
**CAPACITY NEEDS FOR FOREST HEALTH
AND WILDFIRE RESILIENCE:**

**INSIGHTS FROM THE
TAHOE-CENTRAL
SIERRA INITIATIVE**





Authored by: Amanda Milici, 2024
Outreach and Capacity Building Associate
Tahoe-Central Sierra Initiative | Great Basin Institute

Funding for this document was provided by the Regional Forest and Fire Capacity grant through the California Department of Conservation.

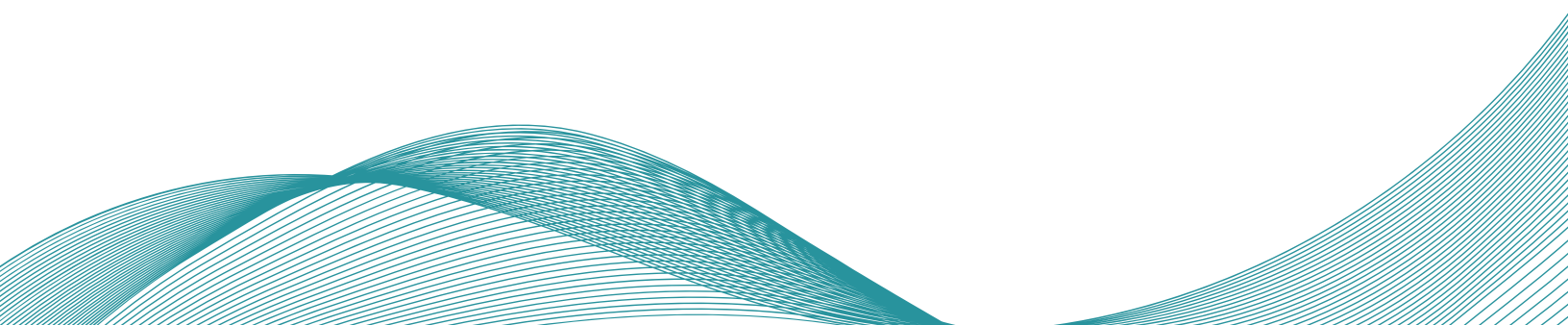


TABLE OF CONTENTS

01	Executive Summary.....Page 1 Summary of Respondent Capacities Summary of Opportunities for TCSI
02	Introduction.....Page 5 TCSI Background What is Capacity?
03	Assessment Methods.....Page 7 Literature Review Survey Development and Review
04	Assessment Findings.....Page 8 Respondent Population Capacity Findings Other Capacities Future Engagement with TCSI
05	Opportunities to Increase Capacity in the TCSI Region.....Page 26

THE TAHOE-CENTRAL SIERRA INITIATIVE (TCSI) FORMED IN 2017 TO ADDRESS THE THREATS OF CLIMATE CHANGE, AMPLIFIED WILDFIRE INTENSITY, INCREASED DROUGHT, AND EXPANDED TREE MORTALITY BY ADVANCING RESTORATION ON 2.4 MILLION FORESTED ACRES OF SIERRA NEVADA WATERSHEDS THROUGH INNOVATION AND COLLABORATION ACROSS LAND OWNERSHIPS.

TCSI is a partnership of federal, state, and nonprofit partners working together to develop and demonstrate innovative planning, investment, and management tools at a landscape scale. It applies the best available science to inform decision-making.

[TCSI's 10-Year Regional Plan](#)

underscores the need to enhance capacity for effective project planning and implementation to achieve landscape-scale resilience. Partners identified equitable partnerships, stakeholder engagement, sustainable funding, and improved workforce capacity and local economies as strategies to achieve this goal.

As a regional effort, TCSI is well-poised

to elevate the needs of partners and local entities and advocate for more funding, resources, coordination, and policies that advance forest restoration across landownerships.

Building on insights from literature and over forty one-on-one meetings, TCSI staff developed a twenty-six-question survey with multiple choice and optional write-in questions. The survey asked about specific needs and barriers entities face in six different capacity categories: organizational, collaboration, landscape strategy, project implementation, community outreach, and monitoring. It also explored ways TCSI might address these barriers and identifies opportunities for future engagement.

This report is intended to serve as a guide for building processes to share resources and leverage skills and expertise that advance forest restoration and wildfire resilience work across multiple scales. TCSI may use insights from this report as it explores funding opportunities to facilitate and support cross-boundary project coordination.

These findings may interest respondents who took the assessment and decision-makers who could help remove or mitigate barriers. It may also be of utility to other landscape-scale partnerships that pursue similar work or want to consider strategic investments in forest and fire management capacity.

SUMMARY OF RESPONDENT CAPACITY NEEDS:

- Wood utilization
- Conducting outreach to disadvantaged communities
- Developing platforms for community feedback
- Creating a list of shovel-ready (NEPA/CEQA compliant) projects
- Recruiting and managing volunteers
- Acquiring prescribed fire burn boss certification
- Workforce recruitment, development, and retention
- Flexible funding for partnership development
- Long-term monitoring resources and funding

SUMMARY OF OPPORTUNITIES FOR TCSI

To effectively address the challenges and opportunities identified in the TCSI region, strategic investments in capacity are essential. There is significant potential to align capacity investments and efforts with the [TCSI 10-Year Regional Plan's six key strategies](#):

1. **Implementation** - Treat overly dense forested areas, reduce forest fuels, restore areas impacted by disturbances, and protect areas that are in desired condition;
2. **Planning** - Build a 10-year Project Portfolio to help develop sustainable funding streams, strategically sequence projects, and build appropriate capacity and workforce resources;
3. **Science** - Support and incorporate robust science to inform management;
4. **Collaboration** - Strengthen equitable partnerships and stakeholder engagement;
5. **Funding** - Secure sustainable funding;
6. **Local Investment** - Improve workforce capacity, local economies, and efficiency.

Respondents identified potential roles for TCSI to enhance individual and collective capacity. Some actions may address capacity needs directly, such as advocating for more flexible funding opportunities. Other actions may address capacity indirectly, such as connecting regional partner interests and expertise for outreach to disadvantaged communities. The following recommendations summarize opportunities for TCSI to bolster capacity and support resilient landscapes and communities.

Advance Biomass Utilization: Currently, TCSI supports a Forest Infrastructure workgroup that is addressing challenges facing biomass utilization facilities that serve the region. TCSI is identifying barriers including financial constraints, regulatory hurdles, market demand, woody supply, and public perception. To support biomass utilization efforts in the region, TCSI could:

- Assess the viability of specific policy reforms, provide advocacy about the importance of biomass utilization facilities and facility operational constraints, and enhance communication and education on forest infrastructure and biomass to target audiences such as elected officials, city and county staff, and policymakers.
- Develop partnerships with the private sector to attract business ventures and emphasize the importance of external financial backing for long-term sustainability. These efforts advance strategies 1 and 6 of the 10-Year Regional Plan.

Enhance Regional Coordination:

Collaboration across landownerships is crucial for successful forest management and wildfire resilience projects. However, different regulations and permitting processes and limited funding for landscape-scale coordination pose significant challenges. To address these challenges, TCSI could:

- Develop centralized resources showcasing successful approaches and lessons learned from existing collaboratives like the North Yuba Forest Partnership, Healthy Eldorado Landscape Partnership, French Meadows Forest Restoration Project, and Lake Tahoe West. TCSI should also leverage the Tahoe-Central Sierra Project Tracker to further streamline project collaboration across landownerships and between project implementors. This will advance strategies 1, 3, and 4 of the 10-Year Regional Plan.
- Continue hosting collaborative convenings and/or develop additional platforms for regional networking and resource-sharing as an avenue for landscape partnerships to discuss successes, challenges, and lessons learned about various topics such as permitting, implementation, and monitoring. This will advance strategy 4 of the 10-Year Regional Plan.
- Formalize a process for providing Letters of Support to regional partner project proposals. This would advance strategies 1 and 5 of the 10-Year Regional Plan.

- Serve as a network manager and connect partners with interest and expertise in conducting outreach to disadvantaged communities, developing platforms for community feedback, conducting outreach to private landowners, recruiting and managing volunteers, and acquiring burn boss certification.

Provide Advocacy and Funding Support:

TCSI is poised to elevate the needs of place-based entities and advocate for increased regional funding and policies that support forest health and wildfire resilience efforts across the landscape. TCSI partner's past success in securing \$32 million in California Climate Investment funds demonstrates the partnership's ability to support work across federal, state, and private lands. However, to advance funding opportunities beyond federal and state grant cycles, TCSI could:

- Pilot innovative financing strategies to explore and support a restoration economy across 2.4 million acres. This would advance strategy 5 of the 10-Year Regional Plan.
- Advocate for more flexible funding opportunities to cover administrative, staffing, and partnership-building needs beyond project implementation, as these needs were prominently expressed in the survey. This would advance strategies 1, 5, and 6 of the 10-Year Regional Plan.

