

# Annual Report 2007

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## Rainwater Harvesting Systems In Place

Rural communities have clean drinking water to counter contaminated wells

Ecosystem Sciences Foundation's efforts to promote sustainable solutions to water quality and quantity problems in the Ignacio Allende watershed, Mexico were realized in 2007 with the installation of several rainwater harvesting systems in the small town of Augustin Gonzales. After over a year of project planning and design, funding was secured through the local municipal Department of Ecology (Dirección de Medio Ambiente y Ecología) to construct the rainwater catchment systems at a primary school and a health clinic in a community whose water was identified (through ESF's water quality testing program) as highly contaminated with fluoride. High fluoride levels cause dental and skeletal fluorosis and have negative effects on brain and central nervous system development. The rainwater catchment systems provide clean drinking water to those who need it most.

The establishment of these systems involved installing rooftop modifications to collect rainwater; gutters and piping to filter systems; constructing large cisterns for water storage during the rainy season; and pumping and filtering systems of stored water for human consumption year round. The installation of these systems was performed by one of ESF's partners in Mexico, the International Renewable Resources Institute ([www.irrimexico.org](http://www.irrimexico.org)). Ecosystems Sciences Foundation was on hand for the ground breaking in May, and the opening of the system in June.



Augustin Gonzales students showing off their smiles

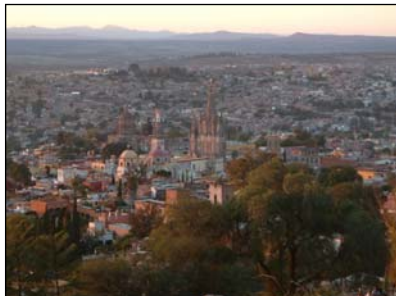
Just recently, the Municipality of San Miguel de Allende acquired funding to expand the rainwater harvesting program by installing 18 systems in 12 communities located in the municipalities of San Miguel and Dolores Hidalgo. These 12 communities had the lowest water quality as determined by ESF's 2006 Drinking Water Quality Testing Project.

In keeping with its mission, ESF identified the need for these programs, designed and trained local personnel, and provided expertise and support to launch the rainwater harvesting effort. These programs provide a model for the Foundation's ability to identify, design, and implement projects that are able to sustain themselves through local governmental and non-governmental partnerships well beyond the Foundation's involvement.



Groundbreaking and installation of rainwater harvesting systems at the primary school and health clinic in a Augustin Gonzales, Mexico.

## San Miguel de Allende, Mexico Urban Ecology and Environmental Assessment



San Miguel de Allende



San Miguel de Allende

The Municipality of San Miguel de Allende faces urban growth challenges that threaten its natural resources, its livability, and its status as a world renowned cultural enclave. There is a pressing need to evaluate the current status of the city's urban environment and its vision for the future. Urban growth in and around San Miguel will continue; however, there are vast opportunities to direct urban growth while also protecting and enhancing environmental resources.

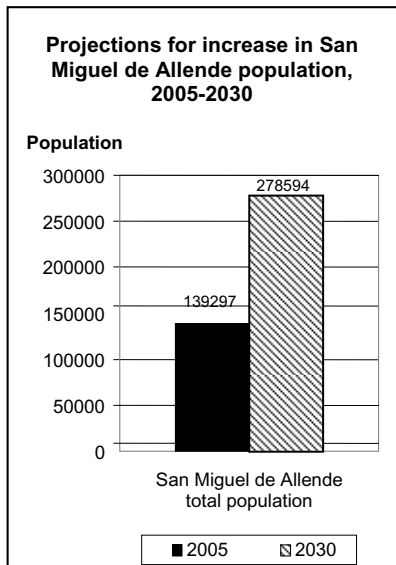
ESF, in partnership with the Department of Ecology of San Miguel, is developing a comprehensive Urban Environmental Assessment of the Municipality. This assessment will develop a base understanding of the local environmental conditions from which a discussion of policies and planning can occur.

