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

IN THE MATTER OF PROTESTED APPLICATIONS 64326 AND 64327 AND APPLICATIONS 69085 AND 69086 FILED TO APPROPRIATE THE PUBLIC WATERS OF AN UNDERGROUND SOURCE WITHIN THE PAHRANAGAT VALLEY HYDROGRAPHIC BASIN (209), LINCOLN COUNTY, NEVADA.	)	**RULING** **#5547**

GENERAL

I.

Application 64326 was filed on July 22, 1998, by Stewart Brothers to appropriate 4.0 cubic feet per second (cfs) of the underground water from the Pahranagat Valley Hydrographic Basin for the irrigation of 360 acres within the SW¼ SE¼ and SE¼ SE¼ of Section 13, the NW¼ NE¼, NE¼ NE¼, SW¼ NE¼ and SE¼ NE¼ of Section 24, all within T.3S., R.60E., M.D.B.&M., the NW¼ SW¼, SW¼ SW¼ of Section 18, and the W½ NW¼ NW¼, W½ SW¼ NW¼ of Section 19, T.3S., R.61E., M.D.B.&M. The proposed point of diversion is described as being located within the SE¼ SE¼ of Section 13, T.3S., R.60E., M.D.B.&M.[1]

Application 64327 was filed on July 22, 1998, by Stewart Brothers to appropriate 4.0 cfs of the underground water from the Pahranagat Valley Hydrographic Basin for the irrigation of 340 acres within the NE¼ SE¼ of Section 35, the NW¼ SW¼, SW¼ NW¼, SE¼ NW¼, NW¼ NW¼, NE¼ NW¼ and NW¼ NE¼ of Section 36, the SW¼ SE¼, W½ SE¼ SE¼ of Section 25, all within T.3S., R.60E., M.D.B.&M. The proposed point of diversion is described as being located within the NE¼ SE¼ of Section 35, T.3S., R.60E., M.D.B.&M.[2]

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[1] File No. 64326, official records of the Office of the State Engineer.

[2] File No. 64327, official records of the Office of the State Engineer.

II.

Application 69085 was filed on August 21, 2002, by Stewart-Nevada Enterprises, LLC, to change the point of diversion and place of use of the 4.0 cfs requested for appropriation under Application 64327 for irrigation purposes within the NW¼ SE¼, NE¼ SE¼, SW¼ SE¼, SE¼ SE¼ of Section 24, the NW¼ NE¼, NE¼ NE¼, SE¼ NE¼, and SW¼ NE¼ of Section 25, all within T.3S., R.60E., M.D.B.&M. The proposed point of diversion is described as being located within the SW¼ SE¼ of Section 24, T.3S., R.60E., M.D.B.&M.[3]

Application 69086 was filed on August 21, 2002, by Stewart-Nevada Enterprises, LLC, to change the point of diversion and place of use of the 4.0 cfs requested for appropriation under Application 64326 for irrigation purposes within the NW¼ SE¼, NE¼ SE¼, SW¼ SE¼, SE¼ SE¼ of Section 24, the NW¼ NE¼, NE¼ NE¼, SE¼ NE¼, and SW¼ NE¼ of Section 25, all within T.3S., R.60E., M.D.B.&M. The proposed point of diversion is described as being located within the SW¼ SE¼ of Section 24, T.3S., R.60E., M.D.B.&M.[4]

III.

Applications 64326 and 64327 were timely protested by United States Department of the Interior, National Park Service on the grounds that:

1. There is no water available for appropriation because the committed water resources exceed groundwater recharge.

2. The approval and development of the appropriation proposed by the applications will impair the water rights of the United States because:

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[3] File No. 69085, official records of the Office of the State Engineer.

[4] File No. 69086, official records of the Office of the State Engineer.

A. The appropriation would further reduce the discharge of the Muddy River impairing the United States' senior water rights and other existing rights to the Muddy River;

B. The proposed appropriation in combination with other existing and proposed appropriations could reduce the discharge of the Lake Mead National Recreation Area springs;

C. The effect of the proposed appropriation, when combined with other existing and proposed appropriations, could impair the senior water rights of the Lake Mead National Recreation Area more quickly and/or to a degree greater than the withdrawal proposed under the applications alone.

3. The public interest would not be served because:

A. The ground-water reservoir in Pahranagat Valley would be mined;

B. The water and water-related resources of the nationally important Lake Mead National Recreation Area would be diminished or impaired.[5]

FINDINGS OF FACT

I.

