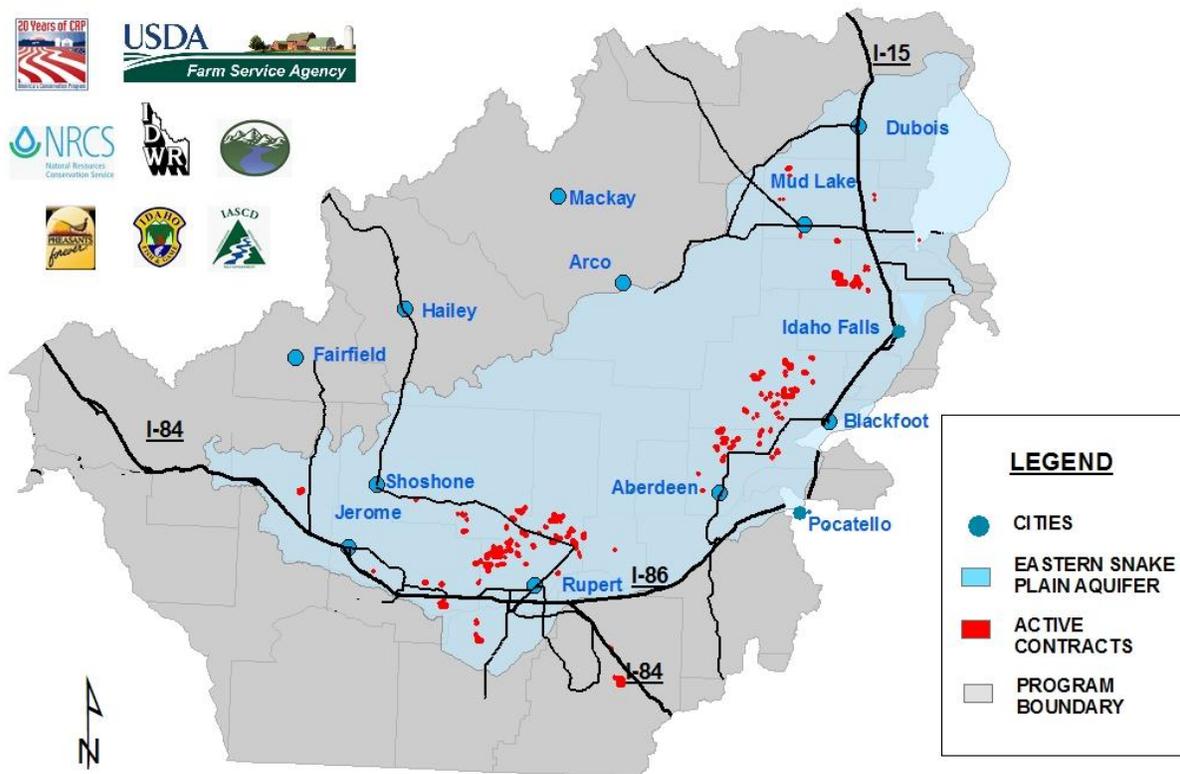


# Idaho's Conservation Reserve Enhancement Program Eastern Snake Plain Aquifer

## FY 2012 CREP Annual Performance Report (CEP-68R)

Conservation Reserve Enhancement Program Area Map



\*The CREP contracts displayed on this map are only approximate locations of contracts and are not intended to be used to identify specific locations of CREP enrolled fields.

## **Introduction**

### **Purpose**

The purpose of this Annual Performance Report (CEP-68R) is to fulfill the State of Idaho's commitment under the terms and conditions of its agreement dated May 2006 with the United States Department of Agriculture (USDA) and Commodity Credit Corporation (CCC) concerning the implementation of the Idaho Eastern Snake Plain Aquifer Conservation Reserve Enhancement Program. This report covers Fiscal year 2012, defined as October 1, 2011 through September 30, 2012.

### **Background**

The Idaho Conservation Reserve Enhancement Program (Idaho CREP) agreement between the State of Idaho, United States Department of Agriculture (USDA) and Commodity Credit Corporation (CCC) was signed in May 2006 for the improvement of water quantity and quality in Idaho. Other conservation issues addressed include the enhancement of wildlife habitat through establishment of vegetative cover to reduce irrigation water consumptive use and agricultural chemical and sediment runoff to the waters of the state. CREP is a part of the Conservation Reserve Program (CRP) operated by the Farm Service Agency (FSA). Other agencies involved with this program include Idaho Soil & Water Conservation Commission (SWC), Idaho Department of Water Resources (IDWR), Idaho Department of Fish and Game (IDFG), Pheasants Forever, and the Idaho Ground Water Appropriators (IGWA).