By the year 2030, the population of San Miguel de Allende Municipality is projected to double. This poses serious planning challenges for urban areas with respect to water, wastewater, and other infrastructure needs. Concurrently, the underlying aquifer in the region is so depleted from over-pumping that it is expected to be exhausted within the next ten years. Concentrations of naturally occurring minerals have contaminated the water quality and rendered it undrinkable in some areas. Water demand to meet population increases will require careful urban and environmental planning.

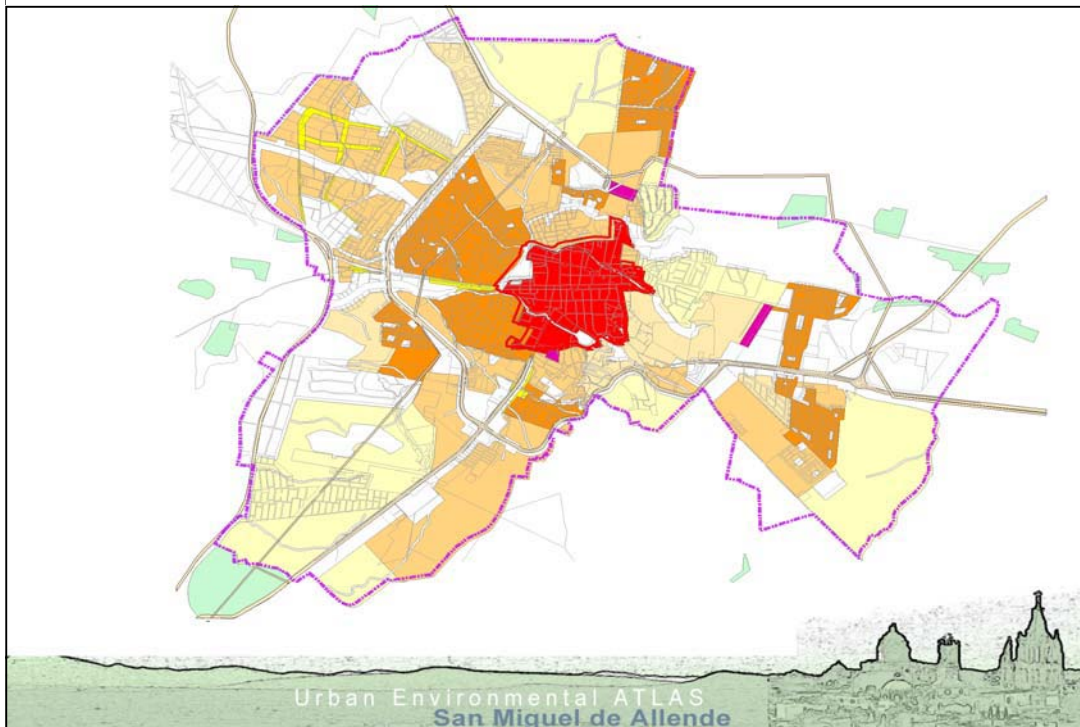
The arroyos and riparian corridors of the Municipality of San Miguel de Allende are among the most important aspects of the landscape and are critical to the health of the environment

and its people. Though the landscape shows many signs of being overburdened from increased development, it is still a viable and complex ecosystem that can be restored.

The development of a comprehensive Urban Environmental Assessment for the region will enable local developers to better understand the underlying ecology and environmental constraints of San Miguel and will encourage planners to design sustainable strategies to guide growth and protect local resources.



San Miguel's current population and projected population by 2030.



## Integrated Regional Watershed Management in Central Mexico



Watershed condition is an important consideration to the future management and sustainability of the Ignacio Allende watershed.



Urban water resources are important to the future of San Miguel de Allende.

ESF's vision for the Mexico program is to create an Integrated Regional Watershed Management (IRWM) plan that develops a long-term and comprehensive vision for the Rio Laja and the 7000 km<sup>2</sup> Ignacio Allende watershed. Since starting work in Mexico in 2001, we have focused on designing and implementing small and medium-sized water management projects

and building partnerships with local non-profit groups and government agencies.

