1.44	1.63	1.8	1.65	1.69	0.87	0.59	0.8	1.2	1.29	1.59	1.7
25	1.47	1.62	1.8	1.66	1.66	0.85	0.61	0.8	1.23	1.29	1.58	1.7
26	1.51	1.6	1.8	1.66	1.64	0.82	0.62	0.8	1.25	1.29	1.57	1.7
27	1.54	1.59	1.8	1.69	1.55	0.79	0.63	0.8	1.28	1.29	1.57	1.7
28	1.53	1.57	1.8	1.71	1.45	0.77	0.64	0.8	1.28	1.31	1.56	1.7
29	1.51	---	1.8	1.74	1.36	0.74	0.69	0.8	1.28	1.33	1.55	1.7
30	1.5	---	1.8	1.76	1.27	0.76	0.73	0.8	1.28	1.35	1.54	1.7
31	1.48	---	1.8	---	1.17	---	0.78	0.8	---	1.37	---	1.7
TOTAL	37.7	44.8	53.3	50.0	53.2	30.3	23.2	26.2	30.2	40.3	46.8	52.2
MEAN	1.2	1.6	1.7	1.7	1.7	1.0	0.7	0.8	1.0	1.3	1.6	1.7
MIN	0.4	1.4	1.5	1.6	1.2	0.7	0.6	0.8	0.8	1.3	1.4	1.6
MAX	1.8	1.8	1.8	1.8	1.8	1.1	0.9	0.9	1.3	1.4	1.7	1.7
AC-FT	74.8	88.9	105.7	99.2	105.5	60.1	46.0	52.0	59.9	79.9	92.8	103.5

CALENDAR YEAR 2006 , TOTAL CFS:488.2 TOTAL AC-FT: 968

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2005

MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.5	1.7	1.7	1.5	1.5	1.5	1.1	1.2	1.1	1.2	1.5	1.5
2	1.5	1.7	1.6	1.5	1.5	1.5	1.1	1.2	1.1	1.2	1.5	1.5
3	1.5	1.7	1.6	1.5	1.5	1.5	1.1	1.2	1.1	1.3	1.5	1.5
4	1.5	1.7	1.6	1.5	1.5	1.5	1.1	1.2	1.1	1.3	1.5	1.5
5	1.5	1.7	1.6	1.5	1.5	1.5	1.1	1.1	1.1	1.3	1.5	1.5
6	1.5	1.7	1.6	1.5	1.5	1.5	1.1	1.1	1.1	1.3	1.4	1.5
7	1.5	1.7	1.6	1.5	1.4	1.5	1.1	1.1	1.1	1.3	1.4	1.5
8	1.5	1.7	1.6	1.5	1.4	1.5	1.1	1.1	1.1	1.3	1.4	1.5
9	1.5	1.7	1.6	1.5	1.4	1.5	1.2	1.1	1.1	1.3	1.4	1.5
10	1.5	1.7	1.6	1.5	1.4	1.5	1.2	1.1	1.1	1.3	1.3	1.5
11	1.6	1.7	1.6	1.5	1.4	1.5	1.2	1.1	1.1	1.3	1.3	1.5
12	1.6	1.7	1.6	1.5	1.4	1.5	1.2	1.1	1.1	1.3	1.3	1.5
13	1.6	1.7	1.6	1.5	1.4	1.5	1.2	1.1	1.1	1.3	1.4	1.5
14	1.6	1.7	1.5	1.5	1.4	1.5	1.2	1.1	1.1	1.3	1.4	1.5
15	1.6	1.7	1.5	1.5	1.4	1.5	1.2	1.1	1.1	1.3	1.4	1.5
16	1.6	1.7	1.5	1.5	1.4	1.5	1.2	1.1	1.1	1.4	1.5	1.5
17	1.6	1.7	1.5	1.5	1.4	1.5	1.2	1.1	1.1	1.4	1.5	1.5
18	1.6	1.7	1.5	1.5	1.4	1.4	1.2	1.1	1.1	1.4	1.5	1.6
19	1.6	1.7	1.5	1.5	1.4	1.4	1.1	1.1	1.1	1.5	1.5	1.6
20	1.6	1.7	1.5	1.5	1.4	1.3	1.1	1.1	1.1	1.5	1.5	1.7
21	1.6	1.7	1.5	1.5	1.4	1.3	1.1	1.1	1.1	1.5	1.5	1.7
22	1.6	1.7	1.5	1.5	1.4	1.2	1.1	1.1	1.1	1.5	1.5	1.8
23	1.6	1.7	1.5	1.5	1.4	1.2	1.1	1.1	1.1	1.5	1.5	1.8
24	1.6	1.7	1.5	1.5	1.4	1.1	1.1	1.1	1.1	1.5	1.5	1.8
25	1.6	1.7	1.5	1.5	1.4	1.1	1	1.1	1.1	1.5	1.5	1.8
26	1.7	1.7	1.5	1.5	1.4	1.1	1.1	1.1	1.1	1.5	1.5	1.8
27	1.7	1.7	1.5	1.5	1.4	1.1	1.1	1.1	1.2	1.5	1.5	1.8
28	1.7	1.7	1.5	1.5	1.4	1.1	1.2	1.1	1.2	1.5	1.5	1.8
29	1.7	---	1.5	1.5	1.4	1.1	1.2	1.1	1.2	1.5	1.5	1.8
30	1.7	---	1.5	1.5	1.4	1.1	1.2	1.1	1.2	1.5	1.5	1.8
31	1.7	---	1.5	---	1.4	---	1.2	1.1	---	1.5	---	1.76
TOTAL	49.2	47.6	47.9	45.0	44.0	41.0	35.4	34.5	33.4	43.0	43.7	50.1
MEAN	1.6	1.7	1.5	1.5	1.4	1.4	1.1	1.1	1.1	1.4	1.5	1.6
MIN	1.5	1.7	1.5	1.5	1.4	1.1	1.0	1.1	1.1	1.2	1.3	1.5
MAX	1.7	1.7	1.7	1.5	1.5	1.5	1.2	1.2	1.2	1.5	1.5	1.8
AC-FT	97.6	94.4	95.0	89.3	87.3	81.3	70.2	68.4	66.2	85.3	86.7	99.4

