

The Hassayampa River Preserve at Vulture Mountains Recreation Area



Site Trail System Plan 2016



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1.0 INTRODUCTION

The Hassayampa River Preserve (Preserve) is a 789 acre property located south of the Town of Wickenburg, owned and managed by The Nature Conservancy (TNC) since 1989. The Preserve will become a key component of the Vulture Mountains Cooperative Recreation Management Area (CRMA), a 71,000 acre area, which already enjoys an extensive network of trails. The Vulture CRMA is cooperatively managed by both the Maricopa County Parks and Recreation Department's (MCPRD, Department) and the Bureau of Land Management (BLM); however, the Preserve itself will be managed by MCPRD only. The Vulture Mountains Cooperative Recreation Management Area Master Plan¹ was approved by the Maricopa County Board of Supervisors on January 23, 2012 and details the overarching goals of the entire recreation area.

Hassayampa River Preserve consists of approximately 789 acres, a portion of which was acquired through an agreement with the U.S. Army Corps of Engineers and are subject to the In-Lieu-Fee Mitigation Program (ILF) requirements (97 acres of ILF Mitigation lands). The portion of HRP that will be subject to this Trail System Plan includes the portions of HRP that will be transferred in fee title to the County and the lands that will be leased to the County, in accordance with separate agreements, and specifically excludes the ILF Mitigation lands.

TNC will transfer ownership of certain real parcels totaling approximately 77 acres as identified in Appendix F of the Site Master Plan beginning January 1, 2017. The property will be conveyed to MCPRD subject to the terms outlined in the Donation Agreement. Upon transfer, MCPRD will be able to provide staff to the site and begin to make the as needed improvements to the trail system.

TNC will retain a conservation easement and incorporate a reversion clause over all properties transferred to MCPRD. Property retained by TNC will be managed by MCPRD under lease.

1.1 Project Background

MCPRD trails and planning staff made several site visits to the Preserve in late 2013 in order to assess and map existing trails. The existing trails serve as the foundation to this trails plan.

The BLM completed the [Wickenburg Community Travel Management Plan](#) (TMP) in May 2014 in order to update the trails and routes throughout the greater Wickenburg region found on BLM managed lands. The TMP also provided for trail access point(s) at either the north or south trestle as referenced later in this plan. This potential trail access is what will link the Preserve to the rest of the CRMA.

1.2 Vision and Mission

The mission of TNC is to conserve the lands and waters on which all life depends, which is not dissimilar to the MCPRD vision and mission. In summary, MCPRD's vision and mission state that through responsible stewardship, the Department shall provide the highest quality of parks, trails, programs, services, and experiences that energize visitors and create life-long users and advocates. These common elements of both the visions and missions will help guide the trails plan.

¹ The name may be shortened to "Vulture Mountains Recreation Area" for easier reference or for signage and marketing materials.

1.3 Existing Trails

The Preserve currently offers about 2.4 miles of self-guided trails (figure 1) that branch out from the Arthur L. Johnson Visitor Center. Although some routes may change based on flood events, existing trails at the Preserve include:

- Lyke’s Lookout
- River Ramble
- Lion’s Trail
- Palm Lake Loop
- Willow Walkway
- Mesquite Meander

