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

IN THE MATTER OF APPLICATIONS 67399,)
70648, 71838, 71869, 71870, 73345, 76028,)
AND 77065 FILED TO APPROPRIATE)
GROUNDWATER WITHIN THE LOVELOCK)
VALLEY HYDROGRAPHIC BASIN (73),)
PERSHING COUNTY, NEVADA.)

RULING

#6312

GENERAL

I.

Application 67399 was filed on April 5, 2001, by Bingo G. Wesner and Karen T. Wesner to appropriate 2.85 cubic feet per second (cfs) of groundwater for the irrigation of 256 acres of land. The proposed point of diversion is described as being located within the SW¼ NW¼ of Section 32, T.28N., R.32E., M.D.B.&M. The proposed place of use is described as being located within portions of the NW¼ NE¼, SW¼ NE¼, NW¼, NE¼ SW¼, NW¼ SW¼ and SW¼ SW¼ of said Section 32.[1]

II.

Application 70648 was filed on November 18, 2003, by Running W Ranch to appropriate 12.0 cfs of groundwater for the irrigation of 639 acres of land. The proposed point of diversion is described as being located within the NW¼ SW¼ of Section 22, T.27N., R.31E., M.D.B.&M. The proposed place of use is described as 203 acres of land located within Section 21, 130 acres of land within the SW¼ of Section 22, 53 acres of land within the NE¼ of Section 29, and 253 acres of land within portions of Sections 29, 30, 31 and 32, all in T.27N., R.31E., M.D.B.&M. Item 12, the remarks section of the application, indicates that the water is to be used as a supplemental water right to existing surface water from the Humboldt River.[2]

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[1] File No. 67399, official records in the Office of the State Engineer.
[2] File No. 70648, official records in the Office of the State Engineer.

III.

Application 71838 was filed on November 2, 2004, by Ward Viera to appropriate 2.5 cfs of groundwater for the irrigation of 140 acres of land and domestic purposes. The proposed point of diversion is described as being located within the NW¼ NW¼ of Section 10, T.26N., R.31E., M.D.B.&M. The proposed place of use is described as being located within a portion of the W½ W½ of said Section 10.[3]

IV.

Application 71869 was filed on November 10, 2004, by Wanda Lee and Charles Gilkison, Jr. to appropriate 0.0012 cfs of groundwater for stockwater purposes (75 goats, 20 cows and 5 horses). The proposed point of diversion is described as being located within the SW¼ NW¼ of Section 28, T.27N., R.31E., M.D.B.&M. The proposed place of use is described as being located within the SW¼ NW¼ of said Section 28.[4]

V.

Application 71870 was filed on November 10, 2004, by Wanda Lee and Charles Gilkison, Jr. to appropriate 0.20 cfs of groundwater for the irrigation of 8.5 acres of land and domestic purposes. The proposed point of diversion is described as being located within the SW¼ NW¼ of Section 28, T.27N., R.31E., M.D.B.&M. The proposed place of use is described as being located within a portion of the SW¼ NW¼ of said Section 28.[5]

VI.

Application 73345 was filed on October 17, 2005, by Humboldt River Ranch, LLC to appropriate 10.0 cfs of groundwater for the irrigation of 550 acres of land. The proposed point of diversion is described as being located within the NW¼ NW¼ of Section 25, T.30N., R.32E., M.D.B.&M. The proposed place of use is described as being located within a portion of said Section 25.[6]

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[3] File No. 71838, official records in the Office of the State Engineer.
[4] File No. 71869, official records in the Office of the State Engineer.
[5] File No. 71870, official records in the Office of the State Engineer.
[6] File No. 73345, official records in the Office of the State Engineer.

VII.

Application 73345 was timely protested by Pershing County Water Conservation District on grounds that the granting of Application 73345 would affect the water table and decreed waters of the Humboldt River.

VIII.

Application 76028 was filed on July 5, 2007, by Pershing County Tourism Authority and Pershing County Baseball Complex to appropriate 0.25 cfs, not to exceed 30 acre-feet annually (afa), of groundwater for recreation and domestic purposes (sports fields, landscaping, snack booth and other related recreational needs). The proposed point of diversion is described as being located within the NW¼ NE¼ of Section 25, T.27N., R.31E., M.D.B.&M. The proposed place of use is described as 15 acres of land being located within the NE¼ NW¼ and NW¼ NE¼ of said Section 25.[7]

IX.