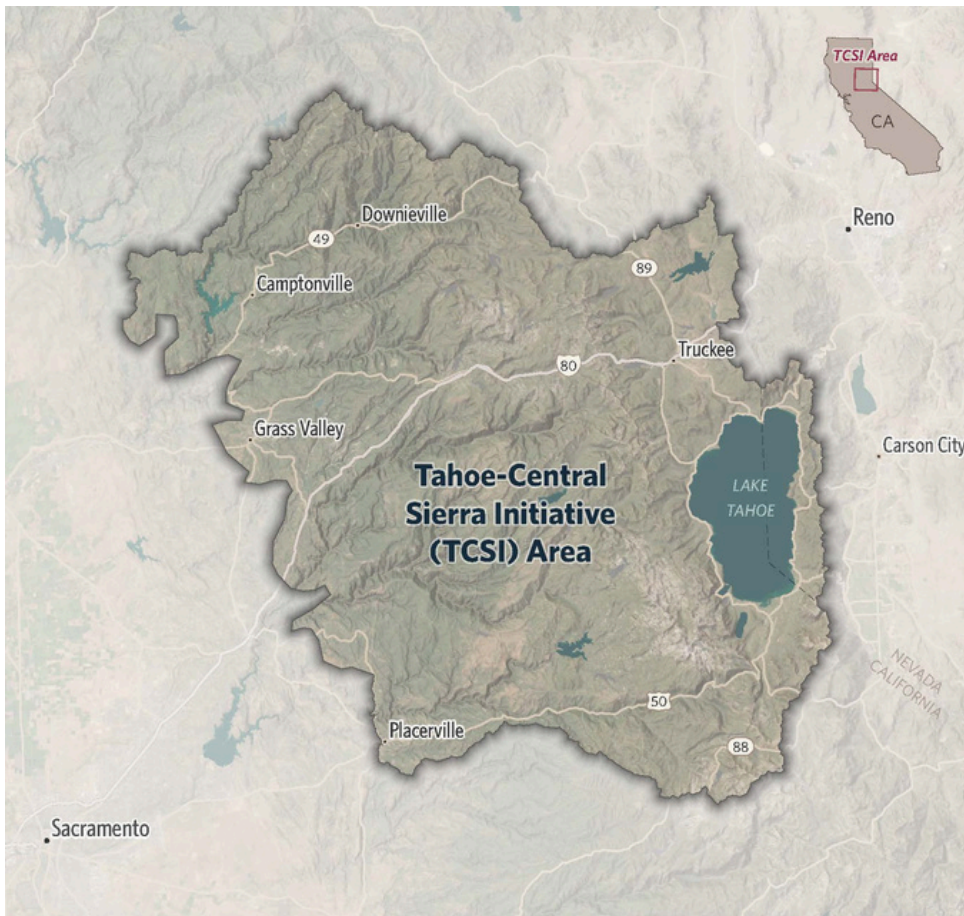
- Utilize the Tahoe-Central Sierra Project Tracker to aggregate and demonstrate overall funding needs to the California legislature and federal offices, advocating for increased investment in TCSI's 2.4-million-acre landscape. This would advance strategies 1, 2, 5 and 6 of the 10-Year Regional Plan.

Support Long-Term Monitoring: Given the importance of monitoring to enable informed decision making, facilitate adaptive management, and assess progress toward socio-ecological resilience, TCSI could:

- Invest in long-term monitoring programs and support data collection and analysis. This could involve identifying the appropriate scale for cross-boundary monitoring, developing standardized monitoring protocols, providing training and technical assistance, and facilitating data sharing and collaboration among organizations. This would advance strategy 3 of the 10-Year Regional Plan.

In conclusion, the capacity assessment underscores the critical need for collaborative efforts and strategic investments to enhance wildfire resilience and forest health across the Tahoe-Central Sierra region. By addressing shared challenges and leveraging the TCSI platform, TCSI is poised to catalyze transformative change and promote resilient forested landscapes for generations to come.

THE TAHOE-CENTRAL SIERRA INITIATIVE (TCSI) FORMED IN 2017 TO ADDRESS THE THREATS OF CLIMATE CHANGE, AMPLIFIED WILDFIRE INTENSITY, INCREASED DROUGHT, AND EXPANDED TREE MORTALITY BY ADVANCING RESTORATION ON 2.4 MILLION FORESTED ACRES OF SIERRA NEVADA WATERSHEDS THROUGH INNOVATION AND COLLABORATION ACROSS LAND OWNERSHIPS.



A partnership of federal, state, and nonprofit partners, TCSI develops and demonstrates innovative planning, investment, and management tools at a landscape scale and applies the best available science to inform decision-making.

Defined by watersheds, the TCSI landscape encompasses the Lake Tahoe basin and surrounding areas, including diverse ecosystems from subalpine forests to the

Sierra Nevada foothills. The TCSI's boundary includes four national forests - the Lake Tahoe Basin Management Unit, a majority but not all of the Tahoe and Eldorado National Forests, and a small sliver of the Plumas National Forest – as well as a significant portion of private, state, and tribal land.

Goal 2 of TCSI's 10-Year Regional Plan states: "To achieve resilience across the entire landscape, the TCSI needs to build capacity to support project planning and implementation." Partners identified equitable partnerships, stakeholder engagement, sustainable funding, and improved workforce capacity and local economies as strategies to achieve this goal.

As a regional effort, the TCSI is well-poised to elevate the needs of local, place-based entities and advocate for more funding, resources, coordination, and policies that advance forest restoration work across landownerships. To understand and articulate those needs, TCSI staff conducted a regional capacity assessment of entities participating in forest restoration or wildfire resilience work in the Tahoe-Central Sierra landscape. This includes but is not limited to Tribes; local, federal, and state agencies; resource conservation districts; fire safe councils; fire protection districts; non-profits and community groups; and land trusts.

TCSI will use insights from this report as a guide to share resources, capacity, and expertise that advance forest restoration and wildfire resilience work across multiple scales. The partnership will also use insights from this report as it explores funding opportunities to facilitate and support cross-boundary project implementation.

WHAT IS CAPACITY?

Within the context of TCSI's 10-Year Regional Plan, capacity refers to the individual and combined ability of agencies, organizations, and Tribes to effectively plan, implement, and sustain the foundational activities that enhance forest resilience.

Beyond financial resources, capacity in this context encompasses organizational strength in managing internal operations, effective collaboration, community engagement, and partnership building. Additionally, it includes the ability to plan, permit, and prepare for project implementation, successfully execute projects on the ground, and continuously monitor, evaluate, and adapt based on evolving needs. For the purposes of this report, TCSI defined capacity by the following categories: organizational, collaboration and partnerships, landscape strategy and planning, project implementation, community outreach, and monitoring.

LITERATURE REVIEW

This report draws on a review of existing literature and other capacity assessments to understand the general needs and interests of organizations, agencies, and Tribes that advance forest health and wildfire resilience in California and the Tahoe-Central Sierra region. Key informing documents include *Investment Opportunities for Increasing Forest and Fire Management Capacity in California* (The Watershed Center, 2020), *What Does Collaborative Capacity Make Possible? Prevailing Perspectives on the Relationship between Collaborative Capacity and Landscape Stewardship Outcomes* (The Stewardship Network and CLSN, 2023), and the *Tahoe Fire and Fuels Team Forest Action Plan* (TFFT, 2019). This combined review provided a strong foundation for the specific context of entities involved in forest resilience work and guided the capacity categories and questions that shaped TCSI's assessment.

SURVEY DEVELOPMENT AND REVIEW

Building on insights from existing literature as well as over forty one-on-one meetings with entities conducting forest health and wildfire resilience work in the TCSI landscape, TCSI staff developed a twenty-six-question survey that included a mix of multiple choice and optional write-in questions. The questions asked about specific needs and barriers that entities face regarding the different types of capacity. The survey also asked about different ways that TCSI might address these barriers and preferences for future engagement. The survey included eight distinct sections including Background

Information, Organizational Capacity, Collaboration and Partnerships, Strategy and Planning, Project Implementation, Community Outreach, Monitoring and Effectiveness, and Concluding Questions. Each section featured a mix of question types, including multiple-choice questions to facilitate quantitative analysis and optional write-in questions to capture qualitative insights.

To ensure clarity, effectiveness, and cultural appropriateness, the survey underwent a review process by a team of partner experts. This team included communications specialists from key regional organizations such as the Sierra Nevada Conservancy and the California Tahoe Conservancy, Tribal relations specialists from the USDA Forest Service, and advisors from regional partner organizations (TCSI Communications Team, Sierra Nevada Conservancy Fund Development Coordinator and Tribal Engagement Analyst, Sierra Institute Shared Stewardship Advisor, Climate Wildfire Institute and Moore Foundation Liaison).

TCSI staff designed and implemented the survey through the online ArcGIS Survey 123 platform and distributed the survey to over 80 individual entities that conduct forest health and wildfire resilience work in the region. TCSI staff also leveraged numerous regional partnerships and networks to distribute the survey to their members. To encourage active participation, TCSI staff secured eight ski-lift tickets to raffle as prizes for participation.

