Sierra Institute
for Community and Environment

Alpine County Stakeholder Assessment: Forest Health, Economic Conditions, Community Well-Being, and Landscape Resiliency

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Executive Summary

Alpine County Stakeholder Assessment: Forest Health, Economic Conditions, Community Well-Being, and Landscape Resiliency

The Alpine County Stakeholder Assessment, a collaboration between the Sierra Institute for Community and Environment, alongside the Forest Health Community Working Group, evaluates forest health, economic conditions, community well-being, and landscape resiliency through stakeholder interviews in Alpine County.

As California's least populous county, with 96% of its land under federal management, Alpine County faces unique hurdles in balancing its slow pace rural identity with the urgent need for landscape-scale restoration. These challenges became particularly acute following the 2021 Tamarack Fire, threatening several communities and burning 68,637 acres. This report captures diverse stakeholder perspectives from 33 interviews with residents, agency officials, Washoe Tribal members, and others that inform economic health, community well-being, and future land management and stewardship in Alpine County.

A primary finding is that, while residents feel a deep connection to the landscape, this bond is complicated by differing perspectives on how to treat not only burned land, but green forest to reduce risks of catastrophic wildfire. There is a broad consensus that active forest management is necessary to prevent catastrophic wildfire, but stakeholders are divided on means of implementation, as well as the scale and intensity of work. Stakeholder relationships range from good to uneven, and occasionally contentious with the U.S. Forest Service and Alpine County itself.

Management of forest biomass remains a contentious issue in the county, underscored by the 2022 Measure D initiative. Its passage prohibits construction of a biomass to electricity utilization facility in the county and limits county work on the topic. Thinning operations, as it relates to particular type and location, leaves a spectrum on comfortability and scale. Land managers and a number of others view prescribed fire as an essential tool for landscape restoration and for reducing future wildfire risk, though it remains a point of anxiety regarding liability and community threat.

Disagreements about management are exacerbated by communication barriers within a dispersed and aging population. There is a need for affordable housing and economic development, but like many rural areas, there is concern that the current way of life will be disrupted. Ironically, that way is threatened by an aging population and by businesses and activities that urgently need an influx of younger, engaged residents.

The report explores the complexities of the Washoe Tribe and interconnected challenges rooted in historical and ongoing exclusion, and identifies steps taken and steps needed to respond to their lifeways, as well as the deep-seated emotional and cultural marginalization that is now compounded by the severity of environmental challenges associated with fire. The loss of the

culturally important piñon pine and nut gathering sites from the Tamarack Fire are described and coupled with a call to develop more culturally responsive recovery work.

The report concludes with a variety of recommendations focused on how to effectively build on already successful local initiatives, ways to promote trust and transparency, and management approaches guided by inclusive actions. A key focus of the recommendations involve building on the excellent work of the Forest Health Community Working Group, which has laid a strong collaborative foundation in Alpine County.

1.0 Introduction

1.1 Background of Report

The Project

Alpine County contracted the Sierra Institute for Community and Environment to perform a stakeholder analysis. This analysis was conducted in collaboration with the Forest Health Community Working Group (FHCWG) and covered the footprint of the FHCWG, which aligns with Alpine County's boundaries. The purpose is to better understand social concerns, values, perspectives, and dynamics as they relate to forest health and management in the FHCWG region.

The report is based on interviews conducted to capture diverse perspectives—across stakeholder interests, concerns, viewpoints—and how these influence and are affected by land management project activities. The resulting report is intended to inform the FHCWG's current and future work, as well as land management and residents alike who are invested in the area's future. We conclude the report with strategies for meaningful, long-term stakeholder collaboration of the natural resources of Alpine County.

Key Objectives of the Stakeholder Assessment are to:

- Identify diverse stakeholder groups and individuals to be involved in the project.
- Include the Washoe Tribe and identify important social, cultural, and land management issues.
- Improve understanding of diverse stakeholder perspectives in the FHCWG footprint.
- Identify and improve understanding of social conditions, values, and perspectives as it relates to forest health and management in Alpine County.
- Develop a report that informs and helps advance communication, outreach, education, and restoration activities that address biophysical conditions and social values.
- Identify pathways for the FHCWG to effectively engage with diverse stakeholders and be successful.

This report consists of several sections. First, a description of methodology for the qualitative assessment methods is shared. Second, findings are presented through social, environmental, economic, and Tribal framing. Third, the report concludes with summary findings and recommendations for continued productive work in the future.

1.2 Methods

Study Area

Alpine County lies in the central Sierra Nevada, roughly straddling the Pacific crest from Lake Tahoe to Yosemite National Park. The landscape is diverse with elevations ranging from under 5,000 feet above sea level to 11,462-foot Sonora Peak. The Sierra Nevada casts a rain shadow

Figure 1: Location of Alpine County in California

effect, resulting in the east side generally characterized by dry forests, sagebrush, and grasslands while the west side is lush with more meadows and forests with larger trees due to greater site productivity. With a terrain that is rugged and remote, access to Alpine County is limited and has shaped the presence of the built environment and the overall rural character of the area.

Federal land ownership characterizes the majority of Alpine County, with 456,500 acres under federal control. A total of 96% of the land is includes parts of three national forests managed by the U.S. Forest Service. Additionally, the Bureau of Land Management (BLM) administers approximately 6,000 acres, a little over 1% of the land base, encompassing significant recreation areas, and situated near eastside communities. With 1,204 residents spread across 475,520 acres, Alpine County is California's least populous county. Major communities include Markleeville, the seat and largest community; Woodfords, a mixture of several smaller communities; Mesa Vista/River Ranch, with larger lot sizes amidst agricultural and undeveloped lands; Hung-A-Lel-Ti, a Washoe Tribal community; and Bear Valley and Kirkwood, mountain resort communities on the western side of the county.

Alpine County was formally established in 1864, but it has been inhabited by the Washoe Tribe from time immemorial. The county has experienced periods of brief but intense periods of mining, transportation to support it, and the rise and fall of agriculture and timber production. Major employer sectors include: recreation, accommodation and food services; public administration; and educational, health, and social services.[1]

Alpine County was significantly impacted by the devastating 2021 Tamarack Fire, a major wildfire event that burned 68,637 acres. The footprint of the Tamarack Fire largely lies mostly within the county boundaries. A substantial portion of the burned area in Alpine County was subjected to high-severity burning. This level of intensity often results in significant ecological and hydrological impacts, including increased risk of post-fire erosion, debris flows, and flash flooding, alongside long-term impacts on local ecosystems, forest resources, and critical watersheds. Firefighting efforts protected major communities in the area, but the sheer scale

[1] Alpine County. (2017), *Alpine County General Plan.* https://www.hcd.ca.gov/housing-elements/docs/alpine-county-5th-adopted031517.pdf

and moderate to high-severity nature of the burn present substantial challenges for the county's recovery and future landscape management efforts.

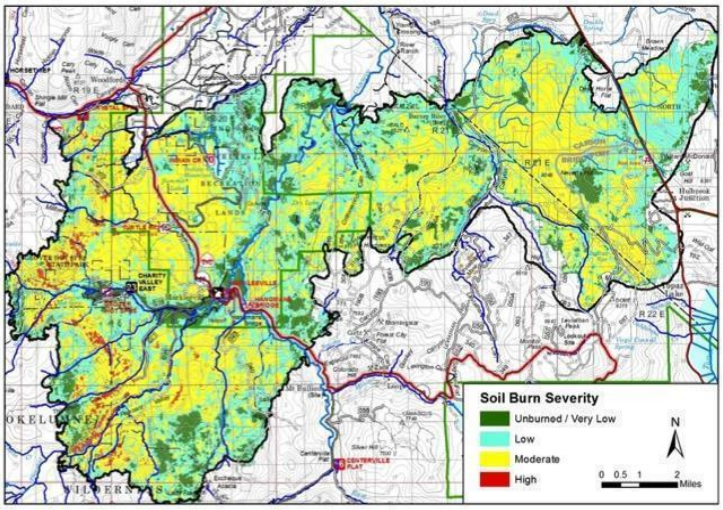

Figure 2: Boundary of and soil burn severity of the Tamarack Fire

Data Collection and Analysis

A total of 33 interviews were conducted, typically lasting between 0.75 and 1.5 hours. Interviews were conducted with a wide variety of stakeholders including (but not limited to): landowners and homeowners, non-governmental agency employees, local business owners, retirees, volunteers, Washoe Tribal community members and officials, county officials, federal and state agency personnel, and FHCWG members.

To ensure that the interview process was grounded in important issues for Alpine County, the Sierra Institute worked with an Advisory Committee—made up of members of the FHCWG to guide and inform the process—and to ensure that unique local factors were included.

An initial draft of the semi-structured interview guide was circulated among the Advisory Committee. Following the committee's feedback and an iterative revision process, the final interview guide was produced. This guide, detailed in **Appendix A**, explores interviewees' perspectives and values on social, environmental, and economic matters in Alpine County.

A team of two Sierra Institute researchers conducted the interviews. Questions were open-ended and gave interviewers the flexibility to focus interviews based on the interviewee's area of knowledge. Initial findings were shared with the Advisory Committee and the FHCWG, and from this, a handful of additional interviews were conducted to ensure a wide variety of perspectives were captured. For a detailed description of the methodology, see **Appendix B**.

The following chapters in this report were guided and informed by interviews conducted between June of 2025 and January of 2026, in person and on-line via Zoom and Teams. The content of the interviews were analyzed and the following themes identified. A primary purpose of this report is to capture residents and other stakeholder opinions and perspectives in order to inform the Forest Health Community Working Group and others local perspectives on natural resource management and social and economic issues of importance. In addition to summarizing key issues, this assessment provides recommendations for pathways forward that are specific to the context of Alpine County's landscape and population.

This report is structured around four core areas that emerged from stakeholder discussions:

I. The **social landscape**, characterized by topics related to trust, communication, and evolving community demographics.
II. The **environmental nexus**, involving the diverse and broad range of perspectives on forest management, federal land ownership, and forest health treatments.
III. **Local economics**, which included the recreation-based economy and challenges in regards to diversification and sustainable growth.
IV. The **Tribal Perspective,** involving Washoe environmental concerns, relations, challenges, and current efforts that shape opportunities moving forward.

2.0 The Social Landscape: Sense of Community, Trust, Communication, and Community Dynamics

2.1 Sense of Community

One essential expression that arose throughout the interview process was the resident's deep love, draw, and connection to the landscape. Without fail, a primary reason for residing in Alpine County mentioned by numerous interviewees was the wide expanse of nature and the quiet, still beauty that characterizes the area. Whether for recreational, subsistence, or aesthetic purposes, people find great meaning to and connection to the mountainous landscape.

While Alpine County has the lowest population of any in California, the draw and importance of a tight-knit community was repeatedly mentioned as a primary reason for living in the area. The small population spread across a handful of communities offers the chance for residents to build organic and meaningful connections to neighbors. Some reported that the sphere of influence, and the ability to participate in groups that can influence the community is a source of both pride and a contribution to personal well-being. The area is often characterized by individuals wearing "multiple hats," as they are deeply involved in the community, participating in numerous boards, committees, volunteer activities, and the like. The overlap of activities and roles leads to both a unified knowing of each other amidst a complex web of key social dynamics and relational patterns that have shaped outcomes for collaborative and collective action. In essence, it's a place where locals expressed having personal and collective agency, coupled with a grain of salt that this autonomy of agency can be challenging and limiting at times with individuals who hold more reclusive preferences.

