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SCOPING NOTICE: CATALINA-RINCON FIRESCAPE PROJECT

Dear Friends and Neighbors of the Coronado National Forest:

I am writing today to advise you about a fire management and fuel reduction project proposed on the Santa Catalina Ranger District and adjacent lands in Pima, Pinal, and Cochise counties, Arizona. The U.S. Department of Agriculture, Forest Service (Coronado National Forest), in collaboration with the U.S. Department of the Interior, National Park Service (DOI-NPS/Saguaro National Park East); the State of Arizona (Oracle State Park and Arizona State Trust Lands); Pima County; and private landowners proposes to implement the **Catalina-Rincon FireScAPE Project** (Project), which has an overarching objective of increasing individual and collective flexibility in management of wildland fire.

The primary goal of the Project is to promote a healthier vegetative landscape that would better survive future wildland fire, facilitate the protection of life, property, and natural resources from the potential adverse effects of wildland fire, and encourage naturally occurring wildland fire to function as a renewing process in the ecosystem. Treatment is needed on a large scale that extends beyond the Forest boundary to protect resources in the Catalina and Rincon mountains from the potential effects of the current abnormally high fuel loading.

During Project planning, participants defined existing and desired conditions for vegetation and fuels, identified priority treatment areas, modeled effects of various fuels treatments, and considered the potential for proposed Project activities to affect natural resources. Proposed activities include, but are not limited to, vegetation hand thinning, mechanical treatments, fuelwood harvesting, application of prescribed fire, and selective use of herbicides. Treatments would be applied individually or collectively across the landscape, depending on specific vegetation and fuel conditions as well as funding and staff availability. Depending on project design, amendment of the current Forest Land and Resource Management Plan (Forest Plan; 1986, as amended) may be necessary to accommodate treatments that will change the visual character of specific areas.

The Forest Service is the lead Federal agency in the National Environmental Policy Act (NEPA) review of the proposed action. The DOI-NPS is a Federal cooperating agency in the NEPA review, in accordance with regulations at 40 CFR 1501.6. Saguaro National Park completed a NEPA review of its fire program in 2007. Proposed Project activities that may affect NPS lands will be aligned with those approved as part of the DOI-NPS program.

In this Scoping Notice, you will find a detailed description of the proposed action. Your comments on the scope of the NEPA review of the proposal, including those related to potential environmental issues and alternative means of accomplishing the Project, are an important component of the environmental review process. Information about how to offer comments is provided below.



BACKGROUND

Geographic Location

The project area encompasses the Santa Catalina Ranger District on the “sky island” ranges comprising the Catalina and Rincon mountains, an area south of the community of Oracle, Arizona, and north and east of Tucson (red boundary on Figure 1), and smaller acreages of neighboring lands that were included in treatment areas based on terrain and fire control features. Forest Service lands cover 260,000 acres of the Project area and include two wilderness areas. The Pusch Ridge Wilderness on the west side of the Santa Catalina Mountains contains rugged high-visual-quality mountain formations and potential habitat for desert bighorn sheep. It also borders the Tucson metropolitan area. The Rincon Mountain Wilderness abuts Saguaro National Park and is characterized by steep and rocky terrain with limited access.

The Catalina Mountains rise from an elevation of 2500 feet at Tucson to 9150 feet atop Mount Lemmon. The east-west leg of the triangle that outlines the Santa Catalina Mountains is referred to as the “front-range”, which is dissected from the main part of the mountain by Sabino Basin and Romero Pass. The northwest and northeast borders include Samaniego and Oracle Ridges. Many of the steep, rocky canyons contain intermittent streams that drain into the San Pedro and Santa Cruz Rivers.

The Redington Pass area separates the Catalina and the Rincon mountains. From a base of about 3500 feet, Rincon Peak tops out at 8482 feet in Saguaro National Park’s Rincon Wilderness. Steep rocky slopes intersected by numerous drainages radiating out to the desert floor characterize the Rincon Mountains.

Existing Conditions

The lands within and surrounding the Project area comprise the Federal, state, and private lands described above. The irregular boundary of the Project area follows features that are logical for fire management planning, primarily drainages, ridges and roads. Across these ownerships and jurisdictions is an array of vegetation types across varying elevations, topography, soils and geologic influences referred to as “ecological units.” Vegetation transitions from southwestern desert scrub and desert grassland at the lower elevations to chaparral, oak savanna, and oak woodland at mid-elevations, then to coniferous woodland at higher elevations. Annual precipitation varies considerably, with 13 inches falling at the lower elevations and 25 to 30 inches near the summit of the Rincon Mountains. Twenty-nine ecological units have been defined in the Project planning area (Figure 1). In general, they include desert scrub, grassland, shrubland, woodland, and forest vegetation community types. Detailed descriptions and photographs are online at www.azfirescape.org/catalina/eu_full_index. A more detailed map is available for you to review online at www.fs.fed.us/r3/coronado/forest/projects/projects.shtml (under NEPA Documents, Developing Proposals) or by visiting the District office.

Fire has played an important ecological role in the history of most of these ecological types in southeastern Arizona. Regular intervals of naturally occurring fire restricts the growth of shrubs in grasslands, thins woodlands and forests of fire-intolerant trees, increases stream flow, and renews wildlife habitat. Fires in the woodlands and forests of southeastern Arizona has generally occurred at a ground level, burned at low to moderate intensity, and maintained an open and grassy aspect.