The Idaho CREP is designed to address issues related to water shortages in the Eastern Snake Plain Aquifer (ESPA). Increased use of ground water, drought, and changing irrigation practices have resulted in decreased spring flows of tributaries to the Snake River. The Idaho CREP has been established with the goal of retiring up to 100,000 acres of ground water irrigated land. This reduction of use is to provide the water savings of up to 200,000 acre-feet annually.

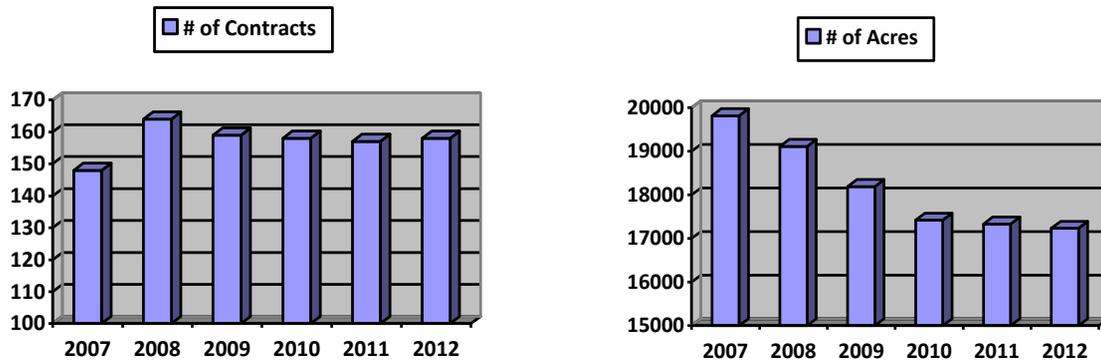
Pursuant to the terms of this agreement, SWC and IDWR are to provide an annual report to FSA summarizing the status of enrollments under Idaho CREP and progress on fulfilling other commitments of the program. The following report contains the program updates for fiscal year 2012.

## CREP PROGRAM STATUS FOR FISCAL YEAR 2012

### Number of Contracts and Acres Enrolled

The number of CREP contracts has remained consistent since inception however, the number of acres enrolled has decreased. Producers are reluctant to enroll land when commodity prices have significantly increased in recent years. Efforts to promote the Idaho CREP program included both formal and informal outreach to producers and coordination efforts with partner agencies. The CREP Coordinator and support staff attend monthly board meetings of local conservation districts within the CREP area.

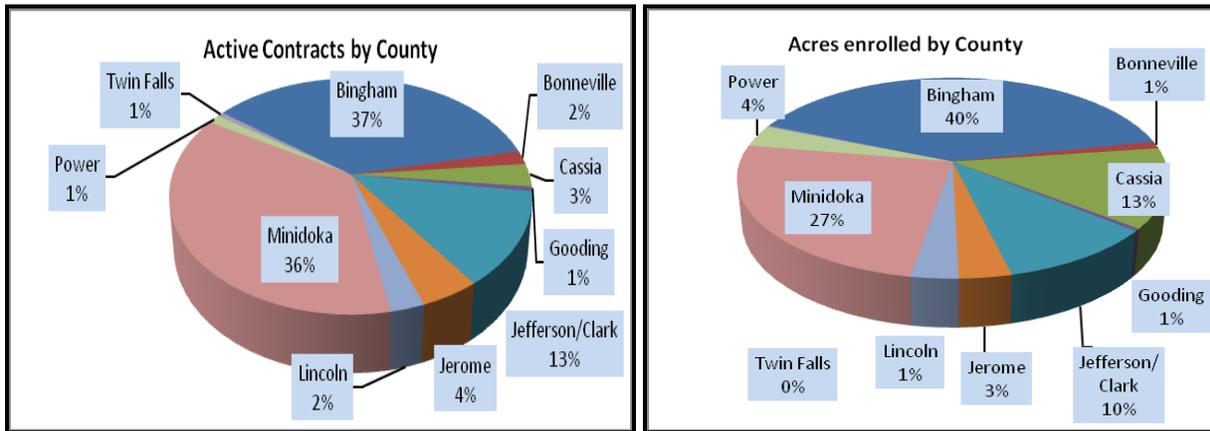
Federal Fiscal Year	Number of Contracts	Number of Acres
2007	148	19,818
2008	164	19,110
2009	159	18,189
2010	158	17,422
2011	157	17,333
2012	158	17,237



### Active Contracts by Administering County (as of 10/1/2012)

There are ten counties currently participating in the CREP program.

