

Building Resilient Landscapes: Post-Fire Restoration on the Mendocino National Forest

Summary of Public Input: 2023, 2024

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Executive Summary

Background

The Mendocino National Forest reached out to the public in 2023 and 2024 to understand community connections to the forest and hear ideas about how to recover after recent wildland fires. We heard from 523 people over two months! Over 60% of those who participated had lived in the area for more than 25 years. For over half of participants (54%), this was their first time providing input to the Mendocino National Forest. The M3P tool (Mapping, Prioritization and Public Participation) was used to gather and understand public input. This executive summary provides key highlights from these engagements, with subsequent chapters providing greater detail.

Public workshops:
November 2023
(Chico, Red Bluff,
Nice, Covelo, CA)

Online engagement:
November 2023 -
January 2024

Priority Forest Benefits

The M3P tool evaluated how people sorted forest benefits, revealing five distinct groups of people with shared perspectives. Each grouping prioritized different sets of benefits.

Ecological focus	Recreation focus	Multiple use focus	Access focus	Relationship focus
• Old growth trees & forests • Diversity of plant & wildlife habitats • Healthy watersheds	• Motorized recreation • Nonmotorized recreation • Hunting & fishing	• Healthy watersheds • Commercial forest products • Gathering food, materials & firewood	• Infrastructure & utilities • Hunting & fishing • Private properties & resorts	• Spending time with family & friends • Areas of tribal importance • Hunting & fishing

Drivers of

Change

Participants identified positive and negative factors influencing their ability to obtain forest benefits.

POSITIVE FACTORS

- Prescribed fire
- Recreation facilities enhancement
- Road maintenance
- Thinning, pruning & reducing burnable vegetation
- Landscape restoration

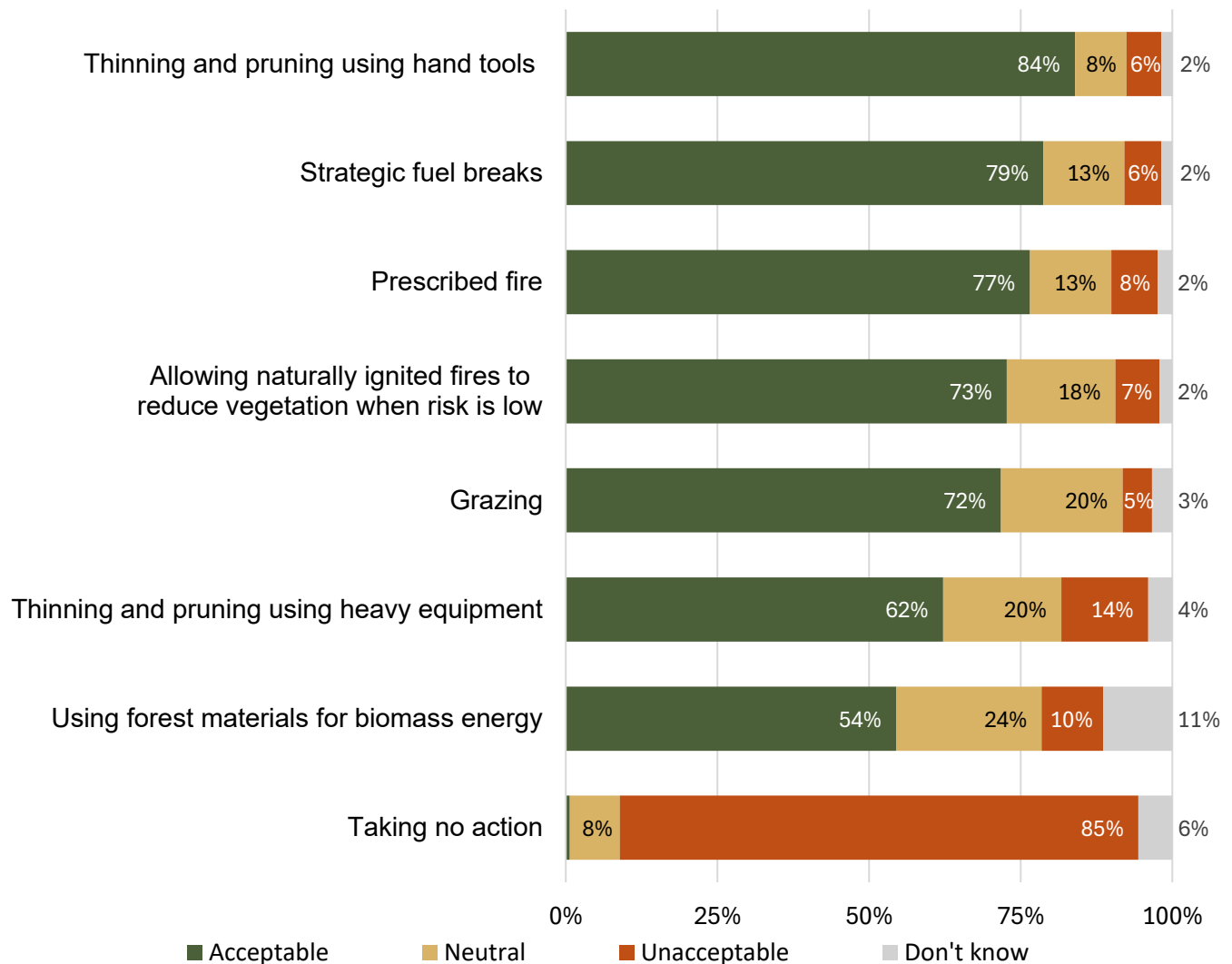


NEGATIVE FACTORS

- High severity wildfire
- Crime, homelessness & illegal marijuana cultivation
- Increased restrictions on public land uses
- Temporary road or site closures

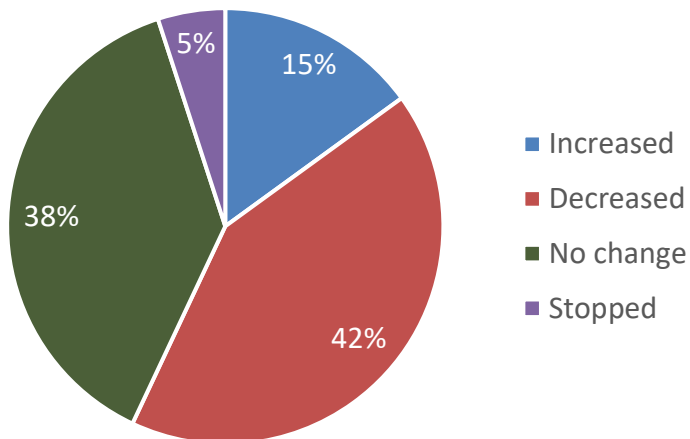
Public Support for Vegetation Management

Participants indicated their degree of support for vegetation management actions designed to reduce wildfire risk.



Postfire Recreation Activity and Investment

Since the wildfires, visits to the Mendocino National Forest have...



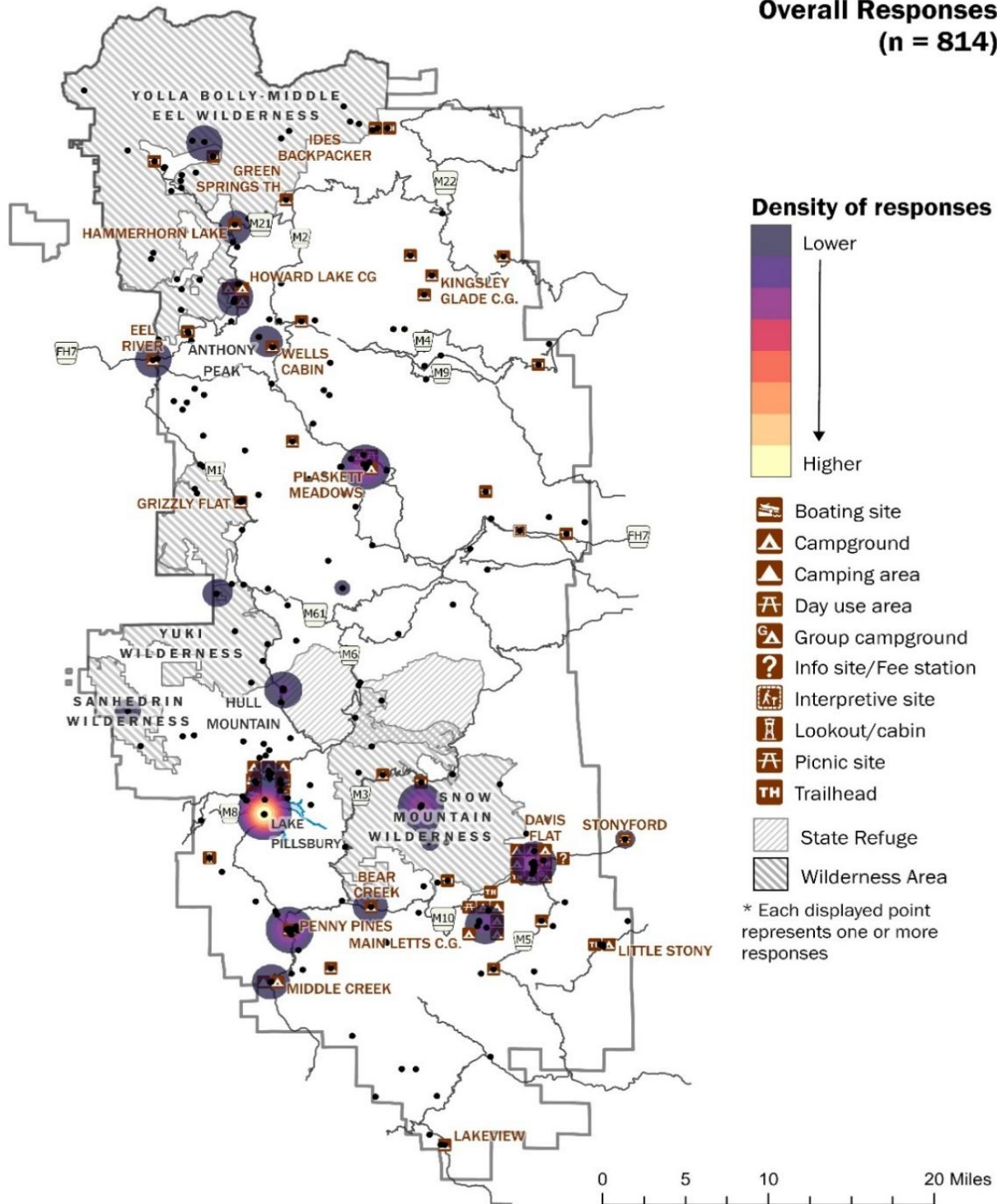
Recreation investments considered to be 'high priority':

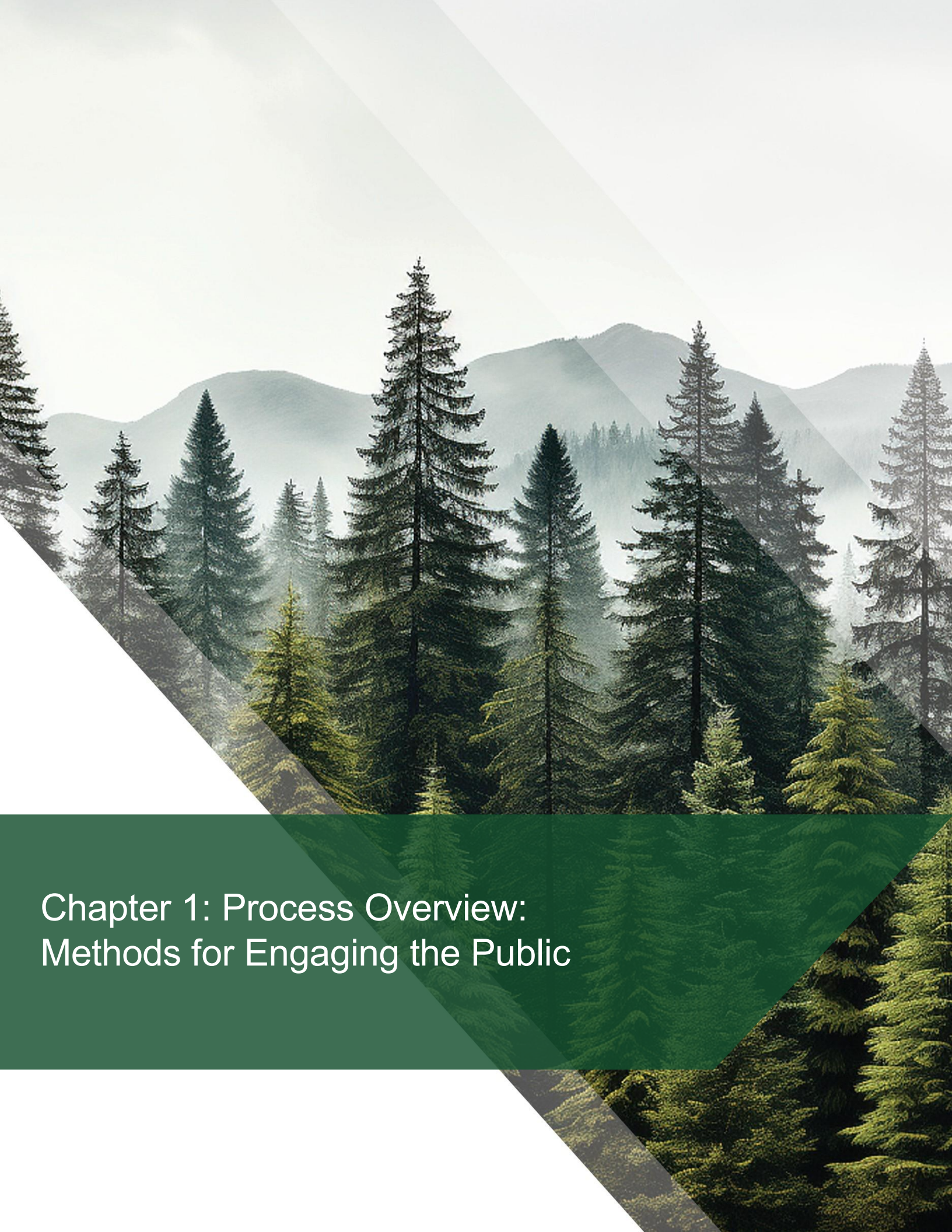
- Trails - non-motorized use (73%)
- Campgrounds (69%)
- Developed day-use sites (54%)
- Motorized trails (47%)
- Boat ramps, docks, piers (45%)

Important Places for Forest Users

Participants identified places on the Mendocino National Forest that were important to them. From this, we identified five 'hotspots,' or areas that are especially important to many forest users, including the areas around: Lake Pillsbury, Snow Mountain & Snow Mountain Wilderness, Penny Pines, Plaskett Meadows, and Davis Flat.

Overall Responses (n = 814)



The background image is a misty forest landscape. In the foreground, several tall, dark green evergreen trees stand prominently. The middle ground is filled with more trees, some of which are partially obscured by a thick mist or fog. In the background, rolling mountains are visible under a pale, overcast sky. A large, semi-transparent green geometric shape, resembling a stylized mountain or a large 'V' or 'A' shape, is overlaid on the right side of the image, extending from the top right towards the bottom right. The text is located in the lower-left portion of the image, within the white space created by the green overlay.

Chapter 1: Process Overview: Methods for Engaging the Public

Public Engagement for Postfire Restoration on the Mendocino National Forest

The Mendocino National Forest (NF) reached out to the public in 2023 and 2024 to understand community connections to the forest and hear ideas about how to recover after recent wildland fires. This chapter highlights the public engagement process. The intent of the engagements was to understand public priorities and preferences for forest landscapes to inform the Prescribed Fire and Fuels Management Strategy and other planning efforts. Information will be used to:

- Demonstrate the degree of public support for the wildfire risk reduction actions described in the Prescribed Fire and Fuels Management Strategy;
- Identify important locations on the Mendocino National Forest and the values and benefits associated with those places; and
- Help determine the next locations on the Mendocino National Forest to implement actions and treatments to reduce wildfire risk and meet forest management objectives.

Engagement Components

| Partner workshop

Engagement included one pilot workshop held in June 2023, which was organized and coordinated by FireScape Mendocino and facilitated by the California Climate Hub. The workshop was attended by representatives of many partner organizations, governmental agencies, Tribes, and nongovernmental organizations. The purpose of the pilot partner workshop was to test the process and gather preliminary responses from key forest partners.

- **Partner pilot workshop:** Willows, CA (June 2023)
- **Public workshops:** Chico, Red Bluff, Nice, and Covelo, CA (November 2023).
- **Online engagement:** November 2023 - February 2024

Public input: Workshops & online

Throughout November 2023, our team held a series of four in-person workshops in Chico, Red Bluff, Nice, and Covelo. A total of 81 participants were in attendance. We also launched an online tool to reach those who could not attend in person. This was open from November 2023 to February 2024, and 497 people provided input by either fully or partially completing the online activity. Combined, we heard from 578 people over two months!

Outreach & Recruitment

Outreach for the in-person workshops and online engagement was led by the Mendocino National Forest in conjunction with key forest partners, including FireScope Mendocino, California Climate Hub, and the Pacific Southwest Research Station. Emails and flyers were sent to forest partners and individuals on the mailing list. Posters were placed on public bulletin boards throughout the communities around the forest. In addition, there were radio and newspaper announcements and information sent to various list-serves and posted on social media platforms.



For those who could make it in person, there were USDA Forest Service (USFS) employees and engaged partners like California Department of Forestry and Fire Protection (CalFire) eager for free-flowing conversation about the opportunities and challenges of post-fire recovery. We also offered games and crafts for young participants, snacks, and Smokey Bear! And at one of the events the local engine and its crew made an appearance.



Public Engagement Approach – How ideas and values were heard.

For both in-person and online participants, there was an opportunity to express their values and priorities for the Mendocino National Forest, as well as ideas about future directions.

The following activities were available during the in-person workshops and online:

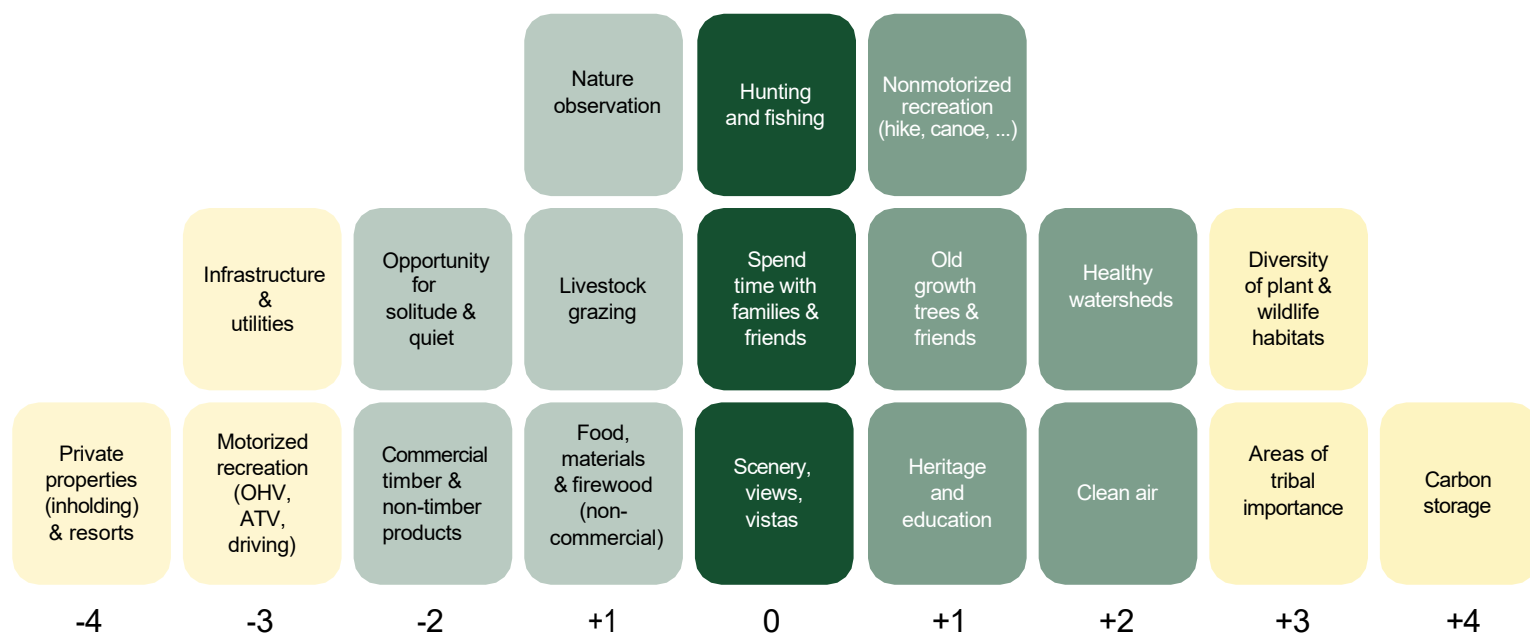
- Forest benefit prioritization and drivers of change selection
- Mapping important places, benefits and drivers of change
- Strategic actions
- Previous engagement with the Mendocino NF
- Background characteristics

Forest Benefits Prioritization

Participants prioritized 19 forest benefits (below) on a scale from -4 to +4. The benefits were prioritized relative to one another, resulting in participants having to make tradeoffs.
(See a completed benefit prioritization below.)

- | | |
|--|---|
| 1. Motorized recreation (OHV, ATV, driving) | 10. Gathering food, materials & firewood (non-commercial) |
| 2. Non-motorized recreation (hike, camp, canoe, equestrian) | 11. Commercial timber & non-timber forest products |
| 3. Hunting & fishing | 12. Healthy watersheds |
| 4. Heritage & education | 13. Opportunities for solitude & quiet |
| 5. Infrastructure (dams, roads) & utilities (cell towers) | 14. Diversity of plant & wildlife habitats |
| 6. Scenery, views, vistas (natural beauty) | 15. Old growth trees & forests |
| 7. Opportunities to spend time with family & friends | 16. Livestock grazing |
| 8. Nature observation (wildlife viewing, photography, birding) | 17. Carbon storage |
| 9. Private properties (inholdings) & resorts | 18. Clean air |
| | 19. Areas of tribal importance |

Example of forest benefits prioritization completed



Most Unimportant

Most Important

Drivers of Change

Next, participants selected up to 3 positive and 3 negative “drivers of change” (things that influence one’s ability to obtain forest benefits most important to them). Participants were presented with 16 drivers of change to choose from (below), or they could write in their own drivers of change.

