

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

IN THE MATTER OF APPLICATIONS)
71162 AND 71163 FILED TO)
APPROPRIATE THE PUBLIC WATERS OF)
AN UNDERGROUND SOURCE WITHIN THE)
DAYTON VALLEY HYDROGRAPHIC BASIN)
(103), LYON COUNTY, NEVADA.)

RULING

#5407

GENERAL

I.

Application 71162 was filed on May 5, 2004, by Stanton Park Development, Inc., to appropriate 3.0 cubic feet per second (cfs), not to exceed 1,000.0 acre-feet annually (afa), of underground water from the Dayton Valley Hydrographic Basin. The proposed manner of use is for municipal and domestic purposes within a proposed place of use, which is described as being within all or portions of Sections 1, 2, 11, 12, 13, 14, 23, 24, 26, 27, 28, 33 and 34, T.16N., R.21E, M.D.B.&M., all or portions of Sections 3, 4, 5, 6, 9, 16, 17, 18 and 19, T.16N., R.22E., M.D.B.&M., a portion of Section 36, T.17N., R.21E., M.D.B.&M., and all or portions of Sections 29, 31, 32, 33 and 34, T.17N., R.22E., M.D.B.&M. The proposed point of diversion is described as being within the NE¼ of Section 29, T.17N., R.22E., M.D.B.&M.¹

II.

Application 71163 was filed on May 5, 2004, by Stanton Park Development, Inc. to appropriate 3.0 cfs, not to exceed 1,000.0 afa of underground water from the Dayton Valley Hydrographic Basin. The proposed manner of use is for municipal and domestic purposes within a proposed place of

¹ File No. 71162, official records in the Office of the State Engineer.

use, which is described on Attachment "A" of this ruling. The proposed point of diversion is described as being within the NW¼ of Section 29, T.17N., R.22E., M.D.B.&M.²

III.

The remarks section of the subject applications states that the water requested for appropriation is to be used for approximately 600 homes within the Canyon Estates Subdivision.^{1,2}

FINDINGS OF FACT

I.

The committed groundwater resource in the form of permits and certificates issued by the State Engineer to appropriate underground water from the Dayton Valley Hydrographic Basin currently exceeds 25,250 acre-feet annually.³

The perennial yield of a groundwater reservoir may be defined as the maximum amount of ground water that can be salvaged each year over the long term without depleting the groundwater reservoir. Perennial yield is ultimately limited to the maximum amount of natural recharge that can be salvaged for beneficial use. If the perennial yield is continually exceeded groundwater levels will decline.⁴

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

² File No. 71163, official records in the Office of the State Engineer.

³ Nevada Division of Water Resources Water Rights Database, Hydrographic Basin Summary, Dayton Valley, July 23, 2004, official records in the Office of the State Engineer.

⁴ Office of the State Engineer, Water for Nevada, State of Nevada Water Planning Report No. 3, p. 13, Oct. 1971.

The Dayton Valley Hydrographic Basin has experienced continual and vigorous development of its underground water resource since 1975 when the United States Geologic Survey (USGS) first evaluated the groundwater basin's water resources as part of its Nevada water reconnaissance program. The findings of the hydrologic study, which are specific to the Dayton Valley Hydrographic Basin can be found within Water Resources - Reconnaissance Series Report 59, Water-Resources Appraisal of the Carson River Basin, Western Nevada, "Recon 59": This report, which was authored by Glancy and Katzer provides a general understanding of the groundwater basin's recharge-discharge relationship from which an estimate of the Dayton Valley's perennial yield is derived.

Glancy and Katzer estimated the potential groundwater recharge to the Dayton Valley Hydrographic Basin by precipitation was 7,900 afa. An additional 1,615 afa was added from subsurface inflow through the alluvial units from the adjacent Eagle Valley and Carson Valley Hydrographic Basins, minus the 70 acre-feet of underground flow from Dayton Valley to Churchill Valley. Therefore, the perennial yield of the Dayton Valley Hydrographic Basin was calculated by Glancy and Katzer to be 9,445 acre-feet.⁴

In 1994, the USGS initiated a hydrologic study to re-evaluate the reconnaissance level water budget for the Dayton Valley, which had previously been defined in Recon 59. This new study culminated with the release of Water Resources Investigations Report 97-4123, Hydrology and Ground-Water Budgets of the Dayton Hydrographic Area, West-Central Nevada, in 1997, "Report 97".⁵ By utilizing refined estimates of the water budget components, the groundwater

⁵ Maurer, D.K., Hydrology and Ground-Water Budgets of the Dayton Valley Hydrologic Area, West-Central Nevada, Water-Resources Investigations Report 97-4123, U.S. Geological Survey, U.S. Department of Interior, Carson Water Subconservancy District, 1997.

recharge and discharge estimates for the Dayton Valley Hydrographic Basin were assigned a new range of values, which exceeded those found in Recon 59. However, even if the high end recharge and discharge values are used to evaluate the basin's groundwater budget, the revised estimates of the underground water, which may be available for appropriation are not of a magnitude that would exceed the basin's current committed groundwater resource. The State Engineer finds that both the original Recon 59 and revised Report 97 estimates of the Dayton Valley Hydrographic Basin's perennial yield are significantly exceeded by the basin's committed groundwater resource.

II.

The State Engineer has denied applications, which requested a permanent appropriation of underground water for municipal purposes within the Dayton Valley Hydrographic Basin since 1980. These denials were based on the grounds that withdrawals of additional groundwater in a basin in which appropriations of groundwater substantially exceed the perennial yield of the basin would adversely affect existing rights and be detrimental to the public interest and welfare.⁶ The State Engineer finds that Applications 71162 and 71163 were filed to appropriate underground water for a similar use and in the same hydrologic basin as applications that have been denied in the past.

III.

When a previous application for a similar use of water within the same hydrologic groundwater basin has been rejected on the grounds that there is no unappropriated water or when its proposed use would conflict with existing rights or would threaten to prove detrimental to the public

⁶ See State Engineer's Rulings for Application Nos. 39087, 43521, 48968, 63576, 63577, 63578, and 63579, official records in the Office of the State Engineer.

interest, the new application may be denied without going to publication.⁷ The State Engineer finds that Applications 71162 and 71163 can be denied prior to publication.

CONCLUSIONS

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.⁸

II.

The State Engineer is prohibited by law from granting an application to appropriate the public waters where:⁷

- 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.

Applications 71162 and 71163 were filed to appropriate underground water from the Dayton Valley Hydrographic Basin. A comparison of the committed groundwater resource of the Dayton Valley Hydrographic Basin with the revised estimates of the basin's perennial yield fails to identify any additional underground water, which may be available for appropriation within the groundwater basin. The State Engineer concludes that to grant permits under the subject applications in a groundwater basin where the quantity of water under existing appropriations exceeds the basins' perennial yield would conflict with existing rights and be detrimental to the public interest.

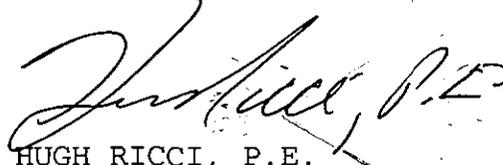
⁷ NRS § 533.370(4).

⁸ NRS chapter 533 and 534.

RULING

Application 71162 and Application 71163 are hereby denied on the grounds that granting the applications would interfere with existing rights and be detrimental to the public interest.

Respectfully submitted,


HUGH RICCI, P.E.
State Engineer

HR/MB/jm

Dated this 20th day of
August, 2004.