County	No. of Contracts	No. of Acres
Bingham	58	6,910
Bonneville	3	199.8
Cassia	5	2,223
Gooding	1	72.7
Jefferson/Clark	20	1,773
Jerome	7	585.1
Lincoln	3	238
Minidoka	58	4,594.1
Power	2	597.9
Twin Falls	1	43
<b>TOTAL</b>	<b>158</b>	<b>17,237</b>



**Level of Program Participation - Federal FY 2012**

FY 2012 concluded with 158 active contracts on 17,237 acres. Activities include:

- One new contract approved for 25 acres
- 55 contracts have Habitat Improvement Program (HIP) agreements on 9,243 acres
- Seven contracts on 1,400 acres were re-seeded
- 16 revisions to existing contracts
- Two contract terminations on 196.5 acres

SWC field staff physically visit each field at least twice during the year to determine the status of the seedlings and follow up with each participant depending on the status of the field. Certifications for established fields began in 2009. Approximately 4,000 additional acres contain established stands but have areas within some individual fields that do not meet the minimum requirements for contract certification and are not included in the following table. Only contracts with all fields meeting the requirements are listed below:

Federal Fiscal Year	Certified Contracts	Certified Acres
2009	7	685
2010	28	4,873
2011	13	446
2012	0	0
TOTAL	48	6,004

- Total reflects some certified contracts that have since been revised or terminated.

Of the total active contracts, approximately 90% of eligible practices are classified CP2 – Establishment of Permanent Native Grasses and 10% are classified as CP4D – Permanent Wildlife Habitat Non easement. Producers are attracted to the benefits of additional cost-share available under CP2 from IDFG. CP22 – Riparian Buffer (Cropland Only) and CP25 – Rare and Declining Habitat have not generated any interest from producers and CP12 – Wildlife Food Plot is not being promoted due to the nature of the practice using additional water to grow wildlife food and not to grow the native grasses.

## Activity Highlights

Retiring marginal land has allowed producers to focus their efforts on farming more profitable land. However, with the recent increased value of commodities, rental payment offers of CREP are not as an attractive option as it was when the program began. As a result, there have been few applications this past year, and several revisions prepared adjusting the boundaries from neighboring irrigated fields. Some locations are experiencing limited supplies of water, but because of the value of commodities, farmers are choosing to raise the lower water demanding crops such as wheat or other small grains, and make a higher return than if enrolled in the program.

- Other programs

Recent general CRP signups offer rental rates that have increased dramatically in some counties, and, although the rental rates are not as much as what CREP offers, the general CRP signup can be made without curtailing the water right during the enrollment period.

In addition to the annual demand reductions realized from CREP, NRCS (AWEP) programs of surface water conversions have also provided more than 35,000 ac-ft. of additional demand reductions on the ESPA. The savings realized with AWEP type projects are dependent upon having enough surface water available, while CREP is a more consistent water savings.

Weather

- Very little vegetation grew because of the extremely dry conditions. Because of the limited growth, no complete contracts could be certified and some stands that were extremely thick last year showed hardly any growth this year. Staff will be assessing the status this upcoming season for establishment.

Idaho Ground Water Appropriators, Inc.

- The Eastern Snake Plain Aquifer (ESPA) Comprehensive Aquifer Management Plan (CAMP) or ESPA CAMP establishes a long-term program for managing water supply and demand in the ESPA through a phased approach to implementation, together with an adaptive management process to allow for adjustments or changes in management techniques as implementation proceeds. Due to the inherent complexities in the management and responses of the river and aquifer to water budget changes, a very deliberate choice was made to incrementally implement the various mechanisms proposed in this Plan. The long-term objective of the Plan is to incrementally achieve a net ESPA water budget change of 600 thousand acre-feet (kaf) annually. It is projected that this hydrologic goal can be achieved by the year 2030 through implementation of a mix of management actions including, but not limited to,
  - aquifer recharge
  - ground-to-surface water conversions
  - demand reduction strategies.

The Plan sets forth actions which stabilize and improve spring flows, aquifer levels, and river flows across the Eastern Snake Plain.

The Eastern Snake River Aquifer (ESPA) Comprehensive Aquifer Management Plan (CAMP) objective was to reduce "demand for 250-350,000 ac-ft." as part of the 600,000 ac-ft. This was part of the 2008 ESPA CAMP goals which talked about Demand Reduction, including:

1. Surface water conservation.
2. Crop mix modification in the Aberdeen/ Bingham groundwater district.
3. Buyouts, buy-downs, and/or subordination agreements.
4. Rotating fallowing, dry-year lease agreements, and (CREP) enhancements.