1. High severity wildfire
2. Low severity wildfire
3. Prescribed fire
4. Thinning, pruning, and reducing burnable vegetation
5. Trees being replaced by shrubs (after fires)
6. Flooding, erosion, debris flow, landslides
7. Higher temperatures & drought
8. Insect & disease outbreaks
9. Invasive plants & animals
10. Landscape restoration (aquatic, forest)
11. Increased maintenance and building of roads
12. Increased restrictions on public lands uses
13. Temporary closures of forest sites or roads
14. Recreation facilities repair and replacement
15. Crime, homelessness, illegal marijuana cultivation
16. Increased forest visitation or concentrated use

Drivers of Change

Trees being replaced by shrubs

Invasive plants and animals

Temporary closures of forest sites and roads

Landscape restoration

Recreation facilities repair & replacement

Increase maintenance & building of roads

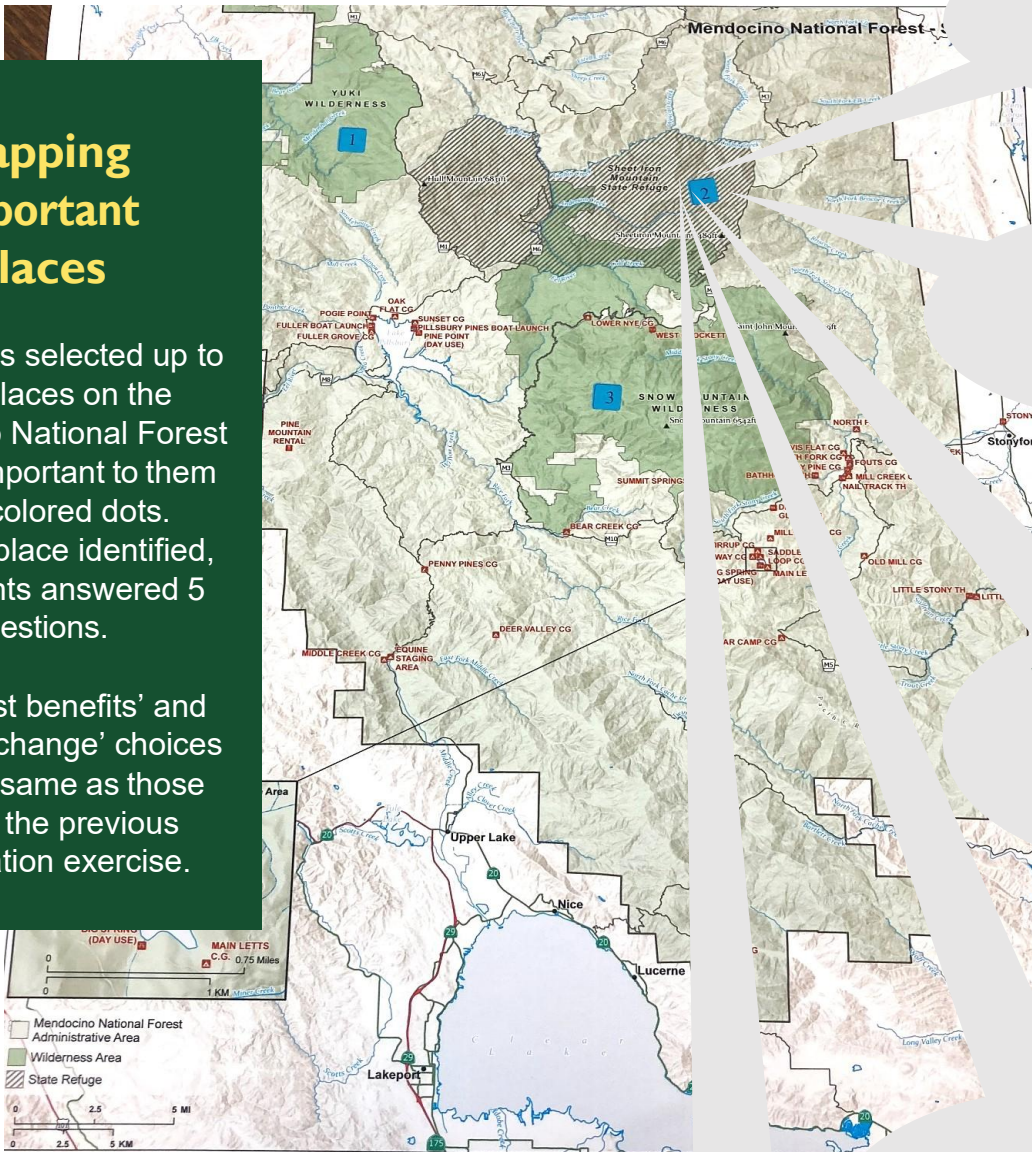
Negative drivers of change (Pick 3)

Positive drivers of change (Pick 3)

Mapping Important Places

Participants selected up to three places on the Mendocino National Forest that are important to them using colored dots. For each place identified, participants answered 5 questions.

The 'forest benefits' and 'drivers of change' choices were the same as those used in the previous prioritization exercise.



What is the name of this place?

What is special or important to you about this place?

What forest benefits are important for you in this place? Pick up to three.

What factors (drivers of change) affect your ability to gain forest benefits? Pick up to two.

What management actions would help address conditions at this location?

Strategic Actions

VEGETATION TYPES (in-person only)

Indicate how you think different vegetation types should be prioritized for post-fire restoration

Options: “1” (lowest priority) to “5” (highest priority), with a “don’t know” option.

1. Chapparral (shrub) dominated system
2. Conifer (pines, firs) forest/woodland
3. Grasslands
4. Hardwood forest or woodland (oaks, maples)
5. Meadows/riparian areas

MANAGEMENT PRIORITIES

When thinking about the future of the Mendocino NF, please indicate the importance of the following management priorities. Options: “1” (lowest importance) to “5” (highest importance), with a “don’t know” option.

1. Information about road conditions and closures
2. Opportunities for hiking, biking, and other trail-based recreation
3. Employment in forest restoration efforts
4. Firefighter safety during wildfire suppression
5. Applying prescribed fire to reduce future wildfire risk
6. Management of illegal marijuana operations
7. Information about closures due to wildfire
8. Real-time information about wildfire containment and risk

RECREATIONAL SITE INVESTMENTS

Rate your degree of prioritization for investment in recreational facilities in the Mendocino NF.

Options: “1” (low priority) to “5” (high priority), with a “don’t know” option.

1. Trails for motorized recreation (e.g., OHV, ATV 4WD, motorcycle)
2. Trails for hiking, biking, and non-motorized use
3. Developed sites for picnicking and other daytime use
4. Campgrounds
5. Large group camping or picnic areas
6. Water recreation facilities (e.g., boat ramps, fishing docks)
7. Equestrian trails and facilities (e.g., horse camp)
8. Cultural or historic interpretive sites

WILDFIRE-RISK REDUCTION STRATEGIES

How do you view the following wildfire-risk reduction management actions on the Mendocino NF? Options: “acceptable”, “neutral”, “unacceptable”, and “don’t know”.

1. Thinning and pruning using hand tools (cutting back small diameter trees or brush)
2. Thinning and pruning using heavy equipment (can involve removal of canopy)
3. Prescribed fire (a planned ignition under certain conditions to meet objectives like habitat improvement)
4. Carefully managing fires started by lightning to reduce vegetation in places where there is no direct risk to lives or property
5. Grazing (using goats or sheep to graze on grasses, brush to reduce wildfire risk)
6. Strategic fuel breaks along existing natural or man-made features (roads, ridgetops, rivers)
7. Using forest materials for biomass energy
8. No action (do nothing)

Community Engagement with the Mendocino National Forest

Participants were provided the opportunity to reflect on how wildfire has changed their interactions with the forest, how the USFS can help to build resilient landscapes, and their previous planning involvement and awareness.

What can the Forest Service do to build healthy landscapes on the Mendocino NF? (open)

How has wildfire changed your interactions with the Mendocino NF? (open)

Have you previously participated in a public meeting or provided input to the Mendocino NF?
Options: “yes”, “no”, “don’t know”

Have you heard of the Mendocino Prescribed Fire and Fuels Management Strategy? Options: “no”, heard the name only, know a few details, very familiar, other. (*in-person only*)

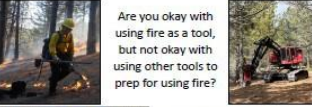
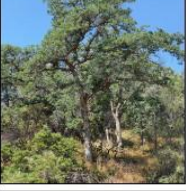
How have the recent large fires (in 2018 and 2020) affected your trips to the Mendocino NF? Options: “no change”, decreased visitation, increased visitation, and “I no longer visit”

Participant background

To understand who the outreach and public engagement efforts reached, we asked a few questions about the background of participants, including their affiliation, length of time living in the community, race/ethnicity, age, gender, education level, and income.

Learning Aids

USFS staff were on hand to help explain different types of actions to reduce the risk of wildfire and to engage in post-fire recovery. The following poster was shown to help participants understand the different types of vegetation and fuel treatments.

Vegetation Types		Actions to Reduce the Risk of Wildfire		What determines how you feel about these actions?	
Vegetation Types Vegetation across the Mendocino National Forest is incredibly diverse. This diversity is driven by fire, climate, elevation, and geology. The Forest is in the inner Northern California Coast Range in a Mediterranean climate characterized by hot, dry summers and rainy, mild winters. Elevations on the Forest range from approximately 750 feet (228 m) in the Grindstone Creek Canyon on the Forest's eastern edge to 8092 feet (2466 m) at the summit of South Yolla Bolly Mountain in the northern part of the Forest.		Actions to Reduce the Risk of Wildfire		What determines how you feel about these actions?	
Chaparral Common species: chamise, manzanita, ceanothus, yerba santa Benefits: important wildlife and pollinator habitat, erosion control Fire: infrequent, high-severity fire Management concerns: too frequent fire can convert chaparral to non-native annual grassland 		Thinning and pruning using hand tools (cutting back small diameter trees or brush) 		Does location matter? Do you feel comfortable with certain actions but not others near your community? 	
Conifer forest Common species: ponderosa pine, sugar pine, Douglas fir, incense cedar, white fir, red fir Benefits: carbon sequestration, clean air and water, wildlife habitat, recreation Fire: frequent, low- to moderate-severity fire Management concerns: conditions that increase the risk of large, high-severity fires that can eliminate available seed sources and reduce the likelihood of recovery 		Thinning and pruning using heavy equipment (can involve removal of canopy) 		What about other locations in the forest like campgrounds and day-use sites? Or sensitive wildlife habitat? 	
Grasslands Common species: historically dominated by native perennial bunchgrasses with annual and perennial wildflowers interspersed Benefits: belowground carbon storage, valuable wildlife habitat, high native plant diversity Fire: frequent, low-severity fire Management concerns: dominance of non-native annual grasses and encroachment of shrubs and trees due to altered fire regimes 		Prescribed fire (a planned ignition under certain conditions to meet management objectives) 		Does the type of tool matter? Are you okay with using fire as a tool, but not okay with using other tools to prep for using fire? 	
Hardwood forests & woodlands Common species: California black oak, interior and canyon live oak, Oregon white oak, big leaf maple, tanoak, madrone Benefits: culturally important source of food, medicines, and materials for Native Americans, support diverse communities of plants and animals, help reduce erosion and provide watershed protection, are a valuable wood source Fire: frequent, low-severity fire Management concerns: altered fire regimes, introduced disease, climate change and associated drought, land use change 		Unplanned ignitions (managing fire started by lightning in places where there is no direct risk to lives or property) 		Are you comfortable with using mechanical treatments because they are more controlled and precise, but less comfortable with the uncertainty of using fire as a tool? 	
Mastication (grinding, chipping, and/or breaking vegetation apart using a masticator) 		Grazing (using goats or sheep to graze on grasses, brush to reduce wildfire risk) 		Does the management goal beyond wildfire risk-reduction matter? Do you feel better about specific actions/tools when there are additional goals? For example, using heavy equipment to thin when the goal is also to increase the health and resilience of hardwood forests? 	
Meadows & riparian areas Common species: sedges, rushes, a large variety of grasses and flowering annuals and perennials, willows, alder, cottonwood Benefits: habitat for important/unique plant and wildlife, help moderate timing/intensity of water flows, high cultural value for Native Americans Fire: variable - wet areas limit fire spread but drier areas rely on fire to limit encroachment Management concerns: altered disturbance regimes such as fire and grazing, altered hydrology due to human infrastructure (e.g., roads) 		Strategic fuel breaks (along roads, ridgetops, rivers, and rock outcrops) 			

Analytical Process

After we received all public input, we converted this information into a database format. Public input from the workshops was manually entered into an Excel spreadsheet, while input gathered from the online tool was downloaded and converted into an Excel spreadsheet and linked to the workshop data. The science team took quality control measures to ensure that all information was reliable and that there were no duplicate entries. Responses to identical questions were analyzed in aggregate form. Some questions were asked only at the in-person workshops and not repeated in the online tool.

Forest prioritization exercise

Each individual poster of forest benefits prioritization exercise was photographed, and the information was entered manually into an Excel spreadsheet. The information was analyzed using R to generate a result that shows the overall prioritization of benefits as well as identifying five groupings (archetypes) based on similarity of response. These archetypes were then studied and analyzed based on responses to other questions in the instrument.

Spatial data

Data from the maps used during in-person workshop were photographed. Data points placed were converted to GPS datapoints and digitized. These were combined with data gathered from the online application. Maps and spatial outputs, such as kernel density maps were created using ArcGIS tools.

How to Interpret Mapping Data

Our maps show the density of responses across Mendocino National Forest. Density maps do not show every individual response submitted but instead highlight areas in the forest where multiple responses are associated with a given driver or benefit. Response density maps depict the relative importance of drivers and benefits across the landscape.

Although we use one color palette for each of the benefits and drivers of change, the map output is scaled to the number of relevant responses. Colors should not be used to compare densities across forest benefits or drivers of change or to compare maps with different underlying data. The high-density shade in one driver map does not necessarily represent the same number of responses as the high-density shade in a different driver map.

Lake Pillsbury received many more responses than any other site in the forest and tended to be highlighted when we created spatial density maps across the forest. To better understand variation in responses outside of Lake Pillsbury, we repeated the spatial density mapping process after removing the Lake Pillsbury responses from our dataset. (When making these maps we only removed the responses that specified Lake Pillsbury specifically, and not sites in the vicinity of Lake Pillsbury (e.g., campgrounds, boat launches, or sites along the shore).

The synthesis of public input and its impact

Led by USFS Research and Development (R&D), the public input was analyzed and synthesized into a story that highlights the diverse perspectives on post-fire restoration on the Mendocino National Forest. The subsequent chapters provide short overviews of the following topics:

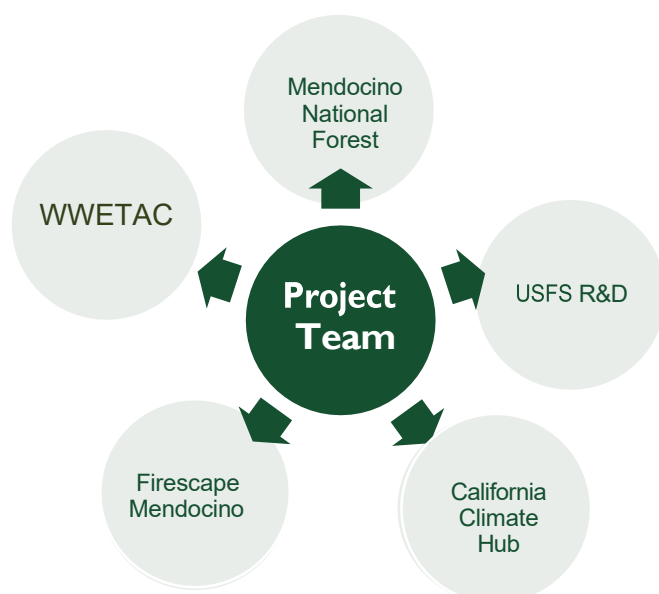
- Priority forest benefits and drivers of change
- Wildfire and fuels reduction
- Recreation, roads, and access
- Participant demographics

In each chapter, we highlight the diverse perspectives of the community members who participated in the public engagement events. The structured M3P approach is designed to yield an overview of the existing perspectives and not an understanding of the distribution of these perspectives across the population. The M3P approach designed as an open-ended discussion facilitator to be considered holistically. It is not grounded in survey methodology and is not a random sample of the population. The results provide a framework for productive conversation among the USFS, agency partners, and a broad spectrum of the community.

Project Partners

A large and committed planning team worked together to organize the public engagement effort. The team used a collaborative approach to ensure that ideas were incorporated.

- National Forest officials led outreach, recruitment, and logistics for workshops and follow-up events.
- Scientists from USFS R&D and the Western Wildland Environmental Threat Assessment Center designed the M3P protocol, developed the online tool, conducted analysis, and produced all final reports.
- The California Climate Hub provided facilitation for the partner workshops.
- FireScape Mendocino hosted the initial partner engagement and invited their members.



- Pacific Southwest Research Station
- Pacific Northwest Research Station
- Rocky Mountain Research Station





Chapter 2: Forest Benefits and Drivers of Change

Forest Benefits and Drivers of Change

This chapter highlights what features of the Mendocino National Forest are most important to people and what changes they are most concerned about. Understanding public priorities for forest benefits and potential changes will help guide land managers in developing future restoration strategies and plans.

Forest Benefits

The first exercise asked participants to prioritize *forest benefits*, defined as attributes of the Mendocino National Forest that are important to people. This was done using a Q-sort technique, where participants were asked to sort 19 forest benefits relative to one another on a scale of importance, from +4 to -4. When considering the average rankings of all completed prioritizations, it is important to highlight that every forest benefit was ranked by at least one participant as either "-4" (most unimportant) or "+4" (most important). Any single benefit can be extremely important or unimportant for someone.

In total, 433 participants completed this exercise (Table 1). On average, *healthy watersheds* was the top benefit of forest, followed by *non-motorized recreation* and *old growth trees and forests*. *Private properties and resorts* was the lowest-ranked forest benefit. Forest commodities, such as grazing and forest products also were ranked relatively low.

Table 1. Ranking of forest benefits (scale from -4 to +4)

Benefit being ranked	Average rank	Min. rank	Max. rank
Healthy watersheds	1.407	-4	4
Non-motorized recreation	0.938	-4	4
Old growth trees and forests	0.927	-4	4
Hunting & fishing	0.826	-4	4
Diversity of plant and wildlife habitats	0.773	-4	4
Opportunities to spend time with family & friends	0.518	-4	4
Scenery, view, vistas	0.480	-4	4
Clean air	0.416	-4	4
Opportunities for solitude and quiet	0.330	-4	4
Motorized recreation	0.256	-4	4
Gathering food, materials, and firewood (non-commercial)	-0.150	-4	4
Nature observation	-0.183	-4	4
Infrastructure & utilities	-0.324	-4	4
Areas of tribal importance	-0.445	-4	4
Heritage & education	-0.742	-4	4
Carbon storage	-1.029	-4	4
Commercial timber & nontimber forest products	-1.156	-4	4
Livestock grazing	-1.174	-4	4
Private properties and resorts	-1.652	-4	4

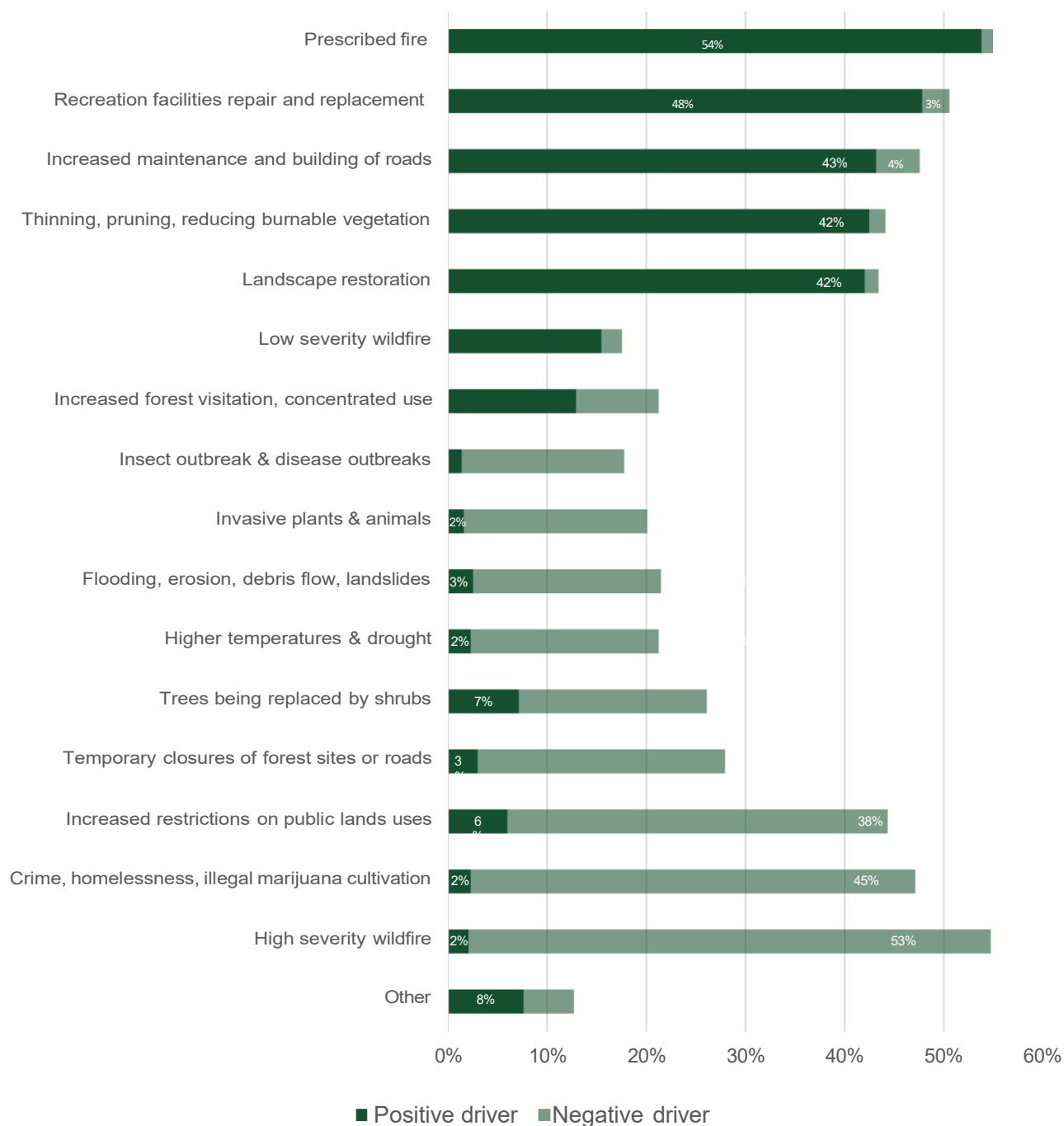
Drivers of Change

Participants were asked to refer to a list of 'drivers of change' which were understood to be factors that could influence their ability to receive these benefits from the Mendocino National Forest, either positively and negatively (Figure 1). A total of 433 participants selected positive and negative drivers of change.

Overall, the most frequently selected positive drivers of change were 'prescribed fire' and 'recreation facilities repair and replacement'. The negative drivers of change most selected include 'high severity wildfire', 'increased restrictions on public lands uses', and 'crime, homelessness, and illegal marijuana cultivation.' Some drivers were identified for both positive and negative attributes, such as 'increased forest visitation/concentrated use.'



Figure 1. Drivers of change selection from in-person and online workshops (n=433)



Divergent, but Shared Perspectives

A major design component of the structured public engagement approach is understanding the broad spectrum of viewpoints among participants. Our analysis of the forest benefit prioritization exercise aimed to find groupings of 'shared perspectives' among participants. We used regression analysis, which uses statistics to create groups based on patterns of responses.

Through analysis, we found five shared perspectives: 'Ecological', 'Recreation,' 'Multiple Use and Forest Livelihoods,' 'Access and Private Property,' and 'Family, Social and Tribal Connections' (Table 2). The 19 forest benefits were categorized into four types: Provisioning services: Forest benefits that can be extracted (e.g., timber, water); Recreation and leisure cultural services (e.g., motorized recreation); other cultural services (e.g., scenery, nature observation); and regulating services: forest benefits that moderate conditions (e.g., clean air)

For each shared perspective, we highlight the top-5 **important forest benefits**. Each shared perspective reflected a different set of priority benefits. Two benefits appeared in the top-5 lists of three or more groups: *healthy watersheds* and *hunting and fishing*, suggesting two clear areas of consensus across all that participated.

For each shared perspective, we highlight the important **drivers of change**. We used regression analysis to explore patterns in those positive and negative drivers of change across the shared perspectives. In cases where there is a lack of statistical significance, this simply suggests that those participants associated with each group were more evenly (and variably) split in their selection of positive and negative drivers of change.

