

**United States Department of the Interior
Bureau of Land Management
Las Cruces District Office
1800 Marquess Street Las Cruces, NM 88005**

Environmental Assessment for
2013 Baylor Pass Run
Public land under BLM administrative jurisdiction in
T22S, R4E, S19,30
Dona Ana County, NM.

DOI-BLM-NM-L000-2013-0010-EA

Signature and Title of Project Lead Date

Signature of Planning & Environmental Coordinator Date



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1 INTRODUCTION

The Baylor Pass Trail is an established hiking and equestrian trail used daily by casual recreation visitors. There are no comparable trails in the Las Cruces District that provide the unique combination of historic connection (Civil War era military action), tradition (the Baylor Pass Run has been an annual event since 1971), wilderness experience, challenge and suburban convenience.

Beginning in 1971, the Mesilla Valley Track Club has sponsored an annual competitive race across the Organ Mountains, along the Baylor Pass Trail. Although there are indications that this event was considered acceptable use, no environmental assessment (EA) was ever prepared under the National Environmental Policy Act (NEPA) to analyze the potential impacts to the Organ Mountains Wilderness Study Area (WSA) and the Organ Peaks WSA. A Special Recreation Permit (SRP) for the event was issued based on a categorical exclusion (CX) level of NEPA analysis. The applicable CX allows for the issuance of a SRP for day and/or overnight use. However, the CX also states that it “cannot be used for the establishment or issuance of SRPs for “Special Area” management.” As defined in 43 CFR 2932.5, WSAs fall within the definition of “Special Areas.”

The Mesilla Valley Track Club did not apply for a SRP in 2010 or 2011. When the application for a 2013 event was initiated, the LCDO recognized that application of a CX was an inappropriate level of NEPA analysis. In order to properly comply with applicable guidance and regulations, the application for an SRP must be subject to (at a minimum) an EA level of NEPA analysis.

1.1 Purpose and Need

Purpose for the Proposed Action: The purpose for the proposed action is to consider a SRP application to conduct a competitive footrace along the Baylor Pass Trail.

Need for the Proposed Action: The need for the proposed action is to comply with provisions of 43 CFR 2930 (Permits for Recreation on Public Land) and *BLM Manual 6330, Management of BLM Wilderness Study Areas*.

1.2 Decision to be Made

The decision to be made is whether to issue the SRP for the Baylor Pass Run. The primary question on whether to issue the SRP hinges on whether issuance of such a permit violates the non-impairment standard of *BLM Manual 6330 – Management of BLM Wilderness Study Areas*. Based on the interpretation of the BLM Manual and impacts analyses, the preferred alternative for the EA is Alternative A, the No Action Alternative.

1.3 Plan Conformance

This site-specific analysis incorporates by reference the information and analysis contained in the *Mimbres Resource Management Plan* (1993), the *New Mexico Statewide Wilderness Study, Volume 4* (1988), and the *Organ Mountains Coordinated Resource Management Plan and Environmental Assessment* (1989).

Pursuant to 40 Code of Federal Regulations (CFR) 1508.28 and 1502.21, this site-specific EA tiers to and incorporates by reference the information and analysis contained in the *Mimbres Resource Management Plan*, April 1993, which was approved as the Final Resource Management Plan for the Las Cruces District Office of the BLM by the Record of Decision (ROD) signed April 30, 1993. The RMP and ROD are available for review at the Las Cruces District Office, 1800 Marquess, Las Cruces, New Mexico.

The Baylor Pass Run is acknowledged within various planning and NEPA documents developed by the BLM Las Cruces District Office and the BLM New Mexico State Office.

The *New Mexico Statewide Wilderness Study, Volume 4: Appendices Wilderness Analysis Reports* (1988) states on page 38-20, “The Mesilla Valley Track Club sponsors the Baylor Pass Run which has been held every fall since 1971. Over 170 runners participated in the race across Baylor Pass in 1981.” However, it is also important to note that under the Preferred Alternative (All Wilderness), “The annual Baylor Pass Run would not be permitted” (page 38-6).

The *Organ Mountains Coordinated Resource Management Plan* (1989) states on page 11, “Keep the existing Baylor Pass Trail open to hiking, equestrian, and bicycle use.” In response to public comments on page 92, the BLM states: “The need to authorize the annual Baylor Pass Run has been recognized by the BLM and would be supported in any wilderness legislation.” On page 157 of the Plan, in the Draft Legislation for the Organ Mountains NCA, Title II – Wilderness, the following statement summarizes the BLM position regarding the Baylor Pass Run: “Section 201. (a) in furtherance of the purposes of the Wilderness Act (16 U.S.C. 1131-1136), the following lands in the State of New Mexico are hereby designated as wilderness and therefore as components of the National Wilderness Preservation System...Organ Mountains Wilderness—Proposed Baylor Peak Unit...Provided that within the lands designated as the Organ Mountains Wilderness, the provisions of the Wilderness Act shall not be construed to prevent the continuation of the annual Baylor Pass Trail Foot Race....”

1.4 Scoping and Issues

This EA will be provided in hard copy to the members of the public on the Interim Management Policy (IMP) review list. The IMP review members will have 30 days to provide comment on the proposal. This EA will also be posted on the BLM LCDO NEPA web site for public review and comment.

The most prominent concern is the compatibility of the proposal with the most current BLM regulations on Wilderness Study Area Management (*BLM Manual 6330 – Management of BLM Wilderness Study Areas*).

1.4.1 Internal Scoping

This proposal was presented to the LCDO NEPA ID Team on November 5, 2012. BLM Wilderness Planner completed initial review with comments on December 11, 2012.

1.4.2 External Scoping

This EA will be provided to the members of the public on the Interim Management Policy (IMP) review list. The IMP review members will have 30 days to provide comment on the proposal.

