

Annual Report 2011

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From Vision to Reality: Enhancing the Lower Boise River A Workshop for Stakeholders and Practitioners

The Lower Boise River is an invaluable resource to southwest Idaho's Treasure Valley, supplying water for agricultural, domestic and recreational uses, providing habitat for fish and wildlife, transporting wastewater and storm water, and providing a suite of other ecosystem and economic services. However, given its location, the Lower Boise River is subject to increased urban development, pollution and other impacts.

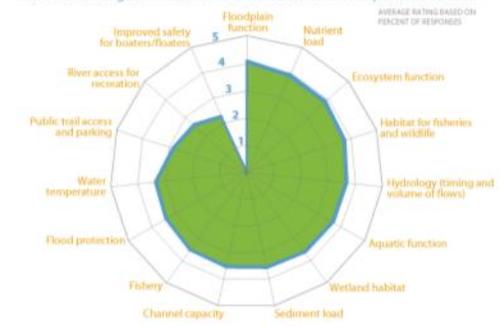
In early 2011, interested local stakeholders came together to plan a workshop on enhancement opportunities for the Lower Boise River. ESF Foundation Manager, Derek Risso, joined the workshop Organizing Committee; the Committee included non-profit and for profit organizations, volunteers and agency representatives. Over the year, the Organizing Committee sponsored a series of eight lectures to investigate pertinent issues and provide a foundation for the workshop, held on October 18th. Derek presented a lecture on what integrated watershed management plans are and how they can be implemented, based on

his experiences working with ESF. The workshop brought 106 of the area's practitioners, decision makers and interested citizens together for an in-depth discussion about the challenges and opportunities for environmental enhancement of the Lower Boise River.

- Continued on page 2

What Needs Improvement

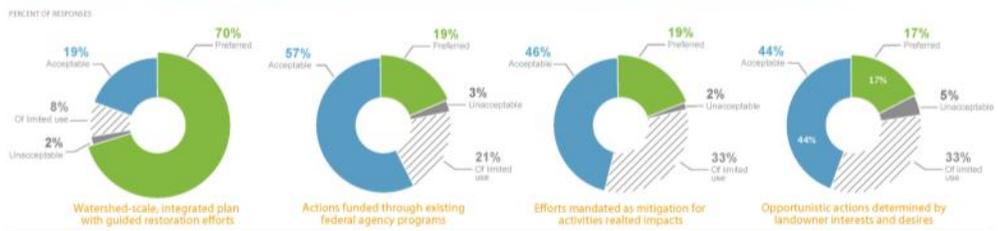
Rate the following Lower Boise River issues based on their importance or need.



Boise River InfoGraphics from Workshop Results

Approaches to Restoration

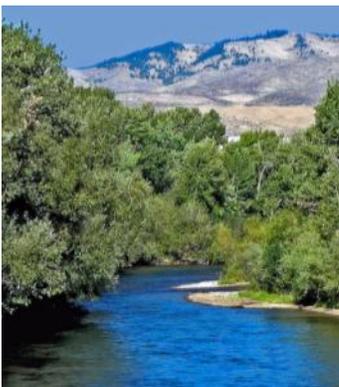
Please rate the following approaches to restoration/enhancement on the Lower Boise River (Preferred, Acceptable, Of Limited Use, Unacceptable).



Derek Risso, Elected Vice President of Idaho AWRA

We would like to congratulate ESF Foundation Manager, Derek Risso, on his election as Vice President of the Idaho State Section of the American Water Resources Association (ID AWRA) for 2011-2012. Membership with the ID AWRA provides a forum for water resources professionals to exchange ideas, promote research, and broaden the understanding of water resources management and issues in Idaho. ESF staff attended several ID AWRA networking luncheons and presentations. As

Vice President, Derek was the chair of the event planning committee, and therefore organized and hosted a dinner meeting on "Regional Restoration, Management, and Planning from a Multi-agency Perspective". Derek also helped to organize lunch time talks by local professionals on water resource issues. ESF sponsored the "Boise River Conference Brown Bags and Vision to Reality Workshop" that was hosted by the ID AWRA and Idaho Rivers United in October 2011.