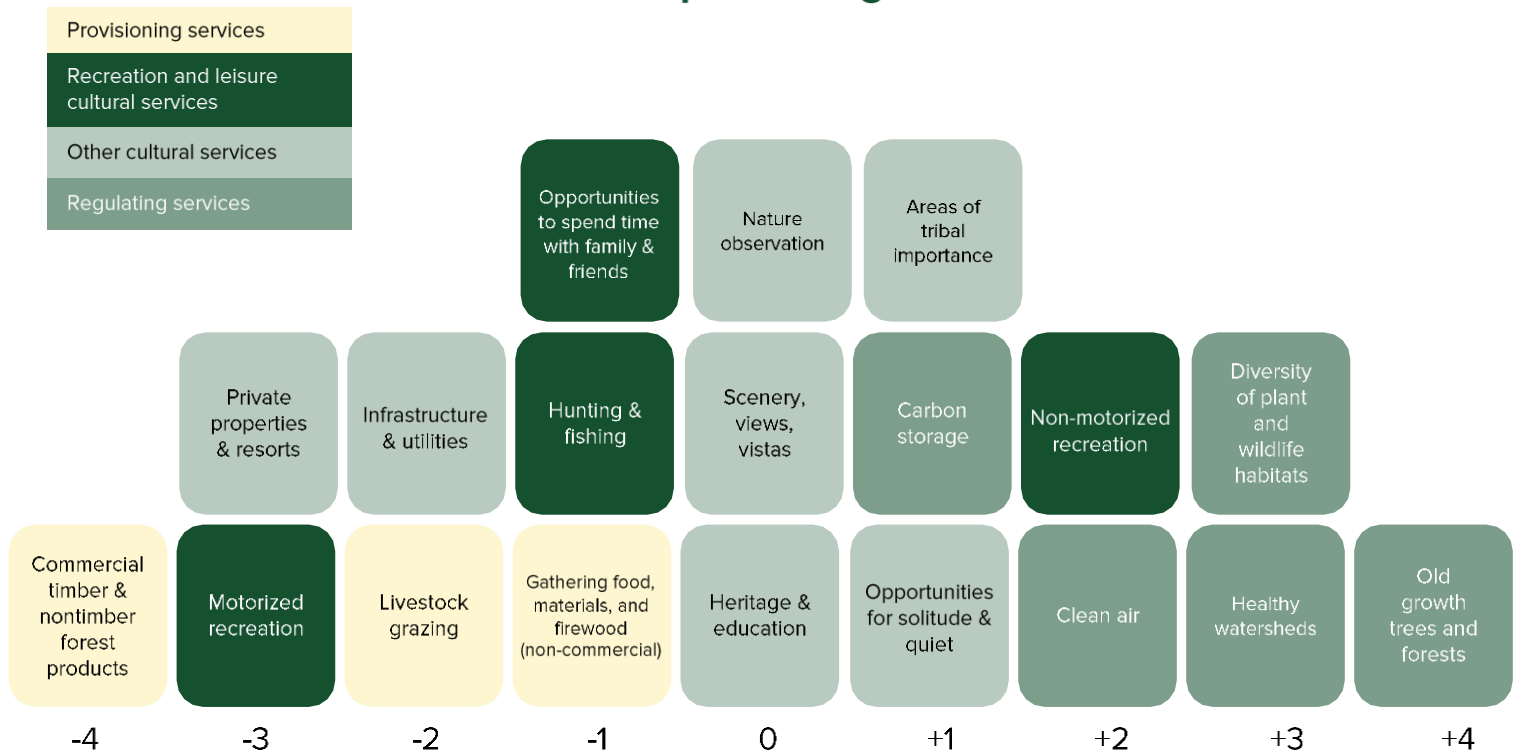
On the coming pages, we dive deeper into each shared perspective - with a brief description of what each group found to be most important and unimportant, as well as description of what drivers of change were associated with each shared perspective.



Table 2. Top-5 forest benefits and drivers of change for each of the five shared perspectives

Ecological	Recreation	Multiple Use & Forest Livelihoods	Access & Private Property	Family, Social & Tribal Connections
- Old growth trees & forests - Diversity of plant & wildlife habitats - Healthy watersheds - Clean air - Non-motorized recreation	- Motorized recreation - Non-motorized recreation - Hunting & fishing - Spending time with family & friends	- Healthy watersheds - Commercial forest products - Gathering food, materials & firewood - Hunting & fishing - Diversity of plant & wildlife habitats	- Infrastructure & utilities - Hunting & fishing - Private properties & resorts - Non-motorized recreation - Healthy watersheds	- Spending time with family & friends - Areas of tribal importance - Hunting & fishing - Gathering food, materials & firewood - Scenery
Drivers of change commonly selected	Drivers of change commonly selected	Drivers of change commonly selected	Drivers of change commonly selected	Drivers of change commonly selected
<i>Positive</i> - Thinning, pruning, and reducing burnable vegetation - Landscape restoration <i>Negative</i> - Higher temperatures & drought	None of statistical significance	<i>Positive</i> - Prescribed fire - Recreation facilities repair and replacement	None of statistical significance	<i>Negative</i> Increased restrictions on public land uses
Drivers of change avoided	Drivers of change avoided	Drivers of change avoided	Drivers of change avoided	Drivers of change avoided
<i>Positive</i> Recreation facilities repair and replacement	<i>Positive</i> - Increased maintenance and building of roads <i>Negative</i> - Invasive plants & animals	<i>Positive</i> - Thinning, pruning, and reducing burnable vegetation - Landscape restoration	<i>Negative</i> - Insect and disease outbreaks - Temporary closure of forest sites & roads	None of statistical significance

Group 1: Ecological

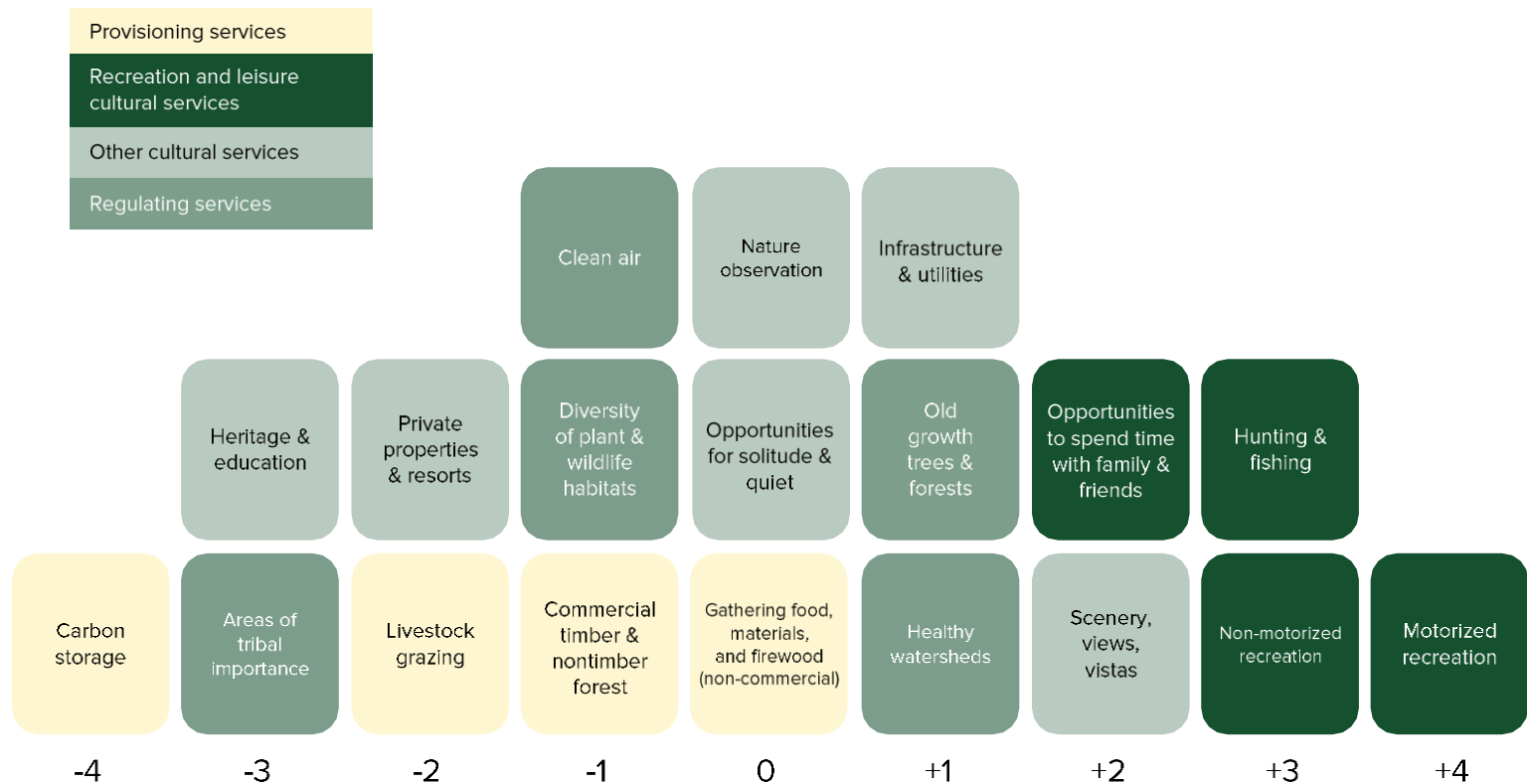


Associated drivers of change

More likely to select "thinning, pruning, and reducing burnable vegetation", and "landscape restoration" as positive. Less likely to select "recreation facilities repair and replacement" as positive.
More likely to select "higher temperature and drought" as negative.

For those who aligned with the 'ecological' perspective, regulating services (e.g., habitat for plants and wildlife, healthy watershed) were viewed as most important, with higher temperatures and drought seen as a concerning driver of change, and active management to reduce fuels and restore the landscape perceived positively.

Group 2 : Recreation

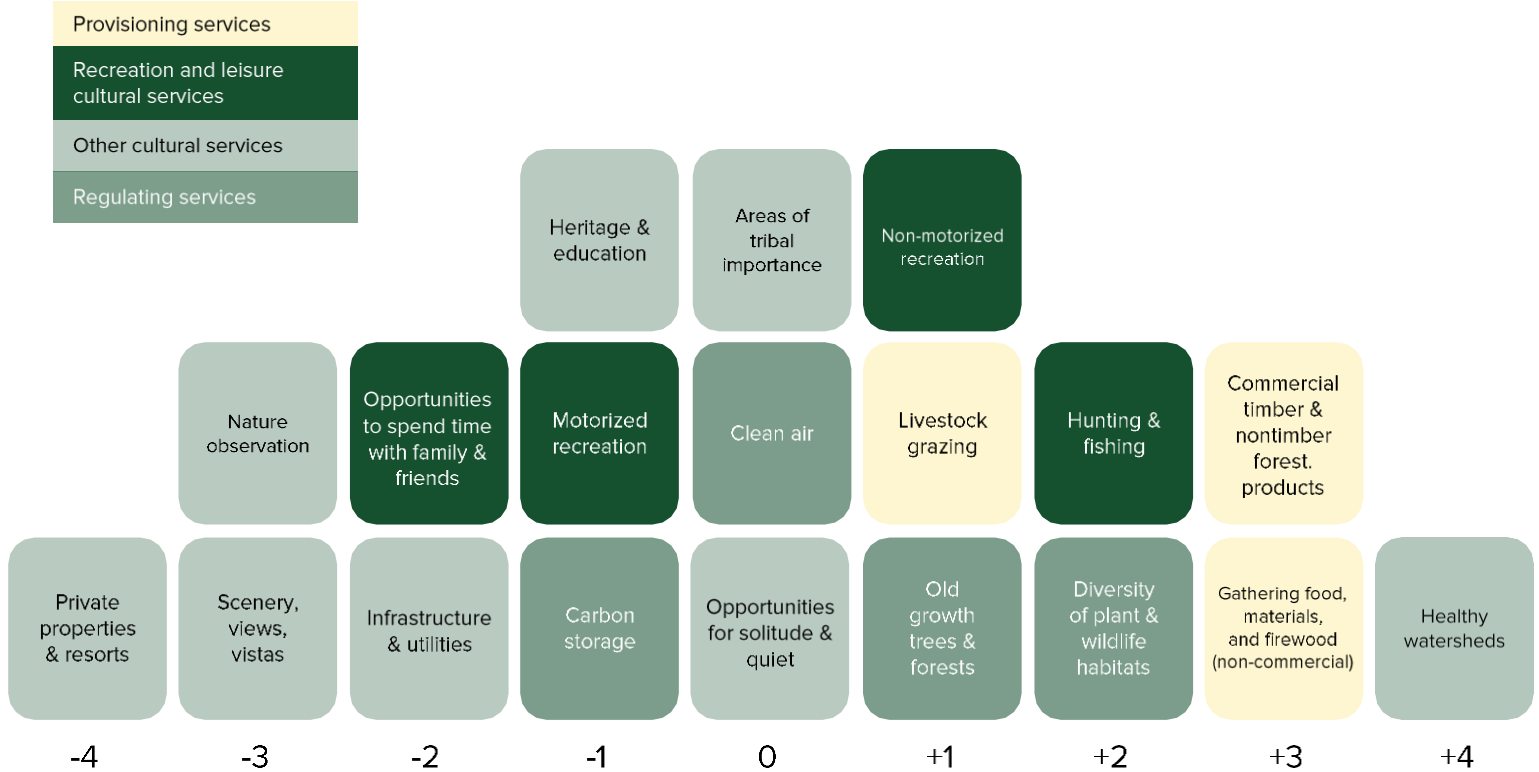


Associated drivers of change

Less likely to select "invasive plants and animals" as negative.
 Less likely to select "increased maintenance and building of roads" as positive.

For those who aligned with the ‘recreation’ perspective, forest benefits related to recreation, spending time with friends and family, and scenery were the highest priorities. This perspective tended to be less concerned about invasive species and, perhaps surprisingly, they were not drawn to increased maintenance and building of roads in a significantly different way from the other perspectives.

Group 3: Multiple Use & Forest Livelihoods

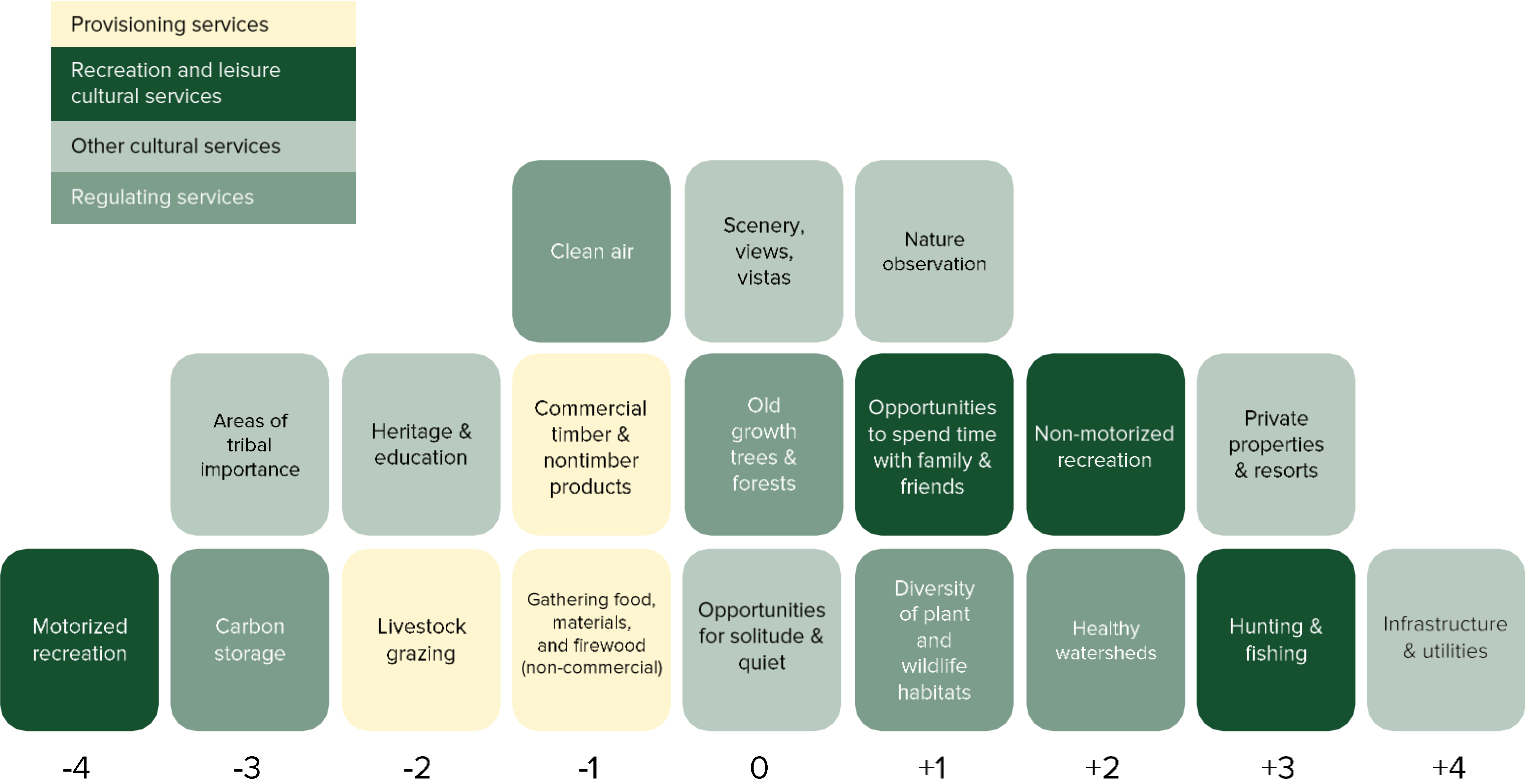


Associated drivers of change

More likely to select “prescribed fire” and “recreation facilities repair and replacement” as positive. Less likely to select “thinning, pruning, and reducing burnable vegetation” and “landscape restoration” as positive.

For those who aligned with the ‘multiple-use and forest livelihoods’ perspective, a combination of regulating services (e.g., environmental benefits such as healthy watersheds) and provisioning services (material benefits such as commercial timber and non-timber products) were the most important. Positive drivers of change were seen as active fire management and an improvement of facilities on the forest.

Group 4: Access & Private Property

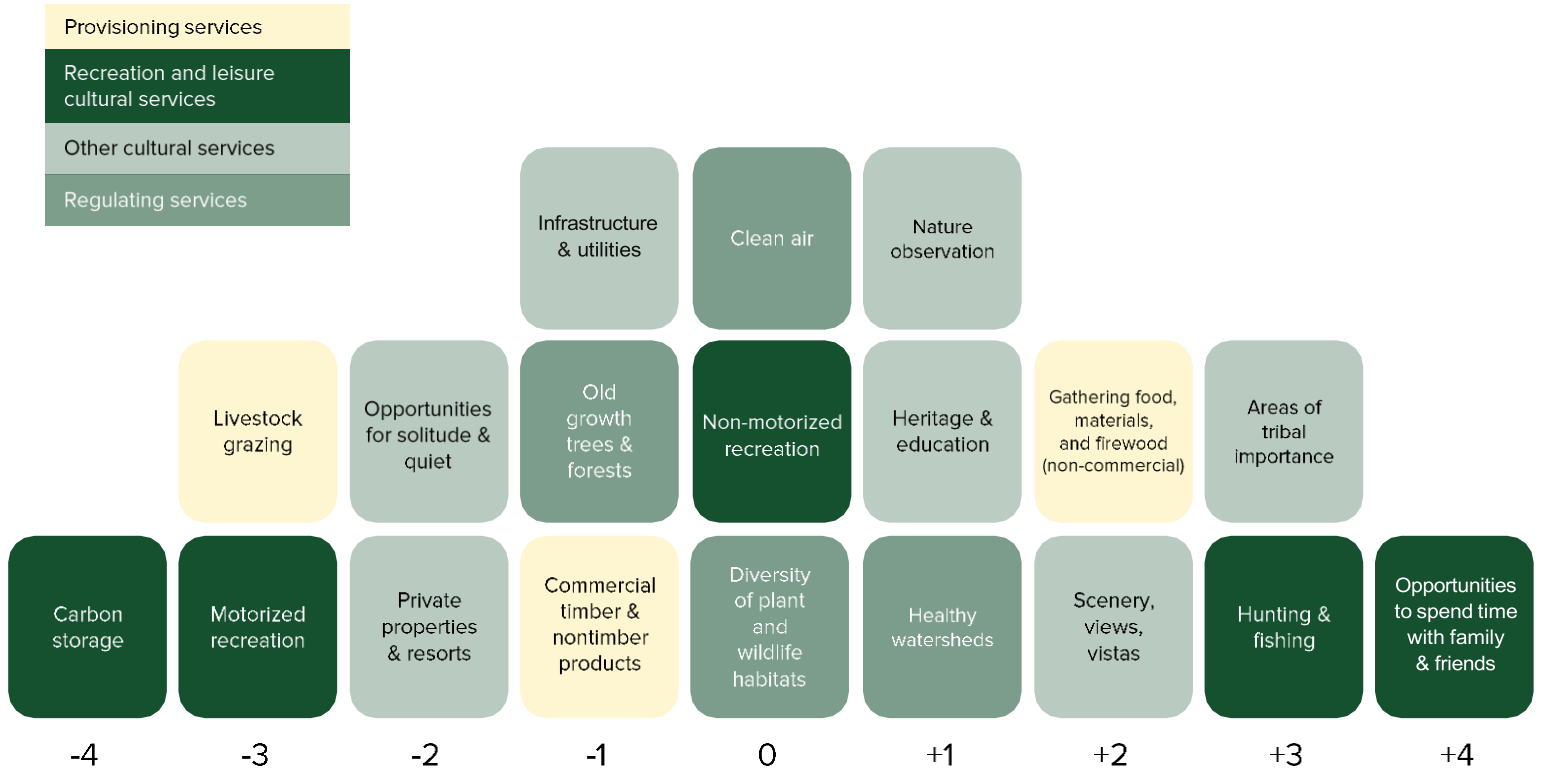


Associated drivers of change

Less likely to select "insect and disease outbreaks" and "temporary closures of forest sites and roads" as negative.

For those who aligned with the ‘access and private property’ perspective, recreation benefits and other cultural services supporting private enterprise (e.g., infrastructure and utilities, private property and resorts) were paramount.

Group 5: Family, Social, & Tribal Connections



Associated drivers of change

More likely to select “increased restrictions on public land uses” as negative.

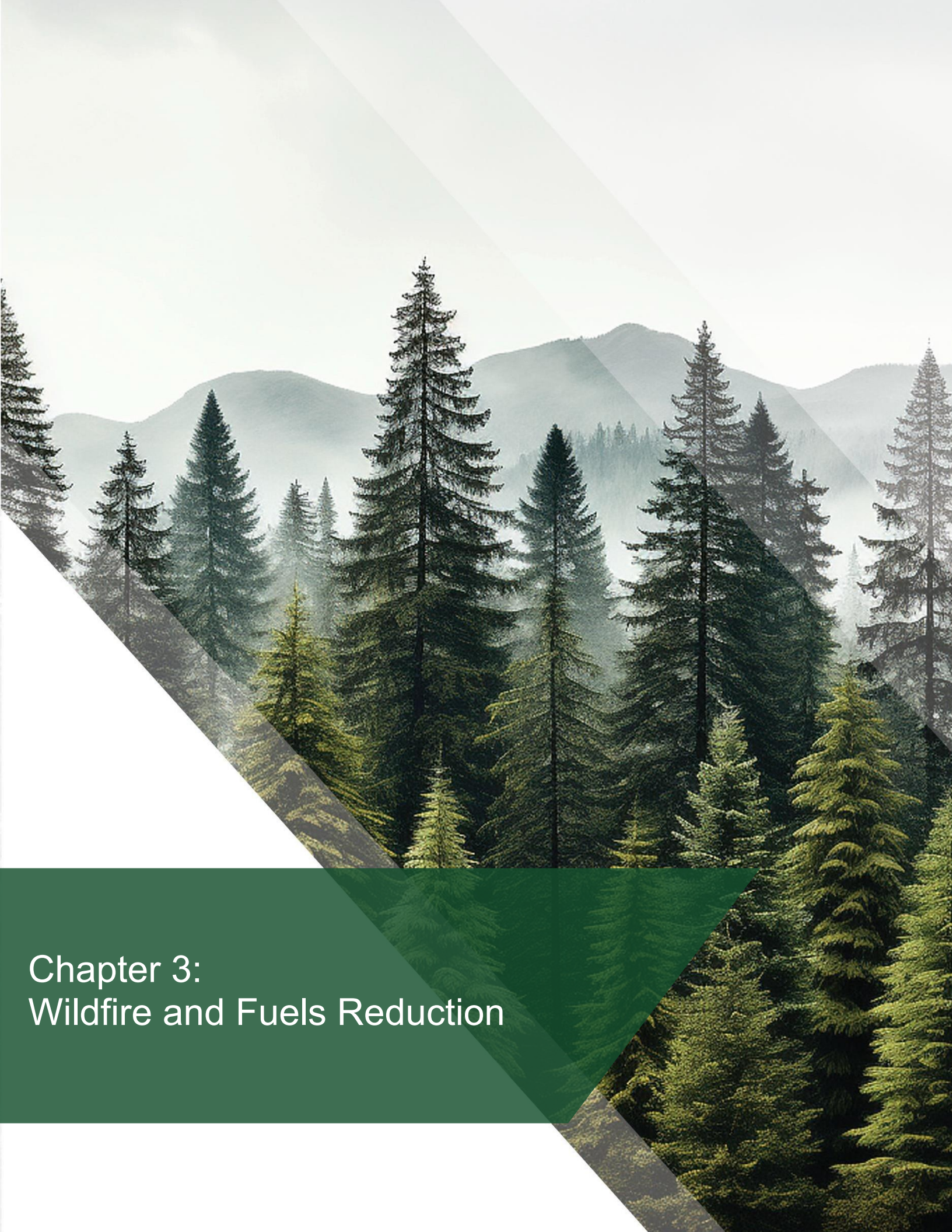
For those who aligned with the ‘family, social, and tribal connections’ perspective, social time, hunting and fishing, and areas of tribal importance were top priorities. This perspective was significantly more likely to be concerned about increased restrictions on public land uses.

