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

FILED
JUL - 8 1999
STATE ENGINEER'S OFFICE

IN THE MATTER OF APPLICATION NUMBER 64798
FILED BY VIRGIN VALLEY WATER DISTRICT
OF MESQUITE, STATE OF NEVADA
ON JANUARY 21, 1999 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 64798 filed on January 21, 1999, by Virgin Valley Water District of Mesquite, State of Nevada, to appropriate the waters of underground, situated in Lincoln 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 1st day of July, 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

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IN THE MATTER OF APPLICATION 64798
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". Springs, including their water-related attributes, and the water-related resource attributes and recreational activities associated with the Virgin River are important features of the Lake Mead NRA. 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 applicant. These rights have not been judicially quantified.

III. Numerous 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 will be affected by up-gradient diversions.

Springs include Blue Point, Rogers, Corral, and Kelsey's springs, and other smaller, unnamed springs.

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.

In 1998, approximately 9,107,000 persons visited Lake Mead NRA, contributing to the local economy.

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.

IV. The Virgin River provides water for vegetation, wildlife habitat, and a popular waterfowl hunting area within Lake Mead NRA. This area within Lake Mead NRA is leased to the Nevada Department of Wildlife for the Overton Wildlife Management Area. Flow of the Virgin River provides nutrients important for sustaining a recreational fishery in Lake Mead NRA.

V. Lake Mead NRA has State appropriative water rights for the following springs which could be impaired by the appropriation and diversion proposed by this application, in combination with existing appropriations:

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Name	Point of Diversion	Certificate Number
Kelsey's Spring	SW ¼, NW ¼, Sec. 20, T16S, R68E, MDB&M	296
Rogers Spring	SE ¼, SE ¼, Sec. 12, T18S, R67E, MDB&M	4476

VI. Virgin Valley Water District proposes to withdraw 6 cubic feet per second (cfs) for domestic and quasi-municipal use in the Virgin River Valley with this application. Virgin Valley Water District also filed associated applications numbered 64793 - 64797 in the Virgin River Valley, each for 6 cfs of ground water for domestic and quasi-municipal uses. The total diversion rate sought by the applicant in the Virgin River Valley is 36 cfs.

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

FINDINGS

I. The proposed appropriation is within the Virgin Valley. Reported values for the total ground-water recharge rate of the Virgin Valley range from 3,600 afy (Harrill and others, 1988) to about 8,400 to 11,600 afy (Las Vegas Valley Water District [LVVWD] and The MARK Group, 1992). Committed ground-water resources in the Virgin Valley are reported to be about 13,300 afy, with 12,497 afy of that value being municipal and quasi-municipal (Nevada Department of Conservation and Natural Resources, 1992).

The perennial yield of ground water of the Virgin Valley is reported to be 3,600 afy (Nevada Department of Conservation and Natural Resources, 1992). Committed ground-water resources exceed perennial yield and recharge. Thus, there is no ground water available for appropriation in the Virgin Valley.

II. The total inflow rate of the ground- and surface-water system of the Virgin Valley ranges from about 178,800 to 182,800 afy (LVVWD and The MARK Group, 1992; and Brothers and others, 1993.) The system yield of the Virgin Valley is 100,000 afy (Nevada Department of Conservation and Natural Resources, 1992), where the system represents both ground and surface water.

LVVWD and The MARK Group (1992) calculated consumptive use for ground- and surface-water rights in the Virgin Valley to be about 20,800 afy. In 1994, the Nevada State Engineer approved applications of Southern Nevada Water Authority (SNWA) to appropriate surface water in Nevada for a combined flow rate not to exceed 190,000 afy. The estimated consumptive use of 20,800 afy plus the approved permits of SNWA for no more than 190,000 afy, totals 210,800 afy.

For the Virgin Valley system, existing committed water resources exceed both the system inflow rate and the system yield. Thus, there is no water, underground or surface, available for appropriation in the Virgin Valley system.

III. LVVWD filed 16 applications to withdraw 10,000 afy of ground water in the Virgin Valley. In a May 4, 1992, letter to the Nevada State Engineer, LVVWD requested that these applications "not be acted on ...

but held for future review." Lincoln County and Vidler Water Company, Inc. have filed two applications to divert a total of 20 cfs of groundwater in the Virgin River Valley and two additional applications to divert another 20 cfs from the Tule Desert, which provides ground-water recharge to the Virgin Valley (Harrill and others, 1988). These applications are senior to the Virgin Valley Water District applications. In addition, Virgin Valley Water District has filed Application Numbers 63292 through 63297 in the Virgin River Valley (These applications have not yet been acted on).

