

## **2014 Annual Report**

to the USDA Forest Service under Sponsor Award

#14-DG-11031600-055 for 2014 (NAU Projects 1002442-1002446) and

#15-DG-11031600-073 for 2015 (NAU Projects 1002742-1002747)



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## Summary

This report presents an integrated and coordinated series of actions for \$2.4 million awarded to the ERI in Fiscal Years 2014 and 2015 under CFDA 10.694, Southwest Forest Health and Wildfire Prevention.

The information provided herein reflects our annual progress as of 07/01/2015 and comprises the final report for 2014 deliverables conducted under #14-DG-11031600-055 (NAU Projects 1002442-1002446). 2015 deliverables under #15-DG-11031600-073 for 2015 (NAU Projects 1002742-1002747) have just started.

All of the activities (deliverables) summarized in this report respond to land manager and stakeholder requests and needs. The deliverables are informed by best available science and scientific evidence which is translated into the language and product appropriate for the target audience. The ERI actively delivers information using a variety of approaches that includes individual and group presentations and discussions, to printed and electronically accessible fact sheets, short technical reports, longer white papers and management reports, and peer reviewed archival literature.

**Annual Report to the USDA Forest Service  
For 2014 & 2015**

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# USFS FY14 Plan of Work - #14-DG-11031600-055

## FY14 Deliverables (Final) - #14-DG-11031600-055

<b>Project 1: Science Support for Collaborative Restoration and Conservation</b>	
<b>Deliverable</b>	<b>Status</b>
<b>1.1) Provide Support for the Four Forest Restoration Initiative (4FRI), a Collaborative Forest Landscape Restoration Act project</b>	
<p>a) Report on technical assistance for science and monitoring. This includes: small group leadership, assistance to help incorporate the adaptive management and monitoring plan into the final EIS, and monitoring plan implementation planning</p> <p>b) Summarize in a Fact Sheet lessons learned about leadership and administrative assistance to the 4FRI steering committee</p> <p>c) Report on IT support for the 4FRI Website and BASECAMP (an online collaborative work space), Website and Administration</p>	<p>a) Technical assistance for science and monitoring</p> <ul style="list-style-type: none"> <li>• Vosick. 12/4/14. Assistance for the Public Meeting to discuss the FEIS. 40 participants</li> <li>• Vosick and Waltz. 10/1-2/14 Assistance with visit from GAO Review and Field Tour</li> <li>• Covington, W and D. Vosick. 1/20/15. Presentation on 4FRI to the Arizona State Senate Committee on Rural Affairs and the Environment.</li> <li>• Vosick, D., 1/26/15, Presentation on 4FRI to the Working Session of the Flagstaff City Council and Coconino Board of Supervisors.</li> <li>• Greco, B. Conducted conference call with A-S NF Forest Leadership Team regarding ERI support to 2nd 4FRI NEPA Planning process. January 28, 2015</li> </ul> <p>b) Esch, B.E. 2015. Fact Sheet: Administrative Support in Collaborative Forest Restoration. ERI Fact Sheets (Doc# 194). Ecological Restoration Institute, Northern Arizona University. 2 p.  <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/asoc/D2015014.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/asoc/D2015014.dir/doc.pdf</a></p> <p>c) IT, Website and Administration Support</p> <ul style="list-style-type: none"> <li>• IT and Website Support. Continued maintenance of the 4FRI Website.</li> <li>• <u>Administrative Support for 4FRI includes:</u> Note-taking and coordination for Steering Committee Calls. Note-taking, coordination, site scheduling and management for General Meetings. Management of BASECAMP an internal on-line communication tool <ul style="list-style-type: none"> <li>➤ Steering Committee Calls: Generally occur on the 1<sup>st</sup> and 3<sup>rd</sup> Tuesday of the month and last 1.5 hours: 6/17/14; 7/15/14; 8/19/14; 9/2/14;</li> </ul> </li> </ul>

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	<p>10/7/14; 10/21/14; 11/4/14; 11/18/14; 1/6/14; 2/3/15; 2/17/15; 3/10/15; 3/17/15; 4/7/15; 4/14/15; 5/5/15; 5/19/15; 6/9/15; 6/16/15.</p> <ul style="list-style-type: none"> <li>➤ Stakeholder Meetings: 6/25/14; 7/23/14; 8/27/14; 9/24/14; 10/22/14; 12/11/14; 1/14/15; 2/25/15; 3/25/15; 4/22/15</li> <li>➤ Coordination for a Museum of Northern Arizona programs titled, <i>4FRI* and the Future of our Forests</i> Wednesday, April 30<sup>th</sup>. Over 100 people in attendance.</li> <li>• <u>Co-Leadership of Stakeholder Group:</u> Includes chairing meetings, agenda development, assisting with media requests, organizing field trips, support for public meetings, managing work flow, navigating conflicts and problem solving. Responsibilities also involved representing the stakeholders during the conflict resolution process. A co-chair serves a term of 6 months and substitutes or assists other co-chairs as needed. State funding is leveraged with federal funding to pay for co-leadership.             <ul style="list-style-type: none"> <li>➤ SHG Meeting Lead on: 10/22/14; 12/11/14; 2/25/15; 3/25/15</li> </ul> </li> <li>• <u>Other 4FRI Support Activities:</u> <ul style="list-style-type: none"> <li>➤ Vosick and Waltz. 10/1-2/14 Assistance with visit from GAO Review and Field Tour</li> <li>➤ Vosick. 12/4/14. Assistance for the Public Meeting to discuss the FEIS. 40 participants</li> <li>➤ Covington, W and D. Vosick. 1/20/15. Presentation on 4FRI to the Arizona State Senate Committee on Rural Affairs and the Environment.</li> <li>➤ Vosick, D., 1/26/15, Presentation on 4FRI to the Working Session of the Flagstaff City Council and Coconino Board of Supervisors meeting on 4FRI.</li> </ul> </li> </ul>
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<b>1.2) Provide scientific and technical support for other CFLRP pilots and emerging projects</b>	
<p>a) Deliverable: Report on activities to support the national CFLRP monitoring network</p> <p>i. The ERI will assist the CFLRP National Monitoring Network to hold (3) webinars in partnership with National Forest Foundation addressing monitoring barriers and lessons learned among all 23 funded CFLRP sites.</p> <p>ii. ERI staff will initiate and coordinate a Region 2 and 3 CFLRP Monitoring Network (outcome from R2/R3 CFLRP workshop) with (6) conference calls planned. Goals are shared lessons learned regarding adaptive management and monitoring plans and coordination of cross-site communication with the development of ecological indicator reports.</p> <p>b) Deliverable: Report on support for the national 5-year monitoring report required by Congress under the Collaborative Forest Landscape Restoration Act.</p> <p>i. ERI staff will participant with USFS Washington Office CFLRP Coordinator to develop and finalize a template for the CFLRP National Ecological Indicator (for 5-yr reporting) and roll out the template utilizing the CFLRP National Monitoring Network.</p>	<p>Deliverable a:</p> <p>i. Webinars</p> <ul style="list-style-type: none"> <li>• Waltz, A. 7/15/14. Webinar. CFLRP National Monitoring Network &amp; Peer Learning: Meeting national ecological indicators</li> <li>• Waltz, A. 9/24/14. CFLRP Nat Mon Network &amp; Peer Learning: Expert Panel reviews</li> </ul> <p>ii. Initiate and coordinate R2/R3 CFLRP Monitoring Network</p> <ul style="list-style-type: none"> <li>• Waltz, A. 2/2/15. Strategy planning with NFF on R2/R3 network - deferred to national workshop</li> </ul> <p>Deliverable b.i:</p> <ul style="list-style-type: none"> <li>• Waltz, A. 8/2/14-10/31/14. Panel Participant. National Indicator Expert Panel.</li> <li>• Waltz, A. 10/15/14-11/24/15. Work with USFS WO and TNC on CFLRP 5-yr report - 3 working calls</li> <li>• Waltz, A. 6/8/15. CFLRP National Ecological Indicator - steps for next reporting</li> </ul>

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<b>Project 2: Information Analysis to Assist Evidence-Based Conservation</b>	
Deliverable	Status
<b>2.1) Complete one review based on information needs identified on page 50-51 in “Restoring Composition and Structure in Southwestern Frequent-Fire Forests: A science-based framework for improving ecosystem resiliency” (RMRS GTR-310) using an established analytical framework</b>	
a) Deliverable: A systematic review addressing an information need. The review will be published to the ERI web site and delivered to practitioners.	a) Sánchez Meador, A., J. D. Springer, D.W. Huffman, J. E. Crouse, M. A. Bowker. “Ecological restoration treatments improve soil function in frequent-fire forests of the western United States: A systematic review”. Internal Review and anticipated for submission to Restoration Ecology later in 2015. ERI Manuscript # 186.