CALENDAR YEAR 2005 TOTAL CFS:514.8 TOTAL AC-FT: 1,021

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2004

MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.93	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1	1.2	1.2	1.5
2	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1	1.2	1.2	1.5
3	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1	1.2	1.2	1.5
4	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1	1.2	1.2	1.5
5	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.1	1.2	1.2	1.5
6	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.1	1.2	1.2	1.5
7	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.2	1.2	1.3	1.5
8	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.2	1.2	1.3	1.5
9	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.2	1.2	1.3	1.5
10	1.9	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.3	1.2	1.3	1.5
11	2	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.3	1.2	1.4	1.5
12	2	2.2	1.6	1.6	1.6	1.6	1.4	1.1	1.3	1.2	1.4	1.5
13	2	2.2	1.6	1.6	1.6	1.6	1.5	1.1	1.3	1.2	1.4	1.5
14	2	2.2	1.6	1.6	1.6	1.5	1.5	1.1	1.2	1.2	1.4	1.5
15	2.1	2.1	1.6	1.6	1.6	1.5	1.5	1.1	1.2	1.2	1.4	1.5
16	2.1	2.1	1.6	1.6	1.6	1.5	1.5	1.1	1.2	1.2	1.5	1.5
17	2.1	2	1.6	1.6	1.6	1.5	1.4	1.1	1.2	1.2	1.5	1.5
18	2.1	2	1.6	1.6	1.6	1.5	1.4	1.1	1.2	1.2	1.5	1.5
19	2.1	1.9	1.6	1.6	1.6	1.5	1.3	1.1	1.2	1.2	1.5	1.5
20	2.1	1.9	1.6	1.6	1.6	1.5	1.2	1.1	1.2	1.2	1.5	1.5
21	2.1	1.8	1.6	1.6	1.6	1.5	1.2	1.1	1.2	1.2	1.5	1.5
22	2.1	1.8	1.6	1.6	1.6	1.5	1.1	1.1	1.2	1.2	1.5	1.5
23	2.2	1.8	1.6	1.6	1.6	1.5	1.1	1.1	1.2	1.2	1.5	1.5
24	2.2	1.7	1.6	1.6	1.6	1.5	1.1	1.1	1.2	1.2	1.5	1.5
25	2.2	1.7	1.6	1.6	1.6	1.5	1.1	1.1	1.2	1.2	1.5	1.5
26	2.2	1.7	1.6	1.6	1.6	1.5	1.1	1.1	1.2	1.2	1.5	1.5
27	2.2	1.7	1.6	1.6	1.6	1.5	1.1	1.1	1.2	1.2	1.5	1.5
28	2.2	1.7	1.6	1.6	1.6	1.5	1.1	1.1	1.2	1.2	1.5	1.5
29	2.2	1.7	1.6	1.6	1.6	1.4	1.1	1.1	1.2	1.2	1.5	1.5
30	2.2	---	1.6	1.6	1.6	1.4	1.1	1.1	1.2	1.2	1.5	1.5
31	2.2	---	1.6	---	1.6	---	1.1	1.1	---	1.2	---	1.5
TOTAL	63.6	58.4	49.6	48.0	49.6	46.1	40.3	34.1	35.4	37.2	41.9	46.5
MEAN	2.1	2.0	1.6	1.6	1.6	1.5	1.3	1.1	1.2	1.2	1.4	1.5
MIN	1.9	1.7	1.6	1.6	1.6	1.4	1.1	1.1	1.0	1.2	1.2	1.5
MAX	2.2	2.2	1.6	1.6	1.6	1.6	1.5	1.1	1.3	1.2	1.5	1.5
AC-FT	126.2	115.8	98.4	95.2	98.4	91.4	79.9	67.6	70.2	73.8	83.1	92.2

