IN THE OFFICE OF THE STATE ENGINEER OF THE STATE OF NEVADA

IN THE MATTER OF APPLICATION NUMBER 71168,
FILED BY SNWA,
ON May 6, 20 04, TO APPROPRIATE THE
WATERS OF Underground

PROTEST

FILED
05 AUG 19 2004
STATE ENGINEER'S OFFICE

Comes now U.S. Fish and Wildlife Service
Printed or typed name of protestant

whose post office address is 911 NE 11th Ave. Portland, OR 97232-4181
Street No. Or P.O. Box, City, State and Zip Code

whose occupation is agency of the Federal government and protests the granting

of Application Number 71168, filed on May 6, 20 04

by Southern Nevada Water Authority (SNWA) to appropriate the

waters of underground situated in Basin 161 Clark Co.,
Underground or name of stream, lake, spring or other source

County, State of Nevada, for the following reasons and on the following grounds, to wit:

See Attachment

THEREFORE the Protestant requests that the application be Denied
Denied, issued subject to prior rights, etc., as the case may be

and that an order be entered for such relief as the State Engineer deems just and proper.

Signed [signature]
Agent or protestant

Michael Eberle, Agent for USFWS
Printed or typed name, if agent

Address 911 NE 11th Avenue
Street No. or P.O. Box No.

Portland, OR 97232
City, State and Zip Code No.

Subscribed and sworn to before me this 19th day of August, 20 04

Cathy Bernhardt
Notary Public

State of Oregon

County of Multnomah

OFFICIAL SEAL
CATHY BERNHARDT
NOTARY PUBLIC-OREGON
COMMISSION NO. 339480
MY COMMISSION EXPIRES OCT. 18, 2004

$25 FILING FEE MUST ACCOMPANY PROTEST. PROTEST MUST BE FILED IN DUPLICATE.
ALL COPIES MUST CONTAIN ORIGINAL SIGNATURE.

Attachment

ADDITIONAL INFORMATION TO SUPPORT THE PROTEST OF THE U.S. FISH AND WILDLIFE SERVICE IN THE MATTER OF APPLICATIONS 71167 - 71173

Introduction

Application Nos. 71167 through 71173 were filed by the Southern Nevada Water Authority on May 6, 2004 requesting a combined diversion rate of 42 cubic feet per second and combined duty of not more than 16,000 acre-feet annually from an underground source in groundwater basin 161, Clark County, Nevada. The purpose of the proposed applications is municipal use. Basin 161 is part of the Ash Meadows groundwater subbasin in the Death Valley Regional Groundwater Flow System. The proposed groundwater wells are approximately 25 miles northeast and upgradient from Ash Meadows National Wildlife Refuge (NWR) and approximately 10 to 15 miles from Corn Creek Springs on Desert NWR.

The U.S. Fish and Wildlife Service (Service) requests that Application Nos. 71167 through 71173 be denied because:

- Water is not be available to appropriate in the manner described.
- Granting of these applications will cause injury to Service-owned senior water rights for water on the Ash Meadows NWR.
- Granting of these applications will threaten or damage habitat for species that are endangered, threatened, or considered for future listing under the Endangered Species Act and, therefore, is not in the public interest.

The following material discusses the Service's concerns.

Lack of Available Water

All of the proposed groundwater withdrawals are located within the Death Valley regional groundwater system, a 15,800 square mile area underlying southwestern Nevada and encompassing 27 hydrographic basins (Harrill et al., 1988). The system is composed of a highly transmissive regional carbonate aquifer and local basin fill aquifers. Groundwater is recharged through rainfall and snow melt in the higher mountain ranges and mesas and discharged at Death Valley National Park and several intermediate discharge areas, including Ash Meadows NWR, downgradient of the proposed wells.

Regional interpretation of groundwater flow within the Death Valley system is based on the concept of groundwater subbasins. A groundwater subbasin defines the area that contributes water to a major surface discharge. Ash Meadows NWR is the discharge zone for the Ash Meadows groundwater subbasin. The subbasin extends about 100 miles to the north and 60 miles to the east. It encompasses a number of groundwater basins including basin 161. Spring discharge at Ash Meadows NWR area is supplied by regional carbonate aquifer water with most of this water originating as recharge in the Spring Mountains east of the refuge and the higher mountains and mesas to the northeast of the refuge (Thomas et al., 1996). This flow path for the recharge supplying the refuge passes directly through groundwater basin 161 and would be captured by the proposed withdrawals.

