

FLN Networker No. 186: June 10, 2015

The FLN Networker is a publication of the Fire Learning Network—a partnership of the USDA Forest Service, Department of the Interior (BIA, BLM, National Park Service, US Fish & Wildlife Service) and The Nature Conservancy—intended to foster communication within the network and among its friends. Submit comments, links and subscription requests to Liz Rank.

For more about the FLN, visit www.conservationgateway.org/fln or contact Lynn Decker.

News from the Field

National: Last week, about 80 members of the **Fire Adapted Communities Learning Network**, **Fire Learning Network**, and **partners and colleagues** in various roles met in Santa Fe for a week of **shared learning** and (of course) **networking**. Thanks to **Emily Troisi**, a post from the field day was on the [facnetwork.org blog](http://facnetwork.org/blog) in near-real-time, and others posted to Facebook as the week went on. **Thanks to our great New Mexico hosts**, as well, and all the **work that everyone put in**—before and during—to make the workshop a success.

A full report will be in the next issue. In the meantime, attached is a summary of the **Rio Grande Water Fund's avoided cost analysis**, which was discussed by **Dale Lyons** (dlyons@tnc.org) in the field and sparked significant interest.

Arizona: Congratulations to the **Flagstaff Watershed Protection Project** (FWPP). They have been honored with the **People's Choice Award** in the **Reducing Our Risk contest** held by Solution Search. They got more than 26,000 votes in the contest, which sought **innovation in disaster preparation**. The FWPP solution includes “implementation of **ecologically sound forest restoration** activities [that] not only protects our community from the immediate threat of wildfire and long term post-fire flooding impacts, but helps alleviate the extreme effects of climate change we are already witnessing in the southwest.” In addition to the cash award, all finalists had a chance to meet at a capacity-building workshop and awards ceremony in Washington DC.

California: A participant in last fall's **Klamath River TRENCH—Kathleen Navarro** (kathleennav@gmail.com), a graduate student in the School of Public Health at the University of California, Berkeley—conducted some of her **research while at the TRENCH**. The **poster capturing the results**—“Gas-Phase Polycyclic Aromatic **Hydrocarbon Exposure** during Prescribed Fire: Case Study”—was awarded “**Best of Session**” at the student poster session of the 2015 American Industrial Hygiene Association annual conference last week.

Oregon: Various forms of **outreach and media engagement** were part of the **Central Oregon TRENCH** last month. Among the tools used were a brief “**commercial**” for **prescribed fire** produced by local station KTVZ and several radio **PSAs about the TRENCH** event itself, alerting people that there would be smoke—and **why**. **Samples of the outreach materials** developed for this are posted on the Conservation Gateway.

Washington: **Annie Schmidt** (director@chumstickcoalition.org) is interviewed about the work of the **Chumstick community to adapt to wildfire** in the recent *Climate Central* **article** “Will the West Ever be able to Live with Fire?”

Funding: Hazard Mitigation

Hazard Mitigation: Last week the Federal Emergency Management Agency (**FEMA**) **announced** \$180 million in funding available through two Hazard Mitigation Assistance programs, including **Flood Mitigation Assistance** and **Pre-Disaster Mitigation**. These grant programs help **state, local, tribal, and territorial governments** to act to reduce the potential cost of natural disasters. Applications are due by **August 28**.

Articles & Reports: Admin Support / Fuel Treatment Effectiveness / Mexican Spotted Owl / Pine Barrens

Admin Support: The **Ecological Restoration Institute** has produced a [brief fact sheet](#) based on a **survey** of 60 Collaborative Forest Landscape Restoration Program (**CFLRP**) **project contacts**. It confirms and documents what you probably know: “Administration is **essential**.”