In late 2011 & early 2012, the Idaho Ground Water Appropriators and (five out of ten ground water district members) recently purchased three large fish facilities in the Hagerman Valley. In purchasing these three large aquaculture facilities, it fulfilled the requirement of more than 160-200,000 ac-ft. of Demand Reduction for the Southern part of the ESPA CAMP. There is still a need for "Demand Reduction" in the middle and Northern sections of the ESPA. The overall goal for the ESPA CAMP is still 600,000 ac-ft

#### Increased Efficiency

SWC staff continues to use the merged shape file "road map" for planning field visits efficiently and selecting areas needing follow up. Staff now has updated equipment incorporating gps locations/photographs to pinpoint problem areas, and expedite compliance checks.

#### Increased Privacy Provision

Communication with partners is still a challenge as not all of the updated authorization forms have been signed.

#### Water SMART Clearinghouse

A website link to Idaho CREP has been included in the Department of Interior's Water SMART Clearinghouse website. The goal of the clearinghouse is to identify, coordinate, and integrate water conservation and sustainable water strategies. The clearinghouse can be accessed at [www.doi.gov/watersmart](http://www.doi.gov/watersmart).

## **Results of the Annual Monitoring Program**

CREP partners collect and analyze data annually to assess water and power savings, determine soil savings and average reduction of chemicals, and monitor wildlife habitat. Field checks are performed to assess grass establishment and modify efforts in weed management based on existing conditions. The total amount of acreage enrolled in Idaho CREP can be compared to retiring water usage from 123 pivots covering 140 acres each or 27 sections of land (640 acres = one section).

### **Water Savings**

IDWR monitors and documents actual water savings. Each acre enrolled into CREP equals actual water savings of approximately two acre-feet. With 17,237 acres currently enrolled, approximately 34,474 acre-feet of water is saved annually. The Idaho CREP is currently 17% of goal to save 200,000 acre-feet annually. The equivalent water savings is close to the annual consumptive use of approximately 330,000 people.

The extent of these water saving benefits are shown using the IDWR ground water model. The ESPA ground water model has been measuring Snake River flows and detecting moderate increases in spring levels from the Thousand Springs area and larger increases from the American Falls area. Model trends indicate continued increases for future years.

### **Power Savings**

IDWR collects information on actual power savings, which utilizes the USDA Natural Resources Conservation Service (NRCS) Energy Consumption Awareness Tool for irrigation. At an average of 3,950 kilowatts per hour per acre, it is estimated that 68,465,350 kilowatt hours are now being saved annually. This puts Idaho CREP at approximately 23% of the goal of saving 300,000,000 kilowatt hours annually.

### **Soil Erosion**

Due to the highly erodible nature of the farm ground enrolled in the CREP program, changing the ground cover from annual crops, stream, or canal banks to permanent vegetative cover provides average soil savings of two tons per acre per year due to water erosion and six tons per acre per year due to wind erosion. This equals soil savings of 34,474 tons per acre per year due to water erosion and 103,422 tons per acre per year due to wind erosion.

### **Pesticides and Nutrients**

Often attached to eroded soil particles are nutrients such as Nitrate (NO<sub>3</sub>) and Phosphate (PO<sub>4</sub>), pesticides, or other agricultural chemicals applied to the field. By reducing the amount of soil erosion, the potential amount of nutrients and pesticides reaching ground water or water bodies downstream is greatly reduced. Considering variables such as amount of fertilizer applied to a field, the type of fertilizer used, or crop rotation, it is estimated that 1.7 to 4.5 million pounds of fertilizer are no longer being applied to enrolled acres.

## Wildlife Populations and Habitat

Of special concern within the CREP area is habitat of grassland-nesting birds including sharp-tailed grouse and sage grouse. Sage grouse are of particular concern throughout the entire state due to a steady decline in population since monitoring began in the 1950's. More extensive declines have occurred in the Upper Snake region, which encompasses much of the Idaho CREP area<sup>1</sup>. Acres enrolled in CREP provide nesting, cover opportunities that should assist with improved populations that will continue to increase as the program continues. The following is information provided from Idaho Dept. Fish & Game:

### IDFG Brood Routes

During 2012, IDFG personnel conducted two roadside brood routes. These routes were in addition to the standard routes surveyed to develop trend data for grassland-nesting birds. Each route consisted of approximately 20 miles of roads driven in which the number and species of upland game was tallied. The IDFG staff will continue to conduct these surveys in an attempt to determine wildlife response in relation to the development of CREP projects. In addition to grassland-nesting birds, there are other wildlife species along these routes including pheasants, gray partridge and songbirds.

