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

IN THE MATTER OF APPLICATION NUMBER 53947,

FILED BY Las Vegas Valley Water District,

ON October 17 19 89, TO APPROPRIATE THE

WATERS OF Underground

PROTEST

Comes now Pahranagat Valley Joint Services Board; Ms. Verna Hansen, Board Chairwoman
Printed or typed name of protestant

whose post office address is Post Office Box 450, Alamo, Nevada 89001
Street No. or P.O. Box, City, State and Zip Code

whose occupation is Board Chairwoman, and protests the granting

of Application Number 53947, filed on October 17, 19 89

by Las Vegas Valley Water District to appropriate the
Printed or typed name of applicant

waters of Underground situated in Lincoln
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 ATTACHED -

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 Verna Hansen
Agent or protestant

Ms. Verna Hansen, Board Chairwoman
Printed or typed name, if agent

Address Post Office Box 450
Street No. or P.O. Box No.

Alamo, Nevada 89001
City, State and Zip Code No.

Subscribed and sworn to before me this 11-R day of July 19 90

JoAnn Clay
Notary Public

State of Nevada

County of Lincoln

JoAnn Clay
Notary Public-State of Nevada
Lincoln County
My appointment expires Jun. 14, 1992

$10 FILING FEE MUST ACCOMPANY PROTEST. PROTEST MUST BE FILED IN DUPLICATE. ALL COPIES MUST CONTAIN ORIGINAL SIGNATURE.

2454 (Revised 6-80)

O-2033

Draft
Protest of Las Vegas Valley Water District Application Number 53947 to Appropriate the Ground Waters of Tikabo Valley Hydrographic Area #169

Prepared for:

The Pahranagat Valley Joint Services Board
Post Office Box 450
Alamo, Nevada 89001

Prepared by:

Sweetwater Consulting Services
Post Office Box 223
Carson City, Nevada 89702

July 1990

Introduction

On behalf of the Pahranagat Valley Joint Services Board (PVJSB) the following protest has been prepared regarding the Las Vegas Valley Water District (LVVWD) application to appropriate the waters of the Tikabo Valley Hydrographic Area #169 (LVVWD Application Number 53947, filed October 17, 1989). PVJSB is deeply concerned with the LVVWD applications, the potential for impacts to Pahranagat Valley ground and surface waters, area residents, agricultural operations and the associated socioeconomic and environmental impacts such appropriations would potentially create.

Pahranagat Valley is home to approximately 1,100 residents, including the Town of Alamo and numerous agricultural operations. PVJSB is comprised of the following Pahranagat Valley service providers: the Pahranagat Valley Volunteer Fire Department Board; the Pahranagat Valley Ambulance Board; the Alamo Town Board; the Pahranagat Valley Power District; the Town of Alamo Water and Sewer Board; and the Lincoln County/Pahranagat Valley Deputy Sheriff's Department. The PVJSB service area includes a resident population of approximately 1,100 persons, commercial and industrial businesses, the Alamo elementary, middle and high school facilities, community park and recreation facilities and numerous farms and ranches located throughout the Pahranagat Valley. Though currently small in size compared to many rural Nevada service area, growth is occurring throughout the valley. Community growth is being driven by the tremendous growth of Las Vegas Valley. New residents are seeking a more rural and higher quality of life than is available in the Las Vegas Valley. Additionally, the potential for even greater growth in the Pahranagat Valley is very good with the proposed industrial development projects in Coyote Springs Valley immediately south of town, the proposed siting of the Nuclear Waste Repository by the Department of Energy at Yucca Mountain, and proposed Department of Defense projects on the Nellis Bombing Range and the Nevada Test Site.

The entire White River drainage, including Pahranagat Valley, provides unique outdoor recreation resources to area residents and visitors alike. Additionally, the White River drainage provides wildlife habitat to numerous wildlife species including several threatened and endangered wildlife species. Located within the Pahranagat Valley is a U.S. Fish and Wildlife Refuge, the "Pahranagat National Wildlife Refuge," and numerous Bureau of Land Management and State of Nevada recreation areas. Las Vegas Valley residents are the primary visitors to the area, as water based recreation is a very limited resource in southern Nevada. Outdoor recreationalists contribute to the area economy through retail purchases and overnight accommodations.

