

# READ Guidelines: Threats to Resources in JOTR from Wildland Fires

*This document is to familiarize yourself (the READ) on what resources need to be protected & what actions we can advise the IC and crews to take in order to mitigate and minimize damage to the following resources:*

## *Environmental*

### AIR

Joshua Tree is a class I air-shed. We are held to higher standards of protection of air quality.

Where ever practical dust mitigation should be in place during suppression activities.

### ABANDONED MINE LANDS

Suppression activities (e.g. fire lines) should be coordinated with the Lead READ or Physical Scientist to determine the locations (s) of mining mill sites in the vicinity of the fire. Many sites contain hazardous levels of heavy metals in the soil. Without proper PPE or respirators fire lines cut to bare earth, that cross mill sites pose a health hazard to firefighter from airborne dust particles.

### WATER

Where practical, fire retardant or water should not be dropped directly on mill sites.

Retardant should not be dropped directly in the vicinity of springs or drainages that follow active streams (e.g. 49 Palms and Stubby Springs). Advise of no aerial retardant applications or foam within 300 feet of waterways. (See “Retardant Guidelines” in the Initial Attack Section of the READ Binder.)

### VEGETATION

Joshua Trees will not be cut.

Desert vegetation is fragile and slow growing. Trampling of vegetation will be avoided, and fire line widths will be minimal.

Disturbed areas are susceptible to invasive species such as Red Brome, Cheatgrass, Saharan mustard and Tumbleweed. All vehicles ordered by the IMT will be washed prior to entering the park. Crews will visually inspect boots, socks, clothing, tools, equipment and personal belongings for plant propagules and soil before entering the park.

Clearing of vegetation for helispots or camps will be minimized and will be coordinated with READ.

No campfires are allowed.

“Fingers” (unburned areas on the edge of a fire perimeter) or unburned islands inside the fire perimeter will not be burned out. These areas will act as seed banks of native plants and will help reestablish native plant populations in the burned areas.

If fire can be directed, keep it out of previously unburned habitats. Unburned habitats tend to have complex vegetative structural diversity and therefore higher wildlife diversity. Backburning of unburnt islands are discouraged.

## WILDLIFE

The entire park is considered Critical Habitat for the desert tortoise. All precautions should be taken to ensure there are no “takes” (unauthorized handling, harassing and/or killing) of tortoises. If off road travel is authorized, a spotter should walk in front of engine to look for tortoises and their burrows.

Tortoise identification materials (*see handout in IAP section in binder*) should be distributed (*i.e.* printed in the IAP) and info should also be placed on the bulletin boards in camp. If IAPs are not being printed, distribute ID materials to captains at briefings. These materials are to aid the identification of tortoises and their burrows by fire crews.

Only pumpkin dipping stations should be used in Joshua Tree. Bucket dipping is not allowed into open water sources in the desert as a rapid drop in water levels can have strong negative impacts on wildlife.

Appropriate food storage and trash management will be in place to prevent wildlife (especially Ravens and Coyotes) from attaining human food.

Fingers or unburned areas act as refugia for wildlife during and after a fire therefore burning out of these areas are discouraged.

## SOILS

Desert soils are held together by biological and physical crusts that are extremely susceptible to disturbance (trampling, driving, and construction).

Once the crust is destroyed, soils are vulnerable to erosion by wind and water, and because desert soils take millennia to form, their loss is irreplaceable. Disturbance of the crust also makes soils more vulnerable to invasion, and makes it harder for some native species to establish.

Disturbance of soil will be minimized. Use trails or washes to access fires whenever possible. Camp in previously disturbed sites.

Off road driving must have the superintendent’s approval.

Dozers will not be used in JOTR – ever.

## *Social*

### CULTURAL

Joshua Tree contains a variety of cultural resources including prehistoric and historic sites, as well as isolated finds. These can include historic structures, artifacts, rock art, and cultural landscapes. These resources can be impacted by direct, indirect, and operational threats. Due to the variability of resources being impacted and the different types of impactation, different actions must be taken on a site by site basis. No standard can sufficiently be set. Below are examples of how different fire related actions effect cultural resources. The park archeologist should always be consulted to assist in the decision making.

Historic structures are directly threatened by fire impingement, and operationally by application of retardants or foam. The use of foam and retardant is discouraged around historic structures unless their loss is imminent.

Rock art is directly threatened by fire impingement, and operationally by application of retardants or water drops. Neither retardants nor water drops should be used when rock art is present. Indirectly, removing of vegetation to reduce fuels near rock art panels can lead to higher risk of looting or future vandalism, care should be given if this option is used. If possible fire should be redirected well before reaching rock art sites.

Artifacts most threatened are those still in context, on the ground. Fire, in particular high intensity fire and/or high residence fire, can directly destroy the composition of or other viable data associated with artifacts. Indirectly, removal of vegetation or creating of islands by successfully excluding fire from around artifacts can lead to higher risk of looting. Operationally, objects can be crushed, moved or fractured by firefighters, equipment, and activities. Fire suppression tactics should not be used within archeological site boundaries unless loss of a historic structure is imminent.

Less than 3% of the park has been surveyed for archeological resources. Archeological resources are threatened by ground disturbance and high-intensity fire. Because archeological sites are often associated with surface and subsurface artifacts many of the same concerns are pertinent here as well. All ground disturbance should be recorded, and monitored before, during or after work is completed (this includes helicopter landing/staging areas).

Cultural landscapes can be damaged by alteration of vegetation characteristics and viewsheds. Mitigations proposed under vegetation apply here as well.

The READ can coordinate with Incident Command to avoid sensitive resources, consult with park archeologist (whom can contact the SHPO and Native Americans), and document damage. When briefing fire crews ask them not to pick up artifacts and avoid ground disturbing activities in areas where artifacts are present.

## WILDERNESS

Wilderness constitutes approximately 75% of Joshua Tree National Park. Minimum-tool analysis will be incorporated into planning. Vehicles should be restricted to outside wilderness areas. Impact caused by aerial use should be considered.

Minimum Impact Suppression Techniques (MIST) will be utilized.

Leave-no-trace ethics will be utilized for all back-country spike camps. All trash will be removed.

Food and trash systems must be put into place to prevent wildlife from attaining human food.

Portable latrines will be considered.

Rehabilitation will remove visual evidence of Fire Management activities according to turn-back standards provided, at the order of the Incident Commander. Flagging will be removed. Stumps will be flush-cut. Hand-line will be disguised with vertical and horizontal mulch and berms pulled over.