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November 6, 2009

ELECTRONIC AND CERTIFIED MAIL

Deputy Regional Forester, Southwestern Region  
Appeal Deciding Officer  
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Re: Appeal of Proposed Black River Land Exchange (Greer, Arizona)  
Exchanges AZA 31926  
Springerville Ranger District, Apache National Forest, Apache County, Arizona  
Record of Decision and FEIS  
dated September 15, 2009 and published September 22, 2009.

To Whom It May Concern:

This is an appeal of the above-referenced Record of Decision (ROD) issued on September 15, 2009 by Chris Knopp, Forest Supervisor, Apache-Sitgreaves National Forest ("Forest Service"). This appeal is filed pursuant to 36 CFR 215, on behalf of the Greer Coalition, Inc. and the Center for Biological Diversity (CBD). These organizations were among those who appealed the Decision Notice and Finding of No Significant Impact originally signed by the Director of Lands and Minerals, Southwestern Region on August 24, 2004 and reversed by Gloria Manning, Appeal Deciding Officer for the Chief on December 6, 2004 and who later challenged the subsequent Decision Notice and Finding of No Significant Impact signed by the Director of Lands and Minerals, Southwestern Region on October 14, 2005. CBD and the Greer Coalition also successfully challenged that decision in *Greer Coalition et al. v. U.S. Forest Service*. Representatives from each organization also filed substantive comments during the comment period for the Draft Environmental Impact Statement (DEIS) for this exchange. Contact information for each Appellant can be found at the end of this appeal.

### **Introduction and Identification of Parties:**

The Arizona Center for Law in the Public Interest is a public interest law firm and is representing the Appellants in this matter. The Greer Coalition is the lead Appellant. Both organizations have members who use and enjoy the Greer Recreation Area including the Federal land in the proposed exchange for a variety of purposes, including hiking, biking, bird watching, wildlife viewing, photography, recreation, solitude, and educational and scientific purposes. Members of these organizations intend to continue these activities and will be affected by the proposed exchange should it be permitted to proceed. Members of the Greer Coalition also own property adjacent to and near the Federal land and reside in Greer for some or all of the year. They will be directly affected if the proposed exchange is allowed to proceed.

As a preliminary matter, we wish to emphasize that the parties do not object to the acquisition by the United States Forest Service (Forest Service) of the non-Federal parcels. In fact, we urge the Forest Service to pursue acquisition of those properties through other means. Appellants simply oppose the proposed Exchange because it would privatize important Federal lands. As set forth in detail below, the Appellants contend that the proposed exchange violates the Federal Land Policy and Management Act (FLPMA) because the Forest Service has not established that the exchange is in the public interest. Although the lands that the Forest Service would receive in the exchange have high environmental values and are very worthy of preservation, the administrative record does not establish that their value is sufficient to offset the loss of the Federal lands. Moreover, it is highly unlikely the non-Federal lands are at risk of development if the exchange does not occur. Further, although it is not a subject of this appeal, the appraisals relied upon by the Forest Service to support the exchange are flawed and fail to establish that the parcels are of equal value.

Appellants contend that the Forest Service has once again violated the National Environmental Policy Act (NEPA) because it still has not adequately evaluated the environmental impact of the exchange, particularly with respect to the hydrological impact. Further, although the Forest Service undertook additional evaluation in response to comments on the DEIS in an effort to justify its approval of the project, that additional analysis was fundamentally flawed—a fact that would have been revealed had the Forest Service provided the public with an opportunity to review and comment on the additional work. In reversing and remanding the prior approval, the District Court held, among other things that:

[W]hile the Forest Service acknowledged the possibility of “wildcat” developments on the federal land resulting in a development scenario of multiple “shallow wells” rather than one deep well, there is no credible analysis regarding the impact such wells would have on the water supply on the federal land and neighboring lands. The Forest Services' failure to perform any such analysis rises to the level of an “arbitrary and capricious” decision and violates their obligations under NEPA in preparation of the EA II.

