MEMORANDUM

Date: July 28, 2014

To: Suzanne Shields, Director
Regional Flood Control District

Chris Cawein, Director
Natural Resources, Parks and Recreation

Linda Mayro, Director
Office of Sustainability and Conservation

From: C.H. Huckelberry
County Administrator

Re: **Risk Assessment of the Sustainability of the Cienega Creek Natural Preserve Introduction**

The County has invested over $64 million in protecting our Cienega Creek natural resource assets including ecosystems, rare riparian environments of the Sonoran Desert, endangered fish species as well as unique and rich cultural assets. Our protection of Cienega Creek began 35 years ago. This investment, of time and money, in the natural system that sustains these resources is under threat. A variety of options have been discussed and postulated regarding protection of these assets, all of which are unproven and untested.

The purpose of this memorandum is to direct you and your staff to compile a risk assessment associated with the sustainability of the Cienega Creek Natural Preserve, as well as to develop the most appropriate conservation strategy to reduce or eliminate threats to its sustainability.

Summary of Ecosystem Assets and Potential Threats

The Cienega Creek Natural Preserve is home to at least five threatened and endangered species (lesser long-nosed bat, yellow-billed cuckoo, Gila topminnow, Gila chub, and Mexican garter snake) and numerous other riparian and aquatic obligate species that may be listed in the future. This abundance is largely the result of Cienega Creek, which is designated as an Arizona Outstanding Water. Yet the creek's decline in recent years is clearly evident, mesquite and cottonwood trees are dying and wetlands have declined significantly. This is because of a decline in all key measures of the creek's water: water volume, extent of stream flow, and depth to water in wells. As a result of these changes, habitats for aquatic and mesic-riparian species in the Preserve are decreasing in size and quality.

Characterization of Resource Sustainability Threats

As threats increase, habitat extent and quality declines, variability increases, and a system is more susceptible to threats, even minor ones that would not otherwise have impacted the system. All possible threats to the sustainability of ecosystem functions at Cienega Creek Natural Preserve should be considered by your respective professional staff. It would appear that while the Rosemont mining proposal is obviously the most visible threat at this moment, there are other significant threats that must be considered such as the proliferation of development (wildcat or regulated) in the vicinity of the Cienega Creek Preserve. Any individual or planned development relying on domestic water wells for water supply or water supply production wells of regulated utilities all pose a significant risk to the natural water resources and ecosystem functions of Cienega Creek. Other mining activities may also threaten the riparian resources of the Cienega Creek Natural Preserve as well as Davidson Canyon. Those specifically related to marble or calcite quarries that are regulated and permitted by either the State Land Department or the State Mining Inspector may be equally detrimental to our resource assets. The attached graphic on Cienega Creek wells demonstrates the scope of the problem.

Little Previous Help from Federal Regulators

Based on our immediate past experience with some federal agencies, it is clear the County cannot rely on them for assistance in protecting these assets. We are being overrun with electric and natural gas energy corridor proposals as well as mining proposals that clearly are counter to our conservation standards and objectives. Hence, there is the need to develop an appropriate strategy or plan to minimize or eliminate the risks or threats to the sustainability of the natural resources within Cienega Creek or at least dimension the actions and cost necessary to do so and evaluate options that may be viable to sustain these important natural ecosystems and cultural resources of Pima County.

The Pantano Dam In-Lieu Fee Option

Third party conversations repeated by federal regulators, project proponents of the Rosemont Mine and others regarding what the County will or will not do regarding a proposed Pantano Dam In-Lieu Fee (ILF) program have been counterproductive and unacceptable. I am also very concerned about how our position continues to be misrepresented without direct conversations with the County. My December 30, 2013 letter to the District Engineer of the US Army Corps of Engineers Los Angeles District was clear on the subject. We will certainly discuss well thought out proposals to consider alternative approaches or other options that may be proffered, but the rampant speculation of what the County will or will not do is extraordinarily counterproductive and only confuses and confounds any future consideration of this option. Therefore, I will not entertain any further discussion regarding this particular in-lieu fee project until after the risk assessment that I have requested from you has been completed. As a worst case scenario, it may conclude that the only way to sustain the natural resource assets of the Cienega Creek in the long run is to import treated and renewable water resources.

Cultural Resources should also be Evaluated for Direct Protection

Cienega Creek encompasses a cultural landscape of great antiquity that lies between the Tucson Basin and the San Pedro River Valley. The year-round presence of water has drawn people to Cienega Creek from the earliest periods of human occupations in southern Arizona. Evidence of past habitation and exploitation can be seen throughout the landscape, which has been occupied and used by humans for more than 12,000 years, from the end of the last Ice Age to modern times.