Boise River, Idaho



Enhancing the Lower Boise River (Continued from front page)

The workshop brought together 106 of the area's practitioners, decision makers and active citizens for substantive discussions about the Boise River's past, present and future.

The focus was on the future, with the presentations and small group discussions designed to help participants form a vision for enhancement. The workshop brought a breadth of experiences, expertise, ideas, and desires into an open and inclusive discussion forum. Derek designed an online survey to gather data from workshop participants about the river, the workshop, and the path forward

for efforts to enhance the Lower Boise River. ESF Board Director, Zach Hill, designed a summary report of the workshop proceedings and results from the small group discussions and online survey following the workshop, which is posted on the Idaho Rivers United web site:

www.idahorivers.org/pdf/BoiseRiverWrkShpReport_Final_a.pdf

Participants showed interest

in continuing cooperative efforts for environmental enhancement of the Lower Boise River. Many members of the Organizing Committee are continuing to meet to organize opportunities for further networking, education, visioning and problem solving.

Ecosystem Sciences Foundation was a sponsor of the Boise River Workshop and funded online video access of the lecture series and workshop presentations.

Lower Boise River 'Vision to Reality' Workshop Breakout Sessions Results

Who do you represent?

In breakout work sessions participants were asked to describe who they represent or their affiliations. The tag cloud of words represents the scale of each response with the percentage in parenthesis.



What are your enhancement goals and interests?

In breakout work sessions participants were asked to describe their interests and goals for river enhancement. The tag cloud of words represents the scale of each response with the percentage in parenthesis.



What are your challenges?

In breakout work sessions participants were asked to describe the challenges they face in enhancement efforts. The tag cloud of words represents the scale of each response with the percentage in parenthesis.



What should happen next?

In breakout work sessions participants were asked what steps should happen next. The tag cloud of words represents the scale of each response with the percentage in parenthesis.



Data sources are based on the results of breakout work sessions involving all workshop participants.

Infographic design by Ecosystem Sciences Foundation

Lower Boise River 'Vision to Reality' Workshop Survey Results

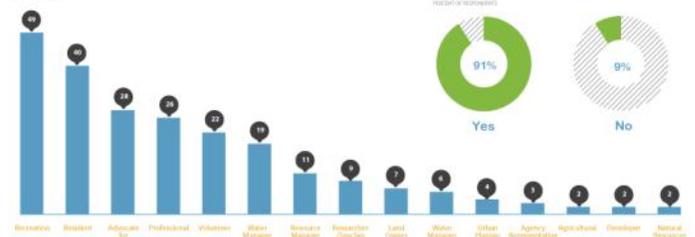
The From Vision to Reality Lower Boise River Workshop was conducted to increase opportunities for public and private ecosystem enhancement of the lower Boise River by establishing networks, building knowledge, envisioning possibilities and tackling challenges.

106 Workshop Participants

Interest in the River

What is your stake of interest in the Lower Boise River?

NUMBER OF RESPONSES



Willingness to Contribute

Are you interested or willing to contribute further to restore or enhance the Lower Boise River?

PERCENT OF RESPONDENTS



Your Role

What is your role and what actions have you performed on the Lower Boise River?

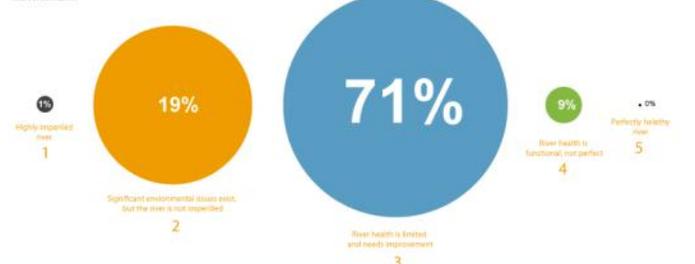
PERCENT OF RESPONDENTS



River Health

How do you rate the health of the Lower Boise River - on a scale of 1-5? 1 = highly impaired/non-functioning to 5 = perfectly healthy/no need for improvement.

