



The Ecological Restoration Institute (ERI) *Accelerating Restoration in the West* Fiscal Year 2017

April 7, 2017

Approved FY17 Work Plan

The U.S. Forest Service Policy Manual¹ released in April 2016, recognizes the importance of restoration for maintaining ecological integrity and achieving desired conditions for ecological resilience, ecosystem services, and managing for climate change. The revised chapter title, “Ecosystem Restoration,” amends Forest Service directives in order to “provide a clear, science-based policy to guide management actions where restoration is appropriate.” Most important, this new directive serves as a tool for “sustaining the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of future generations.”

The manual also acknowledges the importance of understanding historical spatial and temporal variation in ecosystem characteristics under historic disturbance regimes, referred to as the natural range of variability, and the importance of monitoring and evaluation of restoration projects as “essential adaptive management steps for achieving sustainable ecosystems.”

The Ecological Restoration Institute (ERI) provides practical science support to achieve the objectives outlined in the Forest Service Manual, as well as to accelerate forest restoration across all jurisdictions in order to achieve landscape-scale restoration. The ERI is nationally and internationally recognized for expertise and leadership in science-based forest restoration management, monitoring, and treatment evaluation for forest restoration. The ERI network of restoration experiments provide critical information for establishing the natural range of variability at sites in the Intermountain West in order to inform restoration and hazardous fuels reduction treatments. In addition, ERI staff actively evaluate and communicate best available science and provide technical assistance to land managers and stakeholders in order to translate science into meaningful action.

The Ecological Restoration Institute (ERI) at Northern Arizona University is nationally and internationally recognized for expertise and leadership in science-based forest restoration and fire. Authorized in 2004 by the Southwest Forest Health and Wildfire Prevention Act (PL108-317), the ERI is one of three ecological restoration institutes. The ERI serves as an objective leader in primary and secondary biophysical and social science, scholarship, information transfer, collaborative efforts, policy analysis, and workforce education to support landscape-scale restoration of forests and woodlands in the West. The institutes represent a proactive strategy for bridging the gap between scientific research and practical application to achieve desired land management

Highlights of ERI’s proposed Fiscal Year (FY) 2017 work plan for \$1.2 million include:

- Technical support that advances landscape-scale restoration projects and Collaborative Forest Landscape Restoration pilots throughout the West;

¹ FSM 2020

- Anticipatory science synthesis examining the effectiveness of resource objective fires for achieving restoration in frequent-fire forests of the West;
- Continued leadership and innovation to achieve the ecological goals and economic efficiency required for success by the Four Forest Restoration Initiative (4FRI);
- Monitoring restoration treatments in dry mixed-conifer and pinyon-juniper restoration sites;
- Developing new reference information related to historical conditions in “transitional” ponderosa pine forests;
- Assistance to increase the economic efficiency of restoration planning and implementation; and,
- Support for on-the-ground activities of resource managers.

The ERI is grateful for the funding provided by the U.S. Forest Service. Between 2010 and 2014 the ERI received \$6.2 million in federal appropriated dollars based on PL108-317. We leveraged that funding with an additional \$9.8 million from the state of Arizona and \$2.2 million in additional federal projects yielding an almost two-to-one return on investment.

We look forward to working in partnership with the USFS and other partners to deliver a program of excellence in Fiscal Year 2017.

Project 1: Science Delivery and Support for Collaborative Restoration and Conservation from the Local to the Landscape Scale

The ERI works across the Intermountain West providing technical assistance to achieve the goals of the Collaborative Forest Landscape Restoration Act (CFLRA). The ERI is an integral member of the 4FRI project and collaborative stakeholder group. The ERI provides science support for the Rim Country Environmental Impact Statement (EIS), leads monitoring efforts for implementation of the first EIS, and provides ongoing administrative services to support collaboration.