CALENDAR YEAR 2004 TOTAL CFS:550.7 TOTAL AC-FT: 1,092

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2003

MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.18	1.7	1.4	1.4	1.5	1.3	1.1	1.4	1	1.6	1.4	1.5
2	2.2	1.7	1.4	1.5	1.5	1.3	1.1	1.4	1	1.5	1.4	1.5
3	2.2	1.7	1.4	1.5	1.5	1.3	1.1	1.5	1	1.4	1.4	1.5
4	2.1	1.7	1.4	1.5	1.5	1.3	1.1	1.5	1	1.4	1.4	1.5
5	2.1	1.7	1.4	1.5	1.5	1.3	1.1	1.6	1	1.3	1.4	1.5
6	2.1	1.7	1.4	1.5	1.5	1.3	1.1	1.6	1	1.3	1.4	1.7
7	2.1	1.7	1.4	1.5	1.5	1.3	1.1	1.6	1	1.2	1.4	1.8
8	2.1	1.6	1.4	1.5	1.5	1.3	1.1	1.5	1	1.2	1.4	2
9	2.1	1.6	1.4	1.5	1.5	1.3	1.1	1.5	1	1.1	1.5	2.18
10	2.1	1.5	1.4	1.5	1.5	1.3	1.1	1.4	1	1.1	1.5	2.2
11	2	1.5	1.4	1.5	1.5	1.3	1.1	1.4	1	1.1	1.5	2.2
12	2	1.5	1.4	1.5	1.5	1.3	1.1	1.3	1.1	1.1	1.5	2.2
13	2	1.4	1.4	1.5	1.5	1.3	1.1	1.3	1.1	1.1	1.5	2.2
14	2	1.4	1.4	1.6	1.4	1.3	1.1	1.2	1.2	1.1	1.5	2.2
15	2	1.4	1.4	1.6	1.4	1.3	1.1	1.3	1.3	1.1	1.5	2.2
16	2	1.4	1.4	1.6	1.4	1.3	1.1	1.3	1.3	1.1	1.5	2.2
17	2	1.4	1.4	1.6	1.4	1.3	1.1	1.4	1.4	1.1	1.6	2.2
18	1.9	1.4	1.4	1.6	1.4	1.3	1.1	1.4	1.5	1.1	1.6	2.2
19	1.9	1.4	1.4	1.6	1.4	1.3	1.1	1.5	1.6	1.2	1.6	2.2
20	1.9	1.4	1.4	1.6	1.4	1.3	1.1	1.5	1.6	1.2	1.6	2.2
21	1.9	1.4	1.4	1.6	1.4	1.3	1.1	1.6	1.7	1.3	1.6	2.2
22	1.9	1.4	1.4	1.6	1.4	1.3	1.1	1.5	1.8	1.3	1.6	2.2
23	1.9	1.4	1.4	1.6	1.4	1.3	1.1	1.4	1.9	1.4	1.6	2.2
24	1.9	1.4	1.4	1.6	1.4	1.3	1.1	1.3	2	1.4	1.6	2.2
25	1.8	1.4	1.4	1.6	1.4	1.3	1.1	1.3	2.1	1.4	1.6	2.2
26	1.8	1.4	1.4	1.5	1.4	1.3	1.1	1.2	2	1.4	1.6	2.2
27	1.8	1.4	1.4	1.5	1.4	1.2	1.2	1.1	1.9	1.4	1.6	2.2
28	1.8	1.4	1.4	1.5	1.4	1.2	1.2	1	1.8	1.4	1.5	2.2
29	1.8	---	1.4	1.5	1.4	1.2	1.3	1	1.7	1.4	1.5	2.2
30	1.8	---	1.4	1.5	1.4	1.2	1.3	1	1.7	1.4	1.5	2.2
31	1.8	---	1.4	---	1.4	---	1.4	1	---	1.4	---	2.2
TOTAL	61.2	42.0	43.4	46.1	44.7	38.6	35.0	42.0	41.7	39.5	45.3	63.6
MEAN	2.0	1.5	1.4	1.5	1.4	1.3	1.1	1.4	1.4	1.3	1.5	2.1
MIN	1.8	1.4	1.4	1.4	1.4	1.2	1.1	1.0	1.0	1.1	1.4	1.5
MAX	2.2	1.7	1.4	1.6	1.5	1.3	1.4	1.6	2.1	1.6	1.6	2.2
AC-FT	121.4	83.3	86.1	91.4	88.7	76.6	69.4	83.3	82.7	78.3	89.9	126.2

CALENDAR YEAR 2003 TOTAL CFS:543.1 TOTAL AC-FT: 1,077

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2002

MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.36	1.93	1.93	1.43	1.49	1.05	2.22	1.31	1.19	1.19	0.94	1.35
