



2025

# Trails Plan

Draft for Public Comment

Comments are due by April 10, 2025

Comments can be sent to trailsplan@azstateparks.gov



#### **Acknowledgments**

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#### **Definitions and Terminology**

Access – The ability or right to approach, enter, or use a trail or trail system. In the context of trails, "access" typically involves the legal permissions, physical infrastructure, and management policies that allow people to reach and travel on a trail. Factors such as ownership (public vs. private), permits or fees, user designations, and land-management regulations often determine whether, how, and when a trail is accessible to the public.

Accessibility – The degree to which a trail or trail system can be safely and comfortably used by individuals of all abilities, including those with disabilities. In practice, accessibility depends on trail design standards (e.g., width, surface, grade), supporting amenities (e.g., rest areas, signage), and compliance with relevant laws (such as the Americans with Disabilities Act). An accessible trail aims to minimize physical or informational barriers, ensuring that a wide variety of users can experience and enjoy the trail.

**All-Terrain Vehicle (ATV)** – A motorized off-highway vehicle that commonly travels on four low-pressure tires, has a straddle seat, and is steered using handlebars. ATVs are designed to navigate a variety of terrains and are used for both recreational and work purposes.

**Backcountry or Wilderness Trail** – A trail located in remote or more natural settings with limited or no access to modern amenities such as restrooms, potable water, or structured parking. These trails are often used by backpackers, hikers, and other self-reliant users who are prepared for more rugged conditions.

**Core User** – A trail user who primarily uses either a non-motorized or motorized trail, defined as spending 50% or more of their total trail time engaged in that specific type of activity.

**Customer-Centric Approach** – Allows the public to select which media (e.g., online, mobile, phone) they prefer to use in participating in the study.

**Doubletrack** – A wider trail—often similar to an old road or utility corridor—that can typically accommodate side-by-side travel. Doubletrack is often more accessible for multiple users, including those requiring a broader, more stable surface.

**Electric Bike / E-Bike** – A bicycle equipped with an electric motor that can provide propulsion or assistance while pedaling, including electric-assist mountain bikes (eMTBs). Depending on local regulations, e-bikes may be classified under non-motorized or motorized use.

**Frontcountry** – Areas that are easily accessible by paved roads, often feature day-use recreation amenities, and are typically located near developed sites such as visitor centers, campgrounds, or residential communities. Trails in frontcountry areas are often more developed and may cater to a broader range of user abilities.

**Greenway** – A linear open space or corridor, often following a natural or man-made feature such as a river, canal, or abandoned railway. Greenways typically connect parks, nature preserves, cultural sites, or communities and support non-motorized recreation such as walking and biking.

**Interpretive Trail** – A trail with educational signage or markers that explain natural, historical, cultural, or ecological features along the route. Interpretive trails often focus on enhancing visitor understanding of the surrounding environment.

**Land Manager** – An individual, agency, or organization responsible for the oversight, planning, building, maintenance, and regulation of public or private lands. Land managers typically address resource protection, infrastructure development, policy enforcement, and user education to ensure safe and sustainable use of the areas under their care, including trails, waterways, and other recreational facilities.

**Motorized Trail Use** – Use of any vehicle powered by an engine, electricity, or another source other than muscle or wind. Examples include off-road motorcycles, four-wheel drive vehicles, dune buggies, sand rails, tracked or wheeled all-terrain vehicles (ATVs), and vehicles that can travel on or glide above land or water. (Note: E-bikes may or may not be considered motorized, depending on local rules.)

**Multi-Use Trail** – A trail designated for use by multiple user groups, for example, hikers, cyclists, horseback riders, and sometimes off-highway vehicles (if specified). A multi-use designation often entails specific safety guidelines and shared-use etiquette to reduce conflicts among different types of users.

**Non-Motorized Trail Use** – Includes walking and hiking, backpacking, horseback riding, bicycling, jogging and running, cross-country skiing, and snowshoeing.

**Off-Highway Vehicles (OHV)** – Motorized vehicles that are operated primarily on unpaved trails and are designed, modified, or purpose-built for recreational, non-highway, all-terrain travel. These include tracked or wheeled vehicles, utility vehicles, all-terrain vehicles (ATVs), motorcycles, four-wheel drive vehicles, dune buggies, sand rails, amphibious vehicles, ground effects or air-cushion vehicles, and other forms of land transportation powered by an engine or by electricity, rather than muscle or wind.

Other Power-Driven Mobility Devices (OPDMD) — A term used primarily in the context of the Americans with Disabilities Act (ADA) to describe mobility devices powered by batteries, fuel, or other engines, used by individuals with mobility disabilities for the purpose of locomotion. OPDMDs may not necessarily be designed exclusively for use by individuals with disabilities but must be allowed under certain conditions to provide access for those who need them (e.g., Segways, golf carts).

**Path** – A path is typically a purpose-built or naturally formed route designated primarily for pedestrian and/or bicycle use. Paths are often associated with more developed or urban settings, may be paved or unpaved, and can serve both recreational and utilitarian (e.g., commuting) purposes.

**Side-by-Side** – A subcategory of UTV featuring adjacent seats for the operator and passengers, typically with seat belts, a roll bar, and at times enclosed cabins. Side-by-sides are built for off-road use and can vary widely in their speed, power, and intended terrain (e.g., utility vs. high-performance recreational models).

**Singletrack** – A narrow trail—often 12 to 18 inches wide—that only allows single-file travel. Commonly used by mountain bikers and hikers, singletrack trails tend to follow the natural contours of the landscape, requiring careful navigation.

Stratified Random Sample Survey (SRSS) – A sampling method in which the population is divided into subgroups and random samples are drawn from each subgroup. For this study, it refers to a sample of Arizona residents (ages 18+) in which each person has (as closely as possible) the same probability of being selected within their county or region of the state. This methodology enhances representation and allows one to make generalizations about the state of Arizona (e.g., participation rates, etc.) based on a smaller sample.

**Trail** – A pathway, on land or through water, used for either non-motorized or motorized recreational activities. Recreation trails do not include sidewalks, city streets, or rural highways.

**Trail Corridor** – The continuous space surrounding a trail, usually defined by a certain width, that is managed or maintained for recreational or conservation purposes. The trail corridor includes both the tread (the traveled surface) and the adjacent buffer areas.

**Trailhead** – A designated point of access to a trail, often features parking, signage, restrooms, or other amenities such as picnic tables or kiosks. Trailheads serve as entry and exit points and provide essential information (e.g., maps, rules, and safety advisories) to visitors.

**Tread** – The surface or footprint of the trail on which users actually travel. Tread materials can include native soil, gravel, asphalt, mulch, boardwalks, or any other prepared surface.

**Utility Terrain Vehicle (UTV)** – Sometimes referred to as a "side-by-side utility vehicle," a UTV is a motorized off-highway vehicle designed with two or more seats side-by-side, a steering wheel, and often includes seat belts, a roll-cage, and a cargo bed. UTVs may be used in industrial, agricultural, or recreational settings, offering greater carrying capacity compared to ATVs.

**Water Trail Use** – Use of small boats like kayaks, canoes, rowboats, stand-up paddle boards, and single sailboats on recreational routes on waterways, such as rivers and lakes, with a network of public access points.

# **Chapter 1: Executive Summary**

#### **Executive Summary**

The 2025 Trails Plan, at its very core, articulates a shared vision for how we can collectively sustain and protect Arizona's spectacular and diverse trail experiences—from tranquil desert sunrises to the cool pine canopies of the Mogollon Rim. Hikers, mountain bikers, and equestrians encounter scenic vistas, wildlife habitats, and cultural sites that spark awe and foster a deep connection to the land. OHV and ATV riders experience the thrill of venturing through rugged backcountry routes, encountering striking rock formations, and sweeping panoramas that highlight Arizona's iconic terrain. This is Arizona—where the land of extraordinary trails meets enduring stewardship.

#### Arizona's 2025 Trails Plan

Every five years, Arizona State Parks and Trails (ASPT) leads the development of a statewide trails plan that guides the acquisition, development, management, and resource allocation for non-motorized and non-motorized trails throughout Arizona. It also helps determine the distribution of grant funding from the federal non-motorized and motorized Recreational Trails Program and the state's Off-Highway Vehicle (OHV) and Heritage Fund for non-motorized trails. Arizona State Parks and Trails (ASPT) must update this plan every five years to meet regulatory requirements.

Given the significance that trails play in the state, this plan is much more than a requirement for funding. This plan addresses how we, as a state, across boundaries and jurisdictions, can protect and enhance the trail experience and resources to help sustain and preserve Arizona's valued trails. It also outlines a strategy to ensure our trail experiences remain resilient amid environmental and social pressures and growing use and demand.

#### **Why Trails Research Matters**

Understanding participation trends, needs, priorities, and demographics of non-motorized and motorized trail users in Arizona—and the trail management priorities of land managers—is fundamental to effectively planning, maintaining, building, and managing recreational trail resources over the next five years. The 2025 Trails Plan is informed by three key surveys:

- A stratified random sample survey of the general Arizona public (5,359 completed surveys and interviews), reflecting the state's population.
- An invested user survey (5,366 completed surveys).
- A land manager survey (91 completed surveys)

With over 10,800 respondents, this research represents the largest trail-focused study ever conducted by ASPT, and what we believe for the state overall.



5,359

Completed Surveys & Interviews

**3,466** Core Non-Motorized Users **1,435** Core Motorized Users

- Stratified Random Sample Survey (SRSS) of Arizona residents, representative of the state's adult population
- Customer-centric approach—online, mobile devices, computer, phone, etc.
- Available in Spanish and English



5,366

**Completed Surveys** 

**4,717** Core Non-Motorized Users **1,977** Core Motorized Users

- Outreach from Arizona State Parks and Trails—website, social media, partners, etc. to trail users
- Online/mobile survey same as Arizona Public Survey
- Available in Spanish and English



91

Completed Surveys

- Land managers that manage, build, maintain, or plan trails
- Used ASPT email list and partner distribution/share with colleagues, at conferences and meetings, and further extended outreach to address gaps
- Online/mobile survey
- · Available in English

#### A Lot Has Happened Since the Last Trail Plan in 2020

While outdoor recreation has reached unprecedented levels, Arizona has also faced growing environmental challenges, including record-setting drought, wildfires, and increased trail usage that directly affects the state's natural resources. However, these challenges have also created opportunities—several land managers report increased collaboration, shared learning, and greater adaptability and resilience as a result of meeting these evolving demands. Trail land managers, partners, programs, and projects continue to tackle these issues in their pursuit to help trail users access and engage with the outdoors while safeguarding Arizona's natural resources.

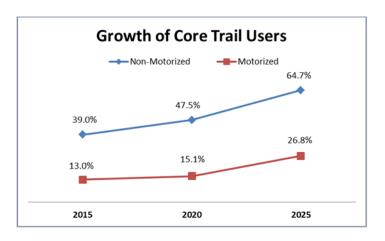
#### Planning and Coordination for Sustainable and Inclusive Growth

Arizona has the **second fastest-growing population in the country**, with over 7.4 million people projected to reach 10.0 million by 2050. Between now and 2030, the projected **population growth rate is 1.4% per year**—twice that of the United States overall. As the number of residents and tourists increases, both non-motorized and motorized trails may face crowding. Heightened use and year-round activity can affect natural landscapes and native wildlife. Such challenges are best addressed through thoughtful planning, collaboration, and coordination with a wide range of stakeholders throughout the state.

#### **Dramatic Increase in Number of Trail Users Since 2020**

The statewide random sample survey of Arizona residents is conducted approximately every five years to inform the development of the Trails Plan. To better understand the trend in trail usage, the following chart highlights core trail users—both non-motorized and motorized—across the last decade and three statewide public surveys.

While the growth of trail users grew steadily between 2015 and 2020, the most dramatic increase occurred from 2020 to 2025. These numbers highlight the heightened value Arizonans place on trail-based recreation—fueled by lifestyle changes, increased accessibility to trail networks, and a growing emphasis on health and wellness. The data underscores the importance of continued investment in trail infrastructure, education, and stewardship to accommodate longstanding enthusiasts and newcomers to Arizona's rapidly expanding trail community.



#### Voices of the Trail Users and Land Managers Reflected in the Shared Trail Management Priorities

The 2025 Trails Plan was developed in close collaboration with a wide range of partners and an engaged Working Group to provide a shared vision for the future of Arizona's trails. The plan considers conservation and recreation as intertwined values and examines current and changing demographics to help trail management remain relevant and agile in adapting to future shifts.

Based on the in-depth findings and feedback from the Arizona public, invested users, and land managers—and following consultation with the Working Group—the 2025 Trails Plan Team reviewed the data reflecting a shared ranking of priorities among 10,000+ trail users and land managers across the state. Drawing on knowledge of trail needs, projects, and funding parameters in Arizona, the top ten 2025 Trail Management Priorities were ranked as follows:

- 1. Maintain existing trails
- 2. Prevent or repair damage to sensitive environmental and cultural sites near trails
- 3. Develop signage, maps, and education materials to better inform users and encourage responsible trail
- 4. Promote safe and responsible recreation through education and enforcement
- 5. Design and construct sustainable trails with a focus on connecting trails, parks and communities
- 6. Obtain land for trails and trail access
- 7. Create memorable visitor experiences to support trail stewardship
- 8. Provide accessible trails and facilities
- 9. Develop adaptable trail management plans based on changing conditions (extreme heat, drought, wildfires, policies, etc.)
- 10. Complete environmental/cultural clearance and compliance

Arizona's trail network faces a dynamic set of challenges and opportunities that influence both non-motorized and motorized recreation. On one hand, the state's population growth and heightened interest in trails have sparked demand for expanded access, improved connectivity, and more meaningful visitor experiences. On the other hand, intensifying climate patterns—such as drought and wildfires—along with the spread of invasive species, raise concerns about long-term sustainability and emphasize the need for careful stewardship of natural and cultural resources. Meanwhile, evolving technologies (e.g., e-bikes, GPS-enabled apps) and social shifts (e.g., the rise in volunteerism and, with more users, conflicts stemming from poor trail etiquette) underscore the importance of staying adaptable and responsive.

Collectively, these trends underscore the four priority themes for the 2025 Trails Plan—Sustainability and Stewardship, Education and Engagement, Access and Connectivity, and Adaptability and Resilience—showing how each factor contributes to shaping Arizona's trail systems. The 2025 Trails Plan explores these issues in detail, reflecting the latest insights from state, federal, and local planning efforts.

# **Priority Areas**

Sustainability and Stewardship

**Education and Engagement** 

**Access and Connectivity** 

Adaptability and Resilience

These priority areas reflect the current trends, opportunities, and challenges facing Arizona's trails over the next five years. The priorities are interconnected and critical to achieving a future vision where Arizona's trails continue to provide rich recreation experiences for non-motorized and motorized trail users. The following page shows which of the 10 priorities fall under each of the four priority areas. Detailed summaries follow for each priority area.



Inspire sustainability and stewardship, preserving Arizona's diverse and cultural landscapes for generations to come.

Sustainability
and
Stewardship

Priorities	Overall Ranking
Maintain existing trails.	1
Prevent or repair damage to sensitive environmental and cultural sites near trails.	2
Design and construct sustainable trails with a focus on connecting trails, parks, and communities	5



Provide trail users with the knowledge and tools needed to enjoy trails responsibly, ensuring their safety and preserving the natural and cultural landscape.

# Education and Engagement

Priorities	Overall Ranking
Develop signage, maps, and education materials to better inform users and encourage responsible trail use	3
Promote safe and responsible recreation through education and enforcement.	4
Create memorable visitor experiences to support trail stewardship.	7



Aim to make trails available to all, expanding accessibility and connecting them to parks and communities to enhance recreation opportunities and social engagement.

#### Access and Connectivity

Priorities	Overall Ranking
Obtain land for trails and trail access.	6
Provide accessible trails and facilities.	8



Recognize the importance of preparing for and adapting to changing environmental and social conditions that impact trail management.

# Adaptability and Resilience

Priorities	Overall Ranking
Develop adaptable trail management plans based on changing conditions and uses.	9
Complete environmental/cultural clearance and compliance.	10

#### **From Plan to Progress**

No single organization, agency, or user group can advance the 2025 Trails Plan alone. Its successful implementation depends on the collaborative efforts of public and private partners, dedicated volunteers, and strong community engagement. By working together—combining expertise, resources, and passion—Arizonans can secure the future of the state's trails, protecting cherished natural resources, enhancing recreation opportunities, and preserving the wide-reaching benefits trails provide.

As we move forward, each stakeholder plays a critical role in bringing this plan to life. The 2025 Trails Plan is more than a document; it is a commitment to the balanced growth, sustainability, and stewardship of Arizona's exceptional trail networks. Let us champion these priorities and shape Arizona's trail legacy for current users and future generations—building a trail system that unites diverse communities, honors our heritage, and remains resilient in the face of evolving challenges.

# **Chapter 2: Introduction**

#### Introduction – Arizona's 2025 Trails Plan (SCORP)

#### What is the Trails Plan?

The Trails Plan guides the acquisition, development, management, and resource allocation for both non-motorized and motorized trails throughout Arizona. It also helps determine the distribution of grant funding from the federal non-motorized and motorized Recreational Trails Program and the state's Off-Highway Vehicle (OHV) and Heritage Fund for non-motorized trails. Arizona State Parks and Trails (ASPT) must update this plan every five years to meet regulatory requirements.

The plan's development is overseen by a diverse working group of trail managers from all jurisdictions, nonprofit organizations associated with non-motorized or motorized trail use, as well as conservation groups, user groups from across Arizona, members of the Off-Highway Vehicle Advisory Group (OHVAG), the Arizona State Committee on Trails (ASCOT), and other outdoor recreation and trail advocates. To ensure a comprehensive and data-driven plan, the trail managers and stakeholders incorporate information from user feedback, trail usage statistics, and their communities.

One of the most significant impacts of the Trails Plan is its ability to **guide** the distribution of federal and state grant funds, allowing for the acquisition of land for trails, the construction of trails, and the installation of signs, kiosks, restrooms, parking, and other amenities that support trail use in communities. This, in turn, has a positive impact on communities, promoting trail use, outdoor recreation, economic growth, and tourism. The Trails Plan is an essential guide and roadmap for the development and enhancement of Arizona's trail systems, ensuring that individuals and visitors to the communities can enjoy the benefits of outdoor recreation and the natural environment.

To ensure **equitable distribution of funding** and address Arizona's highest-priority needs, Arizona State Parks and Trails (ASPT) **conducts public outreach and collaborates with land managers every five years** to determine the most critical trail issues. The Trails Plan that ASPT develops from this feedback helps guide trail-related decisions for the next five years. This process helps ASPT to further achieve its goal to continuously improve trail experiences across the state.

#### **How To Use This Document**

There are several features of this 2025 Trails Plan that we want to highlight to help you use the document more efficiently.

- 1. We have organized the trail priorities into four guiding themes: Sustainability and Stewardship, Education and Engagement, Access and Connectivity, and Adaptability and Resilience. This is to help you navigate the document and find the information that is most relevant to you.
- 2. Each theme includes several highlighted successful projects, programs or initiatives related to that theme.
- 3. We have included a snapshot of Arizona and trail-related trends, and included a list of reviewed plans and references in the appendices so you can continue your research into any of these topics.
- 4. Additional resources have been added to the Arizona State Parks and Trails (ASPT) website. These resources include information about the available grants, additional trail-related resources, organizations and trail user groups by county.

#### Introduction

# **Working Together to Shape the 2025 Trails Plan**

#### **Partnerships and Collaboration**

To develop Arizona's 2025 Trails Plan, Arizona State Parks and Trails (ASPT) and its partners **actively engaged a wide variety of stakeholders, land managers, and the public** to reflect on evolving trail management challenges and opportunities.

To gather input from the public and land managers, ASPT worked with Partners in Brainstorm to conduct surveys and interviews. The 2025 Trails Plan Working Group, which consisted of public and private outdoor recreation professionals, trail users, and advocates representing diverse organizations and various use types across the state, reviewed the survey. Residents—representing both users and non-users of trails to hike, mountain bike, ride horses, or drive off-highway vehicles (ATVs, 4x4s, side-by-sides)—and land managers were urged to participate in and help spread the word about this important survey.

# Public Engagement – Harnessing Community Insight Public Participation (10,725 Completed Surveys and Interviews)

- To gather public input for the 2025 Trails Plan, a stratified random sample survey and interviews were conducted among Arizona's adult residents, collectively referred to as the *Arizona public*. Participants were selected to be demographically representative of the state's population and could choose their preferred method of participation: completing an online, mobile-accessible survey or taking part in a phone interview via either a cell phone or landline. The survey, which took approximately 15 to 25 minutes to complete, was accessible on mobile devices, smartphones, laptops, and computers. Phone interviews, ranged from 18 to 28 minutes depending on participants' responses. Both the surveys and interviews were available in English and Spanish. In total, **5,359 surveys and interviews** were completed statewide.
- Arizona residents who were not contacted through the random sample survey could also take part in the same survey online through the Arizona State Parks and Trails' (ASPT) website. Outreach was conducted through ASPT's communication channels and partners via email, social media, conferences, and other platforms. A total of 5,366 surveys were completed online, in Spanish and English, among these *invested users*.

#### Introduction

#### **Land Managers of Trails**

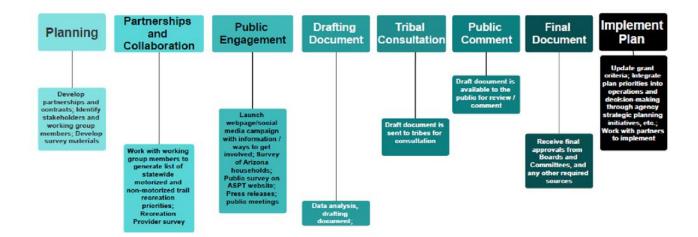
Land managers who **manage, build, maintain, or plan trails** in Arizona, representing federal, state, county and municipalities, and organizations took part in a 15-minute online survey. A total of **91 surveys** were completed by land managers of non-motorized and motorized trails, with representation from each of the 15 counties in Arizona.

#### **Drafting of the Document**

Based on input from the working group; stakeholders; Arizona public and invested users; land managers that manage, build, maintain, or plan trails in Arizona; ASPT, working with Partners In Brainstorms, drafted the 2025 Trails Plan.

#### **Final Plan and Implementation**

The completed 2025 Trails Plan identifies the top concerns of Arizona's trail recreation community, land managers, and recreation agencies. The plan aims to balance trail use with the protection of natural and cultural resources. Federal, state, county, and municipal agencies, as well as other organizations in Arizona, can use this information for future trail management, planning, and budgeting.



# Chapter 3: The Trail Ahead: 10 Key Trends Shaping the Future of Arizona's Trails

#### The 10 Key Trends Shaping the Future of Arizona's Trails

Arizona's trail network faces a dynamic set of challenges and opportunities that influence both non-motorized and motorized recreation. On one hand, the state's growing population and heightened interest in trails have sparked demand for expanded access, improved connectivity, and more inclusive visitor experiences. On the other hand, intensifying climate patterns—from droughts to wildfires—and the spread of invasive species raise concerns about long-term sustainability and emphasize the need for careful stewardship of natural and cultural resources. Meanwhile, evolving technologies (like ebikes and GPS-enabled apps) and social shifts (including the rise of volunteers, and poor trail etiquette of some users impacting others' trail experiences) highlight the need for trail managers to stay adaptable and responsive. Collectively, these trends underscore the four priority themes for the 2025 Trails Plan—Sustainability and Stewardship, Education and Engagement, Access and Connectivity, and Adaptability and Resilience—showing how each factor contributes to shaping Arizona's trail systems. The following 10 key trail management topics explore these issues in detail, reflecting the latest insights from state, federal, and local planning efforts.

#### 1. Population Growth and Increased Trail Usage

Arizona's population has continued to climb, with the **U.S. Census Bureau** estimating over **7.4 million** residents in 2024, and between now and 2030, the projected population growth rate is 1.4% per year, twice the national average. **Maricopa County** in particular remains one of the fastest-growing counties in the nation, fueling higher demand for hiking, mountain biking, and off-highway vehicle (OHV) riding on public lands. This upswing can strain existing infrastructure, making **Sustainability and Stewardship** critical to protect natural and cultural resources from overuse. To mitigate crowding and reduce impacts, some agencies are expanding or reconfiguring trail systems—sometimes adopting permit systems or designated use days. Meanwhile, volunteers and **Education and Engagement** programs (e.g., the Appreciate AZ program using Leave No Trace principles) help newer residents learn appropriate trail etiquette. Investments in signage, overflow parking, and additional trailheads enhance **Access and Connectivity**, while flexible policies (e.g., time-segmented access) bolster **Adaptability and Resilience** by preventing popular areas from becoming overwhelmed.

#### 2. Extreme Weather: Drought and Rising Temperatures

Arizona's increasingly volatile desert climate places mounting pressure on trail design, upkeep, and visitor safety. According to the **Arizona Department of Water Resources**, drought conditions persist across much of the state, making soils more prone to erosion. Concurrently, the **Arizona State Climate Office** report that **recent summers in Arizona have ranked among the hottest on record**, intensifying

wear on tread surfaces and stressing native vegetation. These factors heighten the importance of **Sustainability and Stewardship**, as land managers deploy measures like water bars, hardened surfaces, and heat-tolerant plantings. In terms of **Education and Engagement**, agencies issue heat-safety advisories and sometimes close trails during peak midday temperatures. Short-notice restrictions require **Adaptability and Resilience**, allowing managers to swiftly implement closures and signage. Efforts align with the *Arizona SCORP (2023)* emphasis on proactive approaches to mitigating extreme weather impacts on recreation resources.

#### 3. Wildfires

Frequent and intense wildfires present significant challenges for both non-motorized and motorized trail users. In 2021 alone, multiple fires—including the **Telegraph** and **Mescal** fires—collectively burned over **220,000** acres in Arizona, as reported by the Arizona Department of Forestry and Fire Management. Post-fire restoration involves reseeding native plants, stabilizing slopes, and rebuilding trail infrastructure, all underscoring **Sustainability and Stewardship**. Managers employ **Education and Engagement** via real-time fire updates on agency websites and social media, guiding users to respect closures and practice fire-safe behaviors. Over the long term, improved signage materials (e.g., metal posts) and cleared vegetative buffers demonstrate **Adaptability and Resilience**, reducing potential ignition sources near popular routes. At times, to protect public safety, managers limit **Access and Connectivity** when severe fire risk or ongoing suppression efforts threaten trails and surrounding lands.

In neighboring California, recent Los Angeles fires (including the Palisades and Eaton fires) have severely impacted hiking trails in the region, with 54 trails closed due to extensive burn scars. Many popular trails in the Santa Monica Mountains and Pacific Palisades (e.g., the Temescal Canyon Trail) have been damaged or completely shut down, while parts of Eaton Canyon also remain inaccessible. Even where routes aren't entirely destroyed, safety concerns—like potential landslides and unstable terrain—keep these areas off-limits. Recovery efforts led by park rangers and restoration teams are ongoing, though fully rehabilitating scorched trails may take considerable time. The scope of these closures highlights both the immediate loss of recreation opportunities and the longer-term need for **Sustainability and Stewardship** measures, **Adaptability and Resilience** in restoration planning, and consistent **Education and Engagement** to keep the public informed about hazards and trail statuses.

#### 4. Impact of Invasive Species

Invasive species, such as buffelgrass and stinknet, have heightened Arizona's wildfire risk and displaced native vegetation—an issue the **Arizona-Sonora Desert Museum Buffelgrass Program** calls one of the greatest ecological threats to the Sonoran Desert. These plants gain a foothold on or near trails, undercutting local biodiversity and cultural site preservation, key areas of **Sustainability and Stewardship**. Beyond weed-free feed and vehicle cleaning protocols, managers rely on **Education and** 

Engagement (e.g., volunteer "pull events," social media alerts) to enlist users in spotting and removing invasive plants. The city of Phoenix Parks and Recreation Department is holding "Desert Defenders" events on trails, where volunteers are manually pulling up invasive species — with the main invasive target being stinknet, followed by buffelgrass, fountain grass, and Saharan mustard. Because invasive plants often cross jurisdictional lines, agencies collaborate to ensure Adaptability and Resilience—shared mapping systems, rapid response teams, and consistent enforcement slow new infestations. Such coordinated strategies complement the SCORP's habitat conservation objectives, reinforcing how vital multi-agency efforts are to protect Arizona's trail environments.