<b>Project 3: Ecological Monitoring and Evaluation for Adaptive Management</b>	
Deliverable	Status
<b>3.1) Develop and initiate new LEARN study in a mixed-conifer forest on the Coconino National Forest (Build from FY13)</b>	
a) Work with Coconino National Forest to develop treatment alternatives and study questions	a) Huffman, D., Greco, B, Sensibaugh, M., Sanchez Meador, A. 12/1/2014. Met with the Mogollon Rim District staff (5-hour meeting) to discuss treatment alternatives, design, and the “path forward” for our mixed conifer LEARN study.
b) Summarize baseline data and provide to agency staff	b) Huffman, D., Greco, B, Sensibaugh, M., Sanchez Meador, A. 12/1/2014. Conducted presentation (PowerPoint and handouts) to provide an update on our work and summarize baseline data we collected last summer. Attendees were also provided more detailed summaries in electronic form for their NEPA specialist.
c) Summarize reference conditions and present findings in journal article, conference, or workshop	c) Presentation at the 2014 Society of American Foresters’ National Convention, Session: Sustainability from a Forest Ecology and Silviculture Perspective. Rodman, K.C., Sanchez Meador, A.J., Huffman, D.W. & K.M. Waring. “Reference Conditions and Spatial Dynamics in Southwestern Mixed Conifer Ecosystems”. 10/10/14. Salt Lake City, UT. Approximately 25-30 attendees.

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<p><b>3.2) Quantify reference conditions for spatial patterns in warm/dry mixed conifer forests on the Coconino National Forest</b></p>	
<p>a) One manuscript for peer-reviewed publication</p> <p>b) Workshop and/or field visit for agency staff and interested stakeholders (e.g., 4FRI, Salt River Project, US Fish and Wildlife Service, Arizona Game and Fish, state and local government)</p>	<p>a) Rodman, K.C. 2015. Reference Conditions and Spatial Dynamics in a Southwestern Dry-Mixed Conifer Forest. MS Thesis. Northern Arizona University, Flagstaff. 173 p.</p> <p>b) 3/24/2015. Workshop for Forest Service and State Agencies: “Mixed Conifer Forest Ecology: Emerging Science”. Flagstaff, AZ. 26 Attendees. Presentations included:</p> <ul style="list-style-type: none"> <li>• Rodman, K. Assessing and analyzing mixed conifer spatial patterns in northern Arizona.</li> <li>• Huffman, D. Reference conditions and fire history at Black Mesa.</li> <li>• Springer, J. Effects of tree cutting and fire on understory vegetation in mixed conifer forests.</li> <li>• Waltz, A. Treatment effectiveness of mixed conifer treatments in the Wallow Fire.</li> <li>• Sanchez Meador, A. Overview of the mixed conifer LEARN project on Mogollon RD</li> </ul>
<p><b>3.3) Wildlife responses to restoration and hazardous fuels reduction treatments</b></p>	
<p>a) Cancelled as the result of reduced funds</p> <p>b) Report on pretreatment conditions and progress of the Flagstaff Watershed Protection Project (FWPP) wildlife monitoring</p> <p>c) Cancelled as the result of reduced funds</p>	<p>b) “Mexican Spotted Owl Habitat monitoring Flagstaff Watershed Protection Project (FWPP) Dry Lake Hills Area”. Progress report prepared by Huffman, D., J. Crouse, M. Stoddard, W. Chancellor, J. Roccaforte. Delivered to partners at U.S. Fish and Wildlife Service, US Forest Service, Greater Flagstaff Forests Partnership (GFPP) and the City of Flagstaff. <a href="#">Link to document</a></p>



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<b><i>Project 4: Understanding and Solving the Economic, Social, and Political Issues and Opportunities of Ecological Restoration</i></b>	
<b>Deliverable</b>	<b>Status</b>
<b>4.1) Actions and a case study to increase understanding of innovative funding approaches for achieving forest restoration and wildfire risk reduction.</b>	
<p>a) Provide technical support to implement innovative funding streams.</p> <p style="padding-left: 20px;">i. Deliverable: Report on activities to support implementation</p>	<p>a) Technical Support</p> <ul style="list-style-type: none"> <li>• Vosick D. 2014. 10/9-10/14. Finding Solutions: Healthy Forests, Vibrant Economy. Moderated Panel on local impacts of fire and flooding. Provided conference summary and facilitated a Q and A at the conference. 200 people. Included weekly planning meetings.</li> <li>• During calendar year 2014 and 2015 the ERI worked with Cori Dolan from the University of Arizona to facilitate a conversation between the Coronado National Forest and nonprofit organizations in Southeastern Arizona to identify ways to accelerate restoration on the Coronado National Forest. The Scope of work was to:               <ol style="list-style-type: none"> <li>1. Serve as Lead Coordinator for Southern Arizona restoration funding effort, including convening partners, coordinating meetings and handling all administrative logistics.</li> <li>2. In cooperation with the other members of the coalition, develop educational materials to explain the goals of and potential mechanisms for the innovative funding effort.</li> <li>3. In cooperation with other members of the coalition, identify and interview a minimum of ten conservation leaders, business representatives, and elected officials in Southeastern Arizona to assess their reaction to the project and to uncover potential funding mechanisms that can be used to accelerate restoration.</li> <li>4. Research the most promising funding mechanisms to determine their feasibility for use in Southeastern Arizona. Consider both the pros and cons of each mechanism, the timeline for initiation and implementation, and the costs associated with developing the mechanisms. Prepare this analysis in such a way that it can be used in a future workshop.</li> </ol> </li> </ul>

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<p>b) Compile a case study of local government and the Forest Service working together to leverage funding. In particular identify the essential components for successful partnerships including: appropriate and efficient financial instruments to transfer funds, mechanisms for establishing and executing appropriate roles and responsibilities and other details that will assist other communities replicate successful partnerships.</p> <p>i. Deliverable: Case Study</p>	<p>5. Assist the coalition and the Sky Island Alliance to plan and implement a regional workshop designed to describe the need for accelerated restoration in the Sky Islands, discuss funding mechanisms and build community understanding and support.</p> <p>All deliverables were completed except for assistance to support a workshop (# 5). The workshop was to be funded by the Sky Island Alliance. Due to budget issues and leadership changes at the Sky Island Alliance the workshop was cancelled.</p> <p>In a nutshell, educational materials were prepared, interviews conducted and funding mechanisms examined. Dealing with buffelgrass is the restoration identified as most important through interviews and conversations with the Forest Service. The Coronado is now working with the Sky Island Alliance to form a new nonprofit called Coronado Outdoors. This organization is anticipated to take over raising funds for restoration once it is up and running.</p> <p>b) Working Title: <i>The Flagstaff Watershed Protection :Project – A Unique Community Partnership. Submitted by Mottek Lucas and in final production/press at ERI. ERI Document #192</i></p>
<p><b>4.2) Analyze the relationship of fuels treatments and restoration on real estate values.</b></p>	
<p>a) Deliverable: Manuscript for publication</p> <p>b) Deliverable: Fact Sheet</p>	<p>a) Hjerpe, E, Y. Kim, L. Dunn. Forest Density Preferences of Homebuyers in the Wildland-Urban Interface. (ERI #186) Submitted to Ecological Economics, July 2015.</p> <p>b) Working Title: Real Estate Values and Wildfire, D. Vosick and Y.S. Kim (ERI# 191) Pending -- dependent on peer-review of publication referenced in item a, above.</p>

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### **Project 5: State, Tribal and Private Forestry - The All Lands Approach**

Project eliminated April, 2014

### **Project 6: Services to the Intermountain West**

Deliverable	Status
<b>6.1) Provide support to federal land managers with treatment planning and implementation</b>	
<p>a) Deliverable: Report on actions to support project assessments, data collection, treatment design, and use of best available science by federal land managers to achieve desired conditions and outcomes.</p> <p style="padding-left: 20px;">i. 7 Field Trips</p>	<p>i. Field Trips</p> <ul style="list-style-type: none"> <li>✓ Sensibaugh M, Stoddard M. Field trip and discussions with USFS Coronado NF (Safford Ranger District) personnel at the Hospital Flats site on the Piñaleno Ecosystem Restoration Project (PERP) ERI demonstration mark and RAP. May 19-21, 2014. Pinaleno Mtns.</li> <li>✓ Sensibaugh, M., Greco, B., Participated in a Field Trip to the Piñaleno Ecosystem Restoration Project (PERP) in conjunction with the SW Fire Science Consortium and made a presentation on “Ecological Restoration of Mixed Conifer Forests of the Southwest”. Safford, AZ. June 7, 2014 42 participants</li> <li>✓ Sensibaugh, M., Greco, B., Conducted a Field Trip with Prescott NF personnel to evaluate MSO PAC’s and management strategies in the Greater Prescott area. Prescott NF, June 17, 2014 5 participants</li> <li>✓ Greco, B., Sensibaugh, M., Field trip to evaluate Treatment Effects and Marking Prescriptions for the Rim Lakes Timber Sale”, Black Mesa RD, A-S NF. Heber, AZ. June 17, 2014 13 participants</li> <li>✓ Greco, B., Sensibaugh, M., Conducted a Field trip and presentations for the A-S NF Staff and NEPA Contractor on the Upper Rocky Arroyo Restoration Project (URAR) on the topic “Rapid Assessment Results of Evidence-based Restoration on the URAR Project”. Lakeside, AZ. July 21, 2014. 17 participants.</li> <li>✓ Covington, W, Greco, B., Sensibaugh, M., Vosick, D., Field trip with the Tonto NF Line Officers and Staff to review Reference Conditions and understory response to treatments on the Payson and Pleasant Valley RD’s, Tonto NF. October 13, 2014 22 participants</li> <li>✓ Greco, B., Sensibaugh, M. Field trip on the Rio Gordito Ecosystem Restoration Project area to train USFS personnel, Carson NF on “Evidence Based Restoration”. Tres Piedras, RD, Carson NF. November 12, 2014. 5 participants.</li> </ul>

