

**FOREST HEALTH
STAKEHOLDER
ASSESSMENT**
of the
**YUBA RIVER
WATERSHED**

PREPARED BY

Allison Thomson and Andrew Salmon
Forest Health Watershed Coordinators
South Yuba River Citizens League

Preliminary Report - Summer 2020

LAND ACKNOWLEDGEMENT

SYRCL works within the Yuba River watershed, on the ancestral homelands of Nisenan, Washoe, Konkow, and Mountain Maidu peoples. We acknowledge the painful history of genocide and the loss of lands and waters irreversibly altered. These communities are still here today. SYRCL is grateful for opportunities to partner with tribes in our work throughout the Yuba watershed.



SYRCL is founded on the premise that people can save a river.

The South Yuba River Citizens League (SYRCL – pronounced circle) was founded in 1983 by grassroots activists determined to protect the South Yuba River from dams. Ultimately, SYRCL won permanent protections for 39 miles of the South Yuba River under California’s Wild and Scenic Rivers Act. Today, SYRCL is the central hub of community activism to protect, restore, and celebrate the Yuba River watershed. We are working to restore wild salmon to their native waters and inspiring activism across the globe with our Wild & Scenic environmental film festival.

In recent years, forest conservation in the Yuba River watershed has become a key focus of SYRCL’s work. Through ecologically-based thinning and prescribed burning, we seek to protect communities from the threat of catastrophic wildfire, increase biodiversity, and restore the watershed to a healthier, more resilient state.



CONTACT INFORMATION

Allison Thomson
Forest Health
Watershed Coordinator
allison@yubariver.org
530.265.5961 x231

Andrew Salmon
Forest Conservation
Program Manager
andrew@yubariver.org
571.242.0187



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BACKGROUND

YUBA RIVER WATERSHED



The Yuba River watershed encompasses over 1,300 square miles across Yuba, Nevada, Sierra, Placer, and Plumas counties in Northern California. The Yuba flows from the snow-capped peaks of the Sierra Nevada through vast expanses of conifer forests and oak woodlands to its confluence with the Feather River amongst the irrigated farmlands of the Sacramento Valley. Due to the range of elevations and latitudinal extent, the watershed is made up of diverse forest types that include old growth conifer forests, early seral stage forests, hardwood forests, dense chaparral, foothill woodlands, and other mixed forest types.

These ecosystems, like many across California and the Western United States, have evolved alongside fire and have historically been adapted to thrive in its presence. Fire is an essential ecological process that helps to maintain a healthy forest by reducing overcrowding and disease, stimulating growth in many species, and developing an ecosystem resilient to complex disturbances. A century of fire suppression policies in this fire-adapted forest ecosystem, without a significant timber industry presence to remove the ingrowth of dense fuels, has led to unhealthy forest conditions. Although forests in the Yuba River watershed have been minimally impacted by bark beetle infestations and high-severity fires in recent years, the region is prone to catastrophic events that have plagued much of the Sierra Nevada. Additionally, every community in the Yuba River watershed is listed as High or Very High Fire Severity Zones by the California Department of Forestry and Fire Protection (CalFire).