#### 5. E-Bikes and Other E-Devices

E-bikes and similar devices blur traditional distinctions between non-motorized and motorized trail use. A Colorado Parks and Wildlife (2022) E-Bike Study found that many riders appreciate the extended range and accessibility benefits, though some user groups express concerns over speed differentials and trail crowding. From a Sustainability and Stewardship standpoint, managers may need to widen or reinforce pathways to handle other power-driven mobility devices (OPDMD) without damaging sensitive areas. Through Education and Engagement initiatives—like pilot programs testing various e-bike classes—agencies evaluate impacts on user conflicts and set guidelines clarifying which classes can ride on which trails. For participants with limited mobility, e-bikes expand Access and Connectivity by opening steeper or longer routes otherwise out of reach. Land managers stay nimble, reflecting Adaptability and Resilience, by revisiting regulations and collaborating with user groups to balance inclusivity with ecological protection.

#### 6. Health and Active Living

Trails have emerged as key "green infrastructure," promoting exercise and social well-being. The **Centers for Disease Control and Prevention (CDC)** recommends at least 150 minutes of moderate exercise weekly; many Arizona communities encourage residents to meet these guidelines through trail activities. To further aid in the trail experience, signage now includes trail characteristics (e.g., length, width, grade, cross slope, etc.), allowing trail users to determine if the trail is appropriate for their skills and abilities. Also, maintaining trails that vary in difficulty, allows users to find a trail experience to suit their health status and goals. Engaging the community and other volunteers to maintain trails, giving them a feeling of ownership and pride, increases the likelihood that they will use the trail more often.

Maintaining healthy surfaces, signage, and engaging the community and volunteers to help maintain trails giving them a sense of shared ownership and pride, and ensures **Sustainability and Stewardship**, given heavier foot and bike traffic on popular routes. Coordinating with public health agencies— via initiatives like "Parks Rx" or "Hike with a Doc" and AZ Health Zone—embodies **Education and Engagement**, integrating trail use into broader wellness strategies, which is one of *Arizona SCORP* 

(2023) priorities. By improving **Access and Connectivity** around neighborhoods, transit lines, and community hubs, more groups can incorporate trail activities into their daily lives. Taken together, these collaborations underscore **Adaptability and Resilience**, as managers and health advocates codevelop solutions that respond to shifting demographic and health trends highlighted in SCORP's push for inclusive recreation.

#### 7. Technology and Apps

GPS-enabled platforms like **AllTrails** and **Trailforks**, **Gaia** and others continue to shape how visitors plan outings and share real-time trail conditions. According to the **AllTrails Usage Report (2022)**, southwestern states including Arizona saw significant growth in user uploads and route reviews, which can help alert managers to issues like storm damage or invasive outbreaks. This two-way feedback loop supports **Adaptability and Resilience** by enabling swift interventions. Meanwhile, digital tools bolster **Education and Engagement** through crowdsourced guidance, though they may inadvertently bring large crowds to once-hidden gems. Land managers encourage responsible app usage that respects closures and preserves fragile and cultural sites, safeguarding **Sustainability and Stewardship**. Over time, agencies may refine signage or trailhead resources to accommodate app users looking for QR codes or region-specific updates, improving overall **Access and Connectivity**.

#### 8. User-Created (Social) Trails

Unauthorized "social" trails—often created by mountain bikers, hikers, or OHV riders seeking new paths—proliferate in scenic or challenging terrains. A **2021 Bureau of Land Management (BLM) Southwestern Region Unofficial Trails Assessment** estimated that up to 20% of new paths in certain popular areas were not officially sanctioned, risking habitat fragmentation and cultural resource damage. Balancing closure or rehabilitation of these spurs with legitimate user needs underscores the tension within **Sustainability and Stewardship**. Education campaigns, a core element of **Education and Engagement**, urge visitors to remain on designated routes and report newly emerging **spur trails**—a trail that branches off from a main trail. In some instances, agencies incorporate well-established social trails into official systems—installing signage, reinforcing tread surfaces, and updating maps—a strategy reflecting **Adaptability and Resilience** as managers respond pragmatically to evolving recreation patterns.

#### 9. Trail Access for All

Providing equitable trail access to all communities has become a priority for many agencies. According to the *Arizona SCORP (2023)*, bridging gaps for "those lacking resources or awareness" is essential for ensuring diverse participation in outdoor recreation. Efforts targeting **Access and Connectivity** include shuttles from urban neighborhoods to trailheads, bilingual signage, and low-cost group events. Local nonprofits also partner with agencies to introduce new users to trail settings, aligning with **Education and Engagement** by teaching responsible recreation. These initiatives expand the stewardship

community and cultivate lasting public support for trail funding, addressing **Sustainability and Stewardship** concerns. Over time, more inclusive trails can reinforce **Adaptability and Resilience**, ensuring that a broader constituency values and advocates for these natural assets.

#### 10. Monitoring and Enforcement

Innovations like drones, trail cameras, and GPS trackers are increasingly used to detect rule violations and resource degradation. A **2022 pilot in the Tonto National Forest** deployed cameras at strategic points to identify unauthorized OHV routes, leading to a marked reduction in off-trail damage. These tools enhance **Sustainability and Stewardship** by enabling rapid responses to illegal dumping or encroachment in fragile areas. **Education and Engagement** complements these efforts, as volunteers and rangers serve as ambassadors who remind visitors of best practices. Real-time alerts or mobile app notifications support **Adaptability and Resilience**, helping land managers redirect users from unsafe zones (e.g., wildfire areas) or enforce temporary closures. This collective approach balances the need to protect trail resources with maintaining **Access and Connectivity** where feasible.

# **Chapter 4: Key Research Findings and Shared Priorities**

Why This Trails Research Matters

Three Survey Groups (Arizona Public, Invested Users, Land Managers)

Core Trail Users – A Decade of Growth

Non-Motorized and Motorized Trail Users

Electric Devices and E-Bikes

Land Managers

Shared Priorities (Non-Motorized and Motorized Trails Users and Land Managers)

#### Why This Trails Plan Research Matters

Understanding participation trends, needs, motivations, and demographics of non-motorized and motorized trail users in Arizona and the trail management priorities of land managers is fundamental to effectively planning, maintaining, building, and managing non-motorized and motorized recreational trail resources in Arizona statewide over the next five years. The 2025 Trails Plan is informed by three key surveys—(1) a stratified random sample survey of the general Arizona public (5,359 completed surveys and interviews), (2) an invested user survey (5,366 completed surveys), and (3) a land manager survey (91 completed surveys)—and with 10,000 respondents, it is the largest trail-focused study ever conducted by Arizona State Parks and Trails.

This collective input from thousands of Arizonans, alongside the perspectives of land managers, stakeholders, a Trails Plan Working Group, and five specialized action teams, provides the robust data and insights necessary to:

#### 1. Guide Resource Allocation and Forecasting

- By examining the demographics and preferences of trail users—ranging from hikers and mountain bikers to ATV riders and 4x4 enthusiasts—land managers and stakeholders can better anticipate where to invest in trail improvements, maintenance, and expansion.
- These insights also help determine how best to support the specialized needs of different user groups, for example, providing information on trail characteristics so people of all ages and abilities can determine appropriate use, skills development programs, guided hikes and nature walks, or improved parking for popular trailheads.

#### 2. Shape Inclusive and Targeted Programming

- Nonprofit organizations, community programs, and volunteer initiatives rely on accurate user data to design and deliver activities that are accessible and appealing to Arizona's diverse population.
- A deeper understanding of how often and why people use trails ensures that new programs like beginner off-road safety courses or cultural heritage tours—meet community needs and encourage participation among underrepresented groups.

#### 3. Foster Engagement and Stewardship

- Engaging Arizona's wide-ranging trail user base (public respondents, core "invested user" enthusiasts, and land managers) nurtures a shared sense of responsibility.
- With relevant data in hand, trail organizations and local agencies can partner on outreach
  efforts, volunteer events, and conservation projects, fostering a culture of stewardship and
  mutual respect among hikers, riders, e-bike users, wildlife watchers, and more.

#### 4. Support Economic and Community Development

- Trails contribute significantly to tourism and local economies, whether attracting off-highway vehicle groups or family hiking vacations.
- Insight into trail users' preferences and patterns guides communities in positioning themselves as trail-friendly destinations. It also underscores the economic value trails bring to both rural and urban areas across the state.

#### 5. Prioritize Accessibility and Inclusion

- As Arizona's demographics evolve, it is essential that the "outdoor ecosystem"—including state agencies, nonprofits, and the outdoor industry—collaborate to reduce barriers and ensure that all feel welcome on Arizona's trails.
- Through the 2025 Trails Plan, data on age, race, ethnicity, education level, income, and other factors help identify gaps in representation. This allows stakeholders to create targeted solutions—such as multilingual signage, adaptive equipment programs, or specialized outreach in under-resourced communities.

#### 6. Drive Innovation and Planning for the Future

- Land managers and trail users have many questions about how best to address emerging technologies (e.g., e-bikes or new off-road vehicle designs), trail safety concerns, and sustainable trail building practices.
- By highlighting popular destinations and underutilized areas, the insights from the research can help in identifying and funding of everything from new trail development projects to pilot programs aimed at reducing overuse in high-traffic zones.

In summary, the broad participation in gathering insights for the 2025 Trails Plan—totaling more than 10,000 public and invested user responses plus 91 land manager and stakeholders' insights—ensures that the recommendations and initiatives set forth truly reflect Arizona's changing trail landscape. These data-driven decisions will help federal and state agencies, local communities, private sector partners, and nonprofits collaborate more effectively to expand access, enhance safety, and promote long-term stewardship of Arizona's non-motorized, motorized, and multi-use trails. Ultimately, leveraging these findings will foster a healthier population, strengthen local economies, and preserve the natural beauty that makes Arizona an unparalleled destination for trail-based recreation.

#### 2025 TRAILS PLAN – THREE SURVEYED GROUPS

For the 2025 Trails Plan, three distinct groups were surveyed to provide further insights in developing the priorities, goals, and strategies for the Plan. The surveys and interviews were conducted from March 2024 through September 2024.



5,359

Completed Surveys & Interviews

**3,466** Core Non-Motorized Users **1,435** Core Motorized Users

- Stratified Random Sample Survey (SRSS) representative of the state's adult population
- Customer-centric approach—online, mobile devices, computer, phone, etc.
- Available in Spanish and English



**5,366** Completed Surveys

**4,717** Core Non-Motorized Users **1,977** Core Motorized Users

- Outreach from Arizona State Parks and Trails—website, social media, partners, etc. to trail users
- Online/mobile survey same as Arizona Public Survey
- Available in Spanish and English



**91** Completed Surveys

- Land managers throughout the state that manage, build, maintain, or plan trails
- Used ASPT email list and partner distribution/share with colleagues, at conferences and meetings, and further extended outreach to address gaps
- Online/mobile survey
- · Available in English

#### **Arizona Public**

(Stratified Random Sample Survey)

Completed Surveys

& Interviews

= 5,359

Total **10,725** 

**Invested User** Completed Surveys

= 5,366

#### Arizona Public Survey - Stratified Random Sample Survey (SRSS)

#### **New and Expanded Survey Questions**

In developing the survey to be used for both the Stratified Random Sample and the Invested User surveys, the previous surveys were reviewed and key questions were incorporated that are repeated every five years to identify trends in trail usage and better assess management priorities. The 2025 Trails Team consulted with the Working Group and reviewed other states' trail plans and industry reports for additional guidance—especially when considering what is occurring now but also preparing for the next five years, the term of the 2025-2030 Trails Plan.

The thorough analysis helped to identify new and expanded topics, including:

- Use of e-bikes (by class, ownership)
- Use of power-driven mobility devices (OPDMDs)
- Expanded reasons for not participating in trail activities
- Additional questions related to conditions that may negatively affect one's trail experience in areas of environmental, cultural, and individual or social conditions
- Expanded questions regarding trail management priorities to address physical infrastructure, programming, and needed supports
- Participation and future interest in family trail-related programs or activities (e.g., youth engagement)
- Public and Land Manager Surveys address key 2023 Arizona Statewide Comprehensive Outdoor Recreation Plan (SCORP) priorities. Trail surveys further build on insights from SCORP and delve deeper into strategic areas

#### Arizona Public - A Customer-Centric Approach

The Stratified Random Sample Survey (SRSS) used a mixed-mode, customer-centric approach. Using Partners In Brainstorms' (PIB) proprietary panel of 250,000+ Arizona residents ages 18 years and older, panelists and those who preferred to answer the questionnaire electronically received an e-invitation to participate in the online digital survey (accessible via mobile devices, such as cell phones and tablets, and 508 compliant so to ensure that the digital survey is equally available to everyone, regardless of ability). To further accommodate participants' preferences, respondents chose their preferred language (Spanish or English) to complete either the survey online or in the interview.

The Arizona 2025 Trails Survey and interviews were conducted based on a stratified random sample of Arizona adults, ages 18 years and older. Survey goals were developed by county and region, taking into account variables such as population density, available resources, statistical relevance, and other considerations. The survey and interview guide were programmed, and extensive pretesting was completed in both English and Spanish. Partners In Brainstorm, Inc. (PIB) soft-launched the survey on March 26, 2024. A total of **5,359 surveys and interviews** were completed between March 26, 2024, and September 3, 2024.

The survey data were analyzed by Partners In Brainstorm, Inc. These geographical goals, as well as other key demographics—including age, gender, ethnicity/race, household income, and education level—were examined to ensure that the study was largely representative of Arizona's population. In comparison to the Census data, the respondents included slightly more females than males, so the data were slightly weighted to ensure that males were represented based on the state's population. In addition, to ensure a representative sample of respondents of Hispanic origin, some slight weighting was applied to mirror U.S. Census data for Arizona.

Study results demonstrate the clear benefits of the mixed-mode, customer-centric approach. Among the 5,359 respondents, 88% completed the survey online; of those, 72% used a mobile device (a smartphone or tablet), and 28% used a desktop or laptop computer, while 12% completed the survey by phone interview.

# **County and Regional Goals and Completed Results**

County / Regions	Goal	Actual
Maricopa County	1,425	2,101
Pima County	825	809
Pinal County	445	536
Yavapai County	385	373
Yuma County	385	392
LaPaz + Mohave	385	381
LaPaz County	35	39
Mohave County	350	342
Cochise + Graham + Greenlee + Santa Cruz	385	358
Cochise County	221	215
Graham County	77	69
Greenlee County	5	2
Santa Cruz County	82	72
Apache + Coconino + Gila + Navajo	385	380
Apache County	65	63
Coconino County	160	152
Gila County	60	64
Navajo County	100	101
Total	4,620	5,359*

Exceeded goal to complete 4,620 surveys statewide (95% confidence level, +/- 1.5%).



\* Includes 29 ZIP codes not assignable

#### **Invested Users**

The Invested Users Survey targeted many who already have a relationship with Arizona State Parks and Trails and partners, of which many are already trail users. As noted in previous Trails Plans, this approach uses targeted sampling methods to reach specific individuals rather than drawing randomly from the entire population. Because this results in a non-probability sample, the conclusions apply only to those who participated in the survey and cannot be generalized to a broader group.

A link to the survey in English and Spanish was distributed by Arizona State Parks and Trails from April 16, 2024, through September 3, 2024. Advisory committee members, the 2025 Trails Plan Working Group, other government agencies and departments, trail organizations, and additional partners also shared the link through their networks and communication channels, including social media.



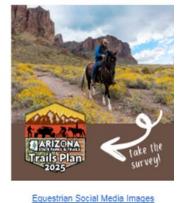
#### **Invested User Survey – Partner Toolkit**

The Partner Toolkit included communication materials that could be used as a template for partner outreach in both English and Spanish to reach the invested trail users. These materials included a flyer, press release, blog post or article copy, newsletter copy, and social media images and posts.

Unique survey links were created for each communication channel. Among the completed 5,366 completed Invested User Surveys, most respondents accessed the survey link via the Arizona State Parks and Trails (ASPT) website (34%) or through ASPT email (28%), followed by ASPT social media (16%) and partner networks (10%). Smaller shares came from press releases, newsletters, flyers, or other sources.







Hiking Social Media Images





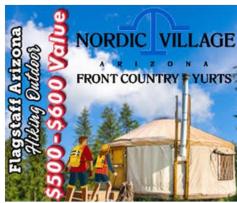
#### **Sweepstakes**

To encourage participation, ASPT and its generous partners offered memorable Arizona adventures and various prizes, such as scenic staycations in Pinetop-Lakeside and Flagstaff, two two-night micro-camper trips, Arizona State Parks and Trails annual passes, gift cards, and more. While the sweepstakes was announced up front to the Invested User group, Arizona public survey and interview participants were only informed about it **after** they completed their surveys or interviews. This timing helped ensure that respondents were not influenced by the prospect of winning prizes when providing their feedback.













#### **Land Managers**

Land managers responsible for planning, building, maintaining, or overseeing non-motorized and motorized recreational trails in Arizona were invited to complete an online survey focused on trail issues and management priorities. An email invitation to the 2025 Trails Plan Land Manager Survey (LMS) was sent on April 30, 2024, and the survey remained open through September 3, 2024. The distribution list included city and county parks and recreation departments, state and federal agencies (e.g., Arizona State Parks and Trails, Arizona Game and Fish Department, Arizona State Land Department, National Parks and Monuments, National Forests, the Bureau of Land Management, and National Wildlife Refuges), as well as tribal governments and related organizations.

Recipients were asked to forward the invitation to the most appropriate individual(s) in their agency as needed. In total, 91 land managers completed the survey.

#### What is a Core Trail User?

A core user is a trail user who primarily uses either a non-motorized or motorized trail, as defined by spending half of time or more on trails engaged in either non-motorized or motorized activities. In order to compare previous Trails Plan survey results conducted every five years, a series of five questions were asked to determine if a respondent is a core non-motorized trail user, a core motorized trail user, or a non-user.

- 1. Have you **ever** used trails on public or private lands in Arizona for **non-motorized recreation**? This includes activities such as trail hiking, jogging, mountain biking, backpacking, horseback riding, and viewing wildlife. Non-motorized water trail use includes activities such as canoeing, kayaking, and stand-up paddle boarding. (If they responded no, they were then categorized as a non-user.).
  - Have you **ever used trails** on public or private lands in Arizona **for motorized recreation**? This includes activities such as driving a quad, side-by-side or all-terrain vehicle (ATV), driving a 4x4 on trails, riding a dirt bike, or riding an electric dirt bike.
- 2. Have you used trails during the **past 12 months** for **non-motorized recreation**? Have you used trails during the **past 12 months** for **motorized recreation**?
- 3. You stated that during the past 12 months you have used Arizona trails for **both non-motorized and motorized** recreational activities. As best as you can recall, did you use trails more for motorized activities, for non-motorized activities, or did you spend the same amount of time doing each? Please select one.
  - More for non-motorized activities (If selected, categorized as a core non-motorized trail user)
  - More for motorized activities (If selected, categorized as a core Motorized Trail User)
  - Same amount of time for each non-motorized and motorized activities (Completed both non-motorized and motorized questions)

The following table provides the total count and percentage of the core non-motorized and motorized trail users. For the purpose of additional tables for the key research findings, these groups are simply referred to as Non-Motorized Trail Users and Motorized Trail Users.

# **Summary of Trail Users – Core Non-Motorized and Motorized Users**

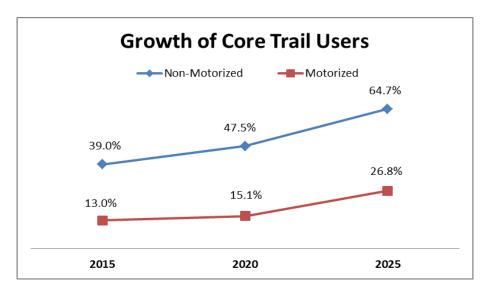
Trail Users	AZ Public N = 5,359	Invested Users N = 5,366
Total	4,716	5,188
Percentage	88.0%	96.7%
Non-Motorized Trail Users	AZ Public N = 5,359	Invested Users N = 5,366
Total	3,466	4,717
Percentage	64.7%	87.9%
Motorized Trail Users	AZ Public N = 5,359	Invested Users N = 5,366
Total	1,435	1,977
Percentage	26.8%	36.8%
Non-Users	AZ Public N = 5,359	Invested Users N = 5,366
Total	643	178
Percentage	12.0%	3.9%

#### Arizona's Core Trail Users: A Decade of Growth

The statewide random sample survey of Arizona residents is conducted approximately every five years to inform the development of the Trails Plan. To better understand the trend in trail usage, the chart below highlights core trail users—both non-motorized and motorized—across the last decade and three statewide public surveys.

In 2015, fewer than four in 10 adults (39.0%) reported regular participation in non-motorized trail activities. By 2024, this figure jumped to nearly two-thirds (64.7%), reflecting a notable shift toward activities such as hiking, running, mountain biking, and horseback riding. Meanwhile, the share of motorized trail users more than doubled over the same period—from 13.0% to 26.8%.

This surge underscores the growing importance of Arizona's trails and highlights the need for continued planning and investment to meet the evolving demands of both non-motorized and motorized trail enthusiasts.



While use grew steadily between 2015 and 2020, the most dramatic climb occurred from 2020 to 2025. These numbers highlight the heightened value Arizonans place on outdoor recreation—fueled by lifestyle changes, increased accessibility to equipment and trail networks, and a growing emphasis on health and wellness. The data underscores the importance of continued investment in trail infrastructure, education, and stewardship to accommodate longstanding enthusiasts and newcomers to Arizona's rapidly expanding trail community.

#### Exploring the Factors Behind the Dramatic Rise in Non-Motorized and Motorized Trail Use

Several key factors have contributed to the dramatic surge in both non-motorized and motorized trail use since 2019. Chief among these is the impact of the 2020 pandemic, when many Arizonans sought safe, socially distanced forms of recreation. Indoor gyms and organized sports often faced capacity limits or temporary shutdowns, prompting individuals to rediscover—or try for the first time—the outdoor spaces readily available close to home. Beyond the pandemic's initial push, other lifestyle and demographic trends helped sustain the rise in trail usage, including:

#### **Flexible Work Arrangements**

 As remote and hybrid work became more common, people gained the freedom to schedule hikes, rides, or runs at times traditionally occupied by commuting or office hours. This flexibility encouraged frequent and spontaneous visits to trails during off-peak times, reinforcing new habits of outdoor recreation.

#### **Population Growth and In-Migration**

Arizona continues to attract newcomers from other states, often drawn by its climate and outdoor
lifestyle. These transplants frequently bring an existing enthusiasm for recreation—whether hiking or
off-roading—further boosting the overall percentage of trail users.

#### **Heightened Health and Wellness Awareness**

- The pandemic underscored the importance of maintaining physical and mental well-being.
- Activities such as hiking, running, mountain biking, and ATV riding offer fresh air, exercise, and a break from screen time—appealing to many seeking to manage stress and stay active.

#### **Social Media and Community Influence**

- Photos of Arizona's dramatic landscapes and off-road adventures frequently go viral, inspiring others to try new trail experiences.
- Online communities and local clubs make it easier for newcomers to learn best practices, discover scenic routes, and find like-minded enthusiasts.

#### **Infrastructure and Technology Improvements**

- Land managers and local governments have upgraded trails, signage, and facilities—often aided by increased public awareness and funding opportunities.
- Many agencies now employ real-time digital tools (such as mobile apps, interactive maps, or website alerts) to share timely information on trail conditions, closures, weather-related hazards, and even crowd levels. These updates empower trail users to plan their trips more effectively—choosing the best times or locations for their outings and avoiding unexpectedly closed or overcrowded areas.
- Technological innovations—such as more affordable e-bikes, advanced ATVs, or route-planning apps—have also made trails more accessible to a wider audience.

#### Search for "Close-to-Home" Escapes

 Many people prefer local adventures over distant vacations, propelling them to explore greenways, regional parks, and public lands in their own backyard. This preference for nearby outdoor experiences aligns with the surge in overall trail use.

All of these factors, combined with the natural allure of Arizona's landscapes, help explain why more than 64.7% of adults now participate in non-motorized trail activities, and why motorized recreation has seen a parallel jump to 26.8%. The growth from 2020 to 2025 reflects a fundamental shift in how Arizonans view outdoor recreation, health, and community—one likely to influence the state's trails and outdoor spaces for years to come.

# **Demographic Snapshot**

For this 2025 Trails Plan, an extensive effort was made for the Arizona Public Stratified Random Sample to mirror the Arizona demographics reported by the U.S. Census to assure a representative sample of adults ages 18 years and older. Following are snapshots of the respondent demographics compared with U.S. Census data for Arizona by age, gender, Hispanic origin, and race for total respondents and by type of trail user, specifically core non-motorized, core motorized, and non-users.

## **Gender Representation in Arizona's Trail Participation**

Among Arizona public respondents, non-motorized trail users include roughly 43.7% males and 52.4% females, with a small fraction (0.7%) preferring to self-describe and 3.2% choosing not to answer, which are categories not reflected in the Census data. This indicates a female majority among those who hike, run, mountain bike, or engage in other non-motorized trail activities. By contrast, motorized trail users are predominantly male, at 57.3%, compared to 38.1% female.

		To	Total		Non-Motorized Trail Users		Motorized Trail Users		Non-Users	
Gender		AZ Public N = 5,359	Invested Users N = 5,366	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	AZ Public N = 643	Invested Users N = 178	
Male	49.1%	47.0%	42.0%	43.7%	40.6%	57.3%	58.4%	42.5%	38.4%	
Female	50.9%	50.1%	53.6%	52.4%	55.1%	38.1%	36.8%	54.8%	57.5%	
Prefer to self-describe	0.0%	0.6%	0.4%	0.7%	0.4%	0.1%	0.4%	0.8%	0.6%	
Prefer not to answer	0.0%	3.3%	4.0%	3.2%	3.9%	4.5%	4.4%	1.9%	3.7%	

Several factors may help explain these patterns. In comments shared by women in the non-motorized segment, activities like walking or running—often viewed as accessible forms of fitness—appear to resonate more strongly with women. Outdoor land managers, industries and nonprofits also increasingly promote inclusive programming and social events (e.g., guided group hikes), which can reduce barriers to participation. In the motorized realm, vehicles such as ATVs, 4x4s, and dirt bikes have historically been marketed more aggressively to men, shaping perceptions of off-roading as a "male-dominated" pursuit.

#### **Growth of Younger Non-Motorized Trail Users and Older Motorized Users and Non-Users**

Within the Arizona public sample, non-motorized trail users tend to be younger overall, with a mean age of 47.3 years. The largest segments fall between 25–44; accounting for nearly 36.5% (18.8% ages 25–34 and 17.7% ages 35–44). This concentration of younger adults suggests that activities such as hiking, running, and mountain biking appeal strongly to those in their 20s through early 40s. By contrast, motorized trail users have a mean age of 55.0 years and are more likely to be in the 55–64 range (21.9%) or the 45–54 range (16.0%). These figures indicate that ATV riding, 4x4 driving, and other motorized pursuits, and accessibility issues draw a somewhat older demographic relative to those on non-motorized trails.

		To	tal	Non-Motoriz	ed Trail Users	Motorized	d Trail Users	Non	-Users
Age	Census	AZ Public N = 5,359	Invested Users N = 5,366	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	AZ Public N = 643	Invested Users N = 178
18-24	12.0%	13.3%	1.7%	14.0%	1.7%	6.5%	1.3%	11.3%	3.2%
25-34	17.0%	15.7%	8.6%	18.8%	9.3%	10.8%	7.3%	11.2%	4.1%
35-44	16.0%	15.1%	14.5%	17.7%	15.3%	13.2%	13.9%	13.9%	10.5%
45-54	14.7%	14.4%	17.0%	16.0%	17.8%	16.0%	18.9%	13.9%	11.0%
55-64	16.8%	16.2%	24.2%	16.3%	24.4%	21.9%	25.9%	11.9%	20.5%
65-74	13.5%	13.8%	26.5%	10.9%	25.3%	16.5%	25.5%	19.8%	36.1%
75 and older	10.0%	11.4%	7.6%	6.3%	6.2%	15.1%	7.1%	18.0%	14.6%
Mean Age of Adults 18+ in Years	49.0	50.2	56.3	47.3	55.5	55.0	56.5	54.2	60.5

Meanwhile, non-users of trails skew older than non-motorized users but slightly younger than motorized users, with a mean age of 54.2. The largest share of non-users is in the 65–74 bracket (19.8%), followed by the 75 and older group (18.0%). Overall, both motorized trail users and non-users tilt toward older age groups, whereas non-motorized trail users show a younger age profile.

#### **Hispanic Trail Use Patterns**

Non-motorized participants slightly exceed the overall Census rate, at 30.0%, while motorized trail users come in lower, at 21.7%. One key factor driving higher Hispanic participation in non-motorized activities could be the relatively low cost and easy accessibility of walking, running, and hiking, which require minimal equipment. Additionally, local outreach and community programs offering group hikes or urban greenway events may make non-motorized activities more visible and attractive to Hispanic participants.