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<p>ii. 2 Rapid Assessments (RAPS) presently planned on the Apache-Sitgreaves and Prescott National Forests. We are engaged in early discussions to establish a restoration treatment demonstration area on the Coronado National Forest</p> <p>iii. Combination of 10 total services based on previous and anticipated demand that may include: workshops, technical assistance, science support and presentations</p>	<ul style="list-style-type: none"> <li>✓ Greco, B., Roccaforte, J.P., Field trip to the Mineral LEARN Sites with USFS Personnel from the W.O., R.O. and A-S NF to review fire effects from the San Juan Fire (2014) and participate in a video production of Lessons Learned for use by the USFS in national programs by the Wildfire Lessons Learned Center. A-S NF. 20 participants. August 17, 2014. <a href="http://www.youtube.com/playlist?list=PLTjug05B4KNvvlloePSAFuvK0IKPZxWfhs">http://www.youtube.com/playlist?list=PLTjug05B4KNvvlloePSAFuvK0IKPZxWfhs</a></li> <li>✓ Huffman, D., Sanchez-Meador, A., Roccaforte, J.P. Sensibaugh, M. – Coordinator: Field trip with Coconino NF personnel to design treatment prescriptions for the Mixed-conifer LEARN project. Mogollon Rim RD, Coconino NF. December 12, 2014, 11 participants.</li> <li>✓ Huffman, D., Greco, B., Sensibaugh, M. Conducted Field Trip for A-S NF personnel to evaluate Pinon-Juniper and Grasslands within the Escudilla East Restoration Project near Springerville, AZ. March 11, 2015 8 participants.</li> </ul> <p>ii Rapid Assessments (RAPS)</p> <ul style="list-style-type: none"> <li>✓ Greco, B., Sensibaugh, M. Conducted a Rapid Assessment for the “Upper Rocky Arroyo Restoration Project”, Lakeside RD, A-S National Forest. <a href="#">Link to document</a></li> <li>✓ Sensibaugh, M., Greco, B. Conducted a Rapid Assessment for “Tio Gordito Restoration Project”, Tres Piedras RD, Carson NF <a href="#">Link to document</a></li> </ul> <p>iii. Services</p> <ul style="list-style-type: none"> <li>✓ Greco, B., Sensibaugh, M., Meeting and presentation to USFS A-S Personnel &amp; public participants regarding a Rapid Assessment request from A-S FLT on the Upper Rocky Arroyo Restoration Project, Lakeside, AZ, May 8, 2014. 9 participants</li> <li>✓ Greco, B., Presentation “Bridge Projects Monitoring Plan” to the Natural Resources Working Group (NRWG), Eagar, AZ. May 13, 2014 32 participants</li> <li>✓ Greco, B., Developed a Monitoring and Adaptive Management Plan for the A-S “Bridge Restoration Projects”. Springerville, AZ. May 13, 2014</li> <li>✓ Greco, B., Presentation on “The White Mountain Stewardship Project: Ten-year Report” to the NRWG, Show Low, AZ June 17, 2014 27 participants</li> <li>✓ Sensibaugh M., Meeting and presentation(s), Greater Flagstaff Forest Partnership (GFFP); monthly meetings, 7-12 participants</li> </ul>
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	<ul style="list-style-type: none"><li>✓ Sensibaugh M., Meeting and discussion about permits and implementation of the Mogollon Rim LEARN project, Mogollon District and Coconino NF, June 9, 2014, 4 participants</li><li>✓ Sensibaugh M., meeting and presentation with Ben DuBois on the Prescott NF to coordinate details for the first RAP Trip, 6/10-14, Prescott, AZ. June 10, 2014.</li><li>✓ Greco, B., Presentation on “Integrating the A-S Bridge Monitoring Plan and the 4FRI Monitoring and Adaptive Management Plan” to the NRWG, Eagar, AZ. July 15, 2014 35 participants.</li><li>✓ Sensibaugh M., Meeting with Mogollon Rim District Ranger, Linda Wadleigh, regarding the Mogollon Rim Mixed-conifer LEARN project, Coconino NF, July 24, 2014 Flagstaff. 3 participants.</li><li>✓ Waltz, A. Presentation. Ft. Valley Research Symposium: Ft. Valley Experimental Forest. August 8, 2014.</li><li>✓ Greco, B. and J.P. Roccaforte. Participated in a formal USFS National Office facilitated review of the San Juan Fire (6/26-7/2 2014). Input and overview of the Mineral LEARN is reported in the “San Juan Fire Fuel Treatment Effectiveness Report” prepared by the Apache-Sitgreaves National Forest, Arizona. August, 2014. <a href="#">Link to Document</a></li><li>✓ Greco, B., Sensibaugh, M., Workshop for the Prescott NF Forest Supervisor, Staff &amp; Bradshaw RD personnel, “Principles of Restoration and application in MSO PAC’s &amp; Territories”, October 6, 2014. Prescott , AZ 10 participants</li><li>✓ Greco, B. Meeting with Neil Bosworth, Forest Supervisor, Tonto NF &amp; Staff to determine content of a presentation at a future FLT meeting, Tonto NF. Phoenix, AZ October 17, 2014. 4 participants</li><li>✓ Greco, B., Sensibaugh, M., Presentation and meeting with Payson RD personnel regarding reference conditions and Rapid Assessment results on the Payson &amp; Pleasant Valley RD’s., Tonto NF. Payson, AZ October 27-28, 2014 5 participants</li><li>✓ Meador-Sanchez, A., Greco, B., Sensibaugh, M., Meeting with Tres Piedras District Ranger, Chris Furr to develop a strategy for science support to the Districts program in FY 2015. November 6, 2014 Flagstaff, AZ. 5 participants</li><li>✓ Greco, B., Sensibaugh, M. Conducted a Workshop on “Principles of Restoration &amp; Reference Conditions of Southwestern Ecosystems”. Tres Piedras RD, Carson NF. November 13, 2014. 21 participants.</li></ul>
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	<ul style="list-style-type: none"><li>✓ Greco, B., Sent a copy of current research publications and the ERI Newsletter to each Line Officer in Region 3, and multiple Staff in the R.O. and each forest in the Region. Purpose of the information sharing was to ensure effective science transfer and communications regards response to USFS Needs Assessments across the Region. November 2014</li><li>✓ Greco, B., Sensibaugh, M., Conducted a workshop for the Apache-Sitgreaves NF Escudilla East ID Team and Line Officers in Alpine, AZ. December 11, 2014. 22 participants.</li></ul>
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<b>6.2) Assist with USFS forest planning and implementation</b>	
<p>a) Deliverable: Report on actions to support forest planning, implementation, and integration of best available science in FLMP revisions. Specific support to be provided to the Apache-Sitgreaves, Tonto, Coconino and Kaibab Forest Plan revisions</p>	<ul style="list-style-type: none"> <li>✓ Greco, B., Assisted Tonto NF Forest Plan Revision Team by Presenting “Ecological Restoration and Fire: A Historical Perspective” at a public meeting in Payson, AZ May 21, 2014 140 participants. <a href="https://www.youtube.com/watch?v=qhKZEUT1dcc">https://www.youtube.com/watch?v=qhKZEUT1dcc</a></li> <li>✓ Greco, B., Sensibaugh, M., Participated with the Tonto NF FLMP Revision Team by Presenting “Ecological Restoration and Fire: A Historical Perspective” at a public meeting in Pleasant Valley, AZ, July 2, 2014. 55 participants. <a href="https://docs.google.com/file/d/0B1wq3f66mAw_enViS2dyakRSdkE/edit">https://docs.google.com/file/d/0B1wq3f66mAw_enViS2dyakRSdkE/edit</a></li> <li>✓ Greco, B., Provided Science –Findings and Reference Bibliography to the Tonto NF FLMP Revision Team regarding Restoration of Frequent Fire Forests and ecosystems on the Tonto NF. Phoenix, AZ. July 7, 2014</li> <li>✓ Greco, B., Sensibaugh M., Meeting with Payson RD District Ranger Angie Elam, and Timber Staff, to discuss ERI involvement with forest planning activities on the Payson Ranger District. July 7, NAU/ERI office, Flagstaff, AZ. 4 participants.</li> <li>✓ Greco, B., Conference call with the Escudilla East Restoration Project to discuss possible support from ERI to provide a Rapid Assessment and Report for consideration in the Project EIS process. Alpine RD, Apache-Sitgreaves NF November 24, 2014 7 participants</li> <li>✓ Greco, B., Conference call with the Tonto NF Forest Plan Revision Team regarding data collection priorities for Ponderosa pine structure changes, understory response patterns and fire regimes on the Tonto NF, November 26, 2014 9 participants</li> <li>✓ Huffman, D., Sanchez-Meador, A., Sensibaugh, M., Greco, B., Meetings and Presentations to Coconino NF Staff and Line Officer (Mogollon Rim RD) on design of the Mixed conifer LEARN Study. Happy Jack, AZ. December 1, 2014 17 participants.</li> <li>✓ Greco, B., Springer, J., Made presentations &amp; participated in a coordination meeting with various organizations, hosted by the Coconino NF on “Ethnobotany Development through Restoration Treatments”. Flagstaff, AZ. February 24, 2015. 8 participants.</li> <li>✓ Greco, B., Sensibaugh, M., Presentation to Tonto NF Leadership and Forest Land Management Plan Revision Team with video conference participation by the R-3 Regional Office. “Summary Results of the Reference Condition and Fire Regime Rapid Assessment – Tonto NF”. Phoenix, AZ. April 23, 2015 13 participants.</li> </ul>