As the 4FRI project progresses, it faces capacity and implementation challenges. Presently the U.S. Forest Service and stakeholders are working on planning for the Rim Country EIS while simultaneously implementing the first EIS. In 2016, the ERI worked on multiple fronts to advance 4FRI goals. For example, the ERI released a white paper compiling some of the lessons learned during the first five years of 4FRI. The white paper was designed to provide critical adaptive management information to help the Rim Country EIS build from the knowledge and experience gained during preparation of the first EIS and to be used as a source of knowledge for other CFLR pilots. The ERI is at the forefront of assisting the stakeholder-led, multi-party monitoring board to implement the monitoring and adaptive management plan approved in the first EIS. The ERI also helped create the new Comprehensive Implementation Working Group (CIWG) to coordinate non-thinning and burning restoration projects (e.g., spring restoration, habitat restoration, etc.) that benefit from added partner capacity and leveraged funding. In a science delivery and technical transfer capacity, the ERI worked directly with the Rocky Mountain Research Station (RMRS) and the Forest Service Interdisciplinary Team (ID Team) to understand the restoration and economic trade-offs of different implementation scenarios in the first EIS area.

In April 2016, the participants at the Collaborative Restoration Workshop identified that sharing lessons learned and communicating across projects and USFS regions are essential for the CFLR pilots to succeed. In 2017, the ERI will work with partners to continue to provide technical support through webinars and workshops.

Project 1: Science Support for Collaborative Restoration and Conservation	
Fulfills Duties under the Act: 1, 2, 3, 4	
Action	Audience
1.1 Assistance to landscape-scale restoration projects across the West.	<u>Audience:</u> CFLRP Coordinator, WO; Collaborative efforts West-wide, federal and state land and wildlife management agencies West-wide. <u>Outcome:</u> Science delivery and lessons learned and successes shared across collaborative efforts.
1.2 Science delivery and support for the Four Forest Restoration Initiative (4FRI), a Collaborative Forest Landscape Restoration Act project.	<u>Audience:</u> 4FRI stakeholders, 4FRI Forest Service ID team and Forest Service leadership. <u>Outcome:</u> Science delivery and support to Stakeholder Group and science transfer to assist Forest Service implementation of EIS No. 1.

Deliverables

1.1) Provide West-wide science delivery and collaborative support for collaborative landscape restoration projects.

- a) Support to West-wide collaborative efforts via national and regional planning and learning efforts (webinar series with NFF).
Deliverable: Report on support.
- b) Sponsor, support, and participate in a national CFLRP social science lessons-learned and policy review writing workshop planned by Will Butler and Courtney Schultz for November 2017. The results will be published by Island Press.

Deliverable: Sponsor of workshop; 1-2 book chapters; Adaptive Management lessons-learned fact sheet for CFLRP audience.

1.2) Science delivery and support for the Four Forest Restoration Initiative (4FRI), a Collaborative Forest Landscape Restoration Act project.

- a) The ERI provides science support on an as-needed basis for the 4FRI ID Team and stakeholders.
Deliverable: Report on science delivery to 4FRI Stakeholder Group and Forest Service Interdisciplinary Team.
- b) The ERI serves in leadership positions on the 4FRI Steering Committee, rotating co-chair position, multi-party monitoring board, RIM Country EIS working group, and Comprehensive Implementation Working Group.

Deliverable: Report on leadership activities (stakeholder group and working groups).

- c) The ERI provides administrative and IT support to facilitate effective collaborative operations.

Deliverable: Report on IT support for the 4FRI website and BASECAMP (an online collaborative work space) and administrative support including minutes and agendas.