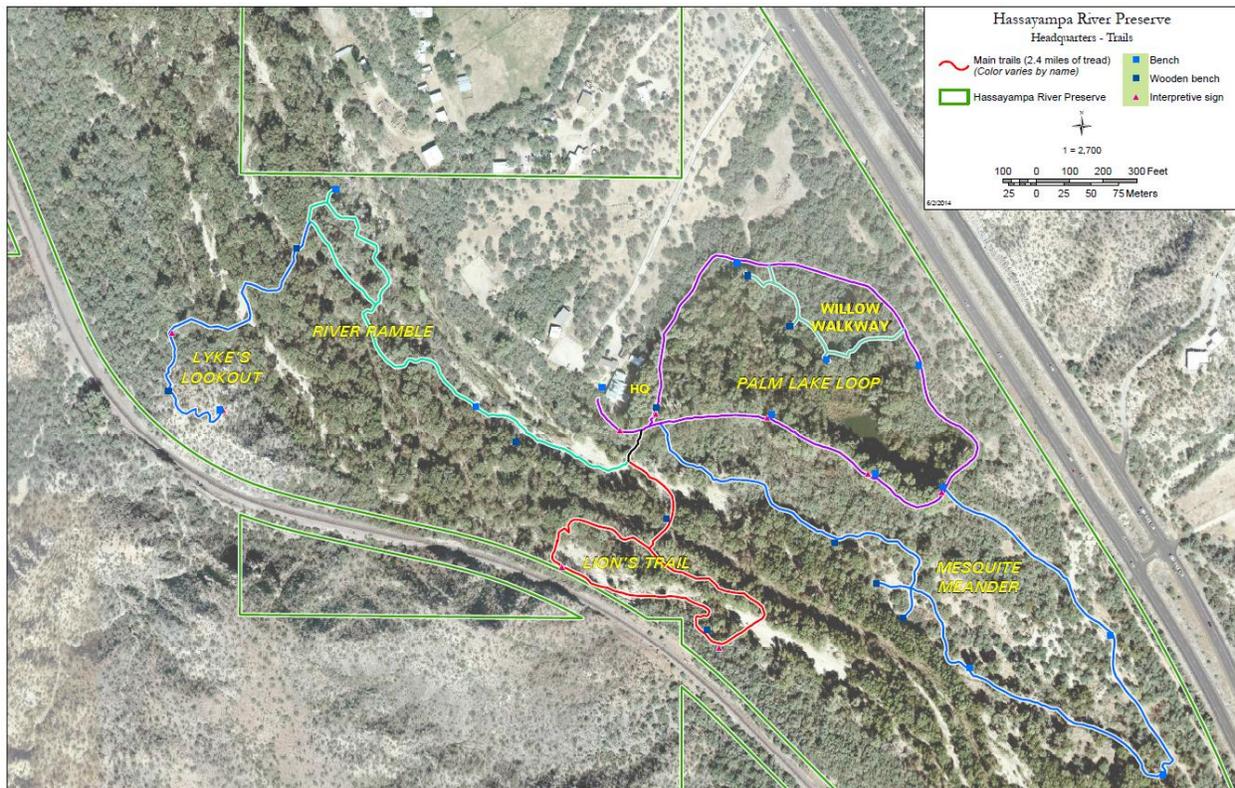


Figure 1: Existing trails (some trails subject to change based on flooding).

2.0 THE PLANNING PROCESS

2.1 Purpose of This Plan

The ultimate purpose of this plan is to outline the long-range vision for the Preserve’s existing trails and to provide guidance to future trail development that will provide for both the public’s enjoyment and the protection of the Preserve’s resources. Other plans may tier from or otherwise support this plan.

2.2 Scope

The scope of this plan is to establish upgrades to existing trails, recommend new trails, and to provide for a Maricopa Trail connection point.

2.3 Previous Planning Efforts or Studies

Three documents played an important role in shaping this plan:

- Wickenburg Community Travel Management Plan (Bureau of Land Management. May 2014);
- Hassayampa River Preserve Site Master Plan (Maricopa County Parks and Recreation Department; and The Nature Conservancy (TNC));
- Vulture Mountains Cooperative Recreation Management Area Master Plan (Maricopa County Parks and Recreation Department. September 2012).

Other important trail related plans or manuals include:

- The Trail Management Manual (Manual) outlines the policies, standards, and guidelines for planning, design, construction, and maintenance of the trails and tracks system in Maricopa County Parks and should be referred to for such purposes. The Manual is available by official request through MCPRD headquarters office.
- The Maricopa Trail will connect all County Parks; its Master Plan may be found on the MCPRD website at <http://www.maricopacountyparks.net/assets/1/6/MaricopaTrailMasterPlan.pdf>

2.4 Plan Amendments or Updates

This plan should be reviewed annually by Preserve staff and Trails Crew to ensure their knowledge of and adherence to this plan and to evaluate implementation progress. This plan may need to be revised to take the changing needs of the County, The Nature Conservancy, the community, and the visiting public into consideration. All potential changes or updates to this plan should be reported to MCPRD executive management and planning staff for consideration. All potential changes or updates to this plan may require the joint participation, cooperation, and approval from both MCPRD and TNC.

2.5 The Planning Team

This plan was completed by the MCPRD Trails Crew and planning staff, including: Westside Regional Park Superintendent, Trail Development Supervisor, Park Planner, and GIS Technician. Other staff provided additional planning support.