Opinion, p. 9-10. Although the FEIS purports to address this omission, the analysis is woefully inadequate and relies upon inaccurate facts and flawed methodologies. Consequently, the Forest Service once again failed to adequately evaluate the environmental impact of the exchange.

**Statement of Reasons:**

**A. Violations of the Federal Land Policy and Management Act.**

The Forest Service is authorized under federal law to engage in land exchanges with private landholders. In 1976, Congress enacted the Federal Land Policy and Management Act (FLPMA) in order to define the broad policy objectives of the government's land management programs. Under FLPMA, the agency is authorized to make trades of federal land if: 1) it is determined that the public interest will be best served by disposition of a certain parcel; and 2) the estimated values of the federal and non-federal lands are equal or approximately equal. In the instant case, neither of these requirements is met.

**1. The Forest Service Has Failed To Demonstrate That the Proposed Exchange is In the Public Interest as Required By 43 U.S.C. §1716(a).**

The Forest Service has not only failed to demonstrate that this exchange is in the public interest, but there is ample evidence in the administrative record to demonstrate that the exchange is in fact *contrary* to the public interest.

Under the FLPMA, land exchanges are authorized provided:

[T]he Secretary concerned determines that the public interest will be well served by making that exchange: Provided, That when considering public interest the Secretary concerned shall give full consideration to better Federal land management and the needs of State and local people, including needs for lands for the economy, community expansion, recreation areas, food, fiber, minerals, and fish and wildlife *and the Secretary concerned finds that the values and the objectives which Federal lands or interests to be conveyed may serve if retained in Federal ownership are not more than the values of the non-Federal lands or interests and the public objectives they could serve if acquired.*

43 U.S.C. §1716(a)(emphasis added).

Further, Forest Service regulations set forth the factors that must be considered in evaluating the public interest. Those factors include the opportunity to meet “the needs of State and local residents and their economies” and “to secure important objectives, including but not limited to: protection of fish and wildlife habitats, cultural resources, watersheds, and wilderness and aesthetic values; enhancement of recreation opportunities and public access...” 36 C.F.R. §254.3. In the ROD, Mr. Knopp asserts that the proposed exchange is in the public interest, (ROD p. 9 and 10) but offers no explanation for how he reached this conclusion beyond his consideration of the benefits of acquisition of the non-Federal lands. Notably, even though the statute specifically provides that the full consideration should be given to the values and objectives that the lands to be conveyed may serve if they are retained, neither the ROD nor the FEIS upon which Mr. Knopp relies actually considers the benefits of such a scenario. Rather, the entire focus of the Forest Service’s analysis is the benefits of attaining the non-Federal land versus the extent of the harm that would result from

conveying the Federal lands or not conveying the lands. So instead of weighing the pros and cons of each scenario, and then evaluating which scenario is best, the ROD and FEIS weigh the pros of alternative 1 (proposed exchange) against the cons of alternative 1 and the cons of Alternative 2 (no action). They entirely ignore the fact that there are pros of Alternative 2. For example, the ROD includes a chart which purports to compare the two alternatives. Under the category of plants and wildlife, when considering the impact of alternative 1 on the “Federal Lands Either Undeveloped or Developed,” the only entry is “The FS would gain 118 acres of riparian habitat that includes 1.65 miles of the West Fork of the Black River and 1.5 miles of the Blue River...” ROD, p. 5-6. In other words, the entire entry for the impact on the *federal* lands is a description of the *nonfederal* lands that would be acquired. There is no acknowledgement whatsoever of the loss of plants and wildlife of the lands that would be conveyed. Another example of this lopsidedness is found under the category of Recreational Opportunities. Of course, as discussed more fully below, the loss of recreational acreage in the immediate vicinity of Greer is a consequence of the proposed exchange that many local residents have raised as a major objection to the proposed exchange. Although the loss of that acreage is acknowledged, there is no recognition anywhere in the ROD or FEIS of the concomitant benefit that would result to the public if the Federal lands were retained. Instead, even the loss of acreage is glossed over by referring, with respect to both the Federal and the non-Federal lands, that there will be a forest-wide gain of 58.61 acres. Of course, no mention is made of the fact that this gain in acreage is in a location that is completely inaccessible for half of the year and located in an area that is far removed from the Greer community. This failure to objectively weigh the two alternative scenarios through the same prism renders any conclusion regarding the public interest of the proposed exchange fatally flawed.