2.2 The Faces of Trust

Trust emerged as a significant theme throughout our interviews, functioning both as a fundamental bond between stakeholders and as an area where focused repair and cultivation of confidence could substantially enhance relationships. This section is broken into three major categories regarding trust:

I. Mistrust of agencies and local government
II. Complex local politics
III. Tribal realities

Mistrust of agencies and local government was observed to be a dominant theme among a number of interviewees. This sentiment is rooted in a long history of strained relationships largely due to community members' feelings of not being included in land management decision-making and management decisions that were made with limited to no public involvement. This friction, while sometimes directed at specific individuals, often focused on institutions, like the Forest Service and the county. Concerns were voiced on the handling of the 1987 Acorn Fire and 2021 Tamarack Fire. The decisions themselves were challenged, but adversarial relations were fueled by lack of coordination with local fire departments and related

unresponsive dynamics. Another common concern was that the Forest Service has not responded quickly enough to fires flagged by local stakeholders and have turned away local volunteer fire departments. This has led to considerable tension and furthered disapproval of wildfire handling.

The Tamarack Fire highlights a chasm in perspectives that some said started with the Acorn Fire of some years ago. The issues involved what some identified as lack of action and the Forest Service not taking full responsibility for actions. Some in the Forest Service felt that the public misunderstood the task at hand with the Tamarack Fire. The agency had to manage 30 fire starts within five days, and was tasked with wildfire management choices with what information was available. Several interviewees shared the broader community's perspective that the Forest Service did not put the fire out when pressure from various entities and stakeholders came. This contributed to highly negative comments. One interviewee explained that the feelings of the community after the Tamarack Fire was that, "we're going after the Forest Service." For people working more closely with the Forest Service, there was more insight into the Forest Service bringing in, "their best and doing the best they could," with targeted efforts by the Forest Service alongside CAL FIRE and local fire departments to evacuate the residents and visitors of Markleeville with exceptional speed and stop fire progression to the town.

This mistrust of agencies was exacerbated by agency structure associated with the fire. Alpine County is unique in that it shares both Forest Service Regions within its borders. Interviewees contrasted the management approaches of Forest Service Region 4, seen as more traditional and at times fixed and siloed in decision-making, with Region 5 which was viewed as more supportive of transparency in actions and partnerships.

At a staffing level, a key barrier identified is the lack of a clear directive or incentive for line officer engagement, hindering relationship-building at the local level. Communication with the Forest Service and the public has improved over the years, however. Some individuals in the Forest Service have been recognized as key connectors between the agency and the local community. Respondents mentioned a key component of this was not only consistency, but even more so was a willingness to have difficult conversations, a local presence, and advocating for local perspectives. These individuals were highlighted as bridges and glimpses of a means to rebuild trust that has been lost, in the face of significant challenges that remain.

It is important to point out that limited public communication is inevitable when it comes to wildfire decision-making. Given the complexity of crisis management and the speed with which decisions have to be made with wildfires, it is expected that informing the public will be delayed. Still, given disagreement about decisions, local impact, and lack of involvement all contributed to adversarial perspectives and even alienation with the agency. In general, interviewees reported that dedicated Forest Service employees have been making improved strides in communication and engagement, but considerable reparations are still needed.

Complex and conflicting local politics was revealed among various individuals and groups. As mentioned previously, the small local numbers contribute to both connectivity and making

tensions more visible. A portion of the county was identified by some as “hard to reach,” either because of their remoteness or because of their more reclusive nature. A portion of these residents have tendencies that were characterized as generally lacking trust in all levels of government. There was mention of budget suspicions, misuse of resources, and use of power for personal gain across the county. Suspicions and a belief in ulterior motives has shut down dialogue and led to coarser counter actions. Some have more narrowly characterized these actions as largely personal issues.

Personal issues with specific individuals in particular have led what some termed "smear campaigns" to characterize the actions taken against individuals who advocated for more contentious positions or ideas. Adjacent to and intertwined with mistrust is desire among stakeholders for an increase in transparency across all levels of engagement, particularly concerning both federal and local governmental initiatives and actions.

A recurring theme across interviews was the perception that the processes of decision-making frequently felt opaque, removed, and fundamentally detached from communal input, localized knowledge, and on-the-ground concerns. This separation has fostered a negative dynamic for community members, often characterized by a sense of being an audience to a predetermined outcome. This has led to several experiencing being "talked at" or "reported to" after decisions have been finalized or directions set, rather than encouraging substantive feedback, meaningful consultation, or co-development of policies, projects, and solutions. This perception of a top-down communication style reinforces feelings of marginalization and powerlessness, making the necessity for robust, proactive, and accessible transparency paramount for restoring trust and ensuring the long-term success and legitimacy of future initiatives.

Tribal mistrust is serious and deeper with a history dating back to the California Gold Rush of 1848. The influx of settlers created massive impacts on both the land, its resources, and the Washoe people’s way of life. Several Washoe interviewees described pre-Euro-American settlement conditions—meaning Tribally managed forests that promoted biodiversity, food security, and a frequent, low-severity fire adapted regime—as one of abundance, sustainability, and a shared cultural knowledge and practice of interconnectivity with the land, the people, and adjacent Tribes. The impact on the Washoe cannot be overstated, stemming from the loss of land and the overuse of resources, which severely affected crucial food staples such as the piñon pine, native grasses and seeds, game animals, and fish. Forced removal, reservation placement on low quality land, and US government policy led to the dismantling of Washoe independence. Forced removal of children to Indian Schools, and suppression of language and cultural practices were designed to systematically dismantle cultural identity and cohesion. Continued destruction of culturally significant sites and resources has also been a major contributor to this mistrust.

These issues persist to the present day though perhaps less overt. Several Washoe interviewees reported a continuation of political and racial undertones in interactions with non-Natives. Differences in communication styles and core values concerning the natural environment exist between mainstream and Tribal societies. Lack of cultural knowledge and sensitivity hinders collaborative efforts. An overall sense of disconnect between the Tribe and

federal, state, and local agencies is a common thread in our discussions with Tribal members. The collective impact is profound. As one interviewee put it, “It can feel like I’m an outsider in my own homeland.”

Several Washoe called out the lack of county and federal engagement–apart from a few key individuals–and reported that not working with the Washoe Tribe is deliberate due to the belief of it slowing down or halting projects. True government to government engagement—required of federal agencies—remains elusive. Several interviewees said there was a lack of meaningful involvement in decision-making processes. This includes work with agencies on forest management. Collaboration has been rocky and tensions between Tribal communities and non-Tribal populations continue.

Despite this sordid history and ongoing challenges, there are notable exceptions that have generated hope among the Washoe. The Forest Service Lake Tahoe Basin Management Unit (LTBMU) was reported as an agency that has fostered improved relationships through ongoing engagement and identifying opportunities for co-management, with the meadow restoration project of Meeks Meadow highlighted as an example. Other non-Washoe interviewees did highlight important connections between key Washoe individuals and non-Washoe partners that have produced a history of positive relationships.

The desire was readily present from several interviewees both Washoe and non-Native for wanting to improve both relationships and eventual movement towards co-management. The work of the FHCWG and involvement of the Washoe contributes to charge hope that deeper engagement is not only possible, but represents a significant step in recognizing the role of the Washoe People—embracing their involvement in land management and as part of the Alpine County community.

2.3 Barriers to Effective Communication

Dialogue in Alpine County can be influenced by a unique set of challenges. Interviewees identified the following key challenges:

I. **Non-Resident Officials:** A number of key county and agency personnel do not live in the county, which can challenge their understanding and appreciation of local concerns and conditions.

II. **Geographic and Demographic Challenges:** Broad outreach can be difficult due to the dispersed nature of residents, no uniform communication mechanism for reaching residents (e.g., local newspaper or newsletter), and an older population with limited use of social media.

III. **Community Fragmentation:** The community is not monolithic, with several subgroups or “cliques” operating independently that challenge county-wide connection and cohesion. This can create, as some described, “echo chambers” of smaller pockets of communities with their own unique identity, shared beliefs, and practices. Like many

rural areas, there is division between newcomers, second-home owners who are part-time, and long-term residents. Also, like many rural areas, there is a portion of the community that simply wishes to be left alone, making broader engagement a challenge.

IV. **Polarizing Dynamics:** Some interviewees called out "black and white thinking," in which opinions are formed quickly that can limit or shut down discussion. This is exacerbated online, where platforms like Next Door or Facebook groups can see posts quickly and descend into online conflict. This too is not unique to the area, but it manifests in specific local ways and can impede local work.

V. **Strategic Outreach:** Across forest health field tours, events, and meetings held by various entities, it was reported that these efforts for strategic outreach were met with varying levels of success. Even with targeted outreach to specific community members or perspectives, engagement can be minimal. Several interviewees made known that while communication and outreach is a challenge, post-fire restoration events centered on planting have been a major local community successes.

VI. **Tribal Communication:** Historical treatment of the Washoe People challenges trust, hinders communication, and contributes to suspicions about other. Some non-Native respondents stated that there are no clear individuals responsible for communicating with the Tribe and that the Tribe feels separate from the rest of the Alpine community. Similarly, community dynamics contributes to the hesitancy of Washoe People to engage with non-Native people. With communication navigational challenges and a history of mistrust, closer working relationships and collaborative efforts is often sporadic.

2.4 Re-Weaving of the Community Fabric

Tensions arising from changing demographics contribute to the county's social obstacles. Several interviewees point to a slow migration of residents from other areas with little to no knowledge of mixed conifer forest ecosystems, creating a knowledge gap and a philosophical divide regarding local environmental realities. New community members have in general brought with them environmental leanings and a preservation “leave it alone” land management approach beyond the Wildland Urban Interface (WUI)— the lands in and immediately surrounding communities. The influx of new residents with these ecological perspectives, directly influence and inform debates over what constitutes a healthy forest and means to achieve and maintain it. Other interviewees indicated that they changed their positions and perspectives regarding how healthy a dense green forest is. When inquired as to what led to this change, many mentioned the Tamarack Fire and the ongoing exploration as to the “why” of the increase and severity of wildfires. Additionally, and critically, there has been a slow shift of perspective that was stimulated by being engaged with local knowledge holders both in meetings as well as on field tours that visited treated and untreated sites, dialoguing about the reasons behind management choices. Varying levels of wistful longing for the nostalgia of dense green and a slow unlearning and relearning process was common.

A number of interviewees identified that there has long been an ongoing need for volunteers. Volunteers fill critical functions and roles across the county, including but not limited to: trail maintenance, fire suppression infrastructure via fire departments, restoration and monitoring activities, and historical preservation. Volunteer work brings people together, builds community, increases shared understanding and is essential for important project completion that likely would not be done otherwise. With an aging population, there has been a growing concern regarding who will continue to fill these roles, particularly the more physically demanding ones. As one interviewee recognized, it is, “a risk for the future in not knowing where the replacement is coming from.”

Another element in building community and collaboratively developing and completing important projects is community engagement with the Washoe Tribe. Engagement with the Washoe Tribe presents a particularly complex challenge. While there is a sense among many that the Tribe chooses limited engagement, this is countered by comments by several Tribal members experiencing being on, “the fringe in our homeland," and encountering a discomfort from others regarding their involvement. It was even reported that there’s been intentional directives from agencies to not reach out to the Washoe due to fear of projects being slowed. It is acknowledged, however, that the Washoe Tribe does face genuine capacity challenges that can limit participation and policy involvement and yet, several Tribal members indicated that there is a growing desire and willingness to engage as capacity allows.

