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

IN THE MATTER OF APPLICATIONS 59352, 62529, 66072, 66077, 66078, 66079 AND 66081 FILED TO APPROPRIATE THE PUBLIC WATERS OF AN UNDERGROUND SOURCE WITHIN THE AMARGOSA DESERT HYDROGRAPHIC BASIN (230), NYE COUNTY, NEVADA.	)	**RULING** **#5750**

GENERAL

I.

Application 59352 was filed on October 29, 1993, by Frederick C. and Sandra J. Fellwock and David Mulkey, Trustee of the David A. Mulkey Living Trust to appropriate 1.56 cubic feet per second (cfs) not to exceed 400 acre-feet annually, of underground water for quasi-municipal purposes. The proposed place of use is described as being 320 acres within the S½ of Section 18, T.16S., R.49E., M.D.B.&M. The proposed point of diversion is described as being located within the NE¼ SE¼ of said Section 18.[1]

II.

Application 62529 was filed on October 24, 1996, by Frederick C. and Sandra J. Fellwock and David Mulkey, Trustee of the David A. Mulkey Living Trust to appropriate 3.0 cfs of underground water for irrigation and domestic purposes. The proposed place of use is described as being 160 acres within the SW¼ of Section 18, T.16S., R.49E.,

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[1] File No. 59352, official records in the Office of the State Engineer. Exhibit No. 2, public administrative hearing before the Office of the State Engineer, June 12-14, 2006. Hereinafter the transcript and exhibits from the hearing will be referred to solely by exhibit number or transcript page.

M.D.B.&M. The proposed point of diversion is described as being located within the NW¼ SW¼ of said Section 18.[2]

III.

Application 66072 was filed on February 16, 2000, by the Nye County Board of Commissioners to appropriate 5.25 cfs of underground water for municipal purposes. The proposed place of use is described as being the Amargosa Hydrographic Basin as delineated in State Engineer's Order No. 724. The proposed point of diversion is described as being located within the NW¼ SW¼ of Section 23, T.15S., R.50E., M.D.B.&M.[3]

IV.

Application 66077 was filed on February 16, 2000, by the Nye County Board of Commissioners to appropriate 5.18 cfs of underground water for municipal purposes. The proposed place of use is described as being the Amargosa Hydrographic Basin as delineated in State Engineer's Order No. 724. The proposed point of diversion is described as being located within the NW¼ NE¼ of Section 5, T.16S., R.53E., M.D.B.&M.[4]

V.

Application 66078 was filed on February 16, 2000, by the Nye County Board of Commissioners to appropriate 5.18 cfs of underground water for municipal purposes. The proposed place of use is described as being the Amargosa Hydrographic Basin as delineated in State Engineer's Order No. 724. The proposed point of diversion is described as being located within the NE¼ NW¼ of Section 5, T.16S., R.53E., M.D.B.&M.[5]

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[2] Exhibit No. 5.
[3] Exhibit No. 8.
[4] Exhibit No. 12.
[5] Exhibit No. 15A.

VI.

Application 66079 was filed on February 16, 2000, by the Nye County Board of Commissioners to appropriate 4.56 cfs of underground water for municipal purposes. The proposed place of use is described as being the Amargosa Hydrographic Basin as delineated in State Engineer's Order No. 724. The proposed point of diversion is described as being located within the NE¼ NE¼ of Section 13, T.15S., R.49E., M.D.B.&M.[6]

VII.

Application 66081 was filed on February 16, 2000, by the Nye County Board of Commissioners to appropriate 5.525 cfs of underground water for municipal purposes. The proposed place of use is described as being the Amargosa Hydrographic Basin as delineated in State Engineer's Order No. 724. The proposed point of diversion is described as being located within the NE¼ SE¼ of Section 22, T.15S., R.50E., M.D.B.&M.[7]

VIII.

Application 59352 was timely protested by Amargosa Resources, Inc. on the following grounds:[8]

> Amargosa Resources, Inc. filed Applications No. 58372, 58373, 58444, 58445 & 58446 in December, 1992 to appropriate 25,000 acre-feet of groundwater within the Amargosa Basin (14-230). In conjunction with these applications, Amargosa Resources, Inc. also filed a petition for forfeiture of 25,000 acre-feet of groundwater within said basin, as provided for by NRS 534.090. This forfeiture is the basis for the water being appropriated by Amargosa Resources, Inc.