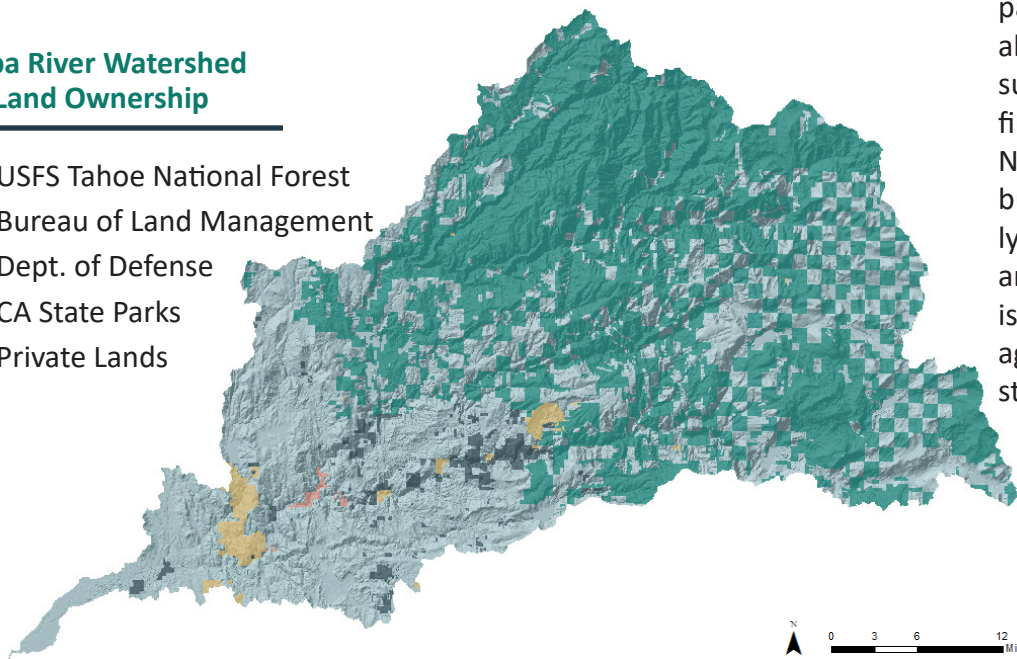
The small, rural communities dotted across the Sierra Nevada mountains have long been dependent upon the natural resources and ecosystems that they call home. For thousands of years, the Yuba River watershed supported thriving indigenous populations who actively managed forests, grasslands, and meadows with fire (Anderson, 2005). With the arrival of Euro-American settlement, came the removal of anthropogenic fire from the ecosystem leading to changes in species composition and increased fire hazards (Stephens, 2006). Since the mid-1800s, the communities of the Yuba River watershed have been sustained by the surrounding forests through a booming wood products industry. A combination of overzealous timber harvesting practices, litigation by environmental groups, public concern, and fire suppression led to the degradation of the forest ecosystem and the collapse of the timber industry in the region. Current efforts promoting ecologically-based forest management have the potential to reduce the risk of uncharacteristic high-intensity wildfire while also protecting and restoring watershed health and native biodiversity and promoting forest conditions that are more resilient to drought, climate change, and other disturbances. Additionally, these efforts can lead to the redevelopment of a wood products industry and a restoration-based economy that supports our local communities.

One of the many challenges to restoring our Yuba forests lies in land ownership patterns. Due to historic railroad land grants, dating back to the mid-19th century, public and private parcels are often side by side, creating a “checkerboard” of ownership with varied land management approaches. This unique ownership pattern makes cross-boundary collaboration essential to effectively increase the pace and scale of forest restoration across the watershed. While Tahoe and Plumas National Forest make up nearly fifty percent of the land area in the watershed. The two National Forests have dozens of sporadic tracts ranging in size. The remaining fifty percent is composed of a checkerboarding of public agencies, private land-owners, and industry. Multiple

partnerships and collaborations already exist in the region, such as local fire safe councils, firewise communities, and the North Yuba Forest Partnership, but a larger network specifically focused on restoration goals and increased communication is needed to effectively leverage resources toward a unified strategy.

Yuba River Watershed Land Ownership

- USFS Tahoe National Forest
- Bureau of Land Management
- Dept. of Defense
- CA State Parks
- Private Lands



FOREST RESTORATION CHALLENGES

- Unique land ownership patterns require cross-boundary and public-private collaboration to sufficiently address landscape-scale restoration.
- The high percentage of Wildland Urban Interface lands makes public safety a top priority in the face of potential high severity wildfires and limits land managers in their restoration approaches to certain areas.
- Climate change will increase the potential for high-severity wildfire.
- Due to historic mining activity and more recent land development, water quality in the Yuba River is severely impacted by sediment, rising temperatures, aged water infrastructure, and mercury contamination.
- Fire suppression has led to significant departure from historic fire return intervals.



BACKGROUND

YUBA FOREST NETWORK

Since the year 2000, the California Department of Conservation’s Watershed Coordinator Program has aimed to “develop plans and projects to improve watershed health, and to achieve state and local natural resource goals.” Watershed Coordinators across the state are tasked with engaging diverse stakeholders, building relationships, and developing resources that accelerate large-scale, collaborative watershed improvement efforts. The 2019-2021 iteration of the program focuses on forest health, thus contributing to the state’s goals of improving water quality under Executive Order N-10-19, as well as multiple state efforts to reduce the risk of catastrophic wildfire, restore forest health, conserve working forests, and promote carbon storage (Cal Fire Forest Health Program).

