

July 9, 2003

By Certified U.S. mail

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RE: Southern Corridor DEIS Comments

Dear Mr. Punske,

As you know, the Utah Native Plant Society filed a request on May 23, 2003 for an extension of the deadline for comments on the Southern Corridor DEIS. Thank you for extending the comment period to July 11, 2003. We wish to revise some of our previously submitted comments and have changed the text accordingly.

The Utah Native Plant Society was founded in 1978 and is dedicated to the preservation and understanding of Utah native wildflowers and their habitats. We have 9 chapters and 500 members statewide, comprised of both professional botanists and amateur plant enthusiasts. We have reviewed the DEIS for the Southern Corridor road project, near St. George and wish to make comment on its impacts and assumptions. No other federally funded project in Utah that anyone of us can remember has ever involved more federally listed threatened or

endangered wildlife species than this one, which includes four federally endangered plant species.

The Grand Canyon Trust is a non-profit conservation organization that is dedicated to the protection and restoration of the Colorado Plateau. We are very concerned about the potential impacts of this project on both the human and natural communities of southwest Utah.

The Center for Biological Diversity protects endangered species and wild places of North America and the Pacific through science, policy, education, citizen activism and environmental law. We have 7,500 members across Utah and the nation.

Purpose and Need:

- THE DEIS ASSUMES STATUS QUO AND FAILS TO TAKE INTO ACCOUNT TRENDS AND RECENT EVENTS

The DEIS fails to take into account current and recent events that could result in a slowdown in the St. George area population growth and needs to be re-evaluated in the light of such things as 9-11, terrorism, wars, recession, hanta virus and SARS.

The airline industry is severely depressed with many of the major carriers near bankruptcy and shows few signs of recovery in a post 9-11 world; this road is being built primarily to service an airport that could actually show a decline in usage. The DEIS fails to acknowledge the trend towards broad acceptance of mass transit across the country and what role it may play in St. George, assuming energy consumption will stay like it is even as the American energy system is nearing a stage of crisis in terms of available fossil fuels. Tourism may not play the role in the future that it has in the past. The building of the new St. George airport, which the Southern Corridor will serve, could be postponed.

St. George is not an industrial city and has very little industry base. The DEIS acknowledges a lack of a centralized business district. The population of St. George has always been based on retirees and tourists and the businesses that support them. In the past, retirees and tourists who do not need roads to go to work were fueling growth of the population. The economy remains depressed and shows no signs of improvement; this has slowed tourism and, in turn, the need for growth. The county can therefore control this growth with appropriate planning and create an open space environment in an extremely arid, water-poor area.

The DEIS Ignores the fact that global warming is becoming a reality and the current climatic/drought stage could in fact last for a considerable period of time. Climatic/drought conditions have persisted through most of the 1990's creating

serious problems and warning signs that cannot be ignored: the Virgin River in the year 2000 was approximately 25% of normal and Lake Powell is at 49% of normal in early 2003. The continued rise in temperatures (record breaking weather several years in a row) may make the St. George area a less desirable place to live. The DEIS failed to analyze if the limiting factor of water supply will limit growth over the next 30 years. In fact it is not illogical to assume that the drought could extend throughout the entire period that the DEIS is intended to cover: an example would be the recent 30-year drought in northern Africa and currently there is no basis to assume this period of drought in Washington County will end any time soon.

The DEIS fails to take into account the role that interest rates play in making housing in St. George affordable to those who move to town. Currently interest rates are at a 45-year low and can only go up reducing immigration to St. George and reducing the population growth rate in the future.

The DEIS further assumes that the next 30 years will be one of high growth like the last 30 years. The DEIS, section 1.5.1, states that the population of St. George in 2030 will be 122,727 people, according to the model from the Governor's Office of Planning and Budget. A confidence interval or probability of this increase occurring is not given. Furthermore, these estimates are deemed too low because of future land use plans in St. George and the estimates are increased to 147,990 residents in 2030 and are used in the DEIS to justify this project. However, the large supply of available land in the land use plan does not create demand for that land. Taking into account the above long term negative factors on demand, it is just as reasonable to assume that a no growth or slow growth scenario will take place. Given a 2% per year growth rate to 2030 the population would only be 90,568. This lower number does not justify the proposed Southern Corridor and calls out for a more conservative project.