Project 2: Evaluation and Synthesis of Best Available Scientific Information (BASI) for Landscape Restoration West-Wide

The ERI contributes to evaluating and documenting best available science information (BASI) through multiple science-synthesis and delivery efforts. Identifying BASI requires continuous assessment of peer-reviewed literature and can be challenging for land managers. The ERI uses rigorous, established protocols to analyze published studies and other data sources, to determine the strength of scientific evidence, and answer both current and anticipated management questions. This work ranges from rapid reviews of key information sources that are produced in a matter of weeks to answer urgent questions, to comprehensive reviews that may include meta-analysis of data to answer broader questions. For all reviews ERI objectively assembles, evaluates, and interprets findings from scientific research, practitioner experience, and gray literature. In this way, the ERI identifies and documents the best available science to assist public land managers in decision processes.

In FY17, the ERI will synthesize available literature and information related to use of natural fire ignitions for accomplishing restoration objectives. We will pursue the following questions: 1) What evidence is there to support assumptions regarding restoration benefits of such “resource objective” wildfires? 2) Are there restoration objectives that are met when managers allow natural ignitions to burn? 3) Are there restoration objectives that are difficult to meet with resource objective wildfires? And, 4) Are there western forest types for which resource objective wildfires are more or less likely to accomplish restoration objectives? Currently, there is much interest in using wildfires to do the work of ecosystem restoration, but to date there has been no systematic investigation of the effectiveness of such a strategy for meeting restoration objectives. This project will be of interest to public land managers West-wide.

Project 2: Evaluation and Synthesis of Best Available Scientific Information (BASI) for Landscape Restoration West-Wide Fulfills Duties under the Act: 1, 2	
Action	Audience
2.1 Synthesis of best available science on the effectiveness of resource objective wildfires for restoring frequent-fire forests of the western United States.	<u>Audience:</u> Forest Supervisors, District Rangers, and Fire Management Officers in the western U.S., researchers, academics, stakeholders. <u>Outcome:</u> Science synthesis to inform management action.

Deliverables

2.1) Evidence-based review of the literature. As interest increases in managing wildfires to accomplish restoration objectives in forests of the western US, this project meets a science need identified by the ERI in both 2015 and 2016 (FY15 Project 3.3, FY16 Project 3.5). In addition, the importance of broadly analyzing efficacy of resource objective wildfires for restoring frequent-fire forests of the western US has been expressed in discussions between resource managers and scientists at regional as well as national-level meetings (e.g., Association for Fire

Ecology, Southwest Fire Ecology Conference, Tucson AZ, 2016; Society of American Foresters National Convention, Madison, Wisconsin 2016).

- a) Deliverable: Synthesis of Best Available Science.
- b) Deliverable: Presentation at professional conference or to stakeholder group or practitioners.

Project 3: Monitoring, Evaluation, and Adaptive Management of Landscape Restoration in Western Fire-Adapted Forests and Woodlands

The ERI is a leader in practical, original science, developed to address both urgent and applied restoration issues as well as critical emerging questions. The ERI works with practitioners and agency staff to identify key science needs and topics. Peer-reviewed articles published in professional journals and technical reports made available through the ERI's website provide high-quality, rigorous information useful to ERI partners, including local land managers and policymakers. Knowledge developed under this project is also placed in broader context in order to be of interest and practical value to resource professionals working in forested ecosystems across North America and internationally. The ERI is focused on several important areas: 1) The ERI quantifies historical reference conditions (natural ranges of variation) for western forest ecosystems. Reference conditions related to historical fire regimes and structural characteristics are used by practitioners as a guide for formulating restoration prescriptions and monitoring and evaluating restoration outcomes; 2) The ERI investigates long-term responses to restoration treatments and interactions with climate at multiple scales (e.g., landscape, stand, small plots). Much of this work is done utilizing LEARN (Long-term Ecological Assessment and Restoration Network), ERI's network of long-term studies established across the Southwest on various public agency lands; and 3) The ERI provides original scientific information related to wildfire causes, patterns, and effects. In addition to these main areas of focus, the ERI also engages in studies related to plant and animal species of conservation concern as needed.