Beginning in late 2019, the Yuba River watershed became home to two Forest Health Watershed Coordinators supporting multiple planning and implementation projects seeking to improve the health of the region’s forests. To tie existing and future projects together into a cohesive strategy, one of their tasks is to build and facilitate a new watershed-wide stakeholder group to promote and implement forest health as well forest product projects throughout the watershed. Initial conversations with local stakeholders from late 2019 to early 2020 demonstrated an existing energy and capacity for forest health projects but lacking a large-scale cohesive strategy. One particular gap identified is the need for bringing together private landowners around unified projects. The new Yuba Forest Network aims to address this need for increased collaboration by connecting stakeholders, projects, and resources in order to accelerate the pace and scale of forest health projects across the region.

The term “forest collaborative” is most commonly used to describe similar stakeholder groups with a focus on US Forest Service lands. In the Yuba River watershed, Tahoe National Forest is actively engaged in the North Yuba Forest Partnership, another coalition group addressing forest health work on 275,000 acres, 210,000 on USFS lands. While the Yuba Forest Network recognizes the importance of the Forest Service in an all-lands approach, the needs of the watershed suggest this new group concentrate attention on non-USFS lands.

PRELIMINARY GOALS

In order to efficiently support and develop current and future cross-boundary forest health projects, the Yuba Forest Network is envisioned as a central networking hub to connect resources and practitioners across the watershed. The preliminary set of goals envisioned for the group include:

- Develop a consolidated platform for:
 - Resource sharing: permitting, contractors, project development, expertise, monitoring protocol
 - Project mapping
 - Calendar of forest health related events
- Support existing institutions to promote cross boundary collaboration
 - Increase the number of collaborative projects
- Identify areas of greatest need for forest health work
 - Share existing and develop a localized risk assessment and prioritization tool
- Increase regional identity around Yuba Forests



SUPPORTING EXISTING INSTITUTIONS

There are many organizations and collaborations already making invaluable progress in restoring the forests of the Yuba River watershed, including but not limited to:

- Yuba, Nevada, and Sierra County Fire Safe Councils
- Nevada County Coalition of Firewise Communities
- North Yuba Forest Partnership
- Yuba-Bear Burn Cooperative
- Cal Fire's Montezuma Fuel Break
- The Yuba Watershed Institute's 'Inimim Forest Restoration Project in collaboration with the Bureau of Land Management, Round Mountain Landscape Resilience Project, and the Little Deer Creek Landscape Resilience Project with Bear Yuba Landtrust
- Cal Fire-funded California Climate Investment (CCI) grants:
 - Yuba Foothills Healthy Forests, through Yuba Water Agency and Yuba Watershed Protection and Fire Safe Council
 - Climate Adaptive Forest Management at Grouse Ridge Research Forest
 - Nevada County Dept. of Public Works Egress/Ingress Fire Safety Project
 - Yuba Project, led by the National Forest Foundation on Tahoe National Forest
 - Multiple Forest Health Research grants

The intent of the Yuba Forest Network is to support existing institutions and encourage similar future projects that increase the pace and scale of forest restoration across the watershed.



NEEDS ASSESSMENT

METHODS & REPRESENTATION



SURVEY METHODS

The intent of the Network is not to be a top-down structure but one focusing on communal goals and needs. An initial needs assessment survey was sent out to stakeholders in May of 2020 to assist in informing the above-mentioned goals while also developing a path forward for the group. This survey was emailed to stakeholders identified through initial networking efforts. The survey consisted of six multiple-choice questions indicating top priorities, needs, and interests, as well as space to identify stakeholders not yet included in the initial outreach. Stakeholders are encouraged to recruit additional relevant local participants from their own networks to further the reach and effectiveness of the Yuba Forest Network.

This report summarizes the results of the initial assessment of forest health-related resource needs in the Yuba River watershed. The results of this needs assessment are meant to inform the goals and priorities of the newly-conceived Yuba Forest Network. As continual feedback is essential to effective collaboration, we anticipate the goals of this group to change over time to address the evolving needs of the watershed. The resulting recommendations, discussed below, are a starting point for concrete steps to move the project forward.