Moreover, when the enumerated factors are considered, it becomes clear that the record does not support the Forest Service’s conclusion that this land exchange is in the public interest. The values and public objectives of the three remote parcels to be acquired do not exceed the values and public objectives provided by the Federal property adjacent to Greer that is to be privatized.

**a. The needs of State and local residents and their economies.**

One of the principal factors to be considered in evaluating whether an exchange is in the public interest is the needs of State and local residents and their economies. Yet, the ROD does not even address this factor let alone weigh it in evaluating whether the proposed exchange is in the public interest. As a review of the history of this exchange reveals, there is overwhelming opposition to the Exchange by Greer residents and property owners. See Comment Letters submitted in response to the first draft Environmental Assessment, the revised draft Environmental Assessment dated April 2004, and the Draft Environmental Impact Statement. To the Greer community, the Exchange represents a significant loss of public open space, a popular recreation area located in the heart of their small town, and a change in the fundamental character of their community. For these residents, this loss is in no way offset by the acquisition of the non-Federal lands, which are located in remote areas many miles from Greer.

The Greer community is extremely concerned that the Federal parcels will be developed once they are transferred into private ownership. As discussed further below, development of the property

would significantly impact the community in myriad ways and the residents' concerns in this regard are legitimate. Although the Forest Service purports to have considered the potential development of the Federal properties in the DEIS, the Forest Service dismisses all of the concerns raised by the Greer community based on the fact that future uses would occur within the constraints of applicable Federal and State laws. As appellants pointed out in their comments to the draft version of DEIS, federal, state and local laws actually would do very little, if anything, to mitigate the environmental impacts of any future development—particularly the type of development most likely to occur—“wildcat subdivisions.” Even a minimal review by the Forest Service of state and local laws would have revealed their inadequacy for addressing the environmental degradation that would be caused by development of the Federal property. Yet, the Forest Service failed to even perform a cursory analysis. By failing to inquire into and evaluate the efficacy of the state and local laws it relied upon, the Forest Service has failed to fully and objectively consider the needs of the State and local residents and their economies. As such, it has acted in an arbitrary capricious manner and contrary to the mandates of the FLPMA.

Similarly, the Forest Service continues to justify the exchange based on a claim that its management direction for the Greer recreation area is to use the exchange process for meeting the “expansion needs” of the community. However, they offer no evidence of any “expansion needs,” but rather simply cite to the Apache-Sitgreaves Land Management Plan. (See FEIS, Appendix C, Response to Comment Letter #05, Item 2). This interpretation of the ASLMP, however, is tenuous at best and there has never been any analysis to establish a need for expansion that could not be accommodated by the existing undeveloped lands in Greer. In fact, the management direction that the Forest Service refers to reads more like criteria for federal lands to be exchanged than a *directive* that the lands be exchanged.

**b. The protection of fish and wildlife habitats**

Another factor which the Forest Service failed to adequately consider in evaluating whether the proposed exchange was in the public interest is the protection of fish and wildlife habitats. The Forest Service is correct when it notes that the non-Federal lands contain valuable riparian and wetland habitat. However, the Forest Service completely fails to consider the habitat values of the Federal parcels and the impact that privatization of those parcels would have on nearby fish and wildlife habitats.

The community of Greer is unique because it has one small access road, Highway 373, with no alternative entrance or exit, and no possible way to alter that due to the terrain around it. A significant portion of the land bordering the six mile corridor of Highway 373 is national forest. Consequently, Greer is a haven for wildlife. Tract A of the Federal land is located in the middle of one of two remaining wildlife corridors on the six-mile stretch of Highway 373 that runs through Greer. Large elk herds, mule deer, occasional whitetail deer, turkey and even antelope herds frequent this area. Tract A is also adjacent to the Lang Creek riparian area which is important beaver habitat. If this property were to be developed, that development would have a detrimental impact on both the wildlife corridor and the adjacent riparian area.