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[6] Exhibit No. 19.
[7] Exhibit No. 23.
[8] Exhibit No. 3.

Application 59352 seeks to appropriate 1.56 c.f.s. of water for quasi-municipal purposes to serve 400 individual homes on 320 acres within the S ½ Section 18, T.16S., R.48E., M.D.B. & M. The total annual use is given as 400 acre-feet per year. The proposed point of diversion and place of use is the same as that under Permit 17181, Certificate 6008, said right already having a claim for forfeiture against it filed by Amargosa Resources, Inc.

NRS 533.370 states that an application to appropriate shall be rejected if it meets any of the following criteria:

1. There is no unappropriated water at the source.
2. There is a conflict with existing rights
3. It is not in the public interest.

Application 59352 is junior in priority to the applications filed by Amargosa Resources, Inc. and any consideration of this application must first take into account the appropriations previously claimed by the Protestant. The applications filed by Amargosa Resources, Inc., once granted, will result in the basin being fully appropriated and there will be no unappropriated water to support an this application as required by NRS 533.370. Therefore Amargosa Resources, Inc. respectively requests that Application 59352 be denied.

IX.

Application 59352 was timely protested by the National Park Service (NPS), as summarized, on the following grounds:[9]

I. In sum, the NPS protests the granting of Application Number 59352 submitted by Frederick C. and Sandra J. Fellwock and David A Mulkey, Trustee of the David A. Mulkey Living Trust, to appropriate and divert ground water, on the following grounds:

[9] Exhibit No. 4.

A. The public interest will not be served if water and water-related resources in the nationally important Death Valley NM including Devil's Hole, are diminished or impaired as a result of the diversion proposed by this application.

B. The diversion proposed by this application will reduce or eliminate the flows of springs in Death Valley NM which are discharge areas for regional ground-water flow systems, thereby impairing the senior NPS water rights.

C. The diversion proposed by this application will cause the water level at Devil's Hole to fall, thereby impairing the senior Federal reserved water right for Devil's Hole.

D. The diversion proposed by this application is located in the Amargosa Desert Hydrographic Area. Since this basin's water resources are already overcommitted, there is no water remaining to appropriate.

X.

Application 62529 was timely protested by the NPS on grounds similar to the protest of Application 59352. The protest is summarized as follows:[10]

- In sum, the NPS protests the granting of Application Number 62529, by Frederick C. Fellwock of Las Vegas, State of Nevada, to appropriate and divert ground water, on the following grounds:
  A. The public interest will not be served if water and water-related resources in the nationally important Death Valley NP including Devil's Hole, are diminished or impaired as a result of the appropriation proposed by this application.
  B. The appropriation proposed by this application will reduce or eliminate the flows of springs in Death Valley NP which are discharge areas for regional ground water flow systems, thereby impairing senior NPS water rights.

[10] Exhibit No. 7.

C. The appropriation proposed by this application, in combination with existing appropriations, will cause the water level at Devil's Hole to fall, thereby impairing the senior Federal reserved water right for Devil's Hole.
D. The proposed appropriation would result in further over-appropriation above the combined perennial yield for the Amargosa Desert area. Since the area's water resources are already overcommitted, there is no water remaining to appropriate.
E. The proposed appropriation would result in further over-appropriation in the Death Valley System, and the Pahute Mesa (or Alkali-Flat Furnace Creek Ranch) subsystem. Since the system and subsystems are already overcommitted, there is no water remaining to appropriate.
F. The proposed appropriation, in combination with existing appropriations, would capture water that comprises outflow from the Amargosa Desert to Death Valley. Thus, the NPS's senior water rights, water resources, and water related resources will be impaired.
G. The State Engineer has denied previous applications to appropriate water for irrigation in the Amargosa Desert, and thus Application Number 62529 should also be denied.

XI.

Application 62529 was timely protested by the U.S. Fish and Wildlife Service (USFWS) on the following grounds:[11]

> Application 62529 was filed by Frederick Fellwock and the David Mulkey Living Trust on October 24, 1996 requesting a diversion rate of 3.0 cubic feet per second from an underground source for irrigation purposes in Basin 230, Amargosa Desert, Nye County, Nevada. The proposed place of use is SW¼, Sec. 18, T.16S., R.49E., M.D.M. in the Amargosa Desert, Groundwater Basin 230, approximately ten miles northwest of the Ash Meadows National Wildlife Refuge (Refuge). The

[11] Exhibit No. 6.

proposed place of use will be referred to as the Amargosa Valley in this protest. The total annual volume is not specified in the application although the application states that 160 acres will be irrigated. Irrigation water rights in this area typically specify an annual duty of five acre-feet per acre. Thus, the total volume of water for this application can be estimated at 800 acre-feet annually.