Application 76028 was timely protested by the Lovelock Meadows Water District on the ground that the proposed well would be inside the water district service area.

X.

Application 77065 was filed on May 20, 2008, by Ron Ward, later assigned to Carlin Resources LLC, to appropriate 0.50 cfs, not to exceed 8.0 afa, of groundwater for commercial purposes (commercial development within approximately 80 acres, laboratory and office building, landscaping and fire protection with additional buildings and facilities as growth demands). The proposed point of diversion is described as being located within the NE¼ SE¼ of Section 17, T.26N., R.31E., M.D.B.&M. The proposed place of use is described as being located within a portion of the SE¼ and a portion of the NE¼ of said Section 17, T.26N., R.31E. M.D.B.&M.[8]

FINDINGS OF FACT

I.

Nevada Revised Statute § 533.365(4) provides that it is within the State Engineer's discretion to determine whether a public administrative hearing is necessary to address the merits of a protest to an application to appropriate the public waters of Nevada. The State Engineer

[7] File No. 76028, official records in the Office of the State Engineer.
[8] File No. 77065, official records in the Office of the State Engineer.

finds that in the case of protested Applications 73345 and 76028, there is sufficient information contained within the records of the Office of the State Engineer to gain a full understanding of the issues and a hearing on this matter is not required.

II.

In State Engineer's Ruling No. 6299, issued on December 24, 2014, the State Engineer issued a new analysis of the availability of water resources in the Lovelock Valley Hydrographic Basin. The ruling found the following.

Perennial Yield Oreana Subarea

The Lovelock Valley-Oreana Subarea Hydrographic Basin (Basin 073A), was designated as an area of concern by the State Engineer by Order No. 369, issued on February 25, 1969, due to issues relating to water quantity and water quality.

Pursuant to State Engineer's Order No. 370, issued on February 25, 1969, the State Engineer curtailed the issuance of any additional permits for irrigation purposes within a portion of the Oreana Subarea and declared municipal use a preferred use of groundwater within the designated area. The remaining portion of the Lovelock Valley Basin has not been designated.

Pursuant to State Engineer's Order No. 1079, issued on May 17, 1993, the State Engineer expanded the area of preferred use, municipal and irrigation to be denied, into other portions of the Oreana Subarea. The purpose of these designation orders was to preserve the limited fresh groundwater resources in the basin for municipal use, rather than for irrigation. The State Engineer recognized that most of the recharge from precipitation in the valley was derived from precipitation in the Humboldt Range and, by designating the Oreana Subarea, he was preserving that limited supply for municipal use. South and west of the Oreana Subarea in Lovelock Valley the water quality was less favorable for municipal use, and in locations further south is not potable.

Groundwater recharge in the Oreana Subarea is estimated to be 2,000 acre-feet per year.[9] The perennial yield of the Oreana Subarea is currently established as 2,000 acre-feet, equal to local recharge from precipitation. Existing groundwater rights in the Lovelock Valley - Oreana

[9] D.E. Everett and F. Eugene Rush, *Water Resources Appraisal of Lovelock Valley, Pershing County, Nevada*, Water Resources-Reconnaissance Series Report 32, (Department of Conservation and Natural Resources and United States Geological Survey), April 1965.

Subarea currently approximate 4,975 acre-feet annually.[10] The State Engineer finds that the existing water rights exceed the perennial yield of the Oreana Subarea.

Lovelock Valley

Lovelock Valley is located at the terminus of the Humboldt River flow system. It extends from Rye Patch Dam to the end of the Humboldt Sink. Groundwater recharge from precipitation within the basin, excluding the Oreana Subarea, is estimated to be approximately 1,200 acre-feet per year. An additional 1,000 acre-feet annually enters the basin as subsurface inflow from the Imlay Area Hydrographic Basin. Groundwater recharge also occurs through river and canal seepage and from deep percolation from irrigated lands. Discharge of groundwater from Lovelock Valley occurs by evapotranspiration (ET) from phreatophytic plants around the perimeter of the valley floor, seepage to irrigation drains and subsequent ET from the Humboldt Sink, subsurface flow to the Carson Desert, or by pumpage.