RESPONDENT POPULATION

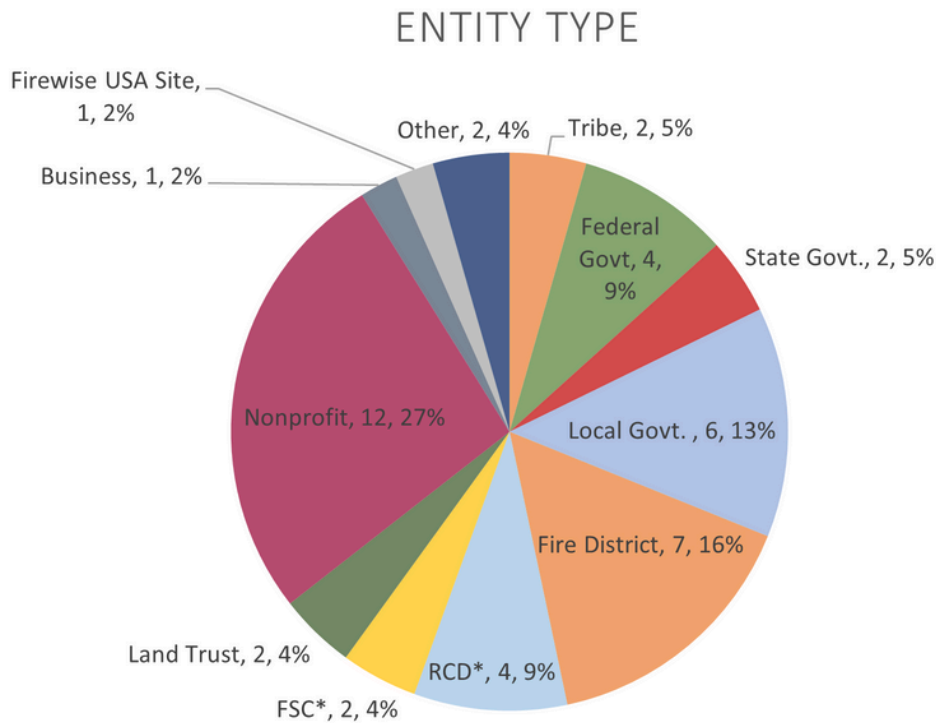
The respondent population comprises a diverse range of entities engaged in forest health and wildfire resilience work across the Tahoe-Central Sierra region. The survey captured responses from various organizational types, and the distribution of respondents across multiple counties reflects broad geographical representation, with participation from entities operating within tribal lands, private non-industrial land, as well as within federal, state, and local jurisdictions.

ENTITY TYPES

Different types of entities may have different capacities in terms of their structures, funding, and missions, and therefore may play different roles in forest and/or fire management. Among the respondent population, nonprofits emerge as

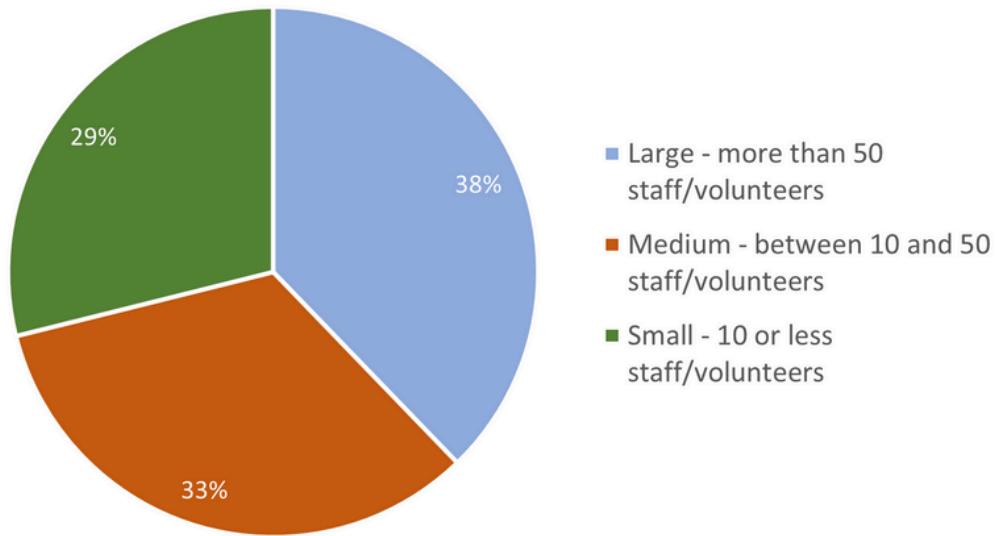
the most represented group, indicating a strong presence of non-governmental organizations committed to addressing forest and fire management issues in the region. Additionally, fire districts/departments and local governments are largely represented, suggesting active participation from local agencies.

It's important to note that while these percentages offer insights into the distribution of entity types, they may also reflect the varying levels of time, capacity, and motivation among different organizations to participate in the survey. Thus, the data may not solely represent the prevalence of these organizational

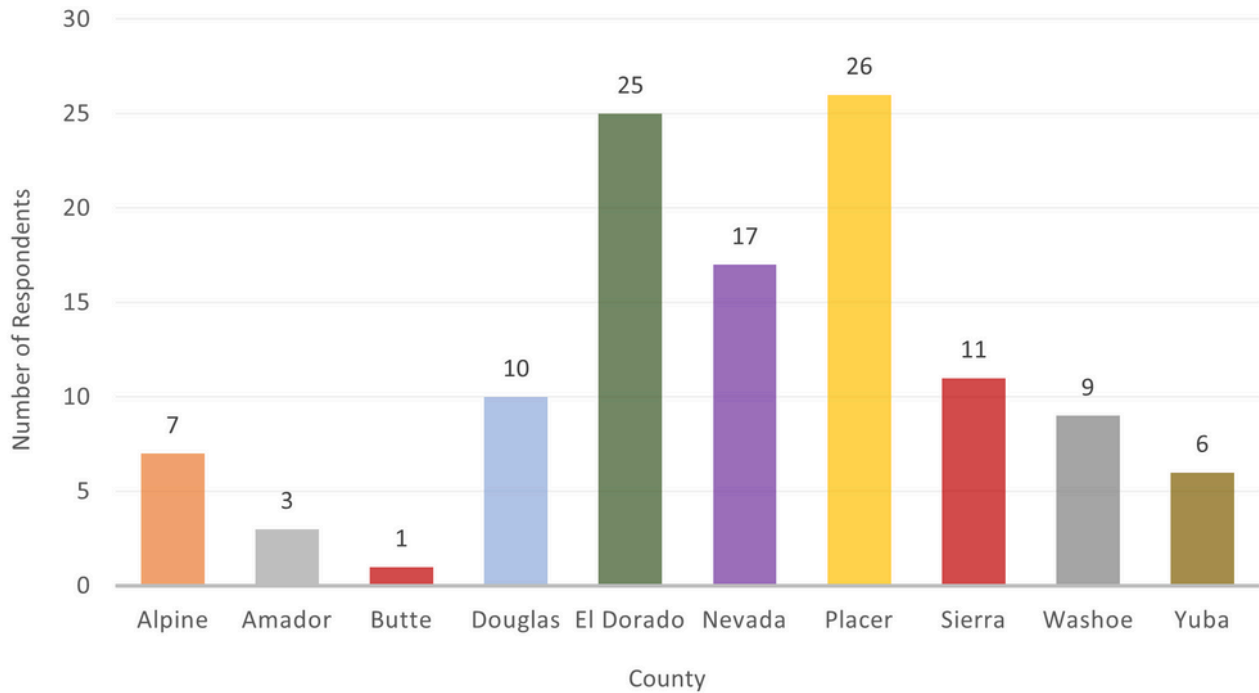


types but may also be influenced by factors such as willingness and ability to engage in the survey itself.