Proposed Alternatives:

- NO BUILD ALTERNATIVE IS INVALID

A valid "no-build" alternative has not been provided in the DEIS. Further, the arguments "for" the provided no-build alternative are at least in part not valid. The statement on page 4-87 (paragraph 4.14.1.1) is speculative and the impacts would have to be analyzed separately. It is a false statement that threatened and endangered species habitats were not found in the St. George replacement airport.

Of most concern, the DEIS makes the following contradictory statements concerning the three alternatives (DEIS p. S-8):

"This alternative would help BLM **provide a barrier to protect the Warner Ridge** population of endangered bearclaw poppy from recreation

activities.”

And then this statement about the no-build alternative:

"This alternative **would not provide a barrier to protect the Warner Ridge** population of endangered bearclaw poppy from recreation activities."

Beyond the contradictory nature of these statements, we completely reject them as lacking scientific basis and in fact, are misleading and should be removed from the DEIS and not be considered as a favorable factor in connection with any “build” alternative. A “no-build” alternative must be developed that will have no impacts on rare plant species.

- OTHER ALTERNATIVES HAVE NOT BEEN ADEQUATELY EXPLORED

A consideration of other options has not been provided. The DEIS only considers alternatives to the northern connection route to the town of Hurricane. No alternatives are considered near the new airport. The widening of I-15 or moving the road further south (into Arizona if necessary) to avoid White Dome are other possibilities that have not been considered.

Environmental Impacts:

- SEED BANK STUDY NEEDED

The DEIS fails to provide any study for seeds in the soil. It is well known that seeds of *Arctomecon humilis* are initially undeveloped and may take several years for the embryo to develop. The amount of seed bank (especially given drought conditions of the past five years) has been shown to be a critical factor in the survival of this species (and could also be in connection with others). Just because a live plant specimen was not found does not mean that plants have not grown in any proposed areas of disturbance and seed bank studies must be conducted for the federally listed species. It is known that the *Arctomecon humilis* seeds can be viable for ten years or more.

- RARE BEE STUDY NEEDED

While the DEIS makes reference to the fact that rare bee/pollinators are in the study area (see pp. 4-88-89), there is in fact no scientific basis to gauge the impacts since the locations of the pollinators are not known. Therefore, protecting "ground nesting pollinators" as described on DEIS p. 4-126 cannot possibly be undertaken without a bee/pollinator study, which needs to be done in connection with *Arctomecon humilis*, *Astragalus holmgreniorum* and *Pediocactus sileri*.

Any plan to ensure the survival of the bearclaw poppy, according to Vincent J. Tepedino (research entomologist, USU Bee Lab), must include protection of its

pollinators. The USF&WS acknowledges that little is known about the rare bee pollinators. In fact, there may be more than the two native bee species that are involved (there may be two species of *Perdita* for example). *Perdita meconis* was only first described in 1993; it is considered rare and should be managed as a sensitive species. Utah has a huge diversity (over 1,000 species) of native bees and there could be a heretofore-unidentified bee species that is playing a significant role in the survival of the federally listed species. In addition to this, while the *Synhalonia* is not as rare as *P. meconis*, its nesting locations are not known.

The DEIS contains inaccurate statements which indicate that the appropriate experts, such as Vincent Tepedino, have not been properly consulted. For example:

“*Synhalonia* is not specific to poppies.” (DEIS, p. 4-88)

This is incorrect and it is obvious that qualified entomology experts, such as Vincent Tepedino, have not been consulted.

The statement that the milkvetch is "self-compatible and not totally dependent on animal pollinators" (DEIS, p. 4-88) is not entirely true. Studies need to be conducted to determine the (a) quantity and (b) viability of self-pollinated versus out-crossed fruits.

The DEIS has not taken into consideration available data from studies conducted by the USU Bee Lab which could shed further light on the status of bee/pollinators in the proposed construction area.