Fuel Treatment Effectiveness: The “**San Juan Fire Fuel Treatment Effectiveness Report**” (based on that summer 2014 fire in Arizona) reports that “overall, the **fuel treatments** that were encountered by this fire **performed as designed** by reducing fire intensities,” which gave firefighters a **safer work environment** and **reduced impacts** on the resources of the Apache-Sitgreaves National Forest. The [report](#) includes maps, photos and a narrative of the fire and its management, as well as discussion of effects and lessons learned. There are also links to several related **videos**.

Mexican Spotted Owl: The **Ecological Restoration Institute's** [working paper](#) “The 2012 Mexican Spotted Owl **Recovery Plan Guidelines for Forest Restoration** in the American Southwest” is intended to “help land managers—especially **silviculturalists and fuel-management specialists**— understand how the revised recovery plan affects forest restoration efforts where project goals include reducing the severity and scale of wildfires as well as protecting and restoring the owl’s habitat.”

Pine Barrens: *ScienceDaily* has a [story](#) about the article “**Drivers of Observed Biotic Homogenization** in Pine Barrens of Central Wisconsin” published in the journal *Ecology*. The *ScienceDaily* story is titled “**Starved for Fire**, Wisconsin Pine Barrens Disappear.”

Video: Benefits and Barriers

Benefits and Barriers: The **Southern Rockies Fire Science Network** has launched a **new video series, Barriers and Benefits to Prescribed Fire**. The [first video](#) in the series is about the **Wapiti Burn**, near Boulder, CO, and covers the extensive community **outreach**, and the challenges of **burning chips** and organizing large **crews of volunteers** that this burn faced.

Job: Burn Boss

Burn Boss: The city of **Austin** (TX) is hiring an environmental program coordinator (burn boss) with **RXB2 and Single Resource Boss qualifications**. Details are on the city’s job site ([position number 114644](#)); applications are due by **June 10**.

FLN and FAC LN Workshops & Field Tours

June 10-11

FireScape Mendocino Workshop 6 / Covelo, CA

At this workshop, participants will hear from subgroups set up at the last workshop about progress made to date, build shared learning on a field tour, and continue to work on topics such as landscape-scale vegetation management, creating fire-ready communities, air quality issues and increasing tribal involvement in the FireScape.

Information: see the announcement at <http://mendocinofirescape.blogspot.com/>

July 1

date change

Georgia Blue Ridge Mountains Landscape / Chattahoochee NF

Landscape partners will visit one or two recently burned areas in the Forest, and will discuss effects of the fire and where restoration of these areas is headed. In the afternoon, Frank Riley will lead a tour of a FireWise community, to see what they’re doing to make themselves more resilient to wildfires.

Information: Malcom Hodges (mhodges@tnc.org)

FLN Prescribed Fire Training Exchanges

- Sept. 15-Oct. 5** **Spanish-Language TREX / northern NM**
This training exchange will be held in and around the Santa Fe National Forest, and will bring together participants from several countries and across the U.S. (The application deadline has passed.)
- Sept. 28-Oct. 10** **Klamath River TREX / northern CA**
updated Information: see the attached flyer
- Oct. 19-Nov. 1** **Northern California TREX / northern CA**
Save the date for this training—details soon; applications will be available in July.

Conferences, Workshops, Training, Etc.