In FY17, the ERI will continue to work with the Mogollon Rim Ranger District of the Coconino National Forest toward implementation of a randomized, replicated study of restoration treatments in warm/dry mixed-conifer forests. Information on restoration options in these important ecosystems is lacking and urgently needed. This work was requested in 2014 by USFS Region 3 (R3) Regional Silviculturist as well as the Four Forest Restoration Initiative (4FRI) ID Team and stakeholder group. Study sites have been established and pretreatment data on forest structure, vegetation, and hazardous fuels have been collected. Study units need to be marked for thinning, and treatments need to be implemented.

In FY17, the ERI will initiate a study to quantify historical fire regimes and structural characteristics in ponderosa pine forests growing in transition with Interior Chaparral and/or Madrean Pine-Oak communities. This work is in direct response to science needs expressed by the Fire Fuels and Aviation Staff Officer as well as Fire Management Officers and Foresters with the Prescott and Tonto national forests, and results from information gaps identified in the ERI FY15 Work Plan, Project 2. This work will also benefit prescription development for the Coconino National Forest below the Mogollon Rim and the Coronado National Forest. Historical reference information for these vegetation communities is lacking, and this project will allow forest managers to develop science-based restoration prescriptions and more clearly evaluate treatment outcomes.

In FY17, the ERI will re-measure long-term sample plots established in 2006 in pinyon-juniper woodlands on the Tusayan Ranger District of the Kaibab National Forest. Very few replicated studies have examined restoration and hazardous fuels reduction treatment responses in southwestern pinyon-juniper woodlands, and this study will provide R3 managers with critically needed information to inform the adaptive management process. In addition, this work will be of interest West-wide to practitioners involved in planning treatments in one of the more extensive woodland types of North America.

Project 3: Monitoring, Evaluation and Adaptive Management of Landscape Restoration in Western Fire-Adapted Forests and Woodlands	
Fulfills Duties under the Act: 1, 2, 3	
Action	Audience
3.1 Continue development of mixed-conifer LEARN study on Mogollon Rim Ranger District, Coconino National Forest (build from 2016).	<u>Audience:</u> 4FRI stakeholders, 4FRI ID Assistant Team Lead, R3 Silviculturist, district managers, researchers, academics. <u>Outcome:</u> Information to assist planning for restoration of warm/dry mixed-conifer forests of the Southwest.
3.2 Initiate study to examine fire history and/or presettlement forest structural characteristics in ponderosa pine forests occurring in transition with interior chaparral and/or Madrean evergreen woodlands.	<u>Audience:</u> Prescott, Tonto, Coconino, Coronado National Forests, Fire, Fuels and Aviation, Fuels Management Officers, Foresters local stakeholders, researchers, academics. <u>Outcome:</u> Information to assist planning for restoration of transitional ponderosa pine forests.
3.3 Re-measure long-term monitoring plots (LEARN) in pinyon-juniper woodlands of the Kaibab National Forest, where restoration-based fuel hazard reduction treatments were implemented in 2006.	<u>Audience:</u> District Ranger, fire and fuels managers, local stakeholders, researchers, academics. <u>Outcome:</u> Information to assist planning for restoration and hazardous fuels reduction in pinyon-juniper woodlands.

Deliverables

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 FY 2015).

- a) Deliverable: Report on progress with Coconino National Forest to complete marking, and administer timber sale, and develop slash treatment options.

3.2) Initiate reference conditions study in transitional ponderosa pine forests, Prescott and/or Tonto national forests. This project will also help to inform management prescriptions on the Coronado and Coconino National Forest (below the Rim).

- a) Deliverable: Progress report that includes: consultations with national forests, study plan development, collection of preliminary data, processing existing samples and data analysis.
- b) Deliverable: Presentation for USFS leadership and staff, collaborative stakeholder groups, and/or professional conference.

3.3) Re-measurement (11-yr) of pinyon-juniper fuels reduction study (LEARN), Tusayan Ranger District, Kaibab National Forest.