		To	Total		ed Trail Users	Motorized	l Trail Users	Non-	-Users
Hispanic Origin	Census	AZ Public N = 5,359	Invested Users N = 5,366	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	AZ Public N = 643	Invested Users N = 178
Yes	29.0%	28.2%	7.2%	30.0%	7.2%	21.7%	7.1%	27.4%	11.0%
No	71.0%	65.4%	85.1%	65.0%	85.2%	69.6%	83.0%	65.3%	82.6%
Prefer Not to Answer	0.0%	5.7%	7.7%	5.0%	7.6%	8.8%	9.9%	7.2%	6.4%

Another noteworthy point is that 8.8% of motorized users preferred not to answer the Hispanic-origin question, versus 5.0% of non-motorized users. Various reasons—ranging from privacy concerns to uncertainty about how the data might be used—could explain this difference. In Arizona, there is a higher "prefer not to answer" among Hispanic males. Overall, cultural preferences, possible financial considerations, and targeted engagement initiatives may all play a role in shaping Hispanic participation in non-motorized versus motorized trail use.

# **Trail Use by Race**

The question allowed respondents to select all categories that apply; therefore some individuals may have chosen more than one race—resulting in totals that can exceed 100% when combined. Among Arizona public respondents, White representation is slightly above the state's census benchmark of 74.0%, at 76.0% overall. This figure remains consistent across non-motorized (76.5%) and motorized (78.8%) trail users but dips among non-users (71.2%). In contrast, Black/African American representation ranges from 3.8% in non-users to 7.0% in non-motorized trail users.

			Total		Non-Motorized Trail Users		Motorized Trail Users		Non-Users	
Race	Census	AZ Public N = 5,359	Invested Users N = 5,366	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	AZ Public N = 643	Invested Users N = 178	
White	74.0%	76.0%	85.1%	76.5%	85.1%	78.8%	83.8%	71.2%	83.6%	
Black/African American	6.0%	6.9%	1.1%	7.0%	1.1%	3.8%	1.2%	3.8%	1.4%	
American Indian/Alaskan Native	6.0%	8.3%	2.2%	6.0%	2.1%	3.8%	2.0%	10.5%	3.7%	
Asian	5.0%	5.8%	2.0%	7.9%	2.2%	2.7%	1.1%	2.9%	1.4%	
Native Hawaiian/Other Pacific Islander	1.0%	0.9%	0.6%	1.1%	0.6%	0.5%	0.6%	0.8%	0.5%	
Other or Prefer Not to Answer	8.0%	11.4%	11.7%	10.9%	11.7%	11.2%	13.7%	15.0%	11.9%	

When looking at invested users—those more formally engaged with organizations or subscribing to outdoor-related communications—White representation rises even further (85.1% overall), while the percentages for minority groups tend to decline. This suggests that communities of color are less likely to opt into more formal affiliations with trail-related entities, possibly due to past marketing focus, or differences in awareness.

Finally, "Other or Prefer Not to Answer" responses hover around 11–15% across categories, indicating that some participants either identify with multiple backgrounds or choose not to disclose racial information.

## **Other Demographics**

Other demographic questions were included in the survey. When asked about their highest level of education completed, 60.1% of non-motorized trail users and 43% of motorized trail users reported holding a Bachelor's degree or higher. Mean household incomes among survey participants also exceeded the state average, with non-motorized user households at \$103,295 and motorized user households at \$114,532. Respondents were asked whether they identify as a member of the LGBTQ+ population. Among the Arizona public, 10.4% of non-motorized trail users and 3.1% of motorized trail users answered "yes." By comparison, a 2025 Gallup poll found that 9.3% of adult Americans identify as LGBTQ+.

#### **Trail Usage Among Non-Motorized and Motorized**

#### Trail Use Frequency (Past 12 Months)

Comparing Arizona public responses for non-motorized versus motorized trail users reveals distinct usage patterns. Among **non-motorized** respondents, **26.1%** report hitting the trails more than once a week—far outpacing the **9.9%** observed among **motorized** users. This indicates that many hikers, runners, and other non-motorized users are engaging in frequent, close to home activities.

On the **motorized** side, a higher proportion cluster in moderate-use categories: **24.8%** report trail riding every few weeks or a few times a month (compared to 18.6% non-motorized), and **19.0%** use trails about once a month (versus 11.7% non-motorized). Such patterns suggest that off-roading activities may involve greater planning or cost, leading to less frequent but often more concentrated outings. Meanwhile, approximately the same percentage of each group visits trails about once a week (16.0% non-motorized, 16.1% motorized).

Overall, non-motorized users skew heavily toward high-frequency visits, while motorized users show a more moderate or occasional pattern of trail use.

	Non-Motori	zed Trail User	Motorized Trail User		
Trail Use During Past 12 Months	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	
Once or a few times (1-3 times)	8.8%	7.5%	12.7%	17.9%	
Every couple of months (4-8 times)	18.7%	16.9%	17.5%	22.9%	
Once a month (9-14 times)	11.7%	11.7%	19.0%	16.4%	
Every few weeks or a few times a month (15-35 times)	18.6%	19.1%	24.8%	20.6%	
Once a week (36-52 times)	16.0%	15.1%	16.1%	12.4%	
More than once a week (approximately 52+ times)	26.1%	29.7%	9.9%	9.8%	

#### **Trail Use Outlook for the Next 12 Months**

Most respondents, regardless of activity type, expect to use Arizona trails about the same over the next year. Among non-motorized trail users, roughly 61–65% anticipates no change in frequency, while 35–32% plan to go out more often. Only a small share (3% or less) foresees a decrease.

	Non-Motoriz	ed Trail User	Motorized Trail User		
Trail Use During Next 12 Months	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	
Less than in the past 12 months	3.2%	2.7%	6.0%	6.5%	
About the same as in the past 12 months	61.3%	65.3%	63.0%	64.3%	
More than in the past 12 months	35.5%	31.9%	31.0%	29.2%	

For motorized trail users, the proportion expecting to maintain their current level sits around 63–64%, with about 29–31% anticipating an increase in riding. A slightly larger segment (6–7%) predicts using motorized trails less—suggesting that factors like cost, time commitments, or changing recreational interests may influence future off-roading plans more than they do for non-motorized users. Overall, the data indicate a generally stable or increasing appetite for trail-based activities in the coming year.

#### **Typical Group Size on Arizona Trails**

Responses indicate that motorized trail outings often involve slightly larger groups than non-motorized excursions. Arizona public respondents using motorized trails typically go out with around 2.43 other adults and 0.93 children, whereas non-motorized users average about 1.83 adults and 0.69 children. This could reflect the communal nature of off-roading—many vehicles can carry multiple passengers, making it more likely for family members or friends to join together.

Number of People With You When	Non-Motori	zed Trail User	Motorized Trail User		
Using Trails	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	
Number of people age <b>18 and older</b> on trail with you	1.83	1.81	2.43	2.24	
Number of people <b>under age 18</b> on trail with you	0.69	0.62	0.93	0.74	

For invested users (individuals more engaged with trail organizations or communications), group sizes are generally close to the Arizona public averages but trend a bit smaller. Non-motorized invested users usually go out with about 1.81 other adults and 0.62 children; motorized invested users report 2.24 adults and 0.74 children per outing. Overall, the data suggest that motorized trail activities more frequently attract larger, potentially family-oriented groups, while non-motorized users often venture out in smaller parties.

#### **Overall Satisfaction with Arizona Trails**

Both **non-motorized** and **motorized** trail users report generally high satisfaction, but with some notable differences between the two groups:

- Non-Motorized Users (AZ public): About 91% are satisfied (56.8% very satisfied, 34.0% somewhat satisfied), and only 9.2% express dissatisfaction (4.2% very dissatisfied, 5.0% somewhat dissatisfied). "Invested" non-motorized users show nearly identical patterns—slightly more than 90% satisfied overall.
- Motorized Users (AZ public): While still largely positive, satisfaction rates are somewhat lower, with about 83% indicating they are satisfied (37.5% very satisfied, 45.2% somewhat satisfied) and around 17% expressing dissatisfaction (5.6% very dissatisfied, 11.7% somewhat dissatisfied). Among "invested" motorized users, roughly 85% are satisfied overall.

In short, the data suggest that while most trail users—whether non-motorized or motorized—are satisfied with their experiences, non-motorized users tend to show a slightly higher proportion reporting they are "very satisfied."

Rating of Access to Trails	Non-Motoriz	zed Trail User	Motorized Trail User		
Over Past Five Years	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	
Very dissatisfied	4.2%	4.3%	5.6%	4.8%	
Somewhat dissatisfied	5.0%	3.6%	11.7%	10.7%	
Somewhat satisfied	34.0%	35.1%	45.2%	48.3%	
Very satisfied	56.8%	57.0%	37.5%	36.2%	

#### **Perceived Changes in Trail Access Over the Past Five Years**

Non-motorized users are considerably more positive about changes in trail access than their motorized counterparts. Among Arizona public respondents using non-motorized trails, only about 10% believe access has gotten worse, while 38% say it has improved. The largest group—just over 40%—feels it has stayed the same, suggesting relatively stable or gradually improving conditions.

In stark contrast, a significantly higher share (31%) of motorized Arizona public users feel trail access has worsened in the past five years, while only 18% think it has improved. Around 41% see no major change in motorized trail access. These findings may reflect differences in land management policies, regulations, or resource allocation for motorized trails versus non-motorized trail.

Rating of Access to Trails	Non-Motoriz	zed Trail User	Motorized Trail User		
Over Past Five Years	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	
Gotten worse	10.4%	11.1%	30.7%	28.5%	
Stayed the same	41.1%	44.9%	40.7%	46.4%	
Gotten better	38.4%	35.0%	17.8%	15.2%	
Unable to answer - have not lived in Arizona for 5 years	10.1%	9.0%	10.8%	9.9%	

#### **Non-Users of Trails**

#### **Top Reasons for Not Participating in Trail Activities**

Both Arizona public and invested user non-participants cite **extreme temperatures and weather** as the leading deterrent to trail use, indicating that concerns about heat, cold, or unpredictable conditions can overshadow other factors. Coming in second is **lack of knowledge about where to go** at their skill level, suggesting that more accessible, skill-specific information could potentially draw more newcomers into trail activities.

Rounding out the top three is **being too busy** with other commitments, whether work or leisure, hinting that scheduling and time availability strongly impact non-participation. Other prominent barriers include **not having companions**, **needing specialized equipment**, and **trail distance**—suggesting both social and logistical factors influence potential users. **Health or mobility constraints**, as well as **fees** and **safety concerns**, also rank relatively high, underscoring the importance of clear safety measures, affordable access points, and infrastructure that supports varying physical abilities.

At the lower end of the list, reasons such as **lack of transportation**, **negative wildlife encounters**, and **not feeling welcome** are less of a deterrent on average—though they may still be significant to certain individuals or communities. Overall, the data suggest that mitigating extreme weather impacts, promoting user-friendly information on skills and locations, and addressing social, financial, and accessibility barriers could help convert more non-users into active trail participants.

	Non-	-Users
Reasons Given for Not Participating in Trail Activities	AZ Public N = 643	Invested Users N = 178
Extreme temperatures and weather	2.99	2.63
Don't know where to go for specific activities at my skill level	2.73	2.43
Too busy with other activities (work or leisure)	2.53	2.33
Don't have companions/people to go with	2.39	2.34
Don't have the equipment	2.26	2.21
Trails are too far away	2.21	2.06
Health issues, don't have physical ability, mobility issues, etc.	2.19	2.18
Fees are too high (for admission, parking, etc.)	2.18	2.06
Fear for personal safety due to theft, bodily injury, getting lost, etc.	2.17	2.06
Trails are too crowded	2.14	2.04
Don't have the skills	2.07	2.09
Lack of transportation to recreation areas	1.86	1.81
Negative interactions with wildlife	1.85	1.71
Don't feel welcome	1.75	1.63

#### **Future Interest Among Non-Users**

A substantial majority of non-users in both the Arizona public (70.9%) and invested users (69.1%) groups express some level of interest (ratings of 5 to 7 on a 7-point scale) in using trails over the next year. The mean ratings—5.23 for Arizona public and 5.10 for invested users—suggest that, on average, these potential trail-goers lean toward moderate to strong interest in future trail participation.

Non-Users	Non-Users			
Level of Interest in Using Trails During Next !2 Months	AZ Public N = 643	Invested Users N = 178		
Not interested (Rated 1 to 3)	15.6%	22.5%		
Neutral (Rated 4)	13.4%	8.4%		
Interested (Rated 5 to 7)	70.9%	69.1%		
Mean	5.23	5.1%		

Meanwhile, roughly 15.6% of Arizona public non-users and 22.5% of invested user non-users report low interest (ratings of 1 to 3). A smaller group (13.4% and 8.4%, respectively) remains neutral. Overall, these data indicate that most non-users are open to trying or resuming trail-based recreation, though some may still feel barriers that keep them from becoming active participants.

#### **Problem Areas Ranked by Trail Users and Land Managers**

Trail users and land managers were asked to rate how much of a problem each of the following statements was on their trails based on a four point scale from Not a Problem (1) to a Major Problem (4) for trail users and a 5-point scale for land managers. The ranking of the problem areas is based on the total mean score. The ranking of the problem areas is based on the total mean score, which is the sum of all the mean scores among non-motorized trail users, motorized trail users, and land managers. Color-coding was used, with green representing Tier 1 and orange Tier 2. The deeper the color, the higher the mean score.

#### **People-Caused Problems and Environmental Issues**

The following looks at the top problem areas when grouped by people-caused problems and environmental issues:

## **Top Three People-Caused Problems**

- 1. **Litter or Trash Dumping** (Rank 1; Total Mean = 13.63)
  - O Increased trail use or a lack of user accountability can all contribute to more trash on trails. Periods of heavy visitation (e.g., busy outdoor seasons) often exacerbate the issue.
- 2. **Poor Trail Etiquette by Other Users** (Rank 4; Total Mean = 12.02)
  - More people sharing the same routes means the potential for more friction—whether it's hikers, bicyclists, or motorized users not following courtesy protocols. Crowded conditions and a lack of knowledge of how and when to share trails can increase conflicts.
- 3. Unauthorized or Irresponsible Use (OHV, E-bike, etc.) (Rank 6; Total Mean = 11.59)
  - Expanding popularity of off-highway vehicles, e-bikes, and similar modes of travel has outpaced the development of dedicated trails and clear guidelines. Users may ride in prohibited areas, driving at higher speeds which may cause safety issues, damaging trails and prompting complaints from others.

## **Top Three Environmental Issues**

- 1. **Erosion of Trails** (Rank 2; Total Mean = 12.77)
  - Higher trail traffic (human and motorized), plus extreme weather events (heavy rain, flooding), accelerates erosion. Land managers see ongoing damage that can be both costly to fix and detrimental to the user experience.
- 2. **Spread of Invasive Species** (Rank 3; Total Mean = 12.14)

- As trail use increases, seeds and organisms are more easily transported on shoes, tires, and gear. Changing rainfall and temperature patterns can also favor invasive species over native plants and wildlife.
- 3. Changes in Climate (Rank 5; Total Mean = 11.76)
  - Extreme heat, intense storms, and other climate impacts amplify existing challenges—eroding trails, stressing vegetation, and affecting how often and safely people can use the trails.

#### Why These Issues May Be Escalating in Arizona

- Year-Round Recreation and Tourism: Arizona's mild winters attract visitors escaping colder climates, concentrating usage in cooler months and putting added strain on popular trails.
- Monsoon Impacts: Sudden downpours during monsoon season can cause severe trail damage and washouts, especially in areas with steep slopes or crumbly soils.
- Rapid Urban Growth and Expansion: Cities like Phoenix and Tucson continue to grow, bringing more
  people to nearby trails. Greater development at the urban—wildland interface often leads to more litter,
  off-trail riding, and invasive species introductions.
- Limited Enforcement in Remote Areas: Arizona has vast public lands, and agencies can be understaffed relative to the area they must manage, leading to gaps in oversight and rule enforcement.

These problem areas reflects not only the general issues facing trails nationwide but also how the state's unique desert and high-desert ecosystems—and its monsoon and high trail usage patterns—shape the severity and causes of these problems.

		Non-Motoriz	ed Trail Users	Motorized	l Trail Users	Land	Total
Rank	Problem Areas	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 3,466	Invested Users N = 4,717	Managers N = 91	Means
1	Litter or trash dumping	2.67	2.65	2.69	2.76	2.86	13.63
2	Erosion of trails	2.46	2.49	2.33	2.42	3.08	12.77
3	Spread of invasive species (e.g., buffelgrass, salt cedar, bullfrogs, stinknet, etc.)	2.49	2.51	1.90	2.14	3.10	12.14
4	Poor trail etiquette by other users	2.30	2.36	2.37	2.37	2.63	12.02
5	Changes in climate (extreme heat/increased temperatures, increased rain/flooding, etc.)	2.56	2.45	1.86	1.99	2.90	11.76
6	Unauthorized or irresponsible use (OHV, e-bike, etc.)	2.25	2.35	2.22	2.28	2.49	11.59
7	Damage to vegetation	2.29	2.28	1.99	2.10	2.73	11.38
8	Damage to historical, cultural, or archaeological sites	2.35	2.30	2.01	2.16	2.54	11.36
9	Lack of enforcement of rules, regulations, or laws / Unable to enforce rules, regulations, or laws	2.11	2.19	2.02	2.13	2.81	11.26
10	Vandalism	2.18	2.19	2.21	2.21	2.40	11.20

		Non-Motoria	zed Trail Users	Motorized	Trail Users	Land	Total Means	
Rank	Problem Areas	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 3,466	Invested Users N = 4,717	Managers N = 91		
11	Lack of sensitivity to cultural/historical significance of trails, sites, etc.	2.29	2.22	1.99	2.09	2.59	11.18	
12	Development limiting trail access or use	2.13	2.27	2.28	2.39	2.07	11.13	
13	Pets (off-leash, pet waste, etc.)	2.24	2.25	1.86	1.97	2.80	11.12	
14	Too many people	2.18	2.27	1.94	2.39	2.24	11.02	
15	Availability of drinking water / groundwater	2.20	2.15	1.90	1.98	2.42	10.65	
16	Air quality (due to pollution, dust, smoke, etc.)	2.26	2.26	1.88	2.01	2.19	10.61	
17	Loss of scenic quality	2.18	2.17	1.84	1.96	2.19	10.34	
18	Closure of trails (due to issues of sustainability, maintenance, etc.)	1.86	1.93	2.22	2.19	1.93	10.14	
19	Conflict between users (based on use type, such as mountain biking vs hiking, riding an e-bike vs riding a horse, motorized vs non-motorized uses, etc.)	1.90	2.03	1.71	1.88	2.37	9.90	
20	Target shooting	1.96	2.08	1.87	2.00	1.95	9.85	

		Non-Motorized Trail Users		Motorized	l Trail Users	Land	Total	
Rank	Problem Areas	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 3,466	Invested Users N = 4,717	Managers N = 91	Means	
21	Noise (e.g., vehicle noise, loud music)	1.95	2.02	1.69	1.83	2.27	9.76	
22	Water pollution	2.16	2.09	1.73	1.84	1.92	9.75	
23	Lack of cell service	1.83	1.81	1.91	1.87	2.21	9.64	
24	Fear for personal safety due to theft, bodily injury, etc. / Responding to issues of safety or crime	1.67	1.68	1.53	1.59	2.21	8.68	
25	Negative interactions with wildlife (e.g., fear of getting hurt by animals, reptiles, insects, etc.) / Users' negative interactions with wildlife	1.56	1.51	1.36	1.39	2.05	7.88	

## **Shared Priorities**

#### **Priority Areas Ranked by Trail Users and Land Managers**

Trail users were asked "How important are the following trail management priorities to you? Their response was based on a 4-point scale, 1 = Not at all important to 4 = Very important. The land managers used a 5-point scale with 1 = Not at all important to 5 = Extremely important. The ranking of the priorities is based on the total mean score, which is the sum of all the mean scores among non-motorized trail users, motorized trail users, and land managers. Color-coding was used, with green representing Tier 1 and orange Tier 2. The deeper the color, the higher the mean score.

		Non-Motoriz	ed Trail Users	Motorized	Trail Users	Land	Total
Rank	Priorities	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	Managers N = 91	Means
1	Maintain existing trails	3.67	3.68	3.47	3.58	4.36	18.77
2	Prevent or repair damage to sensitive environmental and cultural sites near trails	3.39	3.37	3.13	3.20	4.37	17.46
3	Provide trail signs	3.37	3.35	3.20	3.22	4.22	17.36
4	Enforce existing rules and regulations in trail areas	3.25	3.28	3.11	3.15	4.12	16.91
5	Provide trail maps and information	3.25	3.15	3.20	3.02	4.22	16.84
6	Promote safe and responsible recreation programs	3.15	3.09	3.01	3.02	4.33	16.61
7	Design and construct new sustainable trails	3.19	3.27	3.18	3.25	3.60	16.49
8	Obtain land for trails and trail access	3.21	3.35	3.24	3.36	3.25	16.42
9	Support trail stewardship programs for youth and adults	3.19	3.16	3.07	3.07	3.81	16.31
10	Provide information on trail characteristics so people of all ages and abilities can determine appropriate use (e.g., surface, grade, etc.)	3.19	3.15	2.95	3.02	3.79	16.10

# **Shared Priorities**

		Non-Motoria	zed Trail Users	Motorized	d Trail Users	Land	Total
Rank	Priorities	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	Managers N = 91	Means
11	Connect trails to other trails, parks, and communities	3.08	3.09	3.02	3.05	3.82	16.06
12	Provide well-designed facilities, like restrooms, parking, campsites, and shaded areas near trails	3.07	3.02	2.69	2.80	3.88	15.47
13	Develop flexible trail management plans that can be adjusted based on changing conditions (extreme heat, drought, wildfires, policies, etc.)	3.06	3.06	2.80	2.90	3.49	15.32
14	Develop trails and provide facilities to ensure accessibility for individuals of all ages and varying abilities (e.g., adaptive trails)	3.00	2.93	2.78	2.81	3.79	15.31
15	Multi-use paths connecting community sites and resources	2.83	2.83	2.67	2.77	3.71	14.81
16	Create memorable visitor experiences through engaging programming	2.59	2.47	2.45	2.38	3.54	13.42
17	Availability of visitor support (to answer questions, advice on safety measures, etc.)	2.55	2.45	2.36	2.32	3.31	12.99
18	Authorized e-bike opportunities on new or existing trail networks	1.85	1.86	1.83	2.02	2.43	9.99

#### **Electric Devices and E-Bikes**

#### **Use of Electric Devices for Recreation on Trails**

Trail users were asked if they have ever used electric devices, such as e-bikes, electric unicycles, skateboards, or scooters for recreation on trails in Arizona. Relatively few non-motorized trail users reported having tried these devices, whereas a larger share of motorized trail users indicated some level of experience with them.

Among non-motorized trail participants, 9.2% of the Arizona public and 12.0% of invested users have used electric devices on trails. By contrast, 13.5% of the motorized trail users in the Arizona public sample and 19.2% of invested users say they have used such devices. A strong majority of both non-motorized and motorized trail users—ranging from 80.8% to 90.8%—report never having used e-bikes or other electric devices for recreation in Arizona.

Ever Used Electric Devices	Non-Motoria	zed Trail User	Motorized Trail User		
on Trails	AZ Public N = 3,466	Invested Users N = 4,717	AZ Public N = 1,435	Invested Users N = 1,977	
Yes	9.2%	12.0%	13.5%	19.2%	
No	90.8%	88.0%	86.5%	80.8%	

Although these numbers may initially seem low, they translate to roughly 314,000 non-motorized trail users and 190,500 motorized trail users based on a population of 5.27 million adults (aged 18 and older) currently residing in Arizona. Additionally, e-bike use is on the rise as these devices become more affordable, suggesting that interest in e-bikes will likely continue to grow.

#### **Electric Device Users on Trails Demonstrate High Continuation Rates**

Among those who had previously indicated using an electric device on trails, most notably e-bikes, they were asked: "In the last 12 months, have you used electric devices, such as e-bikes, electric unicycles, skateboards, scooters, etc. for recreation on trails in Arizona?" The results show that the vast majority of both non-motorized and motorized trail users, across the Arizona public and invested user groups, indeed used them in the last year. Among non-motorized trail users, 88.9% of the Arizona public and 90.5% of invested users report usage in the past 12 months, whereas motorized trail users report rates of 89.6% among the Arizona public and 93.4% among invested users.

Used Electric Devices on Trails	Non-Motori	zed Trail User	Motorized Trail User		
(Last 12 Months)	AZ Public N = 318	Invested Users N = 568	AZ Public N = 193	Invested Users N = 379	
Yes	88.9%	90.5%	89.6%	93.4%	
No	11.1%	9.5%	19.3%	6.6%	

These findings underscore that once individuals have tried electric devices on trails, they are highly likely to continue using them.

#### **E-Bikes Dominate Electric Device Usage on Trails**

Among trail users who reported using electric devices in the past 12 months, the following scale was used to determine how frequently they used each vehicle: 1 = Not at all, 2 = Once, 3 = A few times, 4 = Every couple of months, 5 = Once a month, 6 = Every few weeks, 7 = Once a week, and 8 = More often than once a week.

Based on this scale, e-bikes stand out as the most frequently used device, with average usage ranging from 4.89 (about once a month among motorized AZ public) to 5.17 (slightly more than once a month among non-motorized invested users). In contrast, electric scooters, skateboards, and unicycles all register much lower frequencies hovering around 1.2 to 1.6—suggesting usage between "not at all" and "once" across both non-motorized and motorized groups.

Frequency of Use on Trails	Non-Motori	zed Trail User	Motorized Trail User		
(Last 12 Months)	AZ Public N = 283	Invested Users N = 518	AZ Public N = 173	Invested Users N = 354	
E-bikes	5.08	5.17	4.89	5.09	
Electric scooters	1.45	1.35	1.60	1.45	
Electric skateboards	1.35	1.23	1.42	1.31	
Electric unicyles	1.26	1.19	1.39	1.28	

These findings suggest that e-bikes are by far the electric device of choice for trail use, regardless of whether respondents identify primarily as non-motorized or motorized trail users.

#### Class 1 E-Bikes Are the Most Common Choice Among Trail Users

Overall, Class 1 e-bikes—those that provide assistance only while pedaling up to 20 mph—are the most frequently used across both non-motorized and motorized trail user groups, with roughly 63% to 64% of non-motorized users opting for them and more than half of motorized users indicating the same. By comparison, Class 2 (throttle-actuated) e-bikes maintain a moderate share, at around 22% to 26% across all groups, while Class 3 e-bikes (pedal-assist up to 28 mph) show the highest usage among the Arizona public motorized users (29.1%) but remain lower for other respondents.

These findings may reflect both regulatory considerations—many trails allow only certain classes—as well as cost and ease-of-use factors. Class 1 e-bikes often replicate a traditional bicycling experience more closely than throttle models, making them appealing for a wide variety of riders. Meanwhile, Class 3 e-bikes, which can achieve higher speeds, may have higher price points or be subject to stricter rules, thereby limiting their overall adoption.

	Non-Motoriz	zed Trail User	Motorized Trail User		
Class of E-Bike Used	AZ Public N = 253	Invested Users N = 475	AZ Public N = 154	Invested Users N = 324	
Class 1: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycles reaches 20 mph.	63.0%	64.4%	54.3%	61.1%	
Class 2: Bicycle equipped with a throttle-actuated motor that ceases to provide assistance when the electric bicycle reaches 20 mph.	24.0%	25.7%	22.1%	25.3%	
Class 3: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 28 mph.	21.1%	15.6%	29.1%	17.9%	

#### **Other Power-Driven Mobility Devices (OPDMD)**

#### Household Other Power Driven Mobility Device (OPDMD) Use Is Higher Among Motorized Trail Participants

Among households where at least one member uses an other power-driven mobility device (OPDMD), such as mobility scooters, Segways, power wheelchairs, all-terrain track chairs, and adaptive bikes, the data show that a larger proportion of motorized trail users report OPDMD usage than non-motorized users. Specifically, 17.4% of the Arizona public and 20.1% of invested users who identify as motorized trail users have someone in their household who has used an OPDMD on trails in the past 12 months. By comparison, 11.8% of the Arizona public and 14.0% of invested users identifying as non-motorized trail participants report such usage.

These findings may be driven by greater familiarity with powered devices among motorized groups, or a broader acceptance of technology-assisted recreation. It might also reflect higher awareness or availability of adaptive devices within households already inclined to use motorized options on trails.

