FILED
SEP 1 - 2000
STATE ENGINEER'S OFFICE

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

IN THE MATTER OF APPLICATION NUMBER 66475
FILED BY THE MOAPA BAND OF PAIUTES OF MOAPA RIVER
INDIAN RESERVATION, MOAPA, NEVADA
ON JUNE 19, 2000 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, and protests the granting of Application Number 66475 filed on June 19, 2000, by The Moapa Band of Paiutes of Moapa River Indian Reservation, Moapa, Nevada, to appropriate the waters of underground, situated in Clark 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. The National Park Service will reconsider its protest if it can be shown that the proposed appropriation, in combination with existing and pending appropriations, if approved and developed, will not affect the water resources and water rights of Lake Mead National Recreation Area.

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 31st day of August, 1999.

_____
Notary Public

State of Colorado

County of Larimer

My Commission expires Flora B. Romero, Notary Public
State of Colorado
My Commission Expires 7/30/2002

**IN THE MATTER OF APPLICATION 66475**
**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. Since 1936, the National Park Service has managed the recreational activities within the Boulder Canyon Project area now known as Lake Mead National Recreation Area (NRA). Lake Mead NRA was established on October 8, 1964 (78 Stat. 1039) to be administered for "...general purposes of public recreation, benefit, and use, and in a manner that will preserve, develop, and enhance, so far as practicable, the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area.... The Secretary shall permit hunting, fishing, and trapping on the lands and waters under his jurisdiction within the recreation area."

III. The NPS is entitled to Federal reserved water rights for reserved lands within Lake Mead NRA. The priority dates for these reserved rights are the dates when the lands were reserved and are senior to the appropriation sought by The Moapa Band of Paiutes of Moapa River Indian Reservation, Moapa, Nevada. These NPS reserved rights have not been judicially quantified.

IV. The Muddy River, which originates from large discharge springs located northwest of Moapa, Nevada, flows into Lake Mead NRA at the north end of the Overton Arm. The State of Nevada, Department of Wildlife, is leasing part of Lake Mead NRA adjoining the Muddy River for the purposes of the Overton Wildlife Management Area. This area supports a variety of waterfowl and vegetation. The United States has a state appropriative water right to water in the Muddy River, Certificate No. 5126. The point of diversion is located in the NW¼ SE¼ Sec. 19, T.16 S., R.68 E., M.D.B.M.

V. Springs and water-related resource attributes are important features of Lake Mead NRA. The springs provide water for vegetation and wildlife habitat and create an environment that many visitors use and enjoy. Most springs are not fed by water from Lake Mead and could be affected by upgradient diversions.

Springs include Blue Point, Rogers, Scirpus, Corral, and Kelsey's Springs, and other smaller, unnamed springs. Visitation to Blue Point and Rogers Springs has been estimated at 5,000 visitors per year. Desert bighorn sheep are also dependent upon the springs in Lake Mead NRA. A herd of approximately 150 use springs in the northern part of the National Recreation Area. The relict Las Vegas Valley leopard frog, *Rana onca*, has been found at Rogers, Corral, and Blue Point Springs. Current taxonomic studies indicate a high potential for listing of this relict population, previously believed extinct, as protected under the Endangered Species Act.

**IN THE MATTER OF APPLICATION 66475**
**EXHIBIT A - CONTINUED**

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

The United States has State appropriative water rights to two springs near the mouth of the Muddy River, which could be impaired by the appropriation and diversion proposed by this application, in combination with existing appropriations

| Name | Point of Diversion | Certificate Number |
|---|---|---|
| Kelsey's Spring | SW¼, NW¼, Sec 20, T16S, R68E, MDB&M | 296 |
| Rogers Spring | SE¼, SE¼, Sec. 12, T18S, R67E, MDB&M | 4476 |

VI. The Moapa Band of Paiutes of the Moapa River Indian Reservation, Moapa, Nevada filed Application No. 66475 to withdraw 6 cubic feet per second (cfs) of ground-water, not to exceed 3500 acre-feet/yr (afy), from California Wash for cooling water for power generation purposes.

VII. The Moapa Band of Paiutes of Moapa River Indian Reservation, Moapa, Nevada has also filed 10 other associated applications ---No.'s 65944, 65945, 65946, 65947, 65948, 65949, 65954, 65955, 66473, and 66474--- each one to withdraw 6 cfs of ground-water from California Wash for cooling water for power generation purposes. The combined diversion rate for all 11 of these applications is 12 cfs or 7,000 afy of consumptive use.

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

FINDINGS

I. The proposed appropriation is located in California Wash. The proposed withdrawal rate of this application is 6 cfs, not to exceed 3,500 afy.