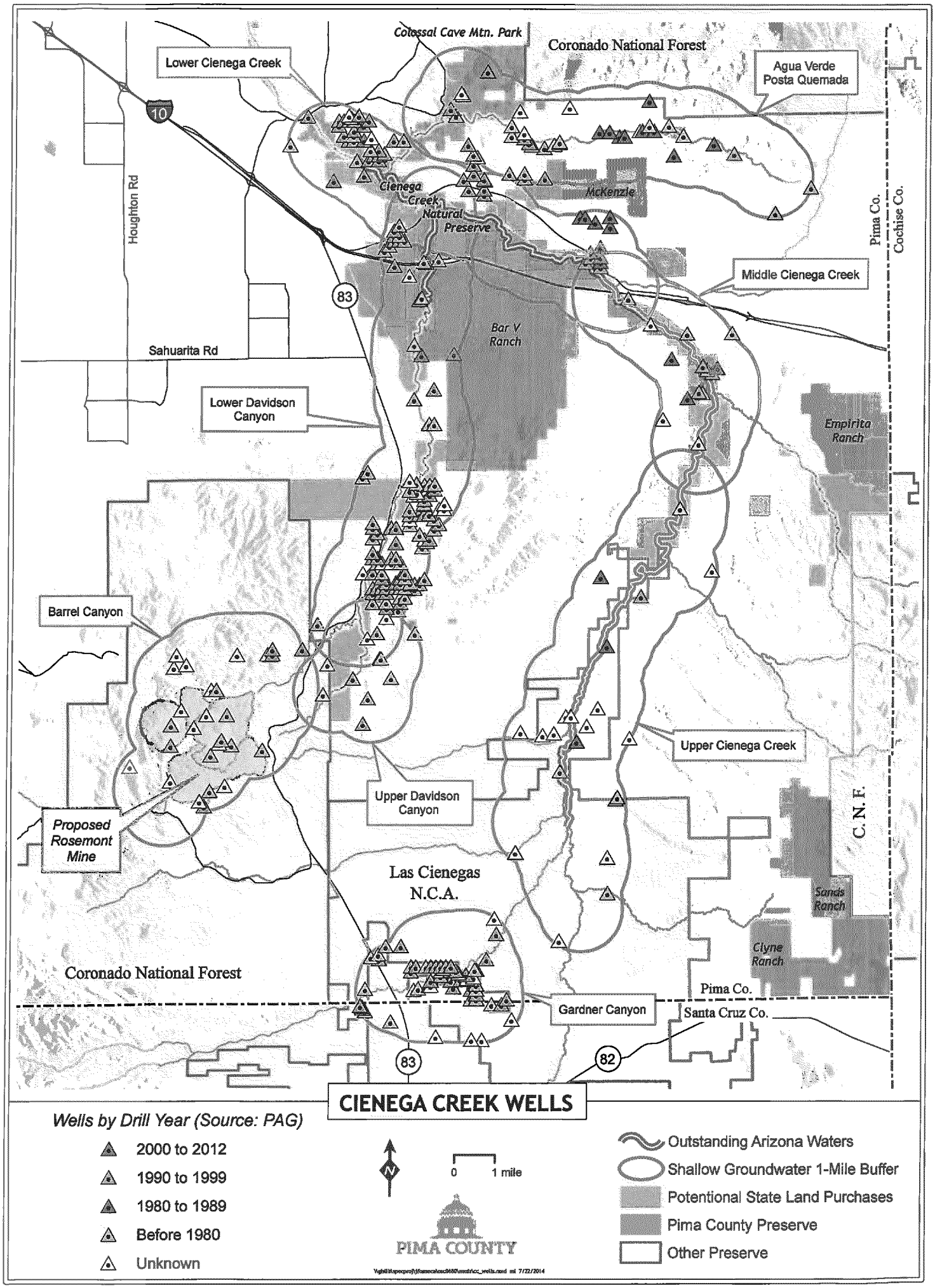
The vast number of prehistoric and historic cultural resources found within the Cienega valley attest to the importance of this area to the human population and the critical importance of its preservation. Management of the Cienega valley should be geared to protect these resources and continue building on our knowledge about the past.

Summary

Please prepare the requested risk assessment. No further discussion of new proposals from any source or interest on the Pantano Dam ILF will be considered until this risk assessment has been completed. The assessment is to develop the best regulatory, acquisition and possible intervention strategies to protect the actual resources of Cienega Creek.

CHH/anc

c: The Honorable Chair and Members, Pima County Board of Supervisors
John Bernal, Deputy County Administrator for Public Works


Colossal Cave Mtn. Park
Coronado National Forest
Lower Cienega Creek
Agua Verde
Posta Quemada
10
Houghton Rd
Cienega
Creek
Natural
Preserve
McKenzie
Pima Co.
Cochise Co.
Middle Cienega Creek
83
Bar V
Ranch
Sahuarita Rd
Lower Davidson
Canyon
Empirita
Ranch
Barrel Canyon
Upper Cienega Creek
Upper Davidson
Canyon
Proposed
Rosemont
Mine
C. N. F.
Las Cienegas
N.C.A.
Sands
Ranch
Clyne
Ranch
Coronado National Forest
Pima Co.
Gardner Canyon
Santa Cruz Co.
83
82
CIENEGA CREEK WELLS
Wells by Drill Year (Source: PAG)
2000 to 2012
1990 to 1999
1980 to 1989
Before 1980
Unknown
N
0
1 mile
PIMA COUNTY
Outstanding Arizona Waters
Shallow Groundwater 1-Mile Buffer
Potentional State Land Purchases
Pima County Preserve
Other Preserve