Similarly, as Arizona Game and Fish has recognized, Tract B provides “important wildlife habitat for a variety of species, including elk, mule deer, turkey, black bear and the spotted owl.” See October 4, 1993 letter from Arizona Game and Fish, previously submitted by Dave Bennett. The parcel also borders the particularly pristine and lush riparian areas of Hall, Benny and Rosey Creeks. This area is the second of the two remaining elk corridors for herds moving off of their summer range down into the Little Colorado River and South Fork winter range areas.

In evaluating the proposed exchange, the Forest Service considered only the habitat and wildlife values of the non-Federal lands and failed to consider the habitat and wildlife values that would be advanced if the Federal parcels were retained. Further, by downplaying the likelihood of development of the Federal lands and ignoring the unlikelihood of development of the non-Federal lands, the Forest Service overstated the extent to which the proposed exchange would secure wildlife and habitat protection. By failing to adequately and objectively evaluate the impact that the proposed exchange would have on wildlife and habitat, the Forest Service acted contrary to the mandates of the FLPMA.

**c. Watershed protection.**

In making its public interest determination, the ROD also fails to adequately consider the adverse impact that the proposed exchange will have on the local watershed. The impact on the watershed has been a frequent concern raised by Greer residents throughout these proceedings and was a principal reason for the district court’s remand. In particular, the residents have expressed concern about the impact that potential development would have on the groundwater table. As discussed at length below, however, in the ROD and FEIS the Forest Service once again fails to adequately address this issue.

In making a public interest determination, the Forest Service has an obligation to consider the potential impacts that the transfer of the Federal lands into private ownership would have on the watershed. By failing to do so, the Forest Service failed to comply with the requirements of the FLPMA.

**d. Wilderness and aesthetic values**

The ROD also fails to consider the impact that the exchange will have on wilderness and aesthetic values for the Greer area and how that impact would be avoided by retention of the Federal lands. As many of the written comments indicated, one of the principal values to the residents of Greer has been the community’s rural character. Much of that character can be attributed to the abundant national forest property located in the center of town. The loss of a major portion of the public lands, potentially combined with subsequent development of the property once it is privatized, represents a very real threat to the aesthetic value of Greer. The Forest Service, however, continues to ignore or downplay this factor in its evaluation of the proposed exchange. Rather, the Forest Service simply focused on the loss of outdoor recreation acreage. Yet, as noted above, it is not just a question of how many acres are lost, but their location in the center of the small town. Again, this is contrary to the express requirements of the FLPMA and its supporting regulations.

**e. Recreation Opportunities and Public Access**

Finally, the Forest Service continues in its failure to honestly and objectively evaluate the loss of recreation opportunities and public access that the proposed exchange represents. In evaluating the loss of recreation opportunities, the ROD and FEIS focus solely on the amount of acreage lost and acquired, but fail to consider the qualitative differences of those acres for recreation purposes. Specifically, the Forest Service fails to acknowledge that the non-Federal lands do not realistically offer an alternative recreation area to the Federal acres lost to the public; consequently, the Service does not honestly and openly confront the fact that the Exchange will result in a net loss of public lands that are accessible and conveniently available to State and local residents for recreation.

In summary, in its ROD, the Forest Service failed to adequately consider all of the factors necessary to determine whether the proposed exchange is in the public interest. Throughout its analysis, the Forest Service avoids an objective and honest analysis of the impact that the loss of the Federal lands would have on the needs of State and local residents, the wildlife and habitat values of the area, the watershed, the wilderness and aesthetic values, and the recreation opportunities. This lack of candor on the part of the Government understates the value of retaining the Federal lands and, therefore, renders its “public interest” analysis wholly inadequate. As a result, the proposed approval of the exchange should be set aside and the exchange should not go forward until an honest and thorough analysis is completed to determine the values and objectives that would be met by retaining the Federal property.