REPRESENTATION

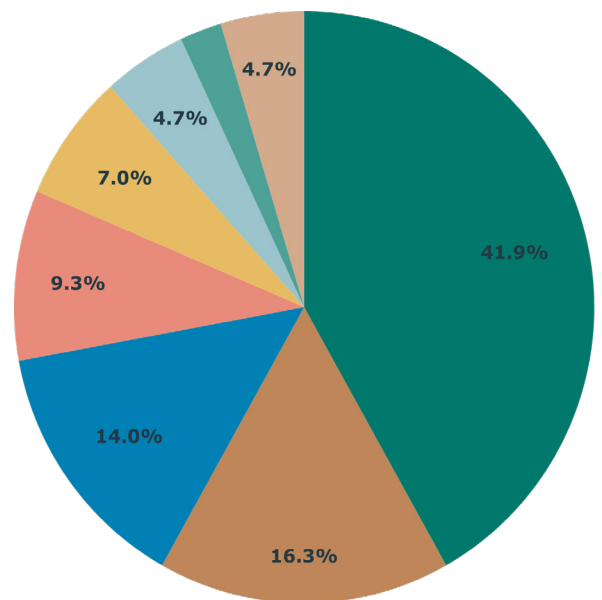


Out of 122 individual survey invitations sent, 43 responses were received (36% individual response rate). Out of the 76 distinct entities who received a survey invitation, 36 separate entities were represented in survey responses (46% organizational response rate).

The largest sector of entities represented in the survey results is non-profits. In order to simplify results, the county or local agency category encompasses a wide range of entities including resource conservation districts, water districts, and various county departments.

Overall, survey representation was lowest from federal agencies, tribes, education and research institutes. Multiple federal agencies have indicated their limited capacity to engage in another stakeholder group but may be open to future meetings. Tribal, education, and research representation was limited due in part to the fact that few of these stakeholder types were identified in initial outreach. More effort is needed to adequately include their voices at the table. This initial survey was not geared toward the general public, however, two responses were received from small private landowners who are also involved in their local fire safe council, these representatives have the potential to bring an additional perspective to the group.

Although organizers are pleased with the overall response rate, these results indicate that more effort is needed to engage certain stakeholder groups and include a greater diversity of viewpoints in forest restoration projects.

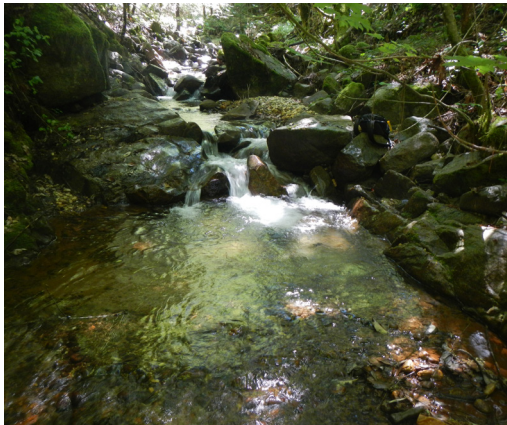


Who are you representing?

- Non-Profit
- County or Local Agency
- Private Business
- State Agency
- Education/Research
- Tribe
- Federal Agency
- Other