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<b>6.3) Provide Web support for ERI, SWERI, 4FRI</b>	
<p>a) Deliverable: Report on technical support for ERI, SWERI and 4FRI websites</p>	<ul style="list-style-type: none"> <li>• Web Accomplishments</li> <li>• ERI Web Analytics</li> <li>• 4FRI-AZPFC Webstats</li> <li>• SWERI Web Analytics</li> </ul> <p style="text-align: center;"><a href="#">Link to document</a></p>
<b>6.4) Translate biophysical and social-political-economic information for affected entities</b>	
<p>a) Deliverable: Editorial support for 1 white paper</p> <p>b) Deliverable: Editorial support for 2 working papers</p> <p>c) Deliverable: 8 fact sheets</p>	<p>a) Editorial Support for white paper</p> <ol style="list-style-type: none"> <li>i. FWPP assessment in progress (Mottek Lucas)</li> <li>ii. Brown, S.J. 2015. Administrative and Legal Review Opportunities for Collaborative Groups. ERI White Paper— Issues in Forest Restoration. Ecological Restoration Institute, Northern Arizona University and the Western Environmental Law Center. 12 p. <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015006.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015006.dir/doc.pdf</a></li> </ol> <p>b) Editorial Support for 2 working papers</p> <ol style="list-style-type: none"> <li>i. Egan, D. 2015. The 2012 Mexican Spotted Owl Recovery Plan Guidelines for Forest Restoration in the American Southwest. ERI Working Paper No. 33. Ecological Restoration Institute, Northern Arizona University. 11 p. <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015015.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015015.dir/doc.pdf</a></li> <li>ii. Kent, L.Y. 2014. An Evaluation of Fire Regime Reconstruction Methods. ERI Working Paper No. 32. Ecological Restoration Institute and Southwest Fire Science Consortium, Northern Arizona University. 15 p. (ERI#182) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2014037.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2014037.dir/doc.pdf</a></li> </ol> <p>c) Fact Sheets</p> <ol style="list-style-type: none"> <li>i. Rocafortte, J.P. Fact Sheet: Planting to Restore Ponderosa Pine Sites Burned by High-Severity Fire. September, 2014 (ERI# 56) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2014035.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2014035.dir/doc.pdf</a></li> <li>ii. Esch, B.E. 2015. Fact Sheet: Administrative Support in Collaborative Forest Restoration. ERI Fact Sheets. Ecological Restoration Institute, Northern Arizona University. 2 p. (ERI#194) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015014.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015014.dir/doc.pdf</a></li> </ol>