Route	Length (mi)	Pheasants Per Mile			
		2009	2010	2011	2012
Kimama Butte CREP	20.1	0.55	0.00	0.00	1.59
North Minidoka CREP	28	0.00	0.00	0.03	0.00

## Fish Habitat

The benefits of the CREP program peak during the irrigation season when the demand for irrigation water is the greatest. Voluntary reduction programs reduce the demand during this peak, allowing more water to stay in the aquifer. Aquatic habitat will continue to improve through the reduction of potential sediment, pesticides, and harmful nutrients entering the waterways. Improved water quality and increased stream flows can provide a higher quality habitat for various native aquatic species as well as sensitive species found throughout the Thousand Springs reach of the Snake River.

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<sup>1</sup> Conservation Plan for the Greater Sage-grouse in Idaho, Idaho Department of Fish and Game, 2006

## Grass Establishment

This year's growing season was not the same as last year. Extreme dry conditions created challenges for participants on how to proceed with weed control and stand establishment. It has also been observed that rodents are starting to increase in numbers which again creates concerns for this upcoming season.

### Spring 2012

- The cool wet spring of 2011 that provided excellent growth of grasses and infestations of mustards and cheat grass pressure provided just the opposite extreme of weather this year. Carcasses from last year's grass and weed growth remained and staff observed very little new growth of any grasses this growing season.
- Cheat grass and other annual weeds did not survive very long as there was no surface moisture available. Fields targeted for spring herbicide treatment were cancelled because the weeds had already succumbed from lack of moisture.

### Summer 2012

- Natural rainfall throughout the growing season was way below normal with Minidoka, Bingham, Jefferson Counties reporting 5 to 8 inches for the complete 2012 water year and less than 3 to 5 inches between the months of April and September. Producers stated that many areas within the reporting zones received even less amounts. Rain that did fall quickly evaporated by the winds that followed. There were complaints of blowing dust from conventionally tilled cropland, and rangeland but the CREP fields with permanent vegetative cover provided stability, capturing a lot of the windblown soil.
- As the summer progressed, so did the dry conditions. A burning ban was put into effect as the threat for wildfire was very severe. Some landowners had to delay their burning plans because of the dry windy conditions. Some were even concerned that a field management operation such as a clipping or harrow could create a spark from their equipment and potentially trigger a fire.
- Several wildfires during the year from neighboring federal lands reached into the CREP fields, and those will be evaluated for regrowth. It is anticipated that the burns from wildfires will actually benefit the stands and reduce rodent pressures.

### Fall 2012

- Staff will be meeting with producers to continue working towards getting stands established.
- With the open, warm fall season, and mild climate into the winter, there is a good chance that a December/January dormant seeding can be successfully accomplished.

# Recommendations for Program Improvement

The following recommendations are being made to improve the CREP program based on assessments of the prior fiscal year activity and other factors that may impact the state.

## 1. Continue seeking solutions to securely share information

IDWR, FSA, and SWC still needs to find a solution to create a common access data base located in a secure environment so that at least IDWR & SWC can access and update data. Still no formal action has taken place. Unnecessary time is still spent between agencies when records are not synched. One solution of taking the common database, and housing it in IDWR's system, so that changes made by SWC can be immediately displayed to IDWR should still be pursued. This can be done by a virtual private network (VPN), and password protected. There may be an annual cost to get this set up, but it would be minimal considering time saved amongst personnel time.

## 2. Coordinate additional CREP efforts targeting sage grouse

It is recommended that Idaho CREP partners continue to identify measurable objectives aimed at protecting sage grouse by increased existing efforts and proposing new measures. The permanent vegetative does provide continued cover, and nesting opportunities that didn't exist before when annually tilled.

## 3. Increase participation levels

Idaho CREP partners have sought some options for increasing participation to meet program goals.