Implications for Land Management

When considering how 433 people prioritized forest benefits and considered drivers of change as positively and negatively influential to those benefits, we stress the following:

- All 19 forest benefits were either most important (+4) or most unimportant (-4) to at least one person.
- Active management (e.g., prescribed fire, roads maintenance and building, recreation facilities maintenance and repair) approaches were generally viewed positively.
- There are five shared groups with different views on forest benefit priorities, BUT there is consensus around the importance of healthy watersheds and hunting and fishing.
- Given the five shared groups with divergent priorities, there are likely no post-fire restoration strategies that will be embraced by all members of the public. Therefore, clearly communicating how different post-fire restoration strategies may (or may not) align with each of the five groups is important for clear and transparent planning and management actions.
- However, managers should look for areas of agreement when considering planning decisions or management actions. For example, healthy watersheds were a top benefit for three of the four perspectives, so management actions such as repairing roads to minimize runoff and off road usage would have broad support.





Chapter 3: Wildfire and Fuels Reduction

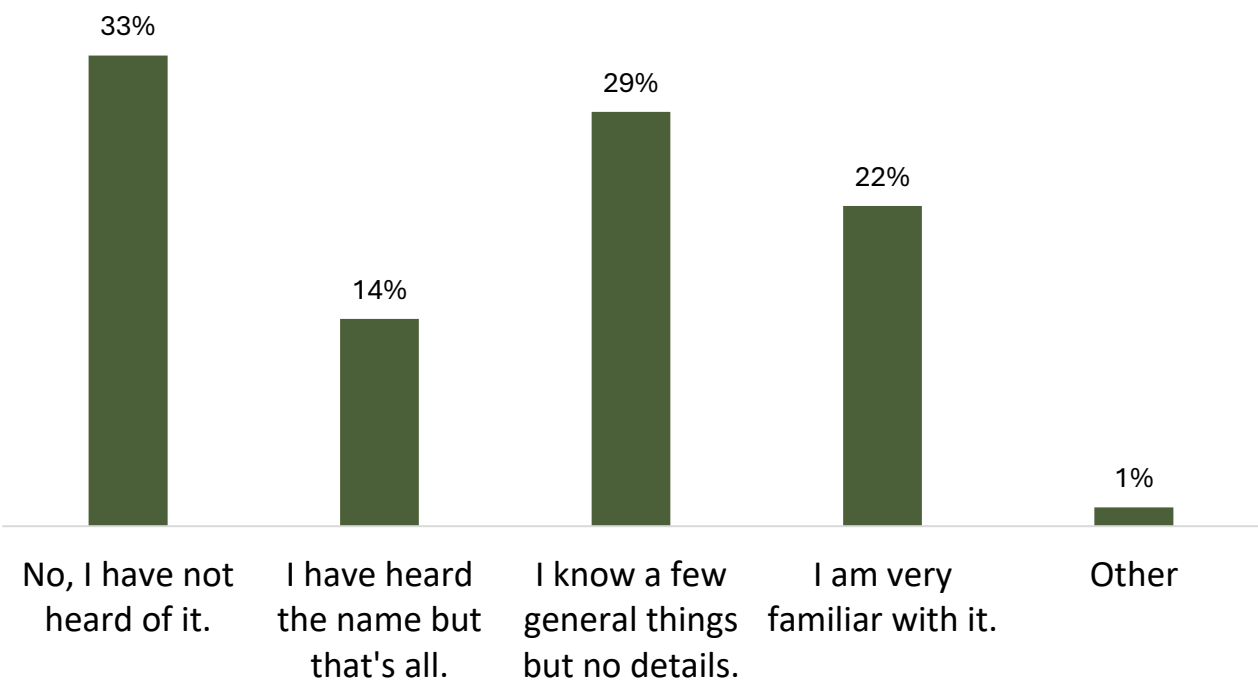
Wildfire and Fuels Reduction

This chapter highlights specific public input collected regarding support for wildfire prevention strategies, including fuels management and treatments in the Mendocino National Forest.

Awareness of the prescribed fire and fuels management strategy

Participants at the four in-person workshops were asked about their familiarity with the Mendocino NF’s strategy for prescribed fire and other fuels management activities (Figure 2). Responses were mixed, with 33% having never heard of the strategy, and 22% being ‘very familiar with it’.

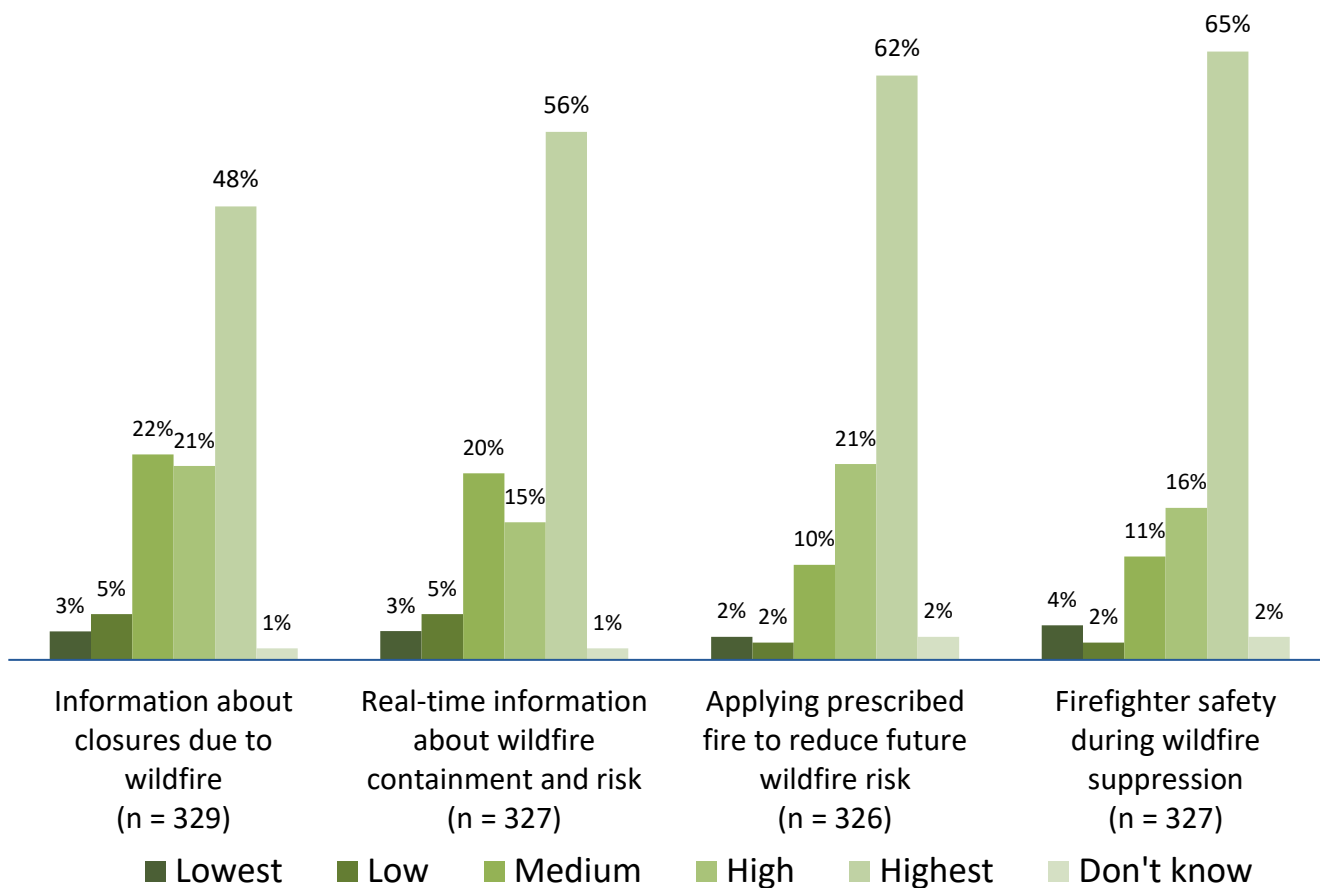
Figure 2. Awareness of Prescribed Fire & Fuels Management Strategy. (*Workshops only, n=76*)



Priorities for wildfire management

Participants were asked to think about the future of the Mendocino NF and prioritize eight items on a 5-point scale from lowest to highest priority. Of these eight items, four were related to wildfire (Figure 3).

Figure 3. Prioritization of wildfire related issues on the Mendocino National Forest



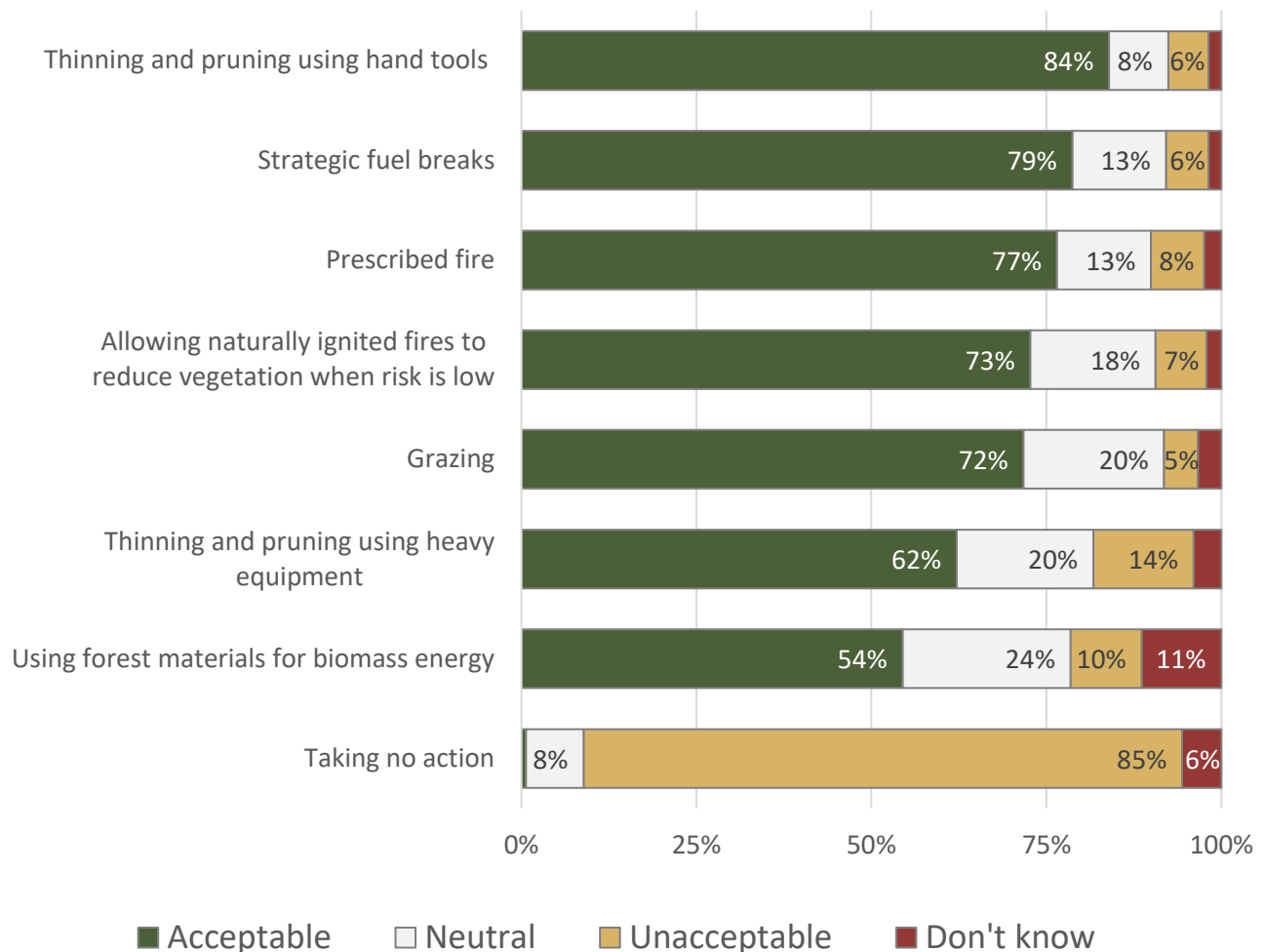
Firefighter safety during wildfire suppression had the highest ranking (average 4.4) and 65% of the participants rated this 'highest priority.' Notably, this was closely followed by *applying prescribed fire to reduce future wildfire risk* (average 4.47) with 62% of participants rating this issue in the 'highest priority' category.

The item *real-time information about wildfire containment and risk* had high levels of support, with 56% assigning it 'highest priority'. Less than half (48%) of participants thought that 'information about closures due to wildfire' was a highest priority, although 91% thought this was at least a medium priority. No more than 5% of participants rated each of the four items as either 'lowest priority' or 'low priority'.

Acceptance of fuel treatment actions

Public engagement participants were asked to rank the acceptability of actions the Mendocino National Forest could take to reduce the risk of wildfire. The acceptability of seven different actions, along with taking no action at all is illustrated in Figure 4.

Figure 4. Participant views on the acceptability of different fuels management actions

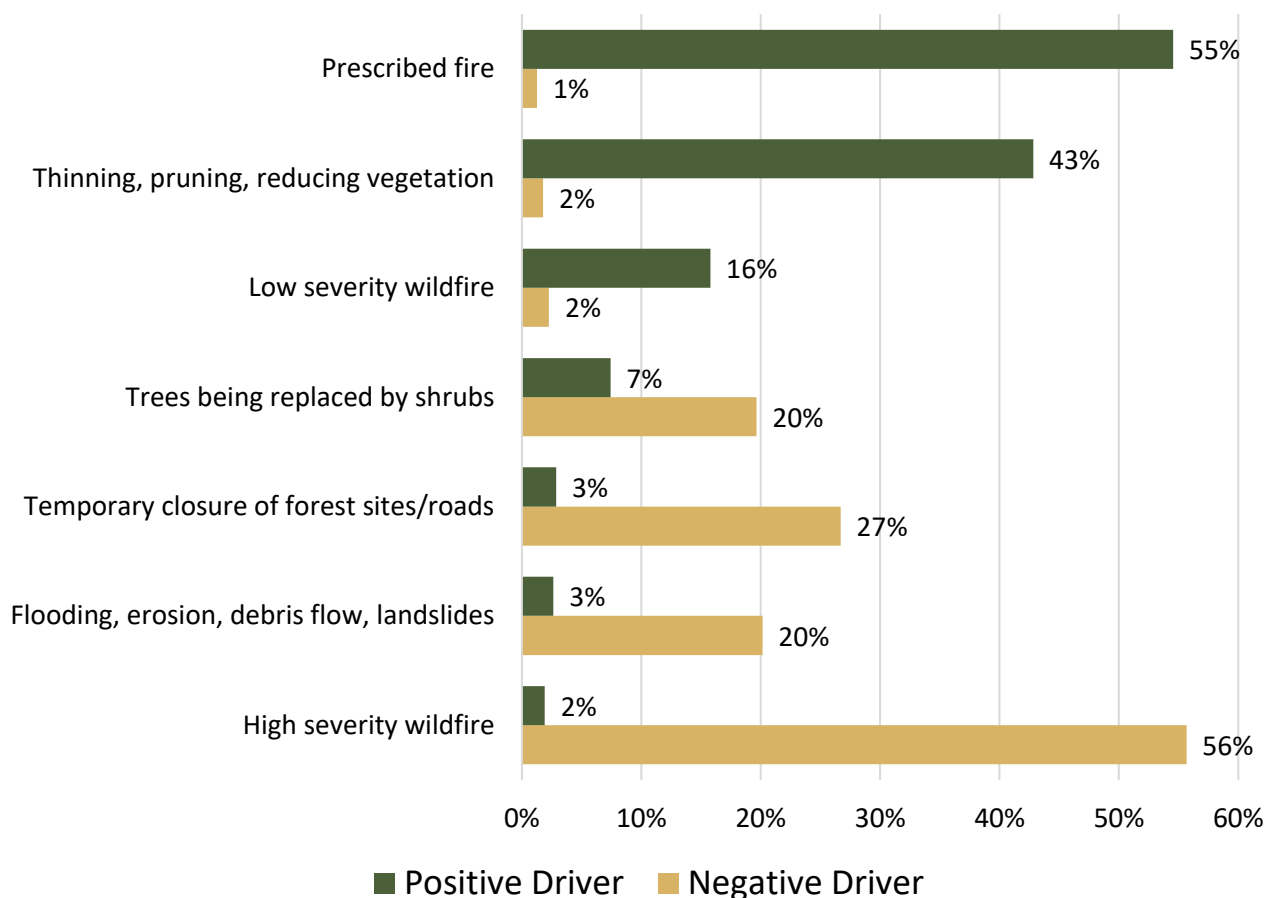


Each of the seven actions was deemed “acceptable” by at least 50% of the participants, although there was some variation. *Thinning and pruning using hand tools* had the highest level of support, with 84% saying it was acceptable. *Thinning and pruning using heavy equipment* (79%) and *prescribed fire* (77%) were the second and third most supported actions. Conversely, *using forest materials for biomass energy* had the highest percentage of participants choosing “neutral” (24%) and “don’t know” (11%), suggesting that many people are not sure what this action involves or potential impacts. Notably, the option of ‘no action’ was deemed unacceptable by 86% of participants.

Drivers of change associated with wildfire

Participants were asked to refer to a list of 16 'drivers of change' which were understood to be factors that could influence their ability to receive important benefits from the Mendocino NF, either positively and negatively (refer to process overview or archetypes reports for more details). They were instructed to select up to three that were positive influences and three that were negative influences. Many of the drivers on the list were related to wildfire (Figure 5).

Figure 5. Drivers of change associated with wildfire



Notably, *prescribed fire* was the most selected positive driver of change, at 55% and *thinning, pruning, and reducing burnable vegetation* was second (43%). At the opposite end, *high severity wildfire* was the most common negative driver of change (56%). *Temporary closures of forest sites or roads, often due to wildfire* was the fourth most common negative driver (27%). *Flooding, erosion, debris flow, landslides* was selected as a negative driver by 20% of participants as was *trees being replaced by shrubs*.

Drivers of change at important forest sites

Participants selected up to three places on the Mendocino National Forest that are important to them. For each place identified, participants answered five questions, including up to three drivers of change associated with that place. The below maps show the spatial distribution of the wildfire related drivers of change: high severity wildfire; temporary closures of sites/roads; and flooding, erosion, debris flow, and landslides.

Note that due to the disproportionately high number of participants that chose Lake Pillsbury, the map shows that location with a star, rather than the relative number of responses. This makes it possible for the density of responses at other locations to be better displayed.

Observations from the maps

High severity wildfire (n=340) (Figure 6). Overall, the density map reflects some of the most-visited locations on the forest such as Penny Pines and Lake Pillsbury. Around 40% of those locations were in the northern portion of the Forest and about 60% in the southern portion.

Temporary closure of sites and/or roads (n=210) (Figure 7). Areas of higher response density were similar to responses for 'high severity wildfire,' though there was a higher concentration of responses in places popular for recreation. In the southern portion of the Forest the areas around Lake Pillsbury, Davis Flat, Penny Pines and Snow Mountain Wilderness were selected by a high number of participants. Sites in the north of the Forest were selected by fewer participants.

Flooding/erosion/debris flow/landslides (n=150) (Figure 8). Participants highlighted areas across the forest but primarily concentrated in the southern half. The areas around Lake Pillsbury, Snow Mountain Wilderness, Penny Pines and Davis Flat were frequently associated with flooding/erosion/debris flow/landslides. In the northern part of the forest, Plaskett Meadows emerged as an area of concern.

Trees being replaced by shrubs (n=101) (Figure 9). Points (n=101) were distributed slightly differently from other maps, with a little more than half of the points distributed in the northern portion of the forest, particularly Plaskett Meadows and Eel River. The area around Lake Pillsbury had a higher concentration of responses in the southern portion of the forest.

Fuel treatments (n=80) (Figure 10). For fuel treatments (prescribed fire or thinning), areas around Hull Mountain, Penny Pines, Bear Creek and Letts Lake emerge as of relatively higher concentration. Relatively few points were selected with either fuel treatment option as a driver of change. These densities therefore reflect areas of higher concentration only relative to the number of places submitted.

High severity wildfire (n = 340)

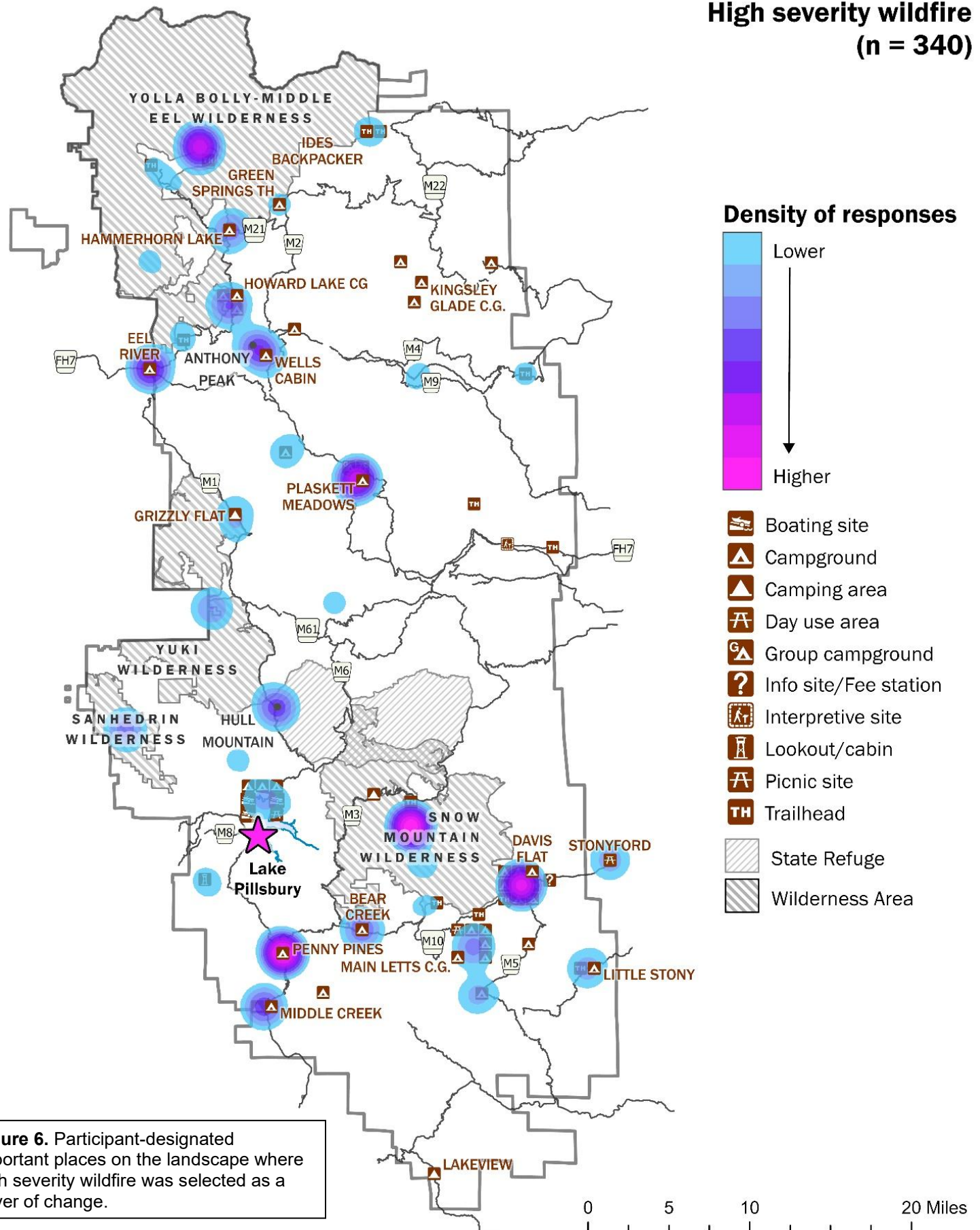
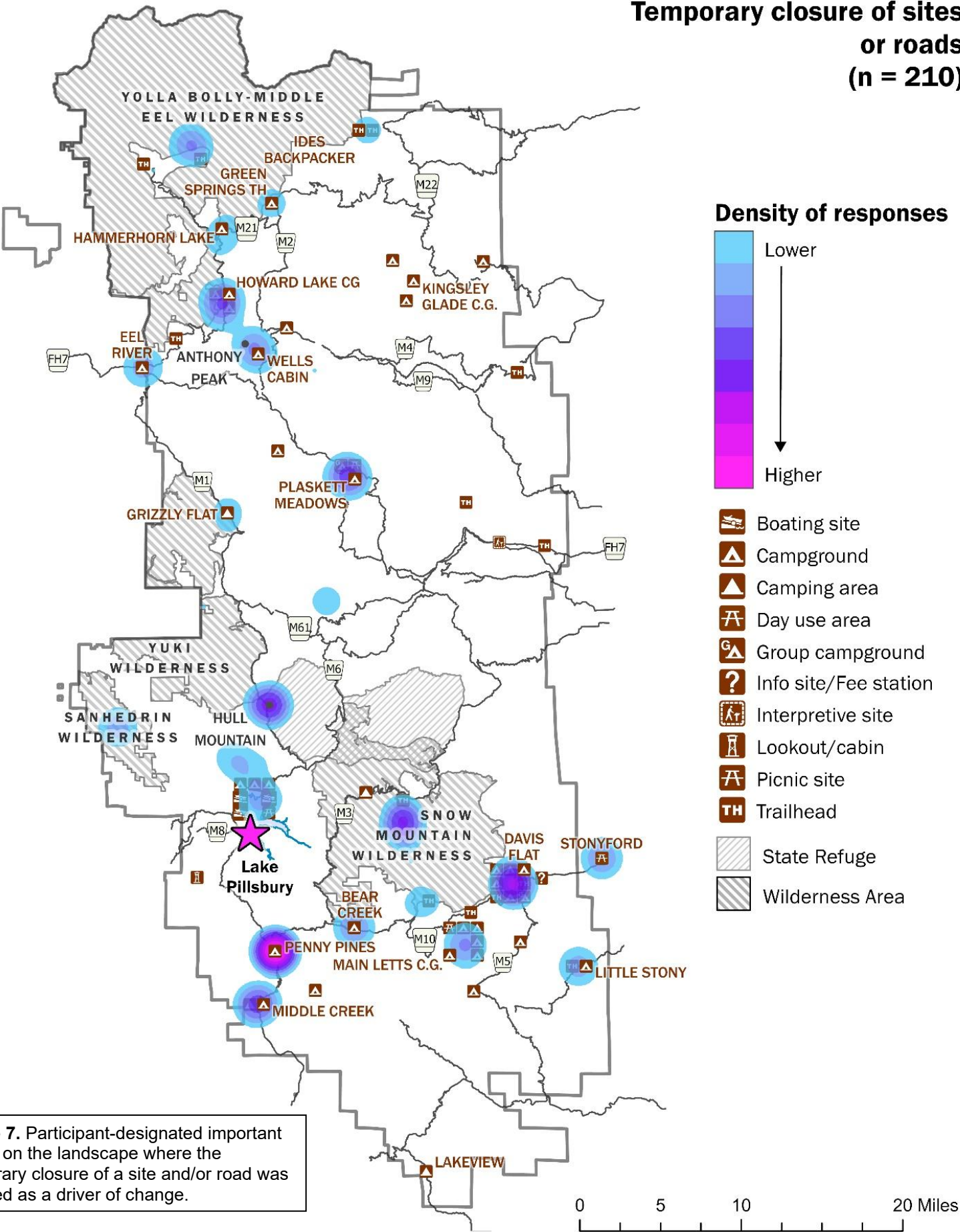


Figure 6. Participant-designated important places on the landscape where high severity wildfire was selected as a driver of change.