The perennial yield of Lovelock Valley is currently established as 43,000 afa. This figure was first published by the Nevada State Engineer in 1971,[11] citing two reconnaissance analyses prepared by the USGS in the 1960s. One was Reconnaissance Series Report 32 (Recon 32),[12] which was specific to Lovelock Valley and evaluated individual components of the Lovelock basin water budget, including an appraisal of water quality and a discussion on perennial yield. The other was Bulletin 32,[13] which provided a hydrologic assessment of the entire Humboldt River basin.

The authors of Recon 32 and Bulletin 32 did not explicitly calculate a perennial yield, but they did evaluate individual components of the Lovelock water budget from which perennial yield can be derived. Recon 32 estimated groundwater discharge by phreatophyte evapotranspiration to be 22,500 afa in Lovelock Valley excluding the Humboldt Sink and the

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[10] Nevada Division of Water Resources' Water Rights Database, Hydrographic Basin Summary, Lovelock Valley – Oreana Subarea (073A), October 24, 2014, official records in the Office of the State Engineer.

[11] Office of the State Engineer, *Water for Nevada, State of Nevada Water Planning Report No. 3*, 1971.

[12] D.E. Everett and F. Eugene Rush, *Water Resources Appraisal of Lovelock Valley, Pershing County, Nevada*, Water Resources-Reconnaissance Series Report 32, (Department of Conservation and Natural Resources and United States Geological Survey), April 1965.

[13] T. E. Eakin and R. D. Lamke, *Hydrologic Reconnaissance of the Humboldt River Basin, Nevada*, Water Resources Bulletin No. 32, (State of Nevada, Office of the State Engineer and United States Geological Survey), 1966.

Oreana subarea. Recon 32 also estimated that 21,000 afa of infiltrated irrigation water is discharged to drains and conveyed to the Humboldt Sink, where it is ultimately lost through ET. In Bulletin 32, the authors estimated total groundwater evapotranspiration in the Lovelock Valley, including the Oreana Subarea and the Humboldt Sink, to be 31,100 afa; however, the authors do not provide supporting information such as ET areas or rates.

The fact that the authors of Recon 32 did not calculate a perennial yield is notable because this was one of their stated objectives. The authors instead concluded that perennial yield was indeterminate, because pumpage near the Humboldt River can induce recharge from the River. They also concluded that groundwater development potential was limited because groundwater of suitable quality for most uses only occurs in the northern portion of the basin, and the bulk of the groundwater in the basin was too highly mineralized for agriculture and most other purposes. When the State Engineer interpreted the information in Recon 32 and Bulletin 32 to assign a perennial yield of 43,000 afa, he did not qualify this estimate at the time to account for the limitations outlined in those reports.

In many Nevada groundwater basins, including Lovelock Valley, the State Engineer has determined that the perennial yield of the basin is equal to the natural ET, assuming that the water consumed by phreatophytic plants can be captured by pumping and placed to beneficial use. In other basins, including many basins with through-flowing rivers or basins that have no natural groundwater ET, the State Engineer has determined that the perennial yield is equal to recharge from precipitation in the valley. Often the State Engineer has used a combination of factors to determine the perennial yield. The 43,000 afa perennial yield assigned to the Lovelock Basin appears to be the sum of the ET lost to phreatophytes (22,500 afa) plus the water lost to the drains and evaporated in the Humboldt Sink (21,000 afa), rounded down from 43,500 to 43,000.

The State Engineer finds it necessary to reexamine and revise the perennial yield of groundwater in Lovelock Valley, because current data on groundwater sources, movement, and quality shows that there are significant limitations to the development potential of the groundwater in the basin. Consideration of these limitations is essential in evaluating new water right applications to ensure sustainable use of the limited fresh water supply in the basin and to prevent conflicts with existing water rights.

In the northern portion of Lovelock Valley, upgradient of most irrigation in the basin, groundwater originates as recharge from precipitation in the local drainage basin, subsurface groundwater inflow from the Imlay area, or as seepage from the Humboldt River, and is of generally good chemical quality. Recon 32 estimated local recharge at 1,200 afa, excluding the Oreana Subarea. Subsurface groundwater inflow from the Imlay area was estimated to be 1,000 afa.[14] Groundwater pumping in this part of the valley that exceeds local recharge and subsurface inflow may ultimately induce additional recharge from the River, which could conflict with existing rights.