PERCENT OF RESPONDENTS



Data sources are based on the results of a survey questionnaire that was given to all workshop participants. 100 of the attendees took the survey.

Infographic design by Ecosystem Sciences Foundation

Silver Creek Watershed Ecological Enhancement Strategy

Silver Creek lies within the Big Wood River watershed, in the heart of Idaho. As far back as 1917, Silver Creek was considered by sportsman to be the most highly productive trout fishery in the country. A 2001 fish population analysis found 2,800 fish per mile in Silver Creek—one of the highest density trout fisheries anywhere.

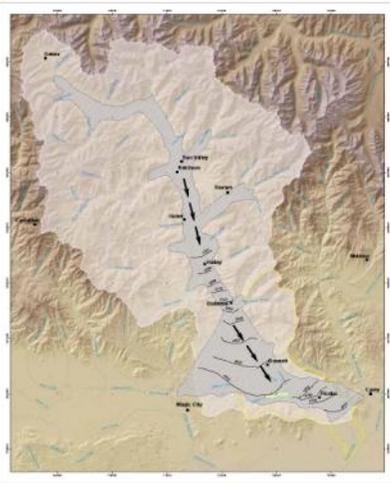
In January 2011, Ecosystem Sciences Foundation, in partnership with The Nature Conservancy (TNC), completed the Silver Creek Watershed Ecological Enhancement Strategy. The Silver Creek watershed, renowned for its trout fishery, is located in south-central Idaho and is home to TNC's famous Silver Creek Preserve. The comprehensive plan was developed to protect and enhance the Silver Creek Preserve and its greater ecosystem. ESF evaluated current watershed conditions to identify priority sites for restoration and enhancement, particularly to reduce sediment and thermal loading, Silver

Creek's principal threats, but also to address deposition and channel conditions, such as stability and erosion. The plan provides a three-tiered restoration approach and a defined monitoring and adaptive management program to inform and guide long-term restoration. ESF looks forward to partnering with TNC to implement the Enhancement Strategy and to foster continued stakeholder input throughout the watershed.

mountain West, Silver and Lov-ing creeks, and all the other streams within the subbasin, are a consequence of springs emanating from the aquifer. Irrigation and precipitation do influence the ecosystem, but the streams were created by the interplay of geologic and climatic forces long before human development.

What makes Silver Creek and its surrounding watershed so unique is that it is largely a spring driven ecosystem. Unlike most streams in the Inter-

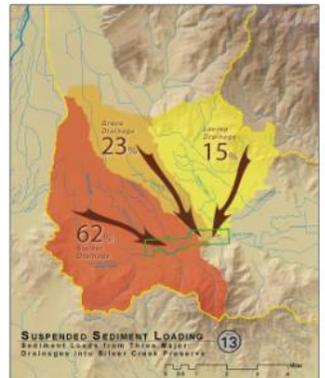
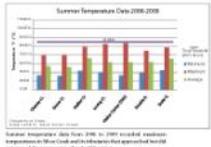
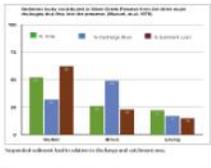
Silver Creek is decidedly unique, and as such, will require careful planning and cautious in-channel actions. This plan identifies priority sites for restoration and enhancement and provides a three-tiered approach to inter-