ENTITY SIZE



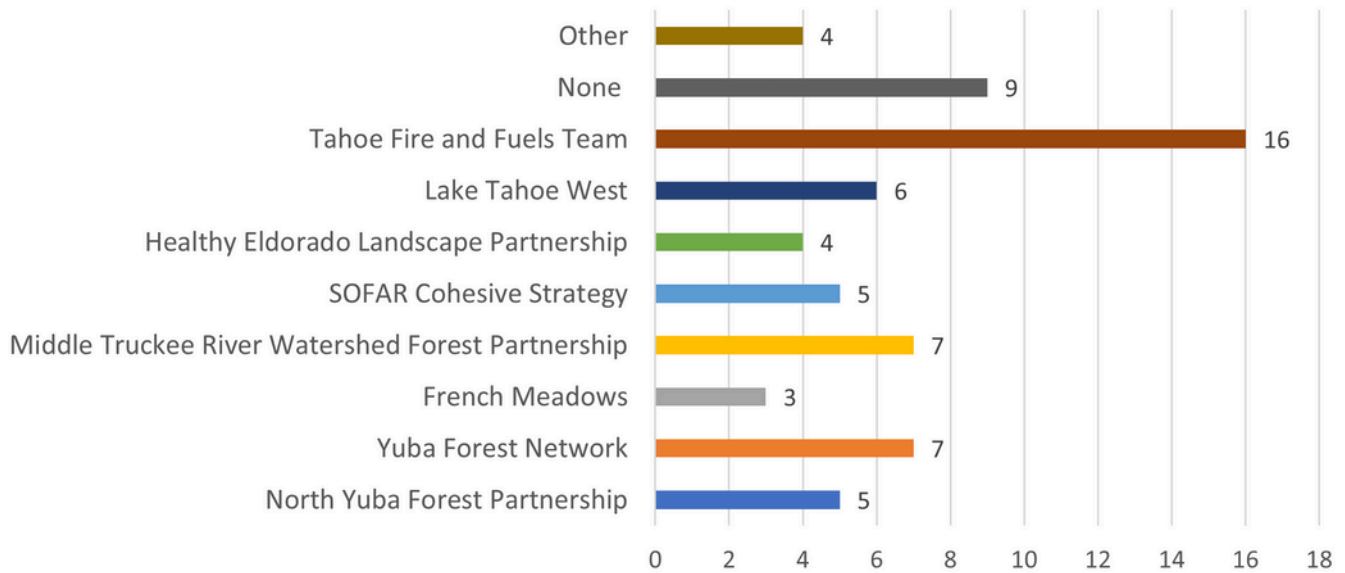
COUNTY DISTRIBUTION



COLLABORATIVE AND PARTNERSHIP PARTICIPATION

Respondents represent a diverse array of collaboratives and partnerships, indicating broad engagement across multiple initiatives aimed at addressing forest health challenges in the region. Respondents from collaboratives listed under "Other" include Truckee Fire CWPP, Tamarack Emergency Forest Restoration Team (EFRT), Alpine County Forest Health Community Working Group, Lake Tahoe Basin Environmental Improvement Program, and the American River Watershed Management Programmatic Watershed Management Plenary.

COLLABORATIVE & PARTNERSHIP PARTICIPATION



CAPACITY FINDINGS

For the purposes of this report, TCSI defined capacity by the following categories: organizational, collaboration and partnerships, landscape strategy and planning, project implementation, community outreach, and monitoring. Each category included a list of different specific capacities. For each capacity type, respondents were asked to indicate whether they wanted to add or enhance it, already had it, did not need it (for example, because it was not relevant to their work or they relied on a partner or contractor for it), or were unsure. It is important to note that the findings here reflect the respondents' perceived capacities and needs—meaning what they identified as having, needing, or not needing from their viewpoint. Responses were summarized based on majorities and natural break points in the data.

EXISTING CAPACITIES ACROSS CATEGORIES

Based on responses, partners expressed existing capacities in the following areas:

- **Developing and maintaining a website (64% of respondents).** The ability to create, update, and manage an organization's website facilitates effective public communication and information dissemination.
- **Planning or attending community events (60% of respondents).** The capability to organize, host, or participate in community gatherings enables direct engagement and relationship-building with the community and partners.

- **Developing outreach and educational materials (49% of respondents).** The skills and resources to produce informative materials like brochures and digital content help educate the public and raise awareness about projects and programs.
- **Acquiring and working with contractors and vendors (49% of respondents).** Proficiency in hiring and collaborating with external service providers ensures efficient project completion.
- **GIS mapping or documentation of biophysical, social, and cultural resources related to wildfire, prescribed fire, cultural fire, and forest health (44% of respondents).** Expertise in GIS mapping and documenting resources supports planning and decision-making with detailed maps and reports.
- **Implementing defensible space and community preparedness programs (33%).** The capability to establish and promote community preparedness programs such as defensible space inspections, home hardening efforts, and wildfire prevention education enhances collective community resilience.

DESIRED CAPACITIES ACROSS CATEGORIES

Based on responses, partners expressed a desire to increase capacity in the following areas:

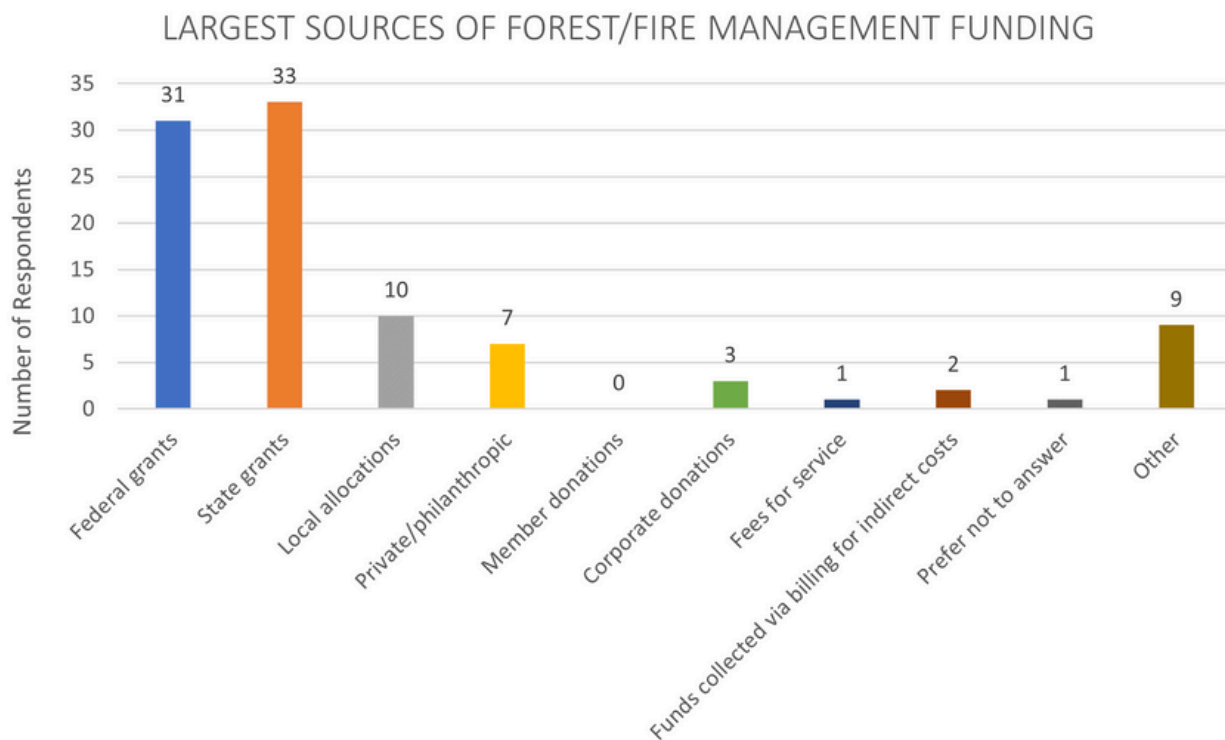
- **Woody by-product utilization (71%).** The ability to effectively use by-products from forest management activities allows woody biomass from forest treatments to leave the forest, creating additional value through products like mulch, bioenergy, and timber.
- **Conducting outreach to underserved communities (71% of respondents).** Engaging underserved communities can facilitate equitable access to resources and support.
- **Developing platforms for community feedback (62% of respondents).** The capability to create systems for collecting and utilizing community feedback improves programs and services based on input and involves the community and other partners in decision-making processes.
- **Conducting outreach to private landowners and residents (53% of respondents).** The ability to engage, educate, and provide resources for private landowners and residents promotes meaningful forest health work across landownerships.
- **Creating a list of shovel-ready (NEPA/CEQA compliant) projects (51% of respondents).** Developing and maintaining a list of projects that meet NEPA/CEQA requirements ensures readiness for implementation when funding or opportunities arise.
- **Recruiting and managing volunteers (51% of respondents).** The skill to attract, organize, and oversee volunteers expands the workforce and achieves more through volunteer support.

- **Acquiring prescribed fire burn boss certification (47%).** The qualification to oversee and conduct prescribed burns safely and effectively leads to the ability to complete more prescribed fire on the ground.