- POLLINATION STUDY NEEDED

This is a different issue, although related, to the rare bee issue. The new highway will likely create a barrier to pollinators who are traveling between populations. Contrary to the assertion of the study, construction of the highway will likely reduce the gene flow and lead to gene loss or genetic drift and hasten the extinction of three federally listed endangered plant species. While specific studies about bees and highway traffic are not known, there are studies analyzing the impact of highway traffic on insects which show heavy insect losses and this impact has not been gauged in any way in the DEIS. For example, *Synlallonia quadricincta* is suspected of being capable of pollinating Warner Ridge and White Dome; what impact would the construction of the highway have on this process?

- SOIL ANALYSIS NEEDED

There appears to be no soil analysis considered in the DEIS. Cryptogamic soil has been determined to be important for the survival of some of the listed plants species. Appreciable loss of cryptogamic soil from highway construction could

have a serious negative effect on the endangered plant populations; it is vital that this issue be addressed.

- CRITICAL HABITAT DESIGNATION REQUIRED

Recently (late June 2003), a preliminary meeting was held by the USFWS in St. George to discuss a multi-species recovery plan for the four listed plant species identified by this project (three of which have been identified as being likely harmed). Follow-up meetings are planned for the fall. The USFWS also intends to designate critical habitat for the two *Astragalus* species as well as *Arctomecon humilis*. Until the multi-species recovery plan process is completed and the critical habitat is designated, no disturbance of actual or potential habitat should occur. After critical habitats for all endangered species in the project have been designated these habitats should be avoided by any road project.

- SENSITIVE PLANT SPECIES NOT SURVEYED

The DEIS and prior plant surveys limited its scope of analysis solely to four federally listed endangered plant species. The DEIS is required to consider federal and state sensitive and rare plant species as well. The viability of all species within the project must be ensured including the following, which are known from the St. George area and grow within the elevation range of the Southern Corridor road project:

Camissonia parryi
Cirsium virginense
Cynanchum utahense
Enceliopsis argophylla
Eriogonum subreniforme
Lomatium scabrum var. *tripinnatum*
Oenothera deltoides var. *decumbens*
Pediomelum mephiticum
Petalonyx parryi
Phacelia anelsonii
Sclerocactus johnsonii
Yucca elata var. *utahensis*

All of these sensitive species are on the Utah Division of Wildlife Resources, June 1998 "rare" or "watch" species lists. *Cirsium virginense* and *Petalonyx parryi* are on the BLM, August 2002, draft sensitive species list for Utah. *Cirsium virginense*, *Enceliopsis argophylla* and *Phacelia anelsonii* are on the Nevada Natural Heritage rare or watch lists.

Ron Kass listed *Petalonyx parryi* as a species associated with *Arctomecon humilis* on May 8, 2000 at Warner Ridge in his technical report of September 2000. He also located *Petalonyx parryi* in the survey of the Atkinville interchange on October 31, 2000.

Tetradymia axillaris var. *longispina* and *Tricardia watsoni* are on the BLM Arizona Strip Field Office Special Status List, are known from Washington County at the right elevation, and should be surveyed for too. *Enceliopsis argophylla* is also on the BLM Arizona Strip list.

Failure to survey for these species and mitigate for their presence could trigger the need for these species to be listed, i.e. could cause them to become threatened or endangered.

- PLANT SURVEY INADEQUACIES

Miscellaneous comments:

The method of the plant pre-surveys only involved checking records collected from the B.Y.U. Herbarium. Other major herbariums, as well as the Utah Natural Heritage Program, should also have been consulted.

Dr. Kass is a well-known botanist, however, he assisted with other bird and animal surveys. His credentials in this regard have not been presented in the DEIS.

3-51 - *Arctomecon humilis* occurs throughout White Dome and White Dome represents critical habitat for the species.

3-52 - *Pediocactus sileri* has already been "taken" in connection with the airport project and it is likely to occur in the study area.

- BIOLOGIC ASSESSMENT LACKS SCIENTIFIC EVIDENCE

The DEIS one-for-one proposal for habitat exchange is not acceptable and is not scientifically valid. The federally listed species cannot be successfully germinated and survive for any period of time outside of their natural environment, nor can they be transplanted successfully. Their unique growing conditions cannot be easily duplicated. The one-for-one exchange does not provide any real mitigation of the damage whatsoever. Further, if it were to do any possible good and have any chance to succeed in this extremely fragile, arid land, the exchange would have to be more like 50:1.