Temporary closure of sites or roads (n = 210)

Figure 7. Participant-designated important places on the landscape where the temporary closure of a site and/or road was selected as a driver of change.



Flooding, erosion, debris flow, and landslides (n = 150)

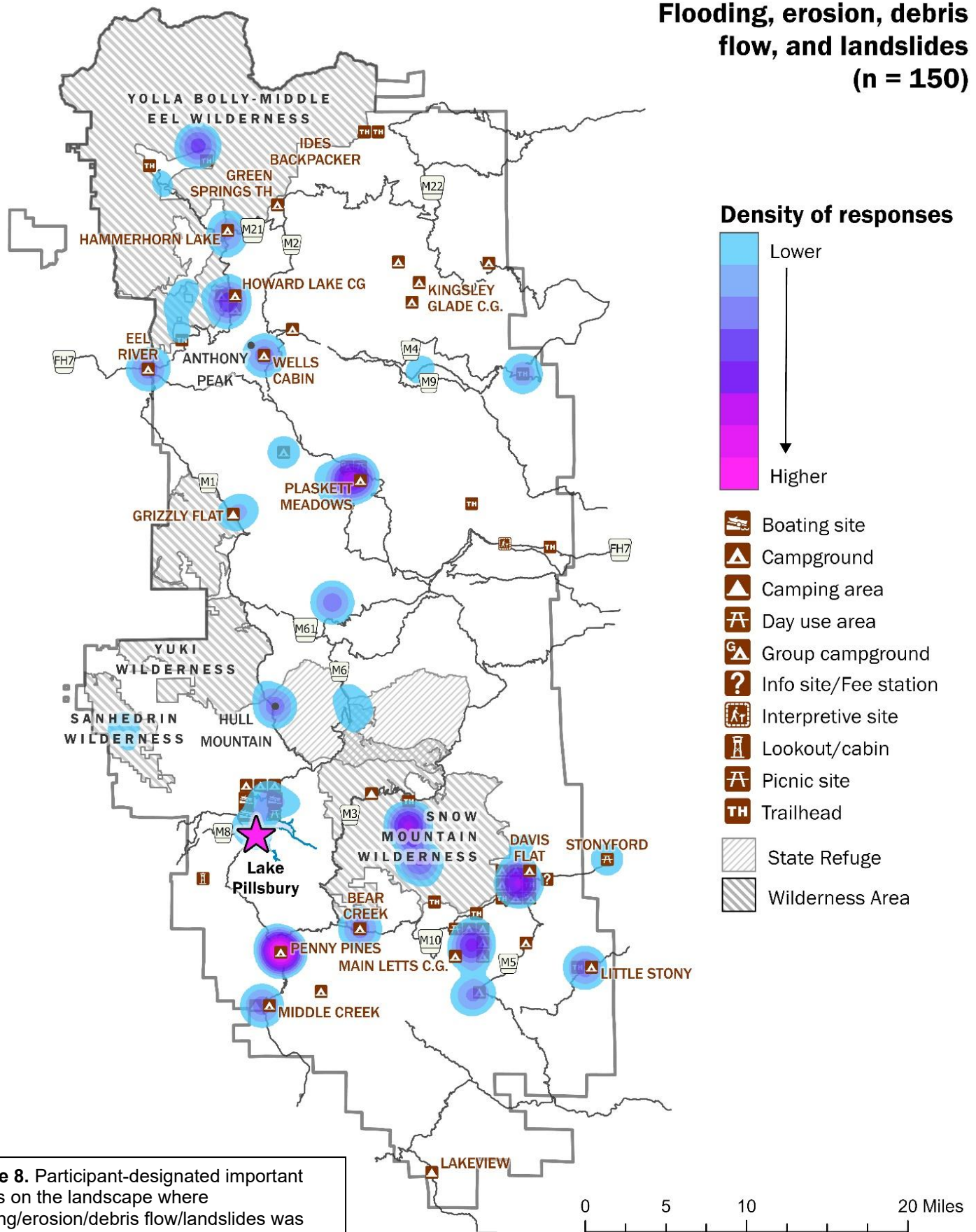
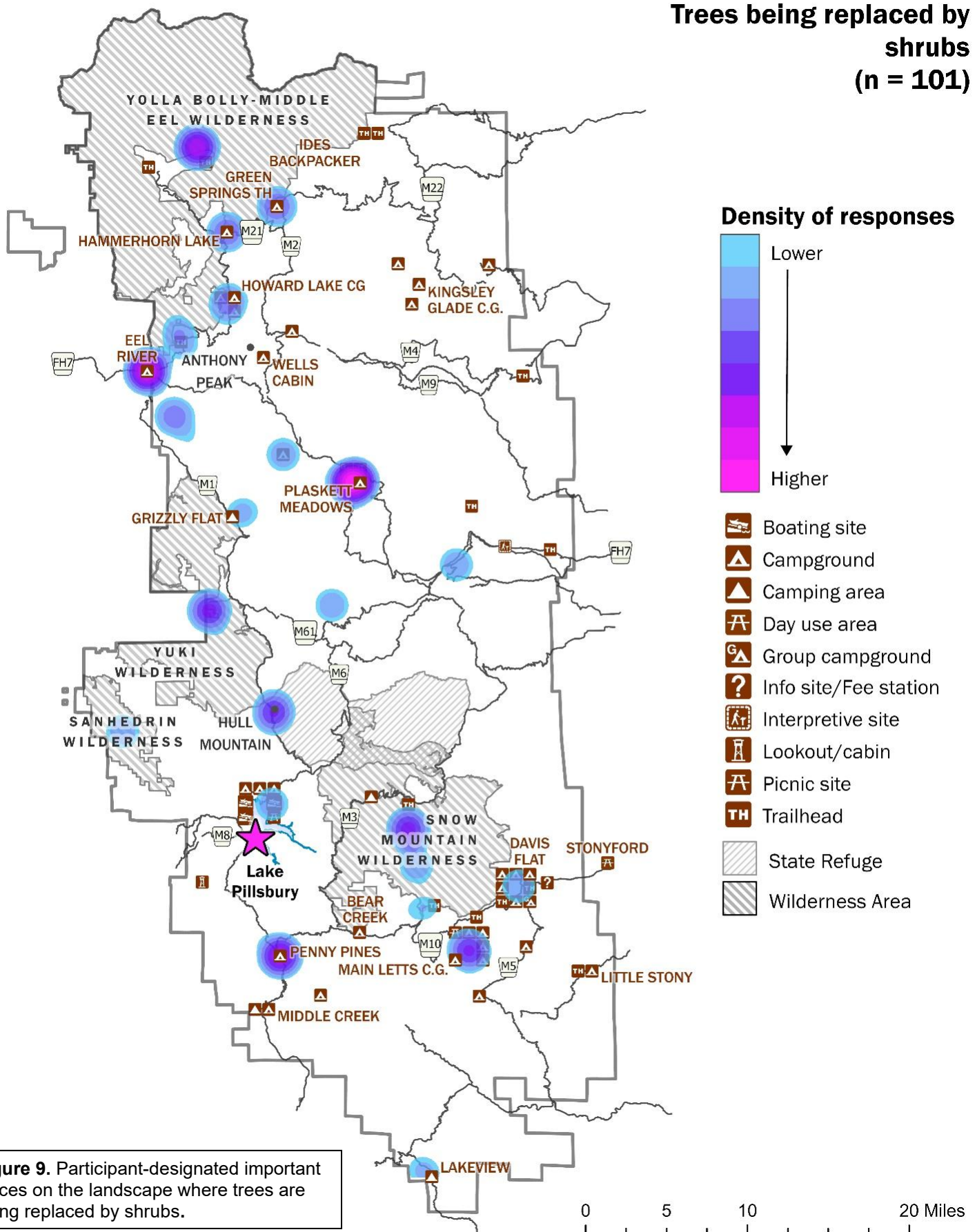


Figure 8. Participant-designated important places on the landscape where flooding/erosion/debris flow/landslides was selected as a driver of change.

Trees being replaced by shrubs (n = 101)



Fuel treatments (prescribed fire and/or thinning) (n = 80)

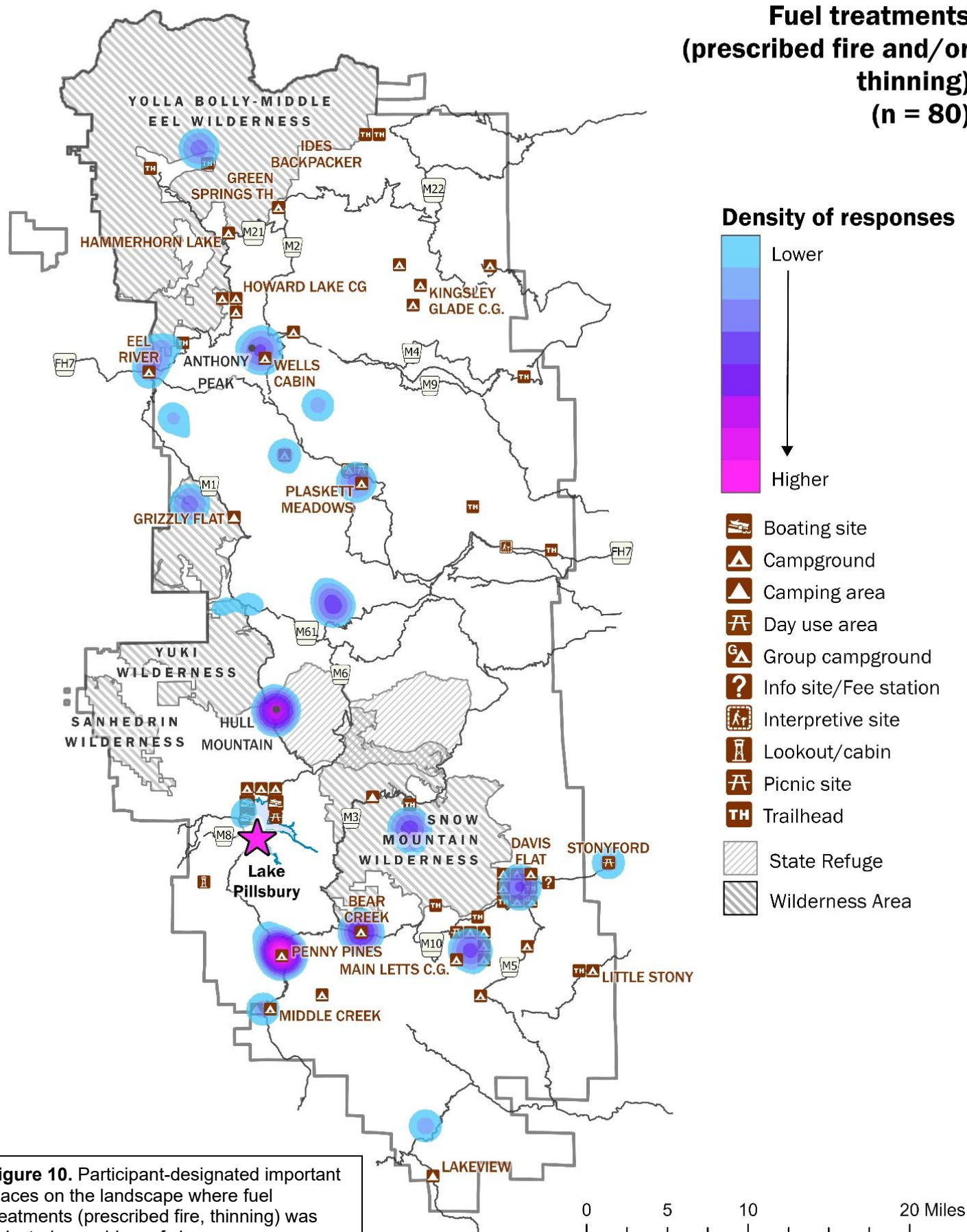
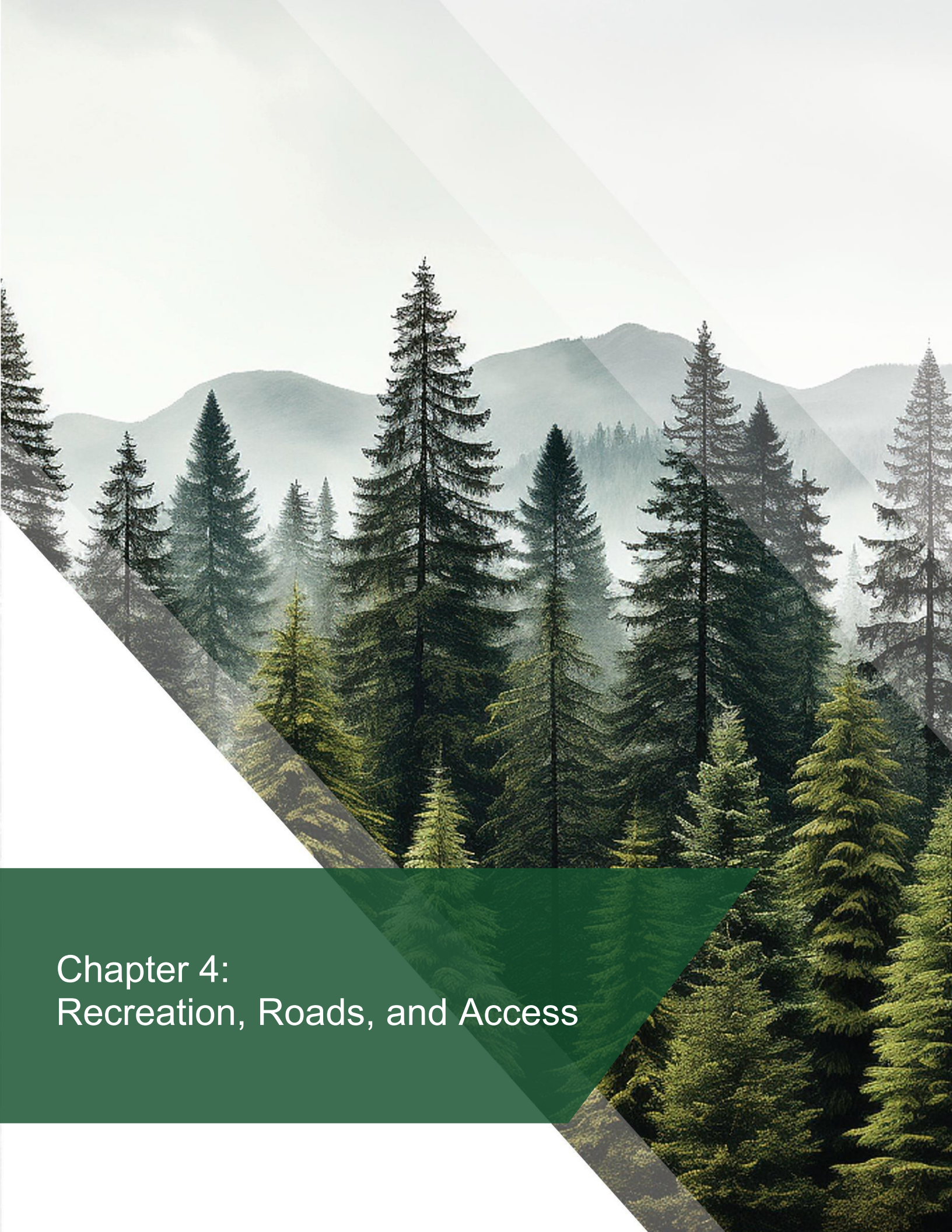


Figure 10. Participant-designated important places on the landscape where fuel treatments (prescribed fire, thinning) was selected as a driver of change.

Implications for forest and rangeland management

- Very few participants believed that ‘no action’ to reduce the risk of wildfire was acceptable, suggesting overall support for the Mendocino National Forest’s Prescribed Fire and Fuels Strategy, although many workshop participants had not heard of the strategy or were not familiar with it.
- Around half the participants selected either *prescribed fire* or the *thinning & pruning of vegetation* as a positive driver of change, suggesting general awareness of the benefits of these fuel treatments. However, there were distinct differences in the perceived acceptability of different types of fuel treatments.
- The least acceptable strategies were *strategic fuel breaks*, *grazing*, and *managing natural ignitions*. Different groups of people are likely to have different concerns about each, according to their priorities. When planning fuels treatments, forest officials may find it beneficial to clearly communicate the planned treatments, focusing on benefits and potential risks to different values.
- The similarities between the maps showing *high severity wildfire*, *flood/erosion/debris flows*, and *temporary site/road closures* is perhaps to be expected, suggesting that the effects of wildfires on visitation can be compounding. This information could be useful when considering future investments in recreation infrastructure.
- Further work should integrate the location specific data (maps, selected benefits and drivers) with the GTR-270 results on recommended restoration strategies. The combined information could help managers prioritize restoration strategies in specific places with specific techniques.

The image is a full-page background featuring a misty forest scene. Tall, dark evergreen trees are scattered across the landscape, with some in sharp focus in the foreground and others fading into a soft, white mist. In the distance, rolling mountains are visible under a pale, overcast sky. A large, semi-transparent green triangle is positioned in the lower-left corner, pointing towards the center of the page. The text 'Chapter 4: Recreation, Roads, and Access' is written in white, sans-serif font within this green area.

Chapter 4: Recreation, Roads, and Access

Recreation, Roads and Access

In recent years, almost 90% of the Mendocino National Forest has been impacted by two large wildfires -- the 2018 Ranch Fire and 2020 August Complex Fire. Wildfires have affected Mendocino lands, watersheds, and resources, with implications for local communities. Managers are faced with decisions about what to prioritize in recovery efforts, how to enhance forest resilience, and where to target new recreation investments. This chapter summarizes data from the Mendocino Postfire Public Engagement effort related to outdoor recreation, roads, and forest access.

Effect of wildfire on forest visitation

We asked how two recent large wildfires affected visits to the Mendocino National Forest (Table 3). Nearly 42% of public engagement participants indicated that they have decreased their visitation to the Mendocino National Forest since the recent wildfires and 5% no longer visit the forest at all. More than one-third (38%) said that the recent wildfires had not changed their visitation patterns, while 16% indicated that their visits had increased.

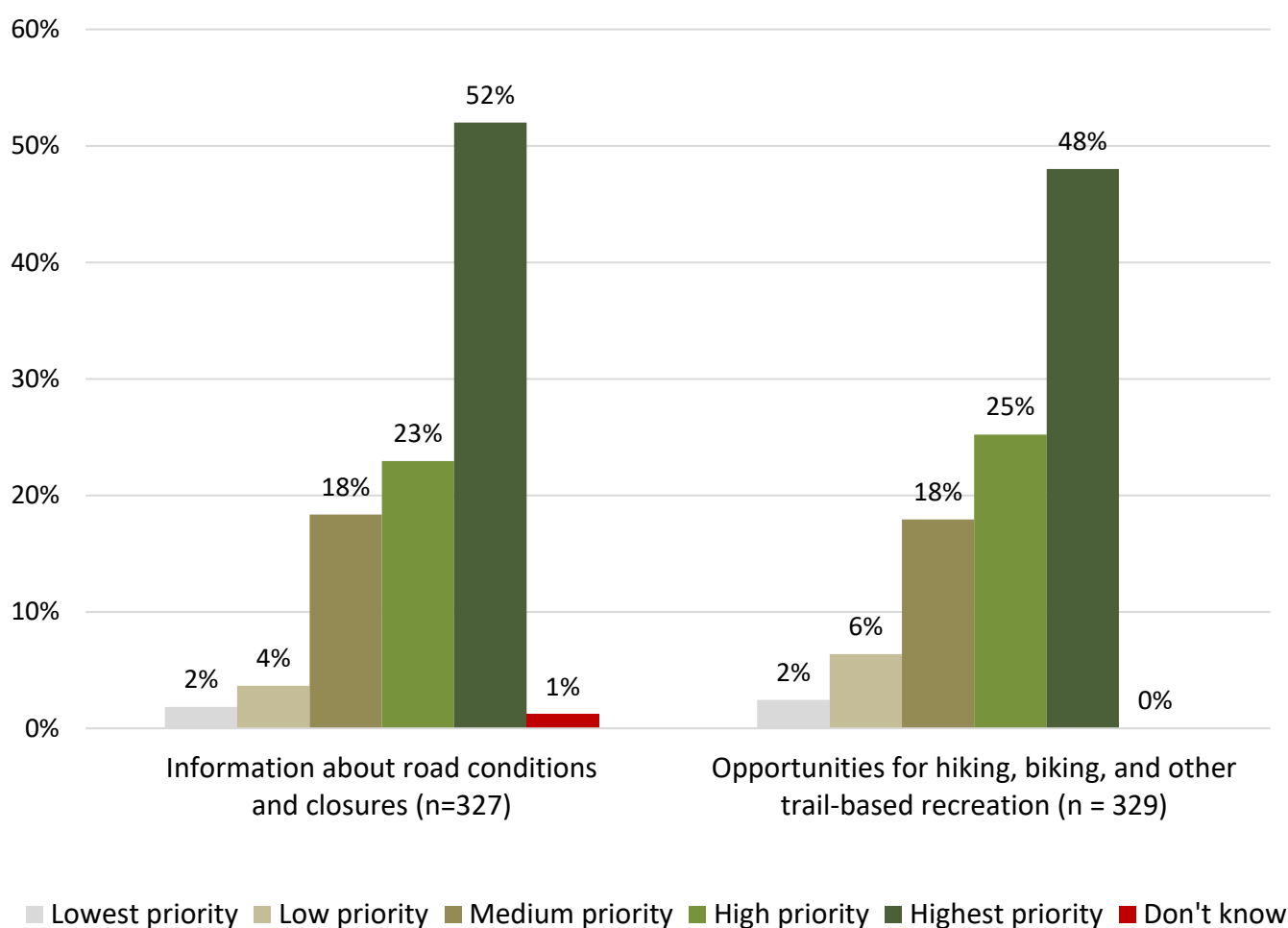
Table 3. Effect of the recent large wildfires on forest visitation to the Mendocino National Forest (n=329)

Visitation change	No.	Pct.
I have increased my visitation to the Mendocino National Forest since the two wildfires	51	15.5%
I have decreased my visitation to the Mendocino National Forest since the two wildfires	136	41.3%
I no longer visit the Mendocino National Forest	17	5.2%
No change	125	38.0%
Blank or N/A	201	

Importance of roads and recreation

Public engagement participants were asked to assess the degree of importance of various types of information related to the Mendocino National Forest. Three-fourths (75%) of respondents said that *information about road conditions and closures* was either highest-priority or high priority (Figure 11). Similarly, *opportunities for hiking, biking, and trail-based recreation* also was of highest or high priority for nearly three-quarters of respondents.