II. Recharge to California Wash from precipitation is estimated to be less than 100 afy (Rush, 1968, Harrill and others, 1988). Another 800 afy enters the valley as subsurface flow from Garnet Valley (Rush, 1968). Ground-water discharge from California Wash occurs as subsurface flow to the Muddy River (Rush, 1968).[1]

[1] See Prudic and others (1995) for a description of the regional ground-water flow system.

**IN THE MATTER OF APPLICATION 66475**
**EXHIBIT A - CONTINUED**

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

III. Rights to water in the Muddy River were decreed by the Tenth Judicial Court of the State of Nevada in the case entitled *Muddy Valley Irrigation Company vs. Moapa and Salt Lake Produce Company*. According to the January 21, 1920, Order of Determination and the March 11, 1920, Further and Supplemental Order of Determination of the Nevada State Engineer, there is no water available for appropriation in the Muddy River, its headwaters, sources of supply, and tributaries (Muddy Valley Irrigation Company, 1938).

IV. Ground-water from the aquifers in Hidden Valley, Garnet Valley, California Wash and the Muddy River Springs Area is tributary to the Muddy River (Rush, 1968; Prudic and others, 1995).

V. The following table summarizes water rights and hydrologic information for Hidden Valley North, Garnet Valley, and California Wash. Committed ground-water resources are equal to 1,719 afy (Column 1). The total amount of proposed appropriations in applications filed prior to those of the Moapa Band of Paiutes and pending before the Nevada State Engineer are equal to 86,733 afy (Column 2). The Moapa Band of Paiutes filed eleven applications to withdraw a combined total of 7,000 afy for industrial purposes, plus an additional application to withdraw 724 afy for commercial purposes (Column 3). Natural recharge to the ground-water aquifers is equal to 1,500 afy (Column 5). The difference between recharge and the amount of water in committed and proposed appropriations is equal to 94,676 afy (Column 6).

| *Hydrographic Area* | *1* *Committed Ground-Water Resources [2](afy)* | *2* *Pending Applications Senior to Moapa Band of Paiutes Applications [2, 4](afy)* | *3* *Pending Applications by Moapa Band of Paiutes. [2](afy)* | *4* *Total: Committed Resources and Pending Applications (afy)* | *5* *Recharge [3](afy)* | *6* *Recharge Less Total of Committed Resources and Pending Applications (afy)* |
|---|---|---|---|---|---|---|
| Hidden Valley N. | 0 | 16,434 | 0 | 16,434 | 200 | -16,234 |
| Garnet Valley | 1,181 | 41,339 | 0 | 42,520 | 400 | -42,120 |
| California Wash | 538 | 28,960 | 7, 724 | 37,222 | 900 | -36,322 |

[2] Source: State of Nevada, Feb. 3, 2000; Nevada Division of Water Resources, Special Hydrographic Abstracts.
[3] Sources: Harrill and others, 1988; Burbey, 1997; Rush, 1964
[4] When the proposed annual duty was not specified, it was estimated from the diversion rate.

**IN THE MATTER OF APPLICATION 66475**
**EXHIBIT A - CONTINUED**

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

VI. The above table does not include Muddy River water rights, which according to the Muddy River Decree, appropriates all water in the Muddy River, its headwaters, sources of supply, and tributaries.

VII. Total committed and proposed ground-water appropriations (Column 4) exceed the natural recharge rates in Garnet Valley, Hidden Valley North, and California Wash. In California Wash, the recharge rate is exceeded by 36,322 afy, in Garnet Valley, the recharge rate is exceeded by 42,120 afy, and in Hidden Valley North, the recharge rate is exceeded by 16,234 afy. Therefore, water is not available for appropriation in any of these hydrologically connected basins. Ground-water withdrawals larger than the recharge rate will come from aquifer storage, which constitutes ground-water mining.

VIII. This application by itself, if approved and developed, could reduce the discharge of the Muddy River by 3,500 afy and impair existing water rights and water related resources of the National Park Service.

IX. This application and associated applications, if approved and developed, in combination with existing permits and pending applications, will capture ground-water that naturally discharges to the Muddy River and impair existing water rights and water related resources of the National Park Service.

X. Lake Mead NRA springs, located within the Black Mountains Area, are discharge points for regional ground-water flow systems and may be affected by the proposed appropriation. The water issuing from the springs probably originates in the Weiser Wash and Mormon Mountains area (Pohlmann and others, 1998), and may include contributions from the Muddy River Springs area (Dettinger and others, 1995). The National Park Service is concerned that the proposed ground-water withdrawals in combination with existing ground-water uses in the Muddy River area, will reduce or eliminate the discharge of the springs within Lake Mead NRA by capturing water destined to the springs, given that pumping occurs over a long period of time.

