

**State and Private Forestry  
FY 2014 Western Competitive  
Resource Allocation  
Single-State Project Proposal**

Filename			
State:	Idaho	Keyword:	TVShade
Administration Information			
Funds Requested:		\$ 300,000.00	
Match:		\$ 300,000.00	

Applicant Information					
1	<b>State Forestry Agency:</b>	Idaho Department of Lands			
	<b>Contact Person:</b>	Mary Fritz			
	<b>Address:</b>	3284 West Industrial Loop			
	<b>City:</b>	Coeur d'Alene	<b>State:</b>	Idaho	<b>Zipcode:</b>
	<b>Phone:</b>	(208) 666-8667	<b>Email:</b>	mfritz@idl.idaho.gov	

Project Information			
2	<b>Descriptive Title of Project:</b>	Treasure Valley Urban Forest Shade Tree Project	
	<b>Partnering Agencies / Organizations:</b>	Southwest Resource Conservation and Development Council (RC&D), Idaho Power (IP), City of Boise and City of Kuna (Cities), Canyon County Parks and Recreation (CCPR), Idaho Department of Environmental Quality (DEQ), Idaho Nursery and Landscape Association (INLA), Idaho Community Forestry (ICA)	
	<b>Project Duration:</b>	<input type="checkbox"/> One Year	<input type="checkbox"/> Two Years

National Relevance			
3	<input type="checkbox"/> Conserve Working Forest Landscapes	<input type="checkbox"/> Protect Forests From Harm	<input checked="" type="checkbox"/> Enhance Public Benefits From Trees and Forests

Project Overview	
4	<p><b>5 Points. 1,000 Characters Including Spaces – Provide a comprehensive but succinct overview of the proposed project that includes basic details of who is doing what, where, and why. This should give reviewers the “Big Picture.”</b></p> <p>Idaho’s Treasure Valley (TV) is the most populous region in the state with over 600,000 people. Idaho Forest Action Plan (FAP) strategies for this priority landscape area (PLA) include targeted use of urban trees to address critical area issues, i.e. air quality, stormwater and energy use. This project leverages resources and expertise of diverse partners (energy producers, air quality experts, planners and foresters) to design and implement a cost-effective, sustainable and replicable energy conservation/education program and plant ~7500 trees in specific locations by buildings to maximize long-term energy efficiency. Data and tools from a recently completed, robust geospatial tree canopy assessment will identify targeted locations and model the value of benefits over time.</p> <p>Results include increased tree canopy cover in an urban environment, reduced peak energy use through strategic shade tree planting, and increased air quality and stormwater benefits associated with urban trees.</p>

Project Budget							
	Grant	Leverage <sup>1</sup>			Source	TOTAL	
		Match	Non-Match				
	Funds requested	Applicant	Non-federal contributors	Applicant, non-federal, and/or federal	3 <sup>rd</sup> Party Contributor/s	Total project cost	
5	<b>Personnel / Labor:</b>	\$ 23,357		\$ 97,836	All Project Partners	\$ 121,193	
	<b>Fringe Benefits:</b>	\$ 9,540				\$ 9,540	
	<b>Travel:</b>			\$ 2,504	Cities, IP	\$ 2,504	
	<b>Equipment:</b>					\$ 0	
	<b>Supplies:</b>			\$ 141,692	Cities, IP	\$ 141,692	
	<b>Contractual:</b>	\$ 239,830		\$ 11,500	IP, ADF	\$ 251,330	
	<b>Construction:</b>					\$ 0	
	<b>Consolidated<sup>2</sup>:</b>		\$ 300,000			\$ 300,000	
	<b>Other:</b>					\$ 0	
	<b>Indirect Costs<sup>3</sup>:</b>	\$ 27,273				\$ 27,273	
	<b>TOTAL:</b>	\$ 300,000	\$ 300,000	\$ 0	\$ 253,532		\$ 853,532

<sup>1</sup> Funds qualifying as “match” must meet the same program requirements as grant funds (e.g., program authorities, non-federal sources). Other “non-match” leveraged funds do not need to meet the same standards (e.g., may include funds for construction, funds from other federal partners). Partnership with other USFS programs outside of State & Private Forestry, as well as other federal and state programs is encouraged. See FAQ online for more information.