1.4.3 Resource Issues Identified

The singular concern for this proposal is whether the activity can be mitigated successfully so as to comply with the “non-impairment” standard of *BLM Manual 6330 – Management of BLM Wilderness Study Areas*. In order to comply with the non-impairment standard, the use must be both temporary and must not create surface disturbance. Other questions include:

- Will vegetation along the trail be impacted?
- How will we prevent weed infestation?
- How will this impair the area’s wilderness values?
- Will soils be subjected to unnecessary erosion?
- Will any wildlife or SSS be impacted by the race?

2 PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative A – No Action Alternative (Preferred Alternative)

Under the No Action Alternative, the SRP application would be denied. Recreational use of the Baylor Pass Trail would continue for individuals and non-commercial, non-competitive groups. The No Action Alternative is the preferred alternative under this EA.

2.2 Alternative B – Proposed Action

Sonia Crose, dba *Precision Fitness Events* proposes to organize and conduct a competitive, simultaneous one-way/roundtrip footrace along the Baylor Pass Trail from the western trailhead on Baylor Canyon Road to the eastern terminus at Aguirre Springs Campground and back. Runners may register to compete for either a one-way distance from the western trailhead parking lot to the trailhead in Aguirre Springs, or a round-trip distance from the western trailhead to the Aguirre Springs trailhead and back to the western trailhead on Baylor Canyon Road. Exclusive use of the Trail is not requested. The proposed activity date is September 14, 2013.

A maximum of 200 runners would be accepted as registered participants. Participants would gather in the Baylor Pass Trailhead parking lot along the east side of Baylor Canyon Road. The Starting Line for the race would be set along Baylor Canyon Road, approximately 0.6 mile south of the trailhead parking lot. Positioning the Starting Line along the road would add additional length to the course (the actual Baylor Pass Trail is approximately 5.41 miles long) to achieve a 6 mile, one-way route and would provide an adequate distance for runners to naturally sort into a single file before entering the Baylor Pass Trail. Runners would stage into (at least) two groups, one registered for the one-way race and the other for runners competing the round-trip distance.

Depending on the number of registered runners, 4 to 6 porta-potties will be placed in the Baylor Canyon Trailhead parking lot. These units will be removed later the same day.

Near the crest of the Trail, the Mesilla Valley Radio Club will have a volunteer radio transmitter to ensure a prompt response in the event of illness or injury along the route. This transmitter will be in communication with a similar station positioned in the Baylor Canyon Trailhead parking lot. Several cases of bottled water will be available at the saddle (near the transmitter station). Both radio equipment and water will be transported via pack animal, which is an authorized use of the trail. The horse or burro would be watered at the Baylor Pass Trailhead. The pack animal would be hobbled while on location with the radio operator. Volunteers will police the Trail the day after the event to remove any discarded water bottles, snack wrappers, etc.

At the Aguirre Springs trailhead, the runners will exit the Trail and follow the paved road approximately 170m southeast (past the cattle guard) to a campsite parking area. This will mark the end of the one-way race, and the turnaround point for the round trip race. An EMT will be stationed at this point, along with Event Staff who will confirm finish times and provide traffic control along the road to prevent user conflict with motorized visitors. Water will be available. Those runners registered for the one-way race will be picked up by friends/relatives after finishing the course. Recreational and competitive runners adhere to a specific protocol on trail events; slower runners keep the right, and runners moving uphill yield to runners descending the track.

Standard Stipulations are a component of every SRP. Additionally, there are Stipulations as Condition of Approval (Appendix A) that will apply to this proposal.

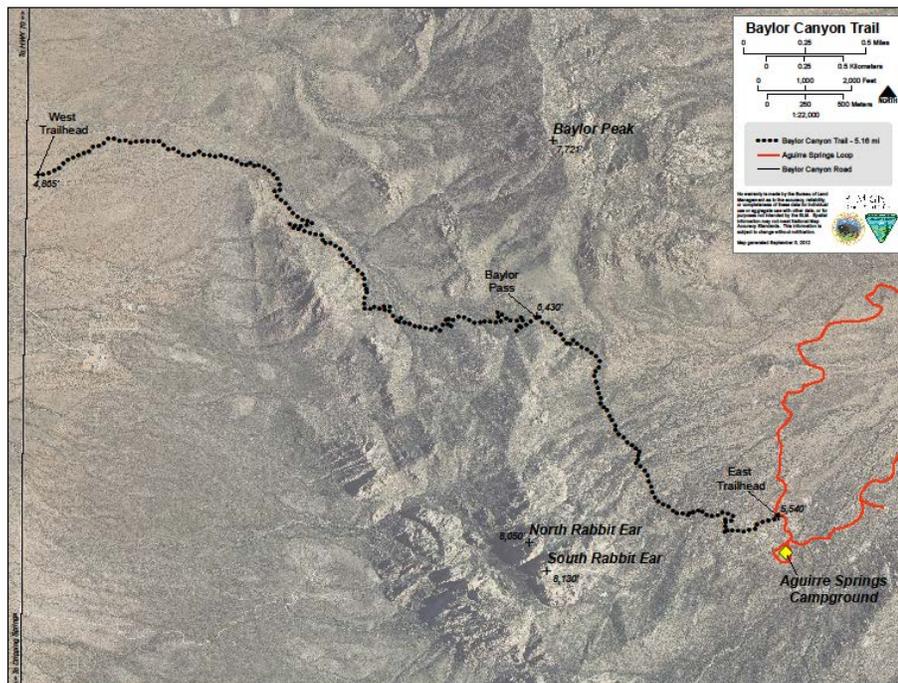


Figure 1 Proposed race route along Baylor Pass Trail.

2.3 Alternative C – Alternate Location

Under Alternative C, the Baylor Pass Run would be held at another venue. Tortugas Mountain (also known as “A” Mountain) is a convenient location that offers approximately 10 miles of multi-use trails along with several parking lots. The elevation differential available at Tortugas Mountain is less than 200m, but there are 8 different routes that traverse the mountain. Combining any number of them could yield a similar physical challenge as that posed by the Baylor Pass Run.

There are no management restrictions on the BLM administered portion of Tortugas Mountain that would inhibit competitive use. In the event of injury, medical response would be more rapid at the Tortugas Mountain area than the remote wilderness of Baylor Pass.