- June 18** **Fire & Grass: Spring Pasture Burning Results Tour / Marvin, SD**
new listing Partners including the Great Plains Fire Science Exchange, Pheasants Forever, Prairie Coteau Habitat Partnership, NRCS and TNC are hosting this tour to discuss prescribed planning and grassland responses.
Information: see the attached flyer
- June 25** **Wildfire and Prescribed Fire Field Tour / Niobrara Valley Preserve, NE**
Partners including the FLN, JFSP consortia and universities, are hosting this tour to discuss ecological effects and responses to fire on the ground. RSVP June 18. Information: see the flyer attached to [FLN Networker No. 185](#)
- July 6-12** **Fire Ecology Institute for Educators / Florissant, CO**
deadline This workshop for grade 3-12 educators has sponsors and presenters, including the Colorado State Forest Service, Coalition for the Upper South Platte, The Nature Conservancy, Rocky Mountain Research Station and others. The registration deadline is **June 19**.
Information: scroll through the listings at <http://coloradoplatt.org/workshops/>
- July 28-29** **Best Practices for Communication and Delivery of Prescribed Fire Messaging / Tall Timbers Research Station, FL**
This course is aimed at increasing the use of prescribed burning in fire maintained ecosystems on private lands through more effective, coordinated communications.
Information: <http://www.ncsu-feop.org/RxFire/communications/>
- July 29-30** **Shortleaf Pine in the Appalachians—A Workshop to Discuss Threats, Barriers and Successes in the Restoration of Shortleaf Pine / Asheville, NC**
updated The Consortium of Appalachian Fire Managers and Scientists and The Nature Conservancy host this workshop, which will include facilitated discussions and a field tour of the Sandymush Game Land. Registration is now open.
Information: <http://www.srs.fs.usda.gov/news/591>
- August 26-27** **Patch Burn Grazing Meeting / Pratt, KS**
The call for abstracts for the Great Plains Fire Science Exchange meeting is open through July 10.
Information: <http://blogs.missouristate.edu/gpfirescience/2015/04/28/call-for-abstracts-2015-patch-burn-grazing-meeting/>

- September 24-26** **Colorado Wildland Fire Conference: Creating Fire Adapted Communities / Snowmass Village, CO**
The conference theme will be “Fire adapted communities—who owns the risk?”
Information: <http://www.wildfire-colorado.com/>
- October 22-24** **Backyards & Beyond: Wildland Fire Education Conference / Myrtle Beach, SC**
Information: <http://www.nfpa.org/training/backyards-and-beyond>
- November 16-20** **AFE Fire Ecology & Management Congress / San Antonio, TX**
The call for proposals (oral & poster presentations, attached meetings) is open.
Information: <http://afefirecongress.org/>

Send News, Links & Comments

- Lynn Decker** – ldecker@tnc.org – Lynn is in DC June 16-19.
- Guy Duffner** – gduffner@tnc.org – Guy is in Covelo, CA June 8-12; out June 15.
- Jeremy Bailey** – jeremy_bailey@tnc.org – Jeremy is out May 25-June 12.
- Wendy Fulks** – wfulks@tnc.org – Wendy is out June 19-22.
- Mary Huffman** – mhuffman@tnc.org – Mary is in Covelo, CA June 8-12; Salmon River, CA June 22-25; Hoopa Valley, CA June 26-28; out June 29-July 12.
- Heather Montanye** – hmontanye@tnc.org – Heather is in the office.
- Liz Rank** (editor) – lrnk@tnc.org – Liz is out June 11, 17.

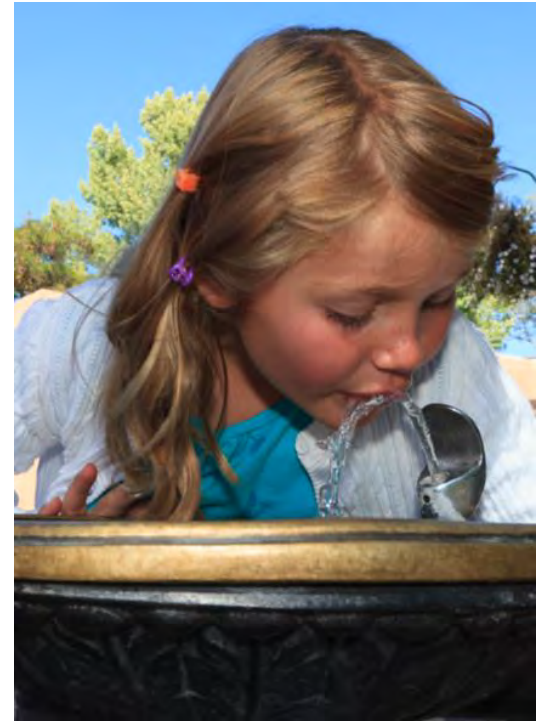
To stop receiving the FLN Networker, please reply to this message and include your request in the body of the message.