<sup>2</sup> If any part of your match requirement is being covered through a consolidated payment grant (i.e. state spending of non-federal funds on activities that meet S&PF program authorities but are not tied to this proposal), please place it here.

<sup>3</sup> Indirect costs must be tied to an established rate. Waived indirect costs are an acceptable source of match.

## Context, Goals, and Objectives

15 Points. 2,000 Characters Including Spaces – What resource issue/s, threats, and/or opportunities does the project address? What is the desired vision or end state? What are the project goals (long-term) and objectives (short-term), and what impacts do you hope to achieve?

Treasure Valley is currently non-attainment for particulates and borderline ozone non-attainment, conditions that compromise public health & economic growth and increase the potential for regulations restricting economic development. Demand for electricity continues to grow and providing ample electric supply is critical for continued economic development. An increasing ratio of impervious to pervious surfaces has increased flooding and stormwater issues in area cities.

Tools and data from a recently completed canopy assessment are available to identify, prioritize and model benefits of targeted tree planting in locations that return the greatest benefits in addressing these issues. The partners involved in this proposal and that assessment are already initiating a pilot project using the assessment results. This proposal builds on these efforts.

### VISION:

Urban tree canopy is used and supported as a cost-effective tool to address critical issues within TV cities

### GOALS:

- Coordinated, regional afforestation efforts maximize benefits and increase efficiencies
- Canopy goals set within 2011-12 canopy analysis achieved for different land-uses
- Energy savings from strategic tree planting exceeds the cost of generating equivalent power from traditional sources, leading to ongoing project support from energy producers
- Public health and environmental resources protected

### OBJECTIVES:

- 1) Design and develop a cost-effective, sustainable and replicable energy conservation tree planting program; measure costs/benefits based on utility thresholds for adoption
- 2) Utilize dynamic prioritization tools and data from recently completed urban canopy analysis for this area to identify, prioritize and model most effective tree planting locations
- 3) Develop and implement an outreach/education strategy focused toward homeowners and decision-makers; host ~18 education and tree distribution events
- 4) Plant 7,500 trees in highest priority areas for environmental and energy benefits

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## Proposed Activities

20 Points. 2,500 Characters Including Spaces – What specific activities will be completed using which grant funds and/or which leveraged resources in the Project Budget? Who will do the work over what timeframe? How do the activities contribute to achieving stated project goals and objectives?

GF=Grant Funds, PF=Partner Funds (See Q7 for breakdown of partner contributions)

- 1) Coordinate stakeholder involvement, identify and implement integrated/strategic approaches to planting trees (GF=\$8,250; PF=\$64,523)
  - YEARS 1-3: Conduct 6 partner meetings and a 1-day stakeholder summit annually to manage and oversee project and ensure understanding of stakeholder priorities
  - YEAR 1: Using CommunityViz GIS tools, select neighborhoods and properties that maximize value of tree plantings for all partners. IP will provide GIS analysis of sites for energy benefits, Cities and DEQ will identify storm and air quality criteria. Partners synthesize the analysis, prioritize and select sites, and identify tree species that maximize energy and environmental benefits in a two county area.
- 2) Develop and implement coordinated education and messaging strategy focused on stakeholders and decision makers. (GF \$41,180, PF \$19,549)
  - YEAR 1: Identify gaps in current educational materials.
  - YEARS 1-3: Create on-line tools, hold workshops and planting demonstrations, develop one video and an updated TV tree planting guide and benefits brochure (4300 copies ea.). Recruit homeowner participation. Provide additional education on planting the right tree in right place, tree maintenance and care.
- 3) Purchase trees
  - YEAR 1: Evaluate nursery source requirements for preferred trees (local, regional, bare-root, balled and burlapped) and purchase trees (GF \$150,000, PF \$141,692)
- 4) Distribute trees (GF \$26,800, PF \$15,317)
  - YEAR 1: Hold 6 education and tree distribution events. Trees are planted by homeowners.
  - YEARS 2-3: Evaluate distribution method and modify—host 6 additional events each year
- 5) Measure and evaluate effectiveness (GF \$13,600, PF \$12,451)
  - YEARS 2-3: Monitor a subset of homes to verify correct tree placement, tree health, planting and care, and evaluate messaging effectiveness.
  - YEARS 2-3: Determine cost-effectiveness comparing project costs to projected kWh saved, air pollutants reduced, and stormwater pollutants mitigated as modeled for 5, 10, 15 and 20 years using CommunityViz and the canopy analysis.