The U.S. Fish and Wildlife Service (Service) requests that Application No. 62529 be denied because:

- Water may not be available to appropriate in the manner described. The State Engineer has denied previous applications for irrigation in this basin.
- Granting of this application may cause injury to Service-owned senior water rights for water on the Refuge.
- Granting of this application may threaten or damage habitat for species that are endangered, threatened, or considered for future listing under the Endangered Species Act and, therefore, may not be in the public interest.

Additional material was submitted by the Protestant in support of the above protest claims and is contained within Attachment A of the protest within File No. 62529, official records in the Office of the State Engineer.

XII.

Applications 66072, 66077, 66078, 66079 and 66081 were timely protested by the USFWS, NPS and U.S. Department of Energy, as summarized, on the following grounds:[12]

National Park Service:

The NPS protested on grounds very similar to its protests of Applications 59352 and 62529. A representative

[12] Exhibit Nos. 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 24, 25 and 26.

summary of the protests to Applications 66072, 66077, 66078, 66079 and 66081 is as follows:

- There is no unappropriated water at the proposed source.
- The approval and development of this application will impair the senior water rights of the United States.
- The public interest would not be served by granting a permit because the water and water-related resources of the Death Valley National Park would be diminished or impaired, the aesthetic value of the park would be reduced, the application is speculative and the land is not owned by the applicant.

U.S. Fish and Wildlife Service:

The USFWS requests that Application Nos. 66072 through 66081 be denied because:

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

U.S. Department of Energy:

The United States Department of Energy, Yucca Mountain Site Characterization Office protested on the following grounds:

- This application should not be granted until litigation is concluded regarding the U.S. Department of Energy (DOE), Yucca Mountain Project (YMP) water permit applications.
- The proposed use conflicts with existing rights in Basin 230 and with existing senior YMP water appropriation permits in Basin 227A and Basin 229 and YMP applications currently being litigated.
- The proposed use threatens to prove detrimental to the public interest in protecting the threatened

and endangered species and critical habitats at Ash Meadows, Devils Hole and/or Death Valley. If the State Engineer determines that the Applicant's proposed use will not prove detrimental to this matter of public interest, the application should nevertheless not be approved unless the Applicant agrees to continue demonstrating that its water use is not causing such harm by implementing a regional groundwater monitoring program designed to identify the potential for and to prevent such impacts to regional water resources.

XIII.

After all parties were duly noticed, a public administrative hearing was held before the Office of the State Engineer on June 12-14, 2006.[13]

FINDINGS OF FACT

I.

State Engineer's Order No. 724, issued May 14, 1979, described and designated the Amargosa Desert Hydrographic Basin as a groundwater basin in need of additional administration under the provisions of NRS § 534.030.[14]

All water right applications, which are filed in the Office of the State Engineer, are subjected to an analysis to determine the location of the proposed points of diversion. This determination is a critical part of the initial application review process and establishes which hydrographic basin the proposed points of diversion are located within. The description of the proposed points of diversion found within Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66081 and their supporting maps were used to plot the location of the proposed well sites.

The State Engineer finds that Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66081 have proposed

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[13] Transcript and Exhibits, public administrative hearing June 12-14, 2006, official records of the Office of the State Engineer.

[14] State Engineer's Order No. 724, dated May 14, 1979, official records in the Office of the State Engineer.

points of diversion that are located within the geographic boundaries of the designated Amargosa Desert Hydrographic Basin.

II.

An examination of the records of the Office of the State Engineer identified numerous water right applications with proposed points of diversion located within the Amargosa Desert Hydrographic Basin that have been previously denied. Amongst this group of denied applications are several, which requested new appropriations of underground water for irrigation purposes.[15] The State Engineer finds that previous applications to appropriate water for irrigation purposes have been denied in the Amargosa Desert Hydrographic Basin.

III.

The Nevada Revised Statutes (NRS) chapters 533 and 534 and the policies developed by the Office of the State Engineer control the appropriation of water within the State of Nevada. Under the provisions found under NRS § 533.370(5), before an application that requests a new appropriation of underground water can be considered for approval it must be determined, amongst other things, that there is unappropriated water available at the targeted source. The answer to the question of what amount of underground water is available for additional appropriation from the Amargosa Desert Hydrographic Basin can be found in an analysis of the basin's recharge-discharge relationship. Central to this equation is the concept of the perennial yield of the Amargosa Desert Hydrographic Basin.