ORGANIZATIONAL CAPACITY

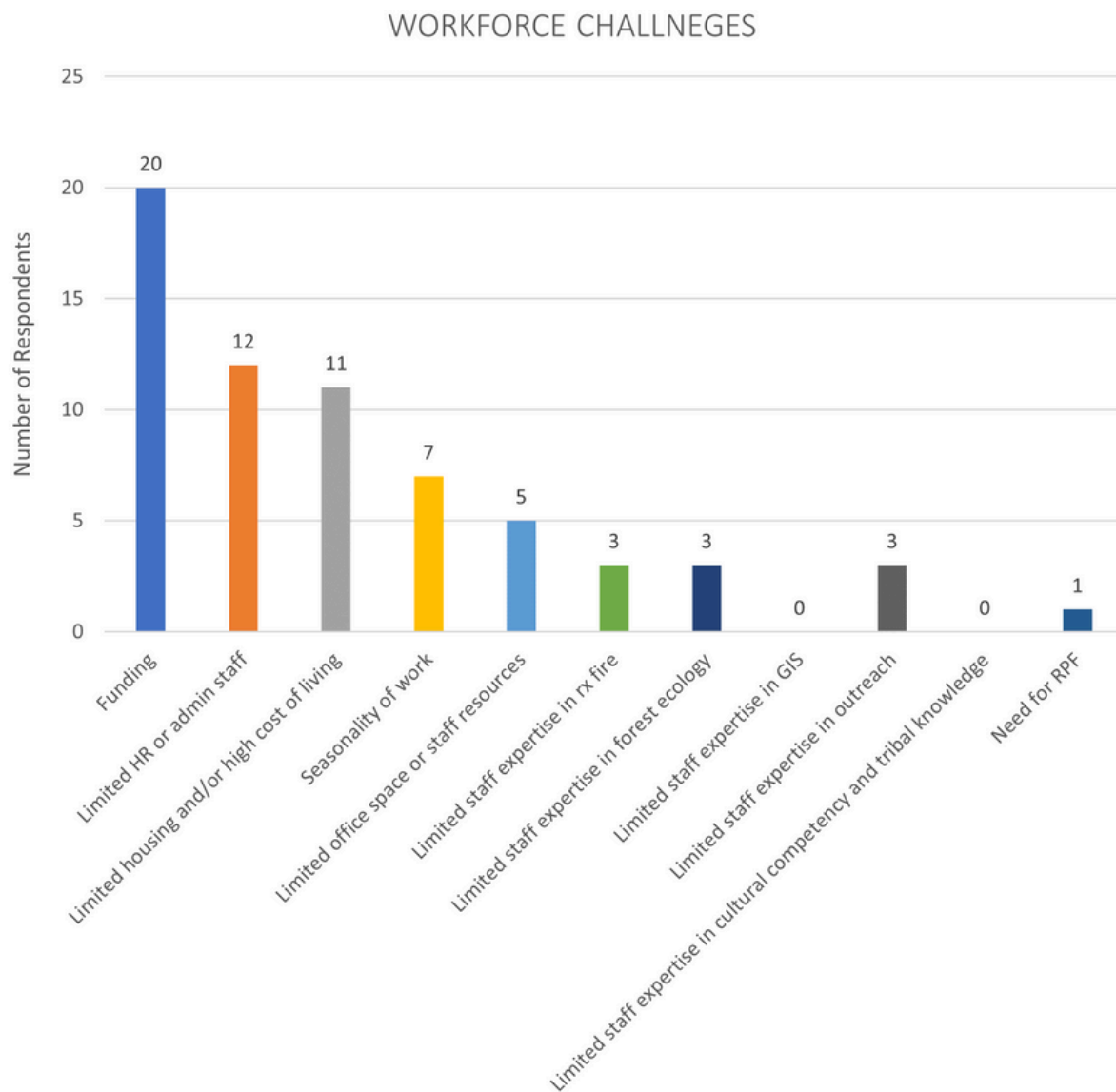
Organizational capacity in the context of forest health and wildfire resilience encompasses the resources, skills, and organizational infrastructure that entities need to effectively carry out their work. This capacity is critical for executing projects, securing funding, managing staff, and maintaining necessary equipment and facilities.

Participants shared information about their largest sources of organizational funding, their largest sources of funding for forest/fire management work, and workforce capacity and challenges. Federal and state grants are the primary funding sources for these activities, with local allocations also playing a notable role. Private and philanthropic contributions, though present, remain limited. Developing and piloting stable and flexible funding and financing mechanisms beyond state and federal grants is crucial for building organizational capacity in forest management and wildfire resilience.



The data suggest that a significant portion of organizations and Tribes involved in forest health and wildfire resilience (47%) feel that they do not have enough staff and/or volunteers to complete their desired work and meet deliverables.

According to responses, the top three factors making it difficult to build a sufficient workforce are limited funding (44%), limited human resources or administrative staff (27%), and limited housing availability and/or high cost of living for employees (24%). Other write-in challenges mentioned include the seasonality of work, tight deadlines to submit for funding, and a lack of long-term funding to support workforce capacity.



COLLABORATION AND PARTNERSHIP CAPACITY

Partnerships are a key aspect of capacity as they enable entities to leverage resources and work together strategically, particularly as different entities may have different roles to play. The data reveal that limited flexible funding that allows time and space for partnership building is the most significant barrier to collaboration, identified by over half of the respondents (53%). Additionally, participants noted challenges such as the need for improved communication and coordination among organizations (31%), differing regulations and permitting processes (29%), and the need for more collaborative organizational cultures (24%).

OPPORTUNITIES FOR TCSI: Based on responses, several common themes emerge regarding opportunities for TCSI to collaborate more effectively with organizations and Tribes in the region.

- Streamline fuels work across different ownerships and land managers to ensure consistent treatment across the landscape.
- Continue providing valuable science and data compilation to guide project planning.
- Act as a central point of contact for various watershed-related groups to reduce strain on organizations attending multiple meetings.
- Implement a comprehensive project tracking tool to reduce duplicity in planning and enhance coordination across projects.



LANDSCAPE STRATEGY AND PROJECT PLANNING CAPACITY

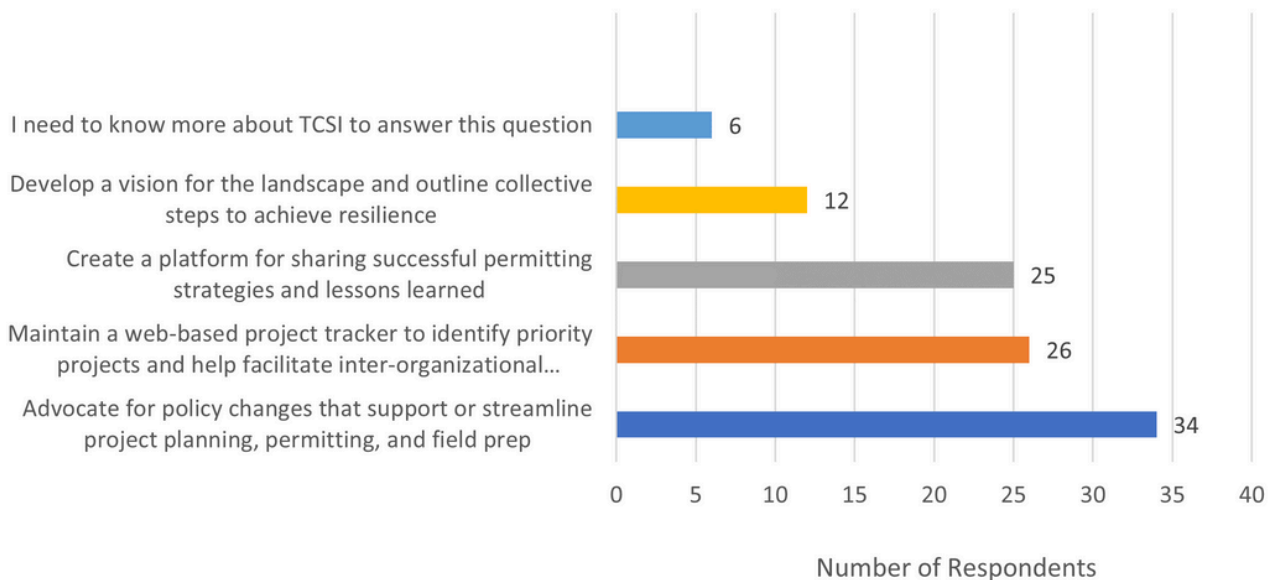
Landscape strategy and project planning capacity refers to an organization's or Tribe's ability to prepare for projects, programs, or other forest health and wildfire resilience efforts. This includes forming comprehensive strategies and plans to guide implementation efforts, and it involves securing the necessary permits and regulatory approvals required for implementation.

	AVERAGE OF RESPONDENTS WHO CURRENTLY HAVE THIS CAPACITY	AVERAGE OF RESPONDENTS WHO WANT TO ADD OR ENHANCE THIS CAPACITY	AVERAGE OF RESPONDENTS WHO DON'T NEED THIS CAPACITY BECAUSE THEY HAVE PARTNERS WHO DO THIS WORK	AVERAGE OF RESPONDENTS WHO DON'T NEED THIS CAPACITY BECAUSE THEY HAVE CONSULTANTS WHO DO THIS WORK	AVERAGE OF RESPONDENTS WHO ARE NOT INTERESTED IN THIS CAPACITY OR IT DOES NOT RELATE
GIS mapping or documentation of biophysical, social, and cultural resources related to wildfire, prescribed fire, cultural fire, and forest health.	44%	42%	7%	4%	2%
Using project prioritization tools such as TCSI's Blueprint, Land Tender, or Planscape.	33%	37%	11%	0%	18%
Creating a list or plan with shovel-ready (NEPA/CEQA compliant) projects	31%	51%	7%	2%	9%
Completing state or local environmental compliance processes (e.g. CEQA, TRPA)	29%	29%	11%	22%	9%
Writing/updating Community Wildfire Protection Plans or similar documents.	22%	22%	33%	7%	16%
Completing federal environmental compliance processes (e.g. NEPA)	22%	36%	13%	20%	9%

On average, 37% of entities expressed a desire to add or enhance their capacity across landscape strategy and project planning sub-categories. The sub-category with the highest percentage of entities wanting to increase their capacity is creating a list or plan with shovel-ready projects (51%). Conversely, the category where most entities already have capacity is GIS mapping or documentation, with 44% reporting current expertise. However, it is important to note that 42% of respondents still want to enhance this skill.