**B. Violations of the National Environmental Policy Act.**

In approving the proposed land exchange, the Forest Service has also failed to comply with the regulations promulgated under the National Environmental Policy Act (NEPA). The purpose of the NEPA analysis is to ensure that the agency has conducted an adequate assessment of the environmental impacts of an exchange. In NEPA, Congress recognized the “profound impact” of human activities on the environment and declared a national policy “to create and maintain conditions under which man and nature can exist in productive harmony.” 42 U.S.C. § 4331(a). To further this policy, NEPA “establishes ‘action-forcing’ procedures that require agencies to take a ‘hard look’ at environmental consequences.” *Metcalf v. Daley*, 214 F.3d 1135, 1141 (9th Cir. 2000) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989)). Chief among these procedures is the preparation of an environmental impact statement (“EIS”).

NEPA requires preparation of an EIS for “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). Every EIS must “provide [a] full and fair discussion of significant environmental impacts” of the proposed agency action. 40 C.F.R. § 1502.1. An EIS serves two purposes:

First, [i]t ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts. Second, it guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.

*Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 768 (2004) (internal quotation marks and citations omitted). In addition to the proposed agency action, every EIS must “[r]igorously explore and objectively evaluate all reasonable alternatives” to that action. 40 C.F.R. § 1502.14(a). The analysis of alternatives to the proposed action is “the heart of the environmental impact statement.” *Or. Natural Desert Ass'n v. Bureau of Land Mgmt.*, 531 F.3d 1114, 1121 (9th Cir. 2008) (quoting 40 C.F.R. § 1502.14). “The existence of reasonable but unexamined alternatives renders an EIS inadequate.” *Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998).

The FEIS prepared by the Forest Service in this case is inadequate for a number of reasons. Although it purports to address the flaws identified by the district court, the analysis is still inadequate. Moreover, when these deficiencies were identified during the public comment period, the Forest Service either failed to address them or undertook additional analysis which was similarly flawed. These shortcomings were further compounded by the Forest Service’s failure to submit these supplemental analyses to additional public comment. As a result, the Forest Service has based its ROD on a FEIS that is premised upon incorrect factual information, flawed methodologies, and erroneous conclusions.

**1. The Forest Service Continues to Use a Development Scenario That Is Unrealistic and Fails to Consider all of the Potential Impacts of “Wildcat” Development.**

As the Appellants noted in our comments on the DEIS, the projected development that is used by the Forest Service to analyze direct, indirect and cumulative impacts of the proposed exchange is unrealistic and not consistent with recent experience in the Greer area. The Forest Service’s reliance upon the development patterns of Crosby Acres (using inapplicable historic growth rates) and a subdivision in Eager, Arizona (that is inconsistent with development norms in Greer) when more relevant data are available is inappropriate and contrary to law.

Further, although the Forest Service analyzes a scenario where the property is developed using “lot splits” it does not address all of the potential environmental impacts of such development if it is not undertaken as a formal subdivision development, subject to local and state requirements for multi-home developments. As we have commented before, “wildcat development” continues to be a significant problem throughout Arizona and is a well-recognized deficiency or “loophole” in the authority given to counties to regulate development. The environmental impacts of such unregulated, but legal, development could be significant and extend beyond the impacts on water supply. The problem with unregulated or “wildcat” development is that because it is not governed by subdivision regulations, basic infrastructure is not required and is often not provided. Because the FEIS relies upon compliance with local and state development regulation but fails to recognize the impacts associated with this loophole that continue to plague Arizona communities (see e.g. [http://www.azre.gov/PUBLIC\\_INFO/Press\\_Releases/Press\\_Rel\\_020608\\_PARTNERS.pdf](http://www.azre.gov/PUBLIC_INFO/Press_Releases/Press_Rel_020608_PARTNERS.pdf) , press release announcing a Task Force formed by the Arizona Department of Real Estate to address the issue), it continues to fall short of considering the full range of environmental impacts that could result from the reasonably foreseeable development.