2	2.36	1.93	1.93	1.43	1.49	1.05	1.28	1.31	1.19	0.94	0.94	1.49
3	2.36	1.93	1.93	1.43	1.49	1.05	1.28	1.31	1.19	0.94	0.94	1.49
4	2.36	1.93	1.93	1.39	1.49	1.05	1.28	1.31	1.19	0.94	0.94	1.49
5	2.36	1.93	1.93	1.39	1.49	1.05	1.28	1.31	1.19	0.94	1.38	1.49
6	2.36	1.93	1.93	1.39	1.49	0.87	1.28	1.31	1.19	0.94	1.38	1.49
7	2.36	2.28	1.93	1.39	1.49	0.87	1.28	1.31	1.19	0.94	1.38	1.49
8	2.36	2.28	1.93	1.39	1.28	0.87	1.28	1.31	1.19	0.94	1.38	1.49
9	2.36	2.28	1.93	1.39	1.28	0.87	1.27	1.31	1.19	0.88	1.38	2.51
10	2.4	2.28	1.93	1.39	1.28	0.87	1.27	1.31	1.19	0.88	1.38	2.51
11	2.4	2.28	1.93	1.81	1.28	0.87	1.27	1.31	1.2	0.88	1.38	2.51
12	2.4	2.28	1.93	1.81	1.28	0.87	1.27	1.31	1.2	0.88	1.35	2.51
13	2.4	2.28	1.93	1.81	1.28	2.1	1.27	1.31	1.2	0.88	1.35	2.51
14	2.4	1.73	2.22	1.81	1.28	2.1	1.27	1.31	1.2	0.88	1.35	2.51
15	2.4	1.73	2.22	1.81	1.28	2.1	1.27	1.31	1.2	0.88	1.35	2.51
16	2.4	1.73	2.22	1.81	1.28	2.1	1.31	1.31	1.2	0.88	1.35	2.28
17	2.36	1.73	2.22	1.81	1.28	2.1	1.31	1.31	1.2	0.88	1.35	2.28
18	2.36	1.73	2.22	2.1	1.28	2.1	1.31	1.31	1.2	0.88	1.35	2.28
19	2.36	1.73	2.22	2.1	1.28	2.1	1.31	1.31	1.2	0.88	1.48	2.28
20	2.36	1.73	2.22	2.1	1.28	1.93	1.31	1.19	1.2	0.88	1.48	2.28
21	2.36	2.22	2.22	2.1	1.28	1.93	1.31	1.19	1.2	0.88	1.48	2.28
22	2.36	2.22	2.22	2.1	1.28	1.93	1.31	1.19	1.2	0.88	1.48	2.28
23	2.36	2.22	2.22	2.1	1.28	1.93	1.27	1.19	1.2	0.88	1.48	2.22
24	1.93	2.22	2.22	2.1	1.28	1.93	1.27	1.19	1.2	0.88	1.48	2.22
25	1.93	2.22	2.22	1.54	1.28	1.93	1.27	1.19	1.19	0.88	1.48	2.22
26	1.93	2.22	2.22	1.54	1.28	1.93	1.27	1.19	1.19	0.88	1.35	2.22
27	1.93	2.22	2.22	1.54	1.28	2.22	1.27	1.19	1.19	0.88	1.35	2.22
28	1.93	1.93	1.43	1.54	1.28	2.22	1.27	1.19	1.19	0.88	1.35	2.22
29	1.93	---	1.43	1.54	1.05	2.22	1.27	1.19	1.19	0.88	1.35	2.22
30	1.93	---	1.43	1.54	1.05	2.22	1.31	1.19	1.19	0.94	1.35	2.22
31	1.93	---	1.43	---	1.05	---	1.31	1.19	---	0.94	---	2.22
TOTAL	70.0	57.1	61.9	50.6	40.5	48.4	40.8	39.2	35.8	28.1	40.0	65.3
MEAN	2.3	2.0	2.0	1.7	1.3	1.6	1.3	1.3	1.2	0.9	1.3	2.1
MIN	1.9	1.7	1.4	1.4	1.1	0.9	1.3	1.2	1.2	0.9	0.9	1.4
MAX	2.4	2.3	2.2	2.1	1.5	2.2	2.2	1.3	1.2	1.2	1.5	2.5
AC-FT	138.8	113.3	122.8	100.4	80.3	96.0	80.9	77.8	71.0	55.7	79.3	129.5

