

Dear Doug and Reed:

I much appreciate the effort that has gone into creating the South Fork draft EA. Alternative B is a great improvement over the “original” alternative C in that it preserves the much-needed toilet facilities and limited parking relatively close to the mouth of South Fork, and adds a desirable handicap-accessible trail.

However, I believe the analysis of Alternative B’s environmental impacts is incomplete. In particular, I find virtually no analysis of the negative impacts of increased human use and activity on the unusual biotic diversity that originally led to South Fork’s designation as a ZBA. I have two suggestions.

- First, the current analysis does not adequately address the likelihood that the proposed parking area will not replace, but simply add to the existing use of the berm. One of the goals of this project should surely be to improve the quality, not just the quantity, of the experience for users that recognize South Fork’s special characteristics. The proposed seasonal road closure above the new parking area is an excellent start, but I’d also urge additional measures to reduce automobile traffic (and so encourage use by walkers, motorized wheelchairs, etc) above area B. It should be clear to both new and repeat visitors that the parking area is not just a sideshow to drive past en route to the berm; it should be the default end of vehicular travel on 42A.

To this end, I’d suggest making the segment of 42A adjacent to the parking area one-way downcanyon, so that all driving upcanyon is routed through the parking area (preserving the existing relatively sharp turns into the area). Drivers would thereby be forced to drive SLOWLY through the area, presumably increasing the chance that they will perceive it as the destination. The goal should be to gently encourage as many drivers as possible to stop there, read the signage, use the trail, and/or WALK further up 42A. I’ve tried to illustrate this idea on the attached sketch map, which slightly modifies the original design concept in the draft EA.

Other minor modifications might further increase the chances that people will enjoy the unique animal and plant resources in South Fork in lower-impact ways. Requiring a stop and a sharp right turn to get onto 42A above the parking lot would encourage drivers to perceive this as a terminal loop on the road, unless they have a special need to continue upcanyon. Another possibility would be to prohibit large vehicles (buses, large RVs, etc) year-round above this area.

- Second, while the current design concept has many excellent features, it continues to encourage uses of South Fork that would better be redirected elsewhere in Cave Creek canyon. I would propose replacing the staging area with a picnic table and eliminating the two downcanyon tables (again, see sketch map). This would divert some users who would be equally satisfied with the experience at one of the existing developed areas within the canyon.

In particular: I strongly support FOCCC’s goal of increasing educational use of Cave Creek Canyon, but not in South Fork. I have led school groups for FOCCC in the past, and doing so has made it clear to me that what captures kids’ imaginations is to be outside, run around and climb a tree or two. Seeing an oak tree, a mistletoe or a Mexican jay is just as good as seeing a trogon or a blue-throated hummingbird. In addition, taking college students on field trips throughout my career has taught me that student groups inevitably have an adverse impact on local vegetation and wildlife. One possible alternative for educational goals would involve the parking lot and other

facilities that have already been developed by USFS and FOCCC at the VIC, using the existing nearby nature trail. I understand that the VIC has limitations – its septic system and the trail link to the existing nature trail have been mentioned -- but focusing and improving educational efforts there would build on what already exists.

The draft EA concludes that Alternative B would “likely attract more people throughout the year and visitors would be likely to spend more time in South Fork” (p. 13). This is particularly true if it does not discourage continued use of Road 42A above the proposed parking lot. But the draft EA does not discuss the resulting long-term negative impacts, in particular on the rare and specialized species whose protection led to the South Fork ZBA. Human presence and activity of almost any sort tends to have negative effects on many species, both plant and animal. These effects are more strongly negative for species that are rare and specialized. A cursory Google search yields (among other papers) several summaries documenting human impacts on biotic resources:

R. Blanc et al. 2006. Effects of non-consumptive leisure disturbance to wildlife, *Revue d'Ecologie* 61:117-134

M. Marzano, N Dandy, et al. 2012. Recreationist behaviour in forests and the disturbance of wildlife. *Biodiversity and Conservation* 21:2967-2986

These papers summarize numerous individual studies, and there are many more in recent years, as “disturbance ecology” has almost become its own field. Even road dust, in addition to its impact on human enjoyment of the area, has negative consequences on other species that most of us don't think about:

N. Waser, M. Price, et al. 2018. Effects of Road Dust on the Pollination and Reproduction of Wildflowers. *International Journal of Plant Sciences* 178: 85-93

In summary, the final plan can and should take further steps to minimize these longer-term impacts.

Sincerely,

Peter Waser
Professor (emeritus) Biological Sciences
Purdue University, West Lafayette, IN 47905