- a) Deliverable: Manuscript for publication.
- b) Deliverable: Presentation for USFS leadership and staff, collaborative stakeholder groups, and/or professional conference.

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

The low value of the wood and biomass generated during forest restoration undermines implementing landscape-scale restoration at the pace and scale that is urgently needed. In particular, biomass has turned out to be more like a hazardous waste problem than a money making commodity. In addition, the money generated from merchantable timber is marginal and provides little offset for the management costs of the Forest Service. In FY 2017, The ERI will work on two fronts to improve the economic efficiency of forest restoration.

First, we will continue to support efforts to find cost effective opportunities for disposing of biomass by working with industry and potential biomass users to advance the siting of a woody biomass energy facility on the West side of the 4FRI landscape. This facility may be sited at Camp Navajo or at another location. This action was identified during an ERI-Arizona State Forestry Biomass workshop in February 2016. This work also complements the All Lands project that was funded in FY2016 through funding from the USFS to the Arizona Department of Forest and Fire Management. That project seeks to motivate restoration on multi-jurisdictional lands outside of and adjacent to the national forests. Biomass disposal is critical for achieving landscape scale restoration regardless of land ownership.

Second, we propose to work with the Forest Service to identify operational improvements that can reduce the internal cost of contract sale preparation. The Forest Service Handbook and Manual date from a period when timber had more value than today. We propose facilitating a workshop with Forest Service implementers to identify the directives in the Forest Service Handbook that should be amended in order to facilitate efficient sales preparation processes that recognize the low value of trees removed in restoration.

The solutions generated from this proposed work will benefit restoration projects across the West that face similar challenges.

Project 4: Understanding and Solving the Economic, Social, Political Issues and Opportunities of Ecological Restoration	
Fulfills Duties under the Act: 6,7	
Action	Audience
4.1 Advance economically practical solutions for biomass harvest, removal, and processing.	<u>Requestor</u> : Industry, 4FRI stakeholders, <u>Outcomes</u> : Solving a major bottleneck for achieving landscape-scale restoration.
4.2 Facilitate workshop to identify changes in the Forest Service Handbook and Manual that will improve the efficiency of sale preparation.	<u>Requestor</u> : 4FRI Innovations & Efficiencies Coordinator

	<u>Outcome:</u> Efficient sale preparation that leads to more acres treated.
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Deliverables

4.1) The ERI will provide technical, scientific, and outreach support to advance economically practical and efficient solutions for biomass removal and processing. These actions are based on ideas and solutions generated from the ERI-State Forestry biomass workshop held in February 2016.

Deliverable: Report on actions.

4.2) The ERI will work with the 4FRI Innovation and ID Team, Region 2 and 3, and State Forestry to design and facilitate a one-day workshop discussing Forest Service Handbook and Manual directives on sales preparation and what can be done to improve efficiency.

Deliverables: One workshop and a compilation of recommendations for Forest Service consideration.

Project 5: Science Delivery and Outreach to National, Western, and Southwestern Audiences: Federal, State, Tribal and Private Forestry

Both the National Cohesive Strategy and the 2012 Planning Rule include USFS direction to maximize capacity and to realize efficiencies by working across boundaries on shared priorities. The 2016 five-year evaluation of SWERI included that “the stakeholders that were interviewed indicated that the institutes should broaden their scope to include other ecosystems and larger landscapes to further the science and resources available to states.”

In addition to our work plan accomplishments in FY 2016, the ERI completed a special project on the Broader-Scale Monitoring Strategy (BSMS) requirement within the 2012 Planning Rule, developing a framework and set of recommendations for USFS Southwest and Rocky Mountain Regions. We are currently working on a special project to develop all-lands strategies on the landscapes adjacent to the 4FRI project with researchers from the Rocky Mountain Research Station. Both of these efforts complement the State, Tribal, and Private Forestry work we plan in 2017. The ERI will use the relationships developed during these projects to facilitate opportunities across boundaries for science delivery to support strategic planning, implementation, and assessment and monitoring of natural resources that cross boundaries.

