



# United States Department of the Interior



**MAY 17 2013**

IN REPLY REFER TO:

NATIONAL PARK SERVICE  
GRAND CANYON NATIONAL PARK  
P.O. BOX 129  
GRAND CANYON, ARIZONA 86023-0129

N3617 (GRCA 8213)



John Halikowski, Director  
Arizona Department of Transportation  
Mail Drop 100A  
Phoenix, Arizona 85007

Dear Mr. Halikowski:

Following are comments submitted by the National Park Service (NPS), Grand Canyon National Park (GCNP), regarding the 2014-2018 Arizona Department of Transportation (ADOT) Tentative Five-Year Transportation Facilities Construction Program (ADOT 5 Year Program). The NPS is primarily concerned about items in the Airport Capital Improvement Program regarding two airports. Grand Canyon National Park Airport (GCNPA) in Coconino County is located approximately three miles south of Grand Canyon National Park, and Grand Canyon West Airport (GCWA) in Mohave County is located approximately two miles south of the park boundary.

Improvements at both airports are proposed in the ADOT 5 Year Program to support and facilitate increased aircraft operations and increased passengers. These increases have the potential to cause significant adverse impacts to GCNP resources, depending upon how they are designed and implemented. To meet its legislative mandates to protect and manage GCNP resources, NPS must ensure that impacts are adequately evaluated and mitigated during all stages of planning, design, and construction of the airport improvements, as well as long-term operation. The NPS has technical expertise that can thoroughly identify and assess impacts on GCNP resources, values and visitors that have been generated from specific internal and external activities. Recognizing that GCNP is an integral part of not only the regional ecological, economic, and social environments, it provides significant value on a national and international scale. The NPS thus seeks to work cooperatively with ADOT and others to protect and to provide for quality visitor enjoyment of the park resources and values. It is in everyone's best interests to work together to protect the superlative resources and values of GCNP that ultimately attract people to northern Arizona, including to its airports. We believe accomplishing this requires that all federal regulations for airport expansion must be applied and met.

Following is a synopsis of our concerns around impacts to GCNP resources and requests for inclusion, broken down by airports and actions.

## **Grand Canyon National Park Airport (GCNPA) – Coconino County**

The ADOT 5 Year Program identifies almost \$19 million for improvements at GCNPA that will facilitate increased operations, visitation, and water use that may result in significant adverse impacts to GCNP resources. NPS submitted comments throughout public/stakeholder meetings held by ADOT on the GCNPA Master Plan in 2006 and updated in 2009, and also in 2012 on the ADOT 5 Year Program for 2013-2017. Our comments outlined serious concerns about potential airport improvements and



expansion, including increased noise in the park, increased passengers to GCNPA, and increased demand for scarce water resources. These improvements and resulting increases have the potential to severely impact springs and other water sources in GCNP, place increased pressures on park facilities, and significantly alter the visitor's park experience. For instance:

- Increasing passengers at the airport is likely to increase visitors to GCNP, adding more people and associated impacts to already overburdened facilities and infrastructure.
- Improvements to facilitate and support increasing numbers of flights and larger jet aircraft may increase pressure for incursion into the Bright Angel Flight-free Zone in the Grand Canyon National Park Special Flight Rules Area, adjacent to the Class D airspace surrounding GCNPA.
- Improvements that are designed or implemented that encourage flights within the flight-free zones would violate and compromise those designations (except under very rare safety-related circumstances).
- Improvements that increase the numbers of passengers at the airport will increase the number of visitors to GCNP, resulting in an increase in park crowding, water use, waste disposal, and impacts to park resources and values.

All of these concerns need to be evaluated and addressed before proceeding with the improvements. They have the potential to cause significant adverse impacts to GCNP resources and the human environment, have the potential to be controversial, and are of significant interests at the local, regional, national and international levels; thus, an Environmental Impact Statement (EIS) is warranted. We request that funding be identified to conduct the EIS in compliance with the requirements of the National Environmental Protection Act (NEPA) and all pertinent federal regulations.

### **Ground Water Concerns and Proposed Water Well at GCNPA**

The ADOT plan to construct a groundwater well to supply water to the expected increase in airport traffic, and eliminating the current water catchment system at GCNPA, is especially concerning to NPS. The well has potential to cause significant adverse impacts to GCNP resources and the human environment, has the potential to be controversial, and is of significant interests at the local, regional, national and international levels; thus, an Environmental Impact Statement (EIS) is warranted. We request that funding be identified to conduct the EIS in compliance with the requirements of NEPA (we also officially ask that NPS be a cooperating agency).

The 2012 Request for Proposal (RFP) for the well feasibility study at GCNPA stated ADOT was seeking the development of a groundwater well or wells that have the capacity to produce 30 gallons per minute (gpm), or 48 acre-feet per year, and meet an expected increase in use from 10,000 gallons per day to 20,000 gallons per day.

This volume of groundwater withdrawal within the Grand Canyon watershed has the potential to adversely impact spring flows and ecosystems along the South Rim of Grand Canyon, especially between Havasu Creek and the Little Colorado River. The NPS is on record in opposition to additional groundwater extraction within the Grand Canyon watershed, and views any reduction or degradation of springs and seeps as an infringement on the park's federal reserved water rights. The sum average base flow of ALL of the named springs (eight) below the South Rim between Garden Creek and Cottonwood Creek equals the 30 gpm target production of the GCNPA well identified in the RFP. Impact to these locations would be devastating to the ecosystems supported by these waters in an otherwise arid landscape, as well as reducing or eliminating human consumptive availability and harming their unquantifiable and irretrievable cultural significances.