The applicant seeks new water rights for as much as 16,000 ac-ft per year in the Ash Meadows subbasin of the Death Valley groundwater flow system. The Service does not believe that additional water is available for appropriation in this area. Walker and Eakin (1963) define perennial yield as the maximum amount of water that can be withdrawn annually from the ground-water system for an indefinite period of time without causing a permanent depletion of the stored water or causing a deterioration in the quality of water. The combined perennial yield for basins 225 – 230 is estimated to be 24,000 including 17,000 acre-feet of spring discharge at Ash Meadows NWR and 7,000 acre-feet coming from the valley fill northwest and northeast of the springs (Walker and Eakin, 1963). Currently, according the State Engineer's records, the permitted and certificated water rights in basin 230 alone exceed the combined perennial yield estimate for basins 225 – 230 and this is not considering applications that are pending. The basin is over appropriated already with respect to the perennial yield estimates, even considering that not all water rights are used to the full extent in any given year. The applicant seeks groundwater that is upgradient and likely tributary to this basin and additional water is not available. Withdrawals in this basin could potentially have a considerable impact on spring discharge at Ash Meadows NWR.

Potential Injury to Service-held Senior Water Rights at Ash Meadows NWR

Ash Meadows NWR is supported by groundwater discharge from the regional carbonate aquifer. All of the current spring discharge is protected through state appropriative water rights. The Service holds water rights to 17,673.8 acre-feet of the total spring flow at Ash Meadows NWR. Applications 71167 through 71173 are within the Ash Meadows groundwater subbasin and directly upgradient of the Ash Meadows NWR. Withdrawal of regional groundwater flow in this area would almost certainly impact the senior water rights at Ash Meadows NWR and elsewhere.

Potential Detriment to the Public Interest

Ash Meadows NWR, established in 1984, provides habitat for at least 33 unique plants and animals. Twenty four species are restricted to this limited geographic area (endemic), giving the refuge one of the highest concentrations of endemic species in the world. The purpose of the refuge is to conserve, protect, and enhance the habitats and populations of endemic, resident, and

migratory species for the continuing benefit of the American people. All of these species are critically dependent on water. Any adverse effects to the water resources of the refuge would jeopardize the health and well-being of the species that inhabit the refuge, conflict with the purpose of the refuge, and not serve the public interest.

Four species of fish, one bird, and one plant at Ash Meadows NWR are currently listed as endangered under the Endangered Species Act (ESA). These species are:

Warm Springs pupfish - *Cyprinodon nevadensis pectoralis;*
Ash Meadows Amargosa pupfish - *C. n. mionectes;*
Ash Meadows speckled dace - *Rhinichtys osculus nevadensis;*
Devil's Hole pupfish - *Cyprinodon diabolis*
Amargosa niterwort - *Nitrophila mohavensis.*
Southwestern willow flycatcher - *Empidonax traillii extimus*

Ash Meadows NWR also contains populations of the following species listed as threatened under the ESA:

Ash Meadows naucorid - *Ambrysus amargosus;*
Ash Meadows milk-vetch - *Astragalus phoenix;*
Spring-loving centaury - *Centaurium namophilum;*
Ash Meadows sunray - *Enceliopsis nudicaulis var. corrugata*;
Ash Meadows gumplant - *Grindelia fraxino-pratensis;*
Ash Meadows ivesia - *Ivesia eremica;*
Ash Meadows blazing star - *Mentzelia leucophylla.*
Bald eagle - *Haliaeetus leucocephalus*

In addition, research is being conducted on 26 other species under consideration for protection under the ESA.

Ash Meadows NWR also supports migratory bird populations, which are dependent on the water resources of the refuge. Impacts to these water resources would interfere with the Service's mandated responsibilities under the Migratory Bird Treaty Act. Desert bighorn sheep also depend on the springs at Ash Meadows NWR during the summer.

Groundwater from the Alkali Flat-Furnace Creek Ranch subbasin flows under the Funeral Mountains, via carbonate rocks, to discharge in the Furnace Creek Wash-Nevares Springs area in Death Valley National Park (Park). Springs and water-related resources are important features of the Park. The springs in the Death Valley region support vegetation and provide critical wildlife habitat. Several species of snail are endemic to the region and are not found outside the Park. Two species are species of concern under the ESA. Desert bighorn sheep (*Ovis canadensis*) are also dependent on the springs for water. Approximately 25 herds concentrate around the Park springs in the summer. Negative impacts to the water resources of the Park would impair the natural features and biological resources of the Park and not be in the public interest.

References Cited

Harrill, J.R., Gates, J.S., and Thomas, J.M., 1988, Major ground-water flow systems in the Great Basin Region of Nevada, Utah, and adjacent states, U.S. Geological Survey Hydrologic Invetigations Atlas HA-694-C.

Nichols, W.D., and Akers, J.P., 1985, Water-level declines in the Amargosa Valley area, Nye County, Nevada, 1962-1984, U.S. Geological Survey Water Resources Investigations Report 85-4273.

Thomas, J. M., Welch, A. H., and Dettinger, M. D., 1996. Geochemistry and isotope hydrology of representative aquifers in the Great Basin region of Nevada, Utah, and adjacent states. U.S. Geological Survey Professional Paper 1409-C.

Walker, G.E., and Eakin, T.E., 1963, Geology and groundwater of Amargosa Desert, Nevada-California, State of Nevada Department of Conservation and Natural Resources Ground-Water Resource Reconnaissance Series Report 14.