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	<p>iii. Waltz, A.E.M. 2014. Effectiveness of Fuel Reduction Treatments: Assessing Metrics of Forest Resiliency and Wildfire Severity after the Wallow Fire, AZ. ERI Fact Sheets. Ecological Restoration Institute, Northern Arizona University. 2 p. (ERI# 183) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2014041.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2014041.dir/doc.pdf</a></p> <p>iv. Fact Sheet: Forest Structure and Fuel Dynamics Following Ponderosa Pine Treatments, White Mountains, Arizona, USA. Roccaforte, J.P. 2015. Ecological Restoration Institute, Northern Arizona University. 2 p. (ERI#187) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015009.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015009.dir/doc.pdf</a></p> <p>v. Stoddard, M.T. 2015. Ecological and Social Implications of Employing Diameter Caps at a Collaborative Forest Restoration Project Near Flagstaff, Arizona. ERI Fact Sheets. Ecological Restoration Institute, Northern Arizona University. 2 p. (ERI# 188) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015017.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015017.dir/doc.pdf</a></p> <p>vi. Huffman, D.W. 2015. Fire History of a Mixed Conifer Forest on the Mogollon Rim, Northern Arizona, USA. ERI Fact Sheets. Ecological Restoration Institute, Northern Arizona University. 2 p. (ERI# 190) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015013.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015013.dir/doc.pdf</a></p> <p>vii. Bryant, T. 2015. Implications of Diameter Caps on Multiple Forest Resource Responses in the Context of the Four Forest Restoration Initiative. ERI Fact Sheets. Flagstaff, AZ: Ecological Restoration Institute, Northern Arizona University. 2 p. (ERI#189) <a href="http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015020.dir/doc.pdf">http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015020.dir/doc.pdf</a></p> <p>viii. Pending #191. Working Title: Real Estate Values and Wildfire, D. Vosick and Y.S. Kim (dependent on peer-review of item a, above.)</p>
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<p>iii. 10 Information requests, this is an estimate based on previous demand</p>	<p>Legislative Remedies for Prescribed Burns on Non-Federal Lands in Arizona” to the Southern Arizona Wildland Fire Coordination Group – Winter Meeting and the Altar Valley Conservation Alliance. Tucson, AZ. December 2, 2014 35 participants</p> <ul style="list-style-type: none"> <li>✓ Vosick. Webinar on Forest Restoration for the Audubon Western Rivers Action Network. 17 participants. December 17, 2014</li> <li>✓ Greco, B. Made multiple presentations at the monthly NRWG and White Mountain Stewardship Monitoring Board meetings in 2014. Springerville, Eagar and Show Low, AZ. 15-40 participants at each meeting.</li> <li>✓ Greco, B., Presentation to the 4FRI Collaborative Meeting regarding Bridge Project and 4FRI Monitoring Plans. Show Low, AZ. March 25, 2015. 35 participants.</li> <li>✓ Greco, B. Presentation to the Arizona Prescribed Fire Council “FY 2014-2015 Council Accomplishments” Payson, AZ March 27, 2015 12 participants.</li> <li>✓ Greco, B., Sensibaugh, M., Meeting with Trout Unlimited regarding Restoration treatments in Central Arizona and resultant effects on fisheries. Payson, AZ. April 9, 2015.</li> <li>✓ Greco, B., Presentation to various organizations and city &amp; county Government Official regarding the 4FRI Phase 2 NEPA process. Show Low, AZ. April 21, 2015. 27 participants</li> <li>✓ Vosick, D. ASU Continuing Legal Education. Assisted in the planning and delivery of two day workshop for lawyers and other public officials on Fire and restoration. 40 participants. May 6 and 8, 2015. Provided information as reported in section iii below. Presentations were also made at the seminar titled The Wildfire Menace: Will the West Learn or Burn? How to learn from History Instead of Repeating It             <ul style="list-style-type: none"> <li>○ Covington, W. “Fire, Forests, and Water: Historical and Anticipated Changes in Forests of the West”</li> <li>○ Vosick, D. “Federal Forest Management: Barriers and Bridges to Restoring Forests.”</li> </ul> </li> </ul> <p>iii. Information Requests</p> <ul style="list-style-type: none"> <li>✓ Greco, B., Information request for ERI Fire Fact Sheet. The Nature Conservancy, Flagstaff Office. May 5, 2014</li> <li>✓ Greco, B., Request for assistance to review USDA Grant Funding Proposals, by Arizona Department of Forestry, May, 6, 2014</li> <li>✓ Greco, B., Submitted a letter of reference (per request) to Eastern AZ Resource Advisory Council for Integrated Biological Solutions, LLC for funding of the White Mountain Stewardship 10-Year report. May 22, 2014</li> </ul>
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	<ul style="list-style-type: none"><li>✓ Greco, B., Responded to an information request from The International Wood Culture Society” regarding “Wood Culture and Uses as Related to the Desert of the Southwest”. June 17, 2014</li><li>✓ Vosick, D. Phoenix Law Firm (Ken Hodson) asking about forest policy/possible forest policy seminar. June 27, 2014</li><li>✓ Crouse, J., Greco, B. Responded to a request from the Apache County, AZ Natural Resources Director to provide Access to a Webinar and provide a summary of Federal Land Acreage for Apache &amp; Navajo Counties (Webinar, Maps, Data summaries). June 26, 2014</li><li>✓ Vosick, D. Beck Group (Roy Anderson) - Consulting firm in Portland, OR looking for info on SW industry. July 8, 2014</li><li>✓ Vosick, D. KTAR Phoenix NPR affiliate. Interview regarding value of restoration treatments. July 8, 2014</li><li>✓ Vosick, D. Request from Carl Fiedler for assistance with old logging photos for a new book. Put in touch with Cline Library, ERI covered cost of photos. July 8, 2014</li><li>✓ Greco, B. Organized a meeting with NAU SOF (Dr. Yeon-Su Kim) and Mottek Consulting (Anne Mottek) to develop a strategy/proposal for completing the White Mountain Stewardship Ten-year Report (2004-2014). Flagstaff, AZ. July 9, 2014. 3 participants.</li><li>✓ Vosick, D. Assistance to Stephen Pyne assembling historical information about fire use at Mount Trumbull. July 19, 2014</li><li>✓ Vosick, D. Ron Klawitter (SRP). Information to help understand the economic issues in the White Mountains. July 23 2014</li><li>✓ Vosick, D.. Nat Lichten – WRI. Interviewed about the FWPP and the factors that made it successful. Was sent supporting materials including the Survey White paper and fact sheets. July 24<sup>th</sup></li><li>✓ Greco, B., At the request of the Flagstaff Fire Department and the Greater Flagstaff Forest Partnership, provided input/support to the Learning Network Hub for the Fire Adapted Communities Program. (<a href="http://www.fireadapted.org">http://www.fireadapted.org</a>) Flagstaff, AZ. August 4, 2014</li><li>✓ Vosick, D. Art Babbott. Request for information about cable logging. Wally Covington, Abe Springer, Sharon Masek Lopez and Andrew Sanchez Meador consulted on the response. August 7, 2014</li><li>✓ Vosick, D. Bruce Hallin. Request for information about the frequency of lightning at CC Cragin. Worked with Dave Huffman to provide a response and sent literature. August 22, 2014</li></ul>
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	<ul style="list-style-type: none"><li>✓ Vosick, D. Jim Paxon. AZ Game and Fish - Economic Trend statistics for the timber industry in Arizona. Referred him to Patrick Rappold after reviewing selected literature. September 10, 2014</li><li>✓ Dubay, T. Lisa Schnebly Heidinger. Request for assistance with photos of Abe Springer for a new book Lisa is writing for NAU. Provided Lisa with photos and photo credit info. September 10, 2014</li><li>✓ Dubay T. Emery Cowan - AZ Daily Sun. New enviro reporter with AZ Daily Sun, Emery Cowan, met with Wally Covington and Diane Vosick to learn about ERI and local forest health issues. September 12, 2014</li><li>✓ Dubay, T.. Carla Sandine. Wally Covington Video Interview about forests and 4FRI for a piece to run at the Arizona Leadership Forum on September 19th in Phoenix. 1200 people anticipated. September 19, 2014</li><li>✓ Greco, B. and Vosick, D. Meeting with AZ (District 6) Senator Carlyle Begay to provide science publications and respond to his request for input regarding Carbon Sink Exchange options between the Navajo Tribal Council, State of Arizona &amp; EPA. Flagstaff, AZ. October 15, 2014.</li><li>✓ Vosick, D. Met with Megan O'Grady, Stratus Consulting- Interview concerning FWPP and its contribution to creating a resilient community. October 21, 2014.</li><li>✓ Greco, B. Meeting with NAU SOF Professor David Auty to assist in his transition to NAU &amp; provide a framework for cooperative studies with ERI. Flagstaff, AZ. October 22, 2014</li><li>✓ Greco, B., Sensibaugh, M. Five telephone conference calls with USFS Personnel on the Carson NF in response to project Assessments, providing science support &amp; technical assistance to Program Planning &amp; Forest Plan Revision support from ERI. October &amp; November, 2014</li><li>✓ Vosick, D. Robert Breunig - Museum of NAZ requested ERI assistance in developing content and editing text for their Slide Fire Exhibit. December 2, 2014</li><li>✓ Greco, B. Participated in the BLM Uinkaret Mountains Restoration Project Public NEPA Scoping Meeting to provide information and science support, requested by the St. George, Utah BLM Office. Flagstaff, AZ December 3, 2014</li><li>✓ Vosick, D. Request from Scott Harger for ERI Working Papers. December 22, 2014</li><li>✓ Dubay, T. Emery Cowan - AZ Daily Sun requested information on PIP0 die-off predictions in face of climate change. January 5, 2015</li><li>✓ Greco, B., Roccaforte J.P., Responded to a data request (Photos, Maps) from the USFS Lessons Learned Center regarding the</li></ul>
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	<p>Mineral LEARN sites impacted by the A-S NF San Juan Fire. January 15, 2015</p> <ul style="list-style-type: none"><li>✓ Greco, B., Crouse, J., Responded to a request by R-3 Regional Ecologist Jack Triepke to set up an FTP site for ERU Data exchange. January 16, 2015</li><li>✓ Greco, B., Presentation to the Natural Resources Working Group, “White Mountain Stewardship Contract – Ten Year Report Strategy”, Eagar, AZ, January 20, 2015 32 participants.</li><li>✓ Greco, B. Conference call with A-S Leadership Team (Tom Osen-Lead) regarding Natural Resource Working Group integration with 4FRI Collaborative process. January 29, 2015. 7 participants</li><li>✓ Dubay, T. Pete Caligiuri – TNC requested permission to use a quote from Wally Covington’s LiveScience op-ed on the Deschutes Forest Collaborative website along with a head shot of Dr. Covington. February 2, 2015</li><li>✓ Greco, B. Presentation regarding “White Mountain Stewardship Contract and Restoration Outcomes” to Navajo County Board of Supervisors &amp; Natural Resource Working Group. Show Low, AZ. February 17, 2015 27 participants.</li><li>✓ Greco, B., Sensibaugh, M., Conference call with tonto NF FLMP Revision Team to coordinate Ecological Response Units and Reference Condition Rapid Assessment on the Payson and pleasant valley RD’s, Tonto NF. February 19, 2015 7 participants.</li><li>✓ Greco, B., Participated in a conference call with Tom Osen &amp; Misc. A-S NF Staff to discuss the update to the Bridge Projects Monitoring Plan. February 19, 2015 5 participants.</li><li>✓ Greco, B., Conference call with Tonto NF FLMP Revision Team &amp; Deputy FS Kerwin Dewberry to coordinate ERI support to the Tonto NF Forest Plan Revision Process. Phoenix, AZ March 11, 2015 5 participants.</li><li>✓ Greco, B., Sensibaugh, M., Conference call with Tessa Nicolet to coordinate Fire Regime data collection and modeling for the Carson &amp; Tonto NF’s. Payson, AZ March 23, 2015 3 participants.</li><li>✓ Dubay, T. Kevin Sullivan - Sedona Fire Dept. requested Wally Covington to appear in a video on community wildfire prevention and preparedness. April 17, 2015</li><li>✓ Vosick, D. Information to the Federal Lands Subcommittee of the House Natural Resources Committee Hearing entitled “The Devastating Impacts of Wildand Fires and the Need to Better Manage our overgrown, fire-prone National Forests”. April 23, 2015</li><li>✓ Dubay, T. Steve Rosenstock - AZ Game and Fish Dep't requested photos to use in briefing materials that mention fire</li></ul>
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	<p>impacts to forest ecosystems and wildlife, and emphasize need for proactive restoration. April 25, 2015</p> <ul style="list-style-type: none"> <li>✓ Vosick, D. Kris Keifer requested validation of information pertaining to treatment effectiveness during the Wallow fire. April 27, 2015</li> <li>✓ Dubai, T. Caroline Pilkington-contractor for County/Co requested photos for a poster the county and city officials will be using in a presentation about forest restoration and inter-agency partnerships to protect communities in St. Louis. May 4, 2015</li> <li>✓ Vosick, D. ASU Continuing Legal Education. Assisted in the planning and delivery of two day workshop for lawyers and other public officials on Fire and restoration. 40 participants. May 6 and 8, 2015. Also gave presentations that are reported in section ii, above.</li> <li>✓ Vosick, D. Chuck Podlak, Ofc of Senator Flake requested review of different national data sets and if they would be good for providing HFRA like requirements. May 12, 2015</li> <li>✓ Vosick, D. Chuck Podlak, Ofc of Senator Flake requested review of Senator Thune legislation and appropriateness for Arizona - engaged Paul Summerfelt, City of Flagstaff. May 12, 2015</li> <li>✓ Vosick, D. Matt Strickler, Ofc of Congressman Grijalva requested assistance for upcoming testimony on the need to stop fire borrowing. Referred him to Aumack, Falk and Barnwell as possibilities. May 14, 2015</li> <li>✓ Vosick, D. Terry T. Brady, Nordev LLC. Wanted link to our Workforce report after hearing interview on KJZZ. May 15, 2015</li> <li>✓ Sensibaugh, M., Participated in multiple monthly meetings as Chairman of the Board, for the Greater Flagstaff Forest Partnership. Flagstaff, AZ CY 2014-2015</li> </ul>
<p><b>6.6) Use media to educate the General Public</b></p>	
<p>a) Deliverable: 2 Newspaper articles</p>	<ol style="list-style-type: none"> <li>1) Covington, WW. Live Science. "Expert Voices: Op-Ed and Insights: The Two Wildfires Everyone Should be Talking About." August 22, 2014. <a href="http://www.livescience.com/47510-wildfire-prevention-is-science-not-art.html">http://www.livescience.com/47510-wildfire-prevention-is-science-not-art.html</a></li> <li>2) Stevens, B. Flagstaff Business News. "The changing face of southwestern forests and forest products." November 1, 2014. <a href="http://www.flagstaffbusinessnews.com/the-changing-face-of-southwestern-forests-and-forest-products/?utm_source=FBN&amp;utm_medium=WEB&amp;utm_campaign=front_featured_title">http://www.flagstaffbusinessnews.com/the-changing-face-of-southwestern-forests-and-forest-products/?utm_source=FBN&amp;utm_medium=WEB&amp;utm_campaign=front_featured_title</a></li> </ol>