NEEDS ASSESSMENT

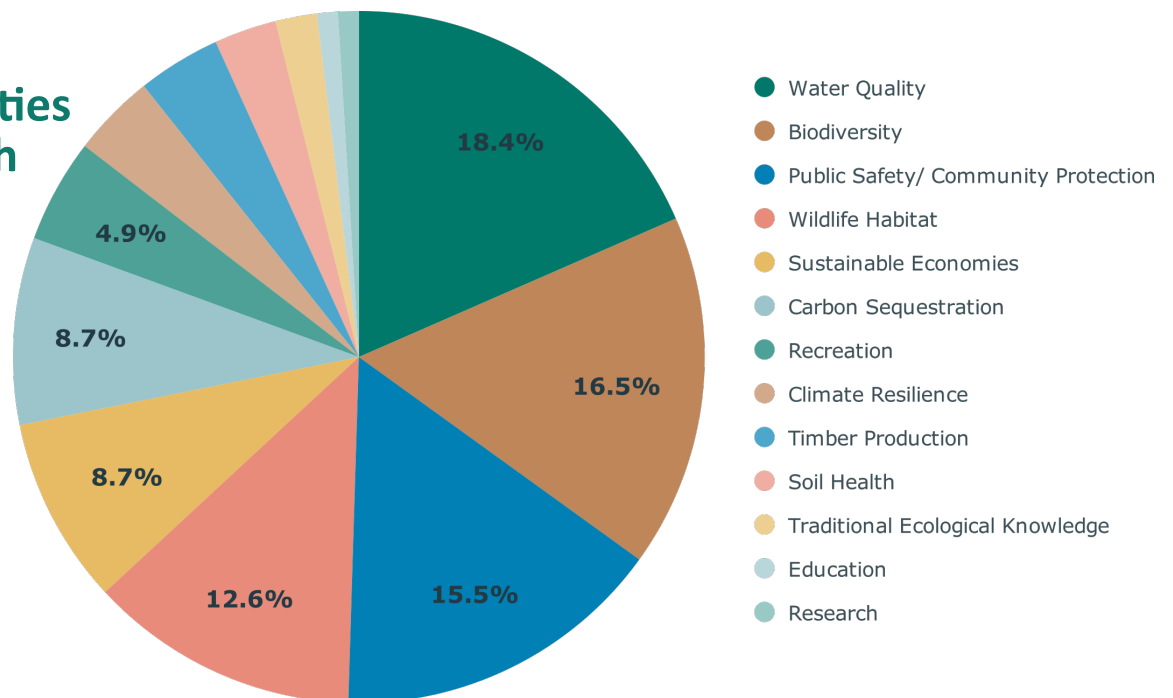
FOREST HEALTH PRIORITIES



Stakeholders were asked to identify their top three priorities in forest health work. Nine categories were provided in the survey, however a significant number of additional write-in responses were received, demonstrating the inherent complexity of forest health work.

The write-in responses were sorted into additional categories, resulting in 13 distinct priorities. This diversity shows both the wide range of interests of forest health stakeholders and the diversity of strengths and expertise present in the region. The Yuba Forest Network aims to connect stakeholders to leverage these diverse strengths to develop forest health projects that address multiple resource objectives.

What are your greatest priorities in forest health work?



NEEDS ASSESSMENT

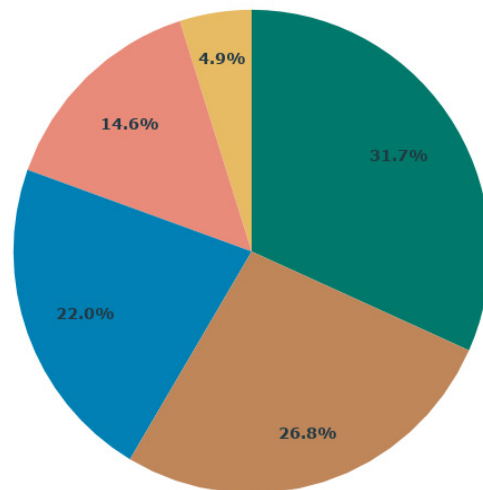
PARTICIPATION & RESOURCE NEEDS

PARTICIPATION

Diversity in priorities, resource needs, and skill sets is important to develop multi-benefit, collaborative projects. However, in an effort to focus the group's first set of goals respondents were asked to identify their primary reason for participating in the Yuba Forest Network.

Over 75% of responses were split almost evenly between: (1) to listen, learn, and share information (2) to guide the development of a regional forest health strategy and (3) to guide the development of new implementation projects. These results lay the foundation for how to move the group forward. Based on the discrete interests for participation, there may be a need to develop sub-groups to allow for different levels of participation depending on organizational interest and capacity. This recommendation will be discussed more in the final section of the report.

What is your primary reason for participating in this group?