XI. The water and water-related resources of Lake Mead NRA are locally and nationally important.

**IN THE MATTER OF APPLICATION 66475**
**EXHIBIT A - CONTINUED**

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

CONCLUSIONS

I. There is no water available for appropriation because committed water resources exceed natural ground-water recharge.

II. The approval and development of the appropriation proposed by this application will impair the water rights of the United States, because:

A. The proposed appropriation will mine groundwater or capture groundwater that discharges to the Muddy River. The United States' senior water right and other existing rights to the Muddy River would be injured, if the appropriation is approved and developed.

B. The proposed appropriation, in combination with existing appropriations and pending applications, if approved and developed, could reduce the discharge of Lake Mead NRA springs, because the total of committed and proposed appropriations exceeds the recharge rate. The drawdown caused by the proposed withdrawals would extend to capture ground-water that naturally discharges through the springs.

C. The effects of the appropriation proposed by this application, when combined with other existing and proposed appropriations, could impair the senior water rights of Lake Mead NRA more quickly and/or to a degree greater than the withdrawal proposed under this application alone.

III. The public interest would not be served by granting this application, because:

A. The water and water-related resources in the nationally important Lake Mead NRA would be diminished or impaired, as a result of the appropriation proposed by this application.

**IN THE MATTER OF APPLICATION 66475**
**EXHIBIT A - CONTINUED**

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

LITERATURE CITED

Burbey, T.J., 1997, 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, 65 p. and 1 plate.

Dettinger, M.D., and Schaefer, D.H., 1996, Hydrogeology of structurally extended terrain in the eastern Great Basin of Nevada, Utah, and adjacent states, from geologic and geophysical models: U.S. Geological Survey Hydrologic Investigations Atlas HA-694-D, 1 sheet.

Dettinger, M.D., Harrill, J.R., Schmidt, D.L., and Hess, J.W., 1995, Distribution of carbonate-rock aquifers and the potential for their development, southern Nevada and adjacent parts of California, Arizona, and Utah: U.S. Geological Survey Water-Resources Investigations Report 91-4146, 100 p. and 2 plates.

Eakin, T.E., 1964, Ground-water appraisal of Coyote Spring and Kane Springs valleys and Muddy River Springs area, Lincoln and Clark Counties, Nevada: Nevada Department of Conservation and Natural Resources Ground-Water Resources-Reconnaissance Series Report 25, 40 p. and 1 plate.

Eakin, T.E., 1966, A regional interbasin ground-water system in the White River area, southeastern Nevada: Water Resources Research, v. 2, no. 2, pg. 251-271.

Glancy, P.A., and Van Denburgh, A.S., 1969, Water-resources appraisal of the Lower Virgin River Valley area, Nevada, Arizona, and Utah: Nevada Department of Conservation and Natural Resources Ground-Water Resources-Reconnaissance Series Report 51, 87 p. and 2 plates.

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 Investigations Atlas HA-694-C, 2 sheets.

Harrill, J.R., and Prudic, D.E., 1998, Aquifer systems in the Great Basin region of Nevada, Utah, and adjacent states -- summary report: U.S. Geological Survey Professional Paper 1409-A, pg. A1-A66.

**IN THE MATTER OF APPLICATION 66475**
**EXHIBIT A - CONTINUED**

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

Muddy Valley Irrigation Company, 1938, Protest of the Muddy Valley Irrigation Company in the Matter of Application No. 10188 by the United States Department of Agriculture, Bureau of Biological Survey, for Permission to Appropriate Water From Muddy Creek, Filed March 9, 1938: Nevada State Engineer's Office, Carson City, Nevada, 2 p.

Nevada Department of Conservation and Natural Resources, 1992, Hydrographic basin statistical summary -- Ground water basins 001-232: State of Nevada, Division of Water Resources and Water Planning, Carson City, Nevada, approximately 250 p.

Pohlmann, K.F., Campagna, D.J., Chapman, J.B., and Earman, S., 1998, Investigation of the Origin of Springs in the Lake Mead National Recreation Area: University and Community College System of Nevada, Desert Research Institute, Water Resources Center, Pulication No. 41161, 51 p. and three appendices.

Prudic, D.E., Harrill, J.R., and Burbey, T.J., 1995, 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, pp. D1-D102.

Rush, F.E., 1964, Ground-water appraisal of the Meadow Valley area, Lincoln and Clark Counties, Nevada: Nevada Department of Conservation and Natural Resources Ground-Water Resources-Reconnaissance Series Report 27, 43 p.

Rush, F.E., 1968, Water-resources appraisal of the Lower Moapa-Lake Mead Area, Clark County, Nevada: Nevada Department of Conservation and Natural Resources Ground-Water Resources-Reconnaissance Series Report 50, 66 p.