

Idaho's Conservation Reserve Enhancement Program Eastern Snake Plain Aquifer

FY 2013 CREP Annual Performance Report (CEP-68R)



SOIL & WATER
CONSERVATION COMMISSION

Conservation Reserve Enhancement Program (CREP)



*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 2013, defined as October 1, 2012 through September 30, 2013.

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 (ISWCC), Idaho Department of Water Resources (IDWR), Idaho Department of Fish and Game (IDFG), Pheasants Forever, and the Idaho Ground Water Appropriators (IGWA).

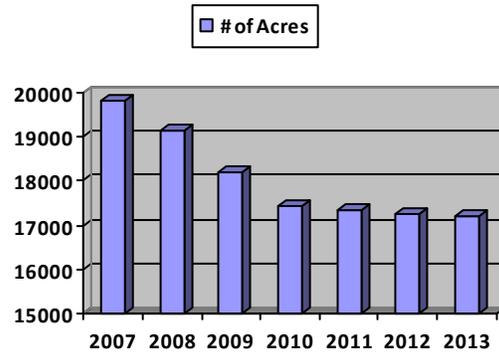
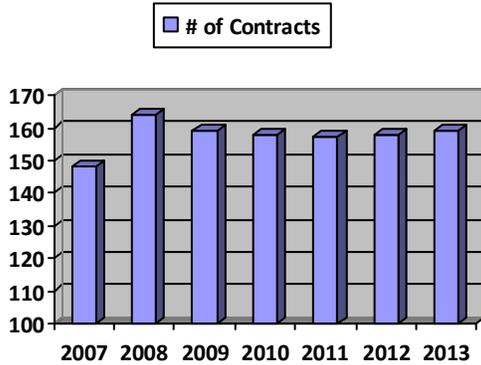
The Idaho CREP is designed to address issues related to water shortages in the Eastern Snake Plain Aquifer (ESPA). Increased use of ground water, drought, and changing irrigation practices have resulted in decreased spring flows of tributaries to the Snake River. The Idaho CREP has been established with 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, ISWCC 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 2013.

CREP PROGRAM STATUS FOR FISCAL YEAR 2013

The number of CREP contracts and enrolled acreage has remained fairly constant since 2010. A small reduction of enrolled contracts & acres may occur, but most of the remaining contracts should stay active as the cost of liquidated damages for contract termination increase each year. 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 also 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
2013	159	17,227

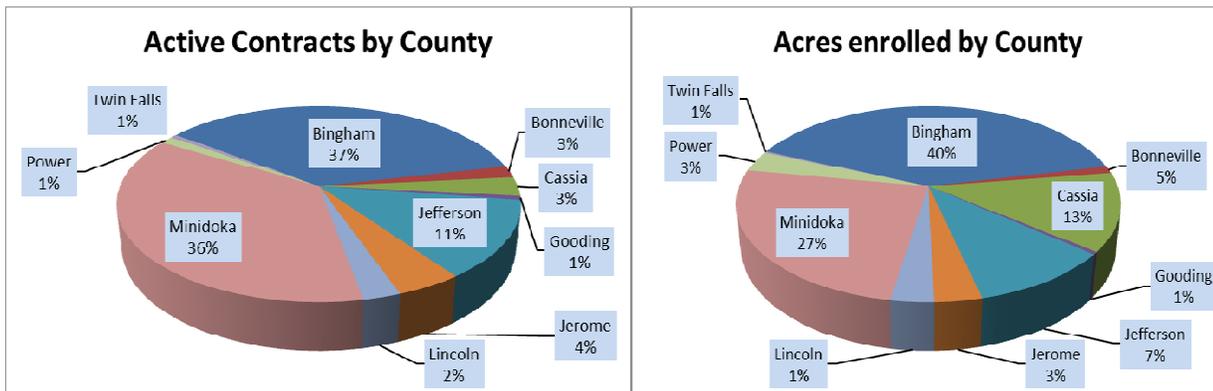


Active Contracts by Administering County (as of 10/1/2013)

Ten counties currently participating in the CREP program.

