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

FILED
AUG 20 2004
STATE ENGINEER'S OFFICE

IN THE MATTER OF APPLICATION NUMBER 71172
FILED BY KAY BROTHERS, AGENT FOR THE
SOUTHERN NEVADA WATER AUTHORITY
TO APPROPRIATE THE WATERS OF UNDERGROUND

PROTEST

Comes now Charles W. Pettee, on behalf of the United States Department of the Interior, National Park Service, whose post office address is 1201 Oak Ridge Drive, Suite 250, Fort Collins, Colorado, 80525, whose occupation is Chief, Water Rights Branch, Water Resources Division, National Park Service, to protest the granting of Application Number 71172 filed on May 6, 2004 by Kay Brothers, Agent for the Southern Nevada Water Authority to appropriate the waters of underground, situated in Nye County, State of Nevada, for the following reasons and on the following grounds, to wit:

See Exhibit A attached.

THEREFORE the protestant requests that the application be denied.

Signed _____
Agent or protestant

Charles W. Pettee
Printed or typed name, if agent

Address 1201 Oak Ridge Drive, Suite 250
Street No. or P.O. Box No.

Fort Collins, CO 80525
City, State and Zip Code No.

Subscribed and sworn to before me this 17th day of August, 2004.

FLORA B. ROMERO NOTARY PUBLIC STATE OF COLORADO

Notary Public

State of Colorado

County of Larimer

My Commission expires _____.

Flora B. Romero, Notary Public
State of Colorado
My Commission Expires 7/31/2006

20

IN THE MATTER OF APPLICATION 71172

EXHIBIT A

Protest by Charles W. Pettee, on behalf of
the United States Department of the Interior,
National Park Service

GENERAL

I. The mission of the National Park Service (NPS) may be paraphrased from 16 U.S.C. 1, as conserving scenery, natural and historic objects, and wildlife, and providing for enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations.

II. Death Valley National Monument was created by Presidential Proclamation in 1933 to preserve unusual features of scenic, scientific, and educational interest. The proclamation warned unauthorized persons to not appropriate, injure, destroy, or remove any feature of the monument. Springs and water-related resources are important features.

In 1952, a forty-acre tract of public land surrounding Devil's Hole was withdrawn, creating a detached component of Death Valley National Monument through Proclamation No. 2961, 3 CFR 147 [1949-1953 Comp.]. The proclamation recognized that the "subterranean pool [Devil's Hole] is an integral part of the hydrographic history of the Death Valley region," and that the pool is the home of "a peculiar race of desert fish...evolved only after the gradual drying up of the Death Valley Lake System...." *Id.* Because of the pool's "outstanding scientific importance...it should be given special protection...." *Id.*

In 1994, the status of Death Valley National Monument was changed to that of a National Park through enactment of the California Desert Protection Act. The Act acknowledged Death Valley's extraordinary and inestimable value and increased the total land area. The Act specifically charged the Secretary of the Interior and all other officers of the United States to take all steps necessary to protect the reserved water rights and water resources of the Park.

III. The NPS is entitled to Federal reserved water rights for reserved lands within Death Valley National Park (Death Valley NP). The priority dates for reserved rights are senior to the appropriation sought by this application. These rights have not been judicially quantified.

IV. A unique and endangered species of pupfish exists at Devil's Hole, a detached unit of Death Valley National Park in Nevada. In the 1970's, groundwater withdrawals near Devil's Hole caused a decline in the water level of the pool, exposing a rock shelf vital to the spawning of the pupfish (Dudley and Larson, 1976). A unanimous decision by the U.S. Supreme Court determined that a Federal reserved water right exists at

Devil's Hole for the purpose of maintaining a water level sufficient to inundate the shelf on which the pupfish spawns (Cappaert v. United States, 1976). The Supreme Court granted continuing jurisdiction to the district court to quantify the minimum water level. The district court held a hearing in 1978 and set the minimum water level at 2.7 feet below the reference copper washer. Current water levels at Devil's Hole are about 2.2 feet below the reference washer and have been steadily declining since about 1989.

V. The Endangered Species Act and its amendments impose obligations on Federal agencies to conserve endangered species such as the Devil's Hole pupfish.

VI. Many of the "unusual features of scenic, scientific, and educational interest" within Death Valley National Park are largely shaped by the hydrologic regime of the area (Hunt et. al., 1966). The hydrologic regime is essential to the values that are preserved in the public interest. Thus, protection of the hydrologic regime is in the public interest. The importance of the Park and its natural features is illustrated by the following:

A. In the eastern part of the Park, Grapevine, Keane Wonder, Nevares, Texas, Travertine, and Saratoga Springs provide water for park facilities, domestic use, public campgrounds, resorts, vegetation, wildlife, public enjoyment, scenic value and other needs. Nevares, Texas, and Travertine Springs collectively discharge about 2,000 gallons per minute and are critical for domestic and commercial use.