The 2016 SWERI Five-Year Report provided some key recommendations from SWERI’s affected entities. In particular, anonymous interviewees suggested improvement of communication and expansion of education workshops and programs. In 2017, the ERI will continue to make the best available science user friendly. A website re-design is underway to allow our audiences to get to the information they need more efficiently and to provide easy access to our newsletter. Biannual newsletters provide announcements and easily understood short descriptions of new publications, working papers, and fact sheets.

Local workshops are effective at not only disseminating science, but also allowing land managers opportunities to share best practices across districts and forests. In addition, they provide researchers at the ERI an opportunity to hear research needs and management questions. Webinar series with

partners (e.g., Southwest Fire Science Consortium; National Forest Foundation) on social, economic, and ecological science will disseminate relevant information to the broader, West-wide audience. As needed, support to USFS planning and monitoring work are planned to deliver the information collected from the Broader-Scale Monitoring Strategy project.

Finally, our Rapid Assessments (RAPS) are greatly appreciated by land managers. Depending on the project, ERI scientists may: rapidly assess available literature, determine and fill information gaps for project planning, work closely with project staff to ground-truth vegetation types, recommend management actions to meet restoration goals, and even set-up demonstration areas to highlight innovative project ideas. The information that the ERI provides can be used as part of the environmental review process and to inform treatment design.

Project 5: Science Delivery and Outreach to National, Western, and Southwestern Audiences	
Fulfills Duties of the Act: 1, 2, 3, 4	
Action	Audience & Requestors
5.1 Provide support to federal land managers with science synthesis, technical assistance, rapid assessments, learning workshops, and presentations.	<u>Requestor</u> : Federal land manager that include district rangers, specialists, silviculturists. <u>Outcomes</u> : RAPS, workshops, field trips, transfer of best available science.
5.2 Provide scientific support for forest planning and incorporation of a broader-scale monitoring strategy into forest planning efforts and at the regional level.	<u>Requestor</u> : R3 Planning Director; Tonto NF Plan Revision lead; Arizona and New Mexico forests. <u>Outcomes</u> : Forest plans use best available information and increased sharing across forest planning efforts via BSMS.
5.3 Maintain and transfer science through the ERI, SWERI, and AZ Prescribed Fire Council websites for land managers and all affected entities.	<u>Audience</u> : West-wide scientific community, AZ Department of Forest and Fire Management, NM State Lands and Department of Forestry, and the stakeholder community. <u>Outcomes</u> : Revised ERI website for cleaner, easier-to-use functionality for multiple audiences.
5.4 Translate and summarize scientific and journal articles for land managers and affected entities.	<u>Audience</u> : City of Flagstaff (prescribed fire management), Environmental community (mistletoe), Prescribed fire managers city and federal (smoke), 4FRI ID team, R3 National Forests.

	<u>Outcomes:</u> Knowledge transfer and best available science used to inform action.
5.5 Transfer science to non-federal entities using field trips, filling information requests, and making presentations.	<u>Requestor:</u> Stakeholders, Tribal Nations, nonfederal land managers. <u>Outcomes:</u> Knowledge to inform action.
5.6 Educate the general public.	<u>Affected entities:</u> General public. <u>Outcomes:</u> Raise awareness and support for restoration.

Deliverables

5.1) Provide support to federal land managers for restoration treatment planning and implementation.

- a) Deliverable: Report on actions to deliver science.
 - i. A combination of ten (10) total services based on previous and anticipated demand that may include: workshops, information requests, technical assistance, field trips, and presentations.
 - ii. Present (2) webinars in partnership with the Southwest Fire Science Consortium and/or National Forest Foundation to present emerging science to land managers and practitioners.
 - iii. Rapid Assessment (RAP) support for restoration projects at the forest level.
 - 1. Project-level BASI synthesis to localize peer-reviewed literature (1).
 - 2. Project-level demonstration area (1).