Perennial yield of a groundwater reservoir may be defined as the maximum amount of ground water that can be

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[15] State Engineer's Ruling Nos. 2480, 2793 and 3206, official records in the Office of the State Engineer.

salvaged each year over the long term without depleting the groundwater reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use. If the perennial yield is continually exceeded groundwater levels will decline.[16]

Withdrawals of ground water in excess of the perennial yield contribute to adverse conditions such as water quality degradation, storage depletion, diminishing yield of wells, increase in cost due to increased pumping lifts, land subsidence and possible reversal of groundwater gradients, which could result in significant changes in the recharge-discharge relationship.

The United States Geological Survey (USGS) estimates that the perennial yield of the Amargosa Desert Hydrographic Basin as follows:[17]

> The physical conditions in Amargosa Desert suggest that the estimate of discharge is the better basis on which to estimate perennial yield in the light of present information. Thus, the tentative perennial yield may be about 24,000 acre-feet per year. Of this, about 17,000 acre-feet can be obtained by full development of the springs in Ash Meadows. The remaining amount would be available for development by wells largely in the area northwest and northeast of the springs. Unused discharge from the springs that is returned to the ground-water reservoir downgradient from the springs toward Death Valley Junction could be withdrawn for use. However, the chemical quality generally becomes progressively poorer by this recycling and the suitability for the intended use should be evaluated carefully.

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[16] State Engineer's office, *Water for Nevada, State of Nevada Water Planning Report No. 3*, p. 13, Oct. 1971.

[17] Walker, G.E. and Eakin, T.E., *Ground-Water Resources - Reconnaissance Series Report 14, Geology and Groundwater of Amargosa Desert, Nevada-California,* Department of Conservation and Natural Resources in Cooperation with the U.S. Geological Survey, p. 29, (1963).

The Office of the State Engineer has for many years relied upon the USGS' estimates of perennial yield. These estimates are critical in determining the degree of regulation, which must be placed upon a groundwater basin's limited underground water resources. An examination of records on file in the Office of the State Engineer indicate that the Amargosa Desert Hydrographic Basin groundwater recharge from precipitation is 600 acre-feet per year, groundwater inflow from Mercury Valley, Rock Valley, Jackass Flats, and Crater Flat totals 44,000 acre-feet per year, groundwater evapotranspiration (ET) is 24,000 acre-feet per year, and subsurface outflow is 19,000 acre-feet per year to the Death Valley area.[18] The State Engineer finds the perennial yield of the Amargosa Desert Hydrographic Basin is currently estimated by the USGS at 24,000 acre-feet annually.

IV.

The Applicant, Nye County, presented expert testimony by Tom Buqo in an attempt to prove that the established perennial yield for Amargosa Desert is underestimated and the actual perennial yield could be as high as 40,000 acre-feet per year[19] or 47,000 acre-feet per year.[20] The witness opined that past estimates of recharge over source areas are highly uncertain and some estimates have significantly underestimated recharge over the two major source areas to Amargosa Desert, the Spring Mountains and the Sheep Range. In addition, recharge over the Panamint Range has largely been ignored or discounted. In regards to discharge, the witness indicated that past estimates of discharge have

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[18] State Engineer's office, *Water for Nevada, State of Nevada Water Planning Report No. 3*, p. 50, Oct. 1971.
[19] Transcript, p. 535.
[20] Exhibit No. 79, p. 30.

significantly underestimated the total ET losses in Amargosa Desert, especially with regard to losses from bare soil and sparsely vegetated soil.[21]