Precision Fitness Events would prepare an acceptable Plan of Operations for the new location.

2.4 Alternative D – Modification of the Proposed Action

Under Alternative D, the Baylor Pass Run would be permitted with the following stipulations designed to space the participants out and encourage timed performance rather than “head-to-head” competition:

- The race would be held on a Monday or Tuesday. Historically, these two days received the fewest number of visitors to recreation sites in general, and thus user conflict would be minimized.
- A maximum of 100 runners would be allowed to register and participate.
- Runners would only compete in a one-way race.
- Runners would be released from the Starting Line in 60 second intervals. Competition would be a timed course, not a direct competition with other participants.
- The Mesilla Valley Radio Club would provide a mid-point tracking station to help ensure participant safety.
- There would be no water cached at the mid-point. Each runner would be responsible for carrying sufficient water to reach the Aguirre Spring Trailhead.
- Arrangements would be made at the Aguirre Spring Trailhead to admit vehicles for the purpose of picking up race participants and to manage the traffic flow to accommodate those vehicles.

These stipulations would reduce the opportunity for 2-abreast racing along the Trail and would likely lessen overall impacts to resources along the Trail.

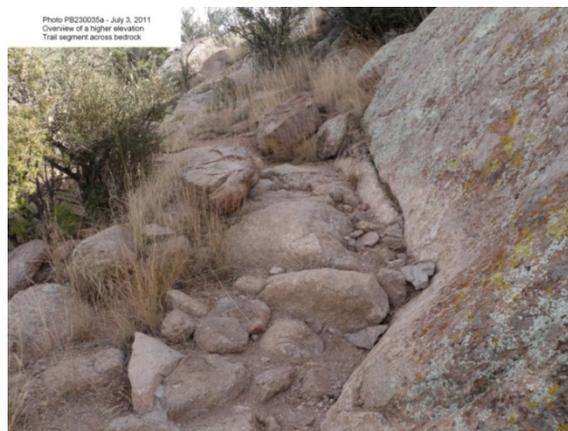


Figure 2 Baylor Pass Trail in a narrow rocky spot where it would be difficult to pass.

3 AFFECTED ENVIRONMENT

3.1 General Setting

Baylor Pass Trail is a National Recreation Trail that runs between Aguirre Springs Campground on the eastern flank of the Organ Mountains to Baylor Pass Trailhead on Baylor Canyon Road on the western slope of the Organ Mountains. BLM GIS data gives a nominal Trail width of 52 inches (1.3m). Measurements taken along the Trail section east of the Baylor Pass Trailhead on Baylor Canyon Road measured between 1m and 1.5m. This is a relatively narrow trail, but adequate for courteous runners to negotiate for brief stretches at two abreast (Figures 2 and 3).



Figure 3 Baylor Canyon Trail near the Trailhead parking lot along Baylor Canyon Road.

85% (7974 m) of the Trail lies within a Wilderness Study Area (WSA). 4812 m are within the Organ Mountains WSA, while 3162 m are within the Organ Needles WSA. Both WSAs are underlain by an Area of Critical Environmental Concern (ACEC). Elevations along the Trail vary from 4865 feet at the Baylor Canyon Trailhead, to 6430 feet near the mid-point of the Trail, to 5540 feet at the Aguirre Springs Campground Trailhead.

Historically, the Baylor Pass Trail is believed to re-trace the route Confederate Lieutenant Colonel John Robert Baylor employed in 1861 to intercept a retreating Union force near San Augustin Spring. With the exception of 2010 and 2011, the Baylor Pass Trail Run has been permitted by the BLM annually since 1971.

3.2 Air Quality

Prevailing winds are southwesterly. Doña Ana County has experienced numerous exceedances of the Federal PM₁₀ standard (dust) for several years and a Natural Events Action Plan (NEAP) was developed by the New Mexico Environment Department and submitted to the Environmental Protection Agency (EPA) in December of 2000. (<http://www.nmenv.state.nm.us/aqb/NEAP/DonaAna.html>).

Air quality can be affected by dust storms caused by a combination of weather conditions, the natural environment and human activities. High winds can raise large amounts of dust from areas of dry, loose, exposed soil. High winds are most common during the late winter and spring months.

Sources of dust can include the following:

- Soil disturbance during construction projects
- Disturbed land areas that are cleared and vacant
- Unpaved roads, parking lots and playgrounds
- Windblown emissions from tilled fields
- Military training exercises

- Unpaved equipment yards
- Undisturbed desert areas during the highest winds

Dust becomes much more common where natural soils have been disturbed by human activities. This tends to be concentrated close to populated areas.

3.3 Soils

While the Organ Mountains are not usefully described in terms of soil characteristics, the Baylor Canyon Trailhead does occupy a geomorphic position, "...in a coalescent-fan depositional environment on a gentle piedmont slope. Deposits tend to be in the form of broad sheets of loamy material, but locally contain lenticular bodies of coarse gravel and sand associated with ancient channel positions. The alluvium is mainly derived from monzonite, with smaller contributions from rhyolite, limestone, intermediate volcanic and metamorphic rocks of the Organ Mountain source area." (*Memoir 39, Soils and geomorphology in the basin and Range area of Southern New Mexico – Guidebook to the Desert Project*, New Mexico Institute of Mining and Technology, 1981. Page 134.)

The Organ Mountains themselves are "...part of 150 mile long, west titled fault block extending from El Paso, Texas northward to central New Mexico." (*Memoir 36, Geology of Organ Mountains and Southern San Andres Mountains, New Mexico*, New Mexico Institute of Mining and Technology, 1981. Page 11.)

Alluvial fans cover both the eastern and western flanks of the Organ Mountains. In most places, the slope of the mountain bedrock declines abruptly at the mountains' base to become rock pediments (gently inclined erosional surface carved into bedrock.) .