Member of Household Use of a Power-Driven Mobility Device	Non-Motori	zed Trail User	Motorized Trail User		
Power-Driven Mobility Device (OPDMD)	AZ Public N = 412	Invested Users N = 473	AZ Public N = 159	Invested Users N = 199	
Yes	11.8%	14.0%	17.4%	20.1%	
No	87.7%	84.6%	81.4%	76.9%	

#### OPDMD Use on Trails Shows Higher Frequency for Power Wheelchairs, Mobility Scooters, and Adaptive Bikes

Across households reporting the use of OPDMDs on trails, power wheelchairs, mobility scooters, and adaptive bikes emerge as the most frequently used options—generally averaging between 2.3 and 3.0 in usage frequency over the past 12 months. By contrast, all-terrain track chairs and Segways register lower overall frequencies, hovering in the 1.2 to 1.8 range. Notably, power wheelchair usage is highest among Arizona public motorized users (3.02), while mobility scooters peak among invested motorized users (3.05).

Frequency of OPDMD	Non-Motori	zed Trail User	Motorized Trail User		
Use on Trails (Last 12 Months)	AZ Public N = 49	Invested Users N = 66	AZ Public N = 28	Invested Users N = 40	
Power wheelchair	2.88	2.27	3.02	2.25	
Mobility scooter	2.34	2.82	2.50	3.05	
Adaptive bike	2.69	2.62	2.80	2.93	
All-terrain track chair	1.54	1.17	1.86	1.20	
Segway	1.45	1.33	1.67	1.45	

These patterns may reflect individual mobility needs, the relative ease of operating certain devices, and the costs or availability associated with specialized equipment, such as track chairs. Additionally, familiarity with powered transportation among motorized trail users may contribute to slightly higher usage of certain OPDMDs in that group. Interestingly, under "Other" responses, the most frequently entered OPDMD was an e-bike.

## Varying Acceptance for Different E-Bike Classes, with Land Managers More Restrictive on Higher Classes

Across the Arizona public, invested users, and land managers, Class 1 e-bikes—often viewed as closer to conventional mountain bikes used on trails—receive wider acceptance for both motorized and multi-use trails, with land managers also showing higher willingness (29.7%) to allow them on non-motorized trails. However, Classes 2 and 3, which include throttle-based or higher-speed capabilities, are more strongly directed to motorized trails, particularly among land managers (87.9% and 90.1%, respectively). These differences may stem from perceptions about speed, noise, and overall trail safety, as well as the belief that Class 1 e-bikes align more closely with traditional pedal-powered activities, while Class 2 and 3 models are viewed as more akin to motorized vehicles.

Trail Suitable for Each Class		AZ Public N = 4,061		Invested Users Land Managers N = 5,020 N = 91				'S	
of E-Bike	Non- Motorized Trail Only	Motorized Trail Only	Multi-Use Trails	Non- Motorized Trail Only	Motorized Trail Only	Multi-Use Trails	Non- Motorized Trail Only	Motorized Trail Only	Multi-Use Trails
Class 1: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycles reaches 20 mph.	14.9%	46.8%	38.2%	11.8%	50.0%	38.2%	29.7%	73.6%	59.3%
Class 2: Bicycle equipped with a throttle-actuated motor that ceases to provide assistance when the electric bicycle reaches 20 mph.	9.8%	70.3%	19.9%	7.3%	74.9%	17.8%	7.7%	87.9%	37.4%
Class 3: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 28 mph.	9.8%	70.7%	19.5%	7.4%	75.5%	17.1%	4.4%	90.1%	27.5%

#### Land Managers in Focus: Key Insights Shaping Arizona's 2025 Trails Plan

A total of 91 land managers—responsible for planning, building, maintaining, or overseeing motorized, non-motorized, and mixed-use trails in Arizona—completed the 2025 Trails Plan online survey. Participants represented federal, state, county, and city/town agencies, as well as various organizations. They were invited by ASPT and its partners to take part in the survey. Although this was not a random sample and is therefore not generalizable to all land managers, it still offers valuable perspectives. The survey focused on trail issues and management priorities, and land managers openly shared their perspectives. The following is a summary of their key insights.

To align with the 2025 Trails Plan, the survey findings for key questions are also broken out by the type of trail managed, specifically:

- Non-motorized trails (e.g., water trails, hiking, backpacking, equestrian use, mountain biking)
- Motorized trails (e.g., e-bikes, dirt bikes, ATVs, UTVs, 4x4s)
- Mixed-use trails (any combination of non-motorized, motorized, e-bikes, or other emerging technologies)

#### **Arizona's Land Managers: Agency Representation**

Federal agencies represent the largest share of respondents overall (37.4%), with an especially strong presence in motorized (73.9%) and mixed-use (65.7%) trail management. City or town agencies follow at nearly 30% overall and are more prevalent in non-motorized trail management (34.7%) than in motorized or mixed-use contexts. State agencies (16.5%) and county agencies (8.8%) make up smaller proportions across the board, though they appear slightly more often in non-motorized and mixed-use trail management. Nonprofit organizations, at under 8% overall, were lower primarily due to others who were interested in taking the survey; however, they did not meet the stated requirement of land manager.

Type of Agency or Organization Represented	Land Manager				
	Total N = 91	Non-Motorized N = 72	Motorized N = 23	Mixed-Use N = 35	
Federal agency	37.4%	33.3%	73.9%	65.7%	
City or Town agency	29.7%	34.7%	0.0%	17.1%	
State agency	16.5%	16.7%	13.0%	5.7%	
County agency	8.8%	8.3%	4.3%	8.6%	
Non-profit organization	7.7%	6.9%	8.7%	2.9%	

The high percentage of federal agencies in motorized and mixed-use settings may be explained by the large areas of federal public land and the associated regulatory requirements. Meanwhile, cities and towns are apt to focus on walkable and bikeable infrastructure at the community level, which helps account for their larger share in non-motorized trail management. Counties show a smaller share overall—only 8.8%—likely due to the fact that there are just 15 counties in Arizona, limiting their presence as land managers. Finally, non-profit organizations often play a partnering role rather than serving as primary land managers, resulting in modest representation in this survey effort across the different trail types.

#### Arizona's Land Managers: A Look at Positions and Roles

Responses from the land managers show that nearly two-thirds (63.7%) classified themselves as recreation management, making it the most common role overall. Trails management ranked second at 51.6%, followed by land/resource management at 41.8%. Law enforcement represented a smaller share of survey respondents.

Current Position (By Category)	Land Manager				
	Total N = 91	Non-Motorized N = 72	Motorized N = 23	Mixed-Use N = 35	
Recreation management	63.7%	63.9%	78.3%	80.0%	
Trails management	51.6%	52.8%	65.2%	62.9%	
Land/resource management	41.8%	47.2%	43.5%	42.9%	
Law enforcement	5.5%	5.6%	4.3%	0.0%	

These percentages suggest that day-to-day responsibilities for most land managers who responded to the survey center on providing visitor experiences, maintaining trail infrastructure, and caring for natural resources. Meanwhile, the relatively low figure for law enforcement may reflect an emphasis on collaboration with specialized units or outside agencies for security and compliance matters, freeing most staff to focus on broader recreation and resource-oriented duties.

## Arizona's Top Trail Management Priorities: Maintenance, Safety, and Stewardship

Survey results from the land managers show that preventing or repairing damage to sensitive environmental and cultural sites near trails (4.37 on a 5-point scale) is their highest priority, closely followed by maintaining existing trails (4.36) and promoting safe, responsible recreation (4.33). Other top concerns include cleaning up trash and litter (4.26), providing trail maps and information (4.22), and completing environmental/cultural compliance (4.14). By comparison, initiatives such as increasing cell service (2.36) and using drones to monitor trail conditions (2.05) rank at the lower end of the list.

Priorities	Land Manager			
Scale: 1 = Not at All Important to 5 = Extremely Important	Total N =91	Non-Motorized N = 72	Motorized N = 23	Mixed-Use N = 35
Maintain existing trails	4.37	4.31	4.43	4.49
Promote safe and responsible recreation programs	4.36	4.42	4.22	4.34
Clean up trash and reduce litter	4.33	4.26	4.43	4.51
Provide trail maps and information	4.26	4.19	4.43	4.43
Complete environmental/cultural clearance and compliance	4.22	4.24	4.43	4.46
Provide trail signs (including kiosks with rules, informational signs, emergency markers, decals, difficulty ratings, fiberglass markers, etc.)	4.14	4.10	4.30	4.43
Enforce existing rules and regulations in trail areas	4.13	4.18	4.30	4.31
Provide well-designed facilities, like restrooms, parking, campsites and shaded areas near trails	4.12	4.03	4.35	4.29
Connect trails to other trails, parks, and communities	3.88	3.94	3.74	4.09
Support trail stewardship programs for youth and adults	3.82	3.96	3.52	3.97
Develop trails and provide facilities to ensure accessibility for individuals of all ages and varying abilities (e.g., adaptive trails)	3.81	3.72	3.96	4.03
Provide information on trail characteristics so people of all ages and abilities can determine appropriate use (e.g., surface, grade, etc.)	3.79	3.83	3.35	3.91
Multi-use paths connecting communities and resources	3.79	3.82	4.00	3.86
Rerouting existing trails so they are more sustainable	3.71	3.81	3.26	3.91
Design and construct new sustainable trails	3.66	3.69	3.48	3.97
Create memorable visitor experiences through engaging programming	3.60	3.68	3.22	3.69
Develop flexible trail management plans that can be adjusted based on changing conditions (extreme heat, drought, wildfires, policies, etc.)	3.54	3.57	3.22	3.51
Availability of visitor support (to answer questions, advice on safety measures, etc.)	3.49	3.49	3.35	3.63
Obtain land for trails and trail access	3.31	3.31	3.30	3.46
Authorized e-bike opportunities on new or existing trail networks	3.25	3.39	2.83	3.29
Increase cell service	2.43	2.42	2.30	2.71
Use of drones to help monitor trail conditions, etc.	2.36	2.36	2.43	2.43

These results suggest that most agencies are highly focused on environmental protection, preserving cultural resources, and keeping existing trails in top condition before expanding technology or other amenities.

Managers may feel direct action on pressing conservation issues and facility upkeep provides the greatest return on limited budgets and staffing. Lower scores for tech-oriented improvements like drones and expanded cell coverage likely reflect either tighter funding constraints or a perception that these features are less critical than immediate on-the-ground needs.

#### **Arizona Land Managers Evaluate the Need for More Trails**

Among the 91 survey participants, land managers generally agreed that there is high visitor demand for various types of trails (average rating 4.07 on a 5-point scale). A similarly high rating (3.98) indicates concerns about insufficient staff to oversee additional trails. Opinions about acquiring more land or easements were more moderate (3.05), and respondents leaned toward disagreement or neutrality (2.73) when asked if their current lands cannot withstand additional trails or trail use.

Need for New Trails	Land Manager			
Scale: 1 = Strongly Disagree to 5 = Strongly Agree	Total N = 91	Non-Motorized N = 72	Motorized N = 23	Mixed-Use N = 35
There is high visitor demand for different types of trails in the area I manage (e.g., difficulty level, width, etc.)	4.07	4.00	4.30	4.37
There is not enough staff to manage more trails	3.98	3.96	4.26	4.20
My agency/organization would need to acquire more land/easements to build more trails in the area I manage	3.05	3.13	2.39	2.74
Lands that I manage cannot withstand more trails or trail use	2.73	2.57	2.96	2.74

These results may reflect the growing popularity of outdoor recreation and the corresponding pressure to diversify available trails. The staffing challenge is understandable, as expanding trail networks requires more personnel to manage maintenance, visitor services, and enforcement. Meanwhile, the moderate ratings on land acquisition suggest that some areas could likely accommodate new trails without immediately securing additional acreage. Finally, the relatively low concern about land resiliency (2.73) indicates that, on balance, most managers believe their existing lands can tolerate more trails, at least for now.

#### Why Agencies Launch New Trail Projects: Insights from Arizona Land Managers

As reported by land managers across the state, new trail projects were most commonly initiated in response to public demand, with an average of 2.30 projects per agency. Close behind were projects stemming from a developed trail plan (2.23) or collaborative planning efforts (2.19). Partner engagement and outside funding

both scored 2.09, indicating moderate roles in driving new initiatives. Some projects (2.03) arose from a need to renovate or protect impacted areas, while professional discretion (1.95) and federally dictated strategies (1.58) appeared less frequently as primary motivators.

Number of Agency's Trail Projects	Land Manager				
Initiated for Following Reasons	Total N = 91	Non-Motorized N = <b>7</b> 2	Motorized N = 23	Mixed-Use N = 35	
As a result of public demand	2.30	2.32	2.48	2.37	
Part of the implementation of a developed trail plan	2.23	2.25	2.26	2.40	
Part of collaborative planning efforts	2.19	2.19	2.30	2.34	
Partner engagement	2.09	2.07	2.30	2.34	
Outside funding	2.09	2.04	2.43	2.34	
In response to impacted areas needing renovation or protection	2.03	2.00	2.04	2.11	
Professional discretion	1.95	1.92	1.83	2.03	
Dictated from federal strategies	1.58	1.60	1.78	1.74	

These results suggest that community interest and prior planning strategies guide much of the trail development process. Public support often catalyzes project momentum, and formal trail plans or collaborative efforts create a clear roadmap for agencies to follow. Partner engagement and outside funding play helpful, although somewhat secondary, roles in getting projects off the ground. By contrast, the relatively lower numbers for professional discretion and federal mandates may reflect that trail-related decisions tend to be driven more by local needs and direct stakeholder input than by top-down directives.

#### Tackling Invasive Species and Trail Erosion: Top Concerns for Arizona Land Managers

The statewide survey of land managers revealed that the spread of invasive species (3.10 on a 4-point scale) and trail erosion (3.08) emerged as the most significant environmental or cultural problems. Climate-related changes (2.90), such as extreme heat or increased flooding, and damage to vegetation (2.73) were also notable concerns. Issues like loss of scenic quality (2.19), air quality (2.19), and negative wildlife interactions (2.05) were seen as lesser problems, with water pollution (1.92) ranking lowest overall.

Problems	Land Manager			
(Environmental and Cultural Conditions)  Scale: 1 = Not a Problem to 4 = Major Problem	Total N = 91	Non-Motorized N = 72	Motorized N = 23	Mixed-Use N = 35
Spread of invasive species (e.g., buffelgrass, salt cedar, bullfrogs, stinknet, etc.)	3.10	3.08	3.22	3.09
Erosion of trails	3.08	3.07	3.39	3.00
Changes in climate (extreme heat /increased temperatures, increased rain / flooding, etc.)	2.90	2.96	2.65	2.74
Damage to vegetation	2.73	2.69	3.04	2.69
Lack of sensitivity to cultural / historical significance of trails, sites, etc.	2.59	2.54	3.17	2.71
Damage to historical, cultural or archaeological sites	2.54	2.49	3.13	2.66
Availability of drinking water / groundwater	2.42	2.43	2.35	2.23
Loss of scenic quality	2.19	2.13	2.52	2.26
Air quality (due to pollution, dust, smoke, etc.)	2.19	2.17	2.30	2.14
Users' negative interactions with wildlife / afraid of getting hurt by animals, reptiles, insects, etc.	2.05	1.97	2.22	1.91
Water pollution	1.92	1.85	2.26	1.94

These findings suggest that land managers are most worried about factors that can directly and rapidly degrade trail environments—namely, invasive species that disrupt native habitats and the physical deterioration of trail surfaces. The relatively high rating for climate-related challenges reflects the region's vulnerability to extreme temperatures and weather events. In comparison, problems like water pollution or negative wildlife interactions appear less pressing, possibly because these issues are either localized or more easily managed.

#### Unofficial Trails, Trash, and Enforcement Top Social Challenges on Arizona Trails

In feedback from the land managers, it emerged that the most pressing social or individual issues include the proliferation of user-created trails (2.86 on a 4-point scale), litter and trash dumping (2.85), and an inability to effectively enforce rules (2.81). Pets off leash (2.80) and unsafe or unauthorized off-highway vehicle use (2.71) also stand out as notable concerns. Issues such as trail conflicts among different user groups (2.37) and impacts of social media on trail use (2.27) sit closer to the middle of the list, while factors like trail closures (1.93) and users feeling unwelcome (1.82) rank at the lower end.

These results likely stem from several interconnected factors. High visitation numbers, limited staffing, and growing popularity of various outdoor activities can all exacerbate user-created trails, trash problems, and difficulties in enforcing regulations. Off-leash pets and unauthorized vehicle use may reflect gaps in visitor

education or a lack of resources for consistent monitoring. Meanwhile, conflicts among diverse user groups are somewhat less severe but still reflect the ongoing need for clear communication and shared etiquette guidelines on multi-use trails.

Problems	Land Manager			
(Individual and Social Conditions)  Scale: 1 = Not a Problem to 4 = Major Problem	T <i>o</i> tal N = 91	Non-Motorized N = 72	Motorized N = 23	Mixed-Use N = 35
Proliferation of user-created trails	2.86	2 <b>.7</b> 8	3.48	3.17
Litter or trash dumping	2.85	2.83	3.30	2.83
Unable to enforce rules, regulations, or laws	2.81	2 <b>.7</b> 5	3.35	3.11
Pets (off leash, waste left on trail)	2.80	2.94	2 <b>.7</b> 0	2.66
Unsafe or unauthorized trail use by off-highway vehicles	2.71	2.65	3.30	3.00
Poor trail etiquette by users	2.63	2.61	2.96	2.63
Unprepared trail users	2.49	2.47	2.96	2.69
Unauthorized uses	2.49	2.44	3.09	2.69
Unauthorized encampments near trails	2.46	2.49	3.09	2.54
Conflicts between different types of users (including mountain bikers, hikers, equestrians, OHVs, cattle grazing, other land uses, etc.)	2.37	2.35	2.74	2.37
Impacts of social media on trail use/information sharing	2.27	2.25	2.61	2.34
Noise (vehicle noise, loud music, etc.)	2.27	2.21	2.61	2.26
Too many people	2.24	2.18	2.61	2.43
Responding to issues of safety or crime	2.21	2.17	2.70	2.31
Lack of cell service	2.21	2.18	2.39	2.17
Unsafe or unauthorized trail use of e-bikes	2.18	2.18	2.35	2.31
Trail access or use limited due to development	2.07	2.06	2.39	2.37
Recreational use of drones by the public	2.04	2.06	1.96	2.06
Target shooting	1.95	1.82	2.96	2.49
Closure of trails (due to maintenance, erosion, etc.)	1.93	1.92	2.35	2.06
Some users don't feel welcome	1.82	1.81	2.17	2.11

#### **Staffing and Workload Challenges Hamper Interagency Coordination**

Drawing on feedback from 91 land managers across Arizona, insufficient staff or volunteer capacity emerged as the greatest barrier to interagency coordination (3.33 on a scale of 1 to 4), closely followed by high workload and other competing priorities (3.25). Agency staff turnover (2.67) and a lack of time to develop and maintain relationships (2.51) were moderate concerns. Lower-ranked issues included lack of awareness of other organizations' plans (2.20), remote location (2.10), unfamiliarity with potential partners (2.07), and a perceived lack of agency support (2.07).

To What Extent Barriers to Interagency	Land Manager			
Coordination Affect Agency Scale: 1 = Not a Barrier to 4 = Major Barrier	Total N = 91	Non-Motorized N = <b>7</b> 2	Motorized N = 23	Mixed-Use N = 35
Don't have enough staff or volunteer capacity	3.33	3.35	3.52	3.46
Other priorities, high workload	3.25	3.25	3.39	3.54
Agency staff turnover	2.67	2.58	2.96	2.91
Lack of time to develop and maintain relationships	2.51	2.51	2.65	2.51
Unaware of other agency and organizations plans and projects	2.20	2.10	2.13	2.26
Located in a remote area	2.10	2.08	2.48	2.26
Unfamiliar with potential partners	2.07	1.99	2.26	2.09
Lack of agency support	2.07	1.99	2.22	2.09

These patterns suggest that a shortage of people and high workloads pose the most significant hurdles to coordinated efforts across agencies. Many land managers likely struggle to balance core responsibilities with building partnerships, leading to less time for collaborative initiatives. Staff turnover can further disrupt relationship-building efforts and continuity in long-term planning. While physical distance, limited knowledge of other agencies' projects, and lack of clear support also matter, these factors appear less critical compared to the universal challenges of staffing and workloads.

#### Volunteering, Wildlife Viewing, and Education Lead Arizona's Trail Programs

According to survey responses from land managers, trail maintenance volunteering (75.8% for adults) stands out as the most commonly offered program. Wildlife viewing (69.2% for adults, 58.2% for children) and guided hikes or nature walks (62.6% for adults, 61.5% for children) also feature prominently. Meanwhile, educational activities—such as outdoor classrooms—are provided at a high rate for children (73.6%), and some land managers plan to expand these programs further. Lower on the current list for adults are skills development

programs (22.0%) and guided OHV rides (17.6%), yet many hope to offer these in the future (52.7% and 44.0%, respectively).

	Land Manager		
Programs and Activities Provided	Provided for Adults	Provided for Children	Hope to Provide in the Future
Trail maintenance volunteering	75.8%	39.6%	20.9%
Wildlife viewing	69.2%	58.2%	17.6%
Guided hikes and nature walks	62.6%	61.5%	25.3%
Social groups	53.8%	41.7%	30.8%
Educational programs, outdoor classrooms, and activities	53.8%	73.6%	20.9%
Fitness challenges	46.2%	37.5%	36.3%
Dark sky programs	44.0%	38.5%	39.6%
Cultural heritage tours	33.0%	29.2%	48.4%
Summer camps/workshops/outdoor adventure programs	24.2%	52.8%	36.3%
Skills development programs	22.0%	20.8%	52.7%
Guided OHV rides	17.6%	66.7%	44.0%

These trends suggest that agencies focus first on foundational or broadly appealing programs, such as volunteering, wildlife viewing, and guided nature experiences. The emphasis on children's educational opportunities aligns with a desire to engage younger audiences and foster long-term stewardship values. By contrast, more specialized offerings (e.g., cultural heritage tours, guided OHV rides) remain less common but have notable interest for future development, likely reflecting shifting demographics, evolving recreational demands, and the potential to attract diverse user groups.

#### E-Bike Classes and Mobility Devices: Where Do They Fit on Arizona's Trails?

According to the survey responses from 91 land managers, motorized trails see the highest acceptance rates for Class 2 (87.9%) and Class 3 (90.1%) e-bikes, as well as other electric devices (74.7%) and other power-driven mobility devices (72.5%). Multi-use trails garner moderate support for Class 1 e-bikes (59.3%), other electric devices (41.8%), and other mobility devices (67.0%), while non-motorized trails have comparatively lower acceptance—though nearly a third of respondents (29.7%) favor allowing Class 1 e-bikes there. Interestingly, other power-driven mobility devices (31.9%) see a higher acceptance on non-motorized trails than Class 2 or Class 3 e-bikes.

It should be noted that under ADA guidelines, agencies must generally allow OPDMDs for individuals with disabilities unless there's a demonstrable issue of safety or significant environmental impact. In contrast, Class 2 or 3 e-bikes are not necessarily recognized as mobility aids for people with disabilities, so there's less of a legal mandate to permit them on trails designated as non-motorized. This distinction often explains why OPDMDs garner more support in settings where traditional e-bikes might face restrictions.

Trail Suitable for Each Class	Land Managers N = 91		
of E-Bike, Other Electric Devices, and OPDMD	Non-Motorized Trail Only	Motorized Trail Only	Multi-Use Trails
Class 1: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycles reaches 20 mph.	29.7%	73.6%	59.3%
Class 2: Bicycle equipped with a throttle-actuated motor that ceases to provide assistance when the electric bicycle reaches 20 mph.	7.7%	87.9%	37.4%
Class 3: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 28 mph.	4.4%	90.1%	27.5%
Other electric devices	3.3%	74.7%	41.8%
Other power-driven mobility devices	31.9%	72.5%	67.0%

These patterns likely reflect differing priorities around speed, user conflicts, and accessibility. Motorized trails are already designed to accommodate powered vehicles, making them a natural fit for higher-speed e-bike classes and electric devices. Multi-use trails attempt to balance a variety of user experiences and often allow limited electric assistance, especially at lower speeds (e.g., Class 1). Conversely, non-motorized trails generally aim to maintain a quieter, more traditional experience, which may explain the higher acceptance of mobility assistive devices for accessibility, while remaining cautious about faster or throttle-based e-bikes.

#### **Federal Agencies Out Front on E-Bike Policies**

Just over half (52.7%) of all surveyed land managers report having an e-bike policy in place. Federal agencies lead the pack, with 88.2% noting a formal policy, whereas only about one-third of state agencies (33.3%) and less than one-third of county (29.6%) or city/town agencies (29.6%) have established guidelines. As a result, counties and cities or towns account for the largest portion of agencies without any e-bike policy.

Agency Has Policy			Land Manager		
Regarding E-Bikes	Total	Federal	State	County	City or Town
Yes	52.7%	88.2%	33.3%	62.5%	29.6%
No	47.3%	11.8%	66.7%	37.5%	70.4%

These differences may reflect federal agencies' broader mandates and resources, allowing them to respond more quickly to growing trends like e-bike use. State, county, and city or town agencies often face competing priorities or limited staffing, which can slow policy development. The relative novelty of e-bikes in many jurisdictions may also be a factor, with some agencies waiting for further data or statewide guidance before establishing formal regulations.

#### Few Agencies Have Formal OPDMD Policies, but Federal Agencies Show Higher Adoption

Survey responses from 91 land managers reveal that under a third (29.7%) have a policy regarding Other Power-Driven Mobility Devices (OPDMD). Federal agencies are the most likely to have established guidelines (50%), whereas only around one in 10 state (13.3%) and county (12.5%) agencies do so. Just over one-fifth (22.2%) of city or town agencies report having a policy in place.

Agency Has Policy			Land Manager		
Regarding OPDMD	Total	Federal	State	County	City or Town
Yes	29.7%	50.0%	13.3%	12.5%	22.2%
No	70.3%	50.0%	86.7%	87.5%	77.8%

These differences may reflect variations in resources, mandates, and the extent of accessibility requirements each level of government must address. Federal agencies often have more standardized procedures and legal guidance on mobility devices, leading to earlier policy adoption. In contrast, smaller jurisdictions might face competing priorities or limited staffing, making it harder to develop formal OPDMD regulations. As mobility devices evolve and user expectations grow, more agencies may recognize the importance of clear policies to ensure both accessibility and proper trail management.

## Summary: Arizona's Trail Managers: Key Insights, Challenges, and Priorities

In summary, the 91 Arizona land managers shared a broad range of insights about the trails they oversee, shedding light on their agencies' roles, pressing needs, and future priorities.

#### **Needs and Challenges**

Land managers generally recognized the demand for additional trail options but also cited barriers, most notably insufficient staff capacity and workload constraints. Interagency coordination was hampered by limited time, high turnover, and competing priorities. Many agencies, however, saw value in collaborative planning and public engagement as drivers for initiating new trail projects.

#### **Top Priorities**

Environmental protection—especially preventing damage to sensitive sites and maintaining existing trails—emerged as a leading focus. Managers placed a high premium on visitor safety, responsible recreation, and proper signage to enhance user experience. While higher-tech solutions (e.g., drones or increased cell service) were on the radar, they ranked lower than immediate operational needs, likely reflecting limited resources or feasibility challenges.

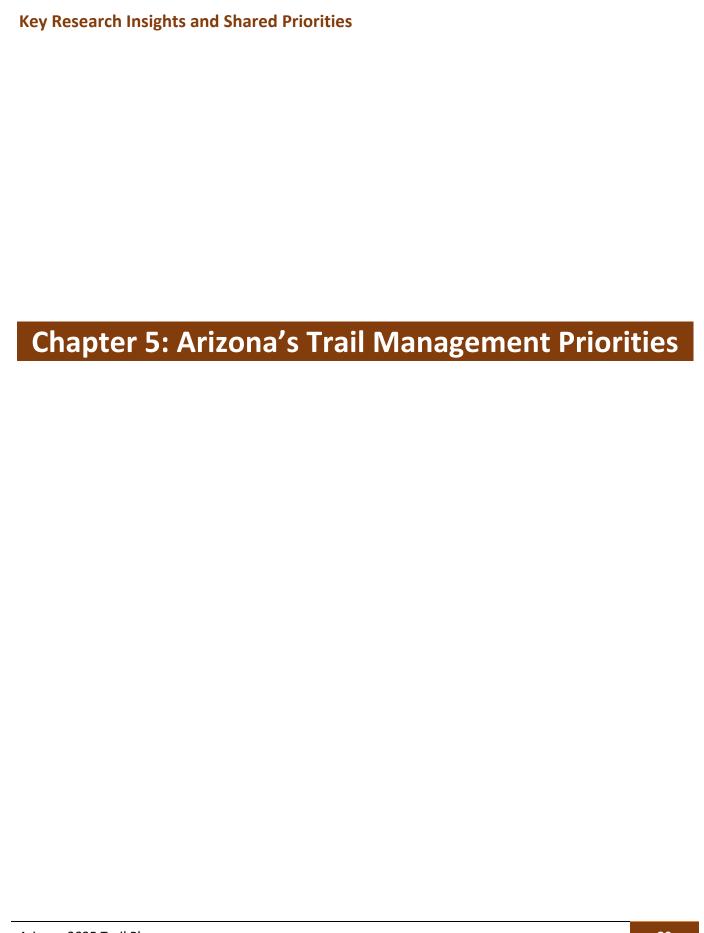
#### **Environmental and Social Concerns**

Invasive species and trail erosion were the top environmental worries, followed by changing climate conditions and vegetation damage. On the social side, user-created trails, trash dumping, and enforcement difficulties presented the greatest challenges. Off-leash pets, unauthorized vehicle use, and conflicts among different user groups were also issues, albeit to a somewhat lesser degree.