Administering County	No. of Contracts	No. of Acres
Bingham	59	6,901
Bonneville	5	798
Cassia	5	2,223
Gooding	1	73
Jefferson/Clark	18	1,176
Jerome	7	572
Lincoln	3	238
Minidoka	58	4,605
Power	2	598
Twin Falls	1	43
TOTAL	159	17,227

Level of Program Participation by Administering County - Federal FY 2013



The Federal FY 2013 concluded with 159 active contracts on 17,227 acres. Considerations to the numbers reported include:

- Acreage adjustments, revisions, are always occurring which fluctuates the total number of acres enrolled. Each revision has to have a new Agreement not to divert prepared to update the number of curtailed acres in the program.
- Revisions take almost as much time as preparation of new contracts. FSA has to prepare new shape files, and acreage adjustments for program activities, and the conservation plan and agreement not to divert has to be revised & re issued by IDWR and ISWCC.
- There have been many requests of contract transfer to other county offices which changes the number of contracts and acreages from one county to the next. .

Challenges to new enrollment

- Annual rental rates are perceived to be not as competitive with current commodity prices. Producers have been reluctant to enroll additional land when commodity prices have significantly increased in recent years. However, with many input costs rising, such as power, land acquisition, fuel, fertilizer, risk, the net return may not always equal a consistent rental rate that CREP offers.
- There is a lack of immediate threat of mandatory curtailment
- Fields on several contracts have been re-seeded this fall and many more are planned to be planted thru this winter up to April 1st of next year. All will be dormant seedings as most have removed their irrigation equipment or have equipment in disrepair.
- Producers on some fields with existing stands have chemically treated, or clipped / harrowed to minimize weed pressures, and provide more available water for their grasses.

Retiring marginal land has allowed producers to focus their efforts on farming more profitable land. With the last several years of 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 not been any new applications this past year, and several revisions have been 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, to earn a higher return in the short term than if enrolled in the program for the consistent rental rate over 15 years.

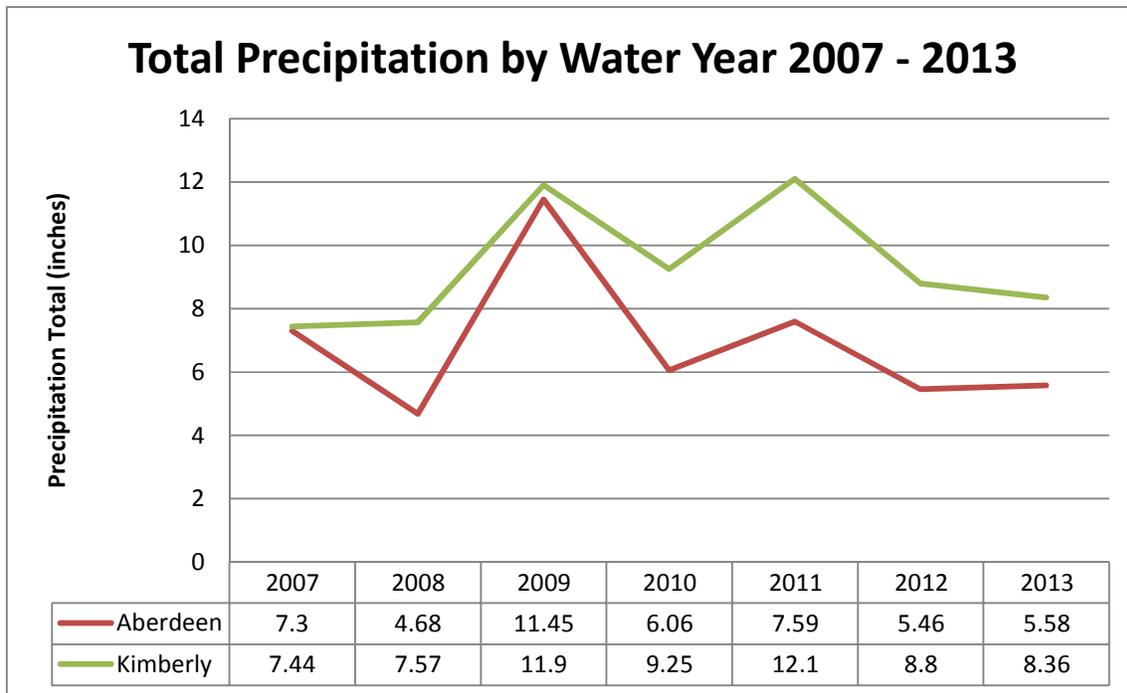
Grass Establishment

ISWCC 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. Contracts with all fields meeting the requirements are listed below: Approximately 2,400 additional acres have established stands but contain fields within the contract that do not meet the minimum requirements for complete certification and are not included in the following table.

