

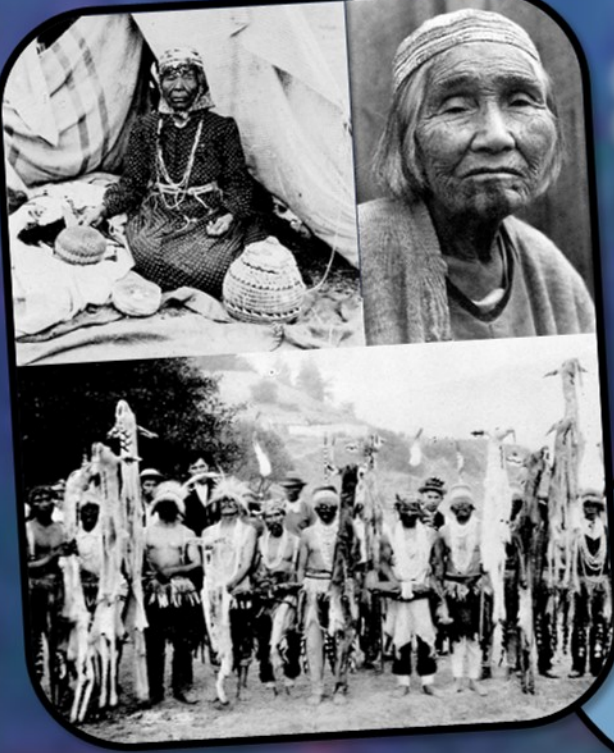
# A History of Community-Based Weeds Control

## Salmon River Restoration Council (SRRC) & Mid Klamath Watershed Council (MKWC)



### OUR HISTORY RIVER of TIME

#### PREHISTORY



Klamath, Karuk & Shasta people inhabit the Klamath Basin, using fire as a land management tool

Wiyot, Yurok & Hoopa people arrive in the Mid Klamath region

850 – 1300 AD

1849 Gold discovered on the Salmon River,

1850

1850s Introduction of non-native grasses to the region



1870s-1930s Hydraulic mining ravages hillsides, irreparably altering river ecology



1930s USFS policy states that all wildfires are to be suppressed by 10am the morning after they were first spotted

1950

1931 & 1932 The land now known as the Marble Mountain & Salmon-Trinity Alps wildernesses set aside as "Primitive Areas"



1950-1980s Commercial logging is being used extensively to harvest Douglas-fir to feed the post war building boom

1964 California Wilderness Act creates the Siskiyou Wilderness

#### THE "HERBICIDE WARS" 1977-1991

Widespread use of 2,4-D across forests by the USFS and logging companies cause a public health emergency that lives on as distrust of government and Tribal ordinances against herbicide use.

In 1984, citizen groups won a court case that resulted in a moratorium on herbicide spraying in the region. The decade of protest and legal conflict resulted in the Klamath N.F. ceasing its aerial spraying program, which has never resumed.

Karuk Tribe nurse

**Mavis McCovey:**

"Between 1976 and 1978, we did not have a single baby carried successfully by anyone who lived in the Orleans area...Then they started spraying closer to Orleans, and other symptoms started showing up...By then we had spontaneous abortions, bladder infections, and skin infections. By 1977 we had 3,000 bladder infections in a community of 650-900 people, and I told the doctor I thought it had to do with the spraying, and that it had something to do with the water."

From *Medicine Trails* by Mavis McCovey & John F. Salter, 2009, p. 204-206.

1980

1974 USFS fire policies change, allowing some lightning fires to burn in wilderness areas



1992 SRRC CREATED Salmon River Community Restoration Program is created to protect & restore Salmon River's anadromous fisheries, becoming the non-profit SRRC in 1995.

1990

1994 SRRC initiates a community-supported program to eradicate weeds, focusing on Scotch broom, Spanish broom & Dyer's Woad. In order to safeguard the health of aquatic ecosystems and work crews, no chemical herbicides were used. Successes soon follow.

2000

2001 MKWC CREATED Citizens create the Mid Klamath Watershed Council with a plants program based on SRRC's community-based, non-chemical model.