3.0 The Environmental Nexus: Perspectives on Forest Health and Management

Social tensions and communication barriers in Alpine County have been expressed in decisions and philosophical beliefs surrounding environmental stewardship and forest management. Throughout the interviews, there was broad agreement on the *need* for action. Whether it was at small-scale focusing community protection or a large landscape-scale intervention, people agreed that some level of intervention was not only necessary, but critical to reduce the threat of catastrophic wildfire and protect local communities. When beginning to unpack what types and levels of management should occur, differences emerged regarding the specific *approaches* and *philosophies* that should guide action. This section elaborates on stakeholder perspectives and dynamics regarding federal land management, identifies key points of consensus and conflict, and examines management topics and applications that are more discordant.

3.1 The Federal Footprint and Agency Constraints

With the scale of federal land ownership as a defining feature of Alpine County, significant responsibility falls on federal agencies for forest management, along with fire management and post-fire recovery. With this breadth of federal responsibility for managing multiple objectives across a large and complex landscape, it places federal agencies in the spotlight with actions intensively scrutinized. As a result, they have a heightened level of responsibility and visibility, which underscores the importance of community relations and interaction.

Interviews conducted for this work revealed a striking dichotomy: some Forest Service personnel view the agency as a strong, community-engaged partner, while some community members expressed significant mistrust and tension with the Forest Service. This difference extended to perception of forest condition: some Forest Service personnel remarked that in general the forests are mostly in good condition and they have managed the WUI project areas effectively—noting that operational access and constraint challenges for management actions—the focus often is directed towards federal land adjacent to private property in the WUI. Community member statements are starkly different. Dissatisfaction with forest health and management decisions ranges from mild to strong condemnation. Fears associated with wildfire, responsibility for their devastating impacts, and a disconnection from decision-making—in terms of both being able to provide input and understanding the reasons behind decisions—emerged as consistent themes.

In addition to communication challenges, constraints facing the agency compounds a suite of limitations on capacity and adds organizational stresses, including:

I. Staffing capacity issues resulting from recent layoff of Forest Service staff and budget cuts.
II. The steep and limited access to the landscape.
III. Special use areas, like wilderness or Inventoried Roadless Areas, and how they complicate management.

IV. Maintaining the status quo, meaning conducting work without adaptation and excluding alternative approaches.
V. A lack of significant commercial timber sales spanning several years.

3.2 Core Areas of Agreement and Division

Despite conflict and dissatisfaction with federal land management and contention of how federal forest management should be done—a critical point of consensus exists. "Many recognize the need for active forest management and don't want to see another Tamarack Fire." The Tamarack Fire was a turning point, seen as both a tragedy and a catalyst for change. Initially, there was a sharp increase in community participation, with residents—many of whom had not previously focused on forest health and creating defensible spaces—beginning to attend recovery and forest health meetings. However, this momentum has gradually declined. This challenge of maintaining recovery engagement after a disaster is a pattern observed in many other impacted communities.

Despite levels of community engagement fluctuating, there is general agreement that fuels management for wildfire risk reduction in and around communities remains vitally important. As many pointed out, emergency coordination and the planned and maintained evacuation routes were critical in saving the lives of residents and tourists during the Tamarack Fire. Robust support for strong emergency services and catastrophic wildfire suppression was mentioned by many of the interviewees.

Another concept that generated overwhelming support was that the landscape must be protected. Interviewees broadly reported a great sense of awe and connection to the natural beauty of this region. It comes as no surprise that across people, this core belief is shared and desire to be reflected in management activities. There is a general consensus that climate change will worsen fire behavior. This is largely attributed to hotter and drier conditions altering forest and fuel conditions, which is expected to increase tree mortality through drought stress and increasing beetle populations. Interviewees frequently expressed concern about the broader impact of climate change on species composition, successional trajectories following disturbance, snowpack levels, and future fire behavior.

While some sentiment exists within the county of a "leave it up to the Forest Service" approach, a shift towards a co-management of land management between Alpine County residents and federal partners is growing in popularity as a desired pathway forward. When saying co-management, this is not about the agency ceding legal responsibility for federal forest management, but rather to utilize local knowledge and institutional memory to inform land management decisions. What this means is the desire for agencies to work more closely and genuinely with locals much more than they have been.

These consensus points become less cohesive, however, when discussions move towards implementation. There is considerable debate over how to achieve a healthy forest, with philosophical divides including:

- **Defining a Healthy Forest:** As stated previously, a significant gap exists between the perception that "lots of green is good," and returning forest conditions to pre-Euro American settlement conditions.

- **Managing Multiple Objectives:** The Forest Service reports pressure to manage for a wide range of competing objectives, which complicates efforts to move towards more consensus decision-making as well as identifying levels of authority and responsibility.

- **Funding Restoration:** While the public generally desires more forest treatment, there is a persistent struggle to develop effective means of covering costs for restoration activities—especially when comparing treatment options (e.g., hand thinning vs mechanical thinning).

3.3 Thinning, Intentional Fire, and Biomass Utilization: A Continuum of Perspectives

There is general agreement about the need to manage forests in ways that maintain green surroundings and reduce the risk of burning up local communities. The Tamarack Fire underscored the importance of this, even to those disinclined towards any thinning whatsoever. Moving outward from the WUI, consensus about the necessity, type, and scale of management and treatment dwindles.

Unlike some other issues, there were few interviewees who did not have a perspective on forest health, thinning, intentional fire, and biomass utilization. Interesting, however, is that while the term "biomass" and biomass utilization have occupied considerable time and set stakeholders against one another, lack of precision in the use of the terms has contributed to disagreement and controversy. As the interviews made clear, divergent perspectives about what biomass is, along with how to "utilize" it, make consensus development on the topic difficult if not impossible.

This section explores different perspectives that came out of the interviews about how to manage surrounding forests to highlight where agreement exists, where it differs, and how differing interpretations of biomass and biomass utilization contribute to disagreement, but from which productive pathways forward can be developed.

Thinning

There is a complex and nuanced spectrum of public opinion pertaining to forest thinning that involves lowering stand density to reduce forest fuel loads and fire risk. While there is agreement about reducing density and fire risk around communities through thinning, this is not matched about whether and how to treat forest land beyond the WUI. In general, strong agreement exists among stakeholders for aggressive, intensive thinning to reduce forest stand density and establish a forest structure with trees more widely spaced near communities. Less agreement and a wider range of perspectives exist for treatment of the remote forested areas.

Some interviewees connected the two areas, making the case that landscape treatment of the remote forested areas is necessary for community safety.

Other concerns, beyond the intensity and location of treatments, include challenging topography, high costs, and potential ecological impacts. These factors raise questions about the effectiveness of landscape thinning in actually reducing fire behavior and community risk when acting as a sole management activity.

An even greater divergence of perspectives emerged when mechanical tree removal is contrasted with manual or “hand thin” forest treatment. Those opposed to mechanical thinning are driven by concerns about soil compaction, visual disturbances, and the industrialization-like quality associated with mechanical thinning. Another dimension of mechanical thinning that brings some concern involves logging for profit, which typically involves commercial harvest of larger trees, versus selective removal of low-value material for ecological objectives. Some interviewees felt commercial harvesting represented a start down a "slippery slope," risking both long-term forest health with the creation of a feedback loop that prioritizes resource extraction over ecosystem integrity.

Those supportive of commercial logging, however, deemed it essential in order to generate payment for work that can be used to offset the prohibitive costs of landscape-scale restoration that otherwise depends on subsidy. There have been significant advances in environmentally sensitive mechanical thinning operations with minimal disturbance and low ground pressure. This opens up possibilities for broadening community discussions that focus around ecologically minded, larger scale restoration applications.

In sharp contrast, hand thinning is often viewed favorably because it is less invasive and conducted at a smaller and more limited scale. For some, this preference is deeply rooted in a philosophical view of hand thinning as a more engaged, connected, and personal approach to land stewardship. This approach resonated with several Washoe interviewees, though was not exclusive to them.

Hand thinning reduces hazardous fuel loads, but is not without its limitations. Due to high cost, this approach alone cannot serve as a primary or complete management strategy for landscape-scale restoration. Hand thinning cannot be deployed with the necessary speed or breadth required to meet the ambitious targets set for comprehensive ecosystem restoration and fire risk mitigation across the extensive acreage currently needing treatment because it is both labor- and time-intensive.

Concerns were raised regarding overall efficacy of hand thinning. When relying solely on hand thinning, several interviewees questioned its ability to consistently achieve desired forest structure that is more likely to safeguard long-term ecosystem resilience, and deliver the fuels reduction necessary to significantly alter catastrophic fire behavior across landscapes. As a result, hand thinning is best suited for smaller, ecologically or culturally sensitive areas, or in conjunction with more scalable, cost-effective methods, rather than being championed as a sole solution to landscape-level restoration.

Regardless of the specific thinning method used, a number of interviewees favored forest fuels reduction practices that are less intensive and more frequent, like grazing and intentional fire coupled with smaller hand thinning, or less intrusive mechanical thinning projects especially around communities. While this regular-entry, diverse strategy approach is more costly and carries an increased risk of being slow to respond to wildfire risks, some interviewees felt it could also prove to be a useful long-term strategy to build community support.

Despite these varied opinions on the methods of forest thinning, there is considerable agreement that woody material should be removed from project sites, rather than piled and burned, a standard, least-cost practice. This will be discussed further in the biomass utilization portion of this section.

Intentional Fire

Intentional fire, includes prescribed fire, typically set by agency fire personnel to reduce ground fuels or as backfires to control wildfire, and cultural fire, involving Native Americans making fire to reduce ground fuels and manage plant growth. With their impact on ecological conditions and fire risk, cultural burning and prescribed fire often overlap. But, unlike prescribed fire, cultural burning typically involves a personal and Tribal relationship to a land area and sometimes to a single plant. It is important to recognize that there are important differences between the two and that these differences reflect cultural dimensions and forest outcomes. We refer to both as intentional fire and draw out their distinctions below.

Like forest thinning, there are a diverse range of perspectives about intentional fire among interviewees. Generally, there is a broad consensus on the potential ecological and protective role of introducing fire to manage fuel loading, reduce fire risk, and promote forest health. Perspectives though differ with respect to how best to use it and the appropriate scale for its use.

Intentional fire is widely recognized as a highly effective complement to mechanical thinning. Proponents emphasized its necessity for managing fuel loads, particularly in remote areas and steep ground. However, its execution faces several significant operational and risk-management considerations. A key component of operations stems from institutional risk tolerance. Personnel across agencies identified the need for extreme caution when using prescribed fire due unintended consequences resulting from managed fire leaving its planned boundaries. The examples of escaped fire, costs of suppression, and liability have resulted in a more conservative approach and limited the use of intentional fire.

Use of intentional fire also involves public health considerations associated with air quality. These concerns are naturally heightened when prescribed burns are scheduled near populated areas—where wind can blow smoke into communities—influencing community health and acceptance.

In spite of these concerns, many land managers and community advocates alike understand that prescribed fire remains one of the most practical, resource-efficient, and sustainable

strategies for fuel reduction and, ultimately, for safeguarding communities from high-severity wildfire events.

In contrast to prescribed fire, interviewees described cultural fire—a long-established Indigenous practice—with a notable degree of openness and willingness to include it as a viable forest and fuels management technique. Cultural fire can contribute to wildfire risk mitigation and fuel reduction, but its fundamental goal is broader, encompassing:

- **Cultural Continuity:** supporting and re-establishing practices that are integral to Indigenous heritage.
- **Ecosystem Health:** enhancing the vitality and biological diversity of ecosystems.