Project coordination/administration by IDL (GF \$32,897). Match is through consolidation. FS approved Indirect is \$27,273.

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<b>Deliverables, Outputs, and Outcomes</b>	
<b>8</b>	<p><b>15 Points. 2,000 Characters Including Spaces – What are the project deliverables, outputs, and outcomes? What metrics or indicators will be used to measure and monitor progress? Outcomes and outputs should relate directly to proposed activities, goals, and objectives.</b></p> <p><b>DELIVERABLES/OUTPUTS</b></p> <ul style="list-style-type: none"> <li>• Average of 6 planning/coordination meetings/yr by project partners</li> <li>• 3 annual stakeholder summit meetings to promote actions/understand stakeholder priorities</li> <li>• Develop updated &amp; focused TV tree planting guide and benefits brochure; print/distribute 4,300 each</li> <li>• Produce a proper tree selection, placement, planting, and maintenance video aimed at maximizing tree benefits</li> <li>• ~18 education/tree distribution events at multiple venues</li> <li>• 7,500 urban trees strategically planted on private property</li> <li>• 7,500 homeowners receive targeted education</li> <li>• Cost/benefit analysis using utility energy efficiency criteria/thresholds; benefits modeling using CommunityViz GIS canopy assessment tools</li> <li>• Monitor/evaluate homeowner planting to ensure criteria are achieved and messaging is effective. Adapt as required.</li> </ul> <p><b>OUTCOMES</b></p> <ul style="list-style-type: none"> <li>• Strategic tree canopy increase w/an estimated value of &gt;\$323,000/yr. in ecosystem benefits (air quality/energy savings/reduced stormwater runoff) averaged over 40-years</li> <li>• A long-term, coordinated and replicable energy saving trees planting program supported by Idaho Power and partners</li> <li>• Informed residents, knowledgeable about proper planting, species selection and site identification, plant trees to maximize long-term community benefits</li> <li>• Trees used as a cost-effective tool to address critical urban issues</li> <li>• Improved public health and environmental protection</li> </ul> <p><b>MEASURES OF SUCCESS</b></p> <ul style="list-style-type: none"> <li>• Number of participating homeowners (educational events/planting trees)</li> <li>• Number of trees planted and % of project trees properly planted and located • % tree survival</li> <li>• Percent canopy cover increase in the TV • Number of partners and amount of resources to sustain efforts</li> <li>• Ability of program to meet/exceed utility cost-effectiveness thresholds • Sustained adoption of program by program partners</li> <li>• Tons of air pollutants and gallons of stormwater runoff mitigated</li> <li>• Replication of program beyond project area</li> </ul>

<b>Collaboration</b>	
<b>9</b>	<p><b>15 Points. 2,000 Characters Including Spaces – Describe the contributions and commitments that each partner has made toward the proposed project. What is the nature of their contributions (project planning, implementation, financial resources, etc.)? How does the project integrate S&amp;PF and/or other programs in a meaningful and complementary way that goes beyond “business as usual”?</b></p> <p>In 2010, Treasure Valley Tree Canopy Partners (including energy experts, planners, foresters, air quality experts and stormwater managers) implemented a tree canopy analysis. This project utilizes the analysis data and tools to design and implement an effort to maximize strategic investments in tree canopy. All partners met throughout 2012 &amp; 2013 to develop this proposal and each had a significant role in the project.</p> <ul style="list-style-type: none"> <li>• IP led project development. They will provide GIS analysis of planting sites for energy efficiency, purchase/distribute trees, educate homeowners, monitor effectiveness, evaluate cost-efficiency and use this project to move a nascent “Energy Saving Trees” program beyond its pilot stage. (\$181,920)</li> <li>• The Cities and CCPR provide forestry expertise and knowledge of local issues and ordinances that impact tree planting.</li> <li>• Arborists provide technical expertise, homeowner education, and tree storage assistance/ care during distribution. (Boise \$28,739, Kuna \$2,240, CCPR \$1,680, other cities \$1,679)</li> <li>• IDL provides technical and education expertise, helps develop/implement education strategy, and distributes trees (\$9,652)</li> <li>• DEQ provides guidance on state water and air quality issues and the benefits of using trees to mitigate these issues (\$3,090)</li> <li>• INLA coordinates local nurseries, growers and provides industry expertise on project planning, education, tree sourcing and distribution (\$10,752)</li> <li>• RC&amp;D will manage the project, coordinate stakeholder involvement, develop education and outreach strategies focusing on public awareness, and coordinates the purchase and planting of trees (\$3,780)</li> <li>• ADF grant funds will help with education, monitoring and tree distribution (\$10,000)</li> <li>• Homeowner’s plant and care for the trees</li> </ul> <p>The Idaho Lands Resource Coordinating Council, a joint advisory group for all Idaho S&amp;PF programs, selected this project as high priority for mitigating issues and addressing opportunities described in the canopy analysis.</p>