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<b><i>Project 7: Duty 5 under the ACT. Provide annual progress reports</i></b>	
<b>Deliverable</b>	<b>Status</b>
7.1) Complete annual progress report on June 30, 2014	✓ Completed through July 30, 2014
7.2) Complete annual progress report on June 30, 2015	✓ Completed as Final Report for #14-DG-11031600-055



# USFS FY15 Plan of Work - #15-DG-11031600-073

## FY15 Deliverables (Progress) - #15-DG-11031600-073

<b>Project 1: Science Support for Collaborative Restoration and Conservation from the Local to the Landscape Scale</b>	
<b>Deliverable</b>	<b>Status</b>
<b>1.1) Provide support for the Four Forest Restoration Initiative (4FRI), a Collaborative Forest Landscape Restoration Act project.</b>	
<ul style="list-style-type: none"> <li>a) Report on technical assistance to: the multi-party monitoring board; the Forest Service as EIS#1 proceeds to implementation; and, support for EIS#2 analysis.</li> <li>b) Report on activities completed as co-chair and assistance provided to create an efficient working relationship between the Natural Resources Working Group (NRWG) and the 4FRI Stakeholder Group.</li> <li>c) Report on IT support for the 4FRI Website and BASECAMP (an online collaborative work space) and administrative support including minutes and agendas.</li> </ul>	Early stage of project – all deliverables are in progress.
<b>1.2) Assist in the planning, coordination and delivery of a 1.5 day workshop for 4FRI Stakeholders and the Forest Service.</b>	
<ul style="list-style-type: none"> <li>a) Deliver workshop.</li> <li>b) Publish white paper that: compiles lessons learned, recommendations for the second analysis area, and a discussion of why the NEPA and Objection process worked (editorial support appears in deliverable 6.4)</li> </ul>	Workshop completed May, 2015. White paper in progress.

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<b>1.3) Provide scientific and technical support for CFLRP pilots and emerging projects.</b>	
<ul style="list-style-type: none"> <li>a) Report on activities to support the national CFLRP monitoring network                             <ul style="list-style-type: none"> <li>i. Report on responses to information requests.</li> <li>ii. Co-produce (with NFF) a webinar describing the outcomes of the 5-Year Monitoring Plan</li> </ul> </li> <li>b) Report on assistance to the National Forest Foundation and the Washington Office of the USFS to plan and deliver a national CFLRP conference. Discussions are underway for this conference. It is possible that the conference will actually occur in FY 2016.</li> </ul>	<ul style="list-style-type: none"> <li>a) Early stage of project – all deliverables are in progress.</li> <li>b) National workshop tentatively scheduled for week of February 22, 2016</li> </ul>

<b><i>Project 2: Information Analysis to Assist Evidence-Based Conservation</i></b>	
<b>Deliverable</b>	<b>Status</b>
<b>2.1) Literature or Systematic Review of restoration treatments to restore Ponderosa Pine Forests with shrub understory.</b>	
<ul style="list-style-type: none"> <li>a) Completed review and draft manuscript or technical report.                             <ul style="list-style-type: none"> <li>i. Presentation to appropriate staff from the Prescott, Tonto and Kaibab National Forests.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Early stage of project – all deliverables are in progress.</li> </ul>

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<b>Project 3: Ecological Monitoring and Evaluation for Adaptive Management</b>	
<b>Deliverable</b>	<b>Status</b>
<b>3.1) Continue development of long-term study in a mixed-conifer forest on the Mogollon Rim Ranger District of the Coconino National Forest (build from FY14).</b>	
a) Report on progress with: <ul style="list-style-type: none"> <li>i. Coconino National Forest to complete NEPA requirements.</li> <li>ii. Coconino National Forest to develop treatment prescriptions.</li> <li>iii. Coconino National Forest to train crews and implement treatment marking.</li> </ul>	Early stage of project – all deliverables are in progress.
<b>3.2) Wildlife responses to restoration and hazardous fuels reduction treatments.</b>	
a) Report on pretreatment conditions and progress of the Flagstaff Watershed Protection Project (FWPP) wildlife monitoring (in FY15 work will be at the Mormon Mountain site on the Coconino National Forest)	Early stage of project – all deliverables are in progress.
<b>3.3) Examine the efficacy of wildfires managed for resource benefit to achieve desired conditions.</b>	
a) Present findings at a professional conference, or a workshop for resource managers, or a stakeholder event. <ul style="list-style-type: none"> <li>i. Initiate study – identify study fires, develop maps, develop study methodology, and seek field work permits.</li> <li>ii. Collect field data.</li> <li>iii. Analyze spatial and field-based data.</li> </ul>	Early stage of project – all deliverables are in progress.
<b>3.4) Test high-resolution spatial data for developing landscape reference conditions and analyzing forest management and disturbance dynamics. Include an analysis of cost effectiveness as compared to conventional approaches for determining landscape level reference conditions.</b>	
a) Final Report and presentation at a national conference. <ul style="list-style-type: none"> <li>i. Develop data layers.</li> <li>ii. Analyses performed at two sites along the Mogollon Rim (Black Mesa and LEARN Blocks 2-6).</li> </ul>	Early stage of project – all deliverables are in progress.

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<b>3.5) Identify the appropriate metrics for monitoring landscape-scale desired conditions in fire-adapted forests, including, but not limited to, forest cover and opening proportions, spatial configuration, and group size. Assess how each metric performs at different scales. This work will be coordinated with Jamie Barbour and the Broad-scale Monitoring Project in Regions 2 and 3.</b>	
a) Final Report or manuscript, presentation to 4FRI Stakeholder Group, presentation to CFLRP Peer Learning Group.	Early stage of project – all deliverables are in progress.
<b>3.6) Re-measurement of study units in the San Juan Fire to determine the outcomes of different treatment approaches implemented prior to this mixed-severity fire and include in this analysis the survivability of trees.</b>	
a) Presentation to land managers and Fact Sheet	Early stage of project – all deliverables are in progress.

### ***Project 4: Understanding and Solving the Economic, Social and Political Issues and Opportunities of Ecological Restoration***

Deliverable	Status
<b>4.1) Actions to increase understanding of innovative funding approaches for achieving forest restoration and wildfire risk reduction.</b> These alternative funding approaches include the Northern Arizona Forest Fund (SRP and NFF) and emerging efforts to support the Coronado National Forest by creating an “opt-in” program for resorts in Southeastern Arizona.	
a) Report on actions that support the Northern Arizona Forest Fund and creation of an “opt-in” resort fee on the Coronado National Forest.	Early stage of project – all deliverables are in progress.
<b>4.2) Continue to facilitate work force training development.</b>	
Participants include industry (Campbell Global, Good Earth Power and New Pac Fiber), Community Colleges (Northland Pioneer College and Coconino Community College), Coconino County Employment Services, Northern Arizona University-School of Forestry, The Nature Conservancy, and the Arizona Department of Forestry. Work force training includes workforce readiness, <span style="color: green;">retention</span> , safety and harvest and manufacturing skills development.	Early stage of project – all deliverables are in progress.
a) Report on actions and outcomes.	

## USFS FY15 Plan of Work - #15-DG-11031600-073

<b>Project 5: State, Tribal and Private Forestry – The All-Lands Approach</b>	
Deliverable	Status
<b>5.1) Assist the Arizona Prescribed Fire Council.</b>	
<p>The mission and purpose of the Arizona Prescribed Fire Council is to serve as a forum for all prescribed fire practitioners (government, academic institutes, tribes, coalitions and individuals) in order to work collectively to promote, protect, conserve, and expand the responsible use of prescribed fire in Arizona’s fire-dependent ecosystems.</p> <p>a) <u>Deliverable</u>: Report on technical support provided to the council and website services.</p>	Early stage of project – all deliverables are in progress.
<b>5.2) In collaboration with the Arizona State Forester and in consultation with the USFS Deputy Chief for State and Private Forestry, revise the Arizona Statewide Strategy to comport with the National Cohesive Strategy.</b>	
<p>a) <u>Deliverable</u>: Report on actions toward revising strategy. The ERI will seek leveraged funding to complement this action.</p>	Early stage of project – all deliverables are in progress.
<b>5.3) Consult with the tribes to assess how assistance can be provided to them in the face of limited financial resources. Priority will be given to work with tribes adjacent to the 4FRI landscape.</b>	
<p>a) <u>Deliverable</u>: Report on options to help serve tribes. Particular emphasis will be on tribes adjacent to the 4FRI landscape.</p>	Early stage of project – all deliverables are in progress.