In its response to comments, the Forest Service defends its analysis of the potential development of the Federal lands, but fails to address the issue of unregulated, but legal development and the potential environmental impacts that it would have on the area. That refusal to consider a reasonably foreseeable event that has the potential to

**2. The FEIS Fails to Consider the Reasonably Foreseeable Development of Both the Federal Lands and the Other Adjacent Parcels Already Owned by the Exchange Proponent.**

In our comments to the DEIS, we once again raised a glaring problem with the Forest Service's cumulative impacts analysis of the proposed exchange: the agency continues to ignore the combined impact of the previous exchange between the Service and Mr. Owens and the proposed exchange. In the previous exchange, a total of 209.15 acres were conveyed from the United States of America to Transamerica Trust No. 84-843. The Trust then conveyed 189 acres to Mr. Owens and approximately 20 acres to two other individuals. By virtue of this previous exchange, Mr. Owens already owns a substantial amount of property in the immediate area. In evaluating the cumulative effect of the current proposed exchange, the Forest Service has not factored in the fact that once the exchange is completed, a single owner—Mr. Owens—will control over 500 acres of prime land available for development. Even if this property is developed at a density of 1 house per acre, that represents a potential of another 400 to 500 houses. There are currently approximately 600 property owners in the Greer area. Adding another 400 to 500 would have a far more significant impact than what is contemplated in FEIS as the “worst case scenario” (a maximum of 258 new lots). In fact, an entirely foreseeable “worst case scenario” is a development one and half times that size.

In its Response to Comments in the FEIS, the Forest Service simply relied upon the fact that the exchange proponent has not, to date, attempted to develop the property he received in 1993. That fact, however, misses the larger point. If it is allowed to proceed, the proposed exchange, when combined with the prior 1993 exchange, will have the effect of creating a very large contiguous parcel of land that is owned by a single individual. If that individual already owns close to 200 acres in the area, what possible reason could he have for acquiring another 300+ adjacent acres unless it is for development of the entire holding. This makes the potential impact of the conveyance significantly greater than if the exchange resulted in Mr. Owens holding only the 337.74 acres that the Forest Service proposes to convey as part of the proposed exchange.

**3. The Hydrological Analysis of the Impact of the Reasonably Foreseeable Development of the Federal Lands Is Inadequate Because It Is Based Upon Incorrect Information and a Flawed Methodology, Which Would Have Been Revealed if the Supplemental Study Had Been Subject to Notice and Comment; The Forest Service's Reliance Upon this Analysis Is Arbitrary and Capricious and Contrary to Law.**

In response to the district court's ruling, the Forest Service performed another analysis of the hydrologic impact of the reasonably foreseeable development which it included in the DEIS. As several commenters, including the Appellants and Dr. Thomas Maddock, III, the Head of the Hydrology and Water Resources Department of the University of Arizona, pointed out, however, the analysis relied upon in the DEIS was not only limited, it was based upon questionable assumptions.

As Dr. Maddock noted in the comments he submitted, many of the assumptions used to model the impacts were completely speculative and are called into question by actual events in the area.

As a result of these comments, the Forest Service undertook further analysis and prepared an Amendment to the Geological Resources Report dated August 18, 2009. That Amendment, which was not subject to public notice and comment, is relied upon by the Forest Service in both the FEIS and the ROD. Specifically, the ROD states that,

[t]he model shows that the shallow White Mountain aquifer could provide a viable water supply to a worst case development scenario of 258-home build out, each with individual shallow wells. In addition, modeling indicated that water use would represent 0.2% of the average flow of the Little Colorado River and no significant impacts to flows would occur.

ROD 9-10.