Full Links

- News from the Field—National workshop: <http://facnetwork.org/fac-learning-networkfire-learning-network-annual-workshop/>
- News from the Field—AZ—Reducing Our Risk: <http://www.solutionsearch.org/contest/reducing-our-risk>
- News from the Field—CA—Poster: https://www.conservationgateway.org/ConservationPractices/FireLandscapes/HabitatProtectionandRestoration/Training/TrainingExchanges/Pages/Poster_Navarro_2015.aspx
- News from the Field—OR—Outreach: <https://www.conservationgateway.org/ConservationPractices/FireLandscapes/fac/facnet/Pages/FACNet-Products-OregonMedia2015.aspx>
- News from the Field—WA: <http://www.climatecentral.org/news/can-the-west-live-with-fire-19013#>
- Funding—Hazard mitigation: <http://www.fema.gov/news-release/2015/06/01/fema-announces-funding-opportunity-fiscal-year-fy-2015-hazard-mitigation>
- Articles & Reports—Admin support: <http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015014.dir/doc.pdf>
- Articles & Reports—Fuel treatment effectiveness: <http://www.wildfirelessons.net/orphans/viewincident?DocumentKey=170b0c1c-2d7e-47a5-8287-67e6e7fb195b>
- Articles & Reports—Mexican spotted owl: <http://library.eri.nau.edu/gsd/collect/erilibra/index/assoc/D2015015.dir/doc.pdf>
- Articles & Reports--Pine barrens: <http://www.sciencedaily.com/releases/2015/05/150526123833.htm>
- Video--Benefits and Barriers: <https://www.youtube.com/watch?v=RtuaZef-ido&feature=youtu.be>
- Jobs--Burn boss: <https://www.austincityjobs.org/postings/48404>

The Fire Learning Network is supported by *Promoting Ecosystem Resilience and Fire Adapted Communities Together: Collaborative Engagement, Collective Action and Co-ownership of Fire*, a cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior.

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RIO GRANDE WATER FUND

Avoided Cost Analysis

Dale Lyons, Director of Freshwater Programs

February 26, 2015

New Mexico's Water Resources Need Protection

Water is life and livelihood. Nowhere is that more true than in New Mexico. However, the reality is that each year the size and severity of wildfires in our state increases, along with subsequent post-fire flooding that degrades rivers, streams and other critical water sources. In addition, state and federal agencies spend hundreds of millions of dollars a year reacting to these fires, not including the lost revenue to business. Without action, New Mexico's future water security is at great risk.

The Rio Grande Water Fund is a solution that can bring clean water to New Mexicans for generations to come. This innovative project will invest in the restoration of forested lands upstream so we can secure clean water for communities in these watersheds and downstream. Our goal is to generate sustainable funding over the next 20 years to proactively increase the pace and scale of forest restoration, including the most high-risk areas in the Rio Grande watershed. We are working together so nature can keep working for us.

Avoided Costs vs. Prevention Cost

The value proposition for the Rio Grande Water Fund is simply that the cost of reducing the risk of wildfire in forested watersheds is far less than the negative economic impact of a wildfire event. To illustrate this point, The Nature Conservancy is conducting an analysis of avoided costs for a wildfire scenario in one portion of the Water Fund's planning area: the headwaters of the San Juan-Chama Project, which provides critical water supplies to the Rio Grande.

Included in this analysis are wildfire economic impacts to a number of factors:

- **Wildfire suppression costs and post-fire BAER rehabilitation costs;**
- **Avoided costs for increased San Juan-Chama Project operation and maintenance (O&M) and avoided costs for dredging of project reservoirs;**
- **Avoided costs of impacts to properties and structures in Rio Arriba County;**
- **Avoided costs of impacts to roads and electrical infrastructure in Rio Arriba County; and**
- **Avoided costs of health effects to residents of Rio Arriba, Taos and Colfax Counties, in NM.**

Factors yet to be included in this analysis are: 1) avoided costs to downstream water utilities, agricultural irrigators, and water management agencies; and 2) avoided impacts to the local economy (e.g. loss of tourism income and disruption to commerce).