CALENDAR YEAR 2002 TOTAL CFS:577.7 TOTAL AC-FT: 1,146

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2001

MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.26	2.28	1.93	1.43	1.54	1.05	2.72	1.27	1.19	1.19	2.27	1.49
2	3.26	2.28	1.93	1.43	1.54	1.05	2.72	1.31	1.19	0.94	2.27	1.49
3	3.26	2.28	1.93	1.43	1.49	1.05	1.27	1.31	1.19	0.94	2.27	2.54
4	3.26	2.28	1.93	1.43	1.49	1.05	1.27	1.31	1.19	0.94	2.27	2.54
5	2.54	2.28	1.93	1.43	1.49	0.87	1.27	1.31	1.19	0.94	2.27	2.54
6	2.54	2.28	1.93	1.93	1.49	0.87	1.27	1.31	1.19	0.94	1.38	2.54
7	2.54	2.28	1.93	1.93	1.49	0.87	1.27	1.31	1.19	0.94	1.38	2.54
8	2.54	1.73	1.93	1.93	1.28	0.87	1.27	1.31	1.19	0.94	1.38	2.54
9	2.54	2.22	1.93	1.93	1.28	0.87	1.31	1.31	1.19	0.88	1.38	2.54
10	2.54	2.22	1.93	1.93	1.28	0.87	1.31	1.31	1.19	0.88	1.38	2.51
11	2.54	2.22	1.93	1.93	1.28	0.87	1.31	1.31	1.19	0.88	1.38	2.51
12	2.54	2.22	1.93	1.93	1.28	0.87	1.31	1.31	1.19	0.88	1.38	2.51
13	2.54	2.22	1.93	1.81	1.28	2.1	1.31	1.31	1.19	0.88	1.49	2.51
14	2.54	2.54	1.93	1.81	1.28	2.1	1.31	1.31	1.19	0.88	1.49	2.51
15	2.54	2.54	2.22	1.81	1.28	2.1	1.31	1.31	1.19	0.88	1.49	2.51
16	2.54	2.54	2.22	1.81	1.28	2.1	1.5	1.31	1.19	0.88	1.49	2.51
17	2.54	2.54	2.22	1.81	1.28	2.1	1.5	1.31	1.19	0.88	1.49	2.52
18	2.54	2.54	2.22	1.81	1.28	2.1	1.5	1.31	1.19	0.88	1.49	2.52
19	2.54	2.54	2.22	1.81	1.28	2.1	1.5	1.31	1.19	0.88	1.49	2.52
20	1.93	2.22	2.22	2.1	1.28	2.1	1.5	1.31	1.19	0.88	1.48	2.52
21	1.93	2.22	2.22	2.1	1.31	2.1	1.5	1.19	1.19	0.88	1.48	2.6
22	1.93	2.22	2.22	2.1	1.31	2.1	1.5	1.19	1.19	0.88	1.48	2.6
23	1.93	2.22	2.54	2.1	1.31	2.1	1.27	1.19	1.19	0.88	1.48	2.6
24	1.93	2.22	2.54	2.1	1.28	2.1	1.27	1.19	1.19	0.88	1.48	2.6
25	1.93	2.22	2.54	2.1	1.28	2.1	1.27	1.19	1.19	0.88	1.48	2.6
26	1.93	1.93	2.54	2.1	1.28	2.72	1.27	1.19	1.19	0.88	1.48	2.6
27	1.93	1.93	2.54	1.54	1.28	2.72	1.27	1.19	1.19	0.88	1.49	2.6
28	1.93	1.93	2.54	1.54	1.28	2.72	1.27	1.19	1.19	0.88	1.49	2.28
29	1.93	---	2.54	1.54	1.28	2.72	1.27	1.19	1.19	0.88	1.49	2.28
30	1.93	---	1.43	1.54	1.28	2.72	1.27	1.19	1.19	2.27	1.49	2.28
31	3.72	---	1.43	---	1.05	---	1.27	1.19	---	2.27	---	2.28
TOTAL	76.1	63.1	65.4	54.2	41.1	52.1	44.2	39.3	35.7	30.8	47.8	75.7
MEAN	2.5	2.3	2.1	1.8	1.3	1.7	1.4	1.3	1.2	1.0	1.6	2.4
MIN	1.9	1.7	1.4	1.4	1.1	0.9	1.3	1.2	1.2	0.9	1.4	1.5
MAX	3.7	2.5	2.5	2.1	1.5	2.7	2.7	1.3	1.2	2.3	2.3	2.6
AC-FT	150.9	125.2	129.7	107.5	81.5	103.3	87.7	78.0	70.8	61.1	94.8	150.2