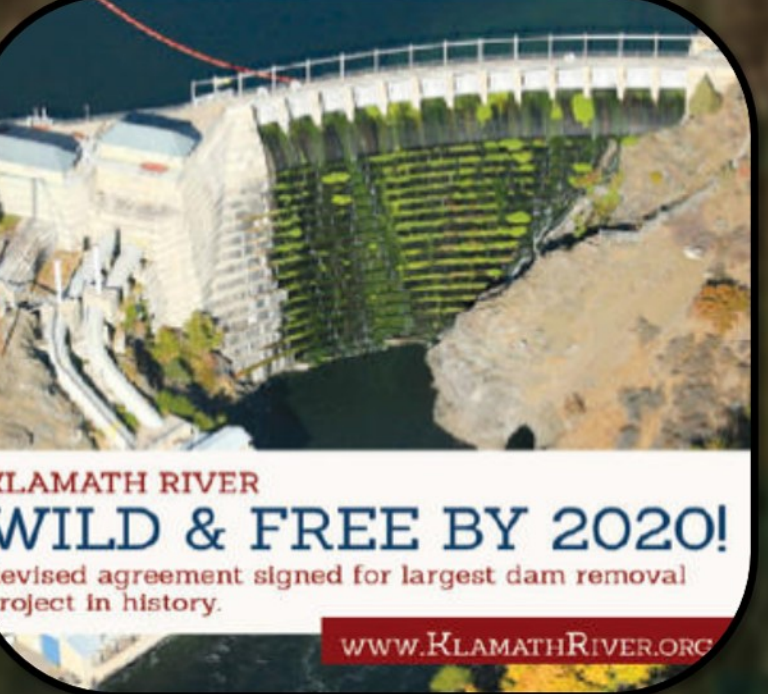


1997 Non toxic weed eradication program of spotted knapweed initiated by SRRC, which will achieve a 99% reduction by 2012.



#### WEEDS KEEP ROLLING IN... Discoveries of new invasive species in the past decade have kept us busy:

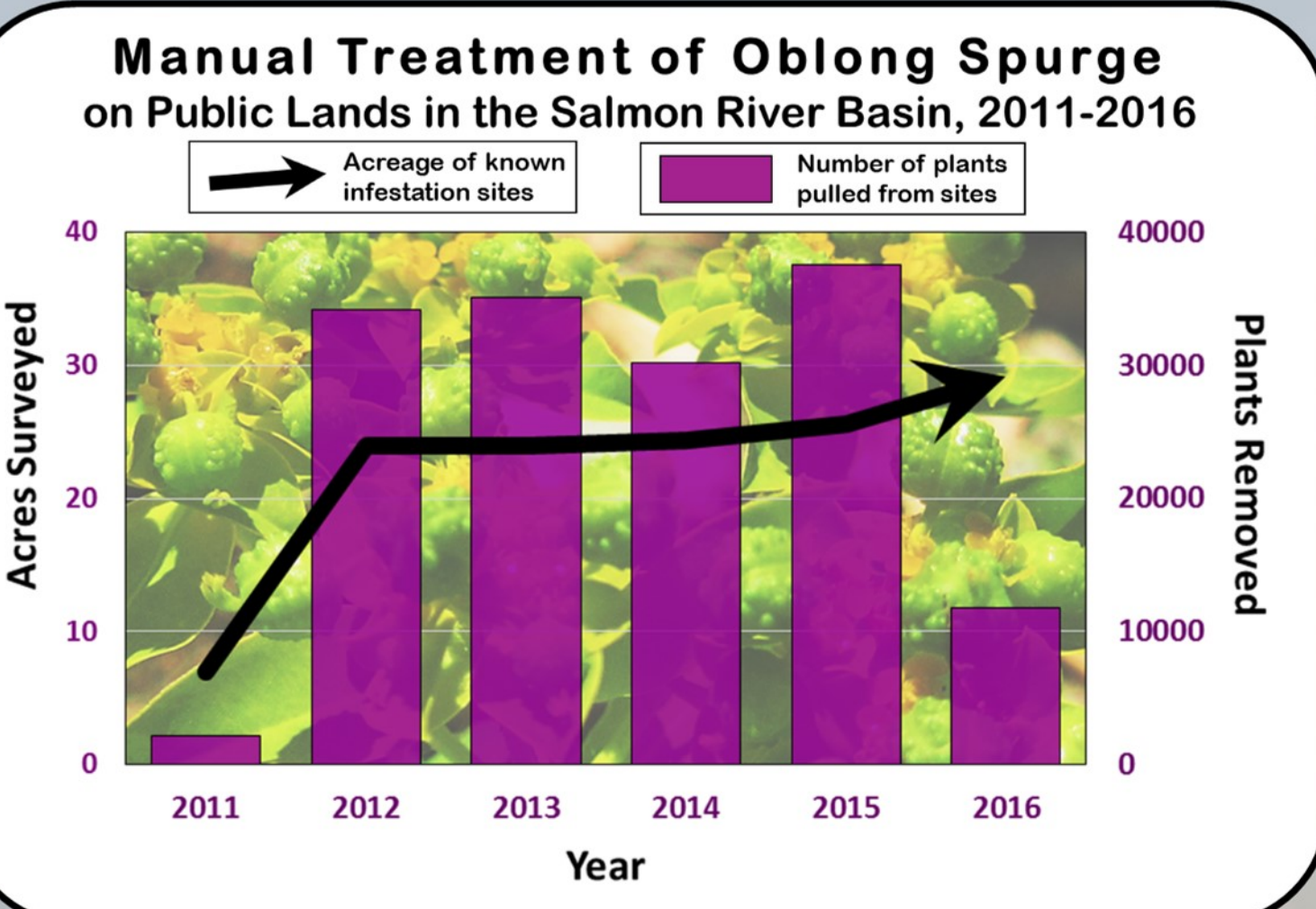
- 2005 Italian thistle (*Carduus pycnocephalus*) & Meadow Knapweed (*Centaurea debeauxii*)
- 2006 Oblong Spurge (*Euphorbia oblongata*)
- 2007 Leafy Spurge (*Euphorbia esula*)
- 2009 Plumeless thistle (*Carduus acanthoides*)
- 2011 Dalmatian Toadflax (*Linaria genistifolia*)
- 2012 Canada Thistle (*Cirsium arvense*)
- 2014 Sulfur Cinquefoil (*Potentilla recta*)