The structural feature targeted for well installation, the Tusayan Graben, is a down-dropped block located along the Vishnu Fault that has long been identified as a likely source of successful groundwater development. A correctly-sited well in this area will likely be able to produce a greater amount of water than the 30 gpm the GCNPA requires. Once installed, the well will only be limited by the results of aquifer pump tests and the size of the pump installed. There are already three existing wells developed in this structural feature in the Town of Tusayan less than 1/2 mile from GCNPA. Aquifer drawdown from pumping at a new well has the potential to decrease the available groundwater at the Tusayan wells over time, requiring them to be deepened or replaced in the future, which could create new stresses to Grand Canyon springs and seeps.

Previous groundwater modeling (E.L. Montgomery and Associates, 1999) specifically investigating the impacts of groundwater withdrawal on springs and seeps in this area concluded that continued or expanded groundwater development will decrease the flows of Havasu, Hermit, and Indian Gardens springs (the only three springs modeled). Adding to the modeling results from this study are that the region has been in prolonged drought conditions since modeling was conducted, and that current climate change scenarios call for reduced water availability and increased water stresses in the future. If a well is to be installed at GCNPA, NPS suggests that a new or updated groundwater model be created to consider scenarios of this new withdrawal point and what effects it could have on groundwater resources, springs, and seeps while incorporating new climate change predictions. Additionally, any new well should be metered to record withdrawal volumes, instrumented to record changes in water level over time, and available for periodic sampling, if these are not already required by the Arizona Department of Water Resources (ADWR).

Beyond GCNPA operational and visitor needs, NPS is concerned with how any excess water will be used. In April 2010, the Town of Tusayan voted in favor of Incorporation. Soon after, the Stilo Development Group (Developer) requested annexation of nearly 5,700 acres of U.S. Forest Service and private lands surrounding the town to develop residential and commercial properties, adding approximately 2,400 new housing units and over 3,000,000 square feet of commercial space. These proposed developments would create a substantially larger water need than what is currently being met by the existing Tusayan water supply wells. The Developer has yet to identify where water supply to these developments would come from.

However, at the targeted rate of 30gpm, the new GCNPA well would withdraw 43,200 gallons per day. Given that estimated demand could increase from 10,000 to 20,000 gallons per day with the airport expansion, the remainder of that water could be available for sale, increasing the amount of total groundwater use in the area. Infrastructure is already in place to move water off-site, as the airport currently augments the catchment system with water purchased from the Tusayan supply. It is likely that if a GCNPA well is producing in excess of its needs that the Town of Tusayan or the Developer would be interested in purchasing water, especially during high demand periods.

The NPS is interested in learning what other alternatives, if any, to groundwater withdrawal have been explored. The removal of the current water catchment basin system was mandated by the FAA due to its proximity to existing and planned runway operations, not due to its ability to collect/retain enough water. Construction of a new surface water catchment installed elsewhere on the property to replace or partially meet the production of a groundwater well should be considered. Additionally, the NPS would like to know what ADOT's plan is for any excess water and how outside requests for any excess water will be addressed. It is most appropriate that these questions be addressed in an EIS.

**Grand Canyon West Airport (GCWA) – Coconino County**

The ADOT Five-Year Program identifies over \$41 million for improvements at GCWA that could facilitate increased operations, visitation, and water use that may result in significant adverse impacts to GCNP resources. NPS submitted comments in 2012 on the ADOT 5 Year Program 2013-2017 expressing serious concerns about potential airport improvements and expansion, including the cumulative effects of projected increases in air-tour and other air traffic and passengers into GCWA.

The NPS believes these concerns need to be evaluated and addressed before proceeding with the improvements. They have the potential to cause significant adverse impacts to GCNP resources and the human environment, the potential to be controversial, and are of significant interests at the local, regional, national and international levels; thus, an Environmental Impact Statement (EIS) is warranted. We request that funding be identified to conduct the EIS in compliance with the requirements of the National Environmental Protection Act (NEPA) and all pertinent federal regulations.

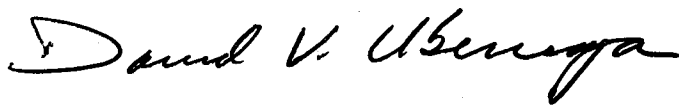
**Request for Cooperating Agency Status**

At a meeting with ADOT representatives at GCNPA in December 2011, NPS expressed interest in participating as a cooperating agency in any upcoming planning and compliance efforts related to GCNPA and were assured that when the time came for environmental analysis, NPS would be contacted and included as a cooperating agency. Our understanding is that GCNPA rests on federal land leased to the state, and that some of the funding for improvements is federal, requiring compliance within the NEPA.

NPS reiterates the request for cooperating agency status on anything related to GCNPA and GCWA. The GCNP will be following both efforts closely and looks forward to hearing from ADOT in the near future about our involvement in these processes.

Thank you for the opportunity to comment. We look forward to being fully involved throughout the anticipated NEPA process. If you have any questions regarding our comments, please call Martha Hahn, Chief of Science and Resource Management, at (928) 638-7759. You may also contact me at (928) 638-7945.

Sincerely,



David V. Uberuaga  
Superintendent

Cc:

The Honorable Janice K. Brewer  
Arizona Governor  
Executive Tower  
1700 West Washington Street  
Phoenix, AZ 85007

Art Babbott, Coconino County Supervisor District 1  
219 East Cherry  
Flagstaff, AZ 86001

Michael C. Williams, Attorney-Adviser  
Santa Fe Unit, Southwest Region  
Office of the Solicitor  
U.S. Department of the Interior  
P.O. Box 1042  
Santa Fe, NM 87504-1042

Representatives Paul Gosar, Anne Kirkpatrick, Raul Grijalva

Senators John McCain, Jeff Flake