Groundwater Basin Flow Contours Map - Big Wood River Watershed
 Prepared by: Ecosystem Sciences Foundation
 Legend: 1 ft, 100 ft, 200 ft, 300 ft, 400 ft, 500 ft, 600 ft, 700 ft, 800 ft, 900 ft, 1000 ft, 1100 ft, 1200 ft, 1300 ft, 1400 ft, 1500 ft, 1600 ft, 1700 ft, 1800 ft, 1900 ft, 2000 ft, 2100 ft, 2200 ft, 2300 ft, 2400 ft, 2500 ft, 2600 ft, 2700 ft, 2800 ft, 2900 ft, 3000 ft, 3100 ft, 3200 ft, 3300 ft, 3400 ft, 3500 ft, 3600 ft, 3700 ft, 3800 ft, 3900 ft, 4000 ft, 4100 ft, 4200 ft, 4300 ft, 4400 ft, 4500 ft, 4600 ft, 4700 ft, 4800 ft, 4900 ft, 5000 ft, 5100 ft, 5200 ft, 5300 ft, 5400 ft, 5500 ft, 5600 ft, 5700 ft, 5800 ft, 5900 ft, 6000 ft, 6100 ft, 6200 ft, 6300 ft, 6400 ft, 6500 ft, 6600 ft, 6700 ft, 6800 ft, 6900 ft, 7000 ft, 7100 ft, 7200 ft, 7300 ft, 7400 ft, 7500 ft, 7600 ft, 7700 ft, 7800 ft, 7900 ft, 8000 ft, 8100 ft, 8200 ft, 8300 ft, 8400 ft, 8500 ft, 8600 ft, 8700 ft, 8800 ft, 8900 ft, 9000 ft, 9100 ft, 9200 ft, 9300 ft, 9400 ft, 9500 ft, 9600 ft, 9700 ft, 9800 ft, 9900 ft, 10000 ft.

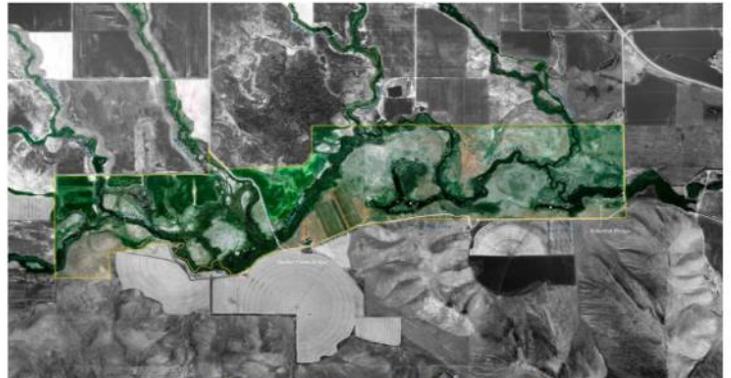


Prepared by: Ecosystem Sciences Foundation
 The Nature Conservancy
 Preserving nature. Restoring life.



SUSPENDED SEDIMENT LOADING
 Sediment Load from Three Major Drainages into Silver Creek Preserve

Sediment Loading
 Sediment deposition in the watershed has increased since the 1980s. The 1980s saw a significant increase in sediment loading, which was primarily due to agricultural activities. The 1990s saw a decrease in sediment loading, which was primarily due to conservation practices. The 2000s saw a significant increase in sediment loading, which was primarily due to agricultural activities. The 2010s saw a decrease in sediment loading, which was primarily due to conservation practices.



Silver Creek Preserve
 Ecosystem Sciences Foundation
 The Nature Conservancy
 Preserving nature. Restoring life.

ESF

Silver Creek Alliance

In early 2011, Ecosystem Sciences Foundation lead the formation of the Silver Creek Alliance - an association of conservation-minded landowners working collaboratively to practice and promote ecologically and economically sound land and water management in the Silver Creek watershed of Idaho. The Alliance was developed with the idea that successful resource management requires strong local partnerships, especially among landowners within the Silver Creek watershed who have a vested interest in the preservation and enhancement of Silver Creek and its tributaries. The Alliance was also developed to build upon the efforts outlined in the Silver Creek Watershed Enhancement Strategy the ESF prepared in partnership with The Nature Conservancy in 2010-2011.