## USFS FY15 Plan of Work - #15-DG-11031600-073

<b>Project 6: Services to the Intermountain West</b>	
<b>Deliverable</b>	<b>Status</b>
<b>6.1) Provide support to federal land managers with treatment planning and implementation.</b>	
<p>a) <u>Deliverable</u>: Report on actions to support project assessments, data collection, treatment design, and use of best available science by federal land managers to achieve desired conditions and outcomes.</p> <ul style="list-style-type: none"> <li>i. A combination of 10 total services based on previous and anticipated demand that may include: workshops, technical assistance, science support, field trips, and presentations.</li> <li>ii. Three Rapid Assessments (RAPs) are presently planned to support landscape restoration projects at the forest level. The RAPs are site-based analyses of historic and current conditions designed to inform Purpose and Need and restoration treatment development.               <ul style="list-style-type: none"> <li>1. Apache-Sitgreaves NF: Escudilla East Restoration Project (RAP) report</li> <li>2. Prescott NF: Restoration Alternatives in MSO PACs (RAP) report</li> <li>3. Carson NF: Tusas-San Antonio Restoration Project (RAP) report</li> </ul> </li> <li>iii. We are finalizing establishment of a restoration treatment demonstration area on the Coronado National Forest.</li> </ul>	<p>Early stage of project – all deliverables are in progress.</p>

## USFS FY15 Plan of Work - #15-DG-11031600-073

<p><b>6.2) Assist with forest planning and implementation by recommending best available science and program support.</b></p>	
<p>Science and timing of support are variable for each national forest based on its individual planning schedule.</p> <p>a) <u>Deliverable</u>: Report on actions to support forest plan revisions.</p> <p>i. Tonto National Forest:</p> <ol style="list-style-type: none"> <li>1. Report on development of public participation process.</li> <li>2. Report on data collection for assessment of reference conditions on the Payson and Pleasant Valley Ranger Districts.</li> <li>3. Report on science and knowledge synthesis and translation and transfer of best available science to support assessment of current conditions and need for change.</li> <li>4. Report on support, as requested, with public meetings, presentations, field trips and technical support in Forestry, Fuels, Watershed, and Fire program areas.</li> </ol> <p>ii. Carson National Forest:</p> <ol style="list-style-type: none"> <li>1. Report on data collection to assess applicability of reference condition synthesis for assessment of current conditions and need for change.</li> <li>2. Report on knowledge gaps with the forest to determine needs to provide science synthesis, translation, or transfer.</li> </ol> <p>iii. Santa Fe, Cibola, Prescott, Lincoln National Forests:</p> <ol style="list-style-type: none"> <li>1. Report on outreach efforts to determine opportunities for ERI to provide best available science or other support to plan revision.</li> </ol>	<p>Early stage of project – all deliverables are in progress.</p>

## USFS FY15 Plan of Work - #15-DG-11031600-073

<b>6.3) Provide website support for ERI, SWERI, 4FRI (see Project 5 for support to the Arizona Prescribed Fire Council).</b>	
Science and timing of support are variable for each national forest based on its individual planning schedule. a) <u>Deliverable</u> : Report on technical support for ERI, SWERI, and 4FRI websites.	Early stage of project – all deliverables are in progress.
<b>6.4) Translate biophysical and social-political-economic information for affected entities.</b>	
a) <u>Deliverable</u> : Editorial support for a total of 3 white papers and or working papers i. White paper compiling lessons learned from 4FRI Retreat on May 27, 28 ii. Working paper on climate change and fire in the Southwest iii. Working paper on carbon cycling in southwestern forests  b) <u>Deliverable</u> : 8 fact sheets that translate and summarize scientific papers and journal articles.	a) Editorial Support i. Early stage of project – all deliverables are in progress. ii. Kent, L.Y. 2015. Climate Change and Fire in the Southwest. ERI Working Paper No. 34. Ecological Restoration Institute and Southwest Fire Science Consortium, Northern Arizona University: Flagstaff, AZ. 6 p. <a href="http://library.eri.nau.edu/gsdl/collect/erilibra/index/assoc/D2015016.dir/doc.pdf">http://library.eri.nau.edu/gsdl/collect/erilibra/index/assoc/D2015016.dir/doc.pdf</a> iii. In progress  b) Fact Sheets – in progress
<b>6.5) Initiate and facilitate knowledge services and science support for non-federal entities through field trips, filling information requests, and presentations for affected entities.</b> These numbers may vary based on demand.	
a) <u>Deliverable</u> : Report on actions to educate and support affected entities. Provide a minimum of 12 services that may include field trips, presentations, and information requests.	• T. Dubay. June 25, 2015. Presentation to Centennial Forest campers on communicating effective PSAs titled "A Fierce Green Fire: Crafting an Effective and Persuasive Message for Environmental Conservation Public Service Announcements." 15 campers in attendance
<b>6.6) Use media to educate the general public.</b>	
a) <u>Deliverable</u> : 2 newspaper articles in response to fire events to education the general public about the need for forest restoration to restore frequent fire forests.	Early stage of project – all deliverables are in progress.

### **Project 7: Duty 5 under the ACT. Provide annual progress reports**

<b>Deliverable</b>	<b>Status</b>
7.1) Complete annual progress report on June 30, 2015	✓ Completed June 30, 2015



## **Web Accomplishments: July 1, 2015–June 30, 2015**

### **4Fri.org Accomplishments**

- Updated site content including meeting minutes, agendas, maps, and other pertinent materials.
- Updated calendar and event locations
- Provided updates on site on important 4Fri related news, news articles, and press releases
- Streamlined content to make important information more readily accessible to users
- Added an interactive 4FRI map tracking acres treated

### **NAU.edu/ERI Accomplishments**

- Added current /relevant ecological related news articles
- Updated the site with current ERI publications including journal articles, ERI working papers, ERI Fact Sheets, and technical papers
- Added relevant events and conferences
- Developed a press specific landing page on the site to answer frequently answered questions of the media, provide high resolution photographs for press members and direct press members with further inquiries to the appropriate person

### **SWERI Accomplishments**

- Revised the home page content to make the content more relevant to users
- Revised, updated, and expanded the broad scale monitoring section
- Streamlined and redesigned the page layout and improved page graphics

### **AZPFC.org**

- Added new events and posts to keep users informed about topics relevant to the council
- Updated board member information as needed
- Created an online voting mechanism for people to vote for board members
- Reported out the voting results and updated the site regarding the board member election
- Created an online registration mechanism for the TREX conference

### **Parashant**

- Created a password protected file repository for members of the site to upload and organize various Parashant related files

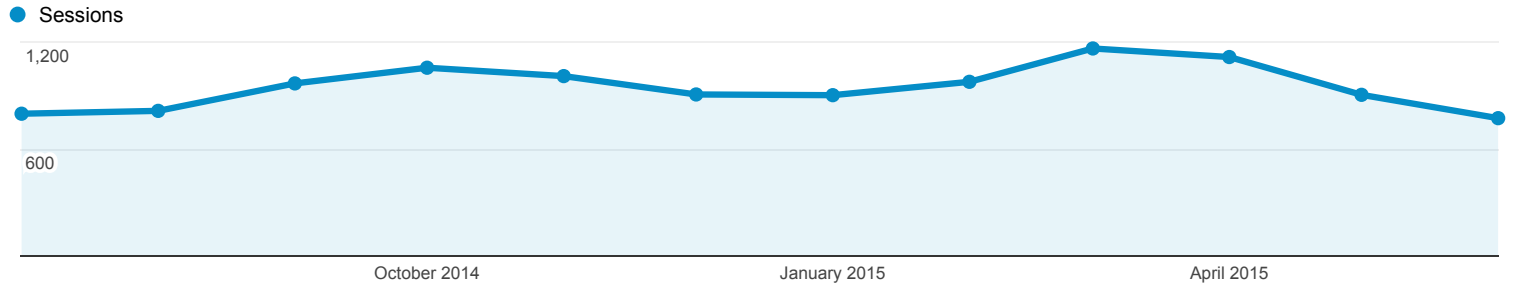
Jul 1, 2014 - Jun 30, 2015

## Audience Overview

You are using a filtered view, which may cause your Users count to be inaccurate. [Learn more](#)

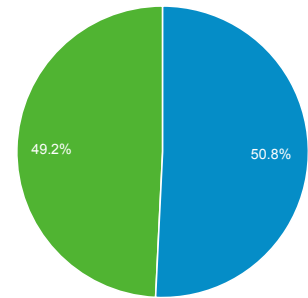
All Sessions  
100.00%

### Overview



Sessions <b>11,399</b>	Users <b>5,810</b>	Pageviews <b>24,596</b>
Pages / Session <b>2.16</b>	Avg. Session Duration <b>00:02:08</b>	Bounce Rate <b>57.33%</b>
% New Sessions <b>49.23%</b>		

Returning Visitor (Blue) | New Visitor (Green)



Language	Sessions	% Sessions
1. en-us	10,620	93.17%
2. en-gb	156	1.37%
3. es	91	0.80%
4. en	80	0.70%
5. en-ca	40	0.35%
6. pt-br	33	0.29%
7. zh-cn	33	0.29%
8. es-es	29	0.25%
9. de	23	0.20%
10. en-au	22	0.19%