OPPORTUNITIES FOR TCSI: Participants were asked to select three potential roles TCSI could play in increasing individual and collective landscape strategy and planning capacity (shown below).

POTENTIAL ROLES TCSI CAN PLAY IN INCREASING LANDSCAPE STRATEGY AND PLANNING CAPACITY



OPEN-ENDED REFLECTION: Participants were also asked to reflect on opportunities for linking large-scale forest health initiatives on public land with local wildfire risk mitigation efforts in their communities, as well as potential actions or mechanisms to enhance collaboration between those two levels of mitigation work. One identified opportunity is to involve downstream stakeholders, such as those in agriculture, whose industries might be affected by watershed-wide wildfires. This broader engagement could attract additional financial support for restoration and resilience work.

Other proposed actions include facilitating information sharing among key stakeholders and establishing collaborative agreements like the "Good Neighbor Program" to implement cross-jurisdictional forest health activities. Additionally, multiple respondents

recommended shared mapping tools to update project information (such as the Tahoe-Central Sierra Project Tracker). Respondents also emphasized the importance of securing additional federal funding, promoting early engagement with regulatory agencies, and fostering collaborative training events such as prescribed fire training exchanges (TREX). Lastly, respondents underscored the need for mechanisms to streamline project implementation on public lands and suggested leveraging regional bodies like TCSI to guide private landowners toward relevant information.

- *“We have an opportunity to involve downstream stakeholders, such as agriculture, whose industries are negatively impacted by a watershed-wide wildfire. By bringing projects to a watershed scale, we can bring in more stakeholders and possible financial supporters of restoration/resilience work.”*
- *“[We need] a mechanism to cut through the tape when the need arises to treat public lands. It takes far too long to arrange an agreement with the USFS to mitigate hazards to communities. An agency needs to take charge and take the lead so the available resources can get the work done.”*
- *“The establishment of [Alpine County’s] Forest Health Community Workgroup is a big move in this direction. The hope is to create a strategy document that outlines the desired target and treatments for each area. Rather than a project list, this is a compilation of targets and treatments to help agencies create their lists and inform the public of the larger direction.”*

PROJECT IMPLEMENTATION CAPACITY

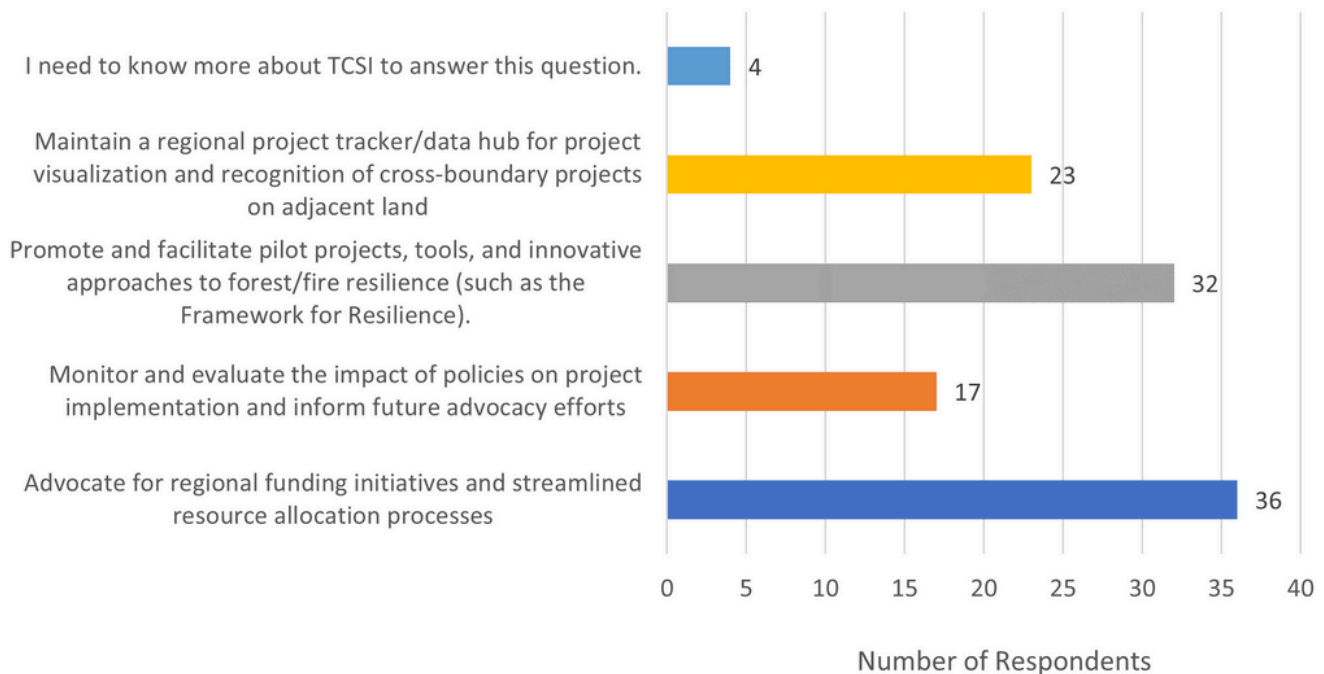
Project implementation capacity in the context of forest health and wildfire resilience refers to the ability to execute on-the-ground activities, including vegetation management, fuel reduction, prescribed burning, forest restoration, and community preparedness programs while navigating regulatory processes and collaborating with partners to achieve project objectives.

On average, 42% of respondents expressed a desire to add or enhance their capacities across all implementation sub-categories. The sub-categories with the highest percentage of entities wanting to increase their capacity are utilizing woody by-products (71%), conducting cultural burning for the enhancement of cultural needs and uses (49%), and acquiring prescribed fire burn boss certification (47%).

	AVERAGE OF RESPONDENTS WHO CURRENTLY HAVE THIS CAPACITY	AVERAGE OF RESPONDENTS WHO WANT TO ADD OR ENHANCE THIS CAPACITY	AVERAGE OF RESPONDENTS WHO DON'T NEED THIS CAPACITY BECAUSE THEY HAVE PARTNERS WHO DO THIS WORK	AVERAGE OF RESPONDENTS WHO DON'T NEED THIS CAPACITY BECAUSE THEY HAVE CONSULTANTS WHO DO THIS WORK	AVERAGE OF RESPONDENTS WHO ARE NOT INTERESTED IN THIS CAPACITY OR IT DOES NOT RELATE
Owning equipment such as chippers, masticators, other large equipment and/or hand tools	7%	29%	38%	15%	11%
Acquiring and working with contractors and vendors	49%	38%	7%	0%	7%
Acquiring prescribed fire burn boss certification	7%	47%	31%	2%	13%
Meeting prescribed fire regulations.	13%	44%	31%	2%	9%
Conducting cultural burning for the enhancement of cultural needs and uses	0%	49%	31%	2%	18%
Implementing fuel reduction projects	33%	40%	13%	4%	9%
Implementing post-fire recovery efforts	20%	29%	29%	4%	18%
Implementing defensible space and community preparedness programs	33%	29%	22%	4%	11%
Restoration and woody by-product utilization (biomass)	2%	71%	16%	2%	9%

OPPORTUNITIES FOR TCSI: Participants were asked to select three potential roles TCSI could play in increasing individual and collective project implementation capacity (shown below).

POTENTIAL ROLES TCSI CAN PLAY IN INCREASING IMPLEMENTATION CAPACITY



COMMUNITY OUTREACH CAPACITY

Community outreach capacity involves effectively disseminating information, engaging community members, and providing education, training, and materials to increase awareness, understanding, and participation in an activity or program.

On average, 43% of respondents desired to increase capacity in outreach and communication efforts related to forest management and wildfire resilience work. The categories with the highest percentage of respondents wanting to add or enhance capacity are conducting outreach to disadvantaged communities (71%), developing platforms for community feedback and advisory groups (62%), and conducting outreach to private landowners and residents (53%).