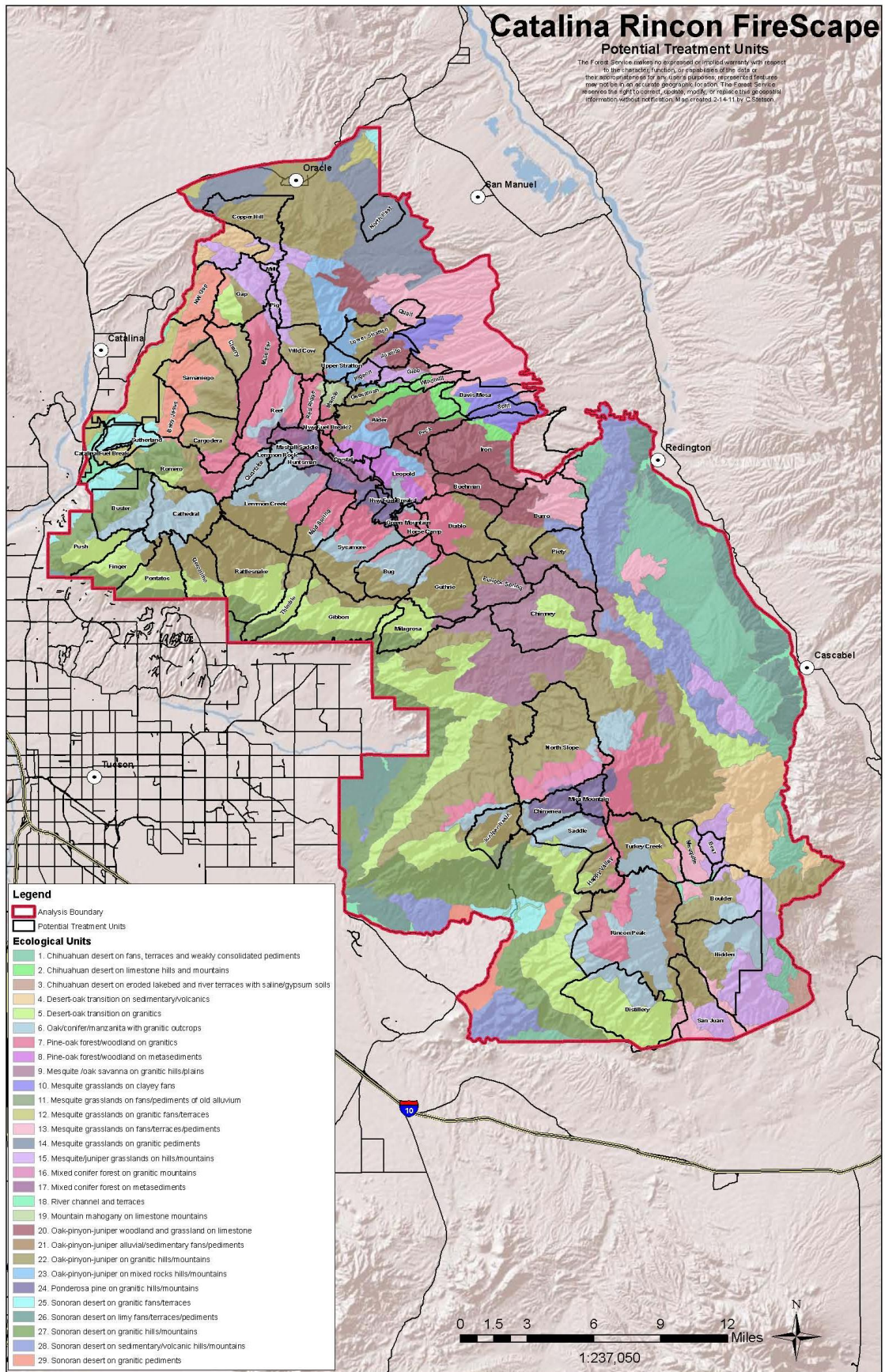


Figure 1. Catalina-Rincon FireScope Project: Project boundary is shown in red. Colored blocks are ecological units described in Table 1. Named units are potential treatments described in Table 2.

The fire history recorded by tree rings indicates that, since the beginning of the early 20th century, the frequency of natural fire has decreased dramatically. Tree-ring research has shown that for many centuries, the Santa Catalina and Rincon mountains shared broadly similar fire regimes and ecosystem properties. However, since the early 20th century, natural fire regimes have been significantly altered because of grazing (which removes the fine fuels that carry surface fire) and continued fire suppression. Because of the heavy recreational use and special uses that the Forest permits in the Catalina Mountains, wildland fires continue to be managed by suppression, while funds for fuels treatments have been aimed at thinning the areas around values at risk.

The resulting century of natural fire exclusion has led to unnatural accumulation of fuels throughout much of the mid- and upper-elevation vegetation types in the Project area. At lower elevations, recent invasions by exotic grasses have altered fire regimes by increasing the potential for intense, spreading grass fires having no historical or ecological precedent. Warming and decadal climate variability, particularly the current multi-year regional drought in the Southwest, exacerbate the situation because they increase tree mortality and foster weather conditions that promote rapid fire spread and surface-to-crown fire transition.

As a result of the convergence of these factors, there have been several recent high-intensity, mountain-range scale wildland fires in the Santa Catalina Mountains, notably the 2002 Bullock Fire (30,560 acres) and the 2003 Aspen Fire (84,300 acres). Together, these two events burned 44 percent (%) of the forested areas of the Catalina mountain range, destroyed 467 buildings and other infrastructure and cost \$30 million to suppress.

The absence of major roads and improvements has written a different story for the Rincon Mountains. Land managers have long been aware that fire is a natural and necessary disturbance in the ecosystems above the Sonoran Desert on these mountains. In the Rincon Mountains, Saguaro National Park's prescribed fire program has been addressing the mid- and upper-elevation fuel accumulations. The Park's prescribed fire program began in 1984 and treatments continue today. Over the last ten years, the Park has burned over 5100 acres under a suppression strategy; 6797 acres under a wildland fire for resource benefit (allows naturally ignited fires to burn within strict program guidelines) strategy; and over 4300 acres by conducting prescribed burns.