2.6 Agency Participation

Although the plan was developed internally by the MCPRD Trails Crew and planning staff, the cooperation and input of TNC was integral to developing the recommendations included in this plan. TNC approved of this plan as indicated by the signature page at the front of this document.

The Bureau of Land Management (BLM) was consulted in April 2013 to determine potential trail linkage areas and identify critical habitat issues. This coordination allows the BLM to reduce the amount of disturbed ground from trails thereby reducing the amount of ground necessary for desert tortoise habitat restoration.² This coordination is also reflected in BLM's Wickenburg Community Travel Management Plan (May 2014) and the recommendations found in this plan. Additionally, if trails are constructed at railroad trestle crossings, the BLM will consult with U.S. Fish and Wildlife Service regarding southwestern willow flycatcher and critical habitat prior to construction.³

² Category II habitat requires a compensation ratio of 4.5:1. Category III habitat requires a compensation ratio of 1:1. Source: BLM Wickenburg Community Travel Management Plan Decision Record, page 24.

³ BLM, Wickenburg Community Travel Management Plan and Environmental Assessment, May 2014, page 69.

Burlington Northern Santa Fe Railroad Company (BNSF) was consulted throughout the overall Vulture and Preserve planning process to determine an appropriate trestle crossing location and to determine safety mitigation requirements. Proposed trails that cross BNSF right-of-way are not considered open to the public until all BNSF requirements have been satisfied and the trail has been built to Department trail standards. At the time of this writing, the BNSF trail crossing application for Bridge 144.8 is still pending.

2.7 Public Participation

Public Meetings

No public meetings specifically regarding the trails plan have been held to date. However, a meeting was held for the Friends of Hassayampa on January 23, 2014 and a public open house was held on February 6, 2014 to discuss the overall project.

Arizona State University

Two Arizona State University (ASU) doctoral students performed a brief visitor preference survey (see Hassayampa River Preserve Site Master Plan, Appendix A for survey report) at the Preserve on April 20 and 21, 2013. The students interviewed 16 visitors, many of which were already TNC members, in order to get a sense of what is important to them. Briefly, the results include:

- Key visitor values:
 - Spiritual, relaxation, escape, freedom, historic, connection with nature.
- Main activities:
 - Birding, hiking / walking, attending interpretive programs.

The survey also was able to distinguish areas where M CPRD may need to pay special attention during the management transition as to not deviate too far from established TNC visitor expectations, including:

- Understanding the Preserve as an interrelated system of processes
- Limit the “red tape” or other regulatory intrusions onto visitors
- Address increased traffic concerns
- Address a perceived loss of personal touch

2.8 Public Information

Media Coverage

Press releases regarding the overall project were issued by both M CPRD and TNC distribution lists prior to the public meeting(s) and were reported to numerous outlets. No press releases specific to this trail system plan have been released to date.

Project Webpage

Information is posted on the M CPRD and TNC websites, respectively, to keep the public and other interested parties updated on the planning process at:

- <http://www.maricopacountyparks.net/park-locator/vulture-mountain-recreation-area/>
- <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/arizona/arizona-hassayampa-maricopa-partnership.xml>

3.0 TRAIL PLANNING

3.1 Planning Issues

The following issues have been taken into consideration in the development of this plan:

- Legal: land transfer; in-lieu-fee areas; conservation easement; water rights; railroad.
- Environmental: riparian; sensitive or endangered species; stray cattle; weather events.
- Visitor expectations: some expectations from ASU survey (more study needed).
- Maintenance: flooding, vegetation over-growth.⁴

3.2 Planning Criteria

Determining if there should be a trail and where it should go is an involved process. Laws and regulations, Department policies and standards, environmental protection, visitor desires and experiences, safety, engineering, and costs all must be considered to produce a functional, quality trail system. This section outlines some of the policies and guidelines that assist in trail development and management.

3.3 Policies

Type of Use

Generally, MCPRD policy encourages designating trails for shared-use whenever possible. However, where essential for visitor safety, special use conditions, or environmental or cultural reasons, use may be restricted or the trail may be temporarily or permanently closed. Reasons for closure may include acts of nature (i.e. wash outs, landslides), resource protection (i.e. wildlife breeding seasons, critical habitat), or for special events.