Interviewees in general expressed support for increased collaboration with and for Washoe-led cultural burning. There are a variety of reasons for this support, but critical among them is recognition that cultural fire is a needed step toward restoring the region's historical, fire-adapted forest. Equally important is the meaningful opportunity for cultural fire applications to incorporate greater Washoe land stewardship authority and Indigenous Traditional Ecological Knowledge (ITEK), a body of placed-based knowledge developed over millennia, into contemporary land management.

There is an additional category of intentional fire that deserves mention: leveraging landscape fire—that is burning, whether started by lightning (natural ignition) or campfire (human caused). This practice is implemented when continued burning of an existing fire is not expected to threaten communities and will reduce fuel loading to lessen the intensity of future wildfire. This practice is based on the idea that huge fuel buildups, resulting from prolonged fire exclusion, will contribute to catastrophic wildfire destruction, and that fuel loading in remote areas is extremely expensive to treat. Its use is generally restricted to remote areas characterized by steep slopes that are unlikely to be treated without wildfire. Managers also have greater flexibility when fire is already burning, as opposed to fire they light.

Some interviewees acknowledged that use of this “natural” fire necessitates adjustments to current policy and greater acceptance of the associated risks. Many interviewees perceive the Tamarack Fire itself as an example of a “let burn” policy that was implemented and resulted in the loss of three homes and fire that threatened Markleeville. Whether this was an intentional “let burn” policy or due to operational limitations, concerns about risk associated with managed fires was increased. As a result, this option is viewed as a long-term aspiration objective, appropriate only under a well-defined, strictly regulated set of conditions coupled with strong political support.

Despite the spectrum of views and diverse objectives associated with intentional fire, a core understanding holds: intentional fire brings risk but also offers rewards in the form of strategic protection of both human communities and reducing the intensity of catastrophic wildfire and habitat. There is a core group that recognizes the positive role of beneficial fire in reducing the threat of catastrophic wildfire and appreciates associated ecological benefits. A central task is

translating this consensus into an effective operational practice—specifically, determining the appropriate scale, optimal locations, and acceptable conditions for its use.

Biomass Utilization

Thinning and forest restoration projects in Alpine County produce small logs and chips for which there are limited to no outlets for this biomass. Termed forest waste by some, biomass is either burned in place, left on the ground, or hauled away. This section identifies how interviewees discuss biomass and the conundrum of what to do with it, now exacerbated by Measure D.

It is useful to first make clear what biomass is. Forest biomass includes all organic material produced in the forest, including merchantable logs. Merchantable logs are typically those that are large enough to be economically sawn into lumber, hence are commonly called sawlogs. While merchantable logs are technically biomass, we don't include them in this discussion of biomass. The sale price of a sawlog into lumber is typically sufficient to offset harvest, hauling, and milling expenses. Low- or no-value smaller timber may be converted to firewood, or chipped and hauled to utilization facilities from which energy may be derived to offset thinning and hauling costs. When harvest and hauling costs exceed the value of the finished product or energy produced, this biomass is usually piled and burned in-place.[2]

Given the overly dense, high fire risk forests in Alpine County, there is recognition of the need to reduce forest density and reduce risk of catastrophic wildfire. When asked about what to do with biomass from forest restoration work, interviewees were generally supportive of utilization. This includes logs, provided they are the result of sustainable forestry practices and quality wildlife habitat remains.

There is broad understanding that forest health projects create a substantial volume of biomass and that sustainable forest management and reduction of wildfire risk compels managing this material. Burning it in place creates undesirable smoke; hauling it away can be costly because it has little to no value; and leaving it in the forest contributes to methane release and increased fire risk, at least in the short term. The question of where and to what end the woody material should be dedicated remains unresolved in Alpine County.

A major barrier associated with biomass utilization is the cost of forest restoration projects. Without a sustainable and predictable revenue stream to fund landscape-scale restoration and the necessary follow-up maintenance treatments, long-term stewardship is financially challenging without extensive subsidy, now more difficult than ever to obtain given the State of California budget deficit and limited federal support for such work. As treatments move beyond the WUI and deeper into the backcountry, costs are even greater. Biomass utilization is often viewed as the single most viable means of offsetting treatment costs and providing revenue to support more complex and expensive treatments.

[2] US Forest Service, (2022). https://www.fs.usda.gov › rm › pubs_journals › 2022 › rmrs_2022_page_dumroese _d001.pdf and ScienceDirect,https://www.sciencedirect.com › topics › chemistry › forest-biomass

There is general support among interviewees for transporting biomass to a facility outside of the county, but the problem is that there isn't a nearby one to which it is economically viable to haul biomass. And there is considerable reticence among stakeholders to local biomass utilization. This reticence is based in part of misunderstanding and miscommunication about the nature of the previously proposed biomass power plant.

Discomfort for managing biomass was exacerbated in Alpine County with misunderstanding and miscommunication that led to the Measure D ballot initiative of 2022. We briefly review it because it is as much about rejection of local biomass utilization as it is about interpersonal dynamics, lack of clear answers to specific biomass facility-related questions, development and circulation of unverified information, and a breakdown of effective communication.

As reflected in the interviews, a number of interviewees remained strongly supportive of Measure D, along with a number that remained strongly opposed to it. This is not surprising. But there were also a number of interviewees who called Measure D unfortunate and still others who remained confused about what Measure D represents and what to do with biomass.

Measure D prohibited Alpine County's involvement in a biomass-to-electric energy facility and prohibited the County from studying biomass to electricity. Some argued there was a plan for a major biomass facility being advanced, and launched the initiative to thwart this effort; others argued that there was no planned facility.

Core opposition to in-county biomass utilization focused on a belief that a large industrial-scale infrastructure would be developed that would dramatically increase truck traffic and road congestion, air pollution, and noise, all of which would compromise Alpine County's rich natural environment and slower, more peaceful pace of life. For some this was coupled with the idea that construction of a biomass facility was designed to capitalize on the Tamarack Fire, and use the disaster as a rationale for bringing in a large facility into the area.

A persistent theme that emerged from interviews about Measure D was that it became personalized and proved difficult for stakeholders to discuss the topic of biomass utilization and what was being proposed, due primarily to the mistrust and lack of collaboration that resulted. The consensus among many interviewees is that controversy could have been mitigated had a more diplomatic, conversational, feedback-soliciting, and information-full approach been adopted. There were sentiments of disappointment of how conversations turned and the ability to have productive discussions dwindled.

Measure D passed 2 to 1 on the east side of the county, underscoring a difference of opinion across the county. The measure passed with 55.87% of voters in support, and imposed a ban on Alpine County government employees, officers, and elected officials from engaging in any activities—including studies or funding—related to a biomass facility.[3] That the measure

[3] The ballot language stated: "Shall the measure prohibiting the construction of a Biomass Facility and prohibiting Alpine County employees, officers, and elected officials from issuing permits or authorizing the use of public funds to analyze, study, or facilitate construction of a Biomass Facility in Eastern Alpine County be adopted?"

bundled prohibition of a biomass facility with prohibition of a feasibility study, only further complicated matters. Some interviewees felt this was counterproductive because it prevents future evaluation and county involvement in the issue and shut down discussions and learning.

Ultimately, Measure D reflects failed communication among a variety of stakeholders and perhaps more importantly for today, a loss of comity and healthy discussion of what to do with biomass in terms of what's possible and what's needed.

This result is that Alpine County faces a challenge of both paying for forest restoration and determining what to do with biomass produced from this work. Measure D's prohibition of discussion by the county sweeps an important part of the generally agreed-upon need for forest restoration and its financing off the table. Forest restoration, biomass utilization within the county or beyond, and paying for this work remains a critical unresolved challenge facing Alpine County.

Acknowledging the conflict and communication challenges, the seeds of productive discussion can be identified in many interviews with stakeholders. This will require open, thoughtful discussions and concerted effort to move past the conflict coupled with a commitment to focus on the challenges that remain today.

4.0 The Economic Dimension: An Economy of Recreation and Sameness, and Dearth of Local Housing

Alpine County's economic identity is tightly tied to its natural landscape that offers a picturesque and rich mountain environment. The current local economy is predominantly recreation-based and caters to tourism, a reality that contributes to strong community opposition to industrialization and visual disruptions of the landscape. This reluctance is a direct expression of a core community value of a natural landscape and a desire to protect the county's quiet, remote and rugged character and feel. One interviewee put it that people are generally opposed to economic development not from a "not in my back yard mentality," but from a belief that development will irrevocably change Alpine County's sense of place or cultural identity, coupled with a desire to maintain nature and "the way it is."

There is general disapproval among interviewees of any kind of activity that would require intrusive development that might affect aesthetic values, be it commercial or expanding residential density. This section assesses key factors that emerged in interviews as they relate to a resilient and sustainable economy. Factors include: shortage of affordable housing and associated challenges, retaining a younger population, understanding the impacts of recreation, diversifying economic opportunities, and identifying obstacles to growth.

Some economic vulnerabilities are clear. Housing is a key challenge for Alpine County: the demand for affordable housing outstrips the supply. The affordability challenge makes it difficult to attract workers, subsequently impacting local businesses, especially those that work in the lower-paying tourism and recreation economy. Housing affordability goes beyond workers in recreation and tourism. Several interviewees reported there are numerous county employees that can't afford to live in Alpine County. One impact of county workers living outside the county is that it reduces county employee understanding of the needs, desires, and realities of residents. It renders these workers less available to respond to emergencies and other immediate local needs. A weakened social fabric may result from this loss of social capital—the networks of relationships and people that work together in a community—as there are few opportunities for after-hours interactions between residents and county employees.

While there is a prevalent—almost universally acknowledged sentiment—that "more housing opportunities would be nice" and would contribute positively to the community's vibrancy, vitality, and economic health, there is little support or momentum for initiatives that address housing development. This is particularly acute in discussions of affordable housing.

Housing for residents at the lower end of the income spectrum has been identified as one of the "severe issues that have been neglected." Conditions within the Sierra Pines trailer park—the primary location for lower income residents—was noted as dire. There is much needed maintenance required for several homes, as well as severe wildfire fuel hazards that threaten the safety and well-being of residents. These conditions contribute to the longevity of service workers remaining in the county. Lower income residents facing high-risk conditions is also about vulnerability, which affects the overall well-being of residents. For these residents,

whether its exposure to environmental hazards, high fire risk, lack of access to essential services, or inadequate housing quality—are compounded by limited resources for mitigation and recovery. Addressing high-risk conditions is not merely an issue of public safety, but fundamental for promoting equity and ensuring the well-being, health, and resilience of the population.

Stakeholders might acknowledge the need for affordable housing, but proactive steps for addressing it were largely absent. The political and social capital required to address zoning changes, supporting specific projects, or allocating municipal resources is counterbalanced by an anti-development bias. The consequences extend well beyond where people live and have reverberating impacts.

Securing a local workforce and volunteer pool remains a challenge for businesses, the county, and organizations that rely on volunteers. One lifelong resident said, “most of the young people end up leaving,” with other interviewees largely attributing this departure due to a lack of both the schools, services, and social amenities to support a younger demographic, in addition to affordable housing. This loss of human capital has long-term implications for the future of the county.

There is a feedback loop at play: lack of housing and infrastructure influences who comes and stays, and businesses must resort to unique ways of securing employees and holding on to those they have, that is, when they can. Nonetheless, there is a younger demographic that does want to stay for reasons similar to those of long-time residents that call Alpine County home. Housing affordability and availability of services challenge their ability to stay. This is fertile ground for deeper exploration and discussion.