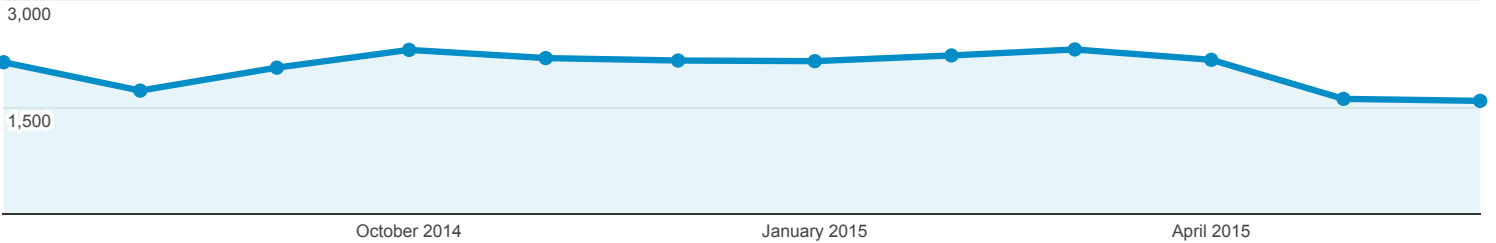
Jul 1, 2014 - Jun 30, 2015

Overview

All Sessions  
100.00%

Overview

Pageviews



<p>Pageviews</p> <p><b>24,596</b></p>	<p>Unique Pageviews</p> <p><b>20,452</b></p>	<p>Avg. Time on Page</p> <p><b>00:01:48</b></p>	<p>Bounce Rate</p> <p><b>57.33%</b></p>	<p>% Exit</p> <p><b>45.95%</b></p>
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Page	Pageviews	% Pageviews
1. /ERI/	4,255	17.30%
2. /eri/	1,941	7.89%
3. /ERI/Directory/Directory-List-View/	1,300	5.29%
4. /ERI/Directory/	1,092	4.44%
5. /ERI/Publications-Media/	1,032	4.20%
6. /ERI/Directory/Directory-Dept-View/	622	2.53%
7. /ERI/Research/	582	2.37%
8. /ERI/Publications-Media/Recent-ERI-Publications/	491	2.00%
9. /ERI/Restoration-Information/	452	1.84%
10. /ERI/Resources/For-Policymakers/Effects-Of-Thinning/	389	1.58%

## 4FRI-AZPFC Web Stats

4FRI.ORG Web Stats					
Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jul-14	920	1,859	4,546	30,119	2.32 GB
Aug-14	882	1,677	3,479	25,820	1.80 GB
Sep-14	969	1,635	3,966	29,383	1.72 GB
Oct-14	1,160	1,995	5,697	33,223	1.84 GB
Nov-14	1,145	1,803	4,184	37,174	1.73 GB
Dec-14	1,186	1,524	3,172	36,566	1.78 GB
Jan-15	1,256	1,596	3,776	34,557	2.03 GB
Feb-15	1,023	1,328	3,422	29,704	1.76 GB
Mar-15	1,253	1,640	3,246	31,615	3.05 GB
Apr-15	1,326	2,204	5,343	34,907	2.10 GB
May-15	1,103	1,958	4,350	29,796	1.74 GB
Jun-15	1,090	1,475	3,612	26,463	2.11 GB

4Fri Top 5 Visited Pages
Home Page
/fire_reintroduction.html
/stakeholders.html
/meetings.html
/maps.html

AZPrescribedFireCouncil.org					
Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jul-14	538	859	2,972	12,833	243.25 MB
Aug-14	380	664	2,361	8,795	226.06 MB
Sep-14	484	798	2,854	11,026	271.00 MB
Oct-14	392	969	3,827	9,579	206.18 MB
Nov-14	409	907	3,692	10,059	177.76 MB
Dec-14	1,050	1,567	4,915	12,136	197.31 MB
Jan-15	1,143	1,798	3,940	11,053	231.16 MB
Feb-15	886	1,270	3,539	7,873	128.40 MB
Mar-15	1,118	1,474	3,635	9,965	167.39 MB
Apr-15	903	1,260	2,464	6,467	107.96 MB
May-15	362	762	1,644	6,544	129.70 MB
Jun-15	352	584	1,779	5,617	100.29 MB

AZPFC Top 5 Visited Pages
Home
Feed
About
Event/Prescribed-Fire-Training-Exchange
News

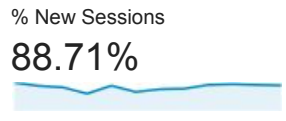
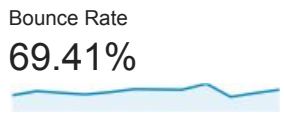
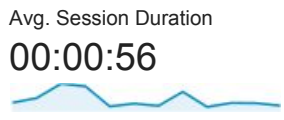
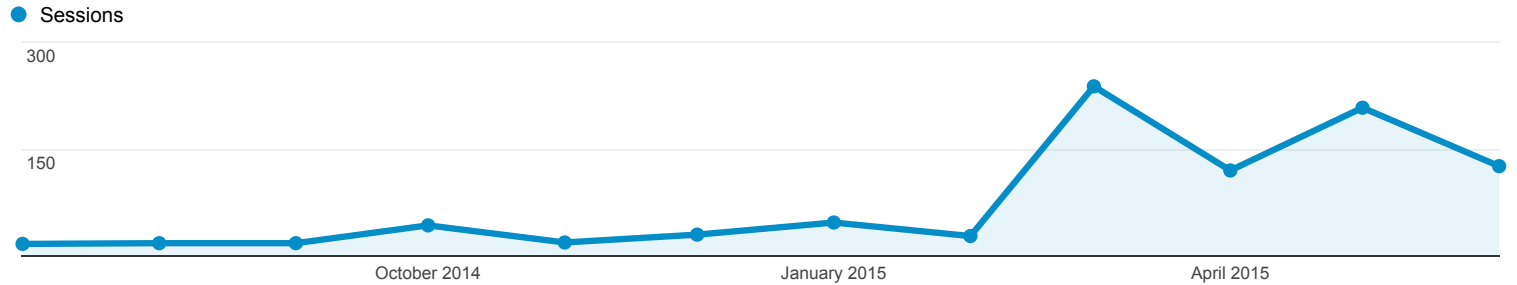
# SWERI Web Analytics: Access to SWERI website over time

Jul 1, 2014 - Jun 30, 2015

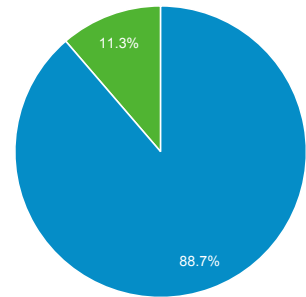
## Audience Overview

All Sessions  
100.00%

### Overview



■ New Visitor ■ Returning Visitor



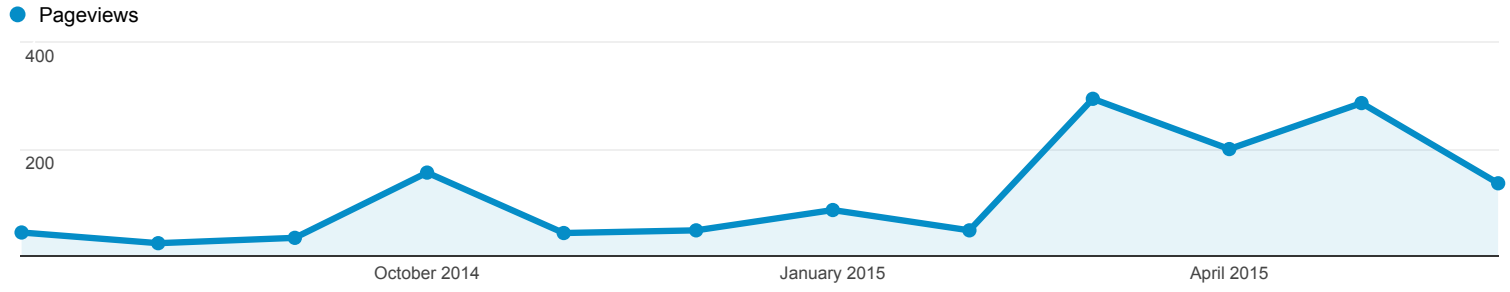
Language	Sessions	% Sessions
1. (not set)	453	49.67%
2. en-us	388	42.54%
3. en	19	2.08%
4. ru	16	1.75%
5. de	12	1.32%
6. en-gb	4	0.44%
7. de-de	3	0.33%
8. es	3	0.33%
9. hu-hu	3	0.33%
10. et	2	0.22%

# SWERI Web Analytics: Page Views over Time

Jul 1, 2014 - Jun 30, 2015

All Sessions  
100.00%

Overview



<b>Pageviews</b> 1,399	<b>Unique Pageviews</b> 1,174	<b>Avg. Time on Page</b> 00:01:37	<b>Bounce Rate</b> 69.41%	<b>% Exit</b> 62.40%
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Page	Pageviews	% Pageviews
1. /	932	66.62%
2. /team.html	70	5.00%
3. /newsstories/cutting_edge.html	60	4.29%
4. /BroadscaleMonitoring.html	49	3.50%
5. /dfc_wksp.html	46	3.29%
6. /index.html	42	3.00%
7. /legislation.html	39	2.79%
8. /reviews.html	36	2.57%
9. /contactus.html	20	1.43%
10. /maps.html	16	1.14%