Prescribed burns are ignited by managers under stringent planning requirements in order to reduce fuels, re-introduce fire, and simulate natural fire cycles. Eventually, this reduction of fuels allows managers to safely use wildland fires to accomplish ecological restoration goals. This demonstrates the difference between the more natural fuel loading on the Rincons and the unnatural build up of fuels on the Catalinas. On the same day that the Aspen Fire started in the Catalina Mountains, lightning in the Rincon Mountains ignited the Helen's II Fire which burned for 53 days, consumed 3500 acres, and received little press because it was not a threat to people and structures.

Interagency collaborators estimated the potential effects of a wildland fire in the Project area using the model *FlamMap* over a regional fuels map developed by the planning team. Flame length is a good indicator of fire behavior and effects on the landscape. The red areas on Figure 2 depict locations where wildland fire in the project area, under the specified conditions, is predicted to spot, cause crown fires and be very difficult to control. This sample model run is based on 90th percentile weather and fuel conditions for southeastern Arizona. Using 97th

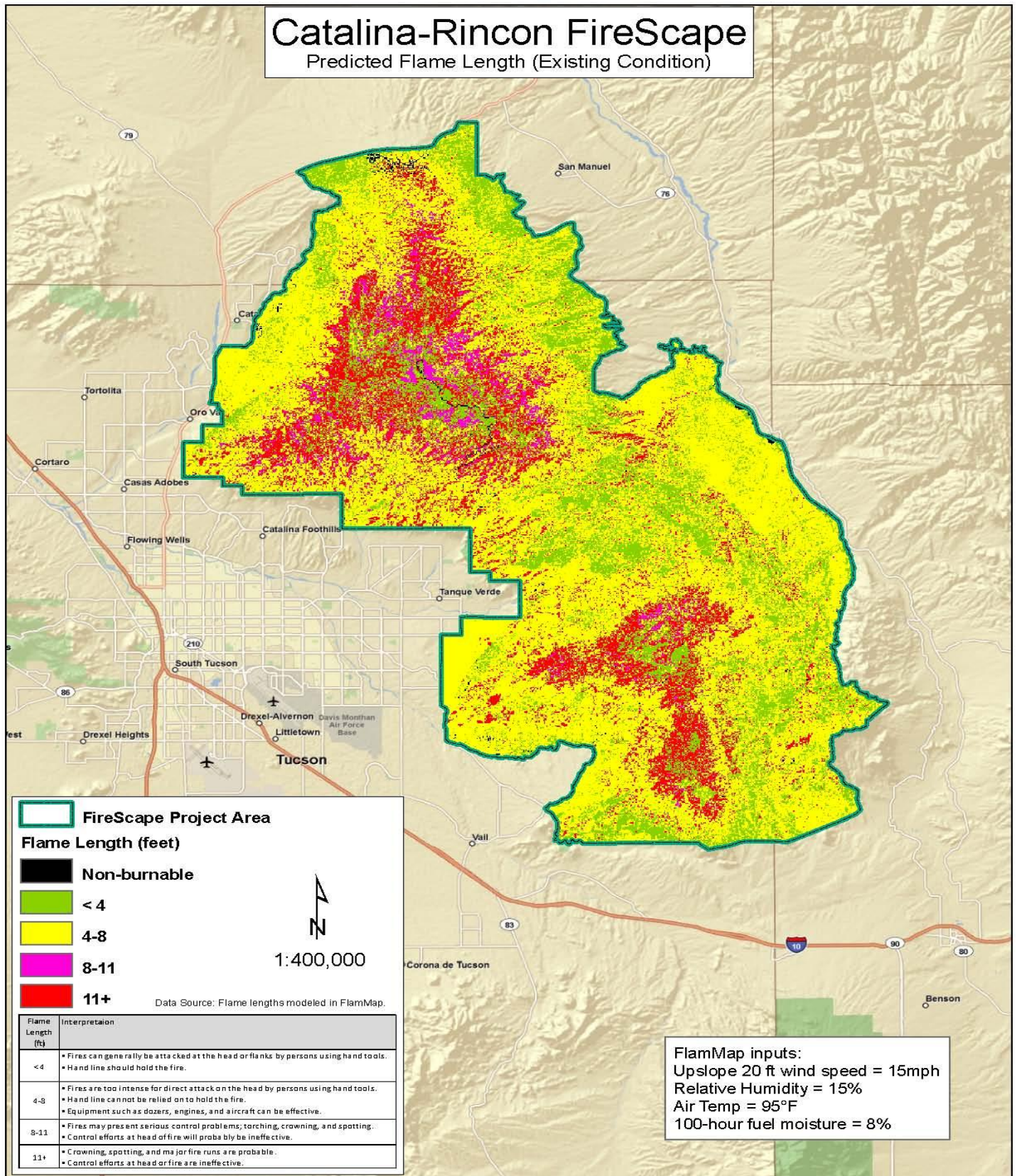


Figure 2. Catalina-Rincon Firescape Project: Predicted flame lengths assuming existing vegetation and fuel conditions in two mountain ranges in southeastern Arizona.

percentile conditions observed during the large wildland fires of the past decades would turn additional areas on the map red, indicating flame lengths greater than 11 feet.