Figure 11. Importance of road conditions and recreation opportunities

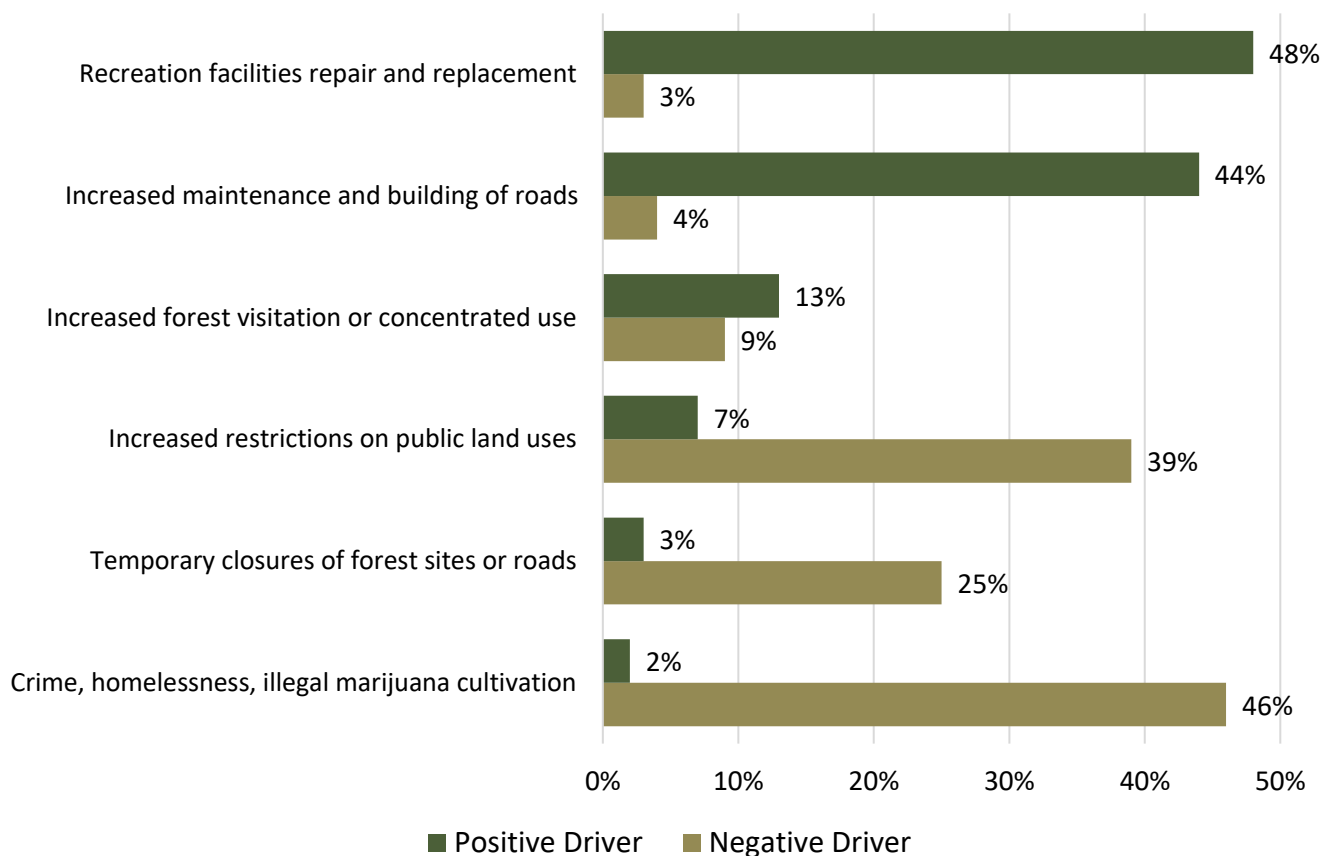


Drivers of change related to recreation and public use

Participants were asked to identify drivers of change that either positively or negatively affected their experiences on the Mendocino National Forest (Figure 12). For this analysis, we reflected only on drivers of change associated with recreation, roads, or public use. We observed that *increased maintenance and building of roads* and *recreation facilities, repair and replacement* were both strong positive drivers mentioned by close to half of respondents (44% and 48%, respectively).

Strong negative drivers of change included *crime, homelessness, and marijuana cultivation* (46%) and *increased restrictions on public land uses* (38%). Perceptions of *increased forest visitation or concentrated use* did not emerge as a strong positive or negative driver.

Figure 12. Drivers of changes associated with recreation and public use

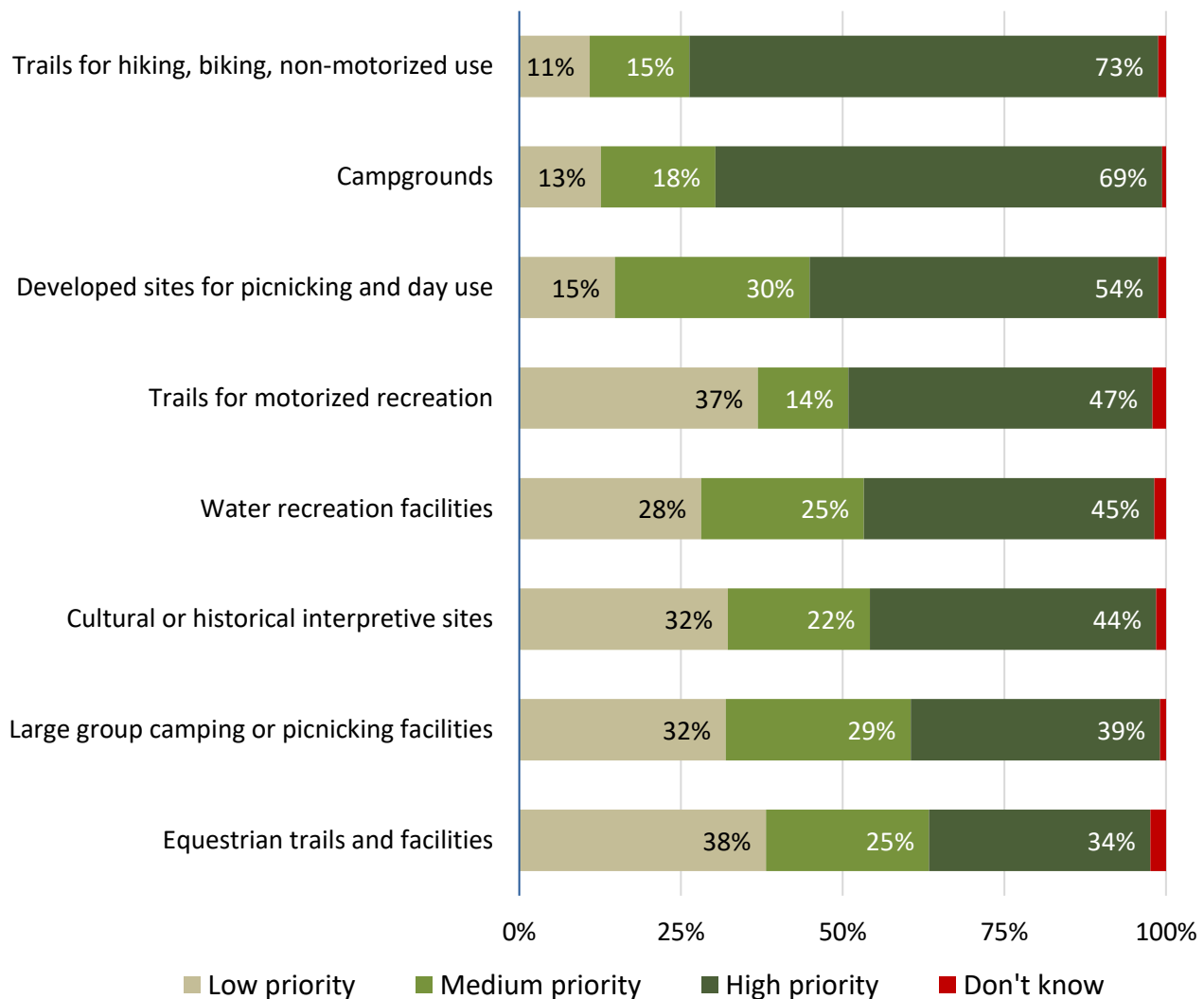


Areas of future recreation investment

Participants were asked to identify priorities for future recreation investment on the Mendocino National Forest from scale of 1 to 5, with 5 being the highest priority and 1 being the lowest (Figure 13). We collapsed categories for this analysis.

Nonmotorized trails were identified as a high priority by nearly three-fourths (73%) of participants. This was followed by campgrounds (69%), and day use sites (54%). Support for motorized trails was split with 38% suggesting that this was a low priority and 47% indicating a high priority. There was substantial support for all recreation investments across all categories with at least one-third of respondents indicating 'high priority' for each item.

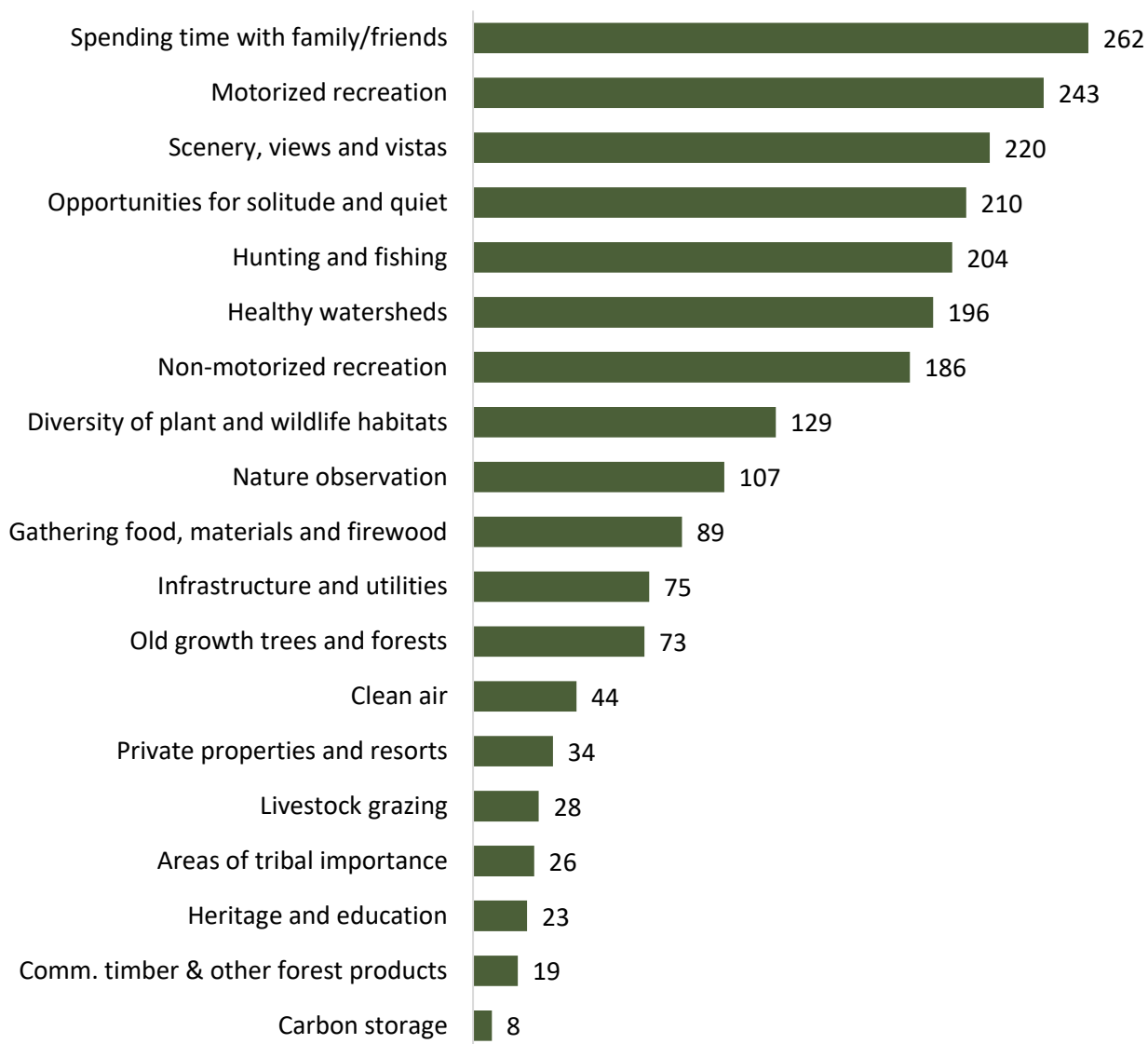
Figure 13. Preferences for future recreation site investments



Forest benefits associated with important forest locations

Respondents were asked to identify places on the Mendocino National Forest that were important to them and to identify the most important benefits associated with these places (Figure 14). In total, 342 individuals mapped 814 locations across the national forest. Frequent benefits identified by respondents included *opportunities to spend time with family and friends* and *motorized recreation* followed by *scenic views*, *hunting and fishing*, *opportunities for solitude*, *healthy watersheds*, and *nonmotorized recreation*.

Figure 14. Benefits associated with mapped locations



Mapping forest locations for recreation use

Respondents assigned forest benefits to places on the map. The next series of figures are maps of the Mendocino National Forest that highlight areas associated with certain benefits. The spatial analysis includes 814 points from 881 valid submissions.¹

These maps are created using the kernel density method, which uses a kernel function to show the intensity of points across an area. The scale on the right of each figure indicates colors associated with the relative response densities, ranging from lower to higher. In Figures 15 to 20, yellow represents higher response density. Areas on the map that do not show any color are areas that were not mentioned with relative frequency.



¹ Of the 881 places submitted, some could not be associated with a single location and were not mapped. For example, some respondents submitted responses associated with the whole forest, or all OHV trails within the forest.

‘Top-5’ Locations summary for recreation benefits

We summarize the ‘top-5’ locations mentioned for each of the six featured forest benefits associated with outdoor recreation and public visitation. In some categories more than five locations are mentioned, due to ties, while in other cases, there was not a fifth location with an adequate response volume.

Spending time with friends & family (Figure 16)

- Lake Pillsbury area (n = 41)
- Penny Pines area (n = 26)
- Davis Flat area (n = 23)
- Plaskett Meadows area (n = 13)
- Letts Lake area (n = 12)

Motorized recreation (Figure 17)

- Penny Pines area (n = 43)
- Davis Flat area (n = 34)
- Lake Pillsbury area (n = 32)
- Letts Lake area (n = 13)
- Hull Mountain area (n = 12)

Quiet & solitude (Figure 18)

- Lake Pillsbury area (n = 27)
- Plaskett Meadows area (n = 17)
- Yolla-Bolly Eel Wilderness (n = 17)
- Snow Mountain Wilderness (n = 19)
- Howard Lake area (n = 7)

Hunting and fishing (Figure 19)

- Lake Pillsbury area (n = 45)
- Plaskett Meadows area (n = 18)
- Letts Lake area (n = 13)
- Howard Lake area (n = 10)
- Snow Mountain Wilderness (n = 10)

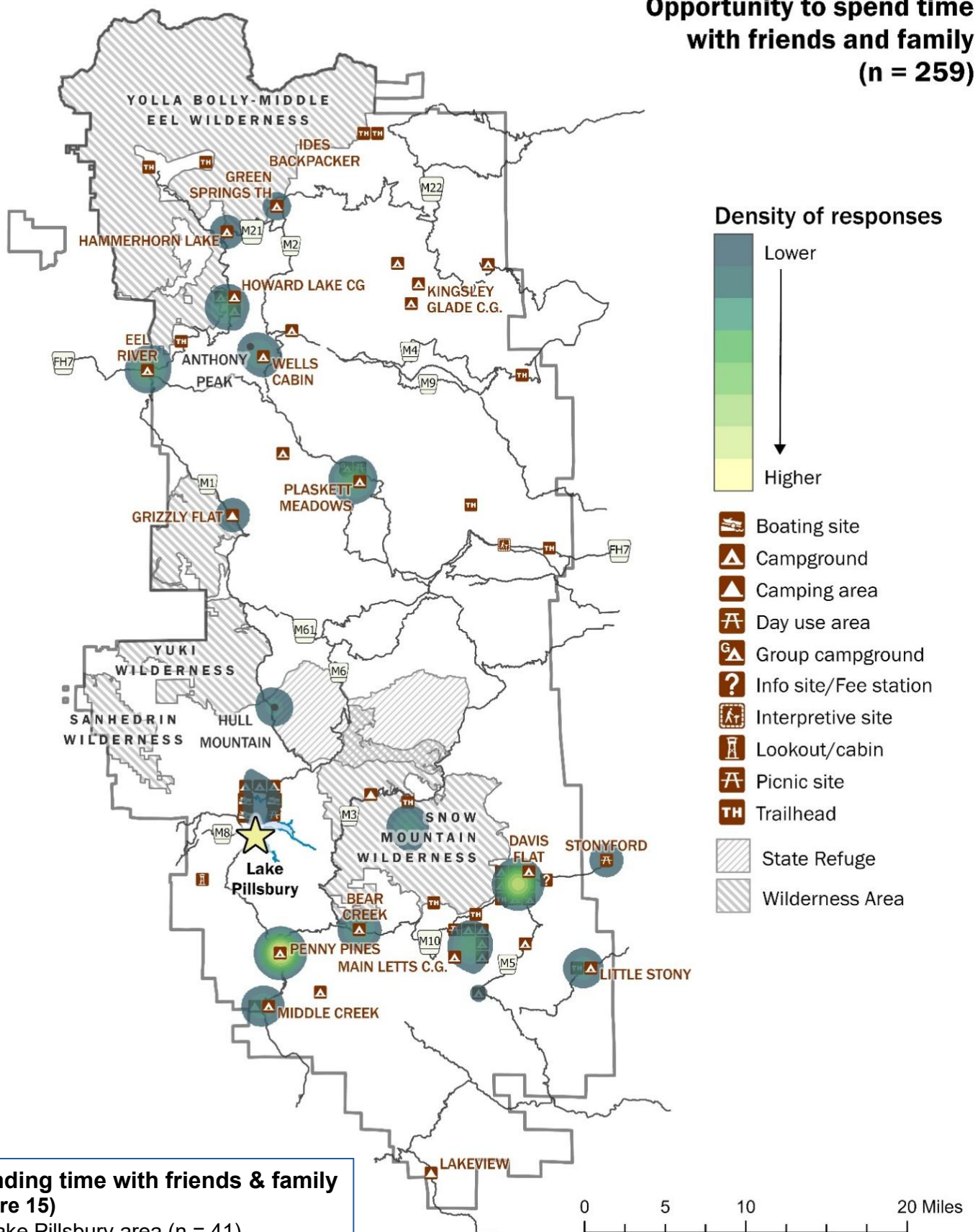
Nonmotorized recreation (Figure 20)

- Lake Pillsbury area (n = 31)
- Penny Pines area (n = 17)
- Snow Mountain Wilderness (n = 13)
- Plaskett Meadows area (n = 10)
- Davis Flat area (n = 9)

Nature observation (Figure 21)

- Lake Pillsbury area (n = 20)
- Snow Mountain Wilderness (n = 17)
- Bear Creek (n = 7)
- **none*
- **none*

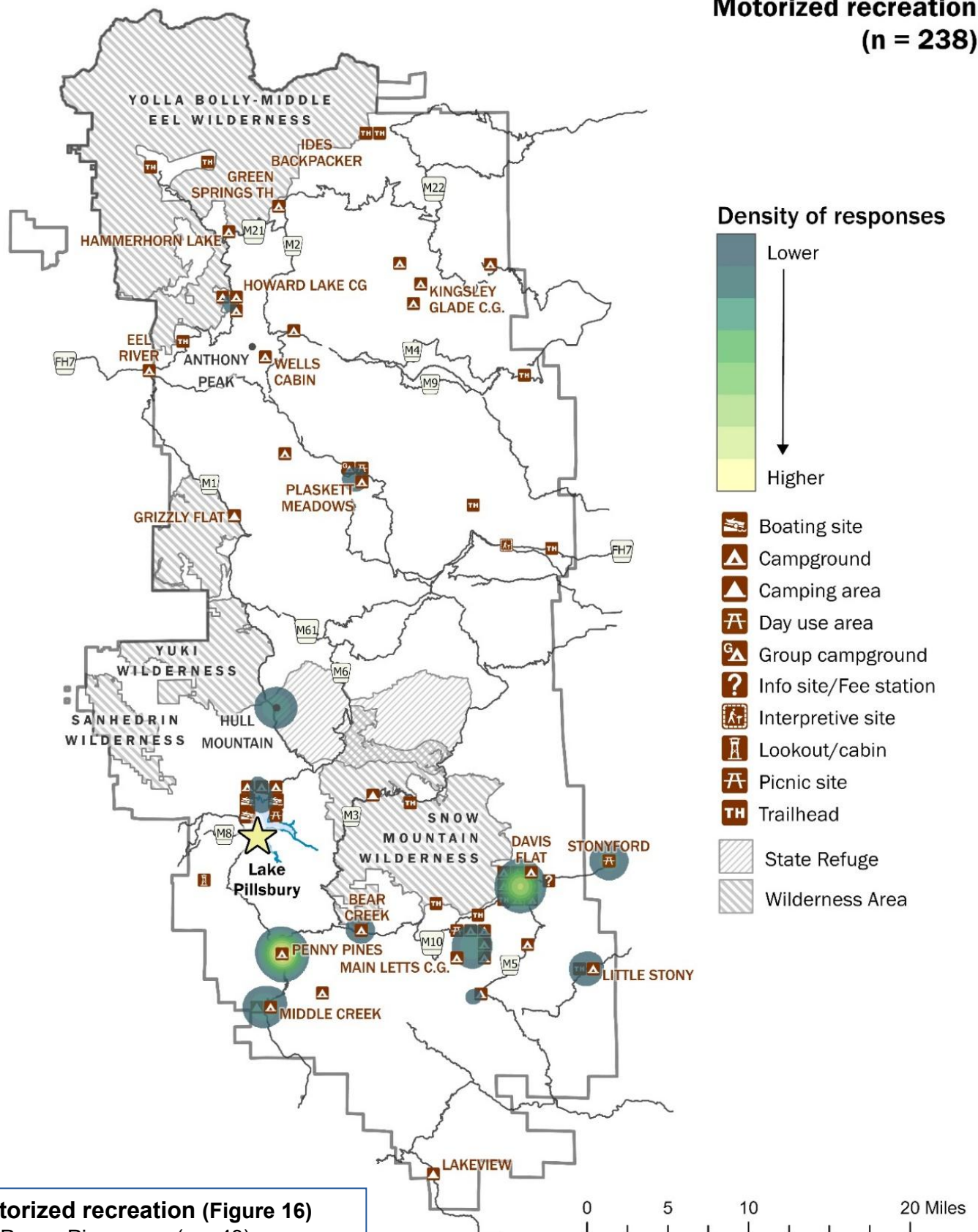
Opportunity to spend time with friends and family (n = 259)