Three major soil types occur within the Organ Mountains. Soils on steep slopes at higher elevations typically are very cobbly and stony and range from shallow to moderately deep. These soils are interspersed between areas of rock outcropping on ridges, ledges, and cliffs. The east footslopes of the Organ Mountains are characterized by low ridges and broad alluvial fans. The soils, formed from granitic bedrock types are very gravelly to cobbly and typically are shallow on ridgetops and deeper on the less sloping stable areas. On the western footslopes of the mountains, the soils are formed from mixed igneous parent materials and typically have a gravelly surface and cobbly subsurface layer." (*New Mexico Statewide Wilderness Study, Volume 4*, 1988. Page 38-8.) .



Figure 4 Baylor Canyon Trail Conditions.

3.4 Hydrologic Resources

There are no perennial streams within the proposed activity area. The hydrologic features of the Organ Mountains are defined by steep, rock faced canyons that funnel ephemeral monsoonal storm water. Evidence of these seasonal events can be found far out along the alluvial fans, where rills can rapidly down-cut through the soil veneer. At several places along the Baylor Pass Trail east of the Baylor Canyon Trailhead, the BLM has inserted stone water-control structures to mitigate erosional processes.

Seeps and springs do exist but are not found along the Baylor Pass Trail.

There are no perennial streams within the proposed activity area. The hydrologic features of the Organ Mountains are defined by steep, rock faced canyons that funnel ephemeral monsoonal storm water. Evidence of these seasonal events can be found far out along the alluvial fans, where rills can rapidly down-cut through the soil veneer. At several places along the Baylor Pass Trail east of the Baylor Canyon Trailhead, the BLM has inserted stone water-control structures to mitigate erosional processes.

3.5 Vegetation

The vegetation along the Baylor Canyon Trail varies with elevation. The vegetation at the lower elevations consists of a desert scrub community of mainly mesquite, creosote, acacia, cacti, yucca, ephedra and various grasses including black grama, bush muhly and three awn. As the trail rises in elevation the grass cover increases and consists of black grama, blue grama, sideoats grama, bluestem and bristle grass. The shrubs or shrub like species at the higher elevations consist mainly of mountain mahogany, sumac, yucca, sotol, ocotillo, acacia and cacti as well as some juniper and oak trees. On years with adequate precipitation, various forbs appear at both the low and higher elevations.

3.6 Weeds

Weeds of concern in Dona Ana County include Russian knapweed, jointed goatgrass, camelthorn, onionweed, Sahara mustard, field bindweed, Russian olive, hoary cress, whitetop, perennial pepperweed, African rue, saltcedar, and Siberian elm. None of the previous species have been noted in the area. Other weedy species that do persist in the local area include cheatgrass and Lehmann lovegrass. Cheatgrass is believed to only persist in isolated locations in the Organ Mountains and Lehmann lovegrass is widespread in the area.

3.7 Wildlife Habitat

The BLM conducted an inventory of wildlife habitats on BLM administered lands within the proposed project area using the Integrated Habitat Inventory and Classification System (IHICS) in 1980. Standard Habitat Sites (SHS) occurring in the area as of 1980 include:

- Creosote Rolling Upland
- Grass Mountain
- Mixed Shrub Rolling Upland
- Mixed Shrub Mountain
- Pinyon-Juniper/Grass Mountain
- Arroyo

Standard Habitat Site descriptions are available from the Las Cruces BLM District Office.

3.8 Special Status Plants

Presence of special status plant species and their habitats in Doña Ana County was considered using LCDO species occurrence/habitat records and New Mexico Natural Heritage Program species records. Species descriptions and distributions were derived from LCDO office records and New Mexico Rare Plant Technical Council [NMRPTC. 1999. New Mexico Rare Plants. Albuquerque, NM: New Mexico Rare Plants Home Page. <http://nmrareplants.unm.edu> (Latest update: 18 January 2006)]. Based on evaluation of the referenced information, of the 21 special status plant species known to occur in Doña Ana County, eight species may occur in the proposed action area. Table 1 below identifies special status plant species potentially occurring in the area.

Table 1 Special Status Plant Species

Species Name	Habitat
Grayish-white giant hyssop	cliff bases and canyon bottoms 4,600-5,900'
Organ Mountains giant hyssop	Talus and boulder fields 5,900-7,500'
Organ Mountains paintbrush	Mountain slopes and canyons 7,000-8,000'
Standley's whitlowgrass	Rock faces and cracks, cliff bases 5,500-6,500'
Organ Mountains pincushion cactus	Rocky broken mountainous terrain 4,400-8,350'
Vasey's bitterweed	Mountain shrub and piñon-juniper woodland 6,900-8,200'
Organ Mountains evening primrose	Seeps, springs, and canon bottoms 5,700-7,600'
Nodding cliff daisy	Igneous cliff faces 5,000-8,800'

3.9 Special Status Animals

Special Status animal species lists for Doña Ana County were compiled from: (www.wildlife.state.nm.us/conservation/threatened_endangered_species/index.htm and <http://www.fws.gov/southwest/es/newmexico/>).

Known geographic distribution and habitat requirements were considered for each species in comparison with habitat types. The results of this analysis are that of 24 species listed by the FWS or NMDGF as species of concern in Doña Ana County, ten species are considered to have potential habitat within the proposed action area. Table 2 below identifies special status wildlife species that may occur in the proposed action area.

Table 2 Special Status Animal Species

Special Status Wildlife Species	
Species	Status
Bald Eagle	NM Threatened, BLM Sensitive
Western Yellow-billed cuckoo	Federal candidate, BLM Sensitive
Western Burrowing Owl	Federal Species of Concern, BLM Sensitive
Piñon jay	BLM Sensitive
Bendire's Thrasher	BLM Sensitive
Bell's Vireo	NM Threatened, BLM Sensitive
Painted Bunting	BLM Sensitive
Western Red Bat	Federal Species of Concern, BLM Sensitive
Spotted Bat	NM Threatened, BLM Sensitive
Allen's Lappet-browed Bat	BLM Sensitive

Habitat descriptions for these special status wildlife species are available from the Bureau of Land Management, Las Cruces District Office.