PURPOSE OF AND NEED FOR ACTION

The need for this collaborative, cross-jurisdictional Project derives from the various agencies' respective missions to manage in accordance with direction and guidance in national, regional, and local fire planning documents. Fire management policy is complex, dynamic, and involves many layers of direction. Among the documents that have guided the development of the Project are the following:

- National Fire Policy of 1995 (revised 2001)
- National Fire Plan of 2000
- A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy Implementation Plan (2001)
- Coronado National Forest Land Resource Management Plan (Forest Plan, 1986, as amended)
- Guidance for Implementation of Federal Wildland Fire Management Policy (2009)
- Coronado National Forest Fire Management Plan (2010)
- Coronado National Forest Social and Economic Sustainability Report (2008)
- Coronado National Forest Comprehensive Evaluation Report (2009)
- Coronado National Forest Ecological Sustainability Report (2009)
- Saguaro National Park Fire Management Plan (2007)
- Saguaro National Park General Management Plan (2008)
- Statewide Strategy for Restoring Arizona Forests (2007)
- Mt. Lemmon Community Wildfire Protection Plan (2004)
- Catalina Community Wildfire Protection Plan (2007)
- Pinal County Community Wildfire Protection Plan (2009)

Collectively, these documents prescribe necessary changes in the landscape to foster the desired future conditions of an ecosystem in which the natural fire cycle is restored.

Fire suppression is primarily responsible for the unhealthy vegetation and fuel conditions currently found in congressionally designated wilderness areas within the project area. Large-scale, high intensity wildland fire holds the potential to so change the ecosystem as to cause vegetative type conversion and massive soil loss that would preclude natural recovery and therefore threaten "wilderness values." Active fire management is needed in these areas to preserve wilderness values as defined by the Wilderness Act of 1964 (Public Law 88-577). One goal of land managers is to use naturally occurring wildland fire for resource benefits to maintain wilderness values. Multiple treatments within wilderness in the project area are anticipated to be needed before managed natural ignitions can be managed.

Planning and implementation of pro-active fuel treatments toward the desired conditions of moderate fire behavior and restored ecological health are complicated by weather conditions, coordination of fire and vegetation management between multiple landowners, and availability of funding. Thus, the primary foundational purpose of the Project is to integrate fire and fuels management activities across Federal, state, and private lands to achieve the following objectives:

- reduce the costs, resource damage, and threats to public and firefighter safety from future wildland fires;
- restore and sustain ecological processes in fire-dependent ecosystems;
- create and maintain fuel conditions that produce manageable fire behavior and intensity;
- alter existing vegetation and fuel conditions, as feasible, to approach those reflective of the historic range as well as those reflective of resilience in the face of predicted changes to regional climate, both in the broader landscape and within individual ecological units; and
- maintain the character of designated Wilderness areas.

PROPOSED ACTION

The Project area comprises 10 vegetation communities (broken into 29 Ecological Units) distinguished by their plant species composition, soils, and other physical, chemical, and biological characteristics (see Figure 1 and Table 1). Both fire and non-fire treatments of specific parcels in the Catalina and Rincon mountains are proposed, in part, depending on which ecological unit(s) are present (Table 2). Treatment options for each unit would not be uniformly applied, and every acre is not scheduled for treatment in every year. Rather, the treatments listed in Table 1 for the parcels identified in Table 2 are those that are anticipated to facilitate the landscape progression ecologically towards desired conditions expressed in the Forest Plan.

Parcels depicted on Figure 1 (also on www.fs.fed.us/r3/coronado/forest/projects/projects.shtml under NEPA Documents, Developing Proposals) and described in Table 2 represent site-specific proposed projects that are bounded by ridges, roads, washes, and other features that either form ecological unit boundaries or serve as fire control features or other logical project edges.

A number of factors will determine treatment priority, beginning with fuel loadings (see Figure 2). Areas near human developments and other values-at-risk, including threatened and endangered species habitat, healthy watersheds, wilderness and sensitive heritage resources, will receive priority consideration. Annual treatment of approximately 50,000 acres is proposed to occur through a combination of options which may include management of wildfires. Projects with partners might contribute another 10,000 acres. There will also be exceptions to the application of these treatments on some of the jurisdictions.

A longer term goal of treatments is to allow natural and prescribed fire to maintain all fire-adapted vegetation types. As Figure 2 shows, much of the landscape currently has the potential to burn with severe effects. In these areas, it may take multiple treatments to reduce flame lengths and bring ecosystems to the desired condition.

Table 1. Catalina-Rincon FireScope Project: proposed vegetation treatment methods by ecological unit in 10 vegetation community types.			
Community/Ecological Unit(s)	Estimated Acres	Primary Treatment Options	Supplemental Treatment Options
CHIHUAHAN DESERT			
1. Chihuahuan desert on fans, terraces and weakly consolidated pediments	24,650		Mech, Thin, Herbicide (Herb), Fuelwood, Wildland Fire*
2. Chihuahuan desert on limestone hills and mountains	3,160		Mech, Thin, Herb, Fuelwood, Wildland Fire*
3. Chihuahuan desert on eroded lakebed and river terraces with saline/gypsum soils	1,000		Mech, Thin, Herb, Fuelwood, Wildland Fire*
DESERT-OAK TRANSITION			
4. Desert-oak transition on sedimentary/volcanics	10,550	Wildland Fire (prescribed or use of naturally occurring)	Mech, Thin, Herb, Fuelwood
5. Desert-oak transition on granitics	48,270	Wildland Fire	Mech, Thin, Herb, Fuelwood
OAK-CONIFER			
6. Oak/conifer/manzanita with granitic outcrops	33,800	Wildland Fire	Herb, Thin, Salvage, Fuelwood outside wilderness boundary
7. Pine-oak forest/woodland on granitics	31,470	Wildland Fire, Salvage, Fuelwood, Thin	Mech, Herb
8. Pine-oak forest/woodland on meta-sediments	2,880	Wildland Fire, Salvage, Fuelwood, Thin	Mech, Herb
MESQUITE GRASSLAND			
9. Mesquite /oak savanna on granitic hills/plains	20,370	Wildland Fire, Mechanical (Mech)	Thin, Herb, Fuelwood
10. Mesquite grasslands on clayey fans	5,470	Wildland Fire, Mech	Thin, Herb, Fuelwood
11. Mesquite grasslands on fans/pediments of old alluvium	560	Wildland Fire, Mech	Thin, Herb, Fuelwood
12. Mesquite grasslands on granitic fans/terraces	8,460	Wildland Fire, Mech	Thin, Herb, Fuelwood
13. Mesquite grasslands on fans/terraces/pediments	22,930	Wildland Fire, Mech	Thin, Herb, Fuelwood
14. Mesquite grasslands on granitic pediments	13,240	Wildland Fire, Mech	Thin, Herb, Fuelwood
15. Mesquite/juniper grasslands on hills/mountains	19,960	Wildland Fire, Mech	Thin, Herb, Fuelwood