ESF partnered with fishing guide Greg Loomis and fisheries biologist Steve Fisher to help form the Alliance. Greg and Steve have

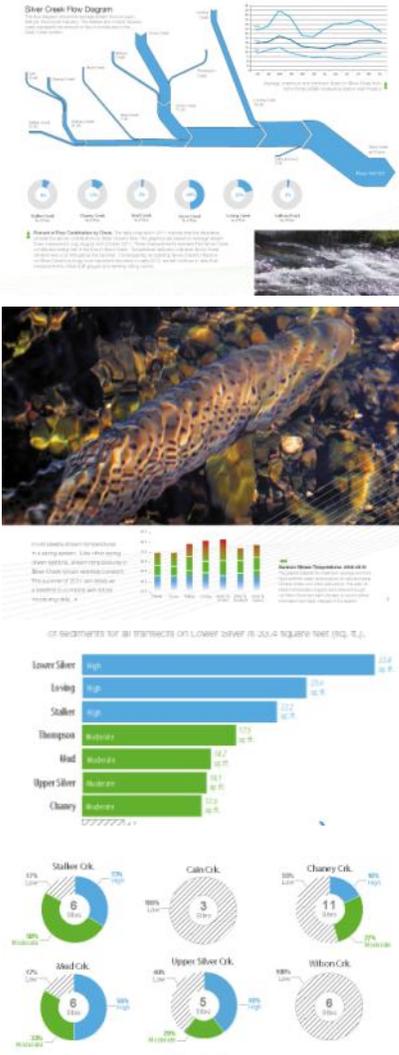
been working in the Silver Creek watershed for many years, and their experience and personal relationships with landowners were critical to communicating the goals and implementing the actions needed on the ground.

In its first six months, the Alliance was extremely busy. It generated an outpouring of positive interest as well as contributions from landowners and anglers. A family foundation, that would like to remain anonymous, gave the Alliance a great headstart with a generous donation for organizational expenses and the development of a monitoring program. This funding, in addition to the other very generous contributions, allowed ESF to accelerate 2011 data gathering on stream flow, temperature and sediment conditions that were identified as critical data gaps in the Silver Creek Watershed Enhancement Strategy. The most significant conclusions from the initial year were:

- Grove Creek contributes almost half of the stream flow to Silver Creek and appears to have the lowest temperatures of all the tributaries
- Stalker, Mud, and Lower Silver Creek exhibited temperatures above the healthy threshold for trout for very short durations. Otherwise, nearly all stream segments exhibited temperatures within the acceptable range for trout.
- Sediment accumulation was highest in Stalker, Loving, and Lower Silver Creeks. Upper tributaries appear to be less impacted by sediment.

Results are summarized in the 2011 Silver Creek Annual Report which is available on the Silver Creek Alliance website: www.silvercreekalliance.org.

Funding was also used to update Save Silver Creek (savesilvercreek.com), a website maintained by Greg Loomis that provides data and information about Silver Creek watershed.



Silver Creek monitoring and Annual report data / infographics.

Todos por el Agua and Watershed Projects

San Miguel de Allende, Mexico

The Foundation has been working in the Municipality of San Miguel de Allende, Guanajuato, Mexico, for almost a decade. Located in the Upper Rio Laja watershed, the City of San Miguel de Allende has been deemed a World Heritage Site. The area has been identified as a priority watershed within the critical larger Lerma-Chapalla system. Sadly, the watershed condition has been severely degraded due to poor land use practices, overgrazing, water extraction, and

more recently, climate change. ESF has implemented numerous projects within this watershed over the last decade. Projects have been accomplished in partnership with the local government, Mexican and US government agencies, universities, local and international non-governmental organizations (NGOs), and local residents. Several of the initiatives started by the Foundation have continued beyond our direction and intimate in-

volvement, including a well water testing program, rain-water harvesting efforts, and most recently, Todos por el Agua.