Finally, these avoided costs are then compared to the cost to restore forests and reduce the risk of wildfire, bearing in mind that these prevention/water source protection costs are planned expenditures over many years, while the avoided costs are incurred immediately following a wildfire.

[illegible]

Scenario Area Data

USGS Stream Gage ID	Point	Contributing Area (sq mi)	Forested %	Forested Area (sq mi)	Forested Area (acres)
9343300	Rio Blanco (below div)	69.1	0.73	50.4	32,283
9345200	Little Navajo (below div)	14.2	0.72	10.2	6,543
9344400	Navajo River (below div)	100	0.64	64	40,959
8284520	Heron Dam	193	0.24	46.3	29,644
8285500	El Vado	777	0.51	396.3	<u>253,612</u>
				Sum	363,043

Of the total forest area, 40% is assumed to be treatable, and 50% is assumed to be impacted by a wildfire.

Area Estimates	
Total forested area (acres)	363,044
Treated area portion	40.0%
Total treated area (acres)	145,218
Wildfire area portion	50.0%
Total wildfire area (acres)	181,522

Forest Treatment Costs

Area Estimates	
Total forested area (acres)	363,044
Treated area portion	40.0%
Total treated area (acres)	145,218

Total treated area (acres) multiplied by per acre treatment cost (\$/acre)

Treatment Costs	Unit Cost/Assumption		Treatment Costs	
	Low	High	Low	High
Forest treatment (\$500-\$1,200/acre)	\$500.00	\$1,200.00	\$72,608,783	\$174,261,078
Merchantable timber value from treatment (offsets treatment cost). Area could sustainably provide 77,850 CCF (934,200 BF, 934.2 MBF) over 10 years (Ecosphere, 2013). Wood supply model in development (done by mid-Feb. 2015); value of harvested material not yet available.	XX	YY	--	--
Total Treatment Cost			\$72,608,783	\$174,261,078

Avoided Costs – 1. Fire Suppression and 2. Rehabilitation

Area Estimates	
Total forested area (acres)	363043.9
Wildfire area portion	50.0%
Total wildfire area (acres)	181522.0

Total wildfire area (acres) multiplied by per acre unit costs (\$/acre)

Avoided Costs	Unit Cost/Acre		Subtotal	
	Low	High	Low	High
Avoided Wildfire Suppression (\$/acre)	\$101	\$1,425	\$18,333,718	\$258,649,140
Avoided BAER Rehabilitation (\$/acre)	\$9	\$4,277	\$1,640,965	\$776,369,407

Avoided Costs - 3. Reservoir Dredging

- Actual dredging cost from Strontia Springs Reservoir in Colorado (Denver & Aurora Water Utilities) was approximately \$116,160/AF.
- Estimated range of dredging costs used in Santa Fe Municipal Watershed Environmental Assessment, 2014, was between \$40,000 & \$120,000/AF.
- Multiplied dredging cost range (\$/AF) by volume of estimated debris accumulated in Heron and El Vado Reservoirs (1,022 AF) as a result of wildfire.

Avoided Costs	Unit Cost/AF		Subtotal	
	Low	High	Low	High
Avoided Reservoir Dredging	\$40,000	\$120,000	\$40,895,909	\$122,687,726

Avoided Costs - 4. San Juan-Chama Project O&M

- San Juan-Chama Project FY15 O&M budget for Chama Field Division is \$1,033,354.
- Assumed wildfire effects would increase project operation and maintenance (O&M) costs between 50% and 100% in the year that a fire occurred.
- Wildfire effects would impact project infrastructure shared by all project contractors/water right holders.
- Potential increased O&M costs would primarily result from removal of accumulated sediment and debris at diversions and tunnel infrastructure.