#### **Programs, Activities, and Policies**

Trail-related programming showed strong emphasis on volunteer maintenance, guided nature activities, and educational offerings—especially for children. For adults, wildlife viewing and guided hikes were widespread, while specialized programs (e.g., cultural heritage tours, OHV rides) were offered less often but are desired in the future by many agencies. Regarding e-bike and OPDMD policies, federal agencies were notably more likely to have formal guidelines in place; state, county, and city/town agencies lagged, often due to differing mandates, resource levels, or the relatively new nature of these technologies.

In all, the survey revealed land managers' commitment to preserving natural and cultural resources, meeting public demand for diverse trail experiences, and grappling with ongoing staffing, funding, and policy development challenges as they strive to enhance Arizona's trail systems for all user groups.



## **Arizona Trail Management Priorities – Shared Priorities Among All Core Groups**

Based on the in-depth findings and feedback from the Arizona Public (via surveys and interviews), Invested Users, and Land Managers (through surveys), and after consultation with the Working Group, the 2025 Trails Plan Team reviewed the feedback and, drawing on their knowledge of trail needs, projects, and funding parameters for trail projects in Arizona, then rank-ordered the top ten 2025 Trail Management Priorities as follows:

- 1. Maintain existing trails
- 2. Prevent or repair damage to sensitive environmental and cultural sites near trails
- 3. Develop signage, maps, and education materials to better inform users and encourage responsible trail use
- 4. Promote safe and responsible recreation through education and enforcement
- 5. Design and construct sustainable trails with a focus on connecting trails, parks and communities
- 6. Obtain land for trails and trail access
- 7. Create memorable visitor experiences to support trail stewardship
- 8. Provide accessible trails and facilities
- 9. Develop adaptable trail management plans based on changing conditions (extreme heat, drought, wildfires, policies, etc.)
- 10. Complete environmental/cultural clearance and compliance

Through this collaborative and inclusive 2025 Trail Plan process, these ten individual priorities are combined into four shared priority areas:

## **Priority Areas**

- 1. Sustainability and Stewardship
- 2. Education and Engagement
- 3. Access and Connectivity
- 4. Adaptability and Resilience

These priority areas reflect the current trends, opportunities, and challenges facing Arizona's trails over the next five years. The priorities are interconnected and critical to achieving a future vision where Arizona's trails continue to provide rich recreation experiences for non-motorized and motorized trail users. The following page shows which of the 10 priorities fall under each of the four priority areas. Detailed summaries follow for each priority area.



Inspire sustainability and stewardship, preserving Arizona's diverse and cultural landscapes for generations to come.

Sustainability
and
Stewardship

Priorities	Overall Ranking
Maintain existing trails.	1
Prevent or repair damage to sensitive environmental and cultural sites near trails.	2
Design and construct sustainable trails with a focus on connecting trails, parks, and communities	5



Provide trail users with the knowledge and tools needed to enjoy trails responsibly, ensuring their safety and preserving the natural and cultural landscape.

## Education and Engagement

Priorities	Overall Ranking
Develop signage, maps, and education materials to better inform users and encourage responsible trail use	3
Promote safe and responsible recreation through education and enforcement.	4
Create memorable visitor experiences to support trail stewardship.	7



Aim to make trails available to all, expanding accessibility and connecting them to parks and communities to enhance recreation opportunities and social engagement.

## Access and Connectivity

Priorities	Overall Ranking
Obtain land for trails and trail access.	6
Provide accessible trails and facilities.	8



Recognize the importance of preparing for and adapting to changing environmental and social conditions that impact trail management.

Adaptability and Resilience

Priorities	Overall Ranking
Develop adaptable trail management plans based on changing conditions and uses.	9
Complete environmental/cultural clearance and compliance.	10

## **Priority Area 1: Sustainability and Stewardship**



Inspire sustainability and stewardship, preserving Arizona's diverse and cultural landscapes for generations to come.

Sustainability and Stewardship

Priorities	Overall Ranking
Maintain existing trails.	1
Prevent or repair damage to sensitive environmental and cultural sites near trails.	2
Design and construct sustainable trails with a focus on connecting trails, parks, and communities	5

Sustainability and Stewardship encompasses the critical steps needed to balance recreation with responsible resource management on Arizona's trails. By taking care of existing trails, safeguarding fragile habitats and cultural sites, and designing new routes that work in harmony with the land, trail managers can preserve Arizona's natural beauty and heritage for generations to come. This approach is guided by three core priorities: (1) maintaining existing trails, (2) preventing or repairing damage to sensitive environmental and cultural areas adjacent to trails, and (3) designing and constructing sustainable trails. Together, these strategies reflect the shared commitment of land managers, user groups, and community partners to ensure that outdoor recreation remains both enjoyable and ecologically sound.

#### **Maintain Existing Trails**

Regular maintenance of existing trails—both non-motorized and motorized—is foundational to sustainability and stewardship. In Arizona, where drought conditions, extreme heat, and increased fire risk can degrade trails more rapidly, consistent upkeep becomes especially critical. Among non-motorized routes (used by hikers, cyclists, and equestrians), common maintenance tasks include repairing eroded switchbacks, regrading surfaces prone to washouts during monsoon season, and clearing overgrowth that can become a fire hazard. For motorized trails, such as off-highway vehicle (OHV) routes, maintenance teams also need to stabilize sections more susceptible to rutting and address soil compaction from higher-impact activities.

Federal agencies, including the U.S. Forest Service and the Bureau of Land Management, emphasize scheduled inspections and standardized protocols to mitigate environmental harm while prolonging the life of each trail. At

the state and local levels, volunteer stewardship programs remain an essential asset: they can mobilize quickly to address trail damage caused by flash floods or manage vegetation and invasive species in areas prone to fires.

**Actionable recommendations** include creating a comprehensive maintenance calendar tied to Arizona's climate patterns (e.g., pre- and post-monsoon checks), setting measurable benchmarks for trail condition, and forming partnerships with local nonprofits or clubs (e.g., hiking groups, OHV associations) to ensure long-term support and funding.

"When I volunteer on the trails, we often help repair washouts from flash floods and clear brush to reduce fire risks. It's hard but rewarding work—every hour we put in helps protect our trails and our community."

—Non-Motorized Trail User (Invested User)

"We need to do a better job in maintaining OHV trails. If we don't address ruts, washouts, and overgrowth, there's a greater chance of accidents."

-Motorized Trail User (Arizona Public)

"Maintenance is a long-term and on-going investment. By repairing erosion, clearing debris, and monitoring trail conditions, we protect the land, enhance user experiences, and ultimately save resources."

—Land Manager of Trails (Federal Agency)

#### Prevent or Repair Damage to Sensitive Environmental and Cultural Sites Near Trails

Protecting vulnerable habitats, wildlife corridors, and archaeological or cultural sites around trails is at the heart of sustainable land management. This is especially true in Arizona's varied landscapes, where sudden changes in weather—such as summer monsoons—can accelerate erosion near petroglyphs or other culturally significant locations, and extreme heat can stress fragile desert ecosystems.

Federal guidelines from the Bureau of Land Management and the National Park Service stress the need for environmental assessments and cultural resource surveys prior to major trail projects, whether for non-motorized or motorized use. In Arizona, these efforts often involve collaboration with tribal governments to identify and safeguard areas of historical or spiritual importance. Practical strategies include installing boundary markers and interpretive signage to discourage off-trail travel, thereby protecting cryptobiotic soils or heritage sites from motorized and foot traffic alike. Regular monitoring—using tools such as drone surveys or Global Positioning System (GPS) mapping—helps land managers detect early signs of erosion or unauthorized activity. Site Steward programs, composed of volunteers, monitor public and non-public sites for land managers and report destruction, vandalism, looting, etc. In the event of damage, rapid-response restoration teams (comprising volunteers and agency personnel) can stabilize or restore sensitive locations before harm becomes permanent, an approach that has proven vital in regions susceptible to sudden flash floods or wildfires.

**Actionable recommendations** include establishing a formal multi-agency rapid-response protocol that integrates volunteer Site Steward programs, tribal liaisons, and local stakeholders. This protocol should outline clear steps for reporting damage, deploying stabilization or restoration teams, and coordinating with cultural

resource experts when sensitive sites—such as petroglyphs or ancient settlements—are at risk. By maintaining regular communication channels among all partners and promptly addressing signs of vandalism or ecological disturbance, land managers can minimize harm to vulnerable habitats and cultural landmarks before it becomes permanent.

"I love exploring remote canyons, but I'm also aware that some of these areas are extremely fragile and may be near historical and cultural sites. Taking steps to protect these trails and sites now is extremely important."

—Non-Motorized Trail User (Arizona Public)

"When we ride, we stay on marked OHV routes to avoid damaging the surrounding area. It's important to respect these places for future generations."

—Motorized Trail User (Invested User)

"Whether it's fencing off sensitive areas or educating visitors about historical landmarks, we strive to balance recreation with preservation. Protecting these sites is a shared responsibility that benefits our community and our cultural heritage."

—Land Manager of Trails (State Agency)

#### **Design and Construct Sustainable Trails**

Designing and building new trails with sustainability in mind—or retrofitting existing ones—offers a proactive way to minimize ecological disruption and reduce long-term maintenance costs. In Arizona's desert, grassland, and forested regions, sustainable trail design must account for monsoonal rain patterns, erosion-prone soils, and extreme temperatures that can degrade surfaces. Non-motorized routes, for instance, often rely on careful contouring and appropriately placed switchbacks to control water flow and reduce erosion, while motorized trails may incorporate engineered drainage systems and reinforced surfaces to handle heavier use.

Agencies such as the National Park Service advocate for erosion-control measures, the use of locally sourced materials, and routes that follow natural landforms. Applying these best practices not only conserves habitats but also bolsters user safety, particularly in extreme conditions. In highly visited OHV areas, incorporating turnouts and signage that direct traffic flow can help protect surrounding vegetation and reduce user conflicts.

State and local governments, often working in tandem with nonprofit organizations, can employ geographic information system (GIS) data for route planning, ensuring that high-risk zones—such as those prone to seasonal flooding—are avoided or carefully mitigated. Multi-agency task forces in Arizona have found success by pooling resources and expertise to address region-specific challenges, such as designing desert-friendly trails that limit dust generation. The ultimate goal is to balance public enjoyment of Arizona's natural resources with a forward-thinking approach that safeguards the environment and cultural heritage for generations to come.

"I appreciate trails that follow the natural contours of the land—those well-thought-out switchbacks keep erosion in check and make my hiking experience safer and more enjoyable."

—Non-Motorized Trail User (Invested User)

"When OHV trails are planned with durable surfaces and proper drainage, it really reduces the damage to our vehicles and helps us avoid tearing up the terrain. It's a win for riders and for the trails."

—Motorized Trail User (Arizona Public)

"Sustainable trail design is more than just a buzzword—it helps us conserve natural resources and keeps our maintenance costs down. By using erosion-control techniques and working with the landscape, we create trails that last for years."

—Land Manager of Trails (City/Town)

#### What is a Sustainable Trail?

There is no single, "official" definition of a sustainable trail used across all federal land management agencies, but agencies such as the U.S. Forest Service (USFS), National Park Service (NPS), and Bureau of Land Management (BLM) generally subscribe to a similar set of principles and guidelines. These principles emphasize that a sustainable trail is one that:

#### 1. Minimizes Environmental Impact

It is designed, built, and maintained in a way that reduces soil erosion, protects water quality, preserves native vegetation, and safeguards wildlife habitat.

#### 2. Requires Manageable Maintenance

It is constructed to natural grades, appropriate alignments, and uses durable materials so that routine care is limited. Sustainable trails are more resilient to weather, heavy use, and natural processes over time, thereby reducing long-term maintenance costs and labor.

#### 3. Meets User Needs and Expectations

A sustainable trail provides a positive, safe, and enjoyable experience for intended user groups (hikers, bicyclists, equestrians, etc.). This means balancing the physical characteristics of the trail with the skill level, capacity, and interests of its users.

## 4. Remains Stable Over Time

By following sound design principles (such as proper drainage, erosion control measures, and trail grade standards), a sustainable trail holds up under expected use levels and environmental conditions with minimal rerouting or reconstruction.

In addition to internal guidance, federal agencies frequently draw upon established best practices from organizations like the International Mountain Bicycling Association (IMBA), the Professional Trail Builders Association (PTBA), and various Trails Sustainability Guidelines. These external sources frequently define a sustainable trail as one that:

- Stays in place for years with minimal maintenance
- Supports the intended uses and experiences
- Causes minimal environmental impact.

**Sustainability and Stewardship** in Arizona's trail management involves both protecting the integrity of the natural environment and honoring the cultural and historical significance of these landscapes. From revitalizing heavily visited urban trails to safeguarding sensitive archaeological sites and coordinating large-scale volunteer efforts, each of the following featured projects demonstrates the collective commitment of land managers, volunteers, and partner organizations to responsible, long-term trail care.

In Phoenix, an extensive renovation to the **Piestewa Summit Trail and Dreamy Draw Trailhead** illustrates how modern amenities and preservation can coexist, providing improved experiences for urban hikers while maintaining the area's desert character. Near Florence, the **Arizona State Land Department's Emergency Mitigation Project** showcases proactive measures to protect a culturally significant site from vandalism and off-highway vehicle damage. Further north in the Coconino National Forest, **Tread Lightly's restoration and cleanup efforts at the Cinder Hills OHV Area** highlight the power of community engagement, sustainable use, and habitat protection in popular motorized recreation zones. Collectively, these projects represent a dedication to ensuring Arizona's trails remain both accessible and ecologically sound for generations to come.

Priority Area 1: Sustainability and Stewardship
Featured Project 1
Piestewa Summit Trail and the Dreamy Draw Trailhead
City of Phoenix Parks and Recreation
Phoenix, Arizona

#### Piestewa Summit Trail and the Dreamy Draw Trailhead

Significant trails that offer opportunities for outdoor recreation and challenging physical activity are vital for providing high-quality experiences to Arizona's urban population. Piestewa Peak is a well-known landmark for the City of Phoenix, and the Piestewa Summit Trail is second only to the Camelback Mountain trails in popularity among hikers. Aging infrastructure and trailhead amenities—such as restrooms, ramadas, water fountains, parking, and traffic circulation—were upgraded to blend in with the surrounding desert environment.

The Dreamy Draw Trailhead is a popular non-motorized entry point into the Phoenix Mountains Preserve, heavily used by hikers, mountain bikers, and equestrians. The City of Phoenix coordinated a trailhead renovation during a large-scale drought pipeline project, which necessitated closing the trailhead. By taking advantage of this closure, the city accelerated renovations that were originally slated for a later date. Improvements included roadways, parking areas, ramada structures, and restrooms. The pipeline project also required extensive revegetation and restoration. When the trailhead reopened in September 2023, it received a positive public response and demonstrated effective stewardship in balancing infrastructure updates with desert conservation.

Priority Area 1: Sustainability and Stewardship
Featured Project 2
Emergency Mitigation Fence Installation
Arizona State Land Department
State Trust Land near Florence, Arizona

#### **Emergency Mitigation Fence Installation**

The Arizona State Parks and Trails (ASPT) program awarded the Arizona State Land Department (ASLD) a \$100,000 grant to purchase and install a fenced barrier protecting 15 acres of a culturally significant site on State Trust land near Florence, Arizona, recognized on the National Register of Historic Places. Despite earlier efforts by the ASLD to safeguard the site—and ongoing work by the State Land Department Trespass Unit and Arizona Site Stewards Program—the area suffered damage from unauthorized OHV use.

Funding from ASPT supported the purchase and installation of metal post-and-rail fencing around key portions of the site, providing more robust protection. This effort also fulfilled ASLD's obligations under the State Historic Preservation Act (A.R.S. § 41-861 et seq.) to preserve historical and cultural resources and prevent further deterioration. By securing an important cultural location and minimizing future harm, the project demonstrates the commitment to sustainability and stewardship of Arizona's diverse heritage.

Priority Area 1: Sustainability and Stewardship
Featured Project 3
Tread Lightly! Cinder Hills OHV Area Restoration and Cleanup
Tread Lightly!
Coconino National Forest, near Florence, Arizona

#### Tread Lightly! Cinder Hills OHV Area Restoration and Cleanup

The Cinder Hills OHV Restoration and Cleanup project is one of four Tread Lightly! stewardship initiatives funded by the Overland Expo Foundation and Nomad Wheels, in collaboration with Overland Expo events. The Overland Expo Foundation is dedicated to forging partnerships with individuals and organizations that safeguard the interests of overlanders, facilitate education and expert resources, and encourage responsible 4×4 and motorcycle exploration of diverse landscapes.

On November 5, 2022, 26 volunteers worked to restore and clean up the Cinder Hills OHV Area in the Coconino National Forest. Their efforts included replacing fencing damaged by recent wildfires and removing more than 3,500 pounds of trash. In total, they restored 300 feet of worm fencing, significantly improving the site's environmental integrity. This collaborative approach exemplifies how active stewardship and community engagement can support sustainability and protect Arizona's natural resources for generations to come.

## **Priority Area 2: Education and Engagement**



Provide trail users with the knowledge and tools needed to enjoy trails responsibly, ensuring their safety and preserving the natural and cultural landscape.

Education and Engagement

Priorities	Overall Ranking
Develop signage, maps, and education materials to better inform users and encourage responsible trail use	3
Promote safe and responsible recreation through education and enforcement.	4
Create memorable visitor experiences to support trail stewardship.	7

Education and Engagement focuses on equipping trail users with the information and skills needed to explore Arizona's trails responsibly, safeguard personal safety, and help preserve the surrounding environment. This approach centers on three key priorities: (1) developing signage, maps, and educational materials that promote responsible trail use; (2) encouraging safe, responsible recreation through both education and enforcement; and (3) creating memorable visitor experiences that inspire lasting stewardship. By integrating these elements into trail management, land managers and user communities can together foster a culture of respect and care for Arizona's natural and cultural landscapes.

#### Develop Signage, Maps, and Education Materials to Better Inform Users and Encourage Responsible Trail Use

Clear, well-designed signage and readily accessible information are essential for guiding users and promoting responsible recreation. For non-motorized trails—including those frequented by hikers, cyclists, and equestrians—best practices often include trailhead kiosks that outline rules, difficulty levels, and natural or cultural features of interest. Likewise, motorized trail users, such as off-highway vehicle (OHV) enthusiasts, benefit from specialized markers indicating permitted vehicle types, speed limits, or safety requirements. Agencies like the U.S. Forest Service and the Bureau of Land Management recommend using universally recognized symbols and multilingual materials where possible.

**Actionable steps** for Arizona land managers include adopting consistent design standards (e.g., color-coded routes, clearly stated regulations) and making digital maps accessible via websites or mobile apps. In fire-prone regions, signage can also highlight precautions for preventing wildfires. By presenting crucial information in both physical and digital formats, trail managers foster an informed user community better equipped to practice responsible recreation.

"Detailed signs and trailhead kiosks make it easier for me to stay on track and respect sensitive areas. It's reassuring to know exactly where I'm headed, so I can relax and enjoy my hike."

—Non-Motorized Trail User (Arizona Public)

"I'm grateful when OHV routes are clearly marked with rules and terrain features. Good signage helps me ride responsibly and avoid accidentally venturing off-trail."

—Motorized Trail User (Invested User)

"Investing in concise, multilingual signage and up-to-date maps is a cornerstone of successful trail management. It empowers every user—whether on foot or on wheels—to enjoy the outdoors responsibly."

—Land Manager of Trails (Federal Agency)

#### **Promote Safe and Responsible Recreation Through Education and Enforcement**

Educating users about proper trail etiquette and safety can reduce environmental damage and user conflicts while enhancing the overall trail experience. Non-motorized trail users may need guidance on topics such as Leave No Trace principles, wildlife awareness, or emergency preparedness for sudden weather shifts. Motorized recreation guidelines often address route navigation, speed controls, and measures to mitigate noise or dust in sensitive areas.

Actionable recommendations for Arizona land managers include hosting or supporting workshops, ranger-led programs, or user-group training sessions that teach safe practices. Enforcement, where warranted, should be handled consistently but fairly—examples might involve fines for off-trail riding in OHV areas or warnings for littering on hiking routes. Partnerships with local law enforcement can help ensure that regulations are understood and followed, especially during high-traffic periods such as holiday weekends. Federal and state agencies often publish toolkits on visitor education and enforcement tactics that can be adapted to Arizona's unique desert, mountain, and forested environments.

"Attending a safety workshop made me more aware of local wildlife and potential hazards. Now, I share that knowledge with others on the trail—everyone benefits from a safer experience."

—Non-Motorized Trail User (Invested User)

"When rangers and volunteers explain speed limits and trail etiquette, it reduces conflicts and keeps our rides more enjoyable. It's a fair way to keep us all accountable."

—Motorized Trail User (Arizona Public)

"Education and enforcement work together. By holding periodic training sessions and being consistent with the rules, we create a culture of responsibility that benefits both the environment and trail users."

—Land Manager of Trails (County Agency)

#### **Create Memorable Visitor Experiences to Support Trail Stewardship**

Well-designed and engaging visitor experiences encourage a sense of connection to Arizona's diverse landscapes, which can inspire long-term stewardship. For both non-motorized and motorized visitors, strategies might involve interpretive signage highlighting geology, flora, and fauna, or volunteer-led educational hikes or rides focusing on local history. Land managers can also coordinate with OHV, hiking, mountain biking or equestrian clubs to offer guided hikes or rides that showcase responsible practices and emphasize environmental awareness.

Actionable approaches include creating interactive interpretive elements—such as downloadable audio guides or smartphone QR codes—and establishing community events like trail cleanups or festival days that celebrate local ecosystems. Drawing on examples from the National Park Service and others, land managers can incorporate Junior Ranger—style programs, adapted to various user groups, encouraging families to learn about and protect the trails they visit. By fostering personal, positive experiences and a deeper understanding of each trail's unique character, these efforts help cultivate a community of knowledgeable, conscientious visitors who are motivated to preserve Arizona's trail systems well into the future.

"Guided nature walks add so much to my understanding of the landscape. Learning about the plants, wildlife, and history of the area makes me want to protect it even more."

—Non-Motorized Trail User (Arizona Public)

"Group rides that highlight scenic views and local culture give us a real sense of connection. It inspires us to keep these trails pristine."

—Motorized Trail User (Invested User)

"When we design programs that help visitors discover the unique geology, flora, and cultural heritage of a trail, we're cultivating stewards at all ages, not just users. That excitement leads to long-term respect for the land."

—Land Manager of Trails (State Agency)

Education and Engagement is central to promoting responsible trail use, fostering safe recreational environments, and inspiring stewardship of Arizona's diverse outdoor spaces. From the Arizona State Association of 4 Wheel Drive Clubs (ASA4WDC), which created an in-depth OHV Handbook to guide off-highway enthusiasts, to Verde Valley Wheel Fun, whose youth education program integrates mountain biking into public school curricula, these projects highlight the role of clear communication, practical instruction, and community outreach. By equipping people—both adults and youth—with the knowledge and tools necessary to explore trails responsibly, Arizona's land managers, agencies, and partner organizations are ensuring that future generations will continue to benefit from the state's rich recreational opportunities.

Priority Area 2: Education and Engagement
Featured Project 1
Arizona OHV Handbook
Arizona State Association of 4 Wheel Drive Clubs (ASA4WDC)
Statewide, Arizona

#### **Arizona OHV Handbook**

The Arizona State Association of 4 Wheel Drive Clubs (ASA4WDC) developed the Arizona OHV Handbook to address a broad range of motorized uses throughout Arizona. This resource covers land-use requirements, areas suitable for off-highway vehicle (OHV) recreation, safety guidelines, communication methods, apps for motorized travel, shooting and camping considerations, and contact details for land managers.

This handbook was created by ASA4WDC through an OHV grant administered by Arizona State Parks and Trails. Publishing, printing, and distribution have all been managed by ASA4WDC, the Arizona Four Wheel Drive Foundation, and key sponsors. The organization is now preparing its third printing, which incorporates updated information on agencies, OHV decal requirements, user guidelines, and communication tools.

Priority Area 2: Education and Engagement
Featured Project 2
Verde Valley Wheel Fun Youth Education Program
Verde Valley Wheel Fun
Verde Valley, Arizona (Serving Multiple Regions Statewide)

#### **Verde Valley Wheel Fun Youth Education Program**

The Verde Valley Wheel Fun organization was awarded a Recreational Trails Program Safety and Environmental Education grant to support three full-time staff, whose efforts include teaching safe and responsible recreational trail use to Arizona public school students. By using mountain biking (MTB) as the main activity, FUN currently operates after-school MTB clubs at 30 public schools in Benson, Colorado City, Hotevilla-Bacavi, Marana, Oro Valley, Payson, Tucson, and the Verde Valley.

Ten new school clubs are added annually, expanding the program's reach throughout the Southeast Region, North Central Region, and other parts of Arizona. Volunteer support remains central to FUN's mission—62 volunteers, assisted by 1.5 full-time equivalent consultants, help maintain and grow these programs. However, paid full-time staff is essential for coordinating club activities, liaising with school officials, managing a website, and developing educational materials that promote responsible trail use.

As the only nonprofit in Arizona working directly with public schools to introduce students to trail-based MTB activities, FUN delivers maximum public benefit with minimal public investment. By emphasizing youth education and environmental stewardship, the program equips students to enjoy outdoor recreation while protecting the trails and landscapes that make Arizona unique.

## **Priority Area 3: Access and Connectivity**



Aim to make trails available to all, expanding accessibility and connecting them to parks and communities to enhance recreation opportunities and social engagement.

# Access and Connectivity

Priorities	Overall Ranking
Obtain land for trails and trail access.	6
Provide accessible trails and facilities.	8

**Priority Area 3: Access and Connectivity** centers on expanding and improving Arizona's trail network by securing land for trails and ensuring that those trails and their accompanying facilities are able to be accessed to a wide array of users. This approach is shaped by the combined insights of land managers, stakeholders, and the Working Group and Action Teams, as well as best practices from federal, state, and local agencies—reinforced by the perspectives of the Arizona Public and Invested Users who participated in surveys and interviews. By focusing on both land acquisition and inclusive design, trail managers can foster a cohesive network of well-connected, inviting trails that reflect the needs of diverse communities across the state.

#### **Obtain Land for Trails and Trail Access**

Securing adequate land for trails and related amenities is a foundational step in ensuring that recreational opportunities are available for a diverse range of users, including hikers, cyclists, equestrians, and off-highway vehicle (OHV) enthusiasts. In Arizona, where landscapes vary from desert plains to mountainous regions, land acquisition often involves collaboration among multiple stakeholders, such as private landowners, federal agencies, tribal governments, and local municipalities.

**Best practices** include using land-use agreements or conservation easements to protect important corridors from development. For instance, partnerships with land trusts and nonprofit organizations can help managers identify parcels that serve as critical connectors between existing trails or public lands. Additionally, working with state agencies and departments—such as Arizona State Parks and Trails—to leverage grant programs allows local jurisdictions to purchase or lease properties earmarked for public recreation.

Actionable recommendations for land managers may involve developing comprehensive trail master plans that align with local growth areas, conducting environmental and cultural resource assessments prior to acquisition, and securing easements that provide consistent public access to trailheads. Securing public support and advocacy for these efforts would greatly enhance the likelihood of them being successful. By proactively engaging in these processes, managers can establish long-term trail networks for Arizona.

## **Provide Accessible Trails and Facilities**

Ensuring that acquired lands and existing trail networks are truly accessible goes beyond meeting basic standards; it involves proactive design, development, and maintenance practices tailored to Arizona's varied terrain and coordination with disability community serving agencies and organizations to ensure that proposed ADA improvements actually serve the intended purpose. For non-motorized trails, this can include creating well-graded pathways suitable for wheelchairs or other power-driven mobility devices (OPDMDs), stabilizing trail surfaces to withstand monsoonal flooding, and posting clear signage about distances and elevation changes. Motorized trail facilities might require reinforced parking areas, safer staging zones for unloading vehicles, and clearly marked routes to reduce environmental impact.