B. Public visitation to the Park for the past ten years is as follows:

1994	971,487
1995	1,109,421
1996	1,189,215
1997	1,188,212
1998	1,177,746
1999	1,227,583
2000	1,179,094
2001	1,014,636
2002	897,596
2003	890,375

(Source: NPS Public Use Statistics Office)

C. Visitors to the park support local businesses by spending money on food, beverages, gas and lodging. In 2000, an economic model was developed by researchers at Michigan State University to estimate the impacts that park visitors have on the local economy in terms of their contribution to sales, income and jobs in the area (NPS Public Use Statistics Office). The model estimated that at Death Valley National Park in 2001, total visitor spending in the local area around was approximately $44 million dollars. Of this total amount, $16.2 million contributed directly to personal income, and supported 1,212 jobs. Among all direct sales, $13.5 million was spent on lodging, and $9.5 million on food and beverages.

D. At least three biologically significant springs or spring complexes are located in Death Valley National Park in proximity to the Amargosa Desert. These water sources include Travertine and Nevares Springs (wetlands) and Devil's Hole. These springs provide water for 18 animal species which are federally listed as endangered, threatened or rare. These species are: Devils Hole pupfish, least Bell's vireo, bank swallow, western least bittern, white-faced ibis, mountain plover, black tern, loggerhead shrike, tricolored blackbird, Furnace Creek riffle beetle, un-named riffle beetle, Devils Hole riffle beetle, Furnace Creek naucorid bug, badwater snail, robust tryonia, Amargosa tryonia, Texas Spring amphipod, and the Travertine Springs amphipod. The Devil's Hole pupfish and white-faced ibis have also been designated as state endangered species by the Nevada Board of Game and

Fish Commissioners.

E. Desert bighorn sheep also have historically used Travertine and Nevares Springs as a water source. This animal is relatively rare in the local area, and is critically dependent on a permanent water supply during the summer months.

FINDINGS

I. This application proposes to appropriate water from Indian Springs Valley (Basin 161). The Nevada Department of Conservation and Natural Resources (1988) found that the perennial yield of Indian Springs Valley is equal to 727 acre-ft/yr (about 1 cfs). According to the Nevada state water rights database (queried May 19, 2004) 8,024 acre-ft/yr of surface and ground water have been appropriated in Indian Springs Valley. About 2,005 acre-ft/yr of this amount is ground water. Based on existing permitted water rights, the amount of water already allocated in this basin greatly exceeds the perennial yield for this basin.

II. Combined withdrawals proposed by the applicant in this basin are 16,000 afy. This individual application proposes to divert as much as 4,344 acre-ft/yr (6 cfs). Indian Springs discharges approximately 500 acre-ft/yr (Rush, 1970). The proposed diversion is much greater than the natural discharge of this basin.

III. Rush (1970) defined the Ash Meadows Groundwater Subsystem as including Groom Lake Valley, Papoose Lake Valley, Tikapoo Valley, Las Vegas Valley, Three Lakes Valley, Indian Springs Valley, Yucca Flat, Frenchman Flat, the eastern third of Jackass Flat, Rock Valley, and Mercury Valley. Subsequent studies (D'Agnese, 1997) suggest that the Las Vegas Valley is not part of the Ash Meadows Groundwater Subsystem.

IV. Ground water flows northward from the Spring Mountains through carbonate rocks in Indian Springs Valley and then westward toward Ash Meadows. Prudic and others (1995) described northward flow from the Spring Mountains to the Spotted Range, then westward beneath Frenchman Flat and eventually southward to Ash Meadows. Ground water is discharged in Ash Meadows through springs along the Ash Meadows fault system, also known as the "gravity fault." The withdrawals proposed by this application will capture water that would otherwise contribute to spring discharge at Ash Meadows.

V. Some water in the carbonate-rock aquifer continues flowing southward across the Ash

Meadows fault zone as underflow to the Amargosa Desert and eventually to Death Valley National Park (Hunt and Robinson, 1960; Rush, 1970; Winograd and Thordarson, 1975; Harrill et. al., 1988; Prudic et. al., 1995; Burbey, 1997 and Laczniak et al., 1999).

VI. Winograd and Thordarson (1975) state that the major springs in Death Valley National Park are likely fed by interbasin movement of water from central and south-central Amargosa Desert. Estimates of subsurface discharge from the Amargosa Desert to Death Valley National Park range from 3,000 afy to 8,300 afy (Prudic et. al., 1995 and Burbey, 1997).

VII. The diversion proposed by this application is located within a basin that is part of the central corridor of the regional ground-water flow system within the carbonate rock province (Dettinger et al., 1995). The carbonate-rock province is typified by complex inter-basin regional flow systems that include both basin-fill and carbonate-rock aquifers (Harrill, et al., 1988, Sheet 1). Ground water flows along complex pathways through basin-fill aquifers, carbonate-rock aquifers, or both, from one basin to another. The proposed diversion is expected to modify the direction of ground-water movement within the Indian Springs hydrographic basin and reduce inter-basin flow, thereby reducing or eliminating spring and stream flows, and possibly resulting in land subsidence and fissuring.