Standards and Objectives

The Trails Management Manual directs standards and management objectives for classifications of trails. Briefly, classifications of trails include:

- Barrier-free: for leisurely outdoor recreation with all obstacles removed for people with mobility, sight, and hearing limitations
- Interpretive: for pedestrian only, leisurely, educational recreation away from distracting use and activities
- Primary: for non-motorized for leisurely recreation
- Secondary: for non-motorized for leisurely recreation, but a greater distance from a trailhead
- Competitive track: for challenging, strenuous, and high-speed outdoor recreation

Table 1 provides a detailed summary of standards and objectives for each classification. The Trails Management Manual provides additional details and other definitions and should be referenced.

⁴ Tree and other vegetation over-growth and trimming will be determined on an annual basis and discussed in more detail in the Site Conservation Plan and the Annual Operations Plan.

TABLE 1: SUMMARY OF STANDARDS AND SPECIFICATIONS

	BARRIER-FREE TRAIL	INTERPRETIVE TRAIL	PRIMARY TRAIL	SECONDARY TRAIL	COMPETITIVE TRACK
Management objectives	To provide outdoor recreation and remove barriers for visitors with mobility, sight, and hearing limitations. Has sitting benches and a hard-ended surface. Low speed. Non-motorized. ¹	To provide educational recreation away from distracting use and activities. Low speed. Non-motorized. ¹	To provide leisurely outdoor recreation which allows for side-by-side travel and easy passing. Medium speed. Non-motorized. ¹	To provide leisurely outdoor recreation in areas that may be distant from an access point or have rugged topography. Medium speed. Non-motorized. ¹	To provide challenging, strenuous, and high-speed outdoor recreation for individuals, groups, and organized events. Direction of travel is one-way. High speed. Non-motorized. ²
Experience objectives	To feel safe, socialize, and be surrounded by nature.	To anticipate, discover, gain environmental awareness, and be a part of nature.	To exercise, socialize, and be surrounded by nature.	To be adventurous, discover, obtain solitude, be remote, and be a part of nature.	To be challenged, take risks, be competitive, exercise, and be active in a natural setting.
User types	Pedestrians, including the physically disabled and toddlers.	Pedestrians.	Multi-use (hikers, equestrians, and bicyclists). ³	Multi-use (hikers, equestrians, and bicyclists). ³	Multi-use (runners, equestrians, and bicyclists). ⁴
Tread construction and maintenance standards	5% max. sustained grade. 8% (for 1/10 th or less of total length) max. grade. ⁵ 7 ft. (two-way), or 5 ft. (one-way) width.	10% max. sustained grade. 15% max. grade. ⁵ 4 ft. width.	10% max. sustained grade. 15% max. grade. ⁵ 4 ft. width.	15% max. sustained grade. 20% max. grade. ⁵ 2 ft. width.	20% max. sustained grade. (No limit) max. grade. ⁵ Up to 10 ft. width.

¹ Except for wheelchairs, and administrative and emergency use.

² Except for administrative and emergency use.

³ Certain trails may be restricted where essential.

⁴ Use is restricted during organized events.

⁵ For specified short distances where essential.

4.0 TRAIL SYSTEM PLAN

Trails at the Preserve are self-guided, leading visitors along the lush river bottom, across the river’s floodplain, through majestic cottonwood-willow forests and dense mesquite bosques (a Spanish word for forest) found only near desert waterways. A major attraction is the trail around Palm Lake where waterfowl, uncommon in the desert, are often seen.

4.1 Considerations

The trail system plan is based on Department trail standards and expertise and partnering agency input and is subject to compliance with applicable environmental laws. Execution of this plan is described under “Recommended Actions” below.

The map included within this plan shows the proposed trail system (Map 2 at the end of this document). If an unauthorized route currently used by the public does not appear on the map, it is slated for closure and obliteration (naturalization). The locations of trails on the plan map are general corridors and not intended to be precise; new trails will be located according to Department standards, area topography, upon approval by TNC, and in coordination with other affected agencies. MCPRD will consult with TNC and other appropriate agencies for the required permits when planning new trails that cross waterways or when conducting particular types of trail maintenance occurring in a waterway. One such appropriate agency would be the County’s Flood Control District and the need to consult about the need for 404 permits when building new trails in waterways.

All of the trails are subject to modifications and improvements as needed to eliminate hazards, prevent erosion, protect the human and natural environment or address other management concerns. Trails may be reconstructed or re-aligned if necessary. Deviations from the identified corridors may arise from the results of an archaeological review or other environmental disclosures prior to construction.