The additional analysis contained in the Amendment, however, is replete with problems that render its analysis unreliable. As more fully documented by Dr. Maddock and Edwin Biggers in the appeals that they have filed in this matter (and which we incorporate herein by reference), the slug tests and analysis presented in the amended report are not at all sufficient to demonstrate that there would be no significant impact to the existing wells. Specifically, the calculation of potential drawdown in the amended report is unreliable because, as discussed more fully below, the analysis: 1) relies upon an average of two out of three test wells that is not likely to be representative of the more typical hydraulic conductivity in the immediate vicinity; 2) is incomplete because it fails to include drawdown from existing wells in the immediate vicinity; 3) incorrectly relies upon recharge of 50% from septic tanks when, in fact, any new development would be required to hook up to the sewer system which would discharge miles below the subject area; and 4) fails to accurately predict the number of future wells in the area in the 100 year timeframe utilized.

First, to calculate the potential drawdown, the Forest Service had slug tests performed on three wells and then, because the data from one of the wells was unreliable, used the average hydraulic conductivity of just two of the wells as the basis for its calculation. While these slug tests gave some information about aquifer characteristics, they were simply too limited and their results were too varied to use as the sole basis for modeling. Particularly because an error in the calculation of the hydraulic conductivity could skew the results dramatically. For example, in running the model, the Forest Service assumed used an average hydraulic conductivity of 13.4 feet per day based on the Squirrel Spring well's rate of 24.6 feet/day and the proponent's well's rate of 2.2/feet per day. Obviously, the disparity between the two wells by itself calls into question the appropriateness of using an average in the modeling. Moreover, it is quite likely that the hydraulic conductivity in the area of the Federal lands is closer to the 2 feet /day seen in Owens' well, or even far less. If this lesser value had been used in the analysis, the projected drawdown would have been increased by a factor of six. Obviously, with such an increased drawdown, the impacts to the water table would be significantly greater than the FEIS suggests.

Second, the analysis also failed to include the drawdown from the existing wells in the immediate vicinity. Obviously, one of the critical aspects of the EIS analysis is to consider “cumulative” impacts. That analysis, must by necessity, evaluate the future impacts in the context of existing conditions.

Third, the supplemental modeling relies heavily upon a factual assumption that is simply incorrect: “[a]ll residents would be disposing of household waste water by means of a septic system.” Amendment, p. 3. Reference to the importance of recharge through the septic systems is referenced throughout the Report, the FEIS, and the Biological Assessment. However, the fact is that all new development in the area would be *required by law* to hook up to the Little Colorado Sanitation System. Thus, all household waste would NOT be available for recharge but would instead be collected by sewer and eventually deposited in settling ponds miles downstream from the local area.

Finally, like the FEIS, the Amendment limits its analysis of reasonably foreseeable development to the 258 home scenario that contemplates only the development of the Federal property. As discussed above, this development scenario is unrealistic for the short term. It is most certainly unrealistic under the 100 year time frame contemplated by the amended report.

In sum, because as the district court recognized, the potential adverse impact to the water table is so significant, a thorough evaluation is mandated by NEPA. Instead of doing a few limited slug tests, the Forest Service should have undertaken a pump test or draw down test to determine aquifer characteristics, as at least one previous commenter suggested. By opting instead to do its analysis by half measures, the Forest Service has only compounded the problems with the earlier study relied upon in the DEIS. The Forest Service’s reliance on the supplemented and amended Geological Resources Study as a basis for its ROD renders that decision arbitrary and capricious, and the failure to submit the supplemental information to public notice and comment was contrary to law. *See Ober v. EPA*, 84 F. 3d 304 (9<sup>th</sup> Cir. 1996)(held that where agency based its decision on information obtained after the initial comment period, it was obligated to provide the public opportunity for comment on the new information).

#### **4. Relying Upon the Erroneous Geological Resources Report, the FEIS Fails to Adequately Evaluate the Impacts that Groundwater Pumping Associated with the Development of the Federal Lands Will Have on Nearby Riparian Areas.**

We appreciate that in response to our earlier comments the Forest Service made an effort to consider the impact that the reasonably foreseeable development will have on the nearby riparian areas and the local watershed, including the Little Colorado River. However, for the reasons noted above, the analysis in the supplemented Geological Resources Report is flawed and the conclusion that there will be little impact on nearby riparian areas is unreliable and demonstrably incorrect.