VIII. A total of seven applications (71167 through 77173) were submitted by SNWA for 6 cfs each. The annual duty associated with the 7 applications is 16,000 acre-ft/yr. The withdrawals proposed by these combined applications will capture ground water that would otherwise flow toward Devil's Hole and springs in the Amargosa Desert and underflow to Death Valley National Park.

CONCLUSIONS

I. Nevada Revised Statute, §533.370(3), states that the Nevada State Engineer shall reject an application for a water permit "where there is no unappropriated water in the proposed source of supply, or where its proposed use or change conflicts with existing rights, or threatens to prove detrimental to the public interest...." Based on the mandate set forth in § 533.370(3), N.R.S., the state engineer should reject this application for the following reasons.

There is no unappropriated water available because:

IN THE MATTER OF APPLICATION 71172

EXHIBIT A (Continued)

Protest by Charles W. Pettee, on behalf of
the United States Department of the Interior,
National Park Service

A. Indian Springs Valley is already over-appropriated.

B. Indian Springs Valley is located in the Ash Meadows Groundwater Subsystem. New appropriations will cause further declines in water levels at Devil's Hole and reduce underflow to Death Valley National Park.

The approval and development of this application will impair the senior water rights of the United States because:

A. The proposed appropriation, in combination with existing appropriations, will reduce or eliminate the flows of springs in Death Valley National Park, which discharge from the regional groundwater flow system.

B. The proposed appropriation, in combination with existing appropriations, will cause the water level at Devil's Hole to fall.

C. The proposed appropriation, in combination with existing appropriations, would capture water that comprises underflow to Death Valley National Park.

The public interest would not be served by granting a permit to this application because:

A. The water and water-related resources of the nationally important Death Valley National Park would be diminished or impaired as a result of this application, resulting in impacts to wildlife and habitat.

B. The water and water-related resources of the park would be diminished, reducing the aesthetic value of the park, and thereby reducing contributions to the local economy.

II. The NPS reserves the right to amend this exhibit as more information becomes available.

REFERENCES CITED

Burbey, T.J. *Hydrogeology and Potential for Ground-Water Development, Carbonate-Rock Aquifers, Southern Nevada and Southeastern California.* U.S. Geological Survey Water

Resources Investigations Report 95-4168, 1997.

D'Agnese, F.A., Faunt, C.C., Turner, K., and Hill, M.C. *Hydrogeologic Evaluation and Numerical simulation of the Death Valley Regional Ground-Water Flow System, Nevada and California*. U.S. Geological Survey Water Resources Investigations Report 96-4300, 1997.

Dudley Jr., W.W., and Larson J.D. *Effect of Irrigation Pumping on Desert Pupfish Habitats in Ash Meadows, Nye County, Nevada.* U.S. Geological Survey Professional Paper 927, 1976.

Harrill, J.R., Gates, J.S., and Thomas, J.M. *Major Ground-Water Flow Systems in the Great Basin Region of Nevada, Utah, and Adjacent States*. Hydrologic Investigations Atlas HA-694-C, 1988.

Hunt, C.B., Robinson, T.W., Bowles, W.A., and Washburn, A.L. *Hydrologic Basin, Death Valley, California.* U.S. Geologic Survey Professional Paper 494-B, 1966.

Laczniak, R.J., DeMeo, G.A., Reiner, S.R., Smith, J.L. and Nylund, W.E. 1999. *Estimates of Ground-Water Discharge as Determined from Measurements of Evapotranspiration, Ash Meadows Area, Nye County, Nevada.* U.S. Geological Survey Water Resources Investigations Report 99-4079.

Nevada Department of Conservation and Natural Resources, Division of Water Resources and Water Planning. *Hydrographic Basin Statistical Summary, Ground Water Basins 001-232.* 1988.

Nevada Division of Water Resources, *Water Rights Database, Special Hydrographic Abstract, and Hydrographic Basin Summary.* Printouts as of May 19, 2004.

Prudic, D.E., Harrill, J.R., and Burbey T.J. *Conceptual Evaluation of Regional Ground-Water Flow in the Carbonate-Rock Province of the Great Basin, Nevada, Utah, and Adjacent States*. U.S. Geological Survey Professional Paper 1409-D, 1995.

Rush, F.E. *Regional Ground-Water Systems in the Nevada Test Site Area, Nye, Lincoln, and Clark Counties, Nevada.* U.S. Geological Survey Water Resources - Reconnaissance Series Report 54, 1970.

Winograd, I.J., and Thordarson, W. *Hydrogeologic and Hydrochemical Framework, South-*

IN THE MATTER OF APPLICATION 71172

EXHIBIT A (Continued)

Protest by Charles W. Pettee, on behalf of
the United States Department of the Interior,
National Park Service

Central Great Basin, Nevada-California, with Special Reference to the Nevada Test Site. U.S. Geological Survey Professional Paper 712-C, 1975.