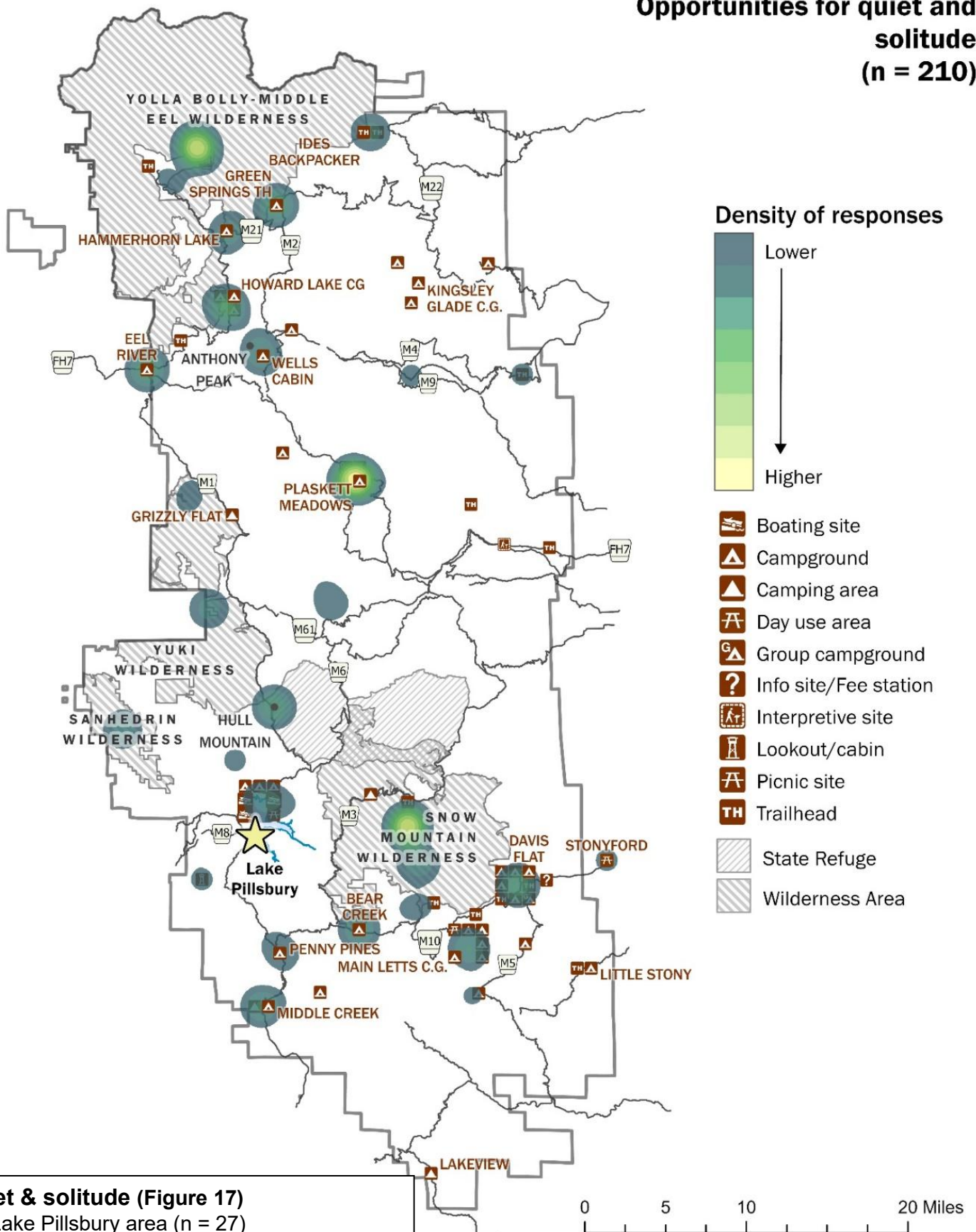
Spending time with friends & family (Figure 15)

- Lake Pillsbury area (n = 41)
- Penny Pines area (n = 26)
- Davis Flat area (n = 23)
- Plaskett Meadows (n = 13)
- Letts Lake area (n = 12)

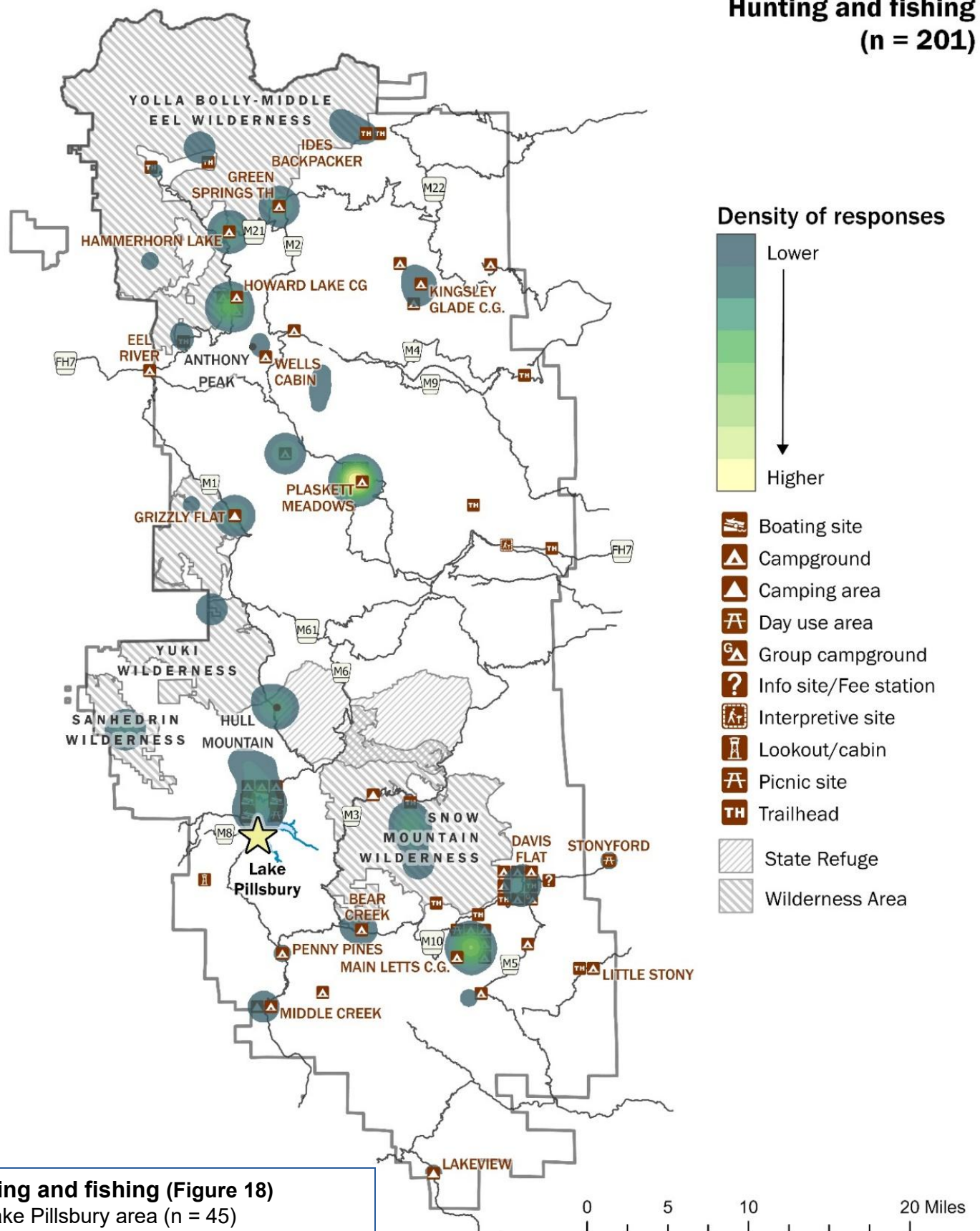
Motorized recreation (n = 238)



Opportunities for quiet and solitude (n = 210)



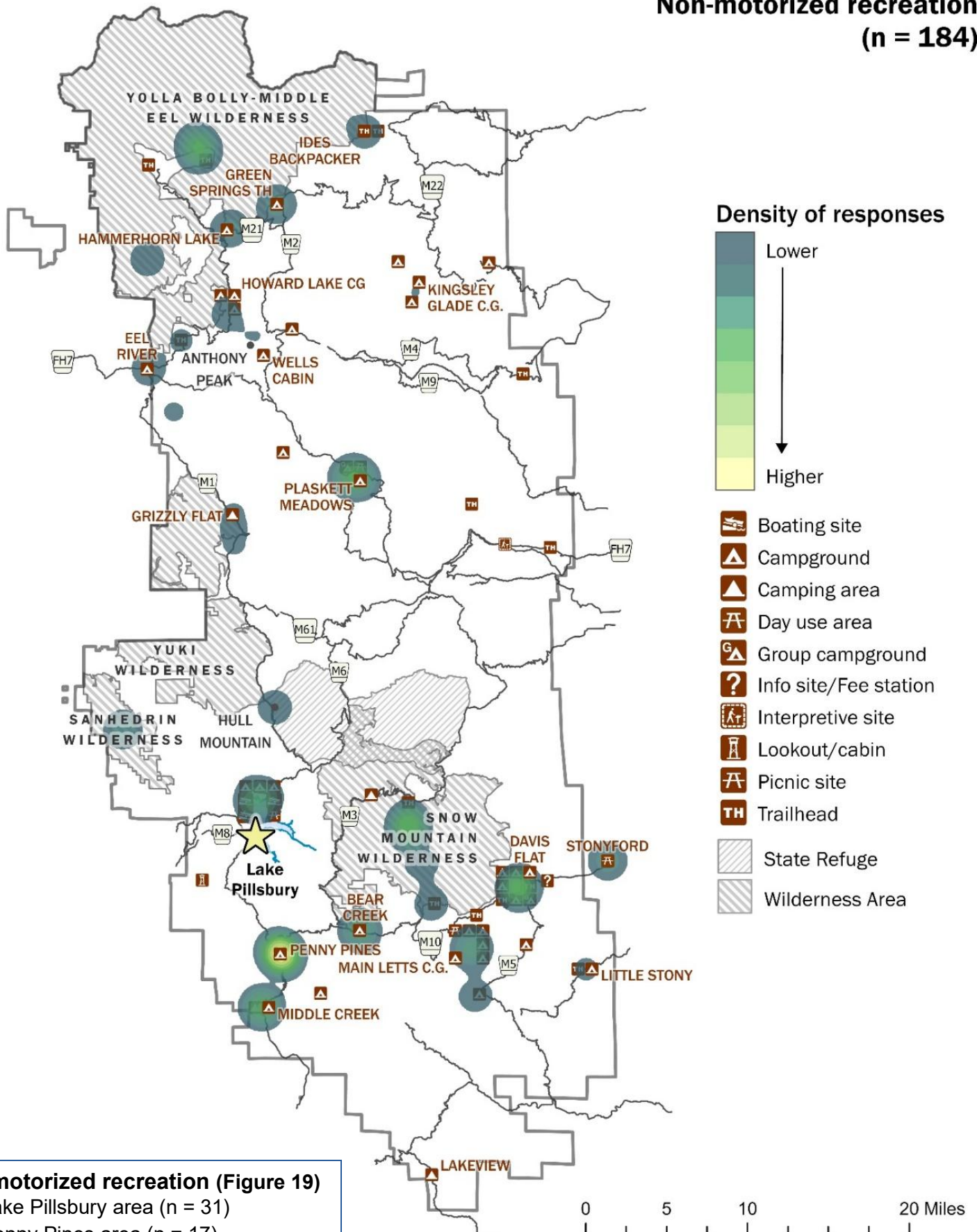
Hunting and fishing (n = 201)



Hunting and fishing (Figure 18)

- Lake Pillsbury area (n = 45)
- Plaskett Meadows area (n = 18)
- Letts Lake area (n = 13)
- Howard Lake area (n = 10)
- Snow Mountain Wilderness (n = 10)

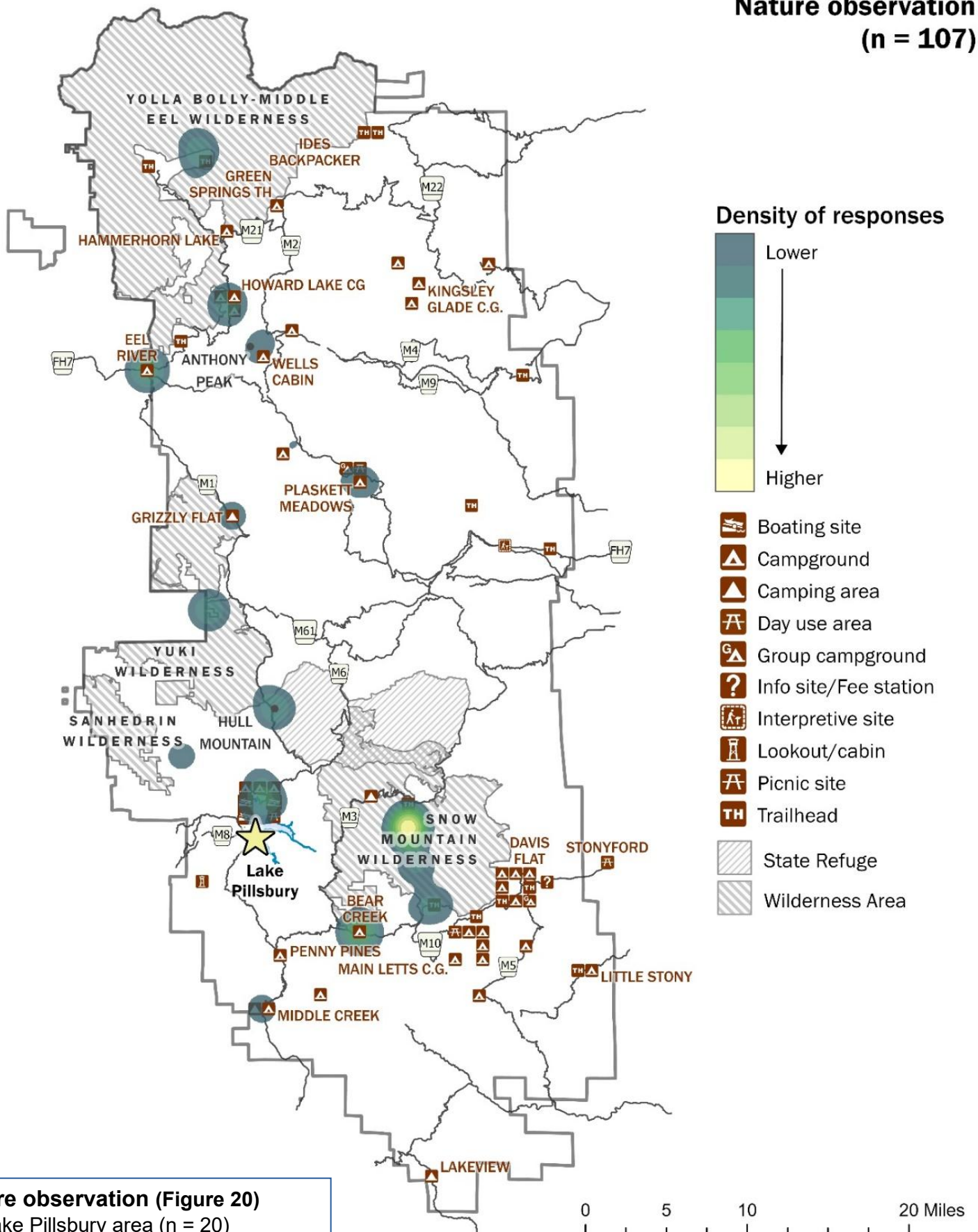
Non-motorized recreation (n = 184)



Nonmotorized recreation (Figure 19)

- Lake Pillsbury area (n = 31)
- Penny Pines area (n = 17)
- Snow Mountain Wilderness (n = 13)
- Plaskett Meadows area (n = 10)
- Davis Flat area (n = 9)

Nature observation (n = 107)



Nature observation (Figure 20)

- Lake Pillsbury area (n = 20)
- Snow Mountain Wilderness (n = 17)
- Bear Creek (n = 7)
- **no other areas with 5 or more points*

Mapping drivers of change for recreation

Public engagement participants identified drivers of change that affected their ability to obtain forest benefits. For this report, we identified several drivers associated with recreation and other public use. For each we have noted frequency of mention and provided maps indicating where these drivers were identified. For figures 21 to 24, bright pink represents a higher response density. Areas on the map showing no color are areas that were not mentioned with relative frequency.

‘Top-5’ Locations summary for drivers of change

We summarize the ‘top-5’ locations mentioned for each of the four featured drivers of change associated with outdoor recreation and public visitation.

Temporary closure of sites and roads (Figure 22)

- Lake Pillsbury area (n = 35)
- Penny Pines area (n = 20)
- Davis Flat area (n = 13)
- Snow Mountain Wilderness (n = 13)
- Hull Mountain (n = 11)

Increased restrictions on public land uses (Figure 23)

- Lake Pillsbury area (n = 38)
- Penny Pines area (n = 17)
- Davis Flat area (n = 16)
- Letts Lake area (n = 12)
- Bear Creek (n = 7)

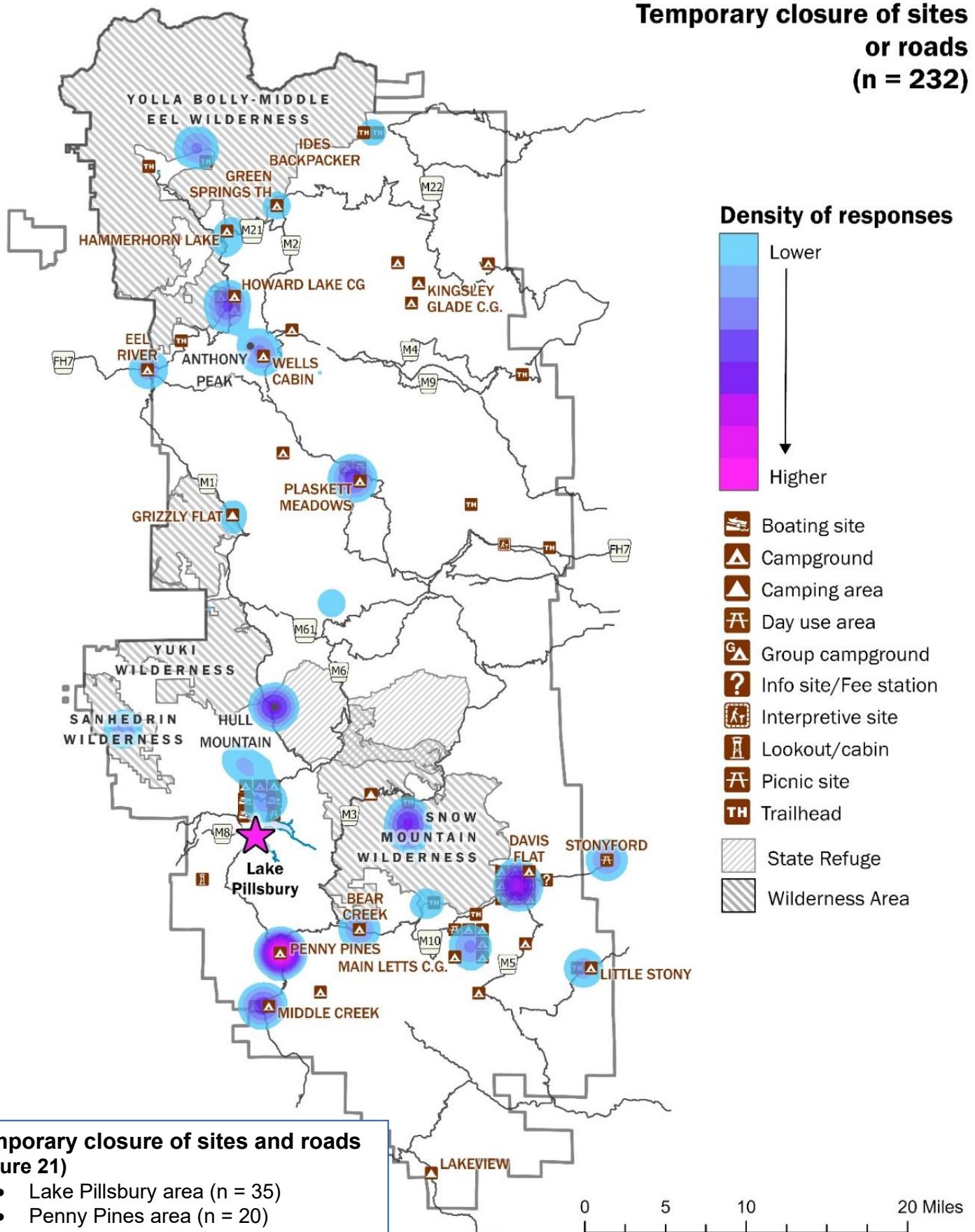
Recreation facilities, repair and replacement (Figure 24)

- Lake Pillsbury area (n = 24)
- Snow Mountain Wilderness (n = 12)
- Plaskett Meadows area (n = 9)
- Penny Pines area (n = 8)
- Davis Flat area (n = 7)

Crime, homelessness or illegal marijuana cultivation (Figure 25)

- Lake Pillsbury area (n = 12)
- Davis Flat area (n = 10)
- Snow Mountain Wilderness area (n = 9)
- Eel River (n = 8)
- Penny Pines area (n = 7)

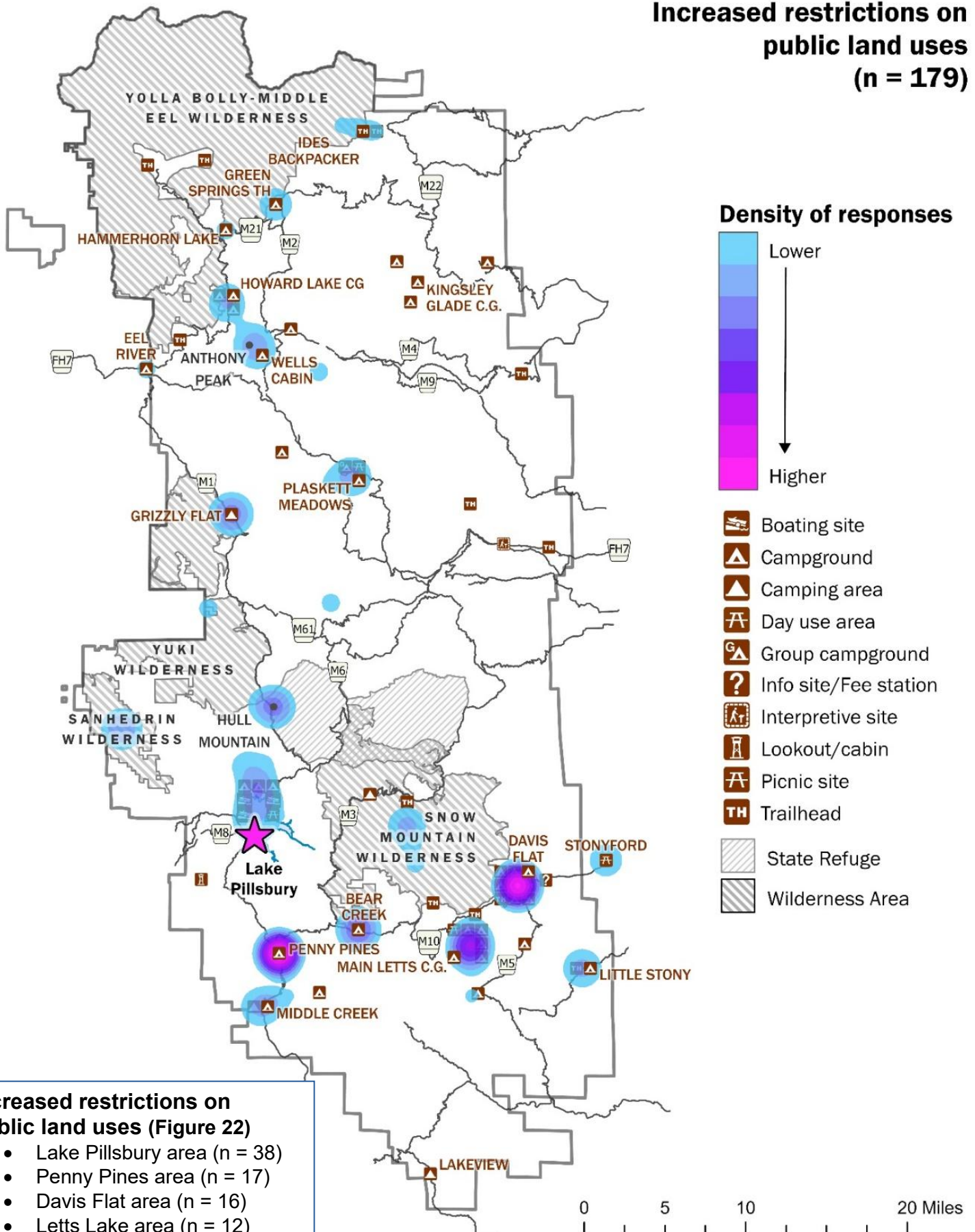
Temporary closure of sites or roads (n = 232)