The witness calculated a water budget based on both recharge and discharge largely using water budget components from previous studies. Components used in formulating total recharge to the Amargosa Basin included recharge from precipitation over mountain block areas, subsurface inflow from tributary groundwater basins, secondary recharge from streambed infiltration and irrigated areas, and recharge from precipitation over groundwater ET areas. The total recharge to the Amargosa Basin was calculated by adding the recharge from precipitation using the Maxey-Eakin method estimated as 1,500 acre-feet per year, recharge from precipitation over valley floor groundwater ET areas which is assumed to equal 1 inch per year occurring over 25,000 acres to yield an estimate of 2,000 acre-feet per year, inflow from primary tributary basins estimated as 45,300 acre-feet per year, secondary recharge from the Amargosa River and Forty-mile Wash estimated as 140 acre-feet per year, and secondary recharge from irrigated land estimated as 850 acre-feet per year. The total recharge to the Amargosa Basin was estimated at 49,790 acre-feet per year.[22] Areas within the Amargosa Desert hydrographic basin examined by the witness in formulating total groundwater discharge from ET included groundwater ET from 12,467 acres in the Ash Meadows area as classified in Water-Resources Investigations Report 01-4195 (Laczniak, et al., 2001), plus an additional 58,000 acres with a depth to groundwater of less than 10 feet, and 45,000 acres where the depth to groundwater ranges between

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[21] Exhibit No. 79, pp. 30-34.
[22] Exhibit No. 79, Table 12

10 and 50 feet.[23] The total area of groundwater ET classified by the witness for the Amargosa Desert hydrographic area is about 103,000 (58,000 + 45,000) acres, and the total area of groundwater ET classified in Water-Resources Investigations Report 01-4195 (Laczniak, et al., 2001) from Ash Meadows, Franklin Well, and Franklin Lake areas which fall within the Amargosa Desert hydrographic area[24] is 15,095 acres.[25] Using an area-weighted groundwater ET rate of 1.4 feet per year for the Ash Meadows area given in Water-Resources Investigations Report 01-4195 (Laczniak, et al., 2001), a groundwater ET rate of 0.5 feet per year for areas with depth to groundwater less than 10 feet, and a groundwater ET rate of 0.1 feet per year for areas with depth to groundwater from 10 to 50 feet, the witness claims that the resulting estimate of groundwater ET in the Amargosa Desert Hydrographic Basin is 47,300 acre-feet per year[26] as compared to the Water-Resources Investigations Report 01-4195 (Laczniak, et al., 2001) estimate of 19,350 acre-feet per year.[27] The discrepancy in total groundwater ET presented by the Applicant as compared to Water-Resources Investigations Report 01-4195 is obviously related to the extent of groundwater ET areas and the respective rates of groundwater ET. The witness attributes the imbalance of total recharge of about 50,000 acre-feet per year and total groundwater ET of about 47,000 acre-feet per year to represent subsurface outflow out of the Amargosa Desert Hydrographic Basin through the Funeral Range and in the area south of Eagle Mountain.[28]

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[23] Exhibit No. 79, p. 33.
[24] Transcript, p. 231.
[25] Exhibit No. 34, Table 2 and p. 16.
[26] Exhibit No. 79, Table 12.
[27] Exhibit No. 34, Table 10.
[28] Exhibit No. 79, p. 34.

In rebuttal, Mr. Laczniak testified as an expert witness for the Protestant. Mr. Lazcniak explained that the larger area of groundwater ET was considered but it was ultimately decided that the ET rates were so small that they would not play a significant role in the ET estimate and could be accounted for in the error of the estimated total groundwater ET volume. In addition Mr. Laczniak explained that Mr. Buqo's estimate of 47,300 acre-feet per year is a result of his estimation of such a large area of depth to water less than 50 feet and ET rates that are too high.[29] Mr. Laczniak went on to explain that the methodology used by Mr. Buqo was flawed citing several examples. First, Mr. Buqo used a rate of 0.1 foot per year for water levels between 10 and 50 feet but if the curve utilized to make this estimate is extended it shows that the evaporative flux is nearly zero by the time you get to just 20 feet in depth. The result is an overestimation of the groundwater ET. Second, the soil type of the area in question is more gravelly and pebbly with not much clay. Gravelly and pebbly soil is coarser than clay and water is more readily evaporated when clay is present. By changing this parameter, the ET rate could be as low as 0.01 foot per year. Third, the maps are biased on the high side in terms of the area where the water table is less than 50 feet.[30]

The Office of the State Engineer has for many years relied upon the USGS' estimates of perennial yield. These estimates are critical in determining the degree of regulation, which must be placed upon a groundwater basin's limited underground water resources. In several groundwater basins, the USGS has modified their initial

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[29] Transcript, p. 637.
[30] Transcript, pp. 646-651.

reconnaissance level estimates of perennial yield through additional published studies, with the Office of the State Engineer accepting the revised numbers. Although numerous new studies have been conducted, none of the cited studies offer a new and convincing value for perennial yield in the Amargosa Desert Hydrographic Basin. The State Engineer finds that the ET estimates offered by the Applicant are not based on measured rates and it is not certain if the rates proffered will actually occur in these areas of sparse vegetation and bare soil. The State Engineer finds the Protestant has presented a convincing argument that the Applicant has overestimated the groundwater ET. After a thorough review of the reports cited by the expert witnesses and each witnesses conflicting analyses, the State Engineer finds that sufficient data does not exist to modify the currently accepted perennial yield estimate of the USGS.