3.10 WSAs

The Organ Mountains and Organ Needles WSAs encompass approximately 14,913 acres. The Organ Mountains rise to over 9,000 feet in elevation and are so named because of the steep, needle-like spires that resemble the pipes of an organ. The area is covered with alligator juniper, gray oak, mountain mahogany and sotol and an abundance of wildflowers. In the upper elevations, stands of ponderosa pine can also be found. For those seeking to view wildlife, the desert mule deer, mountain lions, a variety of song birds, and the Colorado chipmunk inhabit the area. The Organ Needles WSA is adjacent to the Organ Mountains WSA and is composed of rugged, scenic, high spires, with narrow rocky canyons interspersed by steep, rocky ridges. These massive spires are mostly barren rock clefts with narrow chasms containing ribbons of green oak trees, and huge boulders along the flanks.

Naturalness: Both WSAs generally appear natural. Within the Organ Mountains WSA, human imprints are limited, and viewing areas where these imprints are discernible are all minimized by rugged topography. The major topographic features are unaffected by the imprints of man. The WSA appears to have been affected primarily by the forces of nature. The trails include a portion of the Baylor Pass National Recreation Trail (approximately 3 miles). Within the Organ Needles WSA, the human imprints are substantially unnoticeable, with the imprints consisting of livestock development such as fences and developed springs. The trails include a portion of the Baylor Pass National Recreation Trail, most of the Pine Tree National Recreation Trail and the Crawford Trail. These trails do not significantly detract from the naturalness of the area. The WSA appears to have been affected primarily by the forces of nature. The few developments are not substantially noticeable in the area as a whole.

Outstanding Opportunities for Solitude: The Organ Mountains WSA provides outstanding opportunities for solitude. The rugged mountain range contains numerous major ridges and large canyons with each major topographic feature branching into countless smaller features. These features provide numerous areas to find seclusion from others. The Organ Needles WSA provides outstanding opportunities for solitude due to the rugged, scenic, high spires of the mountains and rocky canyons. Visitation to the area is heavy, particularly in the spring and the fall, but is concentrated on the developed trails and despite the proximity of major population centers, users in the area feel very isolated.

Outstanding Opportunities for Primitive and Unconfined Recreation: The Organ Mountains WSA offers outstanding opportunities for primitive and unconfined recreation in terms of both quality and diversity such as horseback riding, hiking, hunting, and photography. Rock climbing opportunities are nationally significant. The Organ Needles WSA also provides outstanding opportunities for primitive and unconfined types of recreation including hiking, rock climbing, camping, backpacking, hunting, sightseeing, photography, and wildlife observation.

Special Features: The Organ Mountains WSA in addition to scenic values contains several historic and prehistoric cultural resource sites, habitat for the Organ Mountains race of the Colorado chipmunk (a State-listed endangered species), and nesting and perching habitat for numerous raptor species. The WSA also supports six State-endangered plant species including three that are under review for Federal listing as threatened or endangered species. There are two known Archaeological sites in the area, The La Cueva rock shelter site and the Van Patten Mountain Camp. The Organ Needles WSA in addition to scenic values, contains ecological and cultural features of scientific, educational, scenic, and historic values.

4 ENVIRONMENTAL EFFECTS

4.1 Impacts of Alternative A on All Resources

Under this Alternative, the proposed action would not be permitted and there would be no impacts to any of the resources.

4.2 Air Quality

4.2.1 Impacts of Alternative B on Air Quality

Trail use specific to the proposed action may result in small increases in dust emissions, particularly along the sides of the trail and in areas where racers run abreast or pass each other. These impacts would likely be minimal, and would be temporally limited to the time of the race.

4.2.2 Impacts of Alternative C on Air Quality

This alternative will have impacts similar to Alternative B, except that the air quality impacts would be located outside of the Organ Mountains and Organ Needles WSAs.

4.2.3 Impacts of Alternative D on Air Quality

This alternative will have impacts similar to Alternative B. Spacing the runners out may reduce the potential of braiding of the trail, less soil erosion, and therefore less dust.

4.3 Soils

Soil cover is relatively shallow throughout the area. This may lead to four related consequences: 1) precipitation factors being equal, low soil moisture retention can be anticipated due to the large soil grain size, 2) surface run-off during monsoonal storm events may be exaggerated, 3) forbs may not thrive across depleted and/or compacted surfaces, and 4) repetitive use of the same footprint will either entrench the path or expose underlying bedrock.

4.3.1 Impacts of Alternative B on Soils

Trail use has a predictable path of surface impact. The degree of impact is modified only by the natural resilience of the soil and the intensity of the trail use. In an ideal situation, a natural balance is maintained between soil resilience and use, and trail use occurs without significant degradation. However, on sites with wet, unstable, and sensitive soils, that equilibrium is easily upset. Even low levels of trail use can have significant environmental consequences.

There is inadequate documentation in terms of systematic monitoring reports to determine the past and current trail conditions. While there is anecdotal information and data to suggest that recreational activities such as trail runs lead to trail “braiding”, there is no monitoring data that ties this impact as a direct result of the Baylor Pass Trail Run in past years. Without monitoring data, there is no evidence that the Baylor Pass Trail Run has led to adverse soil impacts.

4.3.2 Impacts of Alternative C on Soils

Tortugas Mountain has less vegetation and used by local university students. It has typical trail degradation follows one of two pathways: surface erosion or surface failure. Surface erosion occurs when wind or water displace exposed trail surface. This usually occurs on steep terrain or on sandy soils that are susceptible to wind erosion. Surface failure occurs when trail surface degrade into muddy tracks with deep muck holes.

4.3.3 Impacts of Alternative D on Soils

This alternative will be similar to Alternative B. Trail grade, alignment, drainage, tread material characteristics (infiltration and erodibility), trailside vegetation, and local geomorphology all make the trail more or less susceptible to erosion, no matter what day of the week using the trail. However, without monitoring data, there is no evidence that the Baylor Pass Trail Run has led to adverse soil impacts. Spacing the runners out may reduce the potential of braiding of the trail and subsequent soil erosion and other impacts.