<b>Forest Action Plan Integration</b>	
<b>10</b>	<p><b>10 points. 1,250 Characters Including Spaces – How does the project align with stated priority issues, areas, and/or activities in the State Forest Action Plan?</b></p> <p>This project is within the Boise River Priority Landscape Area (PLA) –one of 12 PLAs identified in Idaho's Forest Action Plan in which to focus efforts. It addresses the following strategies for the Boise River PLA:</p> <ul style="list-style-type: none"> <li>• Implement TV canopy analysis tools to better understand and utilize tree canopy to address critical area issues (air and water quality, stormwater runoff and energy conservation) and engage agencies, planners and other partners</li> <li>• Future predicted growth is high throughout the TV. Plant resilient species for site conditions and predicted changes in climate. Increase canopy near building for energy conservation and over impervious surfaces for stormwater. Manage trees to ensure healthy community forests provide maximum benefits</li> <li>• Use local groups and partnerships to develop and implement community forest programs and treatments to mitigate issues</li> <li>• Provide education for targeted audiences on urban tree canopy benefits and tree care</li> </ul> <p>This project also promotes Idaho's State Energy Plan by establishing a cost-effective tree-planting model that meets energy efficiency cost tests.</p>

<b>Meaningful Scale</b>	
<b>11</b>	<p><b>10 Points. 1, 250 Characters Including Spaces – What is the scale of the project? Why/How will the scale of the project facilitate achievement of the stated goals, objectives, and outcomes?</b></p> <p>This project identifies and targets 7,500 planting sites with the highest benefit potential within the 240 square miles of developed and rapidly developing areas within TV; an area encompassing the urban growth boundaries of all cities in the metropolitan area of two counties and where air quality, energy and stormwater issues are greatest. The development of a focused, cooperative and streamlined tree purchase, distribution and planting program with this number of trees is sufficient to test, model, adapt and evaluate the cost-efficiencies necessary for long-term, sustainable program adoption by Idaho Power. The future estimated ecosystem benefits of project trees planted in strategic locations is significant—more than \$300,000 annually averaged over a 40-year period.</p> <p>The educational program and resources will be used throughout TV to inform homeowners on strategic planting to improve overall community health and save energy, though targeted to areas where planting will have the greatest impact.</p>

<b>Sustainability of Outcomes</b>	
<b>12</b>	<p><b>10 Points. 1, 250 Characters Including Spaces – What skills and capabilities will result from and extend beyond the life of the project; how? Can the project be replicated in other areas; how? What plans are in place or being developed to replicate or expand the project, to build on skills, capabilities, and lessons learned?</b></p> <p>This project is the next step in a long-term effort to increase and target investments in tree canopy to address critical TV issues. Utilizing tools developed through a recently completed canopy analysis; project partners will identify, prioritize and model benefits of current and future canopy increases in targeted locations, and develop a streamlined tree education, distribution and planting program. Similar programs exist in other areas, but in Idaho energy is comparatively cheap, and partners must demonstrate much higher cost-efficiencies for adoption as a sustainable program by utilities and others. This project builds on these other efforts and works within a broad partnership to increase efficiencies and demonstrate efficacy. Doing so will enable long-term, sustainable program adoption by Idaho Power and the ability for nearly any other utility in the country to replicate the program. ADF will promote the program and methodology through its Energy Saving Trees program. Engaging and educating homeowners builds support and promotes tree planting to improve community health. Project partners will utilize project results to increase their own investments in tree canopy to address energy, air quality and stormwater issues.</p>