CALENDAR YEAR 2001 TOTAL CFS:625.5 TOTAL AC-FT: 1,241

360410213 SPRING AT CLEAR LK GRADE

DISCHARGE, CUBIC FEET PER SECOND, CALENDAR YEAR 2000

MEAN VALUES

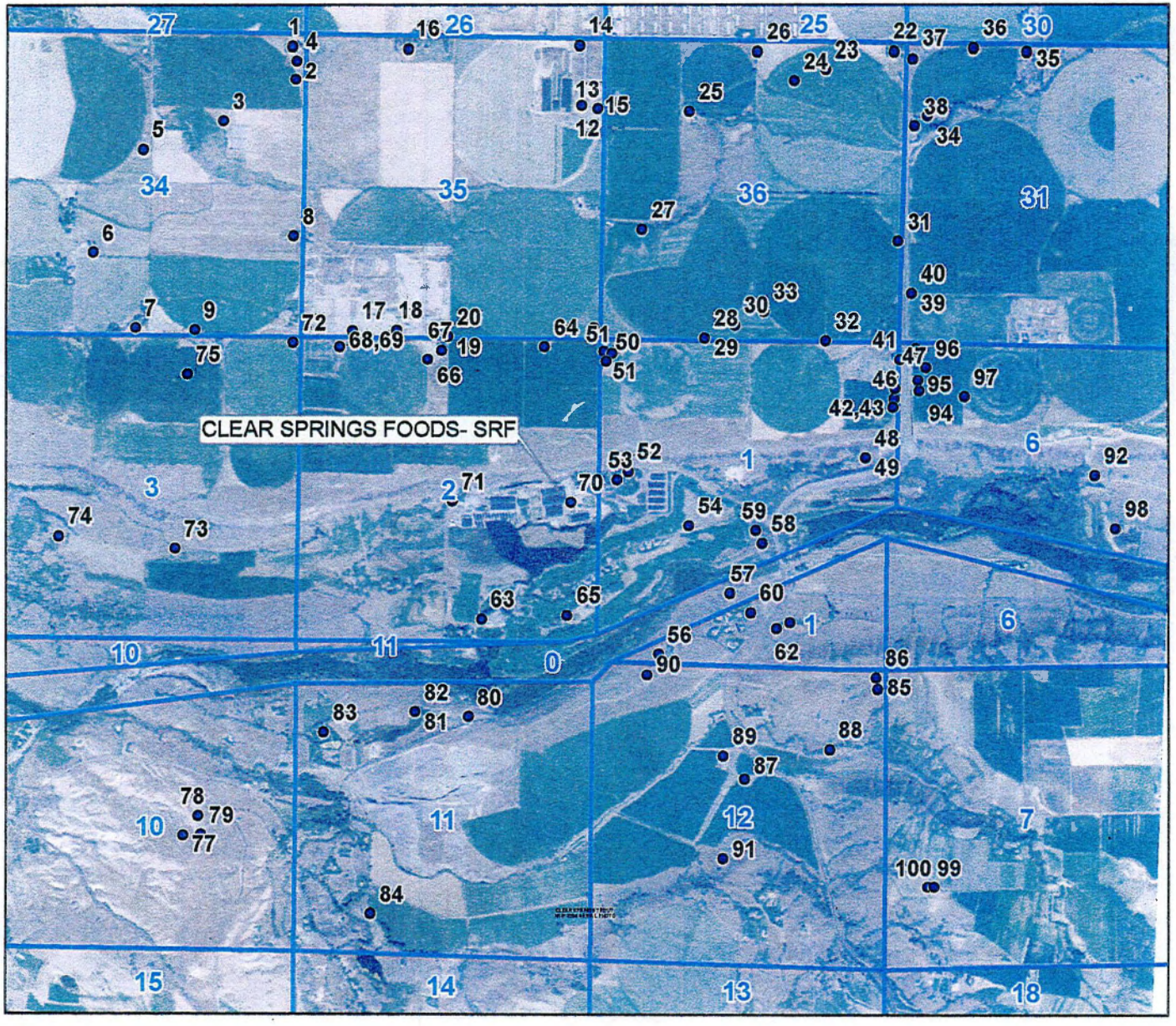
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	---	---	1.04	1.09	1.09	0.98	1.02	1.02	1.02	1.27	1.93
2	---	---	---	1.04	1.09	1.09	0.98	1.02	1.02	1.47	1.27	1.93
3	---	---	---	1.04	1.09	1.09	0.98	1.02	1.02	1.47	0.98	1.93
4	---	---	---	1.04	1.13	1.09	0.98	1.02	1.02	1.47	0.98	1.93
5	---	---	---	1.04	1.13	1.01	1.01	1.02	1.02	1.47	0.98	1.93
6	---	---	---	1.04	1.13	1.01	1.01	1.02	1.02	1.47	0.98	1.93
7	---	---	---	1.04	1.13	1.01	1.01	1.02	1.02	1.47	0.98	1.93
8	---	---	---	1.04	1.13	1.01	1.01	1.02	1.02	1.47	1.49	1.4
9	---	---	---	1.04	1.13	1.01	1.01	1.02	1.02	1.47	1.49	1.4
10	---	---	---	1.04	1.13	1.92	1.01	1.02	1.02	1.42	1.49	1.4
11	---	---	---	1.25	1.13	1.92	1.01	1.02	1.02	1.42	1.49	1.4
12	---	---	---	1.25	1.13	1.92	1.01	1.02	1.02	1.42	1.49	1.91
13	---	---	---	1.25	1.13	1.92	1.01	1.02	1.02	2.07	1.65	1.91
14	---	---	---	1.25	1.13	1.92	1.01	1.02	1.02	2.07	1.65	1.91
15	---	---	---	1.25	1.13	1.92	1.01	1.02	1.03	2.07	1.65	1.91
16	---	---	---	1.25	1.58	1.92	1.01	1.02	1.03	2.07	1.65	1.91
17	---	---	---	1.25	1.58	1.92	1.01	1.02	1.03	1.43	1.65	1.91
18	---	---	---	1.25	1.58	1.92	1.02	1.02	1.03	1.43	1.65	4.08
19	---	---	1.23	1.25	1.58	1.02	1.02	1.02	1.03	1.43	1.65	4.08
20	---	---	1.23	1.25	1.58	1.02	1.02	1.02	1.03	1.22	1.65	4.08
21	---	---	1.23	1.21	1.58	1.02	1.02	1.02	1.03	1.22	1.65	4.08
22	---	---	1.23	1.21	1.58	1.02	1.02	1.02	1.03	1.22	2.15	4.08
23	---	---	1.23	1.21	1.09	1.02	1.02	1.02	1.02	1.27	2.15	4.08
24	---	---	1.23	1.21	1.09	1.02	1.02	1.02	1.02	1.27	2.15	4.08
25	---	---	1.23	1.21	1.09	1.02	1.02	1.02	1.02	1.27	2.15	4.08
26	---	---	1.23	1.21	1.09	1.02	1.02	1.02	1.02	1.27	2.15	3.26
27	---	---	1.23	1.21	1.09	1.02	1.02	1.02	1.02	1.27	2.15	3.26
28	---	---	1.23	1.21	1.09	1.02	1.02	1.02	1.02	1.27	2.15	3.26
29	---	---	1.04	1.21	1.09	0.98	1.02	1.02	1.02	1.27	2.15	3.26
30	---	---	1.04	1.09	1.09	0.98	1.02	1.02	1.02	1.27	2.15	3.26
31	---	---	1.04	---	1.09	---	1.02	1.02	---	1.27	---	3.26
TOTAL	---	---	15.4	34.9	37.7	38.9	31.3	31.6	30.7	44.7	49.1	82.8
MEAN	---	---	1.2	1.2	1.2	1.3	1.0	1.0	1.0	1.4	1.6	2.7
MIN	---	---	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.4
MAX	---	---	1.2	1.3	1.6	1.9	1.0	1.0	1.0	2.1	2.2	4.1
AC-FT	---	---	30.5	69.2	74.8	77.2	62.1	62.7	60.9	88.7	97.4	164.2