- This year, the Idaho Rural Water Association, along with FSA, worked with SWC and printed new CREP informational brochures that are distributed at community events, grower meetings. The brochures are also displayed in the USDA service centers that producers can see and look at when they walk into the office.
- New contracts are difficult to obtain if additional incentives are not offered. This is a problem as land values have escalated from the increased value of commodities. Some producers are faced with options that they had not thought of before. Irrigated ground that is selling for more than twice the amount than when the program started puts pressure on whether they want to stay in the program or not. Sales prices in some areas have actually been enough to justify paying the liquidated damages when a contract is cancelled. There are some discussions of finding ways of integrating with other programs that are in the planning phases that may be able to help with increased participation with CREP.
- To date; no new CREP offers can be processed. This is on hold until a new farm bill is passed. Any existing contracts can still be implemented, and rental payments of existing contracts continue as normal.

## 4. Improve Field Technology

Updated tools have been purchased to improve field check efficiencies.

Newer equipment such as cameras equipped with GPS to tag pictures, record field data, precisely at the location of field checks minimizes the chance of losing locations of photo documentation. Current infrared photography is being utilized to help staff see "obvious" water usage or over sprays from adjacent irrigated fields.

## **5. Measuring Soil Quality**

Testing for soil quality before and after program enrollment was not considered at the beginning of the program. This information can be useful for measuring the effects of the CREP program on soil quality as the field changes from conventional tilled, irrigated cropland to permanent vegetative cover/wildlife land. It has been recommended that SWC staff create a work plan to collect the soil quality data on some sites at the beginning of the contract period, periodically thru the contract period, and upon conclusion of the contract. The data analysis can show baselines in soil quality and health including the effects on organic matter, compaction layers, water holding capacity, and pH levels. This feedback process still has not been initiated due to limited staffing, resources.

## Summary of Non-Federal Program Expenditures

### PROGRAM TOTALS – FY 2007 THROUGH FY 2012

FY 2007	\$5,230,360
FY 2008	\$35,390,421
FY 2009	\$3,814,925
FY 2010	\$4,436,640
FY 2011	\$5,271,232
FY 2012	\$1,528,156
<b>PROGRAM TOTAL TO DATE:</b>	<b>\$55,671,734</b>

Idaho Incentive Payments - \$3 million total budget	
Current: \$30 per acre (one-time payment to participants located within groundwater districts)	<b>\$490,390</b>

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### FY 2012 TOTAL STATE CASH AND IN-KIND CONTRIBUTIONS:

Idaho Department of Water Resources	<b>\$1,432,331</b>
Idaho Soil & Water Conservation Commission	<b>\$94,200</b>
Idaho Ground Water Appropriators	<b>\$750</b>
Idaho Department of Fish and Game	<b>\$875</b>
<b>TOTAL</b>	<b>\$1,528,156</b>

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### FY 2012 DETAILED SUMMARY BY AGENCY:

#### Idaho Department of Water Resources

<b>Water District Water Master Expenses</b>	
WD 01	\$1,218,531
WD 120	\$62,925
WD 130	\$71,310
WD 36A	
WD 110	\$69,905
WD 100	\$9,660
WD 140	
<b>TOTAL</b>	<b>\$1,432,331</b>

**Idaho Soil & Water Conservation Commission**

<b>Employee Wages</b>	<b>\$83,075</b>
Chuck Pentzer, CREP Coordinator, Jerome	
Brian Reed , Idaho Falls	
Mason LeFevre, Arco	
<b>Operating Expenses</b>	<b>\$11,125</b>
<b>Annual Loans/Grants</b>	
Resource Conservation and Rangeland Development Program	
Water Quality Program for Agriculture	
<b>TOTAL</b>	<b>\$94,200</b>

**Idaho Ground Water Appropriators**

Idaho Incentive Payments	\$750
<b>TOTAL</b>	<b>\$750</b>

**Idaho Department of Fish and Game**

<b>Employee Wages</b>	<b>\$875</b>
Sal Palazzolo	
<b>TOTAL</b>	<b>\$875</b>

Pursuant to the terms of the contract, it should be noted that the State of Idaho has met its obligation to use \$5 million to purchase permanent private water rights in the ESPA CREP area no later than December 31, 2010. During 2007, the State of Idaho partnered with the City of Twin Falls and the North Snake and Magic Valley ground water districts to purchase the Pristine Springs area for a total of \$26 million. The purchase of this area addressed a number of conflicts between spring water users and ground water users in the Magic Valley and provided the City of Twin Falls with a fresh water source to improve the quality of its water supply.<sup>2</sup> This expenditure was reported as a line item by IDWR in the Fiscal Year 2008 Annual Report.

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<sup>2</sup> From: US Fed News Service, Including US State News Article date April 28, 2008, Copyright © HT Media Ltd. All Rights Reserved. Provided by ProQuest LLC.