As we have also noted previously, there are several riparian areas either adjacent to the Federal properties or nearby. The center of the potential new well field is about 600 yards from Hall

Creek. Rosey Creek runs along the southern edge of Tract B and is between 100 and 200 yards away. Benny Creek runs about 600 yards south of Rosey Creek and the area between them is marshy and riparian. There is also a spring, Squirrel Spring, about 250 yards from the southeast corner of Tract B. Lang Creek runs about 100 to 200 yards to the north and east of Tract A. It is less than 100 yards from the northwest and northeast corners of the Tract. These waters are all tributaries of the Little Colorado River.

Although the Amendment to the Geologic Resource Report provides a cursory assessment of the impact of 258 wells on stream flow, it is flawed. Based on a revised simulation and analysis using the results of the slug tests, it concludes that the impact of the Little Colorado would be minimal. As discussed above, however, those slug tests, however, are insufficient to give a realistic understanding of the characteristics of this shallow aquifer. The analysis also used faulty assumptions such as recharge from septic tanks and failed to consider the pumping that already exists in the immediate vicinity. It also did not consider additional wells that are expected to be added when the formerly exchanged 209 acres is developed over a longer time frame. Clearly, when these flaws are considered, it becomes apparent that the reasonably foreseeable development that would result from the proposed exchange would have an adverse impact on nearby riparian areas. Moreover, the impact on the small streams, especially Hall Creek, would be greatly magnified over the impact on the Little Colorado due to the much smaller flow in the streams. The Forest Service's analysis of this impact remains woefully inadequate.

**5. The Biological Evaluation of the Impacts on Endangered Species Is Also Inadequate Because it Relies Upon the Erroneous Conclusions of the Amended Geological Resources Report .**

As we noted in our comments on the DEIS, The Forest Service's responsibilities under NEPA and the ESA extend to the impacts of groundwater pumping on nearby riparian habitats that support threatened and endangered species. *See Southwest Center for Biological Diversity v. Perry*, CIV 94-598 TUC ACM (Order filed August 30, 1995 at 21-22.) (“[I]t is hard to imagine anything more obvious than the impact of Sierra Vista's continued growth on the nearby San Pedro River and the federally protected and managed Riparian Area and species there...[C]reeping development and unrestrained draining of the aquifer represents a real threat to the Riparian Area [and]...the Army must not turn a blind eye to this problem or to the fact that its actions may tend to exacerbate it.”) Moreover, if there is a potential adverse impact on those species, Section 7 consultation and a biological opinion by USFW is required.

Here again, we appreciate the fact that in response to our comments, the Forest Service attempted to rectify its previous failure to even consider these impacts, but once again, the attempted analysis is rendered inadequate by the complete reliance upon the conclusions of the Amendment to the Geological Resources Report. Virtually all of the conclusions regarding impact to threatened and endangered species set forth in the Biological Evaluation are premised on the conclusion that any reasonably foreseeable development resulting from the proposed exchange would not have an impact on nearby riparian areas. Interestingly, this reliance on the Amendment presents an inexplicable inconsistency in the Biological Evaluation. On page 2, the Evaluation includes among its development assumptions, “ 1 acre home sites with a total of 258 single family homes...the existing

Little Colorado Sanitary District would collect and treat wastewater of the development,” yet on page 6 of the Evaluation, the author states, “The residents of the proposed development will be utilizing septic tanks for domestic wastewater disposal.” This glaring error regarding an assumption that has a major impact on the analysis suggests both a lack of critical thinking on the part of the author and an inclination on the part of the government toward a predetermined outcome.

**Conclusion.**

For all of the foregoing reasons, Appellants respectfully request that the decision approving the Black River Land Exchange be withdrawn until an appropriate and legal analysis is completed, including a revised Environmental Impact Statement and an appropriate hydrological study.

Respectfully submitted

A handwritten signature in black ink, appearing to read "Joy E. Herr-Cardillo". The signature is fluid and cursive, with a large initial "J" and "H".

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