Avoided Costs	Unit Cost/Unit		Subtotal	
	Low	High	Low	High
Avoided San Juan-Chama Project O&M	--	--	\$1,550,031	\$2,066,708

Avoided Costs – 5a. Structure Value Loss

- Number of structures impacted based on per acre ratio derived from Cerro Grande and Los Conchas fires (0.004 and 0.00007, respectively).
- Average Rio Arriba County home value \$153,844 (U.S. Census, 2013).
- Wildfire caused structure property value decrease of 72% (Buckley et al., 2014).
- Number of structures impacted per acre X acres burned X average home value X decrease in structure value = structure value loss.

Avoided Costs	Unit Cost/Unit		Subtotal	
	Low	High	Low	High
Avoided Structure Value Loss	--	--	\$14,380,961	\$83,778,192

Avoided Costs – 5b. Property (Land) Value Loss

- Rio Arriba County tax assessment data provided land values and acreage for agricultural, commercial, and residential properties.
- Assumed 1% of all properties affected by wildfire.
- Buckley et al., 2013, estimated average loss of agricultural, commercial, and residential land value from wildfire was 54%, 86%, and 72%, respectively.

Avoided Costs	Unit Cost/Unit		Subtotal	
	Low	High	Low	High
Avoided agricultural property value loss	--	--	\$44,101	\$44,101
Avoided commercial property value loss	--	--	\$346,574	\$346,574
Avoided residential property value loss	--	--	\$753,333	\$753,333
Sum			\$1,144,008	\$1,144,008

Avoided Costs – 6. Road Repair/Replacement

- **Total distance of primary roads in analysis area = 1,651 miles.**
- **Assumed 1% of all roads impacted by wildfire = 16.5 miles.**
- **Impacted roads multiplied by range of repair/replacement costs from Buckley et al., 2013.**

Avoided Costs	Unit Cost/Mile		Subtotal	
	Low	High	Low	High
Avoided Roadway Repair/Replacement Costs	\$45,000	\$225,000	\$743,281	\$3,716,405

Avoided Costs – 7. Electrical Infrastructure Repair/Replacement

- **Total length of electrical distribution (14-45 kV, 60-115 kV) lines in Rio Arriba County provided by Jemez Mountain Electrical Cooperative and Northern Rio Arriba Electrical Cooperative.**
- **Total length of electrical transmission (231 kV) lines in Rio Arriba County provided by Jemez Mountain Electrical Cooperative, and PNM.**
- **Assumed 1% of all lines impacted by wildfire.**
- **Line repair/replacement costs per mile from Buckley et al., 2013.**

Avoided Costs	Unit Cost/Mile		Subtotal	
	Low	High	Low	High
Avoided cost of electrical 60-115 kV power line replacement	\$1,240,000	\$2,210,000	\$21,253,600	\$37,879,400
Avoided cost of electrical 231 kV power line replacement	\$1,450,000	\$2,620,000	\$2,005,495	\$3,623,722

Avoided Costs – 8. Los Alamos County Hydroelectric Generation Revenue

	Generation Capacity	Annual Generation
	mW	mWh
El Vado	8	10430
Abiquiu	17	22165

Assumed downstream impacts from wildfire reduced hydroelectric generation at El Vado and Abiquiu between 10% to 50% for two years.