	AVERAGE OF RESPONDENTS WHO CURRENTLY HAVE THIS CAPACITY	AVERAGE OF RESPONDENTS WHO WANT TO ADD OR ENHANCE THIS CAPACITY	AVERAGE OF RESPONDENTS WHO DON'T NEED THIS CAPACITY BECAUSE THEY HAVE PARTNERS WHO DO THIS WORK	AVERAGE OF RESPONDENTS WHO DON'T NEED THIS CAPACITY BECAUSE THEY HAVE CONSULTANTS WHO DO THIS WORK	AVERAGE OF RESPONDENTS WHO ARE NOT INTERESTED IN THIS CAPACITY OR IT DOES NOT RELATE
Conducting outreach to private landowners and residents	33%	53%	9%	0%	4%
Conducting outreach to disadvantaged communities	18%	71%	7%	0%	4%
Developing platforms for community feedback and advisory groups	18%	62%	16%	0%	4%
Developing outreach and educational materials (pamphlets, social media, etc.)	49%	38%	13%	0%	0%
Recruiting and managing volunteers	22%	51%	9%	0%	18%
Developing and maintaining a website	64%	24%	4%	2%	4%
Planning or attending community events	60%	36%	2%	0%	2%

OPEN-ENDED REFLECTION: Participants were asked to share if they’ve had success building trust and relationships with disadvantaged community members, particularly those who may have historically been excluded from environmental decision-making. Several entities report positive interactions, such as engaging with local Tribes in educational prescribed fire events and integrating community needs into policy frameworks. Other responses reveal challenges such as cultural disconnects, language barriers, and a lack of response from disadvantaged communities. Some organizations admitted to struggling with defining who qualifies as "disadvantaged" within their regions, which complicates targeted engagement efforts. Overall, while there are instances of successful engagement, the survey suggests a need for more consistent and tailored efforts to involve disadvantaged communities effectively in forest health and wildfire resilience work.

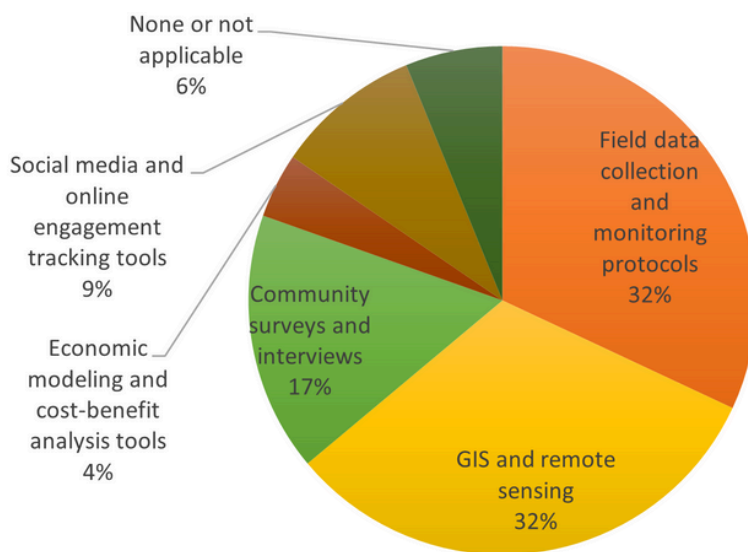
- *“Yes, our Fire District is very engaged with ALL populations within our jurisdiction, and I feel confident we have built trust amongst our community with ALL our efforts. Our community is very engaged in what we do, and we always provide a platform for them to share their ideas and/or concerns.”*
- *“We have had moderate success working with disadvantaged and tribal communities and including them in conversations and planning efforts around wildfire mitigation and forest health projects. Our community outreach work is fairly minimal, with more of our focus on landscape-scale projects and collaborative facilitation, which is why we have not had more success with targeted disadvantaged community work.”*
- *“It's not clear who is "disadvantaged" in our community. I don't think this has been very well defined.”*
- *“Not really, our organization needs help with reaching disadvantaged community members.”*

MONITORING CAPACITY

Monitoring capacity refers to the ability to systematically observe, measure, and assess ecological conditions, overall forest health, mitigation strategies, and community resilience over time to inform adaptive management and decision-making.

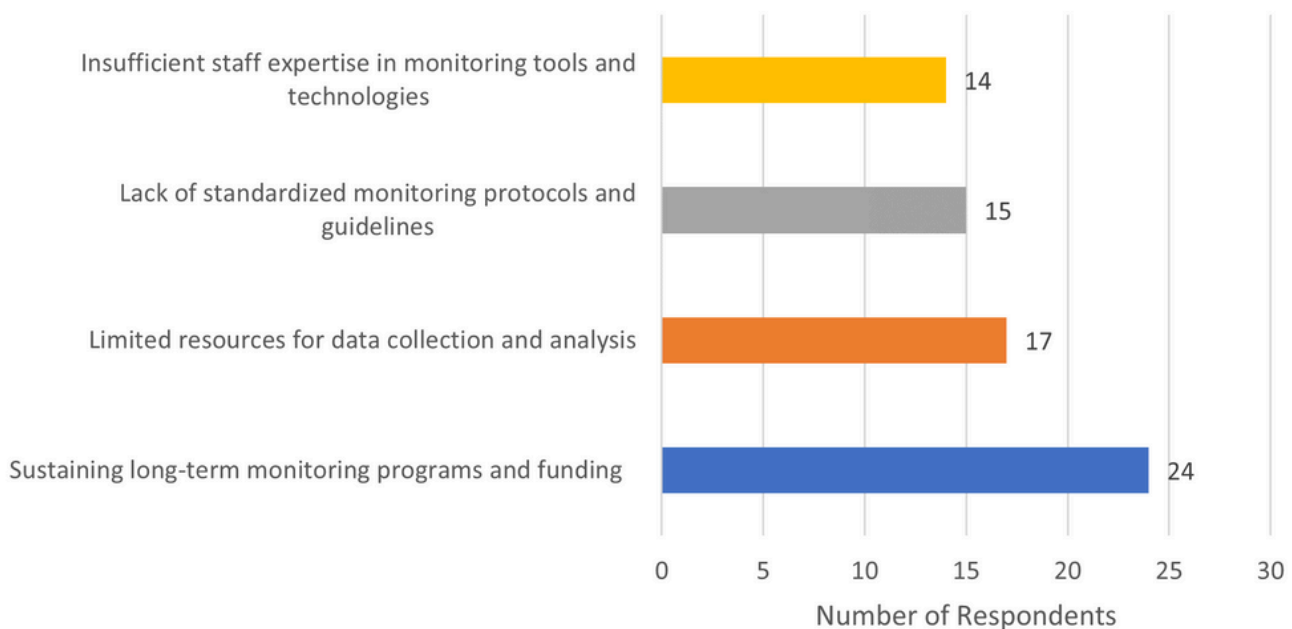
Participants were asked to indicate the technology or methods they typically use for data collection and assessment of project effectiveness. Responses revealed that field data collection and monitoring protocols, as well as GIS and remote sensing, were the most utilized methods, each selected by 31 respondents. Additionally, community surveys and interviews were utilized by 16 respondents, while social media and online engagement tracking tools were used by 9. Economic modeling and cost-benefit analysis tools were less utilized, chosen by 4 respondents, with 6 indicating none or not applicable. No respondents selected "Other" as their preferred method.

MONITORING TECHNOLOGY AND METHODS



The survey results revealed several common hurdles with monitoring, with sustaining long-term monitoring programs and funding emerging as the most prominent challenge, selected by 24 respondents. Limited resources for data collection and analysis (17 respondents) and lack of standardized monitoring protocols and guidelines (15 respondents) were also significant concerns. Other notable challenges include insufficient staff expertise in monitoring tools and technologies (14 respondents) and difficulty accessing and sharing data across organizations (10 respondents).

MONITORING CHALLENGES AND BARRIERS



LARGEST CAPACITY AREAS FOR IMPROVEMENT

Participants were asked to share their entity’s two most significant areas for improvement (shown below). Responses were fairly spread across capacity categories, with community outreach (21%), organizational, project implementation, and monitoring (17% each) having the highest percentage of responses.

CAPACITY CATEGORY	EXAMPLES	PERCENTAGE OF RESPONDENTS LISTING AS AN AREA FOR IMPROVEMENT
Organizational	Limited staff for field work, staffing shortages, staffing housing, funding, understanding full costs for project delivery, hiring an RPF, general funding for wildfire prevention staffing, skill forestry/ prescribed fire workforce	17%
Collaboration and Partnerships	Cross-boundary work, continued group collaboration and partnerships, data sharing, coordination between groups, coordinated resource allocation, consolidation of multiple collaboratives, communication with other organizations and Tribes	16%
Landscape Strategy, Planning, and Permitting	Understanding of greater ecosystem of projects, building connections to ancillary benefits, environmental compliance and cultural compliance, federal requirements clearance knowledge, project permitting, regulation of timber harvest and vegetation management activities, forest mapping, project planning	12%
Project Implementation	Increasing pace and scale, securing contractors to complete work at a reasonable cost, prescribed fire, cultural burning, contractor capacity building, home hardening implementation, defensible space inspections	17%
Community Outreach	Public outreach and education, increasing community involvement, low-income community engagement, collaborating with disadvantaged communities	21%
Monitoring and Adaptive Management	Training and experience in monitoring, long-term monitoring, monitoring for storytelling, establishment of long-term monitoring program, effectiveness monitoring, long-term forest health monitoring, record keeping and tracking	17%

OTHER CAPACITIES

Participants were asked to share other capacities not mentioned in the survey. Responses include:

- Cross-boundary collaboration and understanding between USFS lands and other entities.
- Infrastructure such as fire stations to support wildfire prevention programs.
- Existing agencies have knowledge but work in silos; need coordination for landscape-wide effects.
- Office space and workplace infrastructure: Inadequate space hinders pace and scale of forest health projects.
- Support program for Registered Professional Foresters (RPFs) and mill/biomass facilities
- Grant writing