V.

Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66081 each request new appropriations of ground water from the Amargosa Hydrographic Basin. When an application is filed with the Office of the State Engineer the date of the filing is noted on the application and a sequential application number is assigned. Nevada water law is based in part on the prior appropriation doctrine, which is simplistically summarized as "first in time, first in right." Applications are prioritized on this basis with the priority of an application, and any later permit or certificate derived from that application, being the date the application was filed. This date is referred to as the priority date. An examination of this group of applications shows that Application 59352 has the senior-most priority date of October 29, 1993. Application 62529 has a priority date of October 24, 1996, and Applications

66072, 66077, 66078, 66079 and 66091 have priority dates of February 16, 2000.

Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66081 each request new appropriations of ground water as listed below by descending priority date:

Application No.	Amount Requested
59352	400 acre-feet annually
62529	800 acre-feet annually*
66072	3,800 acre-feet annually**
66077	3,750 acre-feet annually**
66078	3,750 acre-feet annually**
66079	3,300 acre-feet annually**
66081	4,000 acre-feet annually**

*160 acres of irrigation at 5 acre-feet per acre
**Calculated by direct conversion of diversion rate

Under NRS § 533.370(5), the first criteria that must be considered in the issuance of any new water appropriation is a determination of whether water is available at the source. The evidence presented indicated that the committed water resources for all water rights in the Amargosa Desert Hydrographic Basin total over 62,000 acre-feet annually. Within that amount, the committed ground water resources are approximately 24,078 acre-feet annually excluding existing domestic wells and the potential for future domestic well development. The remaining committed water resources are approximately 37,948 acre-feet annually with about 35,541 acre-feet annually of that amount derived from spring sources in the Amargosa Desert Hydrographic Basin.[31]

The issue of existing and future domestic wells merits discussion when considering the committed and future development of groundwater resources in the Amargosa Desert

[31] Exhibit 51, p. 7.

Hydrographic Basin. A review of well driller reports (well logs) shows 476 domestic wells in the Amargosa Desert Hydrographic Basin.[32] Under Nevada water law, a domestic well may use up to 1,800 gallons per day (2.02 acre-feet annually) for domestic purposes without the benefit of a water right permit.[33] This equates to a potential of 961.52 acre-feet annually being pumped from existing domestic wells (476 wells * 2.02 acre-feet annually = 961.52 acre-feet annually). Testimony indicated that 27,904 acres of land are currently available for disposal through the U.S. Bureau of Land Management.[34] Further, Nye County is working on an omnibus lands bill to set aside additional land for both community purposes and commercial purposes.[35] With the amount of land that is and will be available for development, the potential for a dramatic increase in the number of domestic wells appears certain. Witness Buqo stated that a parceling ordinance exists in Pahrump Valley that requires the purchase and dedication of water rights to offset the impact of any additional domestic wells created due to serial parceling. However, the ordinance does not apply to Amargosa Valley, where parceling can occur in a manner that bypasses the subdivision requirements of the Nevada Division of Water Resources.[36]

An examination of the amount of water requested by each application shows the smallest appropriation request is for the senior-most application at 400 acre-feet annually. The remaining appropriation requests range from 800 acre-feet annually to 4,000 acre-feet annually with the

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[32] Nevada Division of Water Resource's Well Log Database, November 13, 2006.
[33] NRS § 534.180.
[34] Transcript, p. 467.
[35] Transcript, p. 468.
[36] Transcript, pp. 519-521.

total amount of water requested under all of the pending applications adding up to 19,800 acre-feet annually.

The following table illustrates the imbalance that exists between committed resources and perennial yield within the Amargosa Desert Hydrographic Basin and also illustrates the potential increase in this imbalance that could result from any approval of Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66091.