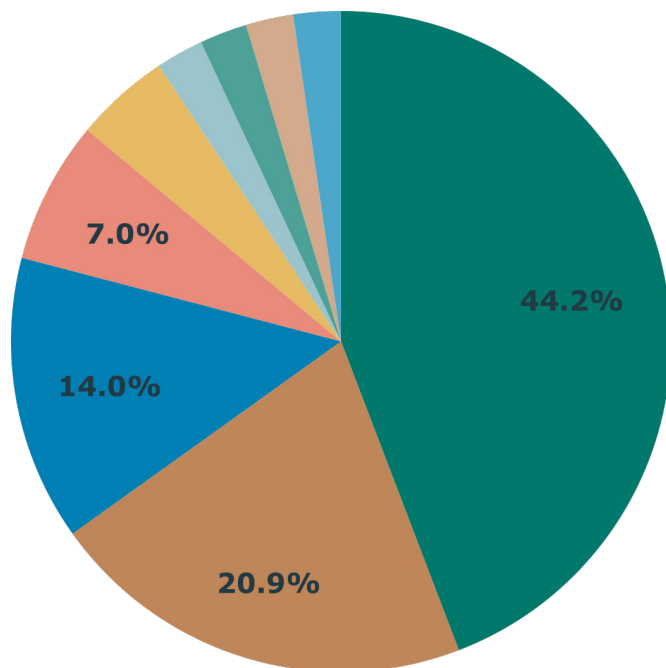
- To listen, learn, and share information
- To guide the development of a regional forest health strategy
- To guide the development of new implementation projects
- To acquire and/or provide technical assistance
- To build new connections/ networking



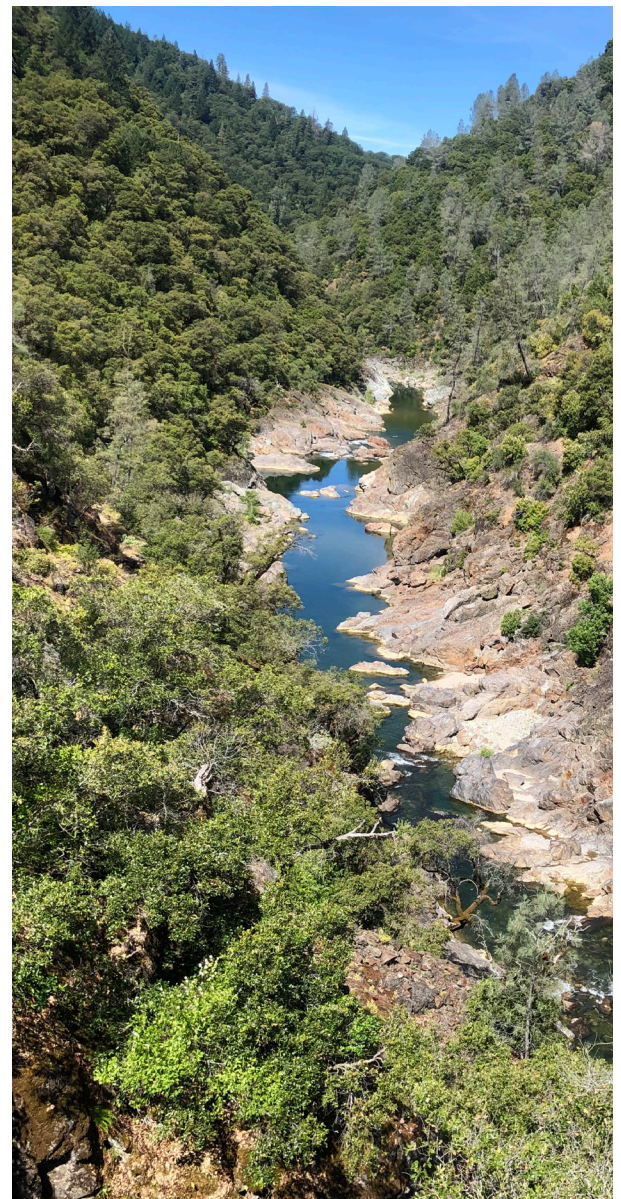
RESOURCE NEEDS

Stakeholders were asked to identify a single resource that would be most useful for their organization to achieve its forest health goals. Overwhelmingly, the top resource identified by respondents was fundraising opportunities. The need for funding for forest health work is well known throughout the state, as seen in the recent increase in state funding for watershed resilience and forest health work (PPIC 2020). However, available funding is still outpaced by the urgent need for forest restoration work across the state. The Yuba Forest Network is focused on encouraging large-scale collaborative projects that avoid intra-regional competition for funding, attract larger funding sources to the region, and ultimately develop a more self-sufficient restoration-based economy.