Water resources is truly the key to the future of the Pahranagat Valley, Lincoln County and all of rural southern Nevada. Adequate water resources is necessary to provide for future growth, the agricultural operations of the valley, and area recreation and wildlife resources.

This protest attempts to identify the numerous potential impacts associated with this LVVWD application; the need for additional information and data regarding Pahranagat Valley water resources; and the need for conducting a comprehensive environmental impact analysis, including project development alternatives, before any decision is made regarding the application. A full and complete public hearing process must also be conducted and incorporated into the decision process.

Potential Impacts

The following potential impacts have been identified which may be associated with the LVVWD Application Number 53947 to appropriate the waters of the Tikabo Valley. The need for a comprehensive third-party environmental impact analysis is paramount. Additional site-specific research and data gathering activities may also be required before an adequate impact analysis can be conducted.

Water Resources

The Pahranagat Valley falls within the basin and range physiography, as does most of Nevada. Basin and range topography greatly effects precipitation patterns, water flows and water locations. Not only are surface flows affected but also groundwater flows are influenced by the basin and range topography (Eakin, 1963). This is particularly significant in the Pahranagat Valley where surface spring discharges total approximately 25,000 acre feet per year (AFY) (NDWR, 1990), and annual recharge from precipitation may be as high as 1,800 AFY (Eakin, 1963), or as low as 1,000 AFY (NDWR, 1990). This situation is complicated by the fact that the Nevada Division of Water Resources's (NDWR) own data is both conflicting and outdated (NDWR, 1990). A detailed research analysis is necessary to determine if the water resources of the Pahranagat Valley are part of a much larger groundwater regime. At least one study has shown that the majority of the spring water discharge originates in adjacent valleys (Eakin, 1963).

Within Pahranagat Valley unique water resources including Ash, Hiko and Crystal Springs support diverse ecosystems. These warm water springs support vegetation and fishery resources including federally listed Threatened and Endangered species (see wildlife section). Considerable effort on a national level has been expended to protect and preserve these unique water resources. The potential for adverse impacts to Ash, Hiko and Crystal Springs and their surrounding ecosystems from LVVWD proposed pumpage and the water exportation project must be fully analyzed. Drawdown from pumping could possibly forever change these fragile ecosystems.

The location of LVVWD Application Number 53947 is located near Pahranagat Valley and PVJSB wells serving the Town of Alamo. Should LVVWD be allowed to pump groundwater in this location drawdown may occur in PVJSB wells, in other Pahranagat Valley wells and Tikabo Valley. This could result in wells having to be drilled

deeper or even moved to maintain production. Water quality could be degredated. All of this would cause considerable hardship and additional expense to the PVJSB.

Groundwater supply and demand for Pahranagat Valley is contained in Table 1. As can be seen, an excess of 17,526 AFY over perennial yield currently exists on record (NDWR, 1988). However the accuracy of this estimate is questionable. Accurate pumping and flow records have not been maintained and/or are not available throughout the Pahranagat Valley. Wells exist, which are being pumped, but are not on record with NDWR. Accurate consumptions records are also not available within the Pahranagat Valley. Extensive riparian vegetation throughout the Pahranagat Valley consumes large amounts of water but little is known about actual consumption amounts. The need for a comprehensive analysis of the existing conditions of Pahranagat Valley water resources is paramount before any decision is made regarding the LVVWD applications.

Table 1

Groundwater Supply and Demand
Pahranagat Valley, Nevada
Basin Number 209

Estimated Groundwater Perennial Yield:	25,000 AFY
Estimated Recharge:	1,000 AFY
Granted or Applied Water Rights:	7,477 AFY
Excess or Shortage:	+17,526 AFY

Source: Nevada Division of Water Resources, 1988.