Please note:

Planned trails are not open to travel until properly permitted (if applicable), constructed, posted, and designated by the Department. Traveling on undesignated trails causes damage to the land, may be hazardous or illegal, and is in violation of park rules.

Additionally, any trails that are parallel to the BNSF Railroad tracks and within its right-of-way are expressly forbidden.

4.2 Recommended Actions

The following action items provide direction for the establishment of a trail system and access to trails. Table 2 below summarizes the recommended actions and is displayed on Map 2.

All trails are designated for non-motorized, pedestrian-only use. No equestrian or mountain biking uses are allowed unless otherwise noted.

Table 2: Summary of Recommended Actions					
Trail Management					
Name	Length (mile)	Width (feet)	Classification	Status	Action
Lyke’s Lookout	0.223	2	secondary	existing	Maintain according to standard.
River Ramble	0.383	4	primary	existing	Maintain according to standard.

Lion's Trail	0.389	4	primary	existing	Maintain according to standard.
Palm Lake Loop	0.533	5-7	barrier-free, interpretive	existing	Maintain existing loop trail. Any upgrades to barrier-free according to standard are subject to approval by TNC.
Willow Walkway	0.148	4	primary	existing	Maintain according to standard.
Mesquite Meander	0.664	4	primary	existing	Maintain according to standard.
*ADOT Rest Area - South Trestle 144.8	0.408	4	primary	recommended, preferred	<p>Maricopa Trail connection / trailhead.</p> <p>Mountain biking and/or equestrian uses allowed.</p> <p>This trail connection depends on approval from BNSF to provide access via their bridge structure(s) and is not considered a designated trail until such approval is granted and safety requirements are met.</p> <p>Maintain according to standard.</p>
*North Trestle 142.3	0.781	4	primary	recommended, alternate	<p>This trail connection depends on approval from BNSF to provide access via their bridge structure(s) and is not considered a designated trail until such approval is granted. Additional approvals may also be required. Mountain biking and/or equestrian uses may not be allowed.</p> <p>Maintain according to standard.</p>
*From proposed Nature Center to Arthur L. Johnson Visitor Center	(a) 0.178 (b) 0.205	4	primary	recommended	<p>Alignment(s) shown is a general corridor and not intended to be precise. The preferred alignment (a) is dependent on discussions and agreements from neighboring private land owner and is not considered a designated trail until such approval is granted; if permission is not granted, an alternate alignment (b) is proposed for this area.</p> <p>Maintain according to standard.</p>
Access Management					
Name	Length (mile)	Width (feet)	Classification	Status	Action
*ADOT Rest Area - South Trestle 144.8	n/a	4	primary	recommended, preferred	<p>Maricopa Trail connection/trailhead.</p> <p>1) A trail connection at this access point depends on approval from BNSF to provide access via their bridge structure(s) and is not considered a designated access point until such approval is granted. Hiking, mountain biking and equestrian use is allowed.</p> <p>2) A trail connection may also be constructed to the Preserve trail system by a trail connection north to the Preserve.</p> <p>3) Iron ranger needed here.</p>
*North Trestle 142.3	n/a	4	primary	recommended, alternate	<p>This trail connection depends on approval from BNSF to provide access via their bridge structure(s) and is not considered a</p>

					designated trail until such approval is granted.
					Iron ranger needed here.
* These are meant to be descriptive only; not actual trail names.					

5.0 OTHER ACTIONS RELATED TO TRAILS

Unless otherwise specified herein, other actions related to trails, signage, or other aspects of trail management will be guided by the Trails Management Manual.

5.1 Maintenance

Trail maintenance is scheduled on an as-needed and on-going basis throughout the County park system. Routine maintenance work includes repair of eroded tread, clearance of encroaching vegetation, and installing surface water control structures (waterbars, dips, etc.).

Reconstruction is heavy maintenance that brings a severely degraded or improperly constructed trail⁵ into compliance with its classification standards. This may involve reconstructing tread to comply with standard gradient and width, constructing tread stabilizing structures (walls, rip-rap, block and fill, etc.), and/or realigning segments of tread. All potentially disturbing trail related activities will be scheduled outside of threatened and endangered species breeding seasons and will comply with all other environmental laws.