The chemical quality of groundwater decreases from north to south. In the agricultural portion of Lovelock Valley, surface water is diverted from the river and distributed throughout the valley for irrigation. Groundwater recharge occurs through river and canal seepage, and irrigation in excess of the field capacity of the soil. Because the farm area and the Humboldt Sink are at the end of the river, salts are concentrated there through the evapotranspiration process. Salts are leached from the soil by irrigation water, but are still present in the groundwater. Some of this infiltrated water discharges to drains and makes its way to the Humboldt Sink, but much of it also supplies water for phreatophyte ET in areas adjacent to irrigated agriculture. Water lost to ET in areas distal from the Humboldt River can generally be captured by pumping, but in most of Lovelock Valley, the water lost to phreatophytic ET is of poor chemical quality. Water lost to ET along the margins of the River is of better quality, but this ET generally cannot be captured by pumping because drawdown near the River induces recharge from the River which maintains a supply of water for phreatophytes.

Groundwater of degraded chemical quality in the southern portion of the basin constitutes the bulk of the perennially available groundwater supply in Lovelock Valley. Capture of this groundwater that would otherwise be discharged naturally by evapotranspiration might be achieved without unreasonable impacts to existing rights, but its development potential is substantially limited by poor water quality.

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[14] T.E. Eakin, *Ground-water appraisal of the Imlay area, Humboldt River Basin, Pershing County, Nevada*, Water Resources-Reconnaissance Series Report 5, (Department of Conservation and Natural Resources and United States Geological Survey), February 1962.

Existing groundwater appropriations in Lovelock Valley are approximately 10,000 afa,[15] which, on its face, suggests that there is a large surplus of groundwater available to appropriate. However, nearly all of the existing appropriations are concentrated in the northern portion of the basin where groundwater quality is generally suitable for most uses. There is virtually no groundwater development in the downgradient portion of Lovelock Valley, including the Humboldt Sink, where the bulk of the perennially available groundwater occurs.

Most of the subject applications at issue in Ruling No. 6299 proposed to pump groundwater near the Humboldt River and upgradient of the existing irrigated farm land. The State Engineer finds that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

The State Engineer found that the existing perennial yield in Lovelock Valley must be limited to the amount of groundwater of suitable chemical quality that is replenished on an annual basis.[16] The revised perennial yield was determined to be 2,200 afa, which is the mean annual rate of recharge from precipitation in the Lovelock hydrographic basin and groundwater inflow from the Imlay hydrographic basin. Existing appropriations of approximately 10,000 afa exceed the revised perennial yield.

III.

Conflicts with Existing Rights

As discussed in the perennial yield section above, the annual recharge in the basin is approximately 2,200 acre-feet and the State Engineer has found that there is no unappropriated groundwater available in the Lovelock Valley Hydrographic Basin.

IV.

Application 67399 was filed to appropriate 2.85 cfs of groundwater for the irrigation of 256 acres of land. The proposed point of diversion is described as being located within the SW¼ NW¼ of Section 32, T.28N., R.32E., M.D.B.&M. The State Engineer finds this is the same area that applications were denied under State Engineer's Ruling No. 6299 on the grounds that the

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[15] Nevada Division of Water Resources' Water Rights Database, Hydrographic Basin Summary, Lovelock Valley (073), October 24, 2014, official records in the Office of the State Engineer.
[16] D.E. Everett and F. Eugene Rush, *Water Resources Appraisal of Lovelock Valley, Pershing County, Nevada*, Water Resources-Reconnaissance Series Report 32, (Department of Conservation and Natural Resources and United States Geological Survey), p. 23, April 1965.

proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

V.

Application 70648 was filed to appropriate 12.0 cfs of groundwater for the irrigation of 639 acres of land. The proposed point of diversion is described as being located within the NW¼ SW¼ of Section 22, T.27N., R.31E., M.D.B.&M. The State Engineer finds this is an area of concentrated irrigation and is within the area where the State Engineer has determined that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

VI.

Application 71838 was filed to appropriate 2.5 cfs of groundwater for the irrigation of 140 acres of land. The proposed point of diversion is described as being located within the NW¼ NW¼ of Section 10, T.26N., R.31E., M.D.B.&M. The State Engineer finds this is an area of concentrated irrigation and is within the area where the State Engineer has determined that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

VII.