CALENDAR YEAR 2000 TOTAL CFS:397.1 TOTAL AC-FT: 788

Exhibit 5

Clear Spring Area Well Locations

NAIP 2004 Aerial



CLEAR SPRING FOODS AREA
WELL LOCATIONS
NAIP 2004 AERIAL

Legend
- Wells_in_Area
- Sections

N

BROCKWAY ENGINEERING, PLLC.
ALR - DEC. 1., 2008

Table Well Driller's Logs Clear Lakes Area															
Clear Springs Foods Snake River Farm															
BROCKWAY ENGINEERING, PLLC.															
ALR - NOV 19, 2008															
															BROCKWAY
OWNER	TOWNSHIP	RANGE	SEC	QQ	Q	WELLADDRES	WELLUSE	PRDCT	S.W.L.	SRF. DIA.	CAS DIA	CAS DPT	DPTH	CONSTRUCTED	MAP NUMBER
DARWIN L CLARK	08S	14E	34	NE	NE		Domestic-Sir	0	72	6	0	19	0	Sep 1 1992	1
E N PELHINTON	8S	14E	34	NW	NE		DOMESTIC	0	0	0	0	0	0	2-7-76	2
JAY MOYLE	08S	14E	34	SW	NE		Domestic	0	72	0	0	0	120	Aug 1 1980	3
KEITH MCCLOUD			0					0	0	0	0	0	0		4
ERICH JOHNS	08S	14E	34	SE	NW		Domestic	0	80	0	0	0	99	Dec 23 1980	5
BILL FRANCIS	08S	14E	34	NE	SW		Domestic	9999	80	0	0	0	100	Dec 31 9999	6
A W B INDUSTRIES	08S	14E	34	SE	SW		Domestic	9999	85	0	0	0	103	Mar 4 1975	7
JOE BENNETT	08S	14E	34	NE	SE		Irrigation	0	77	0	0	0	120	Apr 14 1975	8
PHILLIPS	08S	14E	34	SW	SE		Domestic	9999	82	0	0	0	100	Sep 2 1978	9
EDWARD HUBBARD	08S	14E	35	NE	NE		Domestic	9999	68	0	0	0	103	Sep 6 1979	12
EDWARD HUBBARD	08S	14E	35	NE	NE		Domestic	0	70	0	0	0	97	Sep 13 1977	13
SHIRLEY DOBRAY	08S	14E	35	NE	NE		Irrigation	0	57	0	0	0	90	Feb 3 1973	14
Ed Huber			0					0	0	0	0	0	0	7-11-1985	15
AL BARGER	08S	14E	35	NE	NW			0	70	0	0	0	100	Apr 17 1976	16
GOEDHART & GOEDHART PARTNERSHIP	08S	14E	35	SW	SW	1514 east 3600 south	Commercial	0	91	12	8	-139	168	Jul 26 2000	17
GOEDHART & GOEDHART PARTNERSHIP	08S	14E	35	SE	SW	SAME	Commercial	0	164	8	0	116	0	Dec 11 1998	18
VANDYKE & SONS PARTNERSHIP	08S	14E	35	SE	SW	1548 E 3600 S	Commercial	0	91	8	0	0	125	Jul 12 2005	19
VANDYKE & SONS PARTNERSHIP	08S	14E	35	SE	SW	1548 E 3600 S	Livestock	0	91	8	0	0	125	Jul 12 2005	20
JOHN A CONNER	08S	14E	35	SE	SE		Irrigation	675	90	0	0	0	113	May 24 1960	21
EVELYN STRICKLAND	08S	14E	36	NE	NE	3503 SOUTH 1700 EAST	Domestic-Sir	0	62	6	0	19	0	May 24 1999	22
Blick			0				Irrigation	0	0	0	0	0	0	5-25-70	23
WILLIAM GRISSOM	08S	14E	36	NW	NE		Domestic	450	72	0	0	0	98	Dec 31 9999	24
MARILYN N MOORE	08S	14E	36	NE	NW		Domestic	0	62	0	0	0	98	Nov 20 1972	25
SHAWN MC CLELLAN	08S	14E	36	NE	NW	1649 BOB BARTON	Domestic-Sir	0	74	8	6	-18	103	Sep 25 2001	26
JOHN MADALENA	08S	14E	36	NW	SW	3560 S 1600 E	Domestic-Sir	0	64	6	0	18	0	May 18 1993	27
O G DAIRY	08S	14E	36	SE	SW		Stockwater	0	80	0	0	0	130	Jun 6 1978	28
BLICK BROTHERS FARMS PARTNERSHIP	08S	14E	36	SE	SW	1 MI SOUTH OF BOB BURTON	Irrigation	0	76	0	0	0	0	Apr 15 1995	29
BLICK BROTHERS FARMS PARTNERSHIP	08S	14E	36	SE	SW	MADELENA'S WELL 3600 S APPR	Irrigation	0	69	0	0	0	0	Jan 10 1996	30
FRANK HENSLEE	08S	14E	36	NE	SE		Irrigation	0	95	0	0	0	300	Mar 1 1968	31
JERIMY CRAIG	08S	14E	36	SW	SE	1676 E 3600 S	Domestic-Sir	0	88	6	6	122	230	Nov 16 2004	32
JOHN MADALENA	08S	14E	36	SW	SE		Irrigation	9999	70	0	0	0	85	Mar 2 1976	33
NEAL AMBROSE	08S	15E	31	NW	NW		Domestic	0	62	0	0	0	103	May 23 1978	34
MARK A STRICKLAND	08S	15E	31	NE	NW		Irrigation	675	59	0	0	0	80	Jul 1 1961	35
NEAL AMBROSE	08S	15E	31	NE	NW		Domestic	0	62	0	0	0	165	May 23 1978	36
LEONARD T FLEMING	08S	15E	31	NW	NW		Domestic	9999	75	0	0	0	110	Jun 2 1979	37
NORTH SIDE CANAL CO LTD	08S	15E	31	SW	NW		Domestic	0	62	0	0	0	98	Oct 9 1976	38
BILL C FLEMING	08S	15E	31	SW	SW	1740 E 3600 S	Domestic-Sir	0	88	6	0	19	0	Sep 5 1995	39
BILL C FLEMING	08S	15E	31	SW	SW	1740 E 3600 S	Domestic-Sir	0	99999	0	0	0	0	Sep 5 1995	40
MICHAEL J MADALENA	09S	14E	1	NE	NE	1697 E 3600 S	Domestic-Sir	0	88	6	0	0	140	May 20 2002	41
MC CARTER TULLER CHRONIC INC	09S	14E	1	NE	NE	WELL NO MW-4D	Monitoring	0	179	4	0	208	0	Apr 2 1991	42,43
MC CARTER TULLER CHRONIC INC	09S	14E	1	NE	NE	WELL NO MW-4S	Monitoring	0	80	4	0	110	0	Apr 1 1991	44,45
MC CARTER TULLER CHRONIC INC	09S	14E	1	NE	NE	WELL NO MW-2	Monitoring	0	195	0	0	0	0	Mar 25 1991	46
west end vet clinic			0					0	0	0	0	0	0		47
MC CARTER TULLER CHRONIC INC	09S	14E	1	SE	NE	WELL NO MW-1S	Monitoring	0	88	4	0	105	0	Mar 27 1991	48
MC CARTER TULLER CHRONIC INC	09S	14E	1	SE	NE	WELL NO MW-1D	Monitoring	0	196	4	0	208	0	Mar 26 1991	49
Jim Holley			0					0	0	0	0	0	0	8-14-2001	50
JEFF ASHMEAD	09S	14E	1	NW	NW	1601 E 3600 S	Domestic-Sir	0	97	6	6	18	155	Jul 6 2004	51