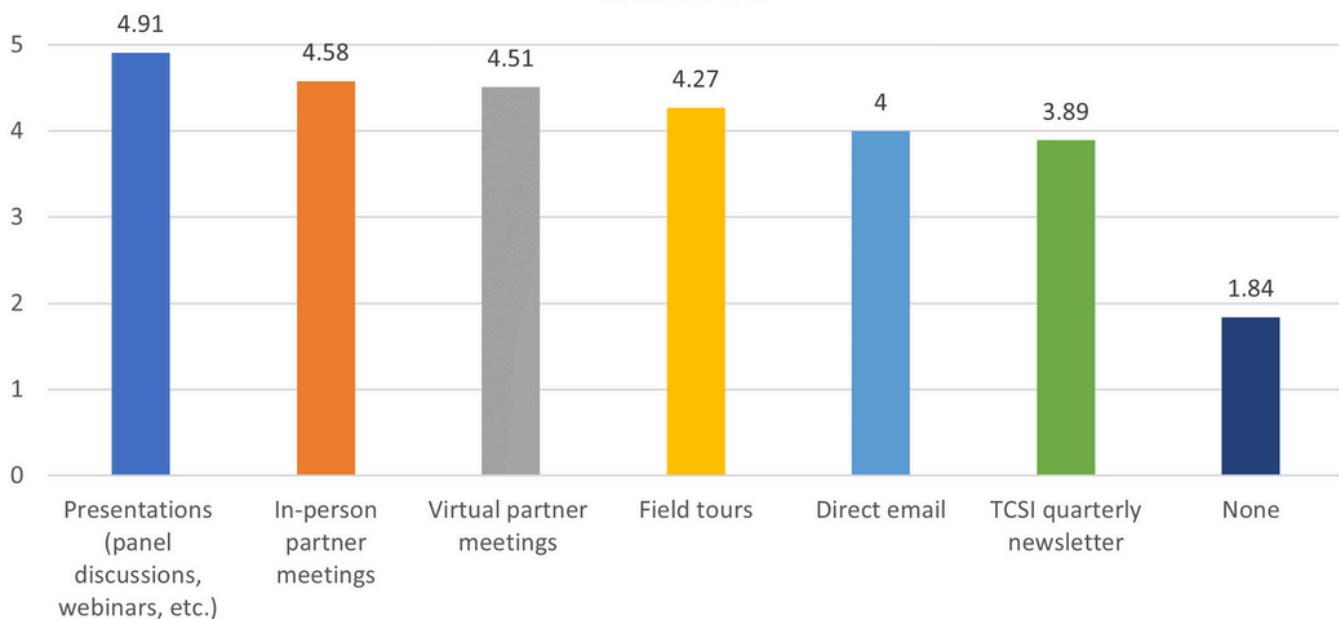
- Communication of carbon/GHG/climate benefits
- Implementation of labor compliance programs: Anticipated need with prevailing wage requirements.
- Information dissemination platforms for stakeholders and treatment techniques

FUTURE ENGAGEMENT WITH TCSI

Participants were asked to rank their preferred methods of future engagement with TCSI. The ranking resulted in the following, scored 1-5:

1. Presentations (panel discussions, webinars, etc.) – 4.91
2. In-person stakeholder meetings – 4.58
3. Virtual stakeholder meetings – 4.51
4. Field tours – 4.27
5. Direct email – 4.00
6. TCSI quarterly newsletter – 3.89
7. None. I am not interested in further engagement with TCSI. – 1.84

PREFERRED ENGAGEMENT WITH TCSI
RANKED 1-5



SUMMARY OF RESPONDENT CAPACITY NEEDS:

- Wood utilization opportunities
- Conducting outreach to disadvantaged communities
- Developing platforms for community feedback
- Creating a list of shovel-ready (NEPA/CEQA compliant) projects
- Recruiting and managing volunteers
- Acquiring prescribed fire burn boss certification
- Workforce recruitment, development, and retention
- Flexible funding for partnership development
- Long-term monitoring resources and funding

SUMMARY OF OPPORTUNITIES FOR TCSI

To effectively address the challenges and opportunities identified in the TCSI region, strategic investments in capacity are essential. There is significant potential to align capacity investments and efforts with the TCSI 10-Year Regional Plan's six key strategies:

1. **Implementation** - Treat overly dense forested areas, reduce forest fuels, restore areas impacted by disturbances, and protect areas that are in desired condition;
 2. **Planning** - Build a 10-year Project Portfolio to help develop sustainable funding streams, strategically sequence projects, and build appropriate capacity and workforce resources;
 3. **Science** - Support and incorporate robust science to inform management;
 4. **Collaboration** - Strengthen equitable partnerships and stakeholder engagement;
 5. **Funding** - Secure sustainable funding;
 6. **Local Investment** - Improve workforce capacity, local economies, and efficiency.
-

Respondents identified potential roles for TCSI to enhance individual and collective capacity. Some actions may address capacity needs directly, such as advocating for more flexible funding opportunities. Other actions may address capacity indirectly, such as connecting regional partner interests and expertise for outreach to disadvantaged communities. The following recommendations summarize opportunities for TCSI to bolster capacity and support resilient landscapes and communities.

Advance Biomass Utilization: Currently, TCSI supports a Forest Infrastructure workgroup that is addressing challenges facing biomass utilization facilities that serve the region. TCSI is identifying barriers including financial constraints, regulatory hurdles, market demand, woody supply, and public perception. To support biomass utilization efforts in the region, TCSI could:

- Assess the viability of specific policy reforms, provide advocacy about the importance of biomass utilization facilities and facility operational constraints, and enhance communication and education on forest infrastructure and biomass to target audiences such as elected officials, city and county staff, and policymakers.
- Develop partnerships with the private sector to attract business ventures and emphasize the importance of external financial backing for long-term sustainability. These efforts advance strategies 1 and 6 of the 10-Year Regional Plan.

Enhance Regional Coordination:

Collaboration across landownerships is crucial for successful forest management and wildfire resilience projects. However, different regulations and permitting processes and limited funding for landscape-scale coordination pose significant challenges. To address these challenges, TCSI could:

- Develop centralized resources showcasing successful approaches and lessons learned from existing collaboratives like the North Yuba Forest Partnership, Healthy Eldorado Landscape Partnership, French Meadows Forest Restoration Project, and Lake Tahoe West. TCSI should also leverage the Tahoe-Central Sierra Project Tracker to further streamline project collaboration across landownerships and between project implementors. This will advance strategies 1, 3, and 4 of the 10-Year Regional Plan.
- Continue hosting collaborative convenings and/or develop additional platforms for regional networking and resource-sharing as an avenue for landscape partnerships to discuss successes, challenges, and lessons learned about various topics such as permitting, implementation, and monitoring. This will advance strategy 4 of the 10-Year Regional Plan.
- Formalize a process for providing Letters of Support to regional partner project proposals. This would advance strategies 1 and 5 of the 10-Year Regional Plan.

- Serve as a network manager and connect partners with interest and expertise in conducting outreach to disadvantaged communities, developing platforms for community feedback, conducting outreach to private landowners, recruiting and managing volunteers, and acquiring burn boss certification.

Provide Advocacy and Funding Support:

TCSI is poised to elevate the needs of place-based entities and advocate for increased regional funding and policies that support forest health and wildfire resilience efforts across the landscape. TCSI partner's past success in securing \$32 million in California Climate Investment funds demonstrates the partnership's ability to support work across federal, state, and private lands. However, to advance funding opportunities beyond federal and state grant cycles, TCSI could:

- Pilot innovative financing strategies to explore and support a restoration economy across 2.4 million acres. This would advance strategy 5 of the 10-Year Regional Plan.
- Advocate for more flexible funding opportunities to cover administrative, staffing, and partnership-building needs beyond project implementation, as these needs were prominently expressed in the survey. This would advance strategies 1, 5, and 6 of the 10-Year Regional Plan.

- Utilize the Tahoe-Central Sierra Project Tracker to aggregate and demonstrate overall funding needs to the California legislature and federal offices, advocating for increased investment in TCSI's 2.4-million-acre landscape. This would advance strategies 1, 2, 5 and 6 of the 10-Year Regional Plan.

Support Long-Term Monitoring: Given the importance of monitoring to enable informed decision making, facilitate adaptive management, and assess progress toward socio-ecological resilience, TCSI could:

- Invest in long-term monitoring programs and support data collection and analysis. This could involve identifying the appropriate scale for cross-boundary monitoring, developing standardized monitoring protocols, providing training and technical assistance, and facilitating data sharing and collaboration among organizations. This would advance strategy 3 of the 10-Year Regional Plan.

In conclusion, the capacity assessment underscores the critical need for collaborative efforts and strategic investments to enhance wildfire resilience and forest health across the Tahoe-Central Sierra region. By addressing shared challenges and leveraging the TCSI platform, TCSI is poised to catalyze transformative change and promote resilient forested landscapes for generations to come.