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STATE ENGINEER



*Bristlecone Audubon*

28 November 2011

Susan Joseph-Taylor  
Chief Hearing Officer  
Office of the State Engineer  
901 S. Stewart Street, Suite 2002  
Carson City, NV 89701

Dear Ms. Joseph-Taylor,

Thank you for the opportunity to provide input into the Southern Nevada Water Authority (SNWA) request to pump water from Spring Valley in White Pine County to Las Vegas in Clark County. We are writing to express our views as a Chapter with the National Audubon Society that has White Pine County as part of its jurisdiction. We would like to go on record in opposition to the exportation of water from one basin to another, anywhere in the State, including from Spring Valley and Snake Valley to Las Vegas. Not one drop.

Aside from the fact that we are running the risk of repeating the tragic history of several western states and Mexico, that of desertification of one region for the municipal/agricultural benefit of another, there are several specific reasons why this is a terribly bad idea in east-central Nevada (Reisner 1986).

First, Nevada is the driest State in the Union. That, coupled with the fact that our geology and topography has resulted in one of the highest ratings for biological diversity in the nation, makes the exportation of water a recipe for disaster. Already, Nevada has the distinction of having more threatened and endangered fish species than anywhere else in the United States (Klappenbach 2006). Ground-water pumping, water diversion and/or degradation in water quality can be linked to the critical status of most of these fish species. It is all about the water.

Spring Valley is home to at least two endemic fish species. One, the relict dace (*Relictus solitarius*) is native to at least four water sources in the valley. The other, the Pahrump killifish or Pahrump poolfish (*Empetrichthys latos latos*), listed as endangered in 1967, was extirpated from its native habitat on Manse Ranch in Nye County and transported to the Shoshone Ponds in Spring Valley to prevent extinction of the species (Huber 1996). Groundwater pumping nearly resulted in its extinction in the 20<sup>th</sup> century. Will ground-water pumping lead to its demise in the 21<sup>st</sup>?

The Western snowy plover (*Charadrius alexandrinus*) (west coast population listed as threatened in 1993) is known from only four locations in northeast Nevada. One of those is a tiny, isolated breeding population on Yelland Lake in Spring Valley. This migratory bird nests directly on the alkali playa. Females drip water from their breast feathers directly on eggs, thus providing evaporative cooling for the eggs on warmer June days. They also feed on insects and other invertebrates found in playa waters adjacent nesting habitat. Surface water is critical to the maintenance of these nesting populations (USFWS 2001, NDOW 2007).

Brazilian free-tailed bats (*Tadarida brasiliensis*) roost and feed in northeast Nevada. In fact, the largest natural roost for this species in the entire state occurs in limestone rock formations perched above Spring Valley. Depending on the year, from 70,000 to 120,000 bats empty into Spring Valley on a nightly basis from this single roost. They all require fresh drinking water and as a group devour more than 300 million night-flying insects each night. Montetary benefits to the local agriculture industry from natural pest control likely reach into the millions of dollars (Bradley 1996).

The ferruginous hawk (*Buteo regalis*) nests in low numbers all across northeast Nevada. The preferred nest structure for this largest of American soaring hawks in Spring and Snake Valley is the Rocky Mountain juniper or Swamp Cedar (*Juniperus scopulorum*). Only a slight drop in the water table could lead to the loss of rare stands of this water-tolerant conifer, which would ultimately lead to a loss of nesting habitat for the ferruginous hawk (NDOW 1998).

Spring Valley along with Snake and Lake Valleys in eastern Nevada define the eastern and southern boundaries of the nesting population of greater sandhill cranes (*Grus canadensis tabida*) in the Great Basin. The low density nesting population of cranes in Spring Valley is entirely dependent on wetlands that flank the western side of Yelland Lake and the eastern edge of Baking Powder Flat. This is the largest subspecies of crane in North America and its nesting population, the smallest in North America, depends almost exclusively on the State of Nevada for its wetland nesting habitat. Any loss of surface waters would result in the loss of these nesting populations in Spring and Snake Valley (NDOW 2005).