	(-) Committed Resources (afa)	(+) Perennial Yield (afa)	(=) Imbalance (afa)
Committed Groundwater Rights including existing Domestic Wells	25,040	7,000	-18,000
Protestant's Existing Rights to Spring Discharge	17,000*	17,000*	0
Applicants' total requested appropriations	19,800	-------	-19,800
Totals (Rounded to nearest 1,000)	62,000	24,000**	-38,000

*The 17,000 acre-feet annually discharged by springs in Ash Meadows is used to satisfy the certificated rights of the United States Fish and Wildlife Service for wildlife purposes.[37]

**The USGS estimated perennial yield of 24,000 acre-feet annually consists of 7,000 acre-feet annually potentially available for pumping from the underground water in Amargosa Desert and 17,000 acre-feet annually discharged by the springs in Ash Meadows.[38]

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[37] Exhibit No. 51.

[38] Walker G.E. and Eakin T.E., *Ground-Water Resources - Reconnaissance Series Report 14, Geology and Groundwater of Amargosa Desert, Nevada-California.* Department of Conservation and Natural Resources in Cooperation with the U.S. Geological Survey, Foreword and p. 29, (1963).

The State Engineer finds that over 24,000 afa of water has been committed under existing permits and certificates for development from wells. The State Engineer finds that existing water rights in the Amargosa Desert Hydrographic Basin exceeds the perennial yield of the basin.

VI.

The State Engineer finds that Protestant Amargosa Resources, Inc. failed to attend the administrative hearing and failed to submit any evidence or testimony in support of its protest claim.

CONCLUSIONS

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.[39]

II.

The State Engineer is prohibited by law from granting an application to appropriate the public waters where:[40]

A. there is no unappropriated water at the proposed source;
B. the proposed use or change conflicts with existing rights;
C. the proposed use or change conflicts with protectible interests in existing domestic wells as set forth in NRS § 533.024; or
D. the proposed use or change threatens to prove detrimental to the public interest.

III.

Protestant Amargosa Resources, Inc., protestant to Application 59352 only, failed to attend the administrative hearing and failed to submit any evidence or testimony in support of its protest claim. After reviewing the protest and in consideration of the lack of any supporting

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[39] NRS chapters 533 and 534.
[40] NRS § 533.370(5).

testimony or evidence, the State Engineer concludes that this protest claim must be dismissed.

IV.

The State Engineer concludes that previous applications, similar to Application 62529, have been denied for irrigation purposes in the Amargosa Desert Hydrographic Basin; therefore, Application 62529 may be considered for denial.

V.

The State Engineer concludes that the best estimate of the perennial yield of the Amargosa Desert Hydrographic Basin is 24,000 acre-feet annually as determined by the USGS. Based upon careful review of the record and the findings contained in this ruling, the State Engineer concludes that there is no justification for changing the accepted perennial yield estimate of the USGS.

VI.

The State Engineer concludes over 24,000 acre-feet annually is currently committed in the form of existing groundwater rights and an additional 962 acre-feet annually is necessary to meet the demand for existing domestic wells. The total demand on the groundwater resource from existing rights total over 25,000 acre-feet annually exclusive of the potential demand from future domestic wells. The estimated perennial yield is only 24,000 acre-feet annually and includes 17,000 acre-feet annually of discharge from springs in Ash Meadows. The committed groundwater resources of the Amargosa Desert Hydrographic Basin currently exceed the groundwater basin's estimated perennial yield. Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66081 would increase the demand on the Amargosa Desert Hydrographic Basin's groundwater resources by 19,800 acre-feet annually.

The State Engineer concludes that the approval of any of the subject applications would result in the withdrawal of substantial amounts of ground water in excess of the perennial yield of the Amargosa Desert Hydrographic Basin and therefore, would adversely affect existing rights and would threaten to prove detrimental to the public interest.

VII.

The State Engineer concludes that to grant permits on applications in an over-appropriated groundwater basin would interfere with the existing water rights; thus, mandating under Nevada law that the State Engineer deny said applications.

RULING

The Amargosa Resources, Inc., protest to Application 59352 is hereby dismissed. The remaining protests to Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66081 are upheld in part and not ruled on in part. Applications 59352, 62529, 66072, 66077, 66078, 66079 and 66081 are hereby denied on the grounds that there is no unappropriated water in the Amargosa Desert Hydrographic Basin, approval of the applications would conflict with existing rights and approval of the applications would threaten to prove detrimental to the public interest.

Respectfully submitted,

TRACY TAYLOR, P.E.
State Engineer

TT/TW/jm

Dated this 16th day of July, 2007.