Flooding and trail wash-out is more of an issue at the Preserve than at other County parks. With a major trail (River Ramble) located within the floodway, it will need to be restored on a regular basis. Light trail maintenance or restoration may be completed by Preserve staff or volunteers; heavier maintenance or restoration will be completed by the MCPRD Trails Crew.

5.2 Obliteration (or Naturalization) of Paths, Trails, and Roads

Undesignated paths, trails, or roads not planned for inclusion into the trail and access system will be “naturalized” by scarifying the tread, planting native vegetation and/or scattering native debris as directed by the Trails Management Manual.

5.3 Control of Off-trail Use

According to MCPRD’s park rules, trail users shall stay on designated trails, and shortcutting or trespass onto private property by any trail user is prohibited. Trail user education and, if necessary, law enforcement will be used to attain compliance via patrols and/or citations.⁶ Signs will be posted at closed paths, roads, and undesignated washes if these areas are subject to continued use after closure.

5.4 Trail and Access Signs

Signs will be posted in accordance with the Trails Management Manual. Directional signs will be posted at junctions, boundary points, and along the trail where necessary. Boundary, land ownership, and fee signs will be posted at boundary access points as necessary. Markers, regulatory, and warning signs may

⁵ An improperly constructed trail includes trails built prior to the adoption of MCPRD current trail standards or illegally built trails constructed by non-MCPRD authorized personnel or its authorized contractors, or “social trails” constructed by visitors repeatedly walking the same route.

⁶ Violation of park rules are considered Class II misdemeanor and punishable according to state law.

be posted where essential for visitor safety and resource protection. Damaged signs will be replaced. All unauthorized signs will be removed.

5.5 Trail Names

Existing trail names will be retained. New names will be chosen for new trails established in the Preserve. Some segments of previously designated trails may be renamed to provide an easier-to-follow trail system.

5.6 Biological Resource Concerns

Sensitive biological resources, such as federally protected species (i.e. threatened, endangered, and candidate species covered under the [Endangered Species Act](#) and migratory birds protected under the [Migratory Bird Treaty Act](#)) and their associated habitat should be avoided to the greatest extent possible. If the preferred alignment for the trail is not within existing disturbed areas, the conservation measures that will be considered while constructing a trail include:

- 1) In accordance with [Arizona Revised Statute \(Title 3, Chapter 7, Article 1, Section 904](#) and 914) protected native plants within the project area must be salvaged prior to commencement of land disturbing activities.
- 2) To ensure that endangered or threatened species are protected, construction activities within the river channel and within 0.1 miles of the edge of the river channel will be prohibited during nesting and breeding season which includes the dates March 15 – August 31.
- 3) Prior to moving a vehicle or large equipment, a check must first be done for desert tortoises.
- 4) If a desert tortoise is encountered and requires handling (relocation out of harm's way), [AZGFD Guidelines](#) for [Handling Sonoran Desert Tortoises Encountered on Development Projects](#) must be adhered to.
- 5) Sensitive natural resource areas will be monitored by MCPRD staff and/or the appropriate state or federal wildlife agency. If a threatened or endangered species is discovered within the area of an established trail, the trail will be temporarily or permanently closed or rerouted as necessary.

5.7 Cultural Resource Concerns

Cultural resource sites have been considered in planning new trail locations. Some sites may not be signed or marked in any way; however, others may be marked and signed for their educational value. Preserve staff may take visitors to sites as a part of educational programming.