Application 71869 was filed on November 10, 2004, by Wanda Lee and Charles Gilkison, Jr. to appropriate 0.0012 cfs of groundwater for stockwater purposes. The proposed point of diversion is described as being located within the SW¼ NW¼ of Section 28, T.27N., R.31E., M.D.B.&M. The State Engineer finds the Pershing County Assessor's records indicate that the proposed place of use is now owned by someone other than the water right applicant and no assignment of this application has been filed with the Office of the State Engineer.[17] The State Engineer finds the water right applicant is no longer able to place the water to beneficial use and it would threaten to prove detrimental to the public interest to grant an application to a

[17] Pershing County Assessor Real Property Recods Inquiry, http://www.pershingcountynv.net:1401/cgi-bin/asw101?Parcel=722105 (last accessed March 2, 2015).

person unable to move forward with use of the water. Additionally, the State Engineer finds this is an area of concentrated irrigation and is within the area where the State Engineer has determined that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

VIII.

Application 71870 was filed to appropriate 0.20 cfs of groundwater for the irrigation of 8.5 acres of land and domestic purposes. The proposed point of diversion is described as being located within the SW¼ NW¼ of Section 28, T.27N., R.31E., M.D.B.&M. The State Engineer finds the Pershing County Assessor's records indicate that the proposed place of use is now owned by someone other than the water right applicant and no assignment of this application has been filed with the Office of the State Engineer.[17] The State Engineer finds the water right applicant is no longer able to place the water to beneficial use and it would threaten to prove detrimental to the public interest to grant an application to a person unable to move forward with use of the water. Additionally, the State Engineer finds this is an area of concentrated irrigation and is within the area where the State Engineer has determined that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

IX.

Application 73345 was filed to appropriate 10.0 cfs of groundwater for the irrigation of 550 acres of land. The proposed point of diversion is described as being located within the NW¼ NW¼ of Section 25, T.30N., R.32E., M.D.B.&M. The State Engineer finds that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

X.

Application 76028 was filed to appropriate 0.25 cfs, not to exceed 30 acre-feet annually, of groundwater for the recreation and domestic purposes (sports fields, landscaping, snack booth and other related recreational needs). The proposed point of diversion is described as being located within the NW¼ NE¼ of Section 25, T.27N., R.31E., M.D.B.&M. The State Engineer

finds this is an area of concentrated irrigation and is within the area where the State Engineer has determined that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

Additionally, Application 76028 was protested by the Lovelock Meadows Water District on the ground that the proposed well would be inside the water district service area. Nevada Revised Statute § 534.120(3) provides that the State Engineer may deny applications to appropriate groundwater for any use in areas served by an entity such as a water district or municipality presently engaged in furnishing water to the inhabitants thereof. The State Engineer finds it would not be in the public interest to grant a new water right in the area currently served by the Lovelock Meadows Water District particularly in light of the fact of the limitation of water availability and conflicts with existing rights.

XI.

Application 77065 was filed to appropriate 0.50 cfs, not to exceed 8.0 afa, of groundwater for commercial purposes (commercial development within approximately 80 acres, laboratory and office building, landscaping and fire protection with additional buildings and facilities as growth demands). The proposed point of diversion is described as being located within the NE¼ SE¼ of Section 17, T.26N., R.31E., M.D.B.&M. The State Engineer finds this is an area of concentrated irrigation and is within the area where the State Engineer has determined that the proposed groundwater pumpage in this location would either induce recharge from the Humboldt River, and thereby conflict with existing surface-water rights, or would pump from the limited fresh water aquifers, a fully-appropriated source.

CONCLUSIONS

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.[18]

II.

The State Engineer is prohibited by law from granting a permit under an application to appropriate the public water where:[19]

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[18] NRS Chapters 533 and 534.
[19] NRS § 533.370(2).

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 protectable 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 there is no unappropriated water that would support the granting of Applications 67399, 70648, 71838, 71869, 71870, 73345, 76028, and 77065; therefore, use of the water under these applications will conflict with existing rights thereby threatening to prove detrimental to the public interest.

RULING

Applications 67399, 70648, 71838, 71869, 71870, 73345, 76028 and 77065 are hereby denied on the grounds there is no unappropriated water in the source, the use of the water would conflict with existing rights and thereby threaten to prove detrimental to the public interest.

Respectfully submitted,

JASON KING, P.E.
State Engineer

Dated this 21st day of
April, 2015.