Table 1. Catalina-Rincon FireScape Project: proposed vegetation treatment methods by ecological unit in 10 vegetation community types.			
Community/Ecological Unit(s)	Estimated Acres	Primary Treatment Options	Supplemental Treatment Options
MIXED CONIFER			
16. Mixed conifer forest on granitic mountains	1,030	Wildland Fire, Salvage, Fuelwood, Thin	Reforestation, Herb, Mech
17. Mixed conifer forest on meta-sediments	2,820	Wildland Fire, Salvage, Fuelwood, Thin	Reforestation, Herb, Mech
RIVER CHANNELS (RIPARIAN)			
18. River channel and terraces	4,350	No primary treatments	Wildland Fire, Thin
MOUNTAIN MAHOGANY			
19. Mountain mahogany on limestone mountains	800	Wildland Fire	Thin
OAK-PINYON JUNIPER			
20. Oak-pinyon-juniper woodland and grassland on limestone	16,350	Wildland Fire, Mech, Fuelwood	Thin, Herb
21. Oak-pinyon-juniper alluvial/sedimentary fans/pediments	1,700	Wildland Fire	Thin
22. Oak-pinyon-juniper on granitic hills/mountains	101,820	Wildland Fire, Mech, Fuelwood	Thin, Herb
23. Oak-pinyon-juniper on mixed rocks hills/mountains	6,490	Wildland Fire, Mech, Fuelwood	Thin, Herb
PONDEROSA PINE			
24. Ponderosa pine on granitic hills/mountains	6,040	Wildland Fire, Thin	Mech, Fuelwood, Salvage
SONORAN DESERT			
25. Sonoran desert on granitic fans/terraces	5,250	Mech*, Herb*	Wildland Fire*
26. Sonoran desert on limy fans/terraces/pediments	15,070	Mech*, Herb*	Wildland Fire*
27. Sonoran desert on granitic hills/mountains	33,850	Mech*, Herb*	Wildland Fire*
28. Sonoran desert on sedimentary/volcanic hills/mountains	21,130	Mech*, Herb*	Wildland Fire*
29. Sonoran desert on granitic pediments	10,650	Mech*, Herb*	Wildland Fire*
TOTAL ACRES TREATED IN PROJECT AREA		474,120	

* The target of these treatments in desert ecotypes is various invasive plant species; natural fires are rare in these systems.

Table 2. Catalina-Rincon FireScape Project: Parcels to be treated		
Specific Parcels¹	Acres	Ecological Units Present²
Alder	6,799	2, 6, 7, 12, 18, 19, 21
Baby Jesus	1,890	11, 21, 24, 28
Bear	714	12, 14
Boulder	4,840	3, 5, 12, 14, 17, 20, 21
Buehman	2,361	6, 19
Bug	4,118	5, 6, 21
Bullock Spring	2,910	8, 21
Burro	6,535	1, 8, 12, 19, 21
Buster	3,558	4, 5, 24, 26
Cargodera	3,242	6, 21, 28
Catalina Fuel Break	954	11, 17, 24
Cathedral	4,328	4, 5, 6, 21, 26
Cherry	1,924	4, 6, 21, 28
Chimenea	2,220	5, 6, 15, 21, 23
Chimney	7,001	4, 8
Copper Hill	3,879	3, 13, 14
Crystal	1,149	6, 7, 16, 21
Davis Mesa	2,122	2, 9, 12
Diablo	5,399	5, 6, 7, 19, 21
Distillery	7,601	4, 5, 6, 12, 21
Finger	2,899	4, 5, 21, 25, 26
Gap	3,791	3, 4, 6, 14, 21, 28
Geesaman	1,065	2, 14, 18, 21, 22
Geronimo	2,896	4, 5, 21, 26,
Gibb	1,284	2, 9, 12, 14,
Gibbon	6,558	4, 21, 26
Green Mountain	785	5, 6, 7, 23
Guthrie	4,372	4, 5, 6, 8, 21
Happy Valley	2,058	4, 5, 6, 21,
Hidden	6,479	5, 12, 14, 20, 21
Horse Camp	410	6
Huntsman	343	5, 16, 23
Hwy Fuel Break 1	294	5, 6, 7, 16, 23
Hwy Fuel Break 2	423	6, 16, 21, 23,
Iron	9,507	1, 2, 9, 12
Juanito	1,430	9, 12, 14, 19, 21
Juniper Basin	2,532	4, 5, 10, 21, 26
Lemmon Creek	7,365	5, 6, 16, 21
Lemmon Rock	584	5, 16
Leopold	3,674	5, 6, 7, 16, 19, 22, 23
Lower Stratton	2,254	9, 12, 14, 19, 21, 22,
Marble	1,056	6, 18, 21, 22
Marshall Saddle	127	5, 16
Mesquite	2,003	11, 12, 14, 17, 21
Mica Mountain	1,288	5, 6, 15, 23
Milagrosa	2,577	4, 8, 21, 26
Mill	254	3, 14
Mud Spring	2,805	5, 6, 21, 23
Mule Ear	3,693	4, 6, 14
North East	1,701	13