Avoided Costs	Unit Cost/Unit		Subtotal	
	Low	High	Low	High
Avoided loss of revenue to Los Alamos County from reductions in hydro power generation			\$201,052	\$1,005,261

Avoided Costs – 9. Health Effects

- Richardson et al., 2012, estimated that cost of illness per exposed person per day was \$9.5.
- Acknowledging that many will chose to avoid exposure, Richardson et al., 2012, estimated that the willingness to pay for a reduction in one wildfire smoke induced symptom day, per person per day was \$84.
- Assumed Rio Arriba, Taos, and Colfax Counties residents are exposed 3, 2, and 1 days, respectively.
- Exposed person per day multiplied by unit costs

Avoided Costs	Unit Cost/EPPDay		Subtotal	
	Low	High	Low	High
Avoided cost of health effects	\$9.50	\$84.42	\$1,894,110	\$16,831,660

Avoided Costs – Summary

	Avoided Costs	Unit Cost/Unit		Subtotal	
		Low	High	Low	High
1	Avoided Wildfire Suppression (\$/acre)	\$101	\$1,425	\$18,333,718	\$258,649,140
2	Avoided BAER Rehabilitation (\$/acre)	\$9	\$4,277	\$1,640,965	\$776,369,407
3	Avoided Reservoir Dredging (\$/AF)	\$40,000	\$120,000	\$40,895,909	\$122,687,726
4	Avoided maintenance and operations (O&M) costs for San Juan-Chama Project			\$1,550,031	\$2,066,708
5a	Avoided structure value loss			\$14,380,961	\$83,778,192
5b	Avoided property value loss			\$1,144,008	\$1,144,008
6	Avoided roadway repair/replacement (\$/mile)	\$45,000	\$225,000	\$743,281	\$3,716,405
7a	Avoided cost of electrical 60-115 kV power line replacement (\$/mile)	\$1,240,000	\$2,210,000	\$21,253,600	\$37,879,400
7b	Avoided cost of electrical 231 kV power line replacement (\$/mile)	\$1,450,000	\$2,620,000	\$2,005,495	\$3,623,722
8	Avoided loss of revenue to Los Alamos County from reductions in hydro power generation			\$201,052	\$1,005,261
9	Avoided cost of health effects (exposed person per day)	\$9.50	\$84.42	\$1,894,110	\$16,831,660
	Total Avoided Cost			\$104,043,129	\$1,307,751,628

Treatment Costs	Unit Cost/Assumption		Treatment Costs	
	Low	High	Low	High
Forest treatment/watershed restoration (\$700-\$1,200/acre)	\$500.00	\$1,200.00	\$72,608,783	\$174,261,078

Avoided Costs – Next Steps

- **Avoided costs yet to be included in analysis:**
 - **Impacts to agriculture (increased O&M for irrigation districts, water supply disruption)**
 - **Local economic impacts (tourism, commercial business disruption, etc.)**
 - **Water utility impacts (increased water treatment and O&M costs, water supply disruption)**

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Fall 2015 Klamath River Prescribed Fire Training Exchange (TREX) SAVE THE DATE!!!

September 28th – October 10th, 2015

ORLEANS

FORKS OF SALMON

HAPPY CAMP

Come join a diverse coalition of local, tribal, state and federal prescribed burners as we expand on last year's TREX to build a local Type III Incident Management Team that brings good fire back to the Western Klamath Mountains before the next wildfire. Call for applications will come out June 1, 2015. Participants interested in IMT cadre or burn boss roles should engage as soon as possible.

For more information, contact:

Will Harling – (530) 627-3202 – will@mkwc.org



Fire & Grass

Spring Pasture Burning Results Tour June 18, 2015

Join us for these **FREE** morning tour of spring 2015 pasture fire units.

Topics will include:

- Planning, timing, and implementation of fire
- Design and objectives
- Fire effects on plants and wildlife
- Fire and grazing integration
- Neighborhood fire teams
- NRCS EQIP programs
- Fence and water systems options



Date: Thursday June 18, 2015

Location: Abbey Grasslands near Marvin, SD

Directions to site: From Marvin, SD go southeast on County Hwy. 6 (147th Ave) 2 miles to 466th Ave. (½ mile east of the Abbey of the Hills.) Turn south on 466th Ave. to the old Abbey Campground.

Agenda: 9:00 AM: donuts and coffee
9:15 – noon: pickup tour of ranch

RSVP requested but not required (for donuts!!).

Peter.bauman@sdstate.edu 882-5140



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