4.4 Hydrologic Resources

4.4.1 Impacts of Alternative B on Hydrologic Resources

There will be minimum impact to this resource. The erosional impacts were related to natural processes including slope instability, rainfall, and surface runoff, as well as recreational trail use including running and hiking, horse riding, and bicycle riding.

4.4.2 Impacts of Alternative C on Hydrologic Resources

There will be minimum or no impact to this resource by reducing visitors' impacts to soils, vegetation and hydrologic resources

4.4.3 Impacts of Alternative D on Hydrologic Resources

The impact of this alternative will be similar to alternative B on this resource. But it is necessary to avoid steep grades, poor soils, and sensitive resources areas to reduce erosion and sedimentation.

4.5 Vegetation

4.5.1 Impacts of Alternative B on Vegetation

The race has been occurring on an annual basis since the 1971 with a few exceptions; therefore, little change from the current conditions of the vegetation would be expected. The trail also gets very regular use, especially on weekends, so passing along the trail and some trampling of vegetation is a regular occurrence. Vegetation along the edges of the trail could be damaged or uprooted if participants left the footprint of the trail. The runners would be expected to mainly stay on the trail due to the higher ease of travel along with prickly vegetation and rocks along the sides of the trail so only an insignificant loss of individual plants would be expected. The trail is also not extremely narrow for much of the route so people would not be forced to leave the trail every time someone wanted to pass unless it was in a narrow area reducing the amount of trampling that would occur. A stipulation for the race organizer to inform the participants to make an effort to stay on the trail when passing to avoid damages to the vegetation would be included to help avoid associated damages.

4.5.2 Impacts of Alternative C on Vegetation

Alternative C would have similar impacts as Alternative B though the race would occur in a different location. A Mountain has more areas of two-track roads along with single track trails so passing would be easier and less vegetation would be trampled where two-track roads exist. The single track is often more narrow on A mountain than the trail at Baylor Pass; therefore people would leave the trail more often if passing occurred on single track and could damage vegetation, but again it would likely be insignificant amounts. A stipulation for the race organizer to inform the participants to make an effort to stay on the trail when passing to avoid damages to the vegetation would be included to help avoid associated damages.

4.5.3 Impacts of Alternative D on Vegetation

Alternative D would have similar impacts as Alternative B, though fewer more widely spaced participants only travelling one direction would likely lead to less trampling of vegetation along the trail edge due to less passing occurring, though vegetation could still be damaged if people left the trail because passing could still occur. The damages to vegetation would be expected to be insignificant due to participants mainly staying on the trail and only very localized damages to vegetation occurring. A stipulation for the

race organizer to inform the participants to make an effort to stay on the trail when passing to avoid damages to the vegetation would be included to help avoid associated damages.

4.6 Weeds

4.6.1 Impacts of Alternative B on Weeds

Weeds are often spread by trail users and weeds regularly colonize along the edges of trails. No known populations of weeds exist along the trail, but may exist in isolated areas near the trail. Cheatgrass has been seen in Dripping Springs Natural Area and along the Pine Tee Trail and Indian Hollow Trail nearby so there is a risk of spread to the Baylor Pass Trail. Lehmann lovegrass is a nonnative grass common on the northern end of the Organ Mountains, but it could spread easily with or without the race occurring due to the existing high concentration of plants in the general area. There is higher potential for participants to bring weed seeds in on clothing or footwear due to the large volume of people, however, the trail is already vulnerable to the spread of weeds due to the very regular use by people and the potential for weeds spreading would not be greatly increased by the race.

4.6.2 Impacts of Alternative C on Weeds

Impacts from Alternative C are similar to Alternative B. No known populations of weeds exist along the trails at A Mountain, but they may exist in isolated areas near the trail. There is higher potential for participants to bring weed seeds in on clothing or footwear due to the large volume of people, however, the trails at A Mountain are already vulnerable to the spread of weeds due to the very regular use by people and the potential for weeds spreading would not be greatly increased by the race.

4.6.3 Impacts of Alternative D on Weeds

Alternative D would have similar impacts to Alternative B. The higher potential for spreading weed seeds due to the large number of people would still be present, but lessened due to the reduced number of participants.

4.7 Wildlife Habitat

4.7.1 Impacts of Alternative B on Wildlife Habitat

Mechanisms through foottraces and trails impact wildlife and wildlife habitats include:

- Audio disturbance and temporary displacement of wildlife
- Visual disturbance and temporary displacement of wildlife
- Direct impact and mortality to slow-moving wildlife

Effects on wildlife and wildlife habitats include both short-term and long-term impacts to different species. Short-term effects tend to be relatively direct, whereas long-term effects often involve more complex ecological processes and are often indirect. For example, human presence often causes wildlife to temporarily move to different areas, and while most animals will run away or hide from people or groups of people, most will return to the area after the activity has ceased. Long-term impacts include loss of vegetation and erosion of trails, which some species will use when humans are not present, but which include the loss of plants that may provide forage and cover for wildlife, and the prevention of

reestablishment of those plants. Such effects typically are not recognizable over one or even a few seasons but rather manifest themselves over a period of many years. Entrenched trail use typically changes habitat from vegetated to non-vegetated, and becomes unsuitable for species that prefer cover but suitable for species that prefer open habitat. Holding the Baylor Pass Trail Run on the Baylor Pass Trail will help maintain approximately 6 miles of three-foot wide hiking trail (approximately 1/3 acre) as disturbed habitat, however, if the race was not run on this trail, the habitat would still remain disturbed. The biggest difference between this and other alternatives is that this alternative would provide approximately ½ day of temporal disturbance to wildlife at this site that the other alternatives would not provide.

4.7.2 Impacts of Alternative C on Wildlife Habitat

Relocation of the race to wildlife and wildlife habitat would be very similar to those of those proposed action. The main difference would be that under Alternative C, those impacts would occur on A Mountain instead of Baylor Canyon.