Table 2. Catalina-Rincon FireScape Project: Parcels to be treated		
Specific Parcels¹	Acres	Ecological Units Present²
North Slope	9,840	5, 6, 8, 15
NW Gap	2,278	3, 4, 11
Peck	1,401	2, 6, 7
Piety	3,782	8, 21, 27
Pig	450	14
Pigeon	800	14, 21, 22
Pontatoc	3,381	4, 5, 21, 26
Push	3,888	4, 5, 24, 25, 26
Quail	851	9, 12, 14, 21
Quartzite	1,019	5, 6
Rattlesnake	7,175	4, 21, 26,
Red Ridge	1,321	6, 16, 18
Reef	4,354	5, 6, 16
Rincon Peak	12,267	4, 5, 6, 11, 12, 17, 20, 21
Romero	4,937	4, 5, 6, 11, 17, 21, 24, 26, 28
Saddle	2,601	4, 5, 6, 21, 23
Samaniego	5,224	6, 11, 21, 28
San Juan	4,086	12, 14, 20, 21
Split	932	2, 9, 12
Sutherland	552	11, 17, 24, 26
Sycamore	5,933	6, 7, 12, 18
Thimble	2,725	4, 21, 26
Turkey Creek	4,515	5, 6, 11, 12, 17, 20
Upper Stratton	1,157	6, 14, 18, 21, 22
Wild Cow	2,716	6, 7, 12, 18
Windmill	732	2, 12, 19

¹ Relative locations are shown in Figure 1.

² See Table 1 for various ecological units in each parcel.

An example of a multiple-entry treatment approach is one currently underway along the Mt. Lemmon-Catalina Highway corridor, which involves (1) hand thinning of trees; (2) pile and burn slash, (3) pile and burn dead and down fuels, and (4) maintaining conditions in the future using prescribed fire. These steps would be executed at different scales over the long-term, as fuel loadings warrant.

This proposal to broaden the scale of fire management activities in the Catalina and Rincon mountains brings with it the responsibility to address multi-faceted concerns. The Project is being designed to apply Best Management Practices that will ensure protection of sensitive natural and cultural resources and neighboring developments. Land management agencies will continue to collaborate and consult with communities, recreational users, permittees, researchers, and other parties who are stakeholders within the project area.

Following are brief descriptions of both fire and non-fire vegetation treatment and removal combinations proposed to achieve the wide range of goals specified in the Forest Plan. Treatments would reduce surface fuels, ladder fuels, and the density of trees and shrubs. Weather factors, limited operating periods, and available funding would dictate the amount and type of treatment that might be applied on any given year.

FIRE TREATMENTS

Prescribed Fire (“Wildland Fire” in Table 1)

Prescribed fire is one that originates as a planned ignition to meet specific objectives identified in a written, approved, prescribed fire plan for which all regulatory requirements have been met prior to implementation.

Wildland Fire Use (“Wildland Fire” in Table 1)

An unplanned ignition of a wildland fire (such as a fire caused by lightning or unauthorized and accidental human-caused fires) and/or prescribed fires that escape control may be managed to achieve specific resource objectives, as follows:

- Reduce abnormally high fuel loads to begin to allow for a return to historic fire patterns and frequencies.
- Release nitrogen and other nutrients into the soil in support of new plant growth.
- Encourage germination of various plant species. Many native plant and forest communities have adapted to fire for their germination and growth. Some species require seed contact with soil that is exposed by fire to naturally regenerate.
- Thin overcrowded forests. Thinned forests recover faster and are more resistant to insect and disease attacks. Currently, many of the mature forests in the project area are overcrowded, resulting in a lack of vigor and health.
- Create diversity needed by wildlife. Wildlife, such as deer, benefit from new growth as plants produce more palatable browse/forage when re-sprouting after a fire.
- Prescribed fire applies low- to moderate-intensity fire using hand, mechanical or aerial firing methods. Burn plans include, but are not limited to, a risk assessment that identifies hazards and potential mitigating actions to protect life, property, and resources.
- Treat wildland-urban interface (WUI) areas where the objective is to reduce the threat of severe wildland fires to private property and increase resident and firefighter safety.

Pile Burning

This is a prescribed fire used to dispose of vegetation remaining after thinning and mechanical treatment. Pile burning is guided by burn plans that dictate burning parameters when conditions are favorable and the risk of fire spread is low. Trees, shrubs, pruned limbs, and dead and down woody material (generally larger than 1 inch in diameter) are gathered and piled by hand. Piles may range from about 5 feet in diameter and 4 feet high to approximately 15 feet in diameter and 8 feet high. They are carefully located to minimize scorch to the canopies and trunks of trees.



Fire Control Lines

These confine prescribed fire operations within control perimeters (see *Thinning* below). Wherever feasible, control lines comprise natural features/barriers, including roads and trails. However, in some cases, construction of fire control lines may require cutting and clearing of vegetation.

NON-FIRE TREATMENTS

Thinning (“Thin” in Table 1)

This treatment is accomplished using hand tools, chainsaws, or specialized mechanical equipment and creates a prescribed spacing among trees and shrubs. It is justified when it is needed to

- Serve as a fire surrogate to directly restore desired, healthier vegetative structure.
- Minimize the potential for unwanted wildland fires by reducing surface and ladder fuels and decreasing contiguous, abnormally heavy fuel loads.
- Pre-treat areas to reduce fuels in a way that enables the subsequent safe and effective application of prescribed fire.
- Treat wildland-urban interface (WUI) areas in some vegetation types.