Federal guidelines—such as those from the U.S. Forest Service—stress the importance of integrating accessibility from the outset of trail development, rather than retrofitting late in the process. On a local level, agencies and departments may prioritize funding for trailheads that offer multiple modes of entry, including public transit connections or bike lanes.

Actionable steps for land managers include collaborating with user groups (e.g., trail users who are also members of the disability community, OHV clubs and hiking associations) to identify high-priority upgrades, establishing routine maintenance schedules to address rapid erosion, and leveraging state grant opportunities aimed at improving access for underserved communities. By designing facilities with inclusivity and resilience in mind, Arizona's land managers can ensure that trails remain both welcoming and functional for the full spectrum of motorized and non-motorized visitors.

"Before local trails were made more physically accessible, I worried about tripping hazards and steep grades. Now that the paths are better maintained and have clearer signage, I feel safer hiking and can enjoy Arizona's natural beauty without constant concern."

—Non-Motorized Trail User (Arizona Public)

"Having wider turnouts and properly maintained surfaces on designated OHV routes has been a gamechanger for riders with varying abilities. It keeps everyone safe and encourages more people to get out and explore the desert."

—Motorized Trail User (Invested User)

"After adding accessible features—such as stabilized surfaces and improved trailhead facilities—we noticed an immediate increase in use by older adults and individuals with mobility challenges. It's gratifying to see that these changes can make such a big difference."

—Land Manager of Trails (Federal Agency)

#### **Expanding Access to Arizona's Trails**

In the context of trail planning and management, access refers to the ease with which individuals can reach, use, and enjoy trails. This concept goes beyond merely providing entry points or parking lots; it involves ensuring that the widest possible range of people—including those with varying physical abilities and circumstances—can benefit from trail systems. Key factors in trail access typically include:

- 1. **Physical Accessibility** Designing trails, entrances, and amenities that accommodate a range of mobility levels (e.g., paved or stabilized surfaces, signage for sight-impaired users, access that meets Americans with Disabilities Act (ADA) standards).
- 2. **Geographic Reach** Placing trailheads and connections within or near communities, ensuring people do not have to travel excessive distances to reach a trail.
- 3. **Transportation Options** Including features like public transit connections, safe parking, and bike lanes that make it easier for users without personal vehicles to visit trails.
- 4. **Affordability** Keeping costs for permits, fees, or parking at a level that does not exclude those with limited financial means.
- 5. **Awareness** Providing multilingual signage, outreach, and education so that people from various backgrounds know about and feel encouraged using the trails.

Together, these aspects of access help create easily accessed, accessible, well-connected trail networks that serve a broad range of users and communities.

#### **Physical Accessibility for Arizona Trails**

Ability 360—a statewide organization that advocates for personal responsibility by, and for, people with disabilities as a means to independence—notes that the "disability community" is the only group that 100% of the population will experience or be affected by at one point in their life or another.

According to the U.S. Census Bureau, currently 13.4% of Arizonans have a disability. Among survey participants, 13.6% of the Arizona Public and 10.4% of Invested Users report having individuals in their household with a disability requiring accommodations related to their use of Arizona trails. The most frequently reported type of disability is mobility. Among participants who indicated having a member of their household with a disability requiring accommodations for trail use, 77.9% of Arizona Public and 77.7% of Invested Users shared that the disability type was mobility.

When asked if anyone in their household used a power-driven mobility device (OPDMD)—such as mobility scooters, Segways, power wheelchairs, all-terrain track chairs, or adaptive bikes—on trails in Arizona in the past 12 months, 9.2% of Arizona Public respondents and 13.6% of Invested Users responded "yes."

The percentage of Arizonans with a disability, particularly mobility-related, is expected to increase over the next few decades as the state's population continues to age. The prevalence of disabilities is much higher among older age groups; in Arizona, the population aged 65 and older grew by about 43% between 2010 and 2020, making it the fastest-growing demographic during that period.

To better accommodate this growing demographic, land managers and organizations can implement accessible trail designs, provide clear signage and communication about trail conditions, and collaborate with advocacy groups to ensure ongoing improvements meet the needs of all users.

## **Geographic Reach – Placing Trailheads and Connections Near Communities**

Geographic reach involves situating trailheads and other access points so those nearby residents can easily begin

their trail experiences without driving long distances. This approach reduces transportation barriers, promotes local recreation, and encourages more frequent trail use. For a land manager, several key considerations can help maximize geographic reach:

- Proximity to Population Centers: Evaluate existing or planned residential areas, schools, and community
  facilities (e.g., parks, recreation centers) to identify ideal trailhead locations. By positioning entrances
  within or near these areas, you can reduce the travel burden and make trails more inviting for both daily
  users and occasional visitors.
- **Transportation Integration:** Work with local transportation agencies to explore options such as bike lanes, sidewalks, and bus stops close to trailheads. If public transit is available, clear signage and route maps should guide users from the transit stop to the trail.
- Multi-Use Connectivity: Collaborate with neighboring jurisdictions and partners to plan trails as part of a
  broader, interconnected system. Linking your trail networks to greenways, bike paths, or other
  recreational corridors expands user choices and can enhance overall trail usage.
- **Community Engagement:** Involve community members during the planning stage to identify locations that are most convenient to them. Solicit input on walking or biking routes they already use; incorporating familiar paths can reduce development costs and help garner public support.
- Strategic Land Acquisition: Where possible, prioritize parcels of land that create logical connections between existing trail networks and local neighborhoods. This could involve partnering with private landowners, pursuing easements, or applying for grants specifically aimed at improving public access.
- Accessibility Considerations: Geographic reach should account for diverse user needs. For example, including ADA-friendly designs (e.g., stabilized trail surfaces, accessible parking spots) at conveniently located trailheads ensures a broader segment of the population can enjoy the trails.
- Safety Measures: Ensure that trailheads near communities have appropriate safety features—such as well-lit parking areas, emergency call boxes, and safe road crossings. Partnering with local law enforcement and emergency services can help address any public safety concerns.

By planning strategically around where people live, work, and recreate, land managers can significantly enhance the reach and impact of their trail systems. This, in turn, fosters greater community ownership, boosts physical activity, and supports broader conservation and recreational goals.

"When we collaborated with city planners to place a trailhead near residential developments, we saw a significant uptick in daily visitors. It's rewarding to see people using the trails more often simply because they're easier to reach."

—Land Manager of Trails (City/Town)

#### **Transportation Options – Enhancing Access Beyond Personal Vehicles**

Transportation options extend beyond simply providing a parking lot at the trailhead. By incorporating features such as public transit connections, bike lanes, rideshare drop-off points, and provisions for electric vehicles—including e-bikes—trail managers can significantly broaden the appeal and usability of trails for a wider range of visitors. Below are key considerations and practical guidance for consideration based on feedback from stakeholders, land managers and Arizona residents:

#### • Public Transit Integration

- Coordinate with Local Agencies: Reach out to municipal or regional transit authorities to explore the possibility of adding or adjusting bus or light rail routes and stops near selected trailheads.
- Signage and Wayfinding: Post clear signs at the bus stop or transit station indicating how to reach the nearest trailhead. Include both distance and directions to simplify navigation for firsttime visitors.
- Shuttle Services: During peak trail seasons or major events, consider offering shuttle services from central locations to help alleviate congestion at popular trailheads and reduce environmental impacts.

#### Safe and Convenient Parking

- Parking Lot Design: Plan for adequate space, especially on weekends and holidays, and ensure parking surfaces are well-maintained. Provide lighting, signage, and clear markings for both standard and accessible parking spaces.
- EV Charging Stations: As electric vehicle use grows, consider installing charging stations at or near trailheads, which can encourage drivers of electric cars to visit.
- Overflow and Event Parking: In high-demand areas, establish overflow parking or shared-use
  parking agreements with nearby businesses, schools, or places of worship to accommodate
  additional vehicles during peak times.
- Security Measures: Implement safety features such as proper lighting, cameras (where feasible),
   and emergency call boxes, which encourage users to feel safe leaving their vehicles behind.

#### • Bike and Pedestrian Infrastructure

- Bike Lanes and Paths: Collaborate with local transportation departments to create or enhance bike lanes leading to the trailhead. Encouraging cycling can reduce automobile congestion and promote healthy, eco-friendly travel.
- Bike and E-Bike Amenities: Offer secure bike racks and consider adding repair stations at the trailhead. As e-bike popularity increases, ensure racks and storage spaces can accommodate a range of bike designs.

 Walkable Connections: Sidewalks or pedestrian paths should seamlessly connect surrounding neighborhoods and commercial areas to the trailhead, making it safer and more appealing to walk to the trail.

## Rideshare, Carpooling, and E-Bike Considerations

- Designated Drop-off Zones: Provide a safe, clearly marked area for rideshare or carpool participants to drop off and pick up passengers near the trailhead.
- E-Bike Charging and Guidelines: Consider adding charging stations specifically suited for e-bike batteries, and post clear rules or guidelines regarding where and how e-bikes can be used on the trail.
- Incentive Programs: Work with local businesses or community organizations to create carpool
  or e-bike incentives, such as discounted parking passes for vehicles carrying multiple passengers,
  or group discounts for electric mobility service users.

#### • Outreach and Communication

- Online Maps and Apps: Update your trail's official website, recreation apps, and social media with detailed transportation information, including transit schedules, bike routes, and parking availability.
- Educational Campaigns: Partner with local transit authorities, cycling groups, and nonprofits to promote sustainable travel options. Workshops, webinars, or informational events can help community members feel more confident using alternative transportation methods, including ebikes.

#### Environmental and Community Benefits

- Reduced Traffic and Emissions: By encouraging cycling (including e-bike use), public transit, and carpooling, land managers contribute to lower traffic congestion and decreased pollution near trail sites.
- Increased Accessibility: Providing diverse transportation options ensures that users who do not own private vehicles can still enjoy the trails, broadening the user base and strengthening community ties.

Including accommodations for electric vehicles and e-bikes in trail management not only eases trailhead congestion but also aligns with broader sustainability goals. By offering multiple ways to reach the trail, land managers invite more people to enjoy the outdoors—ultimately promoting healthier lifestyles and responsible recreation.

"As an e-bike user, I love how easy it is to hop on from my front door, ride to the trailhead, and explore without relying on a car. It's efficient, environmentally friendly, and opens up parts of the trail system I didn't think were possible to reach on a typical bike."

-Motorized Trail User (Arizona Public)

**Guest Author Pieces under Priority Area 3: Access and Connectivity** offer expert insights from land management leaders committed to enhancing trail access throughout Arizona. In these articles, you will find perspectives on how **Travel Management Planning** shapes both motorized and non-motorized use, ensuring that trails remain sustainable, navigable, and aligned with public needs as well as resource protection goals.

**Priority Area 3: Access and Connectivity** 

Guest Author: Kerry Wood, Regional Trails, Dispersed Recreation, and Travel Management Program Manager

**U.S. Forest Service, Southwestern Region** 

#### **Meet Your Guest Author**

Kerry Wood, Regional Trails, Dispersed Recreation, and Travel Management Program Manager U.S. Forest Service, Southwestern Region

"I have worked with trails for more than two decades. I began as a volunteer trail worker on my local trails, followed by a seasonal trail position with the National Park Service in Grand Teton National Park and a firefighter role with the U.S. Forest Service in Wyoming. After several seasonal positions, I completed a Master's degree in forestry at Virginia Tech, and then joined the Appalachian Trail Conservancy as a Regional Trails Program Manager overseeing large-scale trail crew programs in four states in collaboration with multiple federal and state partners. Since 2010, I have lived in Albuquerque, working for the U.S. Forest Service in various roles, including 13 years with the Cibola National Forest as a trails manager. Now, I'm part of the Regional Office team and enjoy mountain biking, backpacking, and skiing—including several adventures in Arizona, where I've bikepacked many segments of the Arizona National Scenic Trail."

## What Is Travel Management Planning and What Does It Have to Do with Trail Access?

During the statewide trails planning process, we often hear from users that trail access is an ongoing concern. Sometimes, routes that people have enjoyed in the past are closed, and it may not be clear why those decisions were made.

Objectives of the U.S. Department of Agriculture Forest Service regarding trails management include providing trail-related recreation opportunities that meet public needs and align with land management and recreation policy objectives. The focus is on emphasizing the natural setting of National Forest System (NFS) lands while respecting land capability.

Two central themes emerge: the provision of trail-related opportunities and adherence to land management objectives and capacity. These objectives can encompass watershed protection, wildlife and habitat preservation, and the safeguarding of heritage and historical resources. Given the range of user needs and the variety of trail experiences, decisions often balance recreational access with resource protection.

By policy (as outlined in Executive Order 11644, "Use of Off-Road Vehicles," as amended by EO 11989), trails open to motorized vehicles (including e-bikes) must undergo a designation process known as Travel Management. Each forest analyzes the effects of motorized travel, taking into account various environmental and land-use factors. Trails traveling through critical habitat might be closed for habitat protection, for instance. Following analysis, trails (along with roads and "areas") designated open for motor vehicle use appear on a Motor Vehicle Use Map (MVUM). The reasons behind any closures are documented in the project record.

Although non-motorized trails are not subject to the same formal process, many forests employ similar methods at various scales—such as by district or project area—when assessing non-motorized routes. Closures can likewise occur to protect resources, or land managers may opt for relocations or seasonal restrictions rather than a full closure.

Another factor is whether the trail in question holds National Forest System Trail (NFST) designation. By policy, the USFS does not maintain "unauthorized trails," which lack official designation or a forest travel atlas reference. A forest may close such trails to prevent resource damage or choose to evaluate them for official designation. In assessing new or unauthorized trails, managers weigh factors such as trail sustainability, management capacity, compliance with the Forest Plan, and other relevant elements.

## **Priority Area 3: Access and Connectivity**

Guest Author: Ryan Anthony, Travel and Transportation Management Lead Bureau of Land Management (BLM), Arizona State Office (Phoenix, Arizona) Bureau of Land Management Travel Management Process

#### **Meet Your Guest Author**

# Ryan Anthony, Travel and Transportation Management Lead, Bureau of Land Management, Arizona State Office

"I serve as the travel and trails lead for BLM Arizona, based in Phoenix. Before joining the BLM, I directed the Iowa Raptor Project at the University of Iowa and worked as a biologist for the U.S. Fish and Wildlife Service. Today, I collaborate with an exceptional recreation team drawn from federal, state, non-governmental organization (NGO), and private partners, all aiming to enhance recreation opportunities throughout Arizona."

## **Bureau of Land Management (BLM) Travel Management Process**

The Travel and Transportation Management Program (TTMP) provides a comprehensive approach to managing and administering transportation networks on lands managed by the Bureau of Land Management (BLM). Through Travel Management Plans (TMPs), BLM evaluates routes, roads, and trails in Travel Management Areas (TMAs) to ensure appropriate levels of access, protect natural and cultural resources, and address the diverse recreational and non-recreational uses of roads and trails.

As part of the TMP development process, BLM staff coordinates with the public and local partners to assess road and trail design, current use patterns, and potential impacts on sensitive natural or cultural sites. The TMP also

designates areas as open, limited, or closed to OHV and other recreational uses, as well as classifying routes according to road, primitive road, or trail designations. Ground-truthing of all existing routes in a TMA ensures that any modifications or closures align with public input, BLM Resource Management Plans (RMPs), and environmental and cultural stewardship goals.

Upon TMP completion and associated cultural survey reports, the BLM implements the approved plan. Implementation may include installing signage at key waypoints and interpreting cultural or ecological features for visitors through maps, brochures, and information kiosks. By balancing access with resource protection, the BLM helps sustain Arizona's unique landscapes for a broad range of users—ensuring ongoing connectivity across multiple districts and recreational settings.

## **Priority Area 4: Adaptability and Resilience**



Recognize the importance of preparing for and adapting to changing environmental and social conditions that impact trail management.

Adaptability and Resilience

Priorities	Overall Ranking
Develop adaptable trail management plans based on changing conditions and uses.	9
Complete environmental/cultural clearance and compliance.	10

Priority Area 4: Adaptability and Resilience focuses on proactively preparing for evolving environmental and social conditions that influence trail management across Arizona's diverse landscapes. This effort includes two core priorities: (1) developing adaptable trail management plans based on changing conditions and uses; and (2) completing thorough environmental and cultural clearance to ensure that resource protection and regulatory compliance remain at the forefront. By embracing forward-thinking strategies and maintaining flexibility, land managers can preserve trail quality, protect sensitive sites, and meet user needs in a dynamic and ever-changing environment.

#### Develop Adaptable Trail Management Plans Based on Changing Conditions and Uses

Arizona's trail networks must account for a wide spectrum of **changing conditions**—ranging from evolving climate patterns and ecological shifts to emerging recreation trends and technological innovations. These factors can influence everything from trail design and materials to scheduling for maintenance and closures:

- Climate and Environmental Fluctuations: Prolonged droughts, increasingly severe monsoon storms, extreme heat, and shifting wildlife habitats all necessitate flexible approaches. For example, land managers might create contingency plans for accelerated erosion on steep slopes during intense rainfall or introduce seasonal closures to protect vulnerable habitats in drought-stricken areas.
- New Recreational Uses and Technologies: Growing interest in e-bikes, electric off-highway vehicles (OHVs), and other battery-powered devices requires trail policies that balance user demand with environmental stewardship. Managers may need to revise trail classifications, set speed limits in congested areas, or designate specific routes for motorized versus non-motorized electric devices.
- Evolving User Demographics and Preferences: As Arizona's population grows and diversifies, land managers often confront varying user expectations—such as requests for more family-friendly paths, advanced technical sections for skilled mountain bikers, or expanded staging areas for OHVs. Ongoing

- surveys and outreach help managers stay informed about these shifting interests, leading to more responsive trail planning.
- Land Use and Urban Development: Rapid development near once-rural trail corridors can heighten demands for multi-use paths or commuter-friendly routes. In such cases, trail managers may need to collaborate with city planners or regional transportation agencies to integrate trails into broader infrastructure projects and accommodate both recreational and utilitarian needs.
- Adaptive Maintenance and Operations: By collecting and reviewing data—such as user counts, accident
  reports, or real-time environmental monitoring—managers can quickly identify emerging issues and
  modify trail layouts or policies to address them. For instance, rerouting a heavily eroded section before
  it becomes hazardous or instituting temporary closures during fire season can protect both visitors and
  natural resources.

Actionable recommendations for Arizona land managers include regularly updating trail management plans, establishing open channels of communication with local communities and user groups, and integrating new technologies (such as geographic information system [GIS] tools) to better track and predict changes. These adaptable strategies help protect Arizona's natural and cultural resources while offering high-quality recreation experiences for a broad range of visitors.

"We regularly review data on everything from erosion to evolving visitor trends, so our management plans stay current. Adaptability is key to protecting resources while still providing a great outdoor experience."

—Land Manager of Trails (Federal Agency)

"We constantly collect and analyze data—from seasonal visitor counts and trail-surface conditions to emerging recreation trends like e-bikes and new OHV models. By staying flexible and updating our management plans as needed, we can respond quickly to shifting weather patterns and changes in user demand. In a state like Arizona, where monsoon storms and extreme heat are common, adaptability is essential for keeping trails safe and enjoyable year-round."

—Land Manager of Trails (State Agency)

#### **Complete Environmental and Cultural Clearance and Compliance**

Before initiating trail enhancements or constructing new routes, thorough environmental and cultural clearance safeguards Arizona's unique landscapes and heritage sites. Federal mandates, such as the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA), outline processes to identify potential impacts on habitats, wildlife corridors, and sites of archaeological or historical importance. On state and local levels, additional reviews may be required to align with regional ordinances designed to protect water resources and desert ecosystems.

In non-motorized contexts—particularly in ecologically sensitive areas—land managers often collaborate with biologists or local tribal governments to verify that any trail realignments or expansions do not disturb rare species or cultural artifacts. In motorized contexts, compliance reviews might emphasize soil stability, noise mitigation, or special agreements to protect sacred landscapes from off-trail use. Actionable recommendations include partnering with agencies and departments such as Arizona State Parks and Trails, State Historic Preservation Office for guidance on cultural site assessments. Additionally, establishing memoranda of

understanding (MOUs) or other cooperative agreements with tribal communities can enhance consultation efforts for both new and existing trails. By adhering to these clearance and compliance procedures, land managers demonstrate their commitment to preserving Arizona's natural and cultural heritage while fostering a responsible recreational environment for all.

"Before we break ground on any new route or realign an existing trail, we undertake a thorough review process, which includes environmental assessments and cultural surveys. That means working closely with tribal communities, wildlife biologists, and archaeologists to ensure we're not disturbing sensitive habitats or heritage sites. It might extend our timeline, but it ultimately preserves the natural and cultural richness that makes Arizona's trail systems so special."

—Land Manager of Trails (Federal Agency)

use or planning can be directed to our Department's general query site at <a href="https://azland.tfaforms.net/4630115">https://azland.tfaforms.net/4630115</a> to help ensure that requests are tracked and routed to the appropriate team member

Under Priority Area 4: Adaptability and Resilience, we have a Guest Author that speaks to connecting trails across jurisdictions with land managers whose missions vary can require adaptability, and two featured projects highlight proactive planning and resource protection in Arizona's evolving landscapes. The Arizona State Land Department Guest Author addresses trails on state trust lands and its role in working early and collaboratively with others to inform trail planning and save time and effort for Arizona's trail proponents. The Cottonwood Spring Fencing Project safeguards a crucial desert water source from unauthorized off-highway vehicle (OHV) use, while the Highline Trail Improvement Project (Phase II) realigns and restores heavily eroded trail segments in the Tonto National Forest. Both initiatives underscore the value of flexibility, collaboration, and ecological awareness in sustaining trails for future generations.

Priority Area 4: Adaptability and Resilience Guest Author: Arizona State Land Department Trails on State Trust Lands Arizona

With Arizona's State Trust Lands (STL) encompassing approximately 13% of the state's undeveloped land and frequently confused with federal public lands, clarifying the role of the Arizona State Land Department (ASLD) and STL's contribution to Arizona's trail network would be helpful.

Arizona's STL was granted by Congress at statehood to serve as the primary asset of a perpetual trust, providing revenue for 13 essential public institutions ("beneficiaries"), with the largest being the common (K–12) schools. State statute establishes ASLD's obligation to manage STL solely for the benefit of the Beneficiaries, distinguishing STL from Arizona's abundant public recreational lands that serve the interests of all Arizonans.

ASLD recognizes that trails contribute greatly to our communities; yet, our Agency's distinct land and resource management obligations sometimes mean that allowing recreational activities or trail access on STL may conflict with our fiduciary responsibility to the beneficiaries. Moreover, ASLD receives the smallest portion of indicia revenue of any state agency, making planning and mitigation efforts particularly challenging. We look forward to

working with all partners in the hope of securing an increase in dedicated funds to address STL lessee and permittee concerns over motorized recreational uses.

ASLD acknowledges that the distribution pattern of STL can pose a challenge for organizations intending to maintain or expand trail systems. When STL is needed for trail access, we strongly encourage all relevant parties to involve ASLD early in the process. We should be viewed as a critical stakeholder for any plans involving STL, allowing us to inform trail planning and save time and effort for Arizona's trail proponents. ASLD aims to develop a balanced approach that protects the Trust's assets in accordance with the beneficiaries' interests and Arizona's future.

ASLD is supportive of the overall priorities and action items identified in the Trails Plan, and we anticipate continued partnership with Arizona's trail managers as the plan is implemented. Any questions related to trail use or planning can be directed to our Department's general query site at <a href="https://azland.tfaforms.net/4630115">https://azland.tfaforms.net/4630115</a> to help ensure that requests are tracked and routed to the appropriate team member.

**Priority Area 4: Adaptability and Resilience** 

**Featured Project 2** 

**Cottonwood Spring Fencing Project** 

East Valley Back Country Horsemen, Tonto National Forest: Mesa Ranger District, Arizona Game and Fish Department (AZGFD), and Tread Lightly

**Bulldog Canyon OHV Area, Mesa Ranger District, Arizona** 

#### **Cottonwood Spring Fencing Project**

Between 2022 and 2024, Arizona State Parks and Trails (ASPT) worked closely with the East Valley Back Country Horsemen (EVBCH), the Tonto National Forest: Mesa Ranger District, the Arizona Game and Fish Department (AZGFD), and Tread Lightly to safeguard a vital water source for desert wildlife. The EVBCH contacted ASPT about installing pipe rail fencing to mitigate ongoing off-highway vehicle (OHV) damage at Cottonwood Spring—a critical water resource for both wildlife and equestrian users. Unauthorized OHV use had severed the main supply line that feeds a wildlife water catchment and spurred new user-created trails within the Bulldog Canyon OHV Area.

In fall 2024, the project's key components converged. ASPT supported the EVBCH in implementing a grant to install fencing, while Tread Lightly obtained funding from Can-Am Off-Road for kiosks and signage. Simultaneously, the AZGFD Habitat Branch repaired the water lines connecting Cottonwood Spring to the wildlife catchment. The result was over 1,000 feet of pipe rail fencing and a single-panel kiosk near the catchment. The kiosk and signage aim to educate the OHV community about staying on designated trails, protecting sensitive areas, and engaging in future stewardship projects with Tread Lightly.

Additionally, ASPT's Marketing and Grants and Trails teams produced a "Grant Success Story" video for their website and YouTube page, highlighting the importance of motorized grant funding and multi-agency collaboration in protecting Arizona's diverse resources. This story is now featured on the ASPT website alongside

other successes, reflecting the program's ongoing mission to promote environmentally responsible recreation and improve connectivity across the state's trail systems.

Priority Area 4: Adaptability and Resilience Featured Project 2

**Highline Trail Improvement Project (Phase II)** 

Tonto National Forest, National Forest Foundation, and Wild Arizona

**Tonto National Forest, Payson Ranger District, Arizona** 

## **Highline Trail Improvement Project (Phase II)**

The Tonto National Forest, National Forest Foundation (NFF), and Wild Arizona (WAZ) have partnered on the Highline Trail Improvement Project, which stretches from Washington Park to the Tonto Fish Hatchery in the Payson Ranger District. This collaborative effort addresses deferred maintenance for roughly 8.7 miles of existing trail and constructs approximately 10.4 miles of new, realigned trail segments. By rerouting sections with severe erosion onto sustainable grades, the project mitigates ecological damage, improves watershed health and water quality, enhances user safety, and reduces long-term maintenance needs.

Work includes repair, reconstruction, and maintenance of about 19.1 miles of non-motorized trail to align with U.S. Forest Service design parameters and Trail Management Objectives. Methods such as breaking up compacted tread by hand, applying native seeds, and installing small one-rock structures restore the natural contour of slopes and prevent further erosion.

This project is funded through multiple grants, including Recreational Trails Program (RTP) awards. Phase Two (or "Heal the Highline Phase II") continues these efforts, adding decommissioning and rehabilitation for 6+ miles of old trail and light brushing on two miles of existing corridors. By engaging local crews, volunteers, and nonprofit partners, the project illustrates how adaptive trail management can address fire damage, climate pressures, and changing user demands, ultimately ensuring that the Highline Trail remains a sustainable, scenic, and resilient asset for future generations.

## **Grants and Funding**

# 2025 Trails Plan – Chapter 6 Grants and Funding

# Statewide Trail Partnerships, Grants and Funding

Trails hold significant value for individuals and communities alike, serving as vital spaces for recreation, exploration, and connection with nature. Beyond physical activity, trails foster a sense of adventure and escape, allowing people to immerse themselves in the beauty of their surroundings. For these reasons, support for trails is widespread and requires collaboration to get the work done.

#### A Focus on Trails - The 200 x 2030 Initiative

Governor Katie Hobbs has announced several initiatives to address important topics that improve the quality of life for Arizonans. One of these initiatives focuses on resilience, water, and the environment. Included in this initiative is a goal to either construct or reopen 200 miles of non-motorized trails by 2030. Arizona State Parks and Trails is working with the Governor's office to both fund and track miles of trails that meet this goal.

#### **Description of Grant Funding Programs**

Arizona State Parks and Trails provides competitive and specialized grant opportunities with federal and state-generated dollars. These programs include the Recreational Trails Program, which funds both non-motorized and motorized projects; the Off-Highway Vehicle Recreation Fund, which funds motorized projects; and the Heritage Fund, which funds non-motorized projects when monies in years when monies are appropriated by the legislature. Each project is subjected to our competitive review process through the Arizona State Parks Board and its advisory committees.