Furthermore, there is no scientific basis or evidence that is indicated in the biologic assessment that the highway will form a corridor to help protect the

northernmost population of *Arctomecon humilis* on Warner Ridge. The fact is that this area is already at last partly fenced and a more appropriate mitigation action would be to fix the broken fence, add more fence where needed, patrol the area and increase public education. The highway will not fix the ORV/OHV problem, in fact, quite the opposite will occur. At least one interchange has been proposed for the area that will only INCREASE access to Warner Ridge, not decrease it.

We are unaware of a single instance where a highway has been proven to be a corridor for an endangered plant species and request explanation for that rationale, which we believe is entirely without basis. Richard Forman, one of the authors of the new book *Road Ecology: Science and Solutions* (Island Press, 2003), suggests that busy roads create an "avoidance zone" which is shunned by many types of wildlife and that it is not a good use of funds for conservation organizations to be protecting wildlife habitats next to busy roads. Heavily used roads fragment sensitive plant populations and habitats rather than protect them.

- THE MOST KNOWLEDGABLE EXPERTS HAVE NOT BEEN CONSULTED

On page 4-82 of the DEIS the statement is made that "No trend data on plant species were available." This is simply not true. Drs. Harper and Van Buren have been collecting data in the area on these species for over ten years. The appropriate experts have not been consulted in the drafting of this DEIS. On page 4-89 it is stated that the "bearclaw poppy grows abundantly at White Dome." This is not true. White Dome, a critical habitat for *Arctomecon humilis*, has been (despite the efforts of the State Lands & Forestry in the 1980's), badly damaged by ORV/OHV use and while some plants do still grow there, they are by no means growing abundantly. Page 4-89 also refers to a fencing of White Dome, which is something we have always supported, but as far as we are aware is not contained in the Washington County habitat Conservation Plan.

The BLM Arizona Strip Field Office has maintained a monitoring file for *Astragalus holmgrenorum* since 1988. The BLM Arizona Strip Field Office also maintains a monitoring file for *Pediocactus sileri*. These files should have been reviewed for the DEIS and trends therein stated in the DEIS.

- MITIGATION: NO HABITAT LOSS IS ACCEPTABLE

Last year's continued drought has created the worst ever germination for both the poppy and the milkvetch - these two species may be in the worst condition ever. Data is available showing population losses are as much as 75% (Shinob Kibe preserve) compared to two years ago. No further loss of habitat is acceptable to this species. DEIS page 4-99, for example, seems to imply that because of the claimed 0.1% impact to poppy habitat that the impact will be of no consequence.

In fact, the full cumulative impacts of the last 30 years have shown exactly these kinds of impacts, which are leading these species to the path of extinction. Until or unless the USF&WS designates critical habitat for these species, no further habitat on which the species, or their seeds, are found or are known to occur can be lost.

- BLM MANAGEMENT AT WARNER RIDGE AND ACEC CONFLICTS

A highway should not be built through an area already designated as a federal "Area of Critical Environmental Concern," ACEC. The highway should completely avoid traversing any part of the three ACEC's in the corridor: Lower Virgin River, Red Bluff and Warner Ridge/Fort Pierce. Further, in the DEIS, p.4-99, it is stated that the project would allow the BLM "to better manage OHV access along Warner Ridge." It is not understood how this could possibly be true in view of the fact that the highway will bring greater access points, more fence that will likely not be kept in repair, more people who will use the equestrian/hiking trail for OHV use, at least one and maybe more new interchanges into the area.

- NO PART OF THE PROJECT SHOULD INTERFERE WITH WHITE DOME

White Dome was (in approximately December of 1983) declared a state ACEC. No part of the project should intersect or traverse White Dome.

- ROAD CONSTRUCTION WILL INCREASE INVASIVE SPECIES

Construction of the project will bring increased invasive species, which are a problem for several of the listed species, especially in view of the location of the highway proximate to these populations. The impacts of these invasive species on listed species, sensitive species and rare bee pollinators have not been analyzed in the DEIS.