Other important resources identified by respondents included: (1) a central hub for information sharing and networking opportunities, and (2) permitting assistance. Through its primary goal as an information sharing and networking hub, the Yuba Forest Network aims to connect stakeholders to share their expertise and fill these and many other resource needs while developing forest health projects.



- Fundraising opportunities
- Central hub for information sharing and networking opportunities
- Permitting assistance
- Other
- Public education and outreach materials
- Mapping and technology services
- Technical forestry training
- Strategy and implementation plan
- All of the above



What resource would be the most useful in increasing the pace and scale of forest restoration work for your organization?

NEEDS ASSESSMENT TREATMENT PREFERENCES

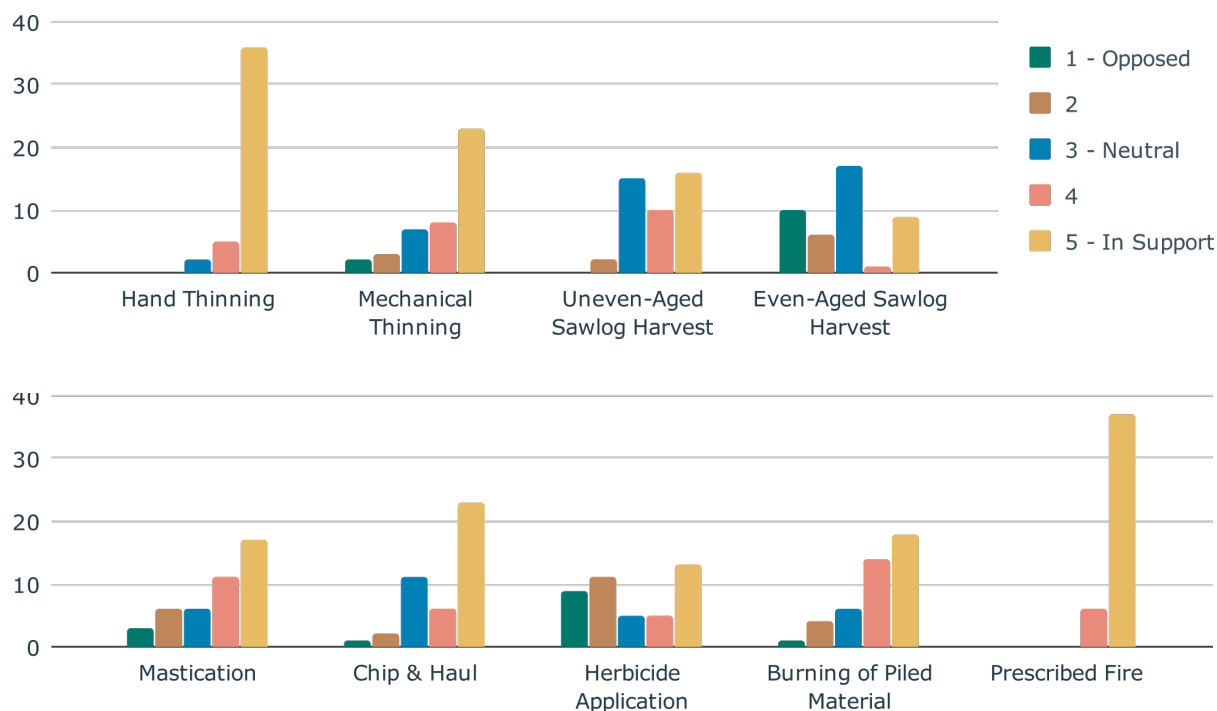


Forest health treatments can take on many different forms, some more controversial than others. Survey respondents were asked to identify their level of support for a variety of treatment types. The intent of this question is to serve as an indicator of potential areas of agreement and conflict within the group. It is important that stakeholders understand where their collaborators' views on potentially controversial issues differ, so that meaningful solutions can be worked out to increase the effectiveness of forest restoration.

Survey results show overwhelming support for prescribed fire and hand thinning. Moderate support for mechanical thinning, chip and haul, and burning of piled material was also indicated. Treatment types that showed mixed levels of support, and therefore potential areas of disagreement, include even-aged sawlog harvest and herbicide application. Two survey respondents indicated they were unclear on the definitions of even-aged and uneven-aged sawlog harvest, which may be reflected in the high proportion of neutral responses for both treatment types.