While housing was identified as a primary issue, economic development was noted as needing attention as well to build an economy that both attracts and holds on to new residents who will stay, and contribute to the long-term vibrancy and vitality of Alpine County.

Stakeholders identified several economic vulnerabilities:

- The chronic rise and fall of local restaurants/businesses due to difficulty of staffing, revenue, and inconsistency of year-round customers.
- An aging population without services to support them, which is expected to become a more pressing issue in the future.
- A general sense of economic stagnation with little real economic development in other potential sectors like information technology, healthcare, or education.
- Climate change: hotter and drier conditions leading to increased tree mortality and fire behavior. These landscape impacts affect the tourism industry and related businesses.

Some interviewees recommended that Alpine County could look at examples elsewhere focused on rural economy and tourism. Several interviewees called for shifting an approach catering to short-term visitors, to one focused on longer seasonal opportunities (retreats, study

abroad, corporate events) that would attract groups to stay for weeks/months (e.g., researchers, universities) and create high-value service jobs (cooks, drivers, logistics).

5.0 Tribal Perspectives and Dynamics: A Complex History and Current Efforts

The Washoe Tribe represents a complex array of interconnected challenges rooted in historical and ongoing exclusion; one interviewee described it as being "out of place in one's own land." This deep-seated emotional and cultural marginalization is now compounded by the severity of environmental challenges.

5.1 Ancestral Homeland Impacts

Recent catastrophic wildfires, particularly the Tamarack Fire, devastated the Washoe Tribe's ancestral and allotted lands. The loss of piñon pine populations highlights this impact acutely. Piñon pine nut gathering sites, culturally important to the Tribe, were destroyed. Piñon nuts are a Washoe staple and the loss of these trees has been profound. One interviewee stated that, "piñon pine is in a state of emergency." Other ecosystem impacts include ecosystem type conversion that includes invasive species in fire damaged areas, and intrusive tourism and agency limitations that challenge Washoe People's cultural expression and relationship to the land. A discussion of these issues follows.

Type Conversion: The fire's impact on individual allotment lands has been severe, frustrating recovery efforts, particularly given the limited support for post-fire recovery. Many post-fire areas are now threatened by type conversion of forest land. Type conversion is when forests are lost to a shrub dominant or some other vegetation type accompanied by a changed animal species mix. Type conversion has resulted in a loss of Washoe Tribal member access to traditional foods and uses. In the areas that are being actively restored, it was reportedly being planted primarily with sugar or Jeffrey pine instead of piñon pine. The current reshaping of the landscape continues to exclude cultural staples, whether intentionally or not, by prioritizing the replanting of trees for timber and aesthetic purposes over native species and traditionally important plants. Piñon pine for the Washoe is a fundamental important tree, while agencies often view piñon pine and juniper woodlands as a wildfire risk liability. The result is that management actions will prioritize wildfire fire risk reduction and suppression concerns.

Invasive Species: Habitat degradation is exacerbated by invasive species. Proliferation of invasive species like cheatgrass following disturbances degrades native ecosystems, impedes natural establishment and recovery of culturally significant plants, and increases future fire risk. The introduction of non-native fish species like rainbow and brown trout has led to significant impacts on endemic Lahontan cutthroat trout populations that, in turn, has affected freshwater mussels because of the symbiotic relationship between the two.

Intrusive Tourism: Increased visitation to Washoe homelands in Alpine County has been affected by the rise in popularity of the nearby Lake Tahoe area. Increased tourism coupled with federal decisions prioritizing tourists over Native interests and their historic rights and relationship to the land, have frustrated the Washoe, and diminished trust in land management agencies.

Bureaucratic Obstacles and Limitations: The process for securing necessary recovery funding and resources is frustratingly slow and cumbersome, hindering the Tribe's ability to swiftly restore their burned homelands and support affected allotment owners. There is limited capacity within the Tribe to respond to federal agency management. The limited capacity of the Bureau of Indian Affairs (BIA) to assist individual allotment owners with fire recovery also has proven frustrating to the Tribe, leading to operational and funding uncertainty.

Mainstream Orientation Towards Profit: A common perspective regarding the current state of forest health and its connection to the economy is captured by the quote: "100 years ago these forests were managed without a dollar in mind. We need to move beyond the idea of capitalism that it (nature) is for a resource." Some Washoe interviewees felt that agency environmental management is oriented towards tourism and profit—with nature being mined, extracted, and commodified, as opposed to a reciprocal paradigm where the environment is managed as a living entity. These interviewees felt this orientation is antithetical to reestablishing a symbiotic relationship between humans and the natural environment.

5.2 A Push for Land Reengagement and Sovereignty

In the face of these challenges, the Washoe Tribe is re-engaging with the land and asserting tribal sovereignty via several key initiatives.

Post-Fire Recovery and Restoration: There is a strong push underway for hands-on restoration, including large-scale piñon pine planting, along with restoration of critical cultural resources and local food systems. Tribal members mentioned that the Tamarack Fire has been a catalyst for reconnecting to the land through restoration and stewardship. The Washoe Resilience Garden, led by the Washoe Environmental Protection Department, was cited as a primary example. The Resilience Garden propagates native species such as piñon pine at nurseries. This work is important because of the difficulty of piñon pine establishment and recovery, and in offering an alternative to Forest Service planting of mainstream commercial species of ponderosa, Jefferey, and sugar pine propagation. Securing the necessary support for the Tribe has been a significant obstacle, specifically for conducting the environmental analysis required to treat federal land, and for completing the site preparation and invasive species treatment essential to enhance the success of their restoration efforts. The Tribe is also challenged to secure funding and ongoing access to sites for monitoring to assess restoration outcomes.

"Land Back" Initiatives: The Tribe is actively seeking opportunities for "land back," involving transfer of federal land back to Tribal control to augment their Trust Land base. From a Tribal perspective, this is a key step to advancing Tribal environmental and cultural stewardship. Increasing jurisdictional control is a necessary part of this. That said, the popularity of the region and economic interests in the Tahoe region are viewed as precluding Washoe land return in the Tahoe area.

5.3 Internal and External Relationship Dynamics

Navigating these external challenges is coupled with the need for targeted internal community cohesion and complex external relations with federal agencies:

Internal Community Outreach: There is a critical need for focused outreach to the geographically separated Hung-A-Lel-Ti community, a smaller segment of the Tribe that often identifies as marginalized and as one interviewee put it, "starving for outreach engagement." Several Washoe interviewees identified that emphasis on involving youth in cultural and land stewardship activities is one strategy to bridge this community to other Washoe ones, while helping ensure the transmission of ITEK. While outreach and involvement with youth in stewardship was reported, several Washoe interviewees would like to see these efforts expanded.

Federal Agency Relationships: Washoe interviewees reported that relationships with federal land management agencies are highly varied. For example, they acknowledged improving relations with the Forest Service, particularly with the LTBMU staff, but identified difficult relations with staff on the Humbolt-Toiyabe National Forest. They felt the root of problems lay in the underlying fears by agency staff that the Washoe Tribe will slow down projects, or that agency staff fail to recognize and respect tribal sovereignty. Additionally, some Washoe Tribal members felt that management objectives of the agency are contrary to those held by the Tribe.

Alpine County and Washoe Community Relationships: Washoe interviewees mentioned that relations with Alpine County have been uneven and at times challenging. Non-tribal interviewees repeatedly mentioned that the Washoe People are “over there” and separate from the rest of the county. The lack of awareness regarding each other's activities signifies an obstacle to collaboration between the two. One event highlights this lack of awareness and exacerbated already strained relationships. A non-tribal contractor leading a fuel reduction project on Washoe Tribal land thought they had the go ahead to proceed, but project objections from local Washoe members didn’t reach the contractor resulting in a formal “cease and desist" letter from the Tribe. This resulted in a hesitancy for those involved in the project to engage in future work.

Nevertheless, a strong desire was expressed by Washoe interviewees to collaborate with Alpine County, the Alpine Watershed Group, the Forest Service, and the FHCWG. This collaboration is particularly sought for meadow restoration and other management activities vital for protecting their homeland, regardless of formal tribal land ownership. One Tribal member stated, "Alpine is a small enough place to take advantage of making mistakes and experiment.” Advocacy and support for the Resilience Garden and ongoing monitoring of planted piñon pines were identified as a real opportunity for the FHCWG and the Washoe Tribe.

Lastly, some non-tribal interviewees mentioned the complexity and nuances of tribal engagement, noting the array of involvement across individuals, departments, and communities. It was said that there was ongoing and productive engagement with certain Washoe members or departments and little to no engagement with others. Cultural competency involving knowing

how to navigate tribal politics was raised as a major challenge and barrier towards gaining consensus, moving projects forwards, and securing sustained Tribal buy-in. Three separate Washoe Bands elevates this challenge. It was also mentioned that inconsistent communications and engagement with groups that are outside of the Tribe can also hinder collaboration and slow project progress.

6.0 Conclusion and Pathways Forward: A Synthesis of Key Findings and Strategic Recommendations

This assessment reveals a community with a deep connection and love with its landscape, but challenges of differing viewpoints about how to restore and maintain this landscape remain. The residents of Alpine County are united in their connection to the quiet, still beauty of their surroundings and a desire for smaller and meaningful personal connections, but like many other smaller rural areas, they are challenged with navigating how to best secure its future. This conclusion synthesizes the core findings from the stakeholder interviews and distills them into a set of recommendations designed to chart a path forward. The second portion of this section will outline in detail the recommendations developed from key findings from our interviews.

6.1 Key Findings: Social, Environmental, Economic and Tribal

The stakeholder interviews conducted for this assessment painted a picture of Alpine County's social, environmental, and economic realities. This section distills the major findings that define the county's current landscape of challenges and opportunities.

Social Fabric: Connections and Challenges

The social landscape of Alpine County is characterized by a quiet duality. While the community shares a connection to the natural world and enjoys the tight-knit relationships common in a sparsely populated area, this unity is often challenged by issues that hinder collective action.

Primary issues include:

Trust: A recurring theme was a complex, layered sentiment of apprehension towards federal agencies, local government, and even among some community members themselves. Within the community, personal disagreements have sometimes obstructed dialogue and collaborative efforts.

Complex Tribal Realities: The Washoe Tribe's history includes calamitous impacts resulting in land loss and cultural suppression. This history shapes present-day realities, with Tribal members reporting ongoing experiences of political and racial undertones. The lack of genuine engagement with agencies and experiences of separation between the Hung-A-Lel-Ti community and the rest of Alpine County remain barriers to genuine partnership.

Communication: Effective communication is difficult due to obstacles such as dispersed and aging population with limited social media use, distinct community groups, and the absence of centralized local news sources. This makes broad outreach challenging and can allow incomplete and unchecked inflammatory information to circulate.

The Environmental Dimension: Shared Goals and a Spectrum of Paths

There is broad agreement on the need for active forest management, but differences persist regarding best methods. The 2021 Tamarack Fire was a catalyst for community consensus on the necessity of intervention. However, this shared goal quickly becomes complicated when specific actions are discussed. The primary areas of disparity are:

Defining a "Healthy Forest": A difference exists between a common public view that "lots of green is good" and the ecological goal of restoring forests to the more open conditions that existed historically. This difference directly influences discussions over the intensity and scale of proposed restoration that includes thinning treatments.

Treatment Options: When it comes to specific management tools, differences exist. Mechanical thinning is seen by some as necessary for restoration at scale and by others as a step toward unwanted commercial logging. Intentional fire, while acknowledged as beneficial by many, inevitably involves the problematic issues of safety, liability, and air quality. The topic of biomass utilization is complicated, with the passing of Measure D, definitional challenges, miscommunication, and personality conflicts limiting productive discussion to date.