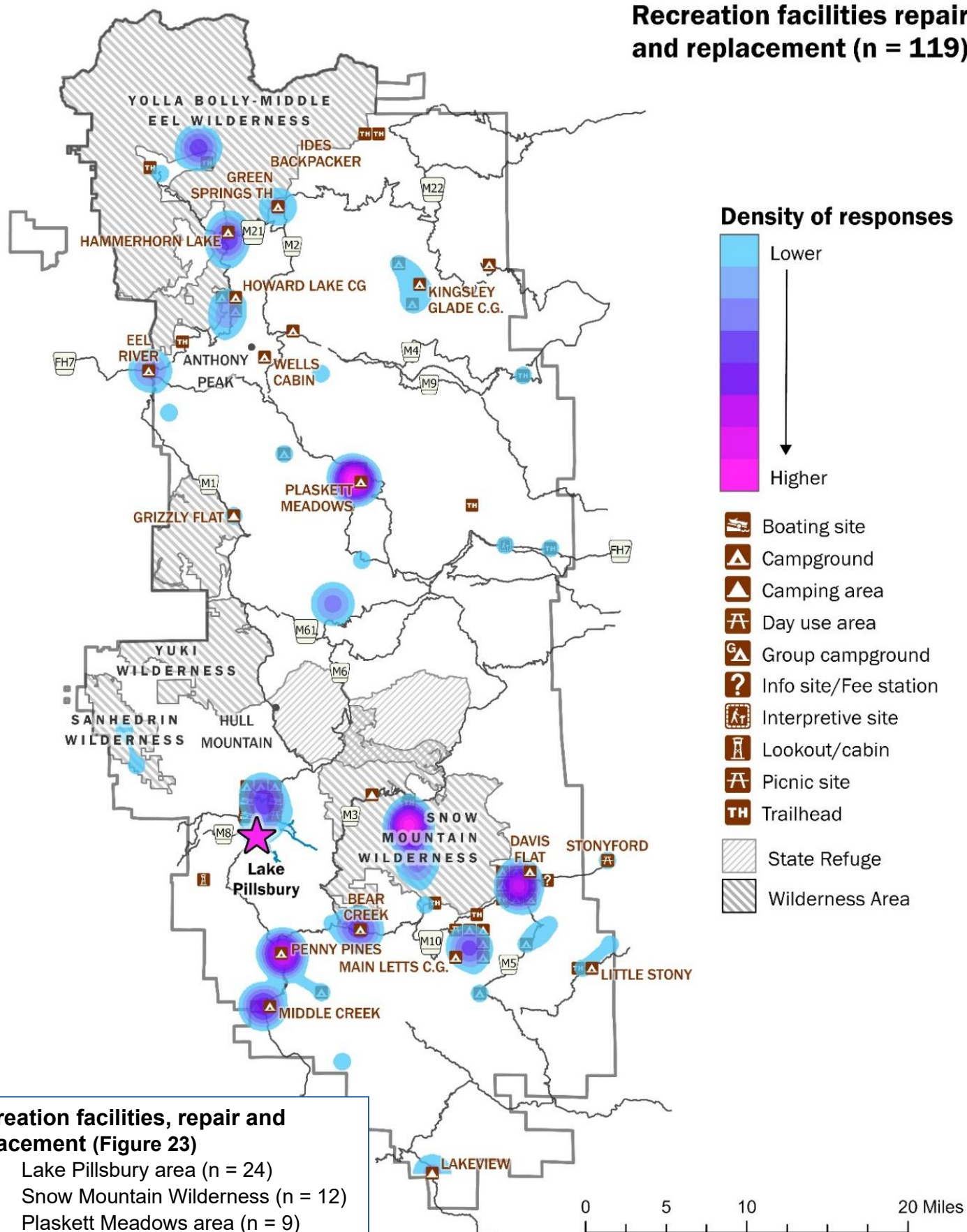
Temporary closure of sites and roads (Figure 21)

- Lake Pillsbury area (n = 35)
- Penny Pines area (n = 20)
- Davis Flat area (n = 13)
- Snow Mountain Wilderness (n = 13)
- Hull Mountain (n = 11)

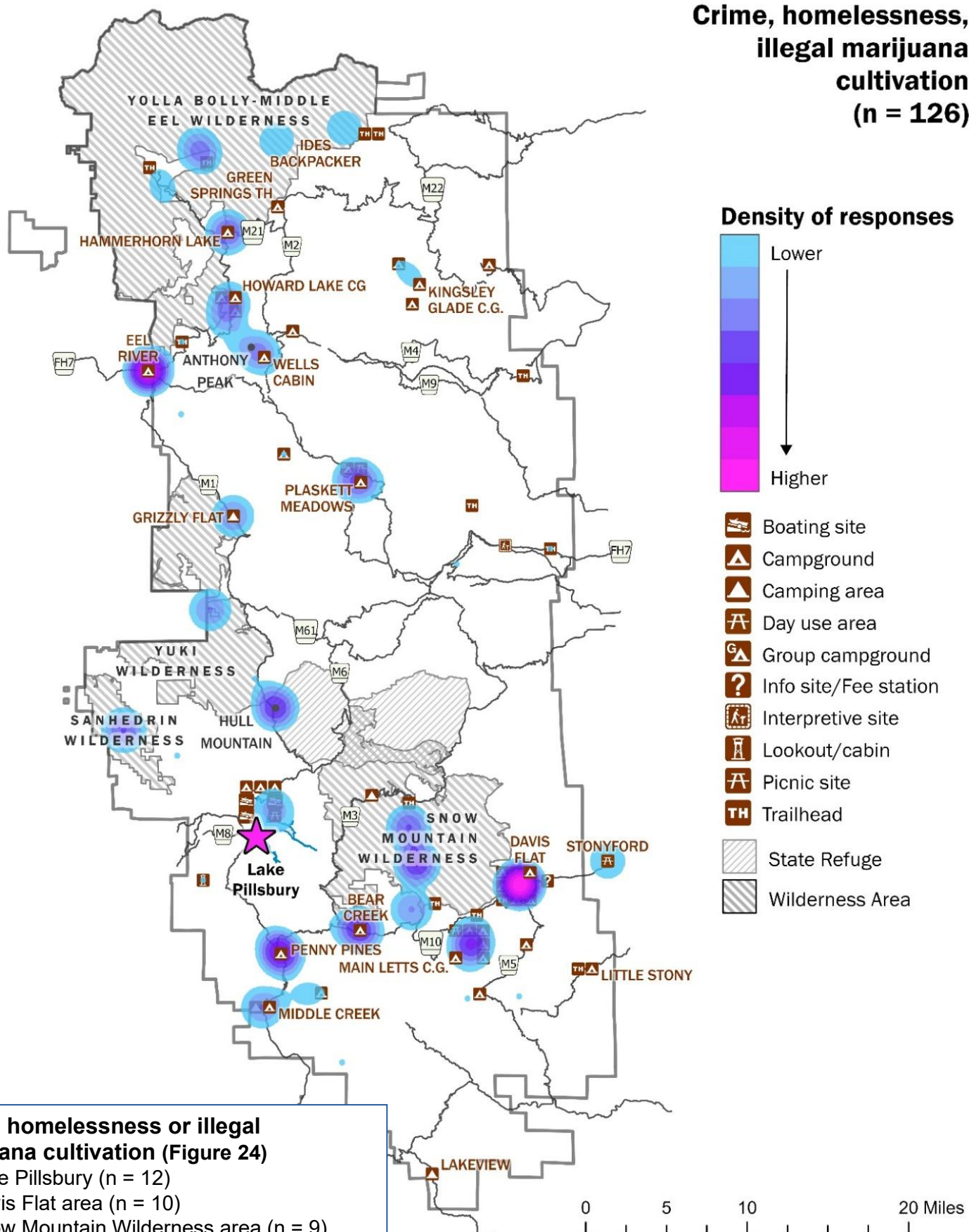
Increased restrictions on public land uses (n = 179)



Recreation facilities repair and replacement (n = 119)



Crime, homelessness, illegal marijuana cultivation (n = 126)



Summary of maps: Key observations of recreation patterns and drivers of change

1. **Lake Pillsbury area was the most frequently named site overall** and caters to diverse recreation uses, including social time with family and friends, non-motorized recreation, solitude, hunting and fishing, and nature observation. Lake Pillsbury appears to have 'something for everyone.' Visitors to Lake Pillsbury were very concerned about temporary road and site closures, public land use restrictions, repair or replacement of recreation facilities, and crime/public safety.
2. **Sites that cater to both motorized and nonmotorized use** include Penny Pines and Lake Pillsbury, as well as Davis Flat. In all of three of these areas, participants were concerned about restrictions on public use and temporary closures of roads and sites. Motorized recreation also was associated with Letts Lake and the Hull Mountain area.
3. **Plaskett Meadows and Snow Mountain Wilderness** were both associated with opportunities for solitude, hunting and fishing, and non-motorized recreation, as well as spending time with friends and family. Visitors to Plasket Meadows and Snow Mountain Wilderness were concerned about the need for recreation facilities repair and replacement. Crime and public safety were also noted as a concern in Snow Mountain Wilderness.
4. **Letts Lake** was identified as an important area for hunting and fishing, motorized recreation, and spending time with friends and family. Some participants were concerned about increased restrictions on public land use in this area.



The background image is a misty forest landscape. In the foreground, several tall, dark green evergreen trees stand prominently. The middle ground is filled with a dense forest of similar trees, partially obscured by a light mist or fog. In the background, rolling mountains are visible under a pale, overcast sky. The entire image is overlaid with a large, semi-transparent green geometric shape that resembles a stylized mountain or a large letter 'V'. This shape is positioned such that it frames the text in the bottom left corner and extends towards the top right of the page.

Chapter 5: Participant Background

Participant Background

Participants (in workshops or online) had a diversity of demographic characteristics and had varying experience with past public involvement on the Mendocino National Forest.

Demographic characteristics

- **Affiliation.** Most participants (87%) described themselves as private citizens or community members (Table 4). Forest landowners or in-holders made up 13% of participants. Fewer than 10% were business owners (9.7%), representatives of governmental (8.6%) or nongovernmental (8.3%) agencies, tribal members (3.8%), or elected officials (1.2%). (Participants could check multiple boxes.)
- **Gender, ethnicity and race.** Participants were 65% male (Table 5) and 69% White (Table 6). About 8% of participants described themselves as Hispanic (Table 7).
- **Age and length of residence.** The age distribution was diverse, with 11% of participants under age 30, 37% between 30 and 49, 36% between 50 and 69, and 17% age 70 or older (Table 8). Participants had lived in the area for various lengths of time, but a good portion (43%) had lived in the area for more than 35 years (Table 9). Meanwhile, 8.4% were new to the area, having lived there five years or fewer.
- **Income and education levels.** Income levels were evenly distributed, with one-third of participants (37%) making less than \$100,000 annually and 13% making greater than \$200,000 annually (Table 10). Education levels (highest level completed) were also evenly distributed (Table 11). Specifically, 42% had a high school diploma or associate's degree, 29% had earned a Bachelor's degree, and 18% had earned something beyond a Bachelors' degree.

Previous public involvement

- **Prior engagement.** For 54% of participants this was their first time participating in a public meeting or providing input to the forest, while 37% had previously engaged with the forest, and 9% were not sure. More online participants reported that this was the first time getting involved in a public process with the Mendocino National Forest.
- **Online media platforms.** Participants reported using a range of online media sources. YouTube was the most used platform, with 77% of participants reporting they consumed and/or shared content on this site, followed by Facebook (76%). For content only, online local and national news outlets were the second and third most platforms used. Community sharing sites and X (Twitter) were each used by less than 20 percent.

Table 4. Affiliations of public engagement participants (n=330)

Affiliation	Number	Pct.
Private citizen or community member	287	87.2%
Forest landowner or in-holder	42	12.8%
Business owner	33	10.0%
Government agency representative	28	8.5%
Non-governmental organization representative	27	8.2%
Tribal member	13	4.0%
Public/elected official	4	1.2%
Other	11	3.3%

Table 5. Gender of public engagement participants (n = 324)

Gender	Number	Pct.
Male	209	64.5%
Female	97	29.9%
Other	1	0.3%
Prefer not to respond	17	5.2%

Table 6. Race of public engagement participants (n=312)

Race	Number	Pct.
White	219	69.1%
Two or more races	25	7.9%
American Indian or Alaska native	9	2.8%
Black or African American	0	0.0%
Other	14	4.4%
Prefer not to respond	45	14.2%

Table 7. Percentage of Hispanic participants (n=317)

Hispanic	Number	Pct.
Hispanic	25	7.9%
Not Hispanic	292	92.1%

Table 8. Age of public engagement participants (n=291)

Age	Number	Pct.
Less than 30	32	11.0%
30 - 49	107	36.8%
50 - 69	106	36.4%
70 or older	46	15.8%



Table 9. Years lived in the area for public engagement participants (n=301)

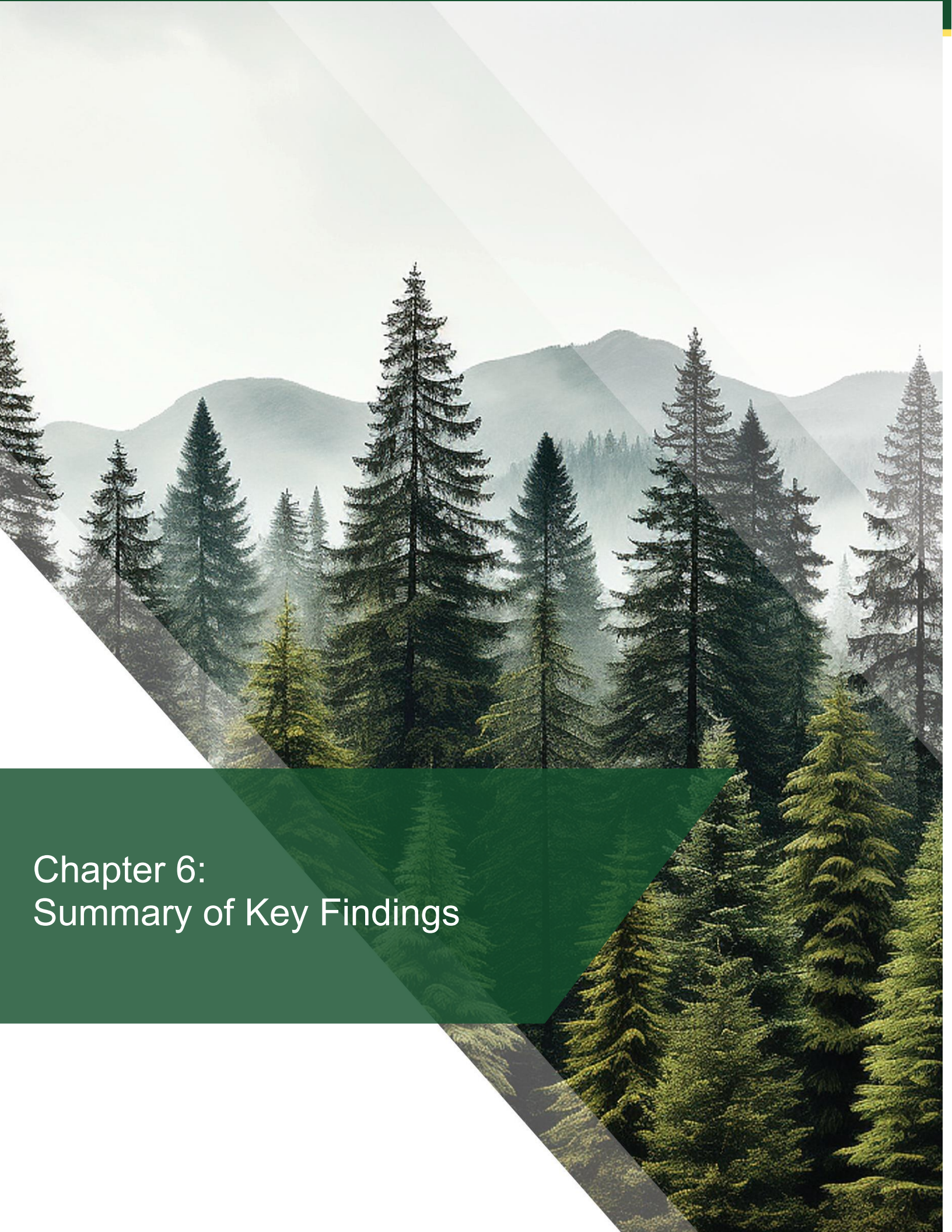
Years living in the area	Number	Pct.
5 years or less	23	7.6%
6 to 15 years	39	13.0%
16 to 25 years	52	17.3%
26 to 35 years	59	19.6%
36 to 45 years	46	15.3%
More than 45 years	82	27.2%

Table 10. Annual income levels public engagement participants (n=314)

Annual income	Number	Pct.
Less than \$50,000	46	14.6%
\$50,000 to \$99,999	70	22.3%
\$100,000 to \$149,999	60	19.1%
\$150,000 to \$199,999	39	12.4%
\$200,000 or more	42	13.4%
Prefer not to respond	57	18.2%

Table 11. Education levels of public engagement participants (n=319)

Education level	Number	Pct.
High school graduate or equivalent (GED)	71	22.3%
Associate's degree or technical diploma	64	20.1%
Bachelor's degree	94	29.5%
Master's degree	37	11.6%
Professional degree	10	3.1%
Doctoral degree	12	3.8%
Prefer not to respond	13	4.1%
Other	12	3.8%
Not applicable	6	1.9%

The background image is a misty forest landscape. In the foreground, several tall, dark green evergreen trees are visible, their needles appearing soft and detailed. The trees are scattered across the frame, with some in sharp focus and others slightly blurred by the mist. In the background, rolling mountains are visible, their peaks softened by a thick layer of white mist or fog. The sky is a pale, overcast grey. Overlaid on this image is a large, dark green geometric shape, specifically a large triangle pointing downwards, which serves as a background for the chapter title. The title is written in a clean, white, sans-serif font.

Chapter 6: Summary of Key Findings

Forest Benefits and Drivers of Change

The prioritization of forest benefits revealed that each of the 19 benefits were named ‘most important’ by at least one participant, and each benefit was named ‘least important’ by at least one person, demonstrating that the Mendocino National Forest contributes to a diverse array of benefits to people. Analyzed collectively, we found that *healthy watersheds, non-motorized recreation, old growth trees and forests, hunting and fishing, habitat diversity, and spending time with friends and family* were most preferred benefits overall.

When asked about drivers of change, active management approaches, such as prescribed fire, maintenance of roads and recreation facilities, vegetation thinking and restoration were generally viewed positively. Drivers less favorably considered included high severity wildfire, crime, land use restrictions and site and road closures.

Our analysis of forest benefit preferences revealed five groups, each with shared viewpoints and orientations. We labelled the five groups: ecological, recreation, multiple use, access-property, and social. Despite these different orientations to the Mendocino National Forest, we found consensus around the importance of healthy watersheds and hunting and fishing.

Given the five shared groups with divergent priorities, there are likely no fire and fuel restoration strategies that will be universally embraced. Consideration of proposed restoration strategies and alignment of their associated benefits with the five distinct groups could help forest officials identify partners and predict constraints. It helps when managers look for areas of agreement when considering future planning decisions or management actions.



Wildfire and Fuels Reduction

Just one in five public engagement participants were familiar with the Prescribed Fire and Fuels Management Strategy, yet most had distinct preferences for fire and fuels treatments. When thinking about the future of the Mendocino National Forest, participants prioritized firefighter safety during active fire suppression, prescribed fire to reduce future wildfire risk, and wanted to see real-time information about wildfire containment and risk. To a lesser extent, they supported information about wildfire closures.

When asked about the acceptability of various fire and fuel treatments, (e.g., thinning, strategic fuel breaks, prescribed fire, grazing, etc.) at least 50 percent found all proposed actions acceptable. The only predominantly unacceptable strategy was 'taking no action.'

Prescribed fire as well as thinning, pruning and reducing vegetation were considered positive drivers of change affecting participants' abilities to render benefits from the forest, while high-severity wildfire was flagged as a negative driver, followed by road and trail closures and flooding.

Areas of concern for high-severity wildfire corresponded to areas of high visitation, such as Lake Pillsbury, Penny Pines, Davis Flat, Plasket Meadows, and the Snow Mountain Wilderness. Relatedly, public participants were especially concerned about road and site closures due to wildfire at Lake Pillsbury, Penny Pines, and Davis Flat, among others.



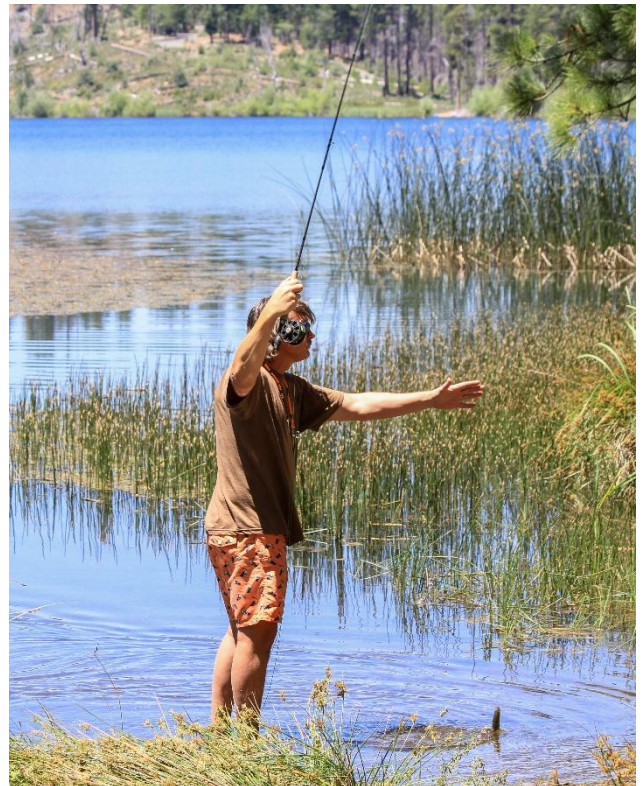
Recreation, Roads and Access

Wildfires have caused changes to forest visitation. Close to half (46%) of participants said that they visit the forest less often (or no longer at all) compared to pre-wildfires. Members of the public are very eager to have information about road conditions (including repairs), and road closures. Many participants expressed a desire to know when roads impacted by wildfire would be re-opened for public use.

Investment in recreation facilities and road maintenance were viewed as positive contributors to forest experiences. Land use restrictions and public safety concerns (crime, homelessness, illegal cultivation) detracted from forest experiences. Recreation facilities most desired by the public include motorized and non-motorized trails, campgrounds, and day use sites.

With the mapping activity, participants identified important places in the Mendocino National Forest and forest benefits associated with those places. The most common benefits mentioned were: *the opportunity to spend time with family and friends; motorized recreation; viewing scenery; hunting and fishing; and solitude*. It is noteworthy that when participants prioritized forest benefits across the entire forest, they mentioned healthy watersheds, non-motorized recreation, and old growth as priority benefits, yet when it came to benefits associated with important sites on the forest, a different benefits list emerged that emphasized social, recreational, and aesthetic aspects.

The mapping activity resulted in the identification of numerous sites important to participants, but there was widespread agreement about the most treasured sites. Lake Pillsbury was mentioned most often and was associated with a wide variety of recreation benefits (boating, fishing, motorized and non-motorized use). Other places frequently note include Penny Pines, Davis Flat, Snow Mountain Wilderness and Plaskett Meadows. Restoration and site remediation efforts focused on these high-priority areas will improve opportunities for people to obtain a variety of benefits.



Conclusion

We conducted a public engagement effort for the Mendocino National Forest to better understand public preferences for post-fire restoration and to identify forest benefits and perceived drivers of change. In the end, 578 people either attended a community workshop in person or logged on to participate in a virtual engagement option. This dual approach (in-person and on-line) was designed to elicit input from residents and resource users of the Mendocino National Forest far and wide. Our effort focused on identifying public preferences for strategic forest management actions to reduce wildfire risk, as well as the prioritization of forest benefits and identification of positive and negative drivers of change affecting these benefits. We also asked participants to tell us about the sites and forest locations important to them across the national forest and to describe the benefits and drivers associated with those sites. The resulting information can inform forest officials engaged in efforts to plan future restoration activities to reduce wildfire risk to know what sites are especially valuable to people in the area and where road or site closures would affect the ability of people to visit these areas and obtain meaningful benefits. Moreover, our analysis revealed five distinct perspectives toward forest benefits, which can be helpful for planners to recognize. While each of the five groups may be differently impacted by proposed actions or drivers of change, there is shared agreement around some forest benefits that resonate across the five groups. Finding these areas of agreement can help managers develop strategies and alternatives that best align with public values.