5.2) Assist with forest planning and implementation by recommending best available science and program support. Science and timing of support are variable for each national forest based on each individual forest planning schedule. This deliverable may include the opportunity to provide BSMS support to NM forests, and Tonto National Forest, just initiating revision under 2012 Planning Rule.

- a) The Region 3 Planning staff has requested assistance from the ERI to share lessons of the R2/R3 Broader-scale Project.
Deliverable: Report on actions to support forest plan revisions on the Region 3 forests undergoing plan revision.
 - i. Facilitate across-forest learning by participating on R3 planning calls; produce summary “shared lessons” for R3 distribution.

5.3) Provide website science-delivery support for ERI, SWERI, the Arizona Prescribed Fire Council, and 4FRI (See Project 1 for 4FRI web support).

- a) Deliverable: Redesigned ERI website and website maintenance for AZ PFC, SWERI, and 4FRI.
- b) Deliverable: Report on technical support for ERI, AZ Prescribed Fire Council, and SWERI websites.

5.4) Edit and deliver biophysical and social-political-economic information for affected entities.

- a) Deliverable: Editorial support for a total of three (3) white papers and/or working papers.
 - i. Working or White Paper for elected officials describing the steps required in order to conduct a prescribed burn. We anticipate that this working paper to be relevant throughout the West.
 - ii. Working Paper describing the role of mistletoe and mistletoe management in ecological restoration.
 - iii. Working Paper on smoke and smoke management in cooperation with the Southwest Fire Science Consortium.
- b) Deliverable: Eight (8) fact sheets that translate and summarize scientific papers and journal articles.

5.5) Initiate and facilitate knowledge services and science support for non-federal entities through field trips, filling information requests, and presentations for affected entities.

These numbers may vary based on demand.

- a) Deliverable: Report on actions to educate and support affected entities. Provide a minimum of 10 activities that may include field trips, presentations, and information requests.

5.6) Educate the general public through the media.

- a) Deliverable: Two (2) newspaper articles to educate the general public about the need for forest restoration to restore frequent-fire forests.

Project 6: Duty 5 under the ACT — Provide Annual Progress Reports

The legislation establishing SWERI requires an annual progress report.

Deliverable

6.1) Complete annual progress report on June 30, 2017 and June 30, 2018.

BUDGET

FY17 Budget \$1,200,000

	Project 1: Science Delivery and Support for Collaborative Restoration and Conservation from the Local to the Landscape Scale	Project 2: Evaluation of Best Available Science Information (BAS) for Landscape Restoration West-wide	Project 3: Monitoring, Evaluation and Adaptive Management of Landscape Restoration in western fire-adapted forests	Project 4: Understanding and Solving Social, Political and Economic Issues	Project 5: Services to the Intermountain West: Federal, State, Tribal and Private Forestry	Total
Personnel:	\$ 158,140	\$ 55,338	\$ 431,774	\$ 55,091	\$ 308,582	\$ 1,008,925
Travel:	\$ 4,342	\$ 1,500	\$ 20,522	\$ 411	\$ 6,588	\$ 33,363
Operations & Supplies:	\$ 2,010	\$ 680	\$ 23,635	\$ 1,724	\$ 10,072	\$ 38,121
Outside Services:	\$ 1,000	\$ -	\$ 1,000	\$ 2,000	\$ 6,500	\$ 10,500
Total Direct Costs:	\$ 165,492	\$ 57,518	\$ 476,931	\$ 59,226	\$ 331,742	\$ 1,090,909
Indirects:	\$ 16,549	\$ 5,752	\$ 47,693	\$ 5,923	\$ 33,174	\$ 109,091
Total Requested:	\$ 182,041	\$ 63,270	\$ 524,624	\$ 65,149	\$ 364,916	\$ 1,200,000