Concerns with Federal Management: With 96% of the county's land federally managed, community concerns often focus on federal agencies, particularly the Forest Service. Apprehension stems from a perception that the agency is not always able to appreciate much less meet community needs. This is influenced by institutional constraints, stiffer institutional and operational approaches, staffing limitations, and a lack of perceived proactive collaboration.

The Economic Paradox: Sameness in a Cherished Landscape

Alpine County’s economy relies heavily on recreation and tourism, which both sustains the community and limits other forms of development. This dependency, combined with a desire to protect the county’s quiet and remote character, leads to a hesitation toward development that involves almost any sort of commercial and industrial projects. This creates an economic dilemma where the county’s appealing values also contribute to an economic monotone and vulnerability, and concerns about biomass utilization, for example, bog down in conflicts associated with scale and intentions.

Housing: A shortage of affordable housing prevents a portion of the local workforce—including some county and agency employees from living in the county—creating a disconnect between government officials and residents.

Development Disconnect: A general desire for "more housing opportunities" often does not translate into active support for development, especially the affordable housing needed by the workforce. With the level of forest management required, identifying the workforce to implement these projects remains a challenge.

Economic Sameness: The economy is characterized by high business turnover, an aging population without adequate support services, and limited diversification beyond seasonal tourism.

Volunteerism: The county relies heavily on an aging volunteer population for critical services, from fire departments to restoration efforts. The housing crisis limits the influx of new residents needed to sustain these services, creating a cycle where economic factors prevent housing, which in turn jeopardizes the long-term viability of vital community functions.

Tribal Sovereignty: Re-Centering Tribal Perspectives

The Washoe Tribe is a sovereign nation with ancestral ties to the land. Their rights and knowledge are integral to the region's future. The failure to fully appreciate this status is a barrier to progress. The most pressing issues confronting the Tribe include:

Environmental Loss: Recent fires have significantly impacted essential cultural resources, including traditional piñon pine gathering sites. This loss is compounded by post-fire recovery efforts that do not adequately prioritize the replanting of culturally vital piñon pine or a misalignment of funding timelines.

Assertion of Sovereignty: The Tribe requests a shift from simple consultation to genuine government-to-government engagement and co-management. Existing positive relationships with the LTBMU is cited as a partnership movement in the right direction.

A Push for Land Re-engagement: The Tribe is actively pursuing "land back" initiatives to regain control and is advocating for the integration of Washoe ITEK into stewardship practices. This includes the application of cultural fire and support for restoration projects like the Washoe Resilience Garden.

6.2 Recommendations for a Resilient Future

Despite the challenges detailed throughout this assessment, concrete and pragmatic pathways for moving forward emerged from the interviews and are presented here. In this section we offer recommendations to advance social cohesion, improve environmental stewardship, and expand collaborative work across Alpine County.

We begin by discussing elements of the county that productively ground conversations and amplify opportunities. The second section reviews opportunities for cultivating trust and enhanced engagement at FHCWG can take towards expanding collaborative opportunities. The FHCWG has been operating for several years, actively building trust and developing productive consultative pathways. These recommendations are meant to build upon the already important work and the foundation the group has built. This report has been commissioned by the FHCWG and indeed it is a leading voice and organization to advance collaborative work, but these recommendations are by no means exclusive to the FHCWG.

6.2a Anchoring Around What Works

1.1 Love of the land: *Build on the passion and commitment to the health of the forest ecosystem and community as a foundation that focuses discussion and efforts, as well as a tether to draw discussions back in when they stray and disagreements begin to dominate conversations.* Interviewees resoundingly shared a desire to prevent the deterioration or destruction of the landscape through catastrophic wildfire or poor land management. As one interviewee reflects on how the land unites people, “Once the land takes hold of you, you’re not going anywhere else… People bond across political boundaries with land.” This thread of connection is one not to be overlooked due to the cohesion it generates.

1.2 Post-fire restoration: *Advance post-fire recovery work to broaden discussions of work on how current and future projects can influence future forest conditions and improve Alpine County.* Post-fire recovery via tree planting is noted by several interviewees as a huge success. One interviewee reflected that, “It was a healing process that makes you feel like you are doing something.” A fascinating aspect of the success of tree planting events is that the fruits of this labor will not be enjoyed for many years to come; the work represents a gift and a commitment to the future. This sentiment of the work that is done now that will benefit the future is one of great power in framing current activities that lead to long-term outcomes and future generations.

1.3 Tribal-led native species nurseries and propagation: *Recognize and work with the Tribe to improve habitat for key species; this includes reestablishing native populations of plants and animals*. Piñon pine and Lahontan cutthroat trout are good examples of important indicator species reflecting the health of the ecosystem, as well as importance to the Washoe Tribe and Tribal culture. With county residents favoring ecosystem health and a growing desire for having the Washoe as leaders or co-leaders of land management, this is a fertile time to advance these opportunities.

1.4 Climate change impacts and proactive management: *Identify likely future landscape scenarios and conditions, and incorporate strategies to build forest resilience and adaptive capacity in response to long-term climate scenarios.* A primary concern voiced in numerous interviews is the adverse impact of a drier, warmer climate on Alpine County. As a unique ecotone within the eastern Sierra Nevada, the area's biodiversity is vulnerable to a warming climate. Align forest recovery and restoration efforts with projected scenarios.

1.5 Investment in recreation infrastructure: *Advance partnerships that build on the expansion and maintenance of trails, trailheads, and campgrounds to restore, maintain, and expand infrastructure.* Recreation and tourism are the backbone of the Alpine County economy. This represents an opportunity for the county, Forest Service, BLM, and dedicated local partners to come together through MOUs and other agreements to jointly build a long-term vision and plan, share responsibility for work, and explore and leverage additional resources.

1.6 Invest in local grassroots organizations and movements: *Explore ways to invest and build the capacity of community-trusted organizations as a key to successfully navigating diverse perspectives and implementing needed projects.* Trusted non-governmental

organizations (NGOs) can often more effectively bridge interests, individuals, groups, governmental entities, and organizations to advance work. Trusted NGOs should be prioritized for funding and capacity building support for Grassroots collaborations. The FHCWG has demonstrated the ability to unite diverse individuals and develop productive partnerships and warrants precisely this kind of support. Other efforts, such as Firewise Communities, provide additional avenues for maintaining the pulse of each unique community. The majority of Alpine County communities are certified as Firewise Communities. Mesa Vista Firewise alone, grew from 18 to 100 homes in two-years according to one interviewee. Because no one group can do it all, utilize these groups to advance community understanding of what a healthy landscape is, optimal ways to manage and utilize biomass, and how to effectively advance natural resource work.

1.7 Working with landowners: *Continue to prioritize collaboration with forest landowners regardless of land condition to connect restorative work and reduce future risk of damaging wildfire. Consider advancing work with landowners that will leverage work on adjacent projects, advance workforce training, and support academic research.* Achieving landscape wildfire risk reduction involves working across public and private land ownerships. In addition to work with the Forest Service, private and other state and federal ownerships offer the opportunity for collaboration and leveraging resources and achieving greater landscape impact. Landowner engagement is also important to ensure participation for continuous green waste disposal. Formalize engagements and commitments where appropriate. Explore large landowner needs and interests, beyond the Forest Service, especially those amenable to restorative work.

6.2b Building Trust and Enhancing Engagement

Trust is fundamental to shared efforts and collaboration. It is essential for effective and thoughtful engagement that genuinely explores possibilities and advances meaningful action.

Community and Collaboration

2.1 Foundational Principles for Productive Collaboration: *Create a safe environment where people can speak openly, disagree respectfully, and engage without fear of dismissal or reprisal.* Collaboration requires a shared commitment to dialogue, patience, and setting aside past disagreements, as polarization often shuts down conversation. Addressing this requires building trust, dedication to good-faith conversation, and respecting differing perspectives. A foundational principle of collaboration is "meeting people where they are," without trying to "educate" them into a new position. This is discussed further below in the 2.6 recommendation. The FHCWG has endeavored to advance this work and nowhere was it more evident in the recent discussion that involved review of this report.

2.2 Identifying Shared Values and Common Ground: *Identify common ground and core values to develop strong foundations for collaboration.* With a baseline of mutual respect, trust, and a shared vision in place, groups can more effectively engage with those with differing perspectives and feel safe in doing so. The FHCWG should consider developing a Charter that outlines this shared vision and is foundational for its work.

2.3 Communication Strategies for Effective Engagement: *Development of communication strategies that take a multi-media approach—utilizing diverse means and methods of communication (high-quality flyers posted in key community locations and digital posting on local news sites and the like). Share meeting information broadly and with ample lead time to events and activities.* Interviewees pointed to the difficulties of communication and noted its absence led to reduced meeting participation. Despite its limited numbers, sharing information with the many small groups across the county effectively is an ongoing challenge. Explore outreach methods that are creative, particularly to engage younger and newer residents. This is key to bridging groups and perspectives and for promoting diversity of parties and inclusion. Use of digital platforms for discussion need to be moderated so comments and discussions can avoid inflammatory remarks that undermine collaborative work. This is not to say forums cannot be used to share diverse perspectives, but how they're shared matters.

2.4 One-to-One Outreach: *To improve local engagement, especially on sensitive issues, use a targeted, personal approach.* This involves trusted community members as the ones doing the outreach and possibly working as intermediaries. Personal invitations from these individuals or community leaders will bear fruit more than impersonal flyers, signs, and digital outreach to attract the diversity of people and geographic areas in Alpine County into conversation and collaboration. Direct involvement with disengaged individuals is a first step to identifying their concerns that can then be identified and addressed in group discussions and work.

2.5 Prioritizing In-Person Dialogue with Facilitation Discussion: *Recognize that sustained relationship-building and successful consensus building relies on structured, in-person dialogue.* Despite the efficiency of digital communication, face-to-face engagement, when thoughtfully organized and facilitated, provides important opportunities to build empathy, ease tensions, and establish common ground. Digital communication is a vital form of communication, especially given the challenges of the remote nature of Alpine County, but should be paired with face-to-face group meetings and interactions and closely managed.

2.6 Shift from Educating to Understanding: *Recognize that good collaborative work involves non-judgmental listening and inquiry-based discussion to advance understanding. This includes identifying concerns and root causes of them, and avoiding persuasion-based discussion.*
A number of interviewees concurred that some people (typically those with whom they disagree) just need to be educated and they'll come around. Implicit in this belief is that the "*facts*" or what one person believes is the "*right*" information will correct the misunderstanding and "*misguided*" perspectives of another. This view ignores that individual beliefs are often shaped by lived experiences and deeply rooted values. To address the one-way dialogue associated with educating, genuine inquiry-based engagement is needed to demonstrate a commitment to understanding the values, anxieties, beliefs, history and needs that shape perspectives. This perspective represents a paradigm shift from responding to surface-level statements towards genuinely understanding the drivers behind words and positions.

I. *Advance Deep Listening and Reflective Communication*
   Respectful, empathetic listening is central to genuine collaborative engagement efforts. Facilitators and project representatives should restate and summarize what they have

heard to confirm accuracy and comprehension. This simple, yet potent, practice both validates lived experiences and improves mutual understanding, reducing the likelihood of people talking past one another. The tool of reflective listening is one of the most effective means for de-escalating conflict and an important step towards finding common ground.