In reference to timber harvests for the production of lumber and other wood products, even-aged forest management is defined by the US Forest Service Reforestation Glossary, as "a planned sequence of treatments designed to maintain and regenerate a stand with predominantly one age class. The glossary defines uneven-aged management as "regeneration and maintenance of stands with a multiaged structure by removing some trees in all size classes."

On a scale of 1 to 5, please rate the following forest health treatment types:



NEEDS ASSESSMENT COMMENTS

In any collaborative group, it is important that all voices are heard in the effort to develop both trusting relationships and effective projects. Many valuable additional comments were added by survey respondents, as shown below:

“My organization supports any work that will support forest health and diversity and all the collateral benefits derived (community safety, watershed health, soil preservation, biodiversity support, recreation, etc). Of course, some are more affordable/acre than others.”

“This project has the potential to affect major progress in our currently dated forest management.”

“None of the current forest management options above reflect Traditional Nisenan practices of the past. Of course some of these options do provide temporary relief to the forest and its inhabitants. I’m absolutely a believer in Traditional style burning, but obviously we have to get the forest prepared because burning is a maintenance tool. No easy answers, but happy to share whatever we can in this partnership.”

“I think it would be great to develop regional goals and priorities for forest management and have a thoughtful dialog of the pros and cons of different treatments, cost, impacts, etc. I also hope that the Collaborative facilitates cooperation and project development between stakeholders, at a larger scale. I am pretty sure that is the intention :)”

“...there will be a lot of overlap between education and restoration. One of [our] priorities is to promote Citizen Science across watersheds. This type of focus dovetails nicely with fuels reduction work understanding conditions before and after treatments and getting the public to do that information gathering work!”

“We would like to see a space to advance an all-lands fire restoration strategy in the Yuba Watershed, similar to what has occurred in NW California with the Klamath Restoration Partnership and the Trinity Integrated Fire Management Partnership. USFS projects could be planned and implemented alongside private projects that incorporate priorities of the many local conservation organizations, local tribes, and others.”

“The biggest need for Forest ‘recovery’ and Forest health is reintroducing fire into the ecosystem. Hand thinning small conifers only is also very beneficial. Mastication only makes things worse over time, especially if it is in any type of hardwood shrub ecosystem. Do fuel treatments in neighborhoods, edge of cities. No need for massive fuel breaks in the middle of nowhere. Focus on SCOTCH BROOM removal as a flammable ladder fuel. Create community products out of wood debris is a long term goal. Everyone wants to cut everything down to prevent the next Paradise, but in reality self thinning is very evident in many forests in Nevada County. Thin only where necessary.”



Next Steps

RECOMMENDATIONS

Based on survey results and individual stakeholder outreach meetings, the watershed coordinators' initial recommendations include the following:

- Hold quarterly general meetings that focus on information sharing and networking
- Establish subgroups that focus on specific issues, resources, or subregions
- Develop collaborative resources, including:
 - Yuba Forest Network information hub website
 - Stakeholder mapping tool
 - Regional forest health strategy

We acknowledge there are many ways to approach the urgent and complex issue of forest health and restoration. The above recommendations are meant as a starting point, and greater conversation is needed to make significant progress toward healthy forests and healthy communities





ACKNOWLEDGEMENTS

This assessment would not have been possible without the thoughtful contributions of so many Yuba River watershed stakeholders who spoke with us and all those who completed the online survey. A special thanks to SYRCL's Executive Director Melinda Booth for her editorial input and overall support. The authors alone are responsible for any remaining errors or omissions.

PHOTO CREDITS

Pages 01, 02, 12 - South Yuba River Canyon- Alex Merkle. Page 05 - Land Ownership data obtained from the Bureau of Land Management. Page 07 - Prescribed Fire at UC Berkeley Research Forest - Ariel Thomson. Page 10 (right) - Downieville - Ken Lund. Page 10 (center) - CA Spotted Owl - Stanislaus National Forest. Page 13 - Timber landing w/ equipment in the North Yuba subwatershed - Madison Thomson. All remaining images were taken by SYRCL employees throughout the Yuba River watershed.

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