Trees and shrubs would be selected for thinning based upon treatment objectives, tree-hazard ratings, snag recruitment, health and vigor, species, size, and age, in descending order of importance. The desired future condition for the ecological type determines species, size class, spacing, and residual stocking targets of thinning projects. Selective thinning favors retention of larger and older trees in uneven-aged stands and retention of the more fire-resistant species and sizes, while at the same time maintaining species diversity.

Reduction of ladder fuels is generally an important treatment objective. Within 300 feet from existing structures, vegetation treatments may be more intense than in areas further away.

Construction of fire control lines may require the removal of herbaceous vegetation, pruning, and/or cutting breaks in the fuel by hand and clearing all vegetation down to mineral soil. After fires are completed, rehabilitation may involve returning previously pulled material back onto the control lines, hand-constructing water diversion channels, or laying shrubs or woody debris on the lines following burning.

In addition to rehabilitating a fire control line, other post-thinning activities may include:

- **removal** of woody debris by hand or machine to an off-site location for other uses or burning.
- **chipping** of woody debris. The use of chipping is limited by the slope of the area. Chipped material may be dispersed over the treatment area and/or transported offsite for other uses.
- **lopping and scattering**, which disperses woody material on the ground to decrease fire intensity. Previously felled trees and shrubs are limbed, lopped, and bucked using chainsaws

so that the resulting slash material lies closer to the ground surface (as opposed to creating burn piles). The slash material is then spread, more or less evenly, over the ground.

- **pruning**, which may be applied along major system road corridors, within fuelbreaks, or in conjunction with fire control lines to remove ladder fuels and facilitate prescribed burning. Using hand tools and chainsaws, tree branches are pruned as close to the bole as possible without damaging it. Trees are generally pruned no higher than 10 feet above ground level or one-third of the tree height, whichever is less.

Mechanical Treatments (“Mech” in Table 1)

Mechanical treatments use machinery to reduce woody biomass across a larger area than is typically treated by thinning. The use of machinery is justified when it is necessary to:

- Address broad-scale invasion (generally into grasslands) of woody species that are difficult to control with fire or herbicides (for example, mesquite and juniper).
- Manage overabundant species that may germinate with fire and increase without frequent fire (for example, manzanita).
- Treat wildland-urban interface (WUI) areas in some vegetation types.

Mastication

This treatment is used to eliminate shrubs and small trees for ecological or fuel reduction purposes. Generally, a tracked or rubber-tired machine chops, shreds, and/or grinds small trees, limbs, shrubs, and dead woody debris into chips to be left on site. Mastication is feasible where slope angles are 40% or less. Mastication moderates fire behavior by reducing fuel-bed depths to generally less than 6 inches. Removal of target species encourages the growth of desired plants.



Grubbing

This is a treatment using heavy equipment to fell and/or uproot trees that are encroaching on grassland. It may be followed by pile burning, or fuelwood harvesting. Grubbing is no longer common on Federal lands because of the potential for adverse effects on areas that have archeological significance.

Application of Herbicides (“Herb” in Table 1)

Stump or post-mastication treatments with herbicides and ground-based spraying are applied when they are the most effective and economical methods of accomplishing ecological objectives. Application of herbicides is justified for to

- Reduce invasion of non-native grasses and noxious weeds.
- Reduce re-sprouting of trees and shrubs to prevent re-growth.
- Address broad-scale invasion (generally into grasslands) of woody species that are difficult to control with fire or mechanical means.

Ground-based treatments use manual applicators or vehicles with spray booms. Strict buffer and grazing rest requirements would apply to broad-scale treatments. Herbicide applications would be

scheduled and designed to minimize potential impacts on non-target plants and animals, while remaining consistent with the objectives of the vegetation treatment program. Rates of herbicide application would depend on the target species, presence and condition of non-target vegetation, soil type, depth to the water table, presence of other water sources, and the label requirements. Only those treatments for specific invasive species addressed in the Forest's NEPA review of the use of herbicides would be applied.

Fuelwood Harvest (“Fuelwood” in Table 1)

Where terrain and access allow, certain tree species may be made available to the public for removal and use as firewood in order to

- Reduce fuels at little cost to land managers while benefitting end users.
- Displace the harvest of other trees for firewood or raw materials in order to achieve a carbon-cycle benefit.

WILDERNESS TREATMENTS

Fire and non-fire treatments are proposed within congressionally designated Wilderness on Forest Service and NPS lands. Non-fire treatments act as a natural fire surrogate and are intended to reduce the potential for large scale, catastrophic, stand-replacing fires within the Wilderness.

The Forest Service Minimum Tools Decision Guide will be used to guide planning of Wilderness treatments. Non-fire treatments, such as selective thinning by hand crews, will be used to enhance existing control features. Fire treatments may include both wildland fire use and prescribed fire. In both cases and wherever feasible, control lines will comprise natural features such as trails, drainage bottoms and exposed rock. In some instances, especially in prescribed fire, control features may be enhanced by hand crews using ordinary hand tools, possibly including chainsaws, to allow for management of the burn event. Depending on the complexity and location of the burn event, helicopter support for fireline control and/or crew support and safety may be used on a case-by-case basis.

AMENDMENT OF THE FOREST PLAN

To accomplish the proposed action, the Forest Plan may be amended to establish less restrictive Visual Quality Objectives (VQO) in the project area. Thus, the NEPA analysis would also evaluate the effects of amending the Forest Plan to change current visual quality standards and guidelines for the project area.