II. *Collaborative Alternatives and Shared Ownership*
When issues and concerns have been clearly explicated and understood, potential alternatives or management pathways can be identified. Options need to be framed as negotiable, with possibilities developed in direct response to community input and concerns. Community contributions must shape outcomes, rather than merely responding to pre-determined decisions. This facilitates information exchange and stimulates genuine involvement, supporting collaborative processes.

2.7 Promoting Radical Transparency: *Consider implementing a highly transparent, public-facing dashboard to communicate both monitoring data and budgetary information at local government, federal, and/or collaborative levels.* Mistrust of government intent, actions, and finances is a recurring theme in the interviews. One means to address this history of distrust is transparency. A dashboard can act in assisting the reduction of the sentiment of land management decisions occurring in a "black box." Explore the creation of a user-friendly, public-facing dashboard of management actions that show in real time. Utilizing a budget tracker in a dashboard shifts mistrust associated with controversial activities like timber targets towards how generated revenue is spent towards projects (e.g., campground improvements, hiking trails, wildlife monitoring, meadow enhancement, reforestation, or other activities important to the community).

Agency Actions

3.1 Community Relationships and Communication: *To ensure successful agency-local involvement, prioritize and cultivate deeper community relationships by integrating community needs and concerns into the initial planning phases of projects.* Agencies, particularly the Forest Service, have dedicated efforts to involve communities for years with varying levels of success. Interviewees noted that many of these agency individuals have shown interest in community concerns. Some have lived locally, which has been helpful because they were around for the conversations involving community frustrations and anger associated with the Tamarack Fire. These staff were identified as essential in bridging agency-local understanding and being able, as one interviewee put it, "… to go in the woods and kick rocks at trees." The promotion of these individuals and support for their involvement is more likely to encourage the sharing of nuanced community concerns with the responsible authorities leading to greater support for land management decisions.

3.2 Forest Service Host In-Person Exchanges: *More opportunities need to be created in which Forest Service staff host in-person exchanges that involve not only sharing project updates but actively seek community input.* Engaging the community from the inception of forest planning facilitates incorporation of local knowledge, which, in turn, will foster stakeholder

support and partnership. This co-creation process can lead to increased opportunities to diversify funding and collaboration, and better decisions.

While some argue that natural resource decisions should be left to the “expert,” doing this results in local values and perspectives that are too often lost and, worse, alienation of residents. Forest management should be steeped in science, but science and project selection are informed by values. This type of involvement should be expanded to other county meetings, local events, and focused town halls.

3.3 Agency Transparency and Co-Development: *Increase transparency in decision-making and follow-up actions to improve stakeholder engagement, incorporation of local knowledge, and local relations.* The give and take of information sharing, weighing concerns, and iterative refinement are vital elements of a robust collaborative planning process. This work lies at the heart of adaptive management that is engaging, leads to more complete learning, and ultimately improves projects and project support. It is important to point out, this is not an agency ceding responsibility, but a decision-making process that is more inclusive. The value of this collaborative model is demonstrated by its long-term stability:

I. **Operational Efficiency:** Some argue these processes are more complex and lengthier than traditional processes, but not when litigation is factored in. This work can save time and is the foundation of stable, long-term projects that are more collaborative.
II. **Addressing Constraints:** While the agency may lack staff, time, and funding over the next few years, there are numerous examples of when consistent Forest Service involvement with the FHCWG and with others has resulted in notable progress.
III. **Preventing Conflict:** This recommendation is not for the Forest Service alone. Advancing such a process at the county with respect to biomass management could have helped stave off divisive actions and miscommunication that led to Measure D.

3.4 Mindfulness of Agency Constraints and Collaborative Solutions: *Community partners need to take advantage of public engagement opportunities to help make them more productive and grounded.* This and other recommendations come with an essential caveat: that non-agency personnel are mindful of current agency limitations. It is important to reiterate that federal agencies are operating under real constraints and limitations, particularly in the wake of federal funding reductions, reduced staffing, and shifts in national priorities. Partners must be sensitive to unrealistic expectations and demands placed on agencies. A productive next step might focus on identification of partnership opportunities that can assist the agencies in meeting their mandated goals and diverse community stakeholder objectives.

Tribal Relations

4.1 Meaningful Engagement: *Recognize that effective tribal engagement goes beyond baseline consultation to exploring projects that are important to the Tribe. The Washoe Tribe’s status as a sovereign nation must be fully recognized and honored in all government-to-government interactions*. A central tenet of the Tribe’s current advocacy is the unequivocal rejection of being treated merely as a "stakeholder." This is a call to move beyond a "check the

box mentality" to genuine, collaborative, and management approaches that respect their unique governance standing. Importantly as well, due to a history of broken promises, establishing trust requires both consistent interaction, follow through, committed partnership. Educational opportunities on Washoe history and culture, land management, and current efforts are also important to address misconceptions and promote respect.

4.2 Integrating Washoe Indigenous Traditional Ecological Knowledge (ITEK)—*a body of place-based knowledge and practices developed over millennia*— for Enhanced Stewardship: *Better integrate the Washoe Tribe's ITEK to ensure sustained success of social and environmental initiatives.* There is opportunity to integrate ongoing Washoe ITEK—particularly given local preference for cultural fire over prescribed fire for fuel reduction and the niche nursery and recovery of piñon pine—to actively steward their ancestral lands. As one interviewee stated, "The more the Washoe gets involved the better." Deeper Washoe engagement offers a valuable opportunity for non-Native stakeholders, but also for the Washoe Tribe with intergenerational knowledge transfer connecting Hung-A-Lel-Ti youth with elders. Due to its remoteness, the Washoe community, as one interviewee observed, is "starving for outreach and engagement." Increasing ITEK applications and targeting efforts through the community council to promote events can provide opportunities to cultivate the next generation of Washoe stewards.

4.3 Identify Land Back or Co-Management Opportunities: *Identify areas, federal or private, where change in ownership or co-management with the Washoe Tribe can occur. Promote the idea of multiple objectives for native species enhancement projects*. There are large swaths of federal land that hold opportunity for direct Washoe management. Mindfully working with the Tribe to identify such opportunities would not only benefit the Tribe but can also enhance ecosystem health. Agencies should explore tradeoffs of wildfire risk for multiple objectives that can provide benefits for projects advancing cultural and ecological health objectives. Opportunities exist with the Forest Service and BLM for designating areas of post-fire recovery towards piñon pine planting and establishment.

4.4 Investment in Tribal Capacity Building: *Assist where appropriate in the building of administrative capacity of the Washoe Tribe.* Both tribal and non-tribal interviewees highlighted the challenges of the Washoe Tribe struggling with internal capacity for consultation, administration, and consistent funding for key positions. A critical step in building the Washoe Tribe's capacity is to develop a strategy that supports necessary administrative functions that support essential backbone operations. Providing support such as transportation, meeting spaces, technology access and the like are relatively simple examples of support Alpine County and agencies can provide.

4.5 Contract Washoe Workforce: *Support Washoe workforce crews through contracting and partnerships across a variety of environmental jobs to build capacity.* Cultural monitors, fire practitioners, and forestry thinning crews are a few examples of work crews that have been successfully launched, and that will benefit from additional support. These jobs offer opportunity for career development, livable wages, and tangible opportunities for Tribal members to steward their homeland.

6.2c FHCWG Collaborative Group Planning

Short-Term Planning

To both clarify and formalize processes, the FHCWG should consider spotlighting its meetings and its work, and deepening its role with respect to implementing recommendations in this report.

5.1 Refined Agenda: *For the FHCWG, consider establishing formal leadership positions, like a chair, vice chair, and secretary.* The *FHCWG might develop an agenda subcommittee or executive committee to more formally develop and refine meeting goals and agendas.* This is not to denigrate existing efforts; it is to build on excellent work to date and advance shared leadership and responsibility, along with increased involvement in the work of the group. A formal leadership structure can help share the burden of Group operations including agenda development, meeting facilitation, and much more. Creating an executive committee that represents diverse interests will assist in not only agenda refinement, but more individuals tracking the pulse of the community and their concerns. This structure will help ensure a range of issues are being addressed, and in so doing strengthen the group and deepen its work.

Shared responsibility also means more vested interest in productive discussions and reduces the likelihood of meetings departing from their objectives. Reaching agreement on what is to be covered in meetings promotes productivity and efficiency during meetings. Agreement anchors a group's direction towards shared priorities. A well thought out and refined agenda is the foundation of deep and successful collaborative efforts.

5.2 Targeted Topic Inclusion: *The FHCWG might on occasion consider broadening its focus by holding a meeting or reserving a portion of a meeting on topics of interest that expand its normal focus.* These topics may at first blush seem to fall outside of the group's focus but may in fact prove vital to successful long-term work. For example, topics such as economic development, housing or workforce development have implications for the FHCWG's project work. Inclusion of such issues may catalyze conversation among groups and agencies that can contribute to successful completion of FHCWG projects.

Long-Term Planning

6.1 Formalize Structure: *The FHCWG should document its governance processes and procedures, and consider formally adopting consensus positions when and where appropriate.* Formalizing its structure and operations through a Charter or MOU will help the group be more transparent, establish a collective vision, expand opportunities for future funding, and potentially improve organizational efficiency.

6.2 Define Measurable Outcomes: *The FHCWG should identify measurable outcomes of its work.* This includes the metrics used to document landscape work. This will create not only buy-in, but targeted focus and legitimacy.

6.3 Explore Federal Opportunities: *Hold meetings with the Forest Service on how the FHCWG can be supportive of the agency's targets, projects and identify specific areas where the group can directly contribute.* The sheer size and percentage of Alpine County's land base that is federally managed places a huge responsibility on the Forest Service. It would be beneficial for the group to launch a conversation to explore how the FHCWG can support Forest Service work. With declining funding and reduced personnel, this is more important than ever. Assistance may involve identifying alternative funding sources, outreach to and brokering outside partners, and much more.

6.4 Tribal Partnerships: *The FHCWG should continue to deepen their communication and engagement with the Hung-A-Lel-Ti community and by presenting at council meetings.* Topics include sharing projects, listening to the tribe's goals and needs, and jointly exploring project opportunities. A potent example is engaging as appropriate with tribally led projects, such as the Resilience Garden.

6.5 Center Activity at Going to Landscape-Scale: *The FHCWG might explore being directly involved in or assist with landscape-scale planning.* The National Environmental Policy Act (NEPA) is a requirement for any federal land management actions. Historically, NEPA has been completed on a project by project level. To meet the ambitious restoration needs and targets in response to large-scale, high severity wildfires, NEPA use is shifting to cover larger landscapes. The FHCWG can play a major role in integrating community needs and interests with landscape projects. An example is the North Fork Forest Recovery Project, a 166,000 acre footprint, that the Sierra Institute working with community stakeholders has successfully completed NEPA in partnership with the Plumas National Forest and is now launching implementation.

Management Options

7.1 Science-Driven Approach: *The FHCWG should frame efforts, measurements, targets, and outcomes based upon prevailing scientific and evidence-based research.* While community engagement and input is crucial, there is also the essential aspect of translating scientific evidence into actionable strategies. It is essential in land management to use the best available science to establish and guide management decisions, while simultaneously interacting with and informing communities in a transparent and open manner.

7.2 Thinning Considerations: *To build public trust around highly trafficked and used areas, the group might advance discussion on appropriate forest structure.* As one interviewee put it, "mindful entries over time... rather than a heavy-handed approach." In areas of residency or recreation-based locales, adoption of slower shifting of forest stand conditions as resident's comfort and exposure can allow for expanded avenues of dialogue and work in the WUI. As discussions move farther away from the WUI, exploration of treatment scale and method should be explored to adequately account for increasing the pace and scale of treatments needed to attain landscape-scale benefits.