- CHEMICALS SPRAY IMPACT

To control invasive species mentioned above and in the rights of way proposed, it is presumed that chemical sprays may be used by UDOT to manage these areas. The impact of the use of these chemical sprays on rare bee pollinators as well on other sensitive wildlife (including plant species) has not been analyzed in the DEIS. Articles published by Vincent Tepedino need to be carefully studied (for example, *The Reproductive Biology of Rare Rangeland Plants and Their Vulnerability to Insecticides* – this article in fact includes information relating to *Arctomecon humilis* and *Pediocactus sileri* – see http://www.sidney.ars.usda.gov/grasshopper/Handbook/pdfs/Mont_III/III5.pdf). In conjunction with pollination biology studies, the appropriate "buffer zone" for the federally listed and other rare/sensitive species that will be impacted needs to be determined.

TOXIC RUN-OFF FROM HIGHWAYS

Paragraph 6.4.3.2 acknowledges the toxic run-off from the new highway that will occur from rainstorms. Yet no analysis has been done to determine what impact this will have on rare bee pollinators as well as on other sensitive wildlife (including plant species).

- RE-SURVEYS SHOULD OCCUR AT THE APPROPRIATE TIMES

Re-surveys (see page 4-126 for example) need to be conducted at times when the listed species are in bloom. This includes early April to at least early June; the bloom times vary with the amount of precipitation.

- RE-VEGETATION

We support revegetation of native species, but they should be indigenous to Washington County (see for example page 4-126). Xeriscaping (see page 6-8) must be carefully managed to avoid using plants that are known to become invasive.

- ORV STUDY NEEDED

Construction of the highway will attract more people, more development, and lead to more ORV/OHV use, likely hastening the extinction of the rare plant species. Analysis of the impacts of increased ORV/OHV use needs to be done.

- POLICY OF OPEN SPACE INCREASES, NOT DECREASES THE AREA'S VALUE

A retiree/service economy as acknowledged by the study dictates a policy and culture of open space which will increase, in the long term, property values as it will increase the desirability both to live and visit the St. George area. The study seems to fail to recognize this basic fact.

- THE PROPOSED HIGHWAY IS HASTENING THE DEMISE OF A SENSITIVE AREA OF BIODIVERSITY OF WHICH THERE IS NO EQUAL IN UTAH

The building of the corridor will spark development and will precipitate "sell-offs" of state lands that would otherwise not occur in the immediate future (White Dome for example) at artificially inflated prices. This will then more likely lead to a loss of habitat for rare and sensitive species.

Cumulative Impacts:

- DEIS DOES NOT DISCLOSE FULL RANGE OF CUMULATIVE IMPACTS

Pages 2-24 thru 2-26 and C-21 in the DEIS discuss the "interchange" creep that will occur. No protection will later be afforded endangered wildlife and plant species as these interchanges are built and the DEIS is not properly determining the impact of these interchanges.

Note that while on the one hand River Road is being avoided by the recommended alternatives, an interchange is being proposed with River Road under all of the build alternatives, the impact of which could be severe to the endangered and sensitive plant, bee and other wildlife species occurring in the area. Further, the Atkinville interchange appears to be designed for a "Western Corridor" that is not discussed nor its associated impact discussed in the study. The resulting combined impact of this could be devastating to the survival of the impacted species.

We applaud SITLA for taking action to identify important habitat (see paragraph 4.14.3.1). However, they may have been misled into thinking that the only "sensitive" species were those that are federally listed and surveys for "sensitive" species identified elsewhere in this letter need to also be taken into consideration.

The negative impact to St. George businesses caused by diverting traffic to Zion National Park through the new corridor has not been analyzed.

Summary

The purpose and need section of the DEIS for the proposed Southern Corridor does not substantiate and support the building of up to 28 miles of new road and as many as 18 new intersections. There are no alternatives analyzed in regard to the vast majority of the project. The "no build" alternative is invalid because it calls for the building of other roads. Further studies of sensitive, rare and threatened plant species as well as their seed-bank, soil, pollinators and habitat are called for to ensure their viability. Cumulative impacts have not been fully disclosed and studied. Mitigation measures to prevent impacts to endangered species are insufficient. Because of the inadequacies in the DEIS, any conclusions reached from the DEIS cannot be supported and are capricious and arbitrary.

Thank you for considering our comments.

Sincerely,

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CIK/UNPS