#### Eligible project activities may include but are not limited to:

- Trail etiquette and education (signage, educational programs)
- Outdoor recreation facilities (restrooms, playgrounds, parking lots, fields, courts)
- ADA/Accessible trails/facility enhancements
- Trail development, maintenance, and improvements (for both non-motorized and motorized trails)
- Trail amenities
- Pedestrian uses (hiking, running)
- Bicycling (bike parks, trails)
- Equestrian trails
- Water trails
- Trailhead development
- Signage
- Planning, masterplans, environmental and cultural surveys for motorized use
- Off-highway vehicle (OHV) law enforcement
- Developing or improving facilities on lakes that allow motorized boat use.
- Law enforcement on lakes allowing motorized boat use.

To learn more about who is eligible to apply for these grants and other information, please visit azstateparks.com/grants.

#### **GRANT FUNDING SOURCES AND PROGRAMS**

#### The Infrastructure Investment and Jobs Act

On November 15, 2021, President Biden signed the Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58, also known as the "Bipartisan Infrastructure Law") into law. The Bipartisan Infrastructure Law is the largest long-term investment in our nation's infrastructure and economy in its history. It provides \$550 billion over fiscal years 2022 through 2026 in new federal investment in infrastructure, including roads, trails, bridges, mass transit, water infrastructure, resilience, and broadband.

The program provides funds for a wide range of recreational trail uses, such as pedestrian uses (hiking, running, wheelchair use), bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or other off-road motorized vehicles. Each state develops its own procedures to solicit projects from project sponsors and to select projects for funding to meet motorized and non-motorized recreational trail needs within the state. The RTP portion of the transportation bill requires ongoing lobbying by trail advocacy groups to sustain it.

#### The Federal Highway Administration – Recreational Trails Program (RTP)

Arizona State Parks and Trails (ASPT) is the agency responsible for administering RTP funds in Arizona. The project portion of Arizona's RTP funds must be divided between motorized (30%), non-motorized (30%), and diverse (40%) trail projects. Funding from the RTP requires a National Environmental Policy Act (NEPA) assessment and 6% matching funds.

In order to be eligible to distribute RTP funds, the program requires each state to establish a State Recreational Trail Advisory Committee (SRTAC) that represents both motorized and non-motorized recreational trail users. Yearly, Arizona convenes two of the agency's standing advisory committees: the Off-Highway Vehicle Advisory Group (OHVAG) and the Arizona State Committee on Trails (ASCOT) to discuss the RTP. This larger joint committee and other key stakeholders assist ASPT in:

- Developing project sponsor criteria (which kinds of project sponsors may receive grants).
- Developing project eligibility criteria (which kinds of projects the state would consider for funding.)
- Developing project evaluation and selection criteria.
- Providing guidance to determine compliance with the diverse trail use requirement.
- Determining appropriate state policy for matching share criteria.

The SRTAC has determined that the 30/30/40 sub-distribution requirement for the program can be met by dividing the apportioned funds equally between motorized and non-motorized uses.

Information on the Recreational Trails Program can be found at the Federal Highways website - <a href="mailto:fhwa.dot.gov/environment/recreational\_trails.">fhwa.dot.gov/environment/recreational\_trails.</a>

The program guidance can be found at:

fhwa.dot.gov/environment/recreational trails/guidance.

In order to comply with legislative requirements in A.R.S. 41- 511.22, 41-511.04 [20] as well as with the guidance above, public and land manager input is sought every five years to help to prioritize trails management issues for both

motorized and non-motorized trails in Arizona in the Arizona Trails Plan. Trail management priorities are based on public and land manager data, working group and advisory committee review and guidance, and staff review.

Priorities are assigned a point value in the overall grant scoring process. Projects related to many of the priority issues are eligible for funding. Grant funding criteria reflect statewide priorities overall; however, it is possible that local concerns, contexts, and opportunities may be present that encourage the submission of an important project linked to priorities assigned fewer points. Such projects have received funding in the past, based on fund availability.

Non-motorized competitive grant projects are capped at \$150,000 and include monies to acquire and develop trails and trail-related facilities for visitors who hike, backpack, mountain bike, cross-country ski, and other recreational activities. From 2020 to 2024, 39 grant projects were awarded totaling \$3,754,870.

# Arizona State Parks and Trails Recreational Trails Program (RTP) Non-Motorized Competitive Grant Funding 2020-2021

Sponsor	Project Title	Grant Award	Total Award with Match
	Year Funded - 2020		
Tonto National Forest - Globe Ranger District	Highline #31 Trail Maintenance	\$50,000	\$52,850
Apache-Sitgreaves National Forest - Clifton Ranger District	Clifton RD Trail Maintenance	\$50,000	\$52,850
Yuma Crossing National Heritage Area	Trail Development Project	\$79,842	\$84,393
Town of Cave Creek	Gateway Trail Project	\$74,498	\$78,744
Sonoran Desert Mountain	Goat Trail Rehab Project	\$74,707	\$78,965
City of Yuma	Riverfront Park Trail Project	\$139,000	\$146,923
Grand Canyon Conservancy	South Kaibab Trail	\$147,600	\$156,013
City of Peoria	Maya Way ADA Trail	\$142,247	\$150,355
Tonto National Forest - Mesa Ranger District	Sonoran Desert Trail system	\$102,667	\$108,519
Verde River Institute	On-site River Ambassador	\$29,775	\$31,472
	Year Funded - 2021		
Town of Pinetop-Lakeside	Mountain Meadows ADA Trail	\$80,000	\$84,560
Arizona State Parks and Trails - Granite Mountain Hotshot Memorial State Park	Trail Improvement/Intern	\$35,844	\$37,887
Arizona State Parks and Trails - Lake Havasu State Park	Sunrise ADA Trail	\$133,816	\$10,570
City of Show Low	ADA Meadow Trail Phase II	\$133,952	\$141,587
Arizona Historical Society	Pioneer Museum Trail	\$20,000	\$21,140
Verde Valley Archeological Center	Native American Heritage Trail Improvements	\$150,000	\$158,550
Arizona Trail Association	Passage 21 Trail Maintenance	\$48,000	\$50,736
Arizona Trail Association	Passage 4 Temporal Gulch	\$149,990	\$158,539
City of Apache Junction	Silly Mountain	\$82,000	\$86,674
City of Kingman	White Cliffs Wagon Wheel Phase II	\$144,310	\$152,536
City of Scottsdale	McDowell Sonoran Preserve Trail	\$47,300	\$49,996
City of Sierra Vista	Garden Canyon Trail	\$150,000	\$158,550

# Recreational Trails Program (RTP) Non-Motorized Competitive Grant Funding 2022-2024

Sponsor	Project Title	Grant Award	Total Award with Match
	Year Funded - 2022		
Arizona State Parks and Trails - Rockin' River Ranch State Park	Trail Development	\$413,169	\$414,862
City of Flagstaff	Picture Canyon Maintenance	\$126,270	\$149,821
Arizona State Parks and Trails - Lake Havasu State Park	Sunrise ADA Trail Project	\$133,816	\$141,013
Verde Valley Cyclists	Blow Out Wash Phase II	\$150,000	\$157,628
City of Page	Red Rim Trails	\$149,925	\$158,475
National Forest Foundation	Highline Trail Improvement Phase II	\$149,982	\$158,528
	Year Funded - 2023		
Verde Valley Trail Fund	Copper Chief Trail Season 3	\$150,000	\$167,543
Wild Arizona	Heal the Highline Trail	\$149,976	\$161,392
Town of Tusayan	Trails Project	\$150,000	\$376,000
City of Yuma	East Mesa Loop Trail	\$150,000	\$454,900
Pascua Yaqui Tribe	Ewame Voo'o Cultural Trails	\$90,000	\$140,000
	Year Funded - 2024		
Pinal County	CAP Phase 2	\$99,270	\$110,300
Town of Oro Valley	Improvements to Vistoso Trails Nature Preserve	\$144,500	\$153,234
Arizona State Parks and Trails - Catalina State Park	Catalina State Park Trail Development	\$150,000	\$159,067
Verde Valley Cyclists Coalition	Copper Chief and Quail Springs	\$150,000	\$192,720
City of Page	BMX Track	\$149,085	\$298,170
Arizona State Parks and Trails	Trails App Development	\$324,344	\$994,344

#### State Parks Recreational Trails Program (RTP) Non-Motorized Trails Maintenance Program

Since 2001, the non-motorized portion of the Recreational Trails Program monies have been used to fund the maintenance of existing trails. In Arizona, maintenance has been one of the top priority recommendations on trails plans since 2000. Land managing agency budgets have been shrinking, and staff for trail maintenance has been difficult to keep. The Arizona State Parks RTP Trail Maintenance Program is constantly refined to make funds more easily accessible. Arizona State Parks and Trails contracts directly with trail maintenance crews, such as youth conservation corps and other trail maintenance providers, to remove the need for individual contracts or agreements with trail managers. In 2021, the trail maintenance contract was expanded to include a crew that provides mechanized trail building and two of the existing contractors have added mechanical equipment to their program.

Funds are generally capped at \$100,000 per applicant. Trail managing agencies must complete a simple application form that identifies the trails they intend to maintain and the amount of funding they need, up to the cap. Projects are selected through a process that ensures statewide distribution of the funds. The project sponsors must provide documentation to support compliance with federal NEPA and state and federal historic preservation requirements (Section 106). The non-federal match portion of the project cost is usually satisfied with volunteer labor.

# Arizona State Parks and Trails Recreational Trails Program (RTP) Trail Maintenance Grant Funding 2020-2024

Sponsor	Project Title	Grant Award	Total Award with Match
	Year Funded - 2022		
Mohave County	Hualapai Trail Maintenance	\$44,990	\$53,539
Friends of Tonto	Sheep Creek Trail Clearing Trail Maintenance	\$50,000	\$53,023
	Year Funded - 2023		
Pine Strawberry Fuel	Pine Trail 26 Pine Creek Canyon Trail	\$48,000	\$50,902
Reduction	Maintenance	740,000	750,502
Year Funded - 2024			
Bureau of Land	Safford/Morenci Trail Maintenance	\$40,000	\$53,299
Management	Janora, Morence Tran Maintenance	→ <del>-</del> -0,000	755,233

#### Recreational Trails Program (RTP) Safety and Environmental Education Program

The Recreational Trails Program allows for up to 5% of apportioned Recreational Trails Funds to be set aside for trail-related safety and environmental education. Each year, Arizona State Parks and Trails solicits projects for this program with up to \$10,000 in available funding per project. These projects could include trail safety education programs, production of trail-related educational materials, interpretive panels, education and environmental materials, interactive displays, and updated information on accessibility of trails and trailhead facilities. Thirty-one grant safety and education projects were awarded from 2020 to 2024, totaling \$307,897.

#### **Arizona State Parks and Trails**

# Recreational Trails Program Safety and Education Grant Funding 2020-2023

Sponsor	Project Title	Grant Award	Total Award with Match
	Year Funded - 2020		
Verde Valley Cyclists	Bike and Bell	\$8,535	\$9,021
Arizona Board of Regents	Hiking Fluid Study	\$9,430	\$9,968
Arizona State Parks and Trails - Lost Dutchman State Park	Exploration Packs	\$7,880	\$8,329
Arizona Game and Fish	Birding Trail Website Development	\$10,000	\$10,570
Arizona Trail Association	Trails Skills Institute Video	\$9,972	\$10,540
Arizona Trail Association	Trail Summit	\$9,996	\$10,566
Sonoran Mountain Bike	"Be Cool" Campaign	\$7,763	\$8,205
Arizona Game and Fish Department	Watchable Wildlife	\$8,960	\$9,471
Benefactors of Red Rock	Interpretive Signage	\$10,000	\$10,570
	Year Funded - 2022		
Flagstaff Trails Initiative	Etiquette and Stewardship Campaign	\$9,065	\$9,582
Verde Valley Wheel Fun	Coordinator Position	\$10,000	\$10,570
Apache-Sitgreaves National Forest	Volunteer Support Project	\$9,996	\$10,566
Town of Camp Verde	Urban Upland Trail Guide	\$7,500	\$7,928
Verde Search and Rescue	Bike Unit Safety Training	\$900	\$951
Verde Valley Cyclists Coalition	Trailhead Map Replacement	\$10,000	\$10,570
Tucson Audubon Society	Cuckoo Corridor Trail Signage	\$3,185	\$3,367
Legends of Superior Trails	LOST Trailer, Tools and Training	\$7,498	\$7,925
Verde River Institute	River Ranger and Safety Program	\$29,709	\$30,136
Verde Search and Rescue	Supply and Equipment Acquisition	\$7,640	\$9,333

# Arizona State Parks and Trails Recreational Trails Program Safety and Education Grant Funding 2024

Sponsor	Project Title	Grant Award	Total Award with Match
	Year Funded - 2024		
Verde Search and Rescue Posse	Search and Rescue Supplies and Equipment	\$10,000	\$11,000
Arizona State Parks and Trails Kartchner Caverns State Park	Title One School Field Trip Support	\$26,179	\$32,353
Arizona Trail Association	Arizona State Map Brochure	\$10,000	\$12,135
Verde Valley Wheel Fun	Youth Education Program	\$30,000	\$181,500
Arizona State Parks and Trails - Cattail Cove State Park	Cattail Cove State Park Trail Signage and Kiosk	\$5,206	\$5,566

#### The Heritage Fund

The Heritage Fund provides grant opportunities for non-motorized trail projects; outdoor environmental education programs; local, regional, and state parks; as well as historic preservation projects through legislatively appropriated funds. No funding was appropriated by the legislature in fiscal year 2025. Between 2022 and 2024, 17 non-motorized trail projects were awarded a total of \$1,455,844. These projects consisted of 20 miles of new trails and seven miles of trail maintenance. The maximum award for this funding source grant varied each year, depending on the amount of money appropriated to the fund. In 2022, the maximum project cap was \$100,000.00; in 2023, it was \$50,000 and in 2024, it was \$120,000.

# Arizona State Parks and Trails Heritage Fund Grant Funding Non-Motorized Trails 2020-2024

Sponsor	Project Title	Grant Award	Total Grant with Match
	Year Funded - 2022		
Verde Valley Cyclists	Blow out wash	\$88,400	\$121,056
City of Flagstaff	Buffalo Park	\$100,000	\$235,453
Arizona Trail Association	Sunflower North Realignment	\$47,304	\$65,376
TRACKS	White Mountain Trail System	\$59,125	\$84,925
National Forest Foundation	Santa Catalina Trails	\$100,000	\$136,741
Town of Snowflake	Cottonwood Wash Trail	\$80,515	\$161,030
	Year Funded - 2023		
Verde Valley Trail Fund	Copper Chief Trail Season 2	\$50,000	\$139,143
Town of Pinetop-Lakeside	Mountain Meadow Amendment	\$50,000	\$200,000
Pasua Yaqui Tribe	Cultural Trails	\$50,000	\$100,000
City of Yuma	West Wetlands Playground Trail	\$50,000	\$62,500
	Year Funded - 2024		
Town of Snowflake	Cottonwood Wash Trail	\$80,500	\$161,000
City of Sierra Vista	Garden Canyon Wash Phase III Restroom	\$120,000	\$133,350
Hawes Alliance	Red Mountain Parking Lot	\$120,000	\$160,000
Prescott Mountain Bike Alliance	Bean Peaks Gravity Flow	\$120,000	\$192,441
National Forest Foundation	Finger Rock & Pontonic Trail Enhancement	\$100,000	\$134,000
Verde Valley Trail Fund	Verde Valley Circle Trail	\$120,000	\$183,180
Coconino County	Frontiere Trails Project	\$120,000	\$165,000

Since the 2020 State Trails Plan was completed, 66 new non-motorized trail projects were selected to receive \$4,159,030 in funding. Funds were distributed as follows: \$182,990 in trail maintenance grants, \$3,754,870 in competitive non-motorized grants, and \$221,170 in safety and education grants. A total of 82.71 miles of new trail were constructed, and maintenance, improvements, or protection of public access occurred on 180 miles of trails.

#### **Competitive Motorized Grants**

There are two sources of funding for competitive motorized projects. One source of funding is the federal Recreational Trails Program (RTP) and the second is the state-funded Off-Highway Vehicle (OHV) Recreation Fund (A.R.S. 28-1176). The RTP program is administered jointly through the Federal Highway Administration, the Arizona Department of Transportation, and Arizona State Parks and Trails. The state-funded OHV program is administered by Arizona State Parks and Trails. Differences in the administration of the grant based on the funding source can be found at the following link: <a href="mailto:azstateparks.com/grants">azstateparks.com/grants</a>. Regardless of the funding source, competitive motorized projects include off-highway vehicle recreation facilities (e.g., trail development and trail maintenance for the use of side by sides (ROV/UTV), off-road motorcycles, all-terrain vehicles (ATV), four-wheel drive vehicles, e-bikes, or other off-road motorized vehicles).

# Arizona State Parks and Trails Recreational Trails Program Motorized Competitive Grant Funding 2020 - 2024

Sponsor	Project Title	Grant Award	Total Award with Match	
	Year Funded - 2020			
Apache-Sitgreaves National Forest - Lakeside Ranger District	Maverick Trail	\$290,594	\$307,158	
Tonto National Forest - Globe Ranger District	Staging Area and OHV Patrols	\$205,680	\$217,404	
Tonto National Forest - Mesa Ranger District	Mesa Ranger District OHV Rehabilitation	\$187,262	\$197,936	
	Year Funded - 2021			
TRAL-Tonto Recreation Alliance	OHV Trail Management	\$252,420	\$266,808	
Town of Camp Verde	Greif Hill Trailhead	\$220,600	\$233,174	
Apache-Sitgreaves National Forest - Lakeside Ranger District	Lakeside Ranger District OHV Grant	\$102,000	\$107,814	
	Year Funded - 2022			
Arizona State Parks and Trails - River Island State Park	River Island OHV Trailhead	\$551,174.00	\$1,400,000	
Year Funded - 2023				
Bullhead City	OHV Trailhead Project	\$984,584	\$1,044,098	
	Year Funded - 2024			
Arizona State Parks and Trails - River Island State Park	River Island Trailhead Development Phase II	\$580,000	\$1,129,034	

#### State of Arizona – Off-Highway Vehicle Recreation Fund (OHV FUND)

The Off-Highway Vehicle Recreation Fund in Arizona is generated from revenues specified in Arizona Revised Statutes 28-5927 and 28-1176. Statute 28-5927 allocates one-half of one percent of all fuel tax revenues to the fund, while Statute 28-1176 allocates funds from both resident and non-resident stickers purchased to legally operate an OHV on Arizona trails. The Arizona Department of Transportation retains 30% of the fund, while the remaining 70% is distributed to Arizona State Parks and Trails, the Arizona Game and Fish Department, and the State Land Department. Arizona State Parks and Trails uses 60% of the funds to distribute Off-Highway Vehicle (OHV) grants. The Arizona Game and Fish Department allocates 35% for OHV law enforcement, education, and outreach programs. Lastly, the State Land Department utilizes 5% for the protection of its 9.2 million-acre portfolio.

#### Law Enforcement Grant (LE Grant)

This provides funding to federal, state, county, local, and tribal law enforcement agencies to conduct OHV-specific enforcement and/or educational programs on public land. Grants are designed to enforce and educate on OHV specific laws and responsible use. \*Note: search and rescue organizations and fire departments are not eligible for these grant funds.

#### **Maintenance and Mitigation Grant Program**

Maintenance and mitigation grants are designed to provide funds for the maintenance of <u>existing motorized trails</u>. The project must be shovel ready. All compliance documents and land managing approvals must be submitted with the application. Once approved, a sponsor shall select one of the Arizona State Parks and Trails contracted trail crews and work must be completed within one year of award. \*Note: Under emergency circumstances like fire damage, weather damage, vandalism, cultural site desecration, or wildlife habitat destruction, Arizona State Parks and Trails can authorize applications to be approved and implemented within six months. Funding could also be used for damage on other areas not open to OHV use that were negatively impacted by Off-Highway Vehicles. Projects are <u>NOT</u> eligible if the needed improvements are associated with old age or neglect. This will occur on a case-by-case basis and will be determined by funding availability.

#### **Signage Grant**

Signage grants are for the purchase of trail signs, kiosks and markers related to off-highway vehicle navigation, information, and safety. The project must be in designated OHV areas, trails or lands open to the public. Projects must be completed within six months of staff approval. Motorized competitive grant projects were capped at \$750,000. For the agency's Off-Highway Vehicle Program, 84 motorized projects were awarded, totaling \$14,221,552 in funding. These awards were distributed across competitive motorized, law enforcement, maintenance and mitigation, and signage projects. Competitive awards consisted of 35 awards for \$10,922,286. Law enforcement grants totaled 34 projects for \$2,414,404. Maintenance and mitigation awards totaled 14 grants for \$877,540 and signage grants included one award at \$7,322. All of these projects had a significant impact on the state's diverse OHV experiences and will help to add thousands of miles of motorized trails as the planning and design efforts they contributed to are finalized in the coming years.

# Arizona State Parks and Trails Off-Highway Vehicle Recreation Fund (OHV FUND) 2020-2021

Sponsor	Project Title	Grant Award	Total Award with Match
	Year Funded - 2020		
Bureau of Land Management - Hassayampa Field Office	Law Enforcement Equipment Project	\$28,500	\$29,925
Bureau of Land Management - Lower Sonoran Preserve Field Office	Law Enforcement Equipment Project	\$28,500	\$29,925
City of Peoria	Law Enforcement Equipment Project	\$30,000	\$31,500
Pinal County	Cave Creek Equipment/Salary Project	\$30,000	\$31,500
Tonto National Forest - Cave Creek Ranger District	Law Enforcement OHV Patrol Project	\$29,979	\$31,478
Tonto National Forest - Globe Ranger District	Globe Ranger District OHV Patrols	\$29,979	\$31,478
Natural Restorations	2020 OHV Restoration Project	\$285,280	\$299,544
Town of Quartzsite	Quartzsite OHV Staging Area	\$463,269	\$486,432
Arizona State Parks and Trails	Great Western Trail Master Plan	\$692,000	\$726,600
Bureau of Land Management - Arizona Strip Field Office	Vermillion Cliffs OHV Enforcement	\$29,500	\$30,975
Gila County Sheriff's Office	Law Enforcement Equipment Project	\$29,921	\$31,417
,	Year Funded - 2021		
Apache-Sitgreaves National Forest - Black Mesa Ranger District	Law Enforcement Grant	\$28,548	\$29,975
Arizona State Land Department	Non-Urban Management Plan (withdrawn)	\$1,500,000	\$1,575,000
Apache-Sitgreaves National Forest - Lakeside Ranger District	Law Enforcement Grant	\$395,829	\$424,774
Arizona State Parks and Trails	OHV Ambassador Program	\$41,572	\$51,172
Arizona State Parks and Trails	OHV Dealership Program	\$113,110	\$160,033
National Off-Highway Vehicle Conservation Council	Mechanized Equipment Training	\$36,375	\$41,055
Natural Restorations	OHV Area Cleanups	\$237,080	\$265,255
Arizona Game and Fish Department - Region 2	Law Enforcement Grant	\$30,000	\$31,579
Arizona Game and Fish Department - Region 6	Law Enforcement Grant	\$30,000	\$31,579
La Paz County	Law Enforcement Grant	\$27,331	\$28,769
Wickenburg Conservation Council	Box Canyon Cleanup	\$27,675	\$29,132
Arizona Game and Fish Department	Youth Helmet Program	\$4,814	\$5,067

# Arizona State Parks and Trails Off-Highway Vehicle Recreation Fund (OHV FUND) 2023

Sponsor	Project Title	Grant Award	Total Award with Match
Year F	unded - 2023		
Bureau of Land Management Amendment	Travel Management Plan	\$111,150	-0-
Mohave County	Sawmill RV Park/Staging Area	\$267,594	\$277,594
Coconino National Forest - Red Rock Ranger District	OHV Program Development	\$243,360	\$314,507
Apache-Sitgreaves National Forest - Springerville Ranger District	Law Enforcement Equipment	\$100,000	\$105,263
Bullhead City Police Department	Law Enforcement Equipment	\$100,000	\$105,263
Coconino National Forest Red Rock Ranger District	Law Enforcement Equipment	\$93,040	\$152,940
City of Peoria	Law Enforcement Overtime	\$30,000	\$31,580
Pinal County Sheriff	Range Patrol OHV Equipment	\$100,000	\$105,263
City of Show Low	Law Enforcement Equipment and overtime	\$100,000	\$105,263
City of Saint Johns	Law Enforcement Equipment	\$96,000	\$101,053
Tonto National Forest - Cave Creek Ranger District	Cave Creek OHV Patrollers	\$94,225	\$100,001
Trail Riders of Southern Arizona	Red Springs Trail Improvements	\$9,025	\$9,500
Tonto National Forest - Mesa Ranger District	OHV Patrols	\$96,250	\$123,250
Arizona Game and Fish Department	Meadow Valley Cattle Guards	\$70,000	\$74,268
Bullhead City	OHV Trailhead	\$309,944	\$1,294,528
Bureau of Land Management - Lake Havasu Field Office	OHV Development	\$117,000	\$194,900
Havasu Side-by-Side	Trail Maintenance	\$13,000	\$42,950
Natural Restorations	OHV Area Restoration	\$288,327	\$321,153
Apache-Sitgreaves National Forest - Alpine Ranger District	OHV Enforcement	\$68,000	\$75,622
Arizona State Parks and Trails - Patagonia Lake State Park	OHV Law Enforcement Equipment	\$80,600	\$96,799
Tonto National Forest	OHV Patrollers	\$98,900	\$106,960
Arizona Alpine Trail	Alpine Master Plan	\$316,503	\$331,990
Yavapai County	Law Enforcement Grant	\$100,000	\$147,920
Arizona Elk Society	Habitat Protection	\$41,322	\$53,322
Apache-Sitgreaves National Forest	Cattle Guard Repair	\$4,504	\$4,983

# Arizona State Parks and Trails Off-Highway Vehicle Recreation Fund (OHV FUND) 2024

Sponsor	Project Title	Grant Award	Total Award with Match
Year Funded - 2024			
Tread Lightly	Arizona Program Managers	\$221,450	\$282,330
Arizona State Parks and Trails	Greater Sedona Recreation Collaborative Continuation	\$49,950	\$54,948
Bureau of Land Management - Grand Canyon Parashant National Monument	Grand Canyon Parashant Law Enforcement Equipment	\$71,500	\$89,375
Santa Cruz County Sheriff's Office	OHV Law Enforcement Equipment	\$100,000	\$112,000
Tonto Recreation Alliance	TRAL OHV Recreation Management 23-24	\$396,107	\$459,707
Lake Havasu City Police Department	Law Enforcement OHV Purchase	\$82,996	\$146,274
Natural Restorations	Clean up 5	\$341,701	\$392,244
Arizona State Parks and Trails	Statewide Trails App	\$670,000	\$1,000,000
Arizona State Parks and Trails - River Island State Park	River Island Phase II	\$1,129,034	\$1,950,000
City of Avondale	OHV Education and Enforcement	\$100,000	\$175,000
Arizona Office of Tourism	Appreciate AZ	\$200,000	\$400,000
Arizona State Parks and Trails - River Island State Park	River Island Cost Amendment	\$374,383	\$374,383
Arizona Department of Emergency and Military Affairs	Florence Fencing	\$100,000	\$100,000
East Valley Back Country Horsemen	Cottonwood Spring Fencing	\$89,434	\$89,434
Tread Lightly	Cinder Hills Signage	\$3,830	\$4,330
City of Page	Rim View Trail Fencing	\$97,798	\$97,798
Tread Lightly	Wilderness Area Signs	\$7,322	\$8,672

which consists of legislative appropriations and donations to the fund. The monies in the fund are appropriated for the sole purpose of maintaining and preserving the Arizona National Scenic Trail that extends approximately 800 miles between the southern and northern borders of the state. The Arizona National Scenic Trail was designated on March 30, 2009 by the Omnibus Public Land Management Act of 2009. ASPT works with the Arizona Trail Association and other partners to approve funding for projects that best meet the needs of the Arizona National Scenic Trail and comply with the statutory intent of the legislation. From 2020-2024, \$1,280,000.00 was appropriated for the Arizona Trail Fund. Donations to the Arizona National Scenic Trail are generally made directly to the Arizona Trail Association. For more information, visit the website at AZTrail.org.

#### American Rescue Plan Act (ARPA) Funding Non-Motorized Projects 2022-2023

Arizona State Parks and Trails invites state, county, tribal, and municipal agencies to submit grant applications for non-motorized recreational trail uses. Projects could support trail activities such as hiking, bicycling, in-line skating, equestrian use, cross-country skiing, acquisition projects, development and/or maintenance projects, the purchase or lease of recreational trails equipment, or education. The maximum allowable award was \$100,000. No match was required.