OWNER	TOWNSHIP	RANGE	SEC	QQ	Q	WELLADDRES	WELLUSE	PRDCT	S.W.L.	SRF. DIA.	CAS DIA	CAS DPT	DPTH	CONSTRUCTED	MAP NUMBER
JEFF ASHMEAD	09S	14E	1	NW	NW	1601 E 3600 S	Domestic	0	96	6	0	0	102	Jul 6 2004	51
MRS OWENS	09S	14E	1	SW	NW		Domestic	0	105	0	0	0	180	Apr 28 1981	52
CLEAR SPRINGS TROUT CO	09S	14E	1	SW	NW		Domestic-Sir	0	42	6	0	41	0	Jan 22 1992	53
JACK E DITEMAN	09S	14E	1	NE	SW		Domestic-Sir	0	36	6	0	78	0	Oct 11 1994	54
JOHN DAVID ERICKSON	09S	14E	1	SW	SW	1445 RIVER ROAD	Domestic-Sir	0	85	8	6	-117	118	Aug 29 2002	55
JOhn Blaire			0					0	0	0	0	0	0	12-21-1981	56
ED SOUTHFIELD	09S	14E	1	SE	SW		Domestic-Sir	0	115	8	0	120	0	Jun 22 1992	57
REECIE EVANS	09S	14E	1	NW	SE	126 COUNTRY CLUB DRIVE	Domestic-Sir	40	74	8	0	98	0	Apr 29 1994	58
VERN WHITE	09S	14E	1	NW	SE	118 COUNTRY CLUB DRIVE	Domestic-Sir	0	74	6	0	93	0	Oct 6 1993	59
Lauren Day			0					0	0	0	0	0	0	10-6-2006	60
RON BROWN	09S	14E	1	SW	SE		Domestic-Sir	0	70	6	0	154	0	May 19 1990	61
WESLEY FRIZEN	09S	14E	1	SW	SE		Domestic-Sir	0	110	8	0	143	0	Sep 16 1983	62
IDAHO POWER CO	09S	14E	2			3696 CANYON LANE RENTAL HOI	Domestic-Sir	30	18	8	6	-76	86	Nov 7 2000	63
wayne loosli			0					0	0	0	0	0	0		64
CLEAR LAKE COUNTRY CLUB	09S	14E	2	NE	NE		Domestic-Sir	0	23	6	0	99	0	Nov 11 1992	65
PAUL L BORCHARD	09S	14E	2	NE	NW		Irrigation	0	73	0	0	0	80	Aug 1 1973	66
PAUL L BORCHARD	09S	14E	2	NE	NW		Domestic	0	86	0	0	0	105	Sep 16 1972	67
CORY VANDYK	09S	14E	2	NW	NW	1511 E 3600 S	Domestic-Sir	0	110	6	6	110	185	Jul 11 2005	68,69
IDAHO TROUT PROCESSORS CO	09S	14E	2	NE	SE		Domestic-Sir	0	97	8	0	255	0	May 9 1997	70
CLEAR SPRINGS FOODS INC	09S	14E	2	NW	SE	clear lakes rd., nw processing offic	Test	650	104	12	12	240	432	Jun 12 2006	71
Tony Farino			0					0	0	0	0	0	0		72
sheldon myron			0					0	0	0	0	0	0		73
bert montgomery			0					0	0	0	0	0	0		74
GEORGE VAN NOY	09S	14E	3	NW	NE		Irrigation	980	80	0	0	0	98	Jul 30 1961	75
CECIL BRIM	09S	14E	10	NW	SE		Domestic	9999	28	0	0	0	130	Oct 5 1983	77
james ray construction			0					0	0	0	0	0	0		78
doug mason			0					0	0	0	0	0	0	8-2-07	79
EUGENE N COOK	09S	14E	11	NW	NE		Domestic	9999	192	0	0	0	260	May 3 1978	80
ALLEN R COLLINS	09S	14E	11	NE	NW		Domestic	9999	0	0	0	0	950	Oct 10 1979	81
AL COLLINS	09S	14E	11	NE	NW		Domestic	0	65	0	0	0	210	Jul 20 1979	82
ed Bordanaro			0					0	0	0	0	0	0	10-6-2006	83
WILLIAM K MILLER	09S	14E	11	SE	SW		Domestic	9999	106	0	0	0	106	Feb 1 1973	84
WILLIAM K MILLER	09S	14E	12	NE	NE		Domestic-Sir	0	42	6	0	19	0	Mar 12 1993	85
LEE BARNES	09S	14E	12	NE	NE		Domestic	0	86	0	0	0	220	Mar 20 1976	86
edna irish real estate			0					0	0	0	0	0	0	11-29-77	87
DON WATSON	09S	14E	12	SE	NE		Domestic	0	30	0	0	0	80	Sep 29 1981	88
john higley			0					0	0	0	0	0	0	6-23-2006	89
DOUG PETTINGER	09S	14E	12	NW	NW	1422 RIVER VIEW LN	Domestic-Sir	20	134	8	8	179	180	Jan 26 2005	90
DAVID ERICKSON	09S	14E	12	NE	SW		Domestic	9999	82	0	0	0	160	Apr 16 1974	91
MRS PENNINGTON	09S	15E	6				Domestic	0	40	0	0	0	125	Nov 4 1965	92
ANDY ANDERSON	09S	15E	6	NW	NW		Domestic	0	40	0	0	0	150	Oct 20 1965	93
MC CARTER TULLER CHRONIC INC	09S	15E	6	NW	NW	WELL NO MW-3D	Monitoring	0	185	4	0	218	0	Apr 4 1991	94
MC CARTER TULLER CHRONIC INC	09S	15E	6	NW	NW	WELL NO MW-3S	Monitoring	0	90	4	0	114	0	Apr 3 1991	95
NEAL AMBROSE	09S	15E	6	NW	NW		Irrigation	9999	85	0	0	0	170	Jul 18 1975	96
BRETT HUMPHRIES	09S	15E	6	NW	NW	1727 E 3600 S	Domestic-Sir	10	87	6	5	125	190	Aug 22 2005	97
STEVEN MILLER	09S	15E	6	SE	SE	RT 4	Domestic-Sir	0	180	6	0	19	0	Jul 2 1991	98
DAVID R SNEDIGAR	09S	15E	7	SW	NW	EAST SIDE OF HYW 30 3/8 MI S C	Domestic-Sir	0	124	6	0	230	0	Oct 25 1996	99
DAVID R SNEDIGAR	09S	15E	7	SW	NW	E SIDE HWY 30 3/8 MI S BRG	Domestic-Sir	0	114	6	0	162	0	Sep 9 1994	100