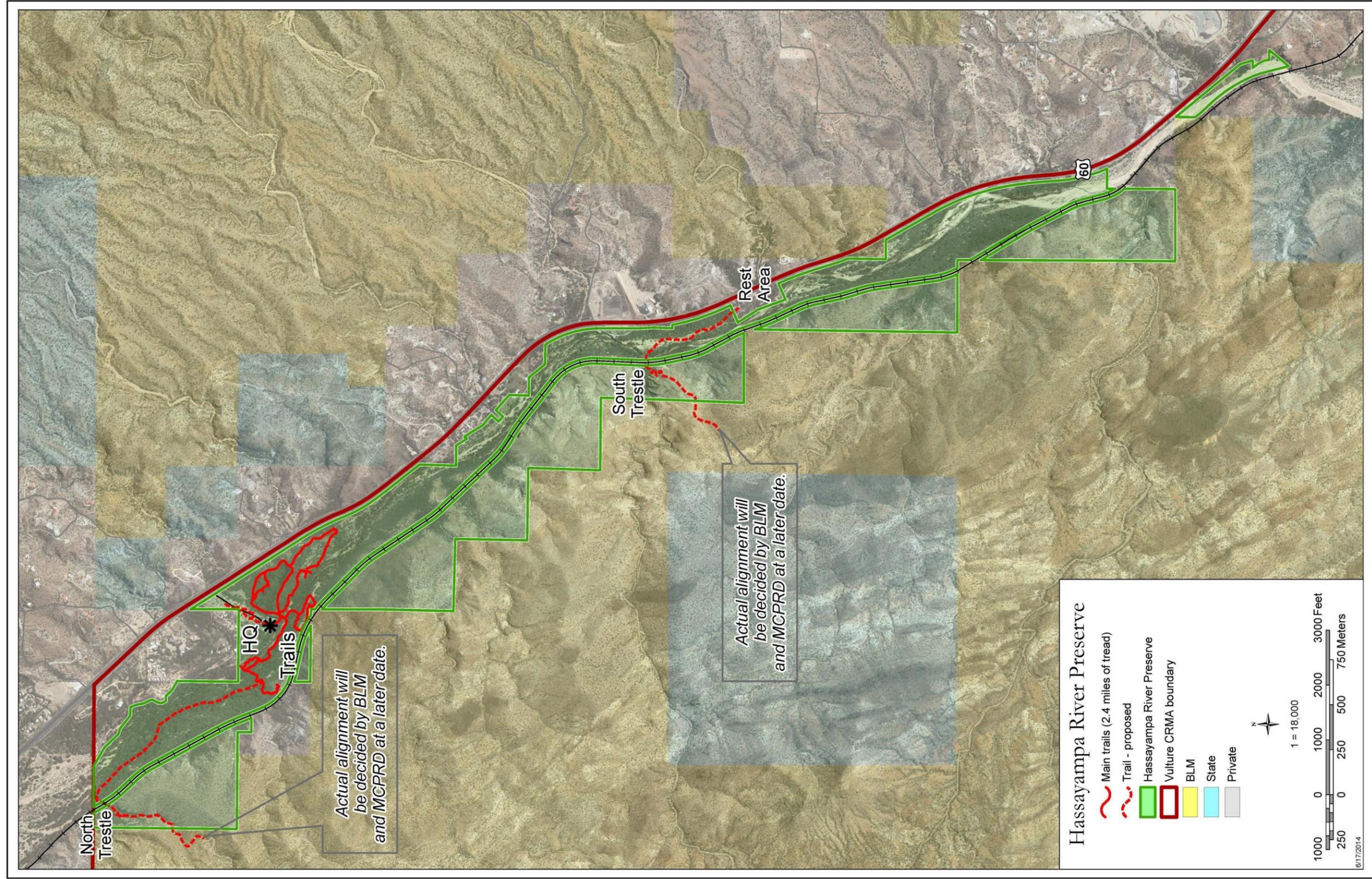
Sites may be monitored by MCPRD staff and/or Arizona Site Stewards. If sites are damaged or vandalized, portions of a trail may be closed or rerouted and a violation report submitted to State Historic Preservation Office (SHPO) and law enforcement. Damage to eligible archaeological sites may be covered under the Archaeological Resources Protection Act of 1979, as amended ([16 U.S.C. 470aa-mm](#))⁷ and/or by Arizona Revised Statute ([Title 41](#), Chapter 4.1 and/or Chapter 4.2).

5.8 Water Resource Concerns

In a summary of floodplain processes that influence Sonoran Fremont cottonwood – Goodding willow riparian forest, Gori (1996) described the Hassayampa floodplain as currently supporting a diverse distribution of cottonwood – willow cohorts that extend laterally from the active channel through higher

⁷ First offence penalties range between fines of \$10,000-\$20,000 and 1-2 years in prison. Second offence penalties are fines up to \$100,000 and not more than five years in prison or both.

terraces. At present limited scouring of streamside herbaceous habitat occurs with 10-year return interval floods. Based on the cottonwood – willow patch model in Gori (1996), the probability of channel realignment, and thus substantial scouring of floodplain forest, increases with flood events that exceed the 10-year return interval. Gori (1996) noted that significant recruitment occurs every 10 years, on average, when large fall or winter floods are followed by one or more seasons of low flow.



Map 2: Existing and recommended trails and access points.