Through the Foundation's partnership with the Mexican NGO Salvemos Rio Laja (Save the Laja or SRL), Todos por el Agua was formed over 4 years ago. One of its long term goals is to create a local and reliable source of funding for watershed conservation
(Continued page 5)

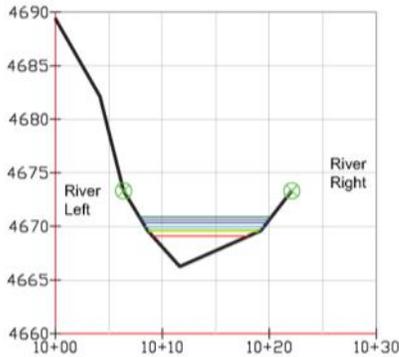
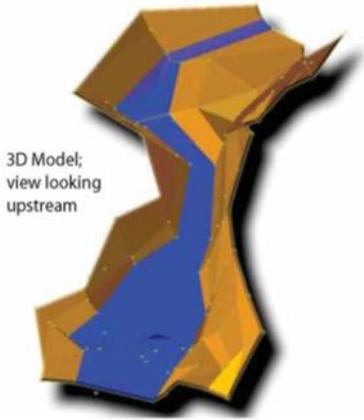


Native Mesquite seeds are collected for future restoration in the community of Tierra Blanca. Photo by SRL, A.C.

ESF

Big Wood River Flow Recommendation Study

Big Wood River
Reach 1 - Cross Section 400



Big Wood River flow study modeling .

The Big Wood River in Central Idaho has experienced altered flow regimes and reduced flow volumes since the construction of Magic Dam in 1910. Though the Magic Dam provides important services, such as hydroelectricity, flood mitigation and timely delivery of irrigation water, these activities do not coincide with water needs for the critical life stages of stream biota.

Beginning in 2010, the Wood River Land Trust (WRLT) and Big Wood Canal Company (BWCC) formed an agreement

that would provide additional flows into the Big Wood River during the non-irrigation season to support populations of rainbow and brown trout, particularly during spawning and migration. ESF was asked to evaluate the agreement and provide recommendations for the timing and distribution of flows. In January 2011, ESF completed the Big Wood River Flow Recommendation Study. Through HEC-2 flow modeling and a 22-year historical analysis, it was determined that 40 acre-feet

of water per irrigation day (as outlined in the agreement) would be beneficial for stream biota in most years, and that a minimum flow of 15 cfs would provide adequate depth for migration and cover for the two trout species during spawning periods.

The Wood River Land Trust sought to implement the plan during the 2011 irrigation season; however the aging infrastructure of the Magic Dam prevented a flow release of 15 cfs. In 2012, BWCC and WRLT, with input from ESF, evaluated alternative flow release scenarios and points from Magic Dam and its surroundings to achieve the 15 cfs flow. ESF will begin monitoring the effectiveness of the flow release once the two entities decide upon the most effective method of achieving 15 cfs in the river.



One of ESF's long term goals is to create a local and reliable source of funding for watershed conservation projects, through the Payment for Environmental Services program.

Todos por el Agua and Watershed Projects (Continued)

projects within the municipality, through the implementation of a Payment for Environmental Services program. It will take many years to build the institutions and develop the mechanisms to secure long-term funding for watershed projects. However, through their diligent work, Agustin Madrigal and Fernando Rivera of SRL and Josh Ellsworth, of ESF and Brandeis University, have already secured hundreds of thousands of dollars in funding for water and soil conservation, habitat restoration, environmental education, and rural training programs within the watershed.

In the short term, SRL (with help from ESF) has helped to secure project-specific funding from many governmental and non-governmental funding sources to implement watershed restoration and monitoring projects in several communities within the municipality. This funding has resulted in the planting of over 60,000 plants (Mezquite and Nopal cactus) on over 424 hectares (1047 acres).

ESF used 2011 as a transition year for its effort in San Miguel de Allende. It continued to support Todos por el Agua, and SRL's efforts in San Mi-

guel and the Upper Rio Laja watershed. Josh Ellsworth worked closely with SRL to further develop Todos por el Agua, including a site visit to Mexico and grant writing. ESF staff also used 2011 to perform preliminary planning and project development efforts for future programs in Mexico. In 2012, ESF will continue to support the ongoing effort of Todos por el Agua while developing and implementing new, related projects to address the needs of the Upper Rio Laja watershed.