4.7.3 Impacts of Alternative D on Wildlife Habitat

Implementation of Alternative D would have similar impacts as those of Alternative B as far as surface disturbance of the trail. However, moving the trail to a Monday and/or Tuesday would lengthen the temporal impacts to wildlife. Instead of concentrating those impacts on a day when wildlife is already disturbed because of busy trail use, the additional disturbance to wildlife would be shifted to a day or days when wildlife are usually less disturbed by people.

4.8 Special Status Plants

4.8.1 Impacts of Alternative B on Special Status Plants

Implementation of the proposed action would not be anticipated to have any impacts to special status plants or their habitats.

4.8.2 Impacts of Alternative C on Special Status Plants

Implementation of Alternative C would not be anticipated to have any impacts to special status plants or their habitats.

4.8.3 Impacts of Alternative D on Special Status Plants

Implementation of Alternative D would not be anticipated to have any impacts to special status plants or their habitats.

4.9 Special Status Animals

4.9.1 Impacts of Alternative B on Special Status Animals

Mechanisms through footraces and trails impact special status animal species and their habitats include:

- Audio disturbance and temporary displacement of wildlife
- Visual disturbance and temporary displacement of wildlife

- Direct impact and mortality to slow-moving wildlife

Effects on special status animals would be similar to those on wildlife in general. Holding the Baylor Pass Trail Run on the Baylor Pass Trail will help maintain approximately 6 miles of three-foot wide hiking trail (approximately 1/3 acre) as disturbed habitat, however, if the race was not run on this trail, the habitat would still remain disturbed. The biggest difference between this and other alternatives is that this alternative would provide approximately ½ day of temporal disturbance to wildlife at this site that the other alternatives would not provide.

4.9.2 Impacts of Alternative C on Special Status Animals

Relocation of the race to special status animals would be similar to those of those proposed action. The main difference would be that under Alternative C, those impacts would occur on A Mountain, where there are fewer special status animal species as compared to Baylor Canyon.

4.9.3 Impacts of Alternative D on Special Status Animals

Implementation of Alternative D would have similar impacts as those of Alternative B as far as surface disturbance of the trail. However, moving the trail to a Monday and/or Tuesday would lengthen the temporal impacts to special status animals. Instead of concentrating those impacts on a day when these creatures are already disturbed because of busy trail use, the additional disturbance shifted to a day or days when these animals are usually less disturbed by people.

4.10 WSAs

4.10.1 Impacts of Alternative B on WSAs

4.10.1.1 WSA Non-Impairment Criteria

FLPMA requires the BLM to manage all WSAs so as to not impair the suitability of such areas for preservation as wilderness. All uses and/or facilities within a WSA must meet the non-impairment standard, meaning that the use must be both temporary, and must not create new surface disturbance. BLM Manual 6330, page 1-31 describes criteria for the approval of SRPs in WSAs, stating that “activities that require authorization under a SRP will be allowed only if the use and related facilities satisfy the non-impairment criteria (and therefore do not involve a use of the WSA that would be incompatible with wilderness designation.)”

There are seven classes of allowable exceptions to the non-impairment standard. These seven classes are emergencies, public safety, restoration of impacts from violations and emergencies, valid existing rights, grandfathered uses, protective or enhance wilderness characteristics or values or other legal requirements. Recreational activities are not considered grandfathered uses under FLPMA. “As described in FLPMA, grandfathered uses only include grazing, mining, mineral leases, and do not include other uses such as recreational activities” (BLM Manual 6330, page 1-12). No exception would apply to the proposed action.



Figure 5 Baylor Canyon Trail exhibiting the wear pattern of the trail and typical vegetation at the higher elevations.

Temporary Use: The Baylor Pass National Recreation Trail footrace has been an ongoing event since 1971; however, it has previously been authorized under a CX. This is the first EA that has been developed to analyze the impacts of the race. Since this race is a chronic, repeated, short term use, it does not meet the definition of “temporary” under the non-impairment standard.

In addition, the nature of the race, and the fact that it has been ongoing for over 40 years, may provide a demand for the use that is incompatible with wilderness management. BLM Manual 6340—Management of BLM Wilderness, states that contests, including foot races, may impair aspects of wilderness character, and, when this is the case, should be prohibited. According to the *New Mexico Statewide Wilderness Study, Volume 4: Appendices Wilderness Analysis Reports* (1988), the Baylor Pass Run would not be permitted if the area were designated as wilderness. A preliminary analysis of the impacts of the trail run on the wilderness characteristics of the area is described below. Competitive events in wilderness study areas may reduce /diminish the entire wilderness study area’s quality of naturalness, outstanding opportunities for solitude and outstanding opportunities for primitive and unconfined types of recreation, at least for the time that the event is taking place.

No New Surface Disturbance: Research suggests that chronic, repeated short-term use of trails, even over a short period of time, will continue to impact the soils and vegetation, possibly to the point that ...“change will be irreversible or recovery can be slow, even when the recreational disturbances are removed” (Cole 1987). “The primary factors that influence magnitude of impact are, amount of use, type of use, timing of use, spatial distribution of use and environmental attributes” (Cole 2004). “Some specific impacts, such as trail widening and creation of parallel treads (trail braiding) or side trails, are strongly influenced by user behavior. Visitors seeking to avoid severe rutting or rockiness caused by soil erosion or muddiness often cause trail widening” (Hammitt & Cole 1998).

As a result, research suggests that the Baylor Pass Run would likely be a use that would lead toward new surface disturbance within the WSAs. However, as no monitoring for the race has ever been conducted, it is unclear whether the race has led to any level of surface disturbance along the trail. Required

monitoring would determine whether any surface impacts stem from the race; any future permits for the race would be conditioned on a finding that the race does not lead to new surface disturbance, as required by the WSA non-impairment criteria.

4.10.1.2 Wilderness Characteristics

In addition to the WSA non-impairment standard, the impacts of the proposed action are also considered in the context of the characteristics of wilderness as described in Section 2(c) of the Wilderness Act.