In the summer of 2007, we agreed to help our partners spearhead an effort to develop an IRWM plan. The first step in this effort is to perform diagnostic work for the watershed, which will include GIS mapping, biodiversity studies, and socioeconomic impact analyses. The current strategy calls for the development of a stakeholder designed IWRM plan by December 2009. The document is currently being reviewed by local, national, and international panels of experts in the field.

ESF and our partners recognize that the numerous federal, state, and municipal government agencies, landowners, and NGOs working throughout the watershed

need to develop an institutional structure through which they can collectively plan and coordinate watershed conservation, restoration, and rural economic development projects.

Building on ESF's extensive experience with IRWM planning and our partners' intimate knowledge of Mexican institutions and policies, we created and are now promoting a Memorandum of Understanding that outlines a multi-year strategy for the development of an Inter-institutional Planning Group. This group will be comprised of representatives from domestic and international non-governmental organizations; government agencies at the municipal, state and federal levels; water user and landowner groups; and academic and research institutions.



Picachos Mountains in the Ignacio Allende watershed, Mexico. This is one area being protected by ESF's Payment for Watershed Services program.



Soil erosion is a major problem in many areas of the Ignacio Allende watershed in Mexico.



Agriculture is a fundamental and important aspect of watershed restoration and water conservation throughout the Ignacio Allende watershed.



Catie Ryan in the field in Central Mexico.

## Payment for Watershed Services: Bridging the gap between urban water users and rural farmers

Years of deforestation, over-grazing, and gravel mining within the Ignacio Allende watershed have led to a loss of biodiversity, caused extreme soil erosion and compaction, and reduced the soil's ability to retain water and recharge groundwater supplies. At the same time, groundwater extraction for agricultural, industrial, and residential use is three times greater than natural recharge and has resulted in a falling water table, pollutant contamination, and the loss of springs and wetlands.

Residents recognize that it is necessary to restore the hydrologic functions of the

watershed to provide a future source of clean surface water and to recharge the aquifer.

Since 2006, ESF and two of its local partners, Salvemos al Rio Laja, A.C. and Department of Ecology of San Miguel de Allende, have researched the development of a municipal level Payment for Watershed Services (PWS) program in San Miguel. PWS is a market-based approach to watershed protection. When implemented, the PWS program will request local water consumers to deposit into a publicly managed fund. The fund will offer multi-year contracts to landowners for restoring

watershed resources.

In 2007, the San Miguel Department of Ecology contracted the University of Querétaro and Cuerpos de Conservación de Guanajuato, A.C., to develop management and restoration plans for the Picachos Mountains and the Rio San Marcos drainage. The plans outline specific projects to be funded by the contributions of water users.

To publicize the project, and receive critical feedback, ESF presented the PWS project at the Meso-american Integrated Watershed Management Conference in Querétaro in September 2007.

## ESF Internship Program: Education & Practical Experience

In 2006, ESF continued to develop its Internship Program by taking on its second Master's Degree student in two years, Catie Ryan.

Catie is completing her Master's of Arts in Sustainable International Development at the Heller School for Social Policy and Management of Brandeis University. ESF hired Catie to work in San Miguel de Allende as a liaison for its Urban Environmental Assessment.

Catie's focus in the graduate program is natural resource management. As a former Peace Corp Volunteer in Asia, Catie has ex-

perience working with municipal level agencies and working with rural peoples to protect and manage natural resources. Catie also has knowledge about conservation and environmental efficiency from her professional experience in the United States. She brought these skills and knowledge to ESF and the Department of Environment and Ecology of San Miguel de Allende. The eight month internship began in September 2007.

Upon completion in April 2008, Catie will have gained valuable experience with an international environmental conservation organization and with municipal level

government agencies in Mexico.

ESF provided Catie with Spanish lessons to supplement her own studies, and provided her with office space and a stipend.

This is the second year that ESF has filled an internship position with graduate students from Brandeis University. The relationship has been highly worthwhile and ESF is proud to provide aspiring students with real world experience.