The long-billed curlew (*Numenius americanus*), willet (*Catoptrophorus semipalmatus*) and Wilson's snipe (*Gallinago gallinago*) are some of the other nesting shorebirds that could not exist in Spring and Snake Valley, were it not for the surface waters that provide them with nesting and foraging habitat in an otherwise arid landscape.

Despite a concerted survey effort focused on the biogeography of bats from 1983 to 2006, the only record of lactating female hoary bats (*Lasiurus cinereus*) in northeast Nevada comes from the Shoshone Ponds in Spring Valley. While this migratory tree-roosting bat species has the ability to travel many miles in one night, it is probable that the species is either using Rocky Mountain juniper that surround Shoshone Ponds or nearby tree species in the Snake Range for natal-roosting habitat. Also, the waters of

Shoshone Ponds are critical for its water needs and quite possibly the water needs of many of its insect prey species (Ports and Bradley 1999).

Spring Valley is home to one of the rarest reptiles found in Nevada. The Sonoran mountain kingsnake (*Lampropeltis pyromelana*) lives on the edge of South Spring Valley on the flanks of the Fortification Range. Given its attraction to moist canyons, streams and springs, it may also live in other portions of Spring Valley. We know very little about this spectacular black, red and white snake. A prudent approach would be to leave the water where it is until we understand the needs of the species and how water plays a role in its life history. It may be all about the water.

The stated infrastructure needs for such a project (345 linear miles of power lines, 345 miles of pipeline, up to 195 wells, six pumping stations, two electric substations, and the over 13,000 acres and several hundreds of miles of new roads) would fragment thousands of acres of wildlife habitat. Many wildlife species in Spring Valley would be as much affected by the fragmentation of their landscape and associated increases in human disturbance and invasion of nonnative plants as they would by the loss and/or degradation of their watering sites. Species in this category would include but are not limited to the pronghorn (*Antilocapra americana*), greater sage-grouse (*Centrocercus urophasianus*), pygmy rabbit (*Brachylagus idahoensis*), mule deer (*Odocoileus hemionus*), dark kangaroo mouse (*Microdipodops megacephalus*), burrowing owl (*Athene cunicularia*), golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*).

Finally, there is a class of wildlife that use Spring Valley strictly as a biannual stopover. The valley takes on global significance when one factors in the semi-palmated plovers (*Charadrius semipalmatus*) that use Spring Valley's wetlands as a fuel stop on their way to and from Mexico and the Yukon Territory and the American golden plovers (*Pluvialis dominica*) on their way to and from Argentina and Baffin Island. This is to say nothing of the many long distance migrators that use Spring Valley just in summer or just in winter.

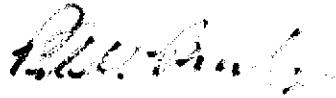
Personally, I can't think of a case where water importation has not led either to deterioration or complete destruction of entire ecosystems (Colorado River Delta and Sea of Cortez [Mexico], Aral Sea [Kazakhstan], Owen's Valley [California], Glen Canyon [Utah], Winnemucca Lake [Nevada], Argenta Marsh [Nevada], Walker Lake [Nevada], Nile Delta [Egypt] etc).

The inherent danger to Spring Valley and its biological systems, and therefore to the precarious branch we are standing on, is far too great to risk such a brazened and ill-thought out scheme. I can't imagine that the headaches and costs of such a project would be less than other options still open to Las Vegas. For example, Las Vegas handing Los Angeles ten desalinization plants on a silver platter, in exchange for a renegotiation of the Colorado River Water Compact, (this time perhaps including Mexico in the discussions?) in addition to Las Vegas instituting its first real water conservation measures (a) removal of all surface waters; i.e. backyard swimming pools, golf course ponds/lakes, fountains,

Venetian canals etc; b] removal of all non-Mojave vegetation, etc) are options that should be considered before risking the destruction of entire ecosystems to the north.

Thank you for your time in this critical matter.

Sincerely,



Peter V. Bradley  
Conservation Chair  
Bristlecone Audubon Society  
837 Eastlake  
Spring Creek, Nevada 89815

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STATE EMPLOYMENT DIV.

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