7.3 Establishing a Community Forest: *Consider the creation of a community-based forest that integrates community involvement and participatory public management, viewing, monitoring,*

and a physical location anchoring ongoing discussions. Community forests, while less common in the United States, are growing in popularity due to their integration of ecological, social, and economic factors. Approaches and outcomes may differ, but the long-term goal of improving forest resources alongside local economic and social benefit with more direct local involvement remains. Being able to have community involvement in the active management of their forest can expand the discussion on forest values to consider a broader array of goals and outcomes. These forests can create locations to compare and contrast treatment types and allow for more concrete visualization of abstract forestry concepts, as well as locations to view treatments over time. Community forests can be a site for demonstration projects that build understanding and trust with a proof of concept project that can be expanded. There are mechanisms that support this work. A starting place involves exploring existing models to get a sense of possibilities. The Forest Service has been advancing use of stewardship contracts, which grants the Forest Service and the BLM the ability to engage in 10-year agreements for restoration work.

7.4 Intentional Fire: *The FHCWG should explore ways to advance community conversations about prescribed and cultural fire.* In doing so the group will help bridge management operations with education and bring the greater Alpine community along in the process. In close consultation with the Tribe, the FHCWG can work with the Washoe People to provide community members opportunities to participate in cultural burns when and where appropriate. Coordination with ITEK practitioners beforehand is essential. The FHCWG might consider adopting a position on the use of intentional fire for use in the backcountry as conditions for its use improve or allow. Strategic use of fire, regardless of who initiates it, is necessary for backcountry and steep slope fire risk reduction warranting considerable examination.

7.5 Landscape Restoration Resources: *The FHCWG might consider exploring opportunities for value-added forest products development.* These conversations can be contentious, but the work is important to help pay for landscape restoration projects and landscape-scale fire risk reduction. Without a sustainable and predictable revenue stream to fund landscape-scale restoration and the necessary follow-up maintenance treatments, long-term stewardship remains financially challenging without a mechanism to offset the expenditures. As treatments move beyond the WUI and deeper into the backcountry, costs increase. Relying solely on grant funding is not seen as a stable, long-term solution, as budgets have shrunk. Developing value-added businesses are essential means for securing revenue needed to support more complex and expensive landscape treatments, such as steep slope hand thinning.

6.3 Concluding Statement: A Call to Continued Collaborative Action

Alpine County stands at a unique period in its history. The challenges identified in this report are significant. Yet, they are matched by an equally powerful and shared commitment to the landscape and a close, tight-knit fabric that defines this community. The future resilience of Alpine County depends not on finding perfect consensus. Rather, the heart of action should be dedicated towards building on the collective willingness to choose the difficult work of re-building trust where it has frayed, fostering genuine dialogue where there has been discord, and forging a shared future for the land that all parties have a dedicated interest in and are willing to advance.

This report builds on the foundational collaborative work the FHCWG has already been curating and serves as a continuing call towards increasing collaborative action, addressing key stakeholders invested in the future and well-being of Alpine County. It is essential that Alpine County community members, the Washoe Tribe, county-level officials and government bodies, and various federal agencies, remain committed towards a collaborative future. A unified devotion and steadfastness is necessary to safeguard the region's prosperity and address the county's pressing ecological, social, and economic issues before circumstances become more difficult and costly to address. Alpine County's collective vision and a flourishing future depends on it.

Appendix A: Interview Guide

Semi-structured interviews will be used for this assessment. That means that questions will not be asked serially and not all questions will be asked in each interview. This guide provides a flexible framework—interviewers may skip or rephrase questions depending on the flow of the conversation. Interview questions help guide and structure an interview and help us make sure we cover the major issues.

Introduction

- Introduce yourself/other persons present and position(s).
- Give a brief recap of Sierra Institute and its relationship to the Forest Health Community Working Group.
- Provide information on the Alpine County Stakeholder Assessment: purpose, methods, and desired outcomes.
- Consent [directed to informant]:
    - "Your responses will remain **anonymous** but will inform a written report provided to Alpine County and the United States Forest Service, made **publicly available** online (your name will not be attached to any information you provide unless you give explicit permission.) Are you okay with participating based on what was just explained?
    - Is it okay if we take notes or record the interview to make sure we capture your ideas effectively and accurately?
    - There are times we may want to quote someone but we will never do so without first obtaining permission.
- Explain to the respondent that they are under no obligation to answer any question that they aren't comfortable answering.
    - Do you have any questions before we get started?

VII. General

- Where do you live? How long have you lived in Alpine County?
- If not Alpine County, what is your relationship to Alpine County?
- What kind of work do you do? How long have you been at this job?
    - Please describe.

VIII. Environmental/Forest Values

- What are some of the major environmental and forest challenges that Alpine County faces?
- How has Alpine County in general responded to these challenges?
    - What if any are the key environment or landscape initiatives in the last ten years?
    - What has the response of communities been to these initiatives?
    - What do you see as successful about these initiatives and what have been their shortcomings?
- What initiatives would you like to see take place to respond to these environmental and forest challenges?

- How would you describe forest health in Alpine County?
- What is the trend over the last 5-10 years?
- Catastrophic wildfire has been destructive across the State. With respect to Alpine County, does it concern you?
- Some community members have expressed a preference for a hands-off approach to forest management. What are your thoughts on this perspective?
- Other people have said more active forest management is needed, particularly thinning the forests. Please comment on this perspective.
- Some have identified biomass utilization as a way to help manage forests. Please comment on this perspective.
    - What does biomass utilization mean to you?
    - In your view, how might biomass utilization contribute to forest health, if at all? [Need to be clear on what they are commenting on when discussing types of utilization.]
- What options do you think are most appropriate for handling biomass after thinning-such as transportation, in-place burning, or other uses?
- Some have proposed locating a biomass utilization facility in Alpine County. In response to concerns about biomass facility being located in Alpine County, measure D was passed. Please comment on this initiative.
    - What concerns do you have about a biomass utilization facility being located in Alpine County?
    - Are there any benefits to your community from a biomass utilization facility being located in Alpine County?
- If you believe a site could be located in the county, what are attributes of a best site? Are there some that fit this bill? Are there sites a biomass facility should not be located?
- If opposed to a biomass utilization facility, what alternatives do you propose for funding forest restoration and managing the biomass these projects produce?
- Another land management tool is the use of beneficial or prescribed fire. Please describe what this means to you. Do you believe it is an appropriate tool to manage landscapes?
- Are there potential benefits you see from the use of beneficial fire for both the environment and your community? What are some of these benefits?
- Are there any risks or concerns you associate with the use of fire?
- Do you have trust in the agencies and organizations that might use prescribed fire? Why or why not?
- When it comes to prescribed fire, do you think it should be used more, less, or about the same moving forward and why?
- Do you feel that your voice and perspective is heard or represented when it comes to land or fire management?
- What information would you like to see to improve the communication between agencies and organizations, and the public?
- What type of involvement would you like to see between agencies and organizations, and the public?

IX. Social Values

- What are some of the most important values or principles pertaining to forest management, watershed, and communities that your community holds dear?
- Are there specific issues or activities that really bring the community together?
- Are there any particularly sensitive or divisive issues within the community?
- Please describe components of a “thriving community”?
- What makes Alpine County unique from other areas?
- How does the community handle conflict or disagreements?
- What does respect mean in your community and how is it shown?
- What brings people in [your community] together? For example, are there community events (I.e. sports, fundraisers)?
- Is there anything else you think is important to understand Alpine County’s community values?

X. Economic Values

V. How has the economy in this area changed in the past 10 years? How would you describe its current condition?
   A. Where do you think the economy is headed over the next 3-5 years?

VI. What types of employment supports the residents of Alpine County?
   A. What are the key job opportunities in the county?
   B. Are you aware of local employment trends or challenges?
   C. What constitutes a living wage job in Alpine County?

VII. Are there economic activities you would or would not like to see established in Alpine County in the future and why?

VIII. How has the community adapted to economic changes over time?
   A. What if any are the new economic trends in the community?
   B. In general, are people comfortable with these trends?

XI. Closing

- Is there anything else you’d like to share that we didn’t cover today?
- Do you have any recommendations for others we should speak with?

Thank you for your time and insights—we truly appreciate your contribution to this assessment.

Appendix B: Methodology

Data Collection and Analysis

This report used primarily qualitative methods to interpret interviews, local nuances, and findings. Data were collected through key informant interviews, targeted meetings with the Advisory Committee, and a FHCWG meeting in which members of the public attended. A total of 33 interviews were conducted, lasting typically between .75 and 1.5 hours. Interviews were conducted with a wide variety of stakeholders including: landowners and homeowners, non-governmental organization employees, local business owners, retirees, volunteers, Washoe Tribal community members and officials, county officials, agency personnel, FHCWG members, and others.

An initial list of key stakeholders to interview was developed by the FHCWG, with a survey sent to members to rank those identified on a scale from 1 to 3 (3 being the highest priority, 2 being medium priority, and 1 being lower priority). Priority scores for potential interviewees were calculated by averaging the scores provided by all respondents. The survey also included an item to gauge the number of respondents who were familiar with each potential interviewee. This information was used to create a final ranked list, prioritizing individuals who achieved high priority ratings and were known by the greatest number of people.

To ensure that the interview process is grounded in issues of importance in Alpine County, the Sierra Institute worked with an Advisory Committee—made up from members of the FHCWG—to guide and inform the process, and to ensure that unique local factors were included. This participatory approach incorporates local knowledge, and considers unique local factors as identified by the group that influence socioeconomic well-being and natural resource management. The Sierra Institute directly engaged the Advisory Committee during the initial design of the report process to: refine the matrix of objectives, develop interview questions, identify key informants for interviews, and provide periodic updates and course corrections to ensure data collection was relevant, comprehensive, and responsive to local conditions.

An initial draft of the semi-structured interview guide was circulated among the Advisory Committee for review. Following an iterative revision process, which incorporated the committee's feedback and suggestions, the final interview guide was produced. This guide, detailed in **Appendix A**, is structured to explore interviewees' perspectives on social, environmental, and economic values.

A team of two Sierra Institute researchers conducted the interviews. A series of interviews were conducted with both researchers to ensure consistency and data collection efficacy before holding individual interviews. Outreach to potential interviewees involved emails and phone calls. Interviews were conducted virtually, in-person, and over the phone with the interview guide. Questions were open-ended and gave interviewers the flexibility to focus interviews based on the interviewee’s area of knowledge and concerns.

The assessment utilized a snowball sampling method, in which initial interviewees were asked to recommend additional participants to be interviewed. This approach assists in the inclusion of hard-to-reach individuals or niche communities potentially missed in the initial prioritization. This method additionally verifies both a saturation of content, a diversity of perspectives, and confirms the comprehensiveness of those identified for interviews.

To protect the identity of each interviewee, the Sierra Institute guaranteed stakeholders that all interviews would remain confidential and anonymous. Interview notes were transcribed during the sessions and then reviewed by the research team. A single research team member was responsible for coding the notes to identify recurring themes and develop an outline, which was reviewed in-person with both the Advisory Committee and the FHCWG as a whole. Discussion of the initial findings occurred and feedback from both groups was solicited. From this, a handful of additional interviews were conducted to ensure other identified persons and perspectives were captured. Thematic analysis was utilized to categorize recurring themes from the interviews to be captured in the final report.