# Arizona State Parks and Trails American Rescue Plan Act Grant Funding 2020 - 2024

Sponsor	Project Title	<b>Grant Award</b>	Total Award with Match
	Year Funded - 2	2022	
City of Sierra Vista	Shared Use Path Kayetan Drive	\$100,000	\$103,250
City of Kingman	Connector Trail	\$99,000	\$99,000

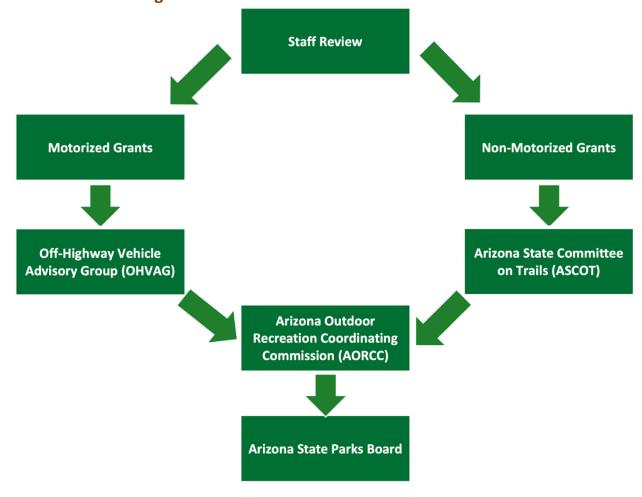
#### **Grant Review Process**

Since the 2020 Trails Plan, Arizona State Parks and Trails staff have been expanding outreach efforts to inform more land managers, towns, cities, and other agencies and organizations about the availability of grant funds and opportunities for training on the application process in various locations throughout the state. Many in-person and web-based trainings have been conducted. As a result, there have been 15 first-time applicants (or 22% of total applicants) for Recreational Trails Program and Off-Highway Vehicle Recreation funds that were awarded monies from these programs. Staff also implemented a rolling grant cycle in order to accept proposals at any time during the year. Funding opportunities are announced via the ASPT website, E-Civis - the state's grant database, Grants.gov and direct email to interested parties.

Grant applications received are processed in the online grant management system and subjected to a competitive review process through the Arizona State Parks Board and its advisory committees.

#### **Committee and Board Review**

• Grant applications are reviewed by ASPT grants staff before distribution to the applicable advisory committee for completeness and accuracy. The staff provide a preliminary assessment of the application using the Board Approved Grants Scoring Criteria generated by the updated Trails Plan. Upon staff review, grants are reviewed by the advisory committee(s) and the Arizona State Parks Board (Board).



- Applicants have the opportunity to provide comments during advisory committee and Board meetings when their application is under review.
- Following the advisory committee review, applications are forwarded to the Arizona State Parks Board for review and final funding recommendations.
- If RTP funds are awarded, the awarded grant application is sent to the State Historic Preservation Office for Section 106 review, then the Arizona Department of Transportation's Environmental Planning Group for NEPA review prior to being sent to Federal Highways for award.

Looking Forward: Implementing Arizona's 2025 Trails Plan

# 2025 Trails Plan – Chapter 7 Looking Forward: Implementing Arizona's 2025 Trails Plan

# **Looking Forward: Implementing Arizona's 2025 Trails Plan**

#### **Looking Forward: Turning the Plan into Action**

As Arizona sets its sights on the future of trail management, the 2025 Trails Plan provides a comprehensive and practical roadmap for preserving and enhancing the state's trail experiences. By focusing on the four key priority areas—Sustainability and Stewardship, Education and Engagement, Access and Connectivity, and Adaptability and Resilience—we can transform a shared vision into meaningful, collaborative efforts. These priorities reflect the full diversity of Arizona's landscapes and user communities, from remote desert trails to popular urban routes.

#### Sustainability and Stewardship

Looking ahead, implementing sustainable design principles and responsible land management are central to protecting Arizona's trails for generations to come. Collaboration among land managers, communities, and volunteers helps ensure that natural and cultural resources are preserved, even as trail use and environmental pressures evolve. Maintaining existing trails, minimizing ecological impacts, and restoring sensitive habitats are core strategies in extending the life and quality of these pathways. Through consistent maintenance and stewardship—including volunteer workdays, cross-agency partnerships, and long-term resource planning—Arizona can retain its unique natural character while expanding recreational opportunities for all.

#### **Education and Engagement**

Empowering users with knowledge and responsible recreation practices will be vital to maximizing both the safety and enjoyment of Arizona's trails. From creating user-friendly educational materials to hosting workshops and community events, well-designed outreach programs reinforce a shared sense of responsibility. By communicating principles of environmental care, cultural awareness, and trail etiquette, these efforts establish a common ground where diverse user groups—ranging from hikers and equestrians to OHV enthusiasts—can come together. In doing so, education and engagement strengthen community bonds and generate a culture of trail advocacy that inspires everyone to protect and respect Arizona's outdoor heritage.

#### **Access and Connectivity**

Ensuring access to quality trails—whether in rural areas, urban centers, or on tribal lands—remains a top priority. Thoughtful planning of trail networks encourages connections among neighborhoods, parks, and other community assets, thereby expanding recreational opportunities and fostering social cohesion. Equitable access ensures that all individuals, regardless of physical ability, location, or socioeconomic status, can benefit from these outdoor resources. Enhanced connectivity also opens doors to new partnerships with organizations focused on transportation, public health, and economic development, leading to more vibrant and accessible trail systems statewide. By integrating transit options, wayfinding tools, and inclusive design features, land managers can broaden the impact of Arizona's trail network for current and future users.

# Looking Forward: Implementing Arizona's 2025 Trails Plan

#### **Adaptability and Resilience**

In the face of changing environmental conditions and shifting recreation trends, the ability to adapt remains essential. Continuous assessment of trail use, emerging technologies, and environmental challenges—such as drought, wildfires, or increased demand—helps guide necessary adjustments to maintain a flexible and resilient trail system. By employing data-driven approaches, such as user surveys and GIS analysis, managers can quickly identify areas needing realignment or additional resources. Staying attuned to community needs and collaborating with stakeholders—ranging from local volunteers to state agencies—ensures that Arizona's trails can rapidly respond to and recover from disruptions while preserving the high-quality experiences users have come to expect.

#### **From Plan to Progress**

No single organization, agency, or user group can advance the 2025 Trails Plan alone. Its successful implementation depends on the collaborative efforts of public and private partners, dedicated volunteers, and strong community engagement. By working together—combining expertise, resources, and passion—Arizonans can secure the future of the state's trails, protecting cherished natural resources, enhancing recreation opportunities, and preserving the wide-reaching benefits trails provide.

As we move forward, each stakeholder plays a critical role in bringing this plan to life. The 2025 Trails Plan is more than a document; it is a commitment to the balanced growth, sustainability, and stewardship of Arizona's exceptional trail networks. Let us champion these priorities and shape Arizona's trail legacy for current users and future generations—building a trail system that unites diverse communities, honors our heritage, and remains resilient in the face of evolving challenges.

# **Appendices**

# Appendices

Appendix A: Acronyms

Appendix B: References and Reports Reviewed

# Appendix A: Acronyms

Acronym	Definition
ADA	American with Disabilities Act
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
ADPAR	Arizona Drought Preparedness Annual Report
ADS	Aerial Detection Survey
ADWR	Arizona Department of Water Resources
AFFM	Arizona Department of Forestry and Fire Management
AIRES	Arizona Institute for Resilient Environments and Societies
AORCC	Arizona Outdoor Recreation Commission
AOT	Arizona Office of Tourism
ARPA	American Rescue Plan Act
A.R.S.	Arizona Revised Statutes
ASCOT	Arizona State Committee on Trails
ASLD	Arizona State Land Department
ASLO	Alternate State Liaison Officer
ASPB	Arizona State Parks Board
ASPT	Arizona State Parks and Trails
ASU	Arizona State University
ATV	All-Terrain Vehicles
AWCS	Arizona Wildlife Conservation Strategy
AZGFD	Arizona Game and Fish Department
BLM	Bureau of Land Management
CDC	Centers for Disease Control and Prevention
COA	Conservation Opportunity Area
CPC	Climate Prediction Center
DFLT	Desert Foothills Land Trust
DOI	Department of the Interior
DOT	United States Department of Transportation
EPA	Environmental Protection Agency
ESA	Endangered Species Act
EWRA	Emergency Wetlands Resources Act
FHP	Forest Health Protection
FHWA	Federal Highway Administration

### **Appendix A: Acronyms**

FS U.S. Forest Service
FSA Farm Service Agency

IIJA Infrastructure Investment and Jobs Act

IMBA International Mountain Bicycling Association

IPaC Information for Planning and Consultation

LWCF Land and Water Conservation Fund
NEPA National Environmental Policy Act

NF National Forest

NGO Non-governmental Organization

NHPA National Historic Preservation Act

NOAA National Oceanic and Atmospheric Administration

NPS National Park Service

NRCS Natural Resources Conservation Service

NWPCP National Wetlands Priority Conservation Plan

OHV Off-Highway Vehicle

OHV FUND Off-Highway Vehicle Recreation Fund
OHVAG Off-Highway Vehicle Advisory Group
OPDMD Other Power-Driven Mobility Devices

OPSP Open Project Selection Process
PIB Partners In Brainstorms, Inc.

ROV Recreational Off-Highway Vehicle

RSS Random Sample Survey
RTP Recreational Trails Program

RTP SEE Recreational Trails Program - Safety and Environmental Education

RV Recreational Vehicle

SCORP Statewide Comprehensive Outdoor Recreation Plan

SGCN Species of Greatest Conservation Need
SHPO Arizona State Historic Preservation Office

SLIF State Lake Improvement Fund

SLO State Liaison Officer

SRSS Stratified Random Sample Survey

SRTAC State Recreational Trail Advisory Committee

SSP Site Steward Program
STL State Trust Lands

SWAP State Wildlife Action Plan
TMA Travel Management Areas

# **Appendix A: Acronyms**

TMP Travel Management Plans

TTMP Travel and Transportation Management Program

UA University of Arizona

USDA United States Department of Agriculture

USFS United States Forest Service

USFWS United States Fish and Wildlife Service

UTV Utility Terrain Vehicle

WY Water Year

**Note:** Due to recent and ongoing updates and reconfigurations of the several of the listed federal, state, county, and local agencies' and departments' websites—as well as those of various organizations—the references and reports reviewed and listed below generally include the main website link. Once on the site, enter the exact title of the report in its search box. If the report is still available, this should direct you to the referenced document.

#### Α

#### American Trails. 2019.

*Trails for All Americans: A Comprehensive Resource for Designing Inclusive Trails.* Accessed March 8, 2025. https://www.americantrails.org/

### Arizona Department of Forestry and Fire Management. 2021.

Statewide Fire Activity Reports. Phoenix: Arizona Department of Forestry and Fire Management. Accessed March 8, 2025.

https://dffm.az.gov/

#### Arizona Department of Health Services. 2021.

*Arizona Health Improvement Plan: Outdoor Recreation Integration.* Phoenix: Arizona Department of Health Services. Accessed March 8, 2025.

https://www.azdhs.gov/

#### Arizona Department of Transportation. 2021.

Active Transportation Master Plan. Phoenix: Arizona Department of Transportation. Accessed March 8, 2025. https://azdot.gov/

#### Arizona Department of Water Resources. 2023.

*Arizona Drought Status.* Phoenix: Arizona Department of Water Resources. Accessed March 8, 2025. https://new.azwater.gov/

#### Arizona Game and Fish Department. 2022.

Wildlife Connectivity Strategy: Guidelines for Trail Planners. Phoenix: Arizona Game and Fish Department. Accessed March 8, 2025.

https://www.azgfd.com/

#### Arizona Office of Tourism. 2022.

Arizona Tourism Outdoor Recreation Report. Phoenix: Arizona Office of Tourism. Accessed March 8, 2025. <a href="https://tourism.az.gov/">https://tourism.az.gov/</a>

#### Arizona-Sonora Desert Museum. n.d.

*Buffelgrass Information and Removal Program.* Accessed March 8, 2025. https://www.desertmuseum.org/

#### Arizona State Climate Office, 2022.

Arizona Climate Trends and Their Impact on Recreation. Accessed March 8, 2025.

https://azclimate.asu.edu/

#### Arizona State Land Department. 2020.

Recreational Use and Land Management: A Comprehensive Guide for Arizona State Trust Lands. Phoenix: Arizona State Land Department. Accessed March 8, 2025.

https://land.az.gov/

#### **Arizona State Parks and Trails**

#### 2019.

Annual Report: Leisure and Lodging Surveys. Accessed March 8, 2025. https://azstateparks.com/reports/2019-annual-report

#### 2020

Arizona Trails 2020: Statewide Motorized and Non-motorized Trails Plan. Accessed March 8, 2025. <a href="https://azstateparks.com/publications">https://azstateparks.com/publications</a>

#### 2021a.

Economic Impact of Arizona's Outdoor Recreation. Accessed March 8, 2025. https://azstateparks.com/publications

#### 2021b.

Recreational Trails Program (RTP) Funding Highlights, 2017–2021. Accessed March 8, 2025. https://azstateparks.com/grants

#### 2022.

Outdoor Recreation Legacy Partnerships: Annual Report. Accessed March 8, 2025. <a href="https://azstateparks.com/publications">https://azstateparks.com/publications</a>

#### 2023.

Arizona Statewide Comprehensive Outdoor Recreation Plan (SCORP). Phoenix: Arizona State Parks and Trails. Accessed March 8, 2025.

https://azstateparks.com/publications

#### Arizona Trail Association, 2021.

Annual Report: Trail Stewardship and Volunteer Engagement. Accessed March 8, 2025. https://aztrail.org/

#### Arizona Trail Association, 2022.

2022–2026 Strategic Plan. Accessed March 8, 2025.

https://aztrail.org/

В

#### **Bureau of Land Management.**

2021.

Public Lands and Outdoor Recreation: A Guide to Planning and Stewardship. Washington, DC: U.S. Department of the Interior. Accessed March 8, 2025. https://www.blm.gov/

2024.

The Bureau of Land Management's Blueprint for 21st Century Outdoor Recreation. Washington, DC: U.S. Department of the Interior. Accessed March 8, 2025.

https://www.blm.gov/programs/recreation/recreation-activities/arizona

#### Bureau of Land Management (BLM) Southwestern Region. 2021.

Unofficial Trails Assessment. Washington, DC: U.S. Department of the Interior. Accessed March 8, 2025.

C

#### Centers for Disease Control and Prevention, 2020.

2020.

Physical Activity Guidelines and Outdoor Recreation: Linking Trails to Better Health. Atlanta: U.S. Department of Health and Human Services. Accessed March 8, 2025. https://www.cdc.gov/physicalactivity/

2024.

*Physical Activity Guidelines.* Atlanta: U.S. Department of Health and Human Services. Accessed March 8, 2025.

https://www.cdc.gov/physicalactivity/

#### Central Arizona Conservation Alliance. 2022.

Ensuring Conservation and Recreation Balance in the Sonoran Desert. Tempe: Central Arizona Conservation Alliance. Accessed March 8, 2025.

https://www.azconservation.org/

#### City of Flagstaff, Parks, Recreation, Open Space and Events (PROSE) Department

2021.

Flagstaff Trails Initiative: Collaborative Action Plan. Flagstaff: PROSE. Accessed March 8, 2025. https://www.flagstaff.az.gov/

2022.

Flagstaff Urban Trails System (FUTS) Master Plan. Flagstaff: PROSE. Accessed March 8, 2025. https://www.flagstaff.az.gov/

#### City of Phoenix, Parks and Recreation Department

#### 2020.

*Desert Park Trails Master Plan.* Phoenix: City of Phoenix. Accessed March 8, 2025. <a href="https://www.phoenix.gov/parks">https://www.phoenix.gov/parks</a>

#### 2023.

Park and Preserve Maintenance Annual Update. Phoenix: City of Phoenix. Accessed March 8, 2025. <a href="https://www.phoenix.gov/parks">https://www.phoenix.gov/parks</a>

#### 2025.

*Desert Defenders.* Phoenix: City of Phoenix. Accessed March 8, 2025. Accessed March 8, 2025. <a href="https://www.phoenix.gov/parks">https://www.phoenix.gov/parks</a>

#### City of Tucson, Parks and Recreation Department

#### 2021.

*Urban Trails Network Strategic Framework.* Tucson: City of Tucson. Accessed March 8, 2025. <a href="https://www.tucsonaz.gov/parks">https://www.tucsonaz.gov/parks</a>

#### 2022.

Tucson Parks and Recreation Five-Year Strategic Plan: Trails and Greenways Chapter. Tucson: City of Tucson. Accessed March 8, 2025. <a href="https://www.tucsonaz.gov/parks">https://www.tucsonaz.gov/parks</a>

#### Coconino County Parks and Recreation Department. 2021.

Peaks to Prairie: A Comprehensive Trails Report. Flagstaff: Coconino County. Accessed March 8, 2025. <a href="https://coconino.az.gov/">https://coconino.az.gov/</a>

#### Colorado Parks and Wildlife. 2022.

*E-Bike Study.* Denver: Colorado Parks and Wildlife. Accessed March 8, 2025. https://cpw.state.co.us/

#### E-L

#### **Environmental Protection Agency.** 2019.

*Green Infrastructure and Recreation Spaces: Best Practices Manual.* Washington, DC: U.S. Environmental Protection Agency. Accessed March 8, 2025.

https://www.epa.gov/green-infrastructure

#### Federal Emergency Management Agency (FEMA). 2019.

Mitigating Flood Risk on Public Trails: A Planning Guide. Washington, DC: FEMA. Accessed March 8, 2025. <a href="https://www.fema.gov/">https://www.fema.gov/</a>

#### Federal Highway Administration. 2020.

*Rails-with-Trails: Lessons Learned.* Washington, DC: U.S. Department of Transportation. Accessed March 8, 2025. https://highways.dot.gov/

#### Federal Interagency Council on Trails. 2021.

*Interagency Guidelines for Sustainable Trail Design.* Washington, DC: U.S. Department of the Interior. Accessed March 8, 2025.

https://www.doi.gov/

#### Florida Office of Greenways and Trails. 2020.

*Florida Greenways and Trails System Plan.* Tallahassee: Florida Department of Environmental Protection. Accessed March 8, 2025.

https://floridadep.gov/

#### Great Outdoors Colorado. 2022.

Community Impact Report: Investments in Trails and Open Space. Denver: Great Outdoors Colorado. Accessed March 8, 2025.

https://www.goco.org/

#### Greater Sedona Recreation Collaborative Motorized Recreation Working Group. 2024.

Proposed Strategies for Motorized Visitor Use Management in the Greater Sedona Area. Accessed March 8, 2025.

https://www.greatersedonarecreation.com/

#### International Mountain Bicycling Association. 2018.

*Guidelines for a Quality Trail Experience.* Boulder, CO: International Mountain Bicycling Association. Accessed March 8, 2025.

https://www.imba.com/

#### Kaiser Family Foundation. 2021.

*Public Health and Community Recreational Spaces: A Policy Brief.* San Francisco: Kaiser Family Foundation. Accessed March 8, 2025.

https://www.kff.org/

#### Leave No Trace Center for Outdoor Ethics. 2019.

Leave No Trace: Minimum Impact Practices for Trail Users. Boulder, CO: Leave No Trace. Accessed March 8, 2025.

https://Int.org/

# Los Angeles County Parks and Recreation. 2025.

*Trail Closure Updates: Palisades and Eaton Fires.* Los Angeles: L.A. County Parks. Accessed March 8, 2025. https://parks.lacounty.gov/ (Search "Trail Closure Updates")

#### Μ

#### Maricopa County Department of Public Health. 2020.

Active Living Campaign: Utilizing Trails for Better Health Outcomes. Phoenix: Maricopa County Department of Public Health. Accessed March 8, 2025.

https://www.maricopa.gov/5302/Public-Health

#### **Maricopa County Parks and Recreation Department**

#### 2019.

*Maricopa County Regional Trail System Plan.* Phoenix: Maricopa County. Accessed March 8, 2025. https://www.maricopacountyparks.net/

#### 2023.

*Maricopa County Regional Trail System Update.* Phoenix: Maricopa County. Accessed March 8, 2025. <a href="https://www.maricopacountyparks.net/">https://www.maricopacountyparks.net/</a>

#### n.d.

*Trail Management Plan.* Phoenix: Maricopa County. Accessed March 8, 2025. <a href="https://www.maricopacountyparks.net/">https://www.maricopacountyparks.net/</a>

#### Mississippi Department of Wildlife, Fisheries, and Parks. 2022.

Recreation and Trails Management Strategy. Jackson: Mississippi DWFP. Accessed March 8, 2025. https://www.mdwfp.com/

#### Mohave County Parks Department. 2021.

Mohave County Trails Master Plan. Kingman: Mohave County. Accessed March 8, 2025. <a href="https://www.mohavecounty.us/">https://www.mohavecounty.us/</a>

#### Ν

#### National Geographic Society. 2021.

Mapping America's Trails: Innovative Approaches to Outdoor Access. Washington, DC: National Geographic Society. Accessed March 8, 2025.

https://www.nationalgeographic.org/

#### National Park Service. 2020.

*Rivers, Trails, and Conservation Assistance Program: Annual Report.* Washington, DC: U.S. Department of the Interior. Accessed March 8, 2025.

https://www.nps.gov/orgs/rtca/

#### National Trails System Council. 2019.

National Trails System: A Framework for Action. Washington, DC: National Trails System Council. Accessed

March 8, 2025.

https://pnts.org/new/

#### **NOAA National Centers for Environmental Information**

2020.

Climate at a Glance: Regional Analysis. Accessed March 8, 2025. https://www.ncei.noaa.gov/

2023.

Climate at a Glance: Arizona. Accessed March 8, 2025. https://www.ncei.noaa.gov/

### Northern Arizona University, School of Forestry. 2021.

Forest Recreation and Trail Management: Research Highlights. Flagstaff: Northern Arizona University. Accessed March 8, 2025.

https://nau.edu/forestry/

#### O-R

#### Outdoor Industry Association. 2021.

*Outdoor Recreation Economy Report.* Boulder, CO: Outdoor Industry Association. Accessed March 8, 2025. https://outdoorindustry.org/

#### Outdoor Recreation Roundtable. 2020.

*Investing in America's Outdoor Recreation Future.* Washington, DC: Outdoor Recreation Roundtable. Accessed March 8, 2025.

https://recreationroundtable.org/

#### Outdoor Recreation Roundtable. 2024.

Recreation Funding in America: Current Results and Future Insights. Washington, DC: Outdoor Recreation Roundtable. Accessed March 8, 2025.

https://recreationroundtable.org/

### Pima County Natural Resources, Parks and Recreation. 2019.

*Trail Access and Inclusion Strategy for Southern Arizona.* Tucson: Pima County. Accessed March 8, 2025. <a href="https://www.pima.gov/parks">https://www.pima.gov/parks</a>

#### Pinal County Open Space and Trails Department. 2022.

*Pinal County Open Space and Trails Strategic Plan.* Florence: Pinal County. Accessed March 8, 2025. <a href="https://www.pinal.gov/">https://www.pinal.gov/</a> (Search "Open Space and Trails")

#### Rails-to-Trails Conservancy. 2022.

Tapping into Trails: Best Practices for Funding, Maintenance, and Community Involvement. Washington, DC:

Rails-to-Trails Conservancy. Accessed March 8, 2025.

https://www.railstotrails.org/

#### S-T

#### Society of Outdoor Recreation Professionals. 2019.

*Recreation Resource Management: A Compendium of Best Practices.* Fort Collins, CO: Society of Outdoor Recreation Professionals. Accessed March 8, 2025.

https://www.recpro.org/

#### Sonoran Institute. 2021.

Community Engagement in Open Space and Trail Planning: A Case Study from Southern Arizona. Tucson: Sonoran Institute. Accessed March 8, 2025.

https://sonoraninstitute.org/

#### Sun Corridor Trail Alliance. 2024.

Action Plan. Accessed March 8, 2025.

https://suncorridortrail.org/

#### Tonto National Forest. 2022.

*Monitoring and Enforcement Pilot Report.* Phoenix: U.S. Forest Service, Tonto National Forest. Accessed March 8, 2025.

https://www.fs.usda.gov/tonto/ (Search "Monitoring and Enforcement Pilot Report")

#### The Conservation Fund. 2020.

Strategic Land Conservation for Trail Corridors. Arlington, VA: The Conservation Fund. Accessed March 8, 2025. https://www.conservationfund.org/

#### The Trust for Public Land. 2021.

*Green Spaces and Trail Networks: Enhancing Community Health and Resilience.* San Francisco: The Trust for Public Land. Accessed March 8, 2025.

https://www.tpl.org/

U

#### U.S. Census Bureau. 2021.

Population Trends and Outdoor Recreation: An Analysis of Changing Demographics. Washington, DC: U.S. Census Bureau. Accessed March 8, 2025.

https://www.census.gov/

#### U.S. Census Bureau. 2025.

*QuickFacts: Arizona.* Washington, DC: U.S. Census Bureau. Accessed March 8, 2025. https://www.census.gov/quickfacts/

#### **U.S. Department of Transportation.** 2022.

Safe Streets and Roads for All: Incorporating Trails and Pedestrian Pathways. Washington, DC: U.S. Department of Transportation. Accessed March 8, 2025.

https://www.transportation.gov/

#### U.S. Fish and Wildlife Service, 2020.

Connecting People with Nature: Planning Trails for Wildlife Conservation. Washington, DC: U.S. Department of the Interior. Accessed March 8, 2025.

https://www.fws.gov/

#### **U.S. Forest Service**

#### • 2018 (or n.d.).

National Strategy for a Sustainable Trail System. Washington, DC: U.S. Department of Agriculture. Accessed March 8, 2025.

https://www.fs.usda.gov/

#### 2021.

*Trail Construction and Maintenance Notebook.* Washington, DC: U.S. Department of Agriculture. Accessed March 8, 2025.

https://www.fs.usda.gov/

#### • 2022a.

Confronting the Wildfire Crisis: A 10-Year Implementation Plan. Washington, DC: U.S. Department of Agriculture. Accessed March 8, 2025.

https://www.fs.usda.gov/

#### • 2022b.

Looking 20 Years Into the Future: The Southwestern Region's Strategic Plan. Washington, DC: U.S. Department of Agriculture. Accessed March 8, 2025.

https://www.fs.usda.gov/

#### 2024a.

*Sustainable Recreation Site Design Guide.* Washington, DC: U.S. Department of Agriculture. Accessed March 8, 2025.

https://www.fs.usda.gov/

#### 2024b.

National Visitor Use Monitoring Survey Results National Summary Report. Washington, DC: U.S. Department of Agriculture. Accessed March 8, 2025.

https://www.fs.usda.gov/

#### n.d.

*Wildfire Crisis Strategy.* Washington, DC: U.S. Department of Agriculture. Accessed March 8, 2025. https://www.fs.usda.gov/

#### U.S. Forest Service, Coronado National Forest, Santa Catalina Ranger District

#### n.d.

Santa Catalina Trail Plan. Accessed March 8, 2025. https://www.fs.usda.gov/coronado/ (Search "Santa Catalina Trail Plan")

#### U.S. Geological Survey. 2020.

Geomorphology of Recreation Areas: Assessing Trail Erosion and Soil Stability. Washington, DC: USGS. Accessed March 8, 2025.

https://www.usgs.gov/

### **United Nations Environment Programme.** 2019.

*Promoting Sustainable Eco-Tourism: Global Guidelines for Trails and Protected Areas.* Nairobi, Kenya: UNEP. Accessed March 8, 2025.

https://www.unep.org/

#### University of Arizona Cooperative Extension. 2022.

Outdoor Recreation and Public Health: Connecting Communities to Trails. Tucson: University of Arizona. Accessed March 8, 2025.

https://extension.arizona.edu/

#### Urban Land Institute. 2021.

Building Active Corridors: Integrating Trails into Urban Development. Washington, DC: Urban Land Institute. Accessed March 8, 2025.

https://uli.org/

#### V-W

#### Valley Forward. 2020.

Connecting Communities: A Green Infrastructure and Trails Report for the Greater Phoenix Area. Phoenix: Valley Forward. Accessed March 8, 2025.

https://www.valleyforward.org/

#### Western Governors' Association. 2020.

*Policy Resolution on Outdoor Recreation: Collaborative Approaches to Trail Management.* Denver: Western Governors' Association. Accessed March 8, 2025.

https://westgov.org/

#### White Tank Mountains Regional Connectivity Initiative. 2024.

Conceptual Wildlife Linkage Report: A Regional Plan for Wildlife Connectivity in the West Valley. Accessed March 8, 2025.

https://www.wtmconservancy.org/connectivity-initiative/

Υ

#### Yavapai County Parks and Recreation Department. 2022.

Yavapai Trails Connectivity Vision: Linking Towns and Open Spaces. Prescott: Yavapai County. Accessed March 8, 2025.

https://yavapaiaz.gov/