Today

### RESULTS of MANUAL EFFORTS

Figure 1. Acreage of known oblong spurge sites and number of plants hand pulled by SRRC's noxious weeds program between 2011 and 2016. After discovery in 2011, this new to us species was treated and surveyed for each subsequent year, resulting in a positive acreage curve. Discoveries in 2012 increased acreage by 244% and demanded the removal of 1513% more plants compared to 2011. Between 2012 and 2015, discovery rates slowed to an average of 0.8 acres/year while the number of spurge plants remained relatively stable, ranging from 30,192 to 37,594. 2016 numbers show a 68% reduction from 2015, despite the discovery of a 3.7 acre site. These results suggest that five years of consistent monitoring, tracking, uprooting, and bagging seed heads may be controlling the spread and/or causing decline of oblong spurge populations growing on our public lands.



Manual Treatment of Spotted Knapweed on Public Lands in the Salmon River Basin, 1998-2016

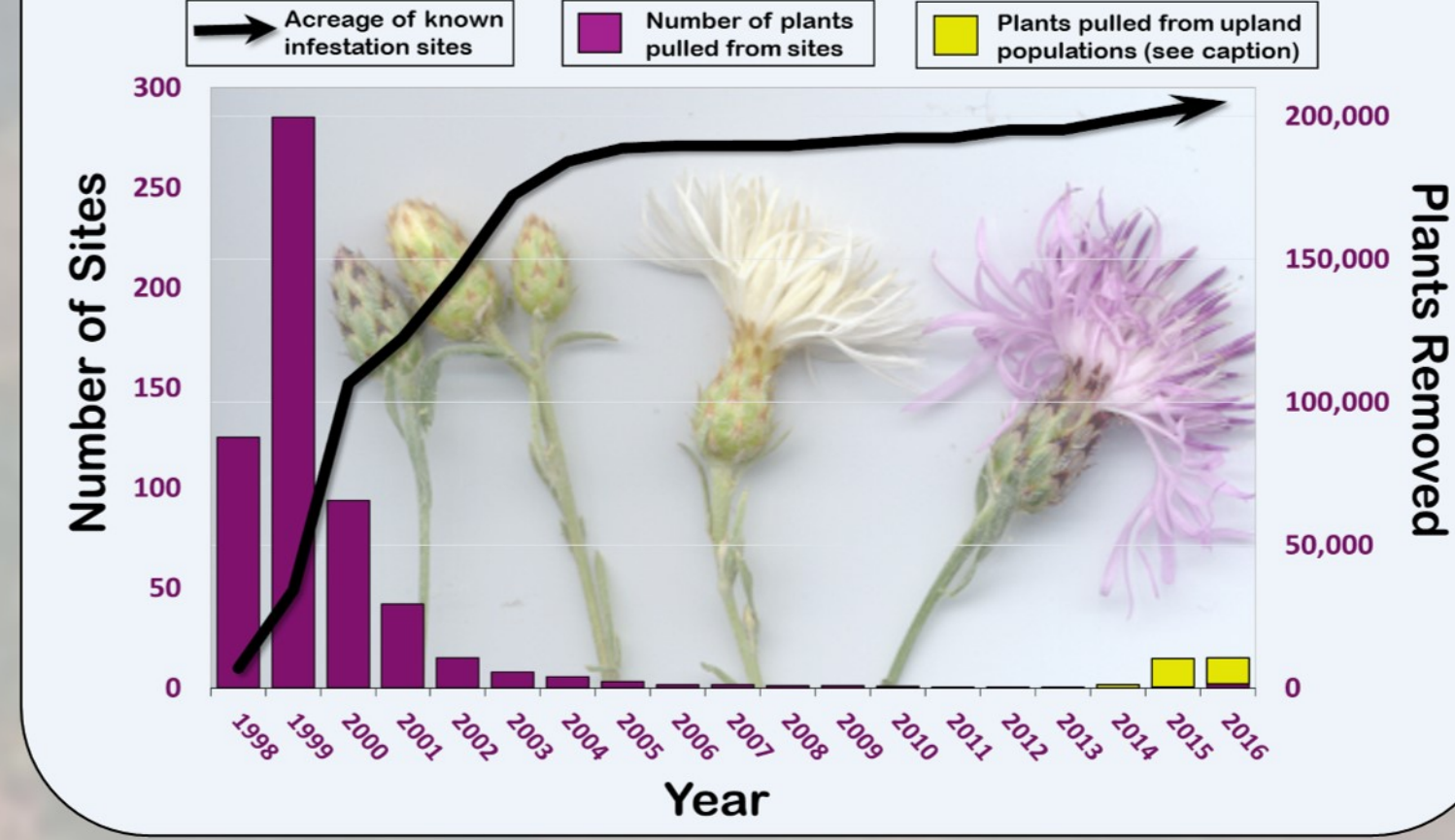


Figure 2. History of SRRC's knapweed program showing a significant & continued decrease in known plant populations and slowed rates of new site discovery over 19 years. This ~99% reduction demonstrates the success of a strong community based weeds program over time.

Yellow bars represent newly discovered, well established, populations at disturbed upland sites far from any other populations. These sites were found using post-wildfire survey funds and are located in old logging units and along cattle routes to wilderness grazing allotments. Due to their new discovery, physical separation and different modes of entry, they are shown as distinct from the populations that have been being treated consistently for years.

### FIRE on our LANDSCAPE

**A NEED TO RESTORE** Megafires resulting from a century of fire exclusion are impacting communities and ecosystems in the Western Klamath Mountains at a rapidly increasing pace and scale. While the majority of these burned areas are ecologically beneficial, proportionally more areas are burning at higher severities than ever before, opening up 1000's of acres to disturbance loving invasive species. Forests are in serious need of ecological restoration treatments based on restoring fire process and function.