Federal Fiscal Year	Established Contracts	Established Acres
2009	7	685
2010	28	4,873
2011	13	446
2012	0	0
2013	27	2,481
TOTAL ESTABLISHED TO DATE	75	8,485

- Total amount reflects some certified/established 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 flexibility of re seeding of CP2.
- Other available options for practices can include the following listed below, but without water, are not as attractive to implement:
 - CP22 – Riparian Buffer (Cropland Only)
 - CP25 – Rare and Declining Habitat
 - CP12 – Wildlife Food Plot

This year's growing season was somewhat similar to last year. Extreme dry conditions once again created challenges for participants on how to proceed with weed control and stand establishment. It has also been observed that rodents are slowly beginning to increase in numbers which again creates concerns for the next upcoming season. The chart below indicates the nature of the dry years that our contract participants have had while trying to establish the native grasses since CREP began. Most of the CREP contracts are located in areas best represented by the Aberdeen graph (red). The last 3 years have been very challenging to re seeding efforts and weed control.



Spring 2013

- As observed from the graph above, the very dry conditions of 2012 continued in many areas that limited weed pressure. Surviving grasses were able to gain a better stand and show more of a solid presence in many of the fields. Staff observed several new areas of native grasses thru this growing season. Cheat grass pressure is still a problem in many fields but some growers report they favor this to bare ground for protection from wind erosion.
- Cheat grass and other annual weeds did not survive very long this year as there was very little surface moisture available. Fields targeted for spring herbicide treatment once again were limited because the weeds had already succumbed from lack of moisture.

Summer 2013

- Natural rainfall throughout the growing season was way below normal once again. Producers stated that many areas within the reporting zones received even less amounts. Rain that did fall quickly evaporated by the winds that followed or came at none optimal times for the plant.
- As the summer progressed, so did the dry conditions. Many landowners decided not to burn because of the dry windy conditions and opted to perform a clip or mechanical type of operation such as a harrow. A favorite method is to knee high clip. This is to cut off weed seeds from developing, and it still allows grasses to re seed. Many areas have benefited with improved densities from natural regeneration.

- Several wildfires during the previous year from neighboring federal lands reached into the CREP fields were evaluated for regrowth. The fires did an excellent job in cleaning up weed residue and opened up to allow predators to work at reducing rodent pressures. The mature grasses seemed to be present and the stands were thriving. Staff will continue to monitor this next year for ongoing possibilities of weed pressures.

Fall 2013

- ISWCC Staff has been meeting with producers to continue working towards getting stands established.
- With the warm, open fall season, and mild climate into the winter, there is a good chance that a December/January dormant seeding can be successfully accomplished.
- Herbicide treatment for cheat grass control is being met with some resistance from producers. Past negative history with similar products for control has kept many from fall applying the herbicide. As a result, mechanical operations such as low clipping, or harrowing are about the only options available to help uproot young plants. In extreme cases where no native grasses are found, glyphosate is being used to completely kill all plants for a cleaner seed bed preparation.

As anticipated, there is quite a bit more time needed working with the challenging situations and finding equitable ways of weed control, seedbed prep, and re seedings. The ISWCC is making sure that there is adequate staff time available to meet these needs by allocating adequate staff hours to provide on farm individual attention to improve stand densities.

Outreach

- Two CREP working group meetings were held this past fy to keep all agencies apprised of the ongoing efforts implementing the program.
- Numerous presentations were made by ISWCC staff in most of the CREP counties and provided updated information and discuss current issues with some of the contracts.

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. This “freedom” and shorter contract commitment is another option considered by the landowners. In addition to the annual demand reductions realized from CREP, NRCS (AWEP) programs implementing surface water conversions have 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 favored as a more consistent water savings tool.

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, it was decided 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 an effort to implement part of the 2008 ESPA CAMP goals. Implemented practices included:

- Surface water conservation "soft conversions".
- Buyouts, buy-downs, and/or subordination agreements.

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

Increasing field Efficiency implementing CREP

ISWCC 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 Global Positioning Systems (GPS) to tag photos, 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. An added effort has been made with the IGWA services to obtain a mailing list that may be sent out to members for updated forms.