Foundation Financial Review

Foundation Annual Highlights

		2011		
Income		In-Kind	Cash	Total
Compensation for Services	\$	-	\$ 31,690.00	\$ 31,690.00
Private/Public Contributions	\$	74,695.00	\$ 45,578.05	\$ 120,273.05
Grants	\$	-	\$ 118,000.00	\$ 118,000.00
Interest Income	\$	-	\$ 1,012.81	\$ 1,012.81
TOTAL INCOME		\$ 74,695.00	\$ 196,280.86	\$ 270,975.86
Project Expenses				
Silver Creek				
Expenses	\$	-	\$ 846.66	\$ 846.66
Labor	\$	7,140.00	\$ 11,500.00	\$ 18,640.00
Silver Creek Landowner Alliance				
Expenses	\$	-	\$ 9,218.54	\$ 9,218.54
Labor	\$	39,310.00	\$ 20,147.00	\$ 59,457.00
Subcontractors	\$	-	\$ 41,637.50	\$ 41,637.50
Big Wood River				
Expenses	\$	-	\$ 216.83	\$ 216.83
Labor	\$	3,010.00	\$ -	\$ 3,010.00
Mexico Programs				
Todos por al Agua				
Expenses	\$	-	\$ 3,348.22	\$ 3,348.22
Labor	\$	12,040.00	\$ 6,750.00	\$ 18,790.00
Mexico Project NGO	\$	-	\$ 18,840.00	\$ 18,840.00
IDAWRA				
Expenses	\$	-	\$ -	\$ -
Labor	\$	1,190.00	\$ -	\$ 1,190.00
Boise River Workshop				
Expenses	\$	-	\$ 39.80	\$ 39.80
Labor	\$	12,005.00	\$ -	\$ 12,005.00
ESF Development				
Expenses	\$	-	\$ 2,011.98	\$ 2,011.98
Labor	\$	-	\$ 460.00	\$ 460.00
Subtotal	\$	74,695.00	\$ 115,016.53	\$ 189,711.53
Charitable Donations				
Boise River Workshop Sponsorship	\$	-	\$ 100.00	\$ 100.00
Subtotal	\$	-	\$ 100.00	\$ 100.00
Overhead Expenses				
Operations and Rent	\$	-	\$ 12,600.00	\$ 12,600.00
Field Supplies	\$	-	\$ 2,441.36	\$ 2,441.36
Insurance	\$	-	\$ 3,740.51	\$ 3,740.51
Taxes	\$	-	\$ 61.97	\$ 61.97
Accounting/Legal	\$	-	\$ 1,956.00	\$ 1,956.00
Subtotal	\$	-	\$ 20,799.84	\$ 20,799.84
TOTAL EXPENSES		\$ 74,695.00	\$ 135,916.37	\$ 210,611.37
Revenue over Expenses		\$ -	\$ 60,364.49	\$ 60,364.49

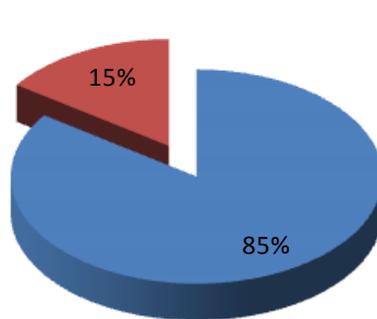


Foundation Financial Review

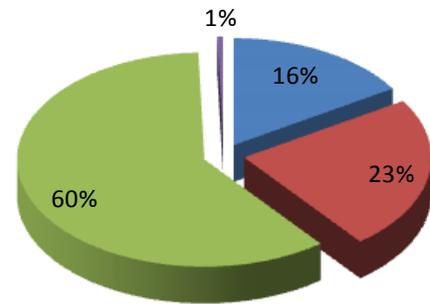
Board of Directors,

We have prepared a summary of the financial transactions of the Foundation for the year ending December 31, 2011. As of December 31, 2011 the Foundation had a residual cash balance of \$150,247. There were no outstanding accounts receivable or outstanding accounts payable.