PROJECT DESIGN FEATURES

Implementation of the Project will adhere to stringent design features that were developed to protect the inherent values and characteristics of native wildlife, plants, fish, and their habitats, and the soils, scenery, air quality, and historic and archaeological sites in each ecological unit. As activities are proposed, fire and fuels managers will review treatment parameters to ensure that they are within the scope of the proposed action evaluated in this NEPA review and that they are consistent with the design features that bound them. Such prescreening will help to assess whether the effects of treatments fall within acceptable boundaries.

Projects in the area will share many design features. Many of these will apply regardless of the presence of sensitive resources. In some cases, the need to protect life and property will override design features. However, in time, with sufficient treatment around developments, allowing fire to resume its natural role in Catalina and Rincon mountain ecosystems will be an increasingly feasible option. General design features and the resources they will protect are as follows:

To ensure safe fire operations, a prescribed “burn plan” will be developed and approved prior to initiating any burning operation, including burning of piles. A burn plan will include, but will not be limited to, the following: unit description, specific prescribed burn objectives, public notification procedures, coordination with other regulatory agencies (such as air quality regulators), hazard analysis, contingency plan, firing procedures, risk assessment, mitigation measures, estimated fire behavior, acceptable weather variables, and prescribed burn organization.

To maintain air quality, fire managers will cooperate with Federal, State, and local regulatory agencies to protect air quality as required by the Clean Air Act and state and local regulations.

To minimize impacts of operations on the landscape, off-road vehicle use will be minimized during Project activities. The creation of new access routes, if needed for suppression activities, will be limited. These routes will be created only if other alternatives are not available. Areas of significant human activity during fire suppression operations, such as fire crew camps, landing strips, and equipment staging areas, will not be located on or next to sensitive resources or habitat of special-status species.

To prevent erosion, protect soils, and maintain water quality, in steep areas (slopes generally over 40%), fire control lines will be constructed in accordance with erosion prevention standards. Intense fire on sensitive soils, which may promote water repellency, nutrient leaching, and erosion, will be avoided. Burned areas will be rested from grazing for specified periods afterward. Riparian areas will be protected to prevent or minimize impacts to watersheds and the riparian habitat and species that occur there. Fire management treatments within or adjacent to riparian and aquatic habitats will be designed to provide long-term benefits to aquatic and riparian resources by reducing threats associated with dewatering and surface disturbance, and/or by improving the condition of the watershed and enhancing watershed function.

To protect wildlife, fish, plants and their habitats, specific protection measures will be implemented to protect and conserve wildlife, fish, plants, and their habitat. As the analysis proceeds potential effects will be assessed for Federally listed threatened, endangered, or proposed species as well as Forest Service, Region 3, sensitive species, Forest management indicator species, and species covered under the Migratory Bird Treaty Act. Such an analysis is intended to identify specific mitigation measures for the proposal.

To protect range resources, grazing areas to be treated will be rested prior to and following fire treatments to ensure that fine fuels are present to carry a prescribed fire and to ensure plant recovery and soil protection. Project activities will be coordinated with grazing permittees to ensure success of burning operations and minimize adverse impacts.

To protect recreation uses and facilities, Project activities will be performed during low-use periods. Slash and debris will be removed, impacted sites will be rehabilitated, and informational signs will be posted to alert users of potential conflicts.

To protect scenic quality, proposed treatments will be designed to blend with the natural environment as much as is practical. Specific instructions on techniques to reduce visual impacts will be implemented.

To protect cultural and historic sites and resources, all historic and cultural sites will be surveyed, protected, and/or avoided.

YOUR OPPORTUNITY TO COMMENT

As the lead agency for NEPA compliance, the Coronado National Forest is offering the public an opportunity to provide comments on the nature of the proposed project and the scope of this environmental review. If you have comments, questions, or concerns, we would like to hear from you¹. Written, facsimile, hand-delivered, oral, and electronic comments about the proposed project will be accepted. In order for us to complete our analysis in a timely manner, please try to submit your comments within 30 days of receiving this notice. Also, please note that comments that express only advocacy or opposition to the project will not be addressed unless substantiated with relevant environmental issues.

Electronic (e-mail) comments should be submitted to comments-southwestern-coronado@fs.fed.us in any of the following ways: text of e-mail, Word (.doc) attachment, or rich-text format (rtf), with “Catalina-Rincon FireScape Project” in the “Subject” line. Also, you must include your name and address within an email message in order to be eligible to appeal a future decision.

You may submit written comments by U.S. mail to:

Stephanie Rayburn, Forester
Santa Catalina Ranger District
5700 Sabino Canyon Rd
Tucson, AZ 85750

Facsimiles (faxes) may be sent to Ms. Rayburn’s attention at (520) 749-7723. Please include your full name and address and project title (Catalina-Rincon FireScape Project) with your comments.

¹ *Comments and personal information, such as names and addresses, become part of the administrative record of this NEPA review. They may be made available to a third-party upon request under the authority of the Freedom of Information Act (FOIA). Personally identifying information is protected by the Privacy Act. If you do not wish for your personal information to be released under the FOIA, you may choose not to include it with your comments. Or, you may request an exemption from FOIA with your comment submittal. Should you choose the latter, you will be informed by the Forest Service as to whether or not your request qualifies for an exemption. If it does not, you would be afforded the opportunity to resubmit your comments without personal information or to withhold them.*

Oral comments may be submitted and additional information about the project obtained by calling Ms. Rayburn at (520) 749-7717 during regular business hours, which are Monday through Friday, 8:00 a.m. to 4:30 p.m., excluding Federal holidays. You may also schedule a personal visit to the address above using the same telephone number.

Questions about the Forest Service NEPA process may be directed to Andrea Campbell, Forest NEPA Coordinator, by mail at 300 W. Congress St., Tucson, AZ 85701, or by telephone at (520) 388-8352.

Sincerely,

/s/ R. Stan Helin
R. STAN HELIN
District Ranger