IV. The aquifers underlying the Virgin Valley are part of a ground-water flow system which discharges water through springs in Lake Mead NRA, including Rogers, Bluepoint, Corral, and Kelsey's Springs (see Prudic and others, 1993; and Pohlmann and others, 1998). These springs, located in the Overton Arm area of Lake Mead NRA, discharge at or near the contact of carbonate rocks and valley fill. Pohlmann and others (1998) determined that the most probable source of water issuing from the springs is the Mormon Mountains (which are partly located in the Virgin Valley) and that the lower Virgin Valley is not a likely source.

The ground water that would be tapped by the proposed point of diversion and those of the associated applications and that issuing from Lake Mead NRA springs apparently have different sources. However, the appropriation proposed by the subject application, in combination with existing appropriations and associated applications and those of LVVWD, if approved and developed, could affect the discharge of the springs, if pumping is large enough and occurs over a long period of time.

V. The movement of ground water adjacent to the Virgin River is controlled by hydraulic gradients that respond to changes in river stage (Glancy and Van Denburgh, 1969). LVVWD and The MARK Group (1992) concluded that ground water and surface water of the Virgin Valley in Nevada should be considered as one hydrologic system. The appropriation proposed by the subject application, in combination with associated applications and existing appropriations, including LVVWD's applications, if approved and developed, could reduce the discharge of the Virgin River. The reduction could disrupt the loading of nutrients important for sustaining a recreational fishery in Lake Mead NRA and diminish the wildlife habitat and popular wildfowl hunting area within Lake Mead NRA.

VI. Ground-water withdrawal rates larger than the recharge rate of the Virgin Valley (8,400 to 11,600 afy) would come from storage and constitute ground-water mining. Existing committed ground-water resources are about 13,300 afy. The proposed appropriation, in combination with those of the associated applications, if approved and developed, will mine ground water.

VII. Application 64798 proposes to withdraw water from the SE¼, NE¼, Section 24, T10S, R68E, MDB&M and to use on all of T13S, R67E; T14S, R67E; T13S, R68E; T14S, R68E; T13S, R69E; T14S, R69E; T13S, R70E; T14S, R70E; T13S, R71E; T14S, R71E MDB&M and portions of T15S, R69E; T15S, R70E, and T15S, R71E MDB&M, Clark County, Nevada, and Section 32, T40N R16W and Section 5, T39N, R16W SRB&M, Mohave County, Arizona. This land is administered by the U.S. Bureau of Land Management and is not owned by the applicant. Ruling Number 4548, signed by the Nevada State Engineer on July 25, 1997, states that "...it would not be in the public interest to approve applications for use upon lands where the applicant does not control both the proposed well locations and the proposed places of use." Specific information relating to the need for and use of water under this application is

lacking.

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

CONCLUSIONS

I. There is no water available for appropriation because:

A. Committed ground-water resources exceed the basin's ground-water recharge rate and perennial yield, and

B. Committed water resources (underground and surface) exceed the basin's inflow rate and system yield.

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

A. The appropriations and withdrawals proposed by the Virgin Valley Water District (Applications 64793 through 64798) in combination with existing appropriations and those proposed by LVVWD, Lincoln County and the Vidler Water Company, Inc., and the previous Virgin Valley Water District applications, will eventually reduce the flow of the Virgin River. The United States' senior water rights would be impaired, if the appropriations are approved and developed.

B. The proposed appropriation, in combination with existing appropriations and those proposed by LVVWD, Lincoln County and the Vidler Water Company, Inc., and the previous Virgin Valley Water District applications, if approved and developed, could reduce the discharge of Lake Mead NRA springs, because of the large potential withdrawal rate. The drawdown caused by such large 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 ground-water reservoir in Virgin Valley, a replenishable resource, would be mined.

B. 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.

C. The land on which the applicant proposes to withdraw the water and proposes to use the water is not owned by the applicant.

IN THE MATTER OF APPLICATION 64798
EXHIBIT A - (CONTINUED)

Protest by Charles W. Pettee
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National Park Service

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