**ESF**

**ESF and Salvemos al Rio Laja have been awarded a USAID-FMCM grant sponsored by the State of Guanajuato, Mexico as part of the PWS project in the watershed around San Miguel de Allende.**

**In 2008, ESF will focus on developing partnerships with other NGOs in an effort to increase support for our projects in Mexico.**

**ESF Grant-Seeking and Project Partnerships**

In 2007, ESF actively pursued funding opportunities from both U.S. and Mexican-based grant makers. In early March, we were invited to submit a proposal to Conservation Food and Health Foundation for our Payment for Watershed Services project in Mexico. Though we made progress in formulating a good relationship with this funder, and provided a very high-quality proposal, the grant was not awarded in the final round due to lack of funding. Regardless, ESF continued to make progress on the PWS project through local support and in-kind contributions.

In an effort to improve our grant writing capacity, staff member Tamsen Binggeli attended a Grant Writing USA workshop. Workshop promoters reviewed and critiqued ESF proposals and we received useful input.

Additionally in 2007, ESF sent over a dozen letters of inquiry to U.S.-based grant makers seeking support for our PWS and Rainwater Harvesting projects. Both the Tinker Foundation and the Overbrook Foundation have expressed interest in our PWS program and have invited ESF to submit a full proposal.

In Mexico, ESF joined the municipal government of San Miguel de Allende and eight other NGOs in applying for a \$360,000 grant from the state of Guanajuato that will fund diagnostic work for the Rio Laja and Ignacio Allende watershed, which will include GIS mapping, biodiversity studies, and socio-economic impact analyses. We are pleased to report that ESF and Salvemos al Rio Laja have been awarded a \$18,665 USAID-FMCM grant sponsored by the State of Guanajuato, Mexico in support of the PWS project in the watershed around San Miguel de Allende.

**ESF’s Watershed Management Plan Deemed One of California’s Best Environmental Strategies**

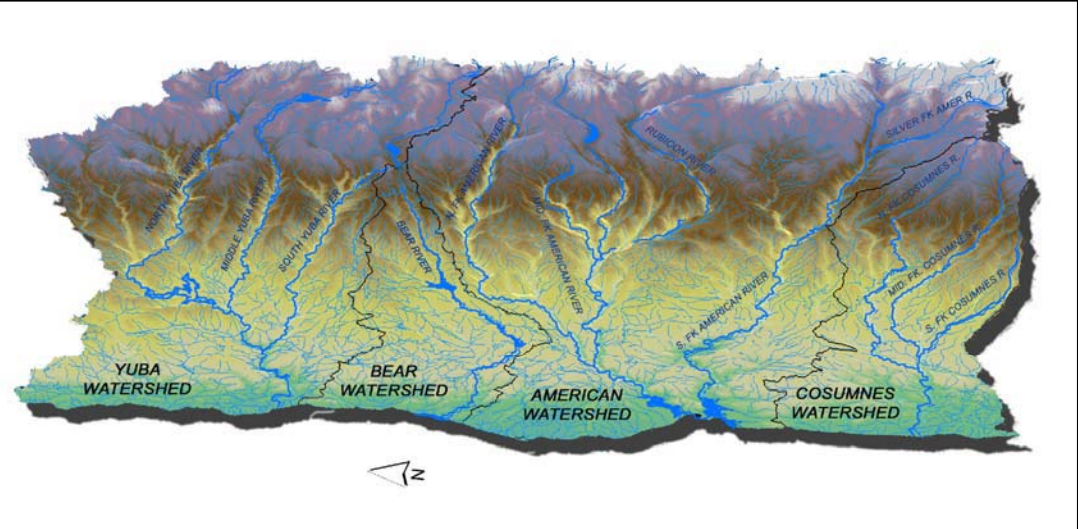
Ecosystem Sciences Foundation recently completed an Integrated Regional Watershed Management Plan (IRWMP) for a large region of the Sierra Nevada in California. The plan was ranked as one of the State’s best IRWM plans by the Department of Water Resources. Because the IRWMP is so highly valued, the restora-

tion and environmental projects identified by the plan will receive \$5 million in funding from the State. The plan was prepared for the constituents that established the CABY planning group, which is responsible for managing the water and landscape resources of the region; CABY is an acronym for Cosumnes, American,

Bear, and Yuba Rivers. ESF encourages and promotes integrated regional strategies to advance water management and conserve watershed resources. With the IRWMP, resource managers in the CABY region can use the strategies contained in the integration plan to conserve water and protect ecological resources.