Steven D Severn, CPA
SEVERN, WINKLE PLLC



■ Project Expenses
■ Overhead Expenses



■ Compensation for Services
■ Private/Public Contributions
■ Grants
■ Interest Income

Executive Director's Letter

Ecosystem Sciences Foundation enjoyed a busy and rewarding year in 2011 both in Idaho and abroad. In Idaho, we expanded our presence through new projects and partnerships. Foundation Manager Derek Rizzo was elected vice-president of the Idaho Chapter of the American Water Resources Association. In this role, he organized lunch lectures and dinner meetings to facilitate the dissemination of knowledge and to increase interchange within the water management community here in Idaho. As part of this effort, Derek became engaged with a group of local citizens interested in improving the management of the Boise River. In partnership with other stakeholders, ESF helped develop and sponsor a "Vision to Reality" workshop that focused on the enhancement of the Lower Boise River in southwest Idaho. The workshop provided a forum for in-depth discussion about the challenges facing the Boise River and opportunities for enhancement.

After successfully working with The Nature Conservancy to develop the Silver Creek Watershed Enhancement Strategy, ESF led the formation of the Silver Creek Alliance, an association of landowners within the watershed

dedicated to ecologically and economically sound resource management. Thanks to generous contributions from landowners and anglers, ESF was able to immediately implement stream flow, temperature and sediment monitoring within the Silver Creek watershed, as detailed in this report. ESF also completed the Big Wood River Flow Recommendation Study and looks forward to partnering with the Wood River Land Trust to implement the plan over the next year.

Our work abroad in Mexico continued as Todos por al Agua entered its fourth year. Our Mexican partner, Salvemos al Rio Laja (SRL) and ESF have successfully secured funding to implement watershed restoration and monitoring projects within the Municipality of San Miguel de

Allende, resulting in habitat restoration, such as the planting of native cacti, environmental education and training. The long-term goal for ESF and SRL remains the creation of a Payment for Watershed Services program that will provide lasting, reliable funding for such projects.

ESF is committed to working on projects that have real, measurable results for the communities in which the Foundation contributes and works. We look forward to our work in 2012 and are indebted to the grant-making institutions and partners who are assisting ESF in meeting its project goals and mission.

Mark Hill
Executive Director



*Visit us on the Web**ecosystemsciences.com*

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Mark Hill
Executive Director

Derek Risso
*Foundation Manager
and Board Treasurer*

Zach Hill
Board Director

Tim Maguire
Board Secretary

How can you help ESF?**Donate Now!**

The Ecosystem Sciences Foundation is dedicated to finding sustainable solutions to environmental, human health, and social issues worldwide. For us to be successful we need your support. Please help us in our efforts by donating to the Ecosystem Sciences Foundation.

All donations are tax deductible and as an ESF supporter you will receive the satisfaction of knowing that your money will help conserve our planet's resources and improve lives.

Donate Online at
www.ecosystemsciences.com

Donate by mail at
Ecosystem Sciences Foundation
Attn: ESF Treasurer
202 N. 9th St., Suite 400
Boise, ID 83702, USA

Foundation Mission

The mission of Ecosystem Sciences Foundation is to promote sustainable solutions to environmental issues. The Foundation advocates the wise application of science and design to protect the environment and restore damaged ecosystems. Ecosystem Sciences Foundation is an international environmental research organization dedicated to bridging the gap between scientific disciplines and resource management strategies.

The expertise and philosophy of the Foundation is broad and inclusive.

- The Foundation is an applied science and research organization dedicated to integrating the fields of ecology and design, specializing in the development of interrelated ecological systems.
- The Foundation believes that how we build our communities and develop the landscape is a critical component of ecosystem health and integrity.
- The Foundation believes in a collaborative and multi-disciplinary approach to environmental issues, and promotes solutions that are inclusive and comprehensive.

The Foundation actively develops and supports projects that have strong local support, have solid opportunity for the successful application of designs and is based on real, measurable improvement of the ecosystem.

The Foundation pursues research and operating grants, accepts donations and endowments, and makes in-kind or matching grants on a per project basis.