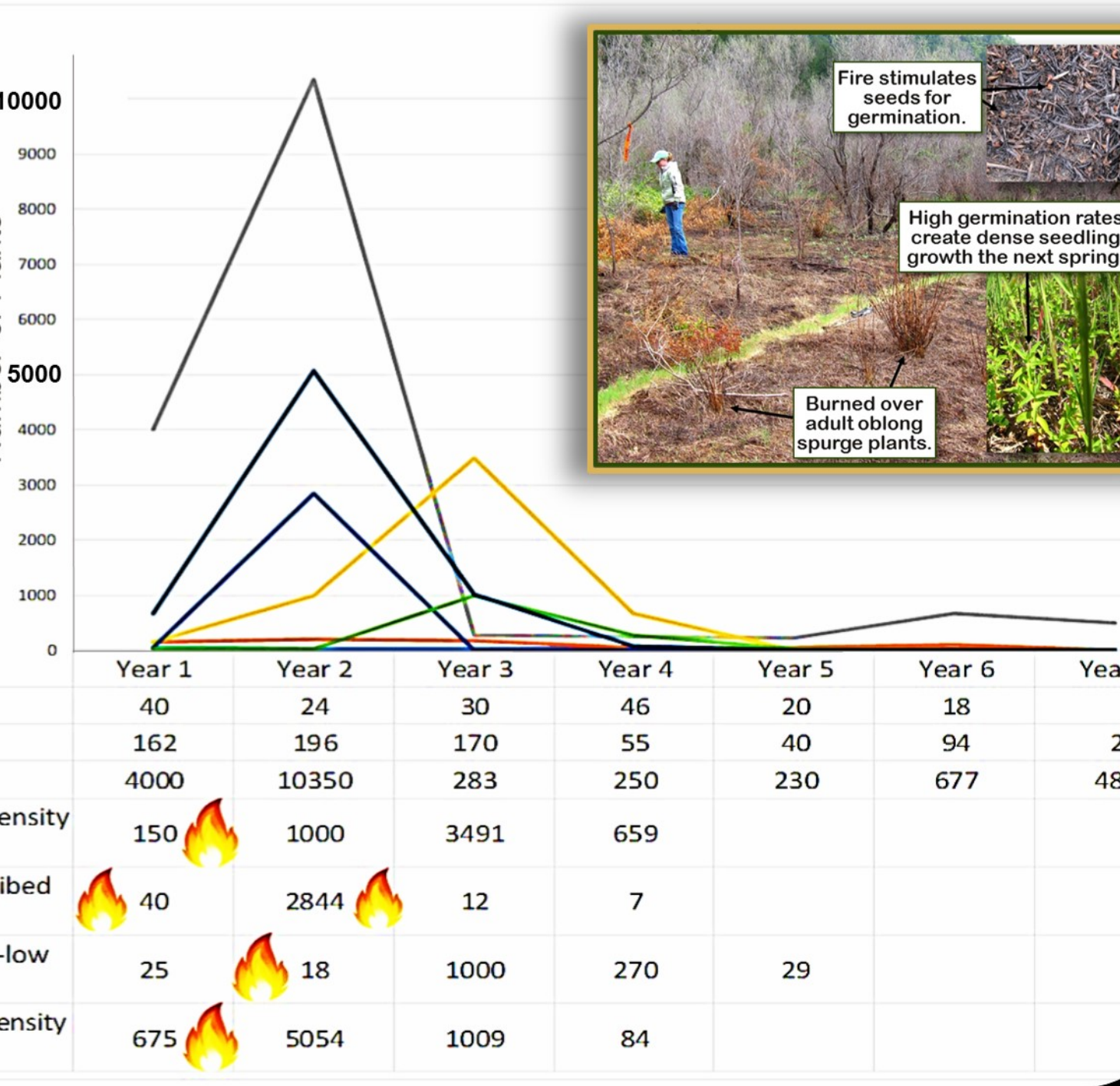


**Western Klamath Restoration Partnership (WKRP)** has formed to address this need and create a shared vision for restoring fire resilience at the landscape scale, founded upon Traditional Ecological Knowledge and practices and concepts outlined in the National Cohesive Wildland Fire Management Strategy. This vision incorporates social, ecological, economic and cultural values spatially across a 1.2 million acre landscape to determine where restoration treatments would yield the most results with the least amount of impacts.

Increased use & scale of prescribed/cultural fire is the most effective tool for addressing WKRP's goals. The WKRP seeks to develop community capacity to use prescribed/cultural fire as well as address policies and regulations limiting large scale use. Addressing invasive species spread will be critical.

### Fire and Manual Treatment of Oblong Spurge Site Histories from the Mid Klamath Region

Figure 3. Increased wild & prescribed fire can increase the risk of invasive plant establishment, but can also be a tool for fighting them. Research is needed, but trends in MKWC's site histories suggest that multiple fire events combined with manual removal may lead to swift eradication.



### COMMUNITY is the KEY



Number of Volunteers & Volunteer Hours MKWC Plants Program, 2012-2016					
	2012	2013	2014*	2015	2016
New Volunteers	10	16	16	22	40
Repeat Volunteers	5	8	10	24	34
AmeriCorps	24	2	20	2	0
Students/youth	33	9	13	34	28
Staff**	16	8	16	17	21
<b>Total Number</b>	<b>88</b>	<b>43</b>	<b>75</b>	<b>99</b>	<b>123</b>
<b>Total Hours</b>	<b>403</b>	<b>298</b>	<b>418</b>	<b>691.5</b>	<b>786</b>

\*Restoration Fridays began 2014.  
\*\*Staff includes: FS, Tribe, SRRC, Klamath River Outfitters, Orleans Et., and MKWC.