American River in the Sierra Nevada, California



CABY Region of the Sierra Nevada, California

## Foundation Financial Review

### Foundation Annual Highlights

Income	In-Kind	Cash	Total
Compensation for Services	\$ -	\$ 3,954.79	\$ 3,954.79
Private/Public Contributions	\$ 99,390.00	\$ 63,787.10	\$ 163,177.10
Grants	\$ -	\$ -	\$ -
Exchange Rate	\$ -	\$ 5.16	\$ 5.16
<b>TOTAL INCOME</b>	<b>\$ 99,390.00</b>	<b>\$ 67,747.05</b>	<b>\$ 167,137.05</b>

### Project Expenses

Pit Resource Conservation District, USA			
Expenses	\$ -	\$ 350.83	\$ 350.83
Labor	\$ -	\$ 1,615.00	\$ 1,615.00
El Dorado Irrigation District, USA			
Expenses	\$ -	\$ 440.17	\$ 440.17
Labor	\$ -	\$ -	\$ -
Mexico Program			
Urban Assessment			
Expenses	\$ -	\$ 4,490.82	\$ 4,490.82
Labor	\$ 14,350.00	\$ -	\$ 14,350.00
Upper Rio Laja Watershed			
Expenses	\$ -	\$ 3,432.72	\$ 3,432.72
Labor	\$ 29,195.00	\$ 2,500.00	\$ 31,695.00
Rain Water Harvesting			
Expenses	\$ -	\$ 3,339.92	\$ 3,339.92
Labor	\$ 2,240.00	\$ -	\$ 2,240.00
Payment for Watershed Services			
Expenses	\$ -	\$ 1,113.38	\$ 1,113.38
Labor	\$ 23,105.00	\$ 2,500.00	\$ 25,605.00
Water Quality Testing			
Expenses	\$ -	\$ 1,998.20	\$ 1,998.20
Labor	\$ 3,220.00	\$ -	\$ 3,220.00
Mexico Office Expenses			
Expenses	\$ -	\$ 15,020.64	\$ 15,020.64
Labor	\$ 8,750.00	\$ 2,939.34	\$ 11,689.34
Foundation for Ecological Security			
Expenses	\$ -	\$ 1,746.55	\$ 1,746.55
Labor	\$ -	\$ 2,500.00	\$ 2,500.00
Internship Program			
Expenses	\$ -	\$ 5,199.10	\$ 5,199.10
Labor	\$ 7,700.00	\$ 30.00	\$ 7,730.00
Project Development			
Expenses	\$ -	\$ 419.83	\$ 419.83
Labor	\$ -	\$ 111.00	\$ 111.00
Grantseeking			
Expenses	\$ -	\$ 562.59	\$ 562.59
Labor	\$ 2,100.00	\$ 8,372.78	\$ 10,472.78
Subtotal	\$ 90,660.00	\$ 58,682.87	\$ 149,342.87

### Overhead Expenses

Operations	\$ -	\$ 4,826.74	\$ 4,826.74
Labor	\$ 8,730.00	\$ 1,815.50	\$ 10,545.50
Insurance	\$ -	\$ 1,394.00	\$ 1,394.00
Accounting/Legal	\$ -	\$ 1,137.00	\$ 1,137.00
Subtotal	\$ 8,730.00	\$ 9,173.24	\$ 17,903.24

<b>TOTAL EXPENSES</b>	<b>\$ 99,390.00</b>	<b>\$ 67,856.11</b>	<b>\$ 167,246.11</b>
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<b>Revenue over Expenses</b>	<b>\$ -</b>	<b>\$ (109.06)</b>	<b>\$ (109.06)</b>
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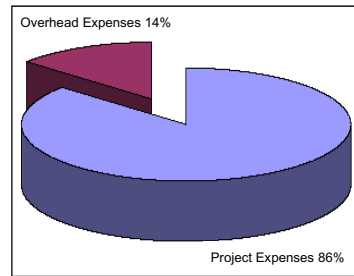
## ESF

## Board of Directors,

We prepared a summary of the financial transactions of the Foundation for the year ended December 31 2007. As of December 31, 2007 the Foundation had a residual cash balance of \$105,789. There were no outstanding accounts receivable and there were \$508 in outstanding accounts payable.