Size: Changes to the area's size is described as having at least five thousand acres of land or being of sufficient size as to make practicable its preservation and use in an unimpaired condition. The proposed action would not impact the size criteria.

Naturalness: Changes in naturalness are often described in terms of human and ecological modifications of the natural landscape. The proposed action has been an ongoing, yearly event that in the past has not been analyzed for the impacts to the WSAs. Although the trail itself is not natural, at the time the wilderness study area initial inventories were conducted (1979), the trail was considered to be substantially unnoticeable (Initial Inventory, III: Recommendation and Rationale, NM 030-074). Chronic, repeated short-term use, over a short period of time, would potentially widen the trail. When visitors step off of the trail to either pass or let others go by, that in turn modifies the natural landscape by expanding and widening the trail and diminishing the overall quality of naturalness. The majority of the Baylor Pass Recreation Trail is not wide enough for two people to run or walk side by side, pass each other competitively or conduct a competitive race that would be coming from both directions of the trail.

Outstanding Opportunities for Solitude: Changes in outstanding opportunities for solitude are often described in terms of the quality of the opportunity. Much of the research on solitude has included concepts such as territoriality, personal space, crowding, social carry capacity, social norms, encounter norms and structure of the built environment. Indicators that can be used to measure wilderness study areas conditions related to solitude include three categories of indicators. Presence of others, separation from sights and sounds originating outside wilderness and infrastructure within wilderness and disruption, conflict, or negative behaviors of others reduces solitude. Competitive events tend to lessen the wilderness experience for others, affecting the setting for isolation and social interaction. This proposed action would put a higher density of users on the Baylor Pass National Recreation Trail on or around September 14, 2013, impacting the physical isolation and increasing the social engagement of visitors, which in turn, diminishes the overall outstanding quality of opportunities for solitude for visitors who are not participants in the proposed activity.

Outstanding Opportunities for Primitive and Unconfined Recreation: Changes in outstanding opportunities for primitive and unconfined recreation are often described in terms of the quality of the opportunity for primitive and unconfined recreation. This quality is primarily about the opportunity for people to experience wilderness, and is influenced by settings that affect this opportunity. It is preserved or improved by management actions that reduce visitor encounters and signs of modern civilization inside wilderness. Primitive recreation in wilderness has largely been interpreted as travel by nonmotorized and nonmechanical means (such as horse, foot, canoe) that reinforce the connection to our ancestors and our American heritage. However, primitive recreation also encompasses reliance on personal skills to travel and camp in an area, rather than reliance on facilities or outside help. Unconfined means "not kept within

limits” and encompasses attributes such as self-discovery, exploration, and freedom from societal or managerial controls. This proposed action would put a higher density of users on the Baylor Pass National Recreation Trail on or around September 14, 2013, impacting the physical isolation and increasing the social engagement of visitors, which in turn diminishes the overall outstanding quality of opportunities for primitive and unconfined recreation.

4.10.2 Impacts of Alternative C on WSAs

Under Alternative C, the proposed action would be permitted at another venue outside of the WSAs. Competitive running events are not wilderness study dependent and can be conducted outside of WSAs with the same positive results for the runners, but minus the impairment to the wilderness characteristics. There would be no impacts to WSAs.

4.10.3 Impacts of Alternative D on WSAs

4.10.3.1 WSA Non-Impairment Criteria

The impacts on the WSA non-impairment criteria of ‘temporary’ and ‘no new surface disturbance’ would be the same as in Alternative B, the proposed action.

4.10.3.2 Wilderness Characteristics

Impacts to the wilderness characteristics of size, outstanding opportunities for solitude, and outstanding opportunities for primitive and unconfined recreation criteria would be the same as those from Alternative B, the proposed action.

Impacts to the naturalness of the area could be less than in Alternative B, based on the spacing of the runners and the timed aspect of the race under that alternative. As stated in the impacts analysis of Alternative B, the majority of the Baylor Pass Recreation Trail is not wide enough for two people to run or walk side by side, pass each other competitively or conduct a competitive race that would be coming from both directions of the trail. Spacing the runners out would likely reduce the potential surface impacts of runners running side by side, or passing each other; however, some side by side running or passing would still be likely to occur.

4.11 Cumulative Impacts

The Cumulative Impact Area for the proposed project is the entire Organ Mountains and the Organ Needles WSAs, consisting of 14,913 acres. Regardless of the alternative selected for this proposal, continued casual use of the trail is allowed and will continue to exist. These past, present, and reasonably foreseeable casual uses of the trail may result in surface resource impacts to the WSAs, including soil erosion and vegetation trampling. Alternatives B and D would likely create increases to these impacts. According to visitor sign-in sheets at the Baylor Pass Trailhead, approximately 80 visitors hiked or ran the Trail from October 1-23, 2012. Anecdotal information suggests that local runners and hikers may not sign in at the register and may account for an additional 30-40 visitors per month (S. Crose, personal communication). In addition, non-recreational uses such as grazing, fire, and drought may also lead to increased surface disturbance along the trail and in the WSAs.

5 MONITORING/MITIGATION MEASURES FOR ALTERNATIVES B AND D

The BLM will require a Plan of Operation that incorporates adequate safety precautions for participants and visitors at both the Baylor Pass Trailhead and the Aguirre Spring Trailhead.

BLM will monitor the activity at three locations: The Baylor Pass Trailhead, the saddle near the crest of the Trail, and at the Aguirre Spring Campground.

The BLM will prepare a Monitoring Plan specifically designed to capture impacts attributable to the Run.

6 INDIVIDUALS, ORGANIZATIONS, TRIBES, OR AGENCIES CONSULTED

The public had the opportunity to contact the LCDO and provide input on this project. The project was listed on the New Mexico BLM Website NEPA Log:

http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html

The EA is also posted for a 30-day public review comment period, and specifically sent to the Interim Management Policy (IMP) review list.

7 LIST OF PREPARERS

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