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.

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 17,227 acres currently enrolled, approximately 34,454 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 68,046,650 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 34,454 tons per acre per year due to water erosion and 103,362 tons per acre per year due to wind erosion.

Pesticides and Nutrients

Often attached to eroded soil particles are nutrients such as Nitrate (NO₃) and Phosphate (PO₄), 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, and 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 area¹. Acres enrolled in CREP provide

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

nesting, cover opportunities that should assist with improved populations that will continue to increase as the program continues.

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.

Recommendations for Program Improvement

1. Continue seeking solutions to securely share information

- IDWR, FSA, and ISWCC still needs to find a solution to create a common access data base located in a secure environment so that at least IDWR & ISWCC 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 ISWCC 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

- For the past two years, the Idaho Rural Water Association, along with FSA, worked with ISWCC 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 have been some discussions of finding ways of integrating with non-federal programs 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 has been utilized to help staff see "obvious" water usage or over sprays from adjacent irrigated fields. Utilizing smart phone technology is also used to determine precise locations of hay stacks, manure piles etc. to make sure nothing has been placed on the actual CREP field.

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 ISWCC 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.

6. Finding economic alternative solutions

- A soil conservation district and a FSA committee have asked about seeking economically viable alternatives to getting stand establishment. Their concern is that there is a high risk of spending money on native seed with uncertain results because of the dry weather that we have been experiencing. Discussions such as allowing intensive grazing of unestablished stands in exchange for a reduced rental rate that year would reduce weed growth and promote better seedbed preparation have been discussed. CRP rules have been pretty clear that grazing cannot occur on stands that have yet to be established. A valid equitable concern from the district and county committee may lead to further discussions thru this winter. If a pilot type project could be initiated, the value of high intensity, short duration grazing could provide a very feasible option for preparation of reseeding fields.

Summary of Non-Federal Program Expenditures

PROGRAM TOTALS – FY 2007 THROUGH FY 2013
 FY 2013 TOTAL STATE CASH AND IN-KIND CONTRIBUTIONS:

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
FY 2013	\$3,263,418
PROGRAM TOTAL TO DATE:	\$58,935,152

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

FY 2013 TOTAL STATE CASH AND IN-KIND CONTRIBUTIONS:		
Idaho Department of Water Resources	\$3,068,657	
Idaho Soil & Water Conservation Commission	\$193,886	
Idaho Ground Water Appropriators	**	
Idaho Department of Fish and Game	\$875	
TOTAL		\$3,263,418
FY 2013 DETAILED SUMMARY BY AGENCY:		
Idaho Department of Water Resources		
Water District Water Master Expenses		
WD 01	\$1,216,915	
WD 120	\$62,925	
WD 110	\$69,905	
WD 100	\$9,660	
TOTAL Water District Master Expense		\$1,359,405
Idaho Ground Water Appropriators		

Numbers included within IDWR report above.		
IDWR Projects		
Blue Lakes Pipeline Replacement project (loan)	\$1,500,000	
Walcott Recharge Project		
IWRB	\$80,000	
Project Partners	\$120,000	
Total IDWR Projects		\$1,700,000
IDWR Employees		
Neal Farmer		
Bruce Tuttle		
Linda Davis		
Total IDWR employee wages		\$9,252
Idaho Soil & Water Conservation Commission		
ISWCC Employees		
Chuck Pentzer, CREP Coordinator, Jerome		
Brian Reed, Idaho Falls		
Rob Sharpnack, Shoshone		
Carolyn Firth, Burley		
Jan Webster, Teri Murrison, Boise support		
Total ISWCC Employee Wages		\$107,440
Operating Expense		
Contract assistance	\$2,300	
Fuel, travel, office expenses	\$11,936	
Equipment	\$10,526	
Total ISWCC operating expense		\$24,762
Annual Loans/Grants		
Resource Conservation and Rangeland Development Program (Loan)	\$61,684	
TOTAL ISWCC program loans and grants (ESPA only)		\$61,684

Idaho Department of Fish and Game		
IDF&G Employee		
Sal Palazzolo	\$875	
Total IF&G Employee Wages		\$875

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.² This expenditure was reported as a line item by IDWR in the Fiscal Year 2008 Annual Report.

#

² 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.