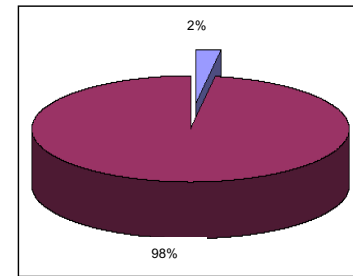
Steven D Severn, CPA  
SEVERN, WINKLE & MAGETTE

## Foundation Financial Review



### Use of Operating Funds

Direct Project Expenses	86%
Overhead Expenses	14%



### Sources of Income

Public/Private Contributions	98%
Compensation for Services	2%

## ESF Hosts Mayor of San Miguel on Visit to Idaho

San Miguel de Allende Municipal Presidente, Jose Correa, along with the Director of Ecology for the Municipality, Mr. Don Patterson visited Idaho as guests of ESF in July, 2007. While in Idaho the Presidente and his Ecology Director met with Boise, Idaho Mayor, David Bieter (photo below) and ESF Director Mark Hill to discuss issues of development and sustainability for the futures of their cities. Presidente Correa also discussed the ESF projects in central Mexico and solidified our mutual partnership. Presidente Correa was able to take time off and raft the Payette River with ESF.

## Executive Director's Letter

The year 2007 was a productive and rewarding year for ESF. The Foundation accomplished many notable projects, formed important and lasting partnerships, and was successful in promoting the Foundation's mission in both the United States and Mexico. ESF is succeeding as a small foundation, using limited resources with great efficiency.

We are achieving important goals with real, measurable results for the communities

in which the Foundation contributes and works.

In Mexico we dedicated the rainwater catchment systems project to bring clean, potable water to villages in the San Miguel de Allende Municipality of central Mexico. We identified villages most at risk from wells contaminated with arsenic and fluoride, to prioritize alternative water supply systems using rainwater collection techniques. The municipal government of San Miguel de Allende has matched ESF funding to build demonstration rainwater collection systems.

ESF continued its close working relationship with the Department of Ecology in San Miguel to advise and work on a variety of pressing environmental issues including urban ecology planning, gravel mining in rivers, wetland wastewater treatment, environmental education, and watershed restoration. We also continued our internship program with Brandeis University to focus on urban environmental systems.

In the United States, ESF completed a complex watershed planning effort for four river basins in northern California. We developed a unified Integrated Regional Water Management Plan for the Cosumnes, American, Bear, and Yuba river basins. This project is considered to be one of the leading environmental management strategies in the State of California.

Ecosystem Sciences Foundation reflects back on 2007 as a year of fulfillment from our substantial contributions to our Mexico Program. We have furthered the mission of the Foundation and continue to expand our accomplishments and experience. For 2008, the ESF Board plans to streamline our efforts in Mexico by capitalizing on our partnerships there, and to devote more resources toward our domestic projects.

Mark Hill

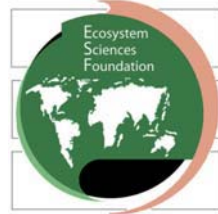
Executive Director



Boise, Idaho Mayor David Bieter (left) meets with Presidente Jose Correa of San Miguel in June 2007 at Boise City Hall while a guest of ESF.

ESF

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### ESF Board

Mark Hill  
*Executive Director*

David Varner  
*Foundation Manager*

Zach Hill  
*Board Director*

Tim Maguire  
*Board Secretary*

Derek Risso  
*Board Treasurer*

### 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.

Visit us on the Web

[ecosystemsciences.com](http://ecosystemsciences.com)

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  
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Donate by mail at  
Ecosystem Sciences Foundation  
Attn: ESF Treasurer  
280 N. 8<sup>th</sup> St., Suite 208  
Boise, ID 83702, USA



A view of Presa Allende and the Ignacio Allende watershed, Mexico.