Current water uses in the Pahranagat Valley are primarily municipal, ranching, agricultural, wildlife and culinary. Granting LVVWD Application Number 53947 would preclude increased usage by any of the current users over existing rights, as LVVWD is filing on all unappropriated water. There would be no water available for expanding existing uses, or for new users. Community growth in Alamo could be severely curtailed or made prohibitively expensive. Numerous impacts are possible which must be addressed and analyzed prior to any action on the LVVWD applications.

Vegetation Resources

Potential impacts to the vegetation resources of the Pahranagat Valley include surface disruption from construction, and interference with the hydrologic cycle. A lowered water table would have tremendous impacts on the vegetative resources of the valley. The valley provides important wildlife habitat including the only greenbelt and wetlands within the entire region. Loss of this vegetation would result in critical loss of diversity of both plant and wildlife species. The aesthetics of the region are greatly enhanced by the existing diversity of the ecosystems. Loss of vegetation would also impact the outdoor recreation resources currently enjoyed by so many Las Vegas Valley residents. This could also chain react into economic impacts to the local economy.

Wildlife Resources

Pahranagat Valley provides habitat for a wide variety of wildlife including mule deer, jackrabbits, cottontails, rodents, coyotes, mountain lions, badgers and grey foxes. The Pahranagat National Wildlife Refuge, comprised of approximately 5,380 acres of marshes, open water and native grass meadows provide critical habitat for a variety of birds and mammals. Waterfowl, characterized by pintails, teal, mallards and redheads, and shorebirds, including great blue herons and egrets, are found throughout the refuge and the Pahranagat Valley (USF&WS, 1990).

Several fisheries also exist in the valley comprised of rainbow trout, white crappie, large mouth bass, speckled dace and channel catfish. The region's most popular fisheries are located within the Pahranagat Valley and are enjoyed by thousands of visitors annually.

Several threatened and endangered (T&E) animal species are known to occur in the valley. These include the desert tortoise - Gopherus agassizi, bald eagle - Halialetus leucocephalus, and the banded gila monster - Heloderma suspectum. Protected aquatic species include the Pahranagat roundtail chub -Gila robusta jordam and the White River springfish - Crenichthys baileyi grandis (USF&WS, 1990).

The LVVWD Application Number 53947 has the potential to significantly impact wildlife resources including T&E species and protected aquatic species in the Pahranagat Valley. A full and comprehensive analysis is necessary to identify impacts to wildlife species before action is taken by NDWR.

Visual/Aesthetic Resources

Should this LVVWD application be approved, significant impacts to the Pahranagat Valley visual and aesthetic resources is possible. A "de-greening" of the valley would forever change the scenic beauty of the area. Construction improvements (pipelines, pump stations, etc.) would degrade the existing views both from the

community of Alamo and U.S. Highway 93. Visual/aesthetic resources must be included and analyzed before action is taken by NDWR.

Recreation Resources

The Pahranagat Valley provides diverse outdoor recreation opportunities to southern Nevada residents and visitors alike. Outdoor recreation participants also contribute significantly to the local economy through gasoline and retail purchases and overnight accommodations. Outdoor recreation visitor days are climbing steadily throughout the Pahranagat Valley, and Lincoln County as a whole. There is a potential to degrade the water related recreation resources of the Pahranagat Valley should LVVWD be allowed to appropriate said waters. The potential to impact existing wetlands, open waters, and marsh areas would directly impact hunting, fishing, bird watching, and other existing outdoor recreation opportunities. This would chain react and impact the local economy in lost revenues, depressing the fragile Lincoln County economic base.

Alamo/Pahranagat Valley Region

Several impacts to the Alamo/Pahranagat Valley Region have been identified in previous discussions, (i.e. vegetation, wildlife, water, etc.). Other impacts to the existing environment will greatly affect the future of the valley. A detailed analysis is necessary regarding impacts from exportation of water from Tikabo Valley and the Alamo/Pahranagat Valley. For example, the Town of Alamo water system currently faces severe deficiencies in both water quantity and quality. It is currently unknown if there is sufficient water resources to correct the system and to provide for future growth. Proposed "water mining" of the Pahranagat Valley by the LVVWD could severely impact the existing community water system both now and in the future. If all available water is exported from the valley, sufficient water resources to support local development and growth from mining or industrial uses may be unavailable. Population reductions and corresponding economic impacts could also result should the existing agricultural employment base, the mainstay of the local economy, be reduced by LVVWD pumpage. The loss of the Pahranagat Valley's water resources could forever impact the ability to attract future industrial development to the area and place the valley in a downward economic spiral.