Ground water in the Pahranagat Valley Basin is stored and transmitted in the Paleozoic carbonate rocks beneath the valley fill. Hiko, Crystal and Ash Springs issue from the Paleozoic carbonate rocks and play a dominant role in the economy of Pahranagat Valley. The magnitude of the combined discharge, averaging 35.0 c.f.s. (25,000 acre-feet annually), is far in excess of the amount that might be supplied by recharge from precipitation within the defined surficial area of the valley (estimated average 1800 acre-feet annually). This indicates that much of the ground water discharged by the springs is derived from beyond the drainage divide of the valley. The general hydraulic gradient tends to slope southward and towards the White River

[5] File Nos. 64326 and 64327, official records in the Office of the State Engineer.

> Channel, of which Ash, Crystal and Hiko springs are located along said course.[6]
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> That the existing fractures or solution openings have extensive hydraulic connection throughout the area, is demonstrated by the regional hydrology. Ground water movement through carbonate rocks in this region occurs through both fractures and solution openings. Solution openings developed near sources of recharge where carbon dioxide carried by rain water penetrate the rocks, or where organic and other acids derived from decaying vegetation and other sources were carried by water into contact with carbonate rocks. The principle significance of solution openings is that they greatly facilitate movement of ground water through carbonate rocks. Certainly, the large quantity of ground water issuing from factures and solution openings, such as those of Ash, Crystal and Hiko Springs in Pahranagat Valley, is a dramatic demonstration that ground water moves through Paleozoic carbonate rocks in this region of Nevada.[6,7]

The proposed points of diversion under these applications are within one mile from the historic flow path of the White River. Reconnaissance Series Report No. 21 provides information as to the occurrence and movement of ground water.

> The occurrence of ground water in Pahranagat and Pahroc Valleys is one of contrast. The depth to ground water in most of Pahroc Valley is generally more than 200 feet. In Pahranagat Valley, however, the depth to water along the White River channel from the vicinity of Hiko Spring to Maynard Lake is at or within a few feet of land surface. Northward from Hiko along the lowland the depth to water increases; at the north end of Pahroc Valley it apparently is on the order of 250 feet or more. In most of Pahranagat Valley the younger valley fill along the White River channel is saturated to or nearly to land surface. Toward the mountains the depth to water increases.[8]

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[6] T. Eakin, *Ground-Water Resources - Reconnaissance Series Report 21, Ground-water Appraisal of Pahranagat and Pahroc Valleys, Lincoln and Nye Counties, Nevada*, p. 11 (1963).

[7] State Engineer's Ruling No. 3225, dated August 14, 1985, official records in the Office of the State Engineer.

[8] *Ground-Water Resources - Reconnaissance Series Report 21*, p. 12 (1963).

"Thus, based on the potential hydraulic gradients, ground water probably moves from the northwest, north, and northeast toward the principal carbonate springs in Pahranagat Valley."[9]

The State Engineer finds the hydraulic gradient indicates that groundwater flow is southward from the northern portion of Pahranagat Valley towards the White River Channel along which are located Ash, Crystal and Hiko Springs and Upper and Lower Pahranagat Lake.

II.

Present development in Pahranagat Valley is using nearly all of the natural spring discharge of about 25,000 acre-feet per year.[10] The right to use the water of Crystal, Ash and Hiko Springs was decreed by the Pahranagat Lake Decree of October 1929, amended by the Nevada Supreme Court in *Alamo Irrigation Company, Inc. v. United States of America*, 81 Nev. 390 (1965). The State Engineer finds the proximity of the points of diversion under these applications to the path of the White River Flow System that leads to Hiko, Ash and Crystal Springs indicates that to grant permits under Applications 64236 and 64327 would interfere with existing rights and thereby threaten to prove detrimental to the public interest.

CONCLUSIONS OF LAW

I.

The State Engineer has jurisdiction over the parties and subject matter of this action and determination.[11]

II.

The State Engineer is prohibited by law from granting a permit under an application to appropriate the public waters where:[12]

A. there is no unappropriated water at the proposed source;

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[9] Id. at 15.
[10] Id. at 1.
[11] NRS chapters 533 and 534.
[12] NRS chapter 533.370(4).

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.

The State Engineer concludes that to permit the appropriation of ground water under Applications 64326 and 64327 would interfere with existing water rights thereby threatening to prove detrimental to the public interest. The State Engineer concludes that since no water rights are being permitted under the initial applications for appropriation, no water rights exist that can be changed under change Applications 69085 and 69086; therefore, they must also be denied.

RULING

Applications 64326 and 64327 are denied on the grounds that to permit the appropriation of water under them would interfere with existing rights and threaten to prove detrimental to the public interest. Applications 69085 and 69086 are denied on the grounds that no water right exists that can be changed by the applications and therefore to grant a permit under them would also threaten to prove detrimental to the public interest. No ruling is made on the merits of the protest.

Respectfully submitted,

HUGH RICCI, P.E.
State Engineer

HR/SJT/jm

Dated this 25th day of

January, 2006.