Of an equal concern is the unique identity and character of the Pahranagat Valley which has developed since the area's early settlement. A major disruption of the existing community cohesiveness, which could result in extensive social problems, is possible should LVVWD be successful in its water exportation plan. The family-oriented structure of the Mormon Church, the years of stability and basic rural philosophies of families working together could all unravel. The loss of agricultural based employment due to environmental degradation, dislocation and out-migration could forever change the valley's quality of life, stability and rural

character. Social impacts could be greater than the environmental impacts associated with LVVWD's proposed exportation project. A full analysis must be conducted before action is taken by NDWR.

Conclusion

The LVVWD Application Number 53947 to appropriate the waters of the Tikabo Valley Hydrographic Area #169 has the potential to impact numerous unique natural resources, the socioeconomics of the region, the residents of the Pahranagat Valley and the Town of Alamo, listed T&E flora and fauna and the future of the entire region. This is a major water importation project, comparable to Los Angeles Water and Power's water importation project from Owen's Valley and Mono Basin during the early 1900's. The ramifications of approval of LVVWD Application Number 53947 would result in by far the greatest irreversible and irretrievable commitment of resources of any project ever proposed in the State of Nevada. A project of this magnitude requires extensive analysis based upon accurate and current data. Poor information and lack of data raise serious concerns regarding Pahranagat Valley water resources, the specifics of the proposed LVVWD water importation project, associated development impacts, and monetary costs to the rate payers. A fair and impartial decision regarding this LVVWD application and the issues is not possible without further study and detailed analysis.

Therefore, we respectfully request, on behalf of the Pahranagat Valley Joint Services Board, that LVVWD Application Number 53947 be denied pending the completion of the following items and request that any future decision be based upon an unbiased, third-party impact analysis. We request that:

* NDWR commissions a comprehensive research analysis to fully identify the existing state of Tikabo Valley Hydrographic Area #169 and Pahranagat Valley Hydrographic Area #209 water resources including: water quantity - surface and ground; basin inflow and outflow; annual recharge; perennial yield; water rights; water consumption and pumpage; and water quality - surface and ground.

* LVVWD and NDWR conduct a third-party comprehensive environmental impact analysis, including project development alternatives, based upon the most current data and information available.

* The fragile ecosystems of Ash, Hiko and Crystal Springs, which support federally listed T&E species, be fully analyzed regarding potential impacts from LVVWD's Application Number 53947 and proposed water exportation project.

* Full public hearings be conducted, including hearings to be held in the Town of Alamo to provide for public input and comment on said LVVWD application.

* Because of the magnitude of potential impacts associated with the LVVWD application and water importation project, impacts to the social and economic environments of the Pahranagat Valley be fully analyzed.

* Full disclosure of the proposed project's development and maintenance cost be made.

* Under NDWR guidance, LVVWD establishes an open and clear mechanism for public information regarding the water importation project and the associated impacts of the proposed project.

The Pahranagat Valley Joint Services Board appreciates the opportunity to protest said LVVWD Application Number 53947 per Nevada Revised Statutes and reserves the right to amend said protest at some point in the future should new data and information become available.

LITERATURE CITED

(Eakin, 1963)
Eakin, Thomas E. 1963. Groundwater Resources, Reconnaissance Series - Report 21 - Groundwater Appraisal of Pahranagat and Pahroc Valleys - Lincoln and Nye Counties, Nevada. USGS.

(NDWR, 1990)
Nevada Division of Water Resources. 1990. Personal Communication.

(USF&WS, 1990)
U.S. Fish and Wildlife Service. 1990. Pahranagat National Wildlife Refuge. Personal Communication.