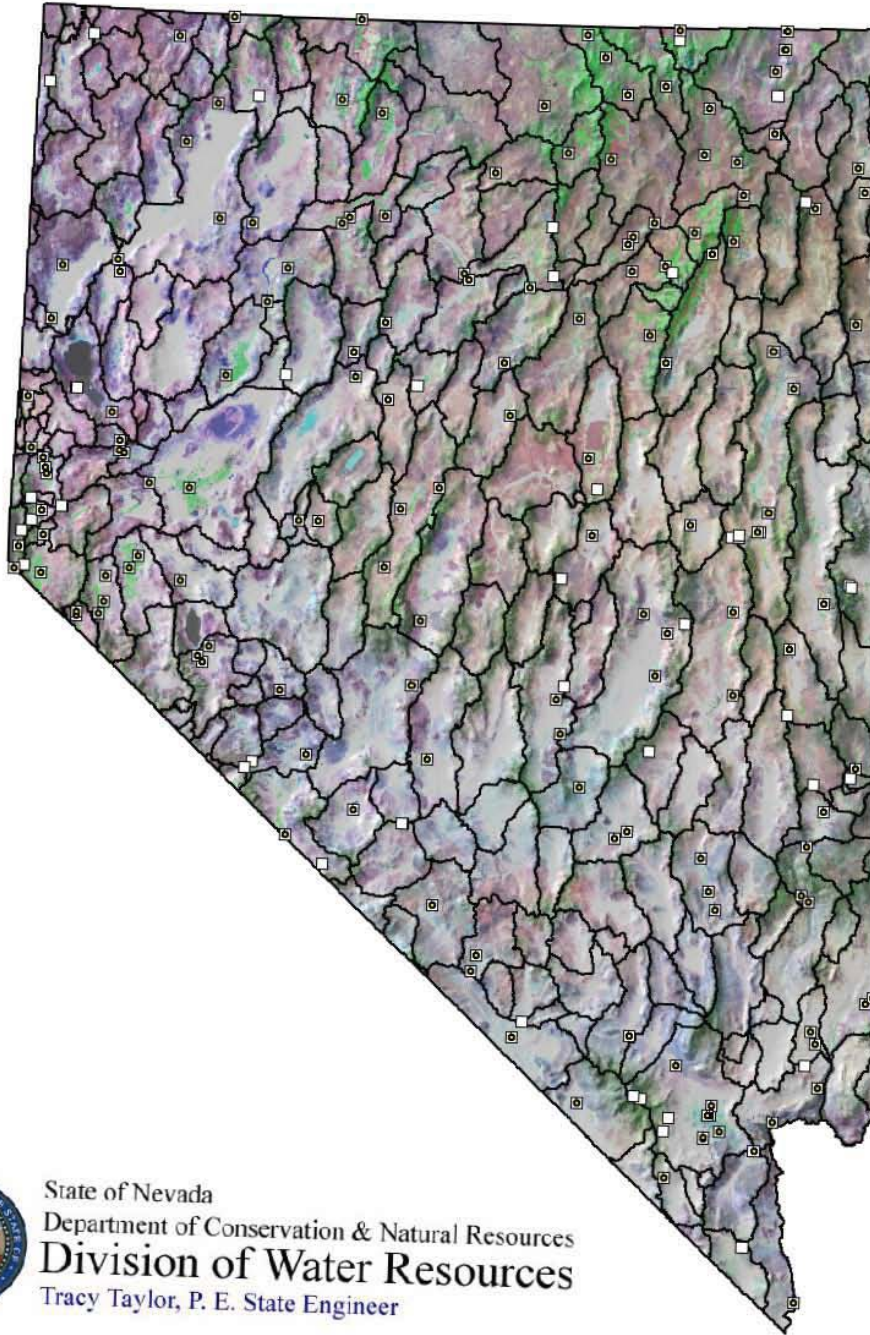


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# Evapotranspiration and Net Irrigation Water Requirements for Nevada



State of Nevada  
Department of Conservation & Natural Resources  
**Division of Water Resources**  
Tracy Taylor, P. E. State Engineer

All compiled evapotranspiration data files are available via internet download from the following NDWR website:

<http://water.nv.gov/NVET>

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# Evapotranspiration and Net Irrigation Water Requirements for Nevada

By

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Appendix 14. Mean annual reference (ET<sub>os</sub>) and actual crop evapotranspiration (ET<sub>act</sub>) of alfalfa, grass hay, pasture grass, turf grass, and small shallow open water bodies for all HAs. Values of the ET<sub>os</sub> and ET<sub>act</sub> for each HA were either assigned for HAs with single stations, computed using a valid period of record weighted average for HAs with multiple stations, or estimated from spatial interpolation for HAs with no stations. \* indicates that the ET<sub>os</sub> and ET<sub>act</sub> was estimated using spatial interpolation.

BASIN NAME	BASIN NUMBER	BASIN REGION	REFERENCE ET <sub>os</sub> (ft)	ALFALFA ET <sub>act</sub> (ft)	HIGHLY MANAGED PASTURE GRASS ET <sub>act</sub> (ft)	LOW MANAGED PASTURE GRASS ET <sub>act</sub> (ft)	GRASS HAY ET <sub>act</sub> (ft)	TURF GRASS ET <sub>act</sub> (ft)	SHALLOW OPEN WATER E <sub>act</sub> (ft)
Adobe Valley*	115	Central Region	5.0	4.3	4.1	3.3	3.9	4.0	5.2
Alkali Spring Valley*	142	Central Region	5.2	4.5	4.4	3.6	4.2	4.4	5.5
Alkali Valley*	111A	Central Region	4.7	4.1	3.9	3.1	3.7	3.9	4.9
Alkali Valley*	111B	Central Region	4.7	4.1	3.9	3.1	3.7	3.9	4.9
Amargosa Desert	230	Death Valley Basin	5.8	5.6	4.8	3.9	3.7	5.6	6.1
Antelope Valley	57	Humboldt River Basin	4.4	3.6	3.6	3.0	3.5	3.5	4.6
Antelope Valley	106	Walker River Basin	4.6	3.8	3.7	3.0	3.6	3.6	4.8
Antelope Valley*	186B	Central Region	4.1	3.2	3.1	2.5	2.9	2.9	4.3
Antelope Valley*	186A	Central Region	4.2	3.3	3.2	2.6	3.1	3.0	4.4
Antelope Valley*	93	Western Region	4.3	3.7	3.6	2.9	3.5	3.5	4.5
Antelope Valley*	151	Central Region	4.4	3.3	3.3	2.7	3.1	3.0	4.6
Bedell Flat*	94	Western Region	4.1	3.4	3.3	2.7	3.2	3.1	4.3
Big Smoky Valley	137B	Central Region	4.8	4.1	4.0	3.2	3.9	3.7	5.1
Big Smoky Valley	137A	Central Region	4.8	3.9	3.8	3.0	3.8	3.5	5.0
Black Moutains Area	215	Colorado River Basin	5.5	5.1	4.4	3.5	2.8	5.1	5.7
Black Rock Desert	28	Black Rock Desert Region	4.3	3.8	3.7	3.1	3.7	3.7	4.5
Boulder Flat*	61	Humboldt River Basin	4.2	3.5	3.4	2.8	3.3	3.3	4.4
Boulder Valley*	15	Northwest Region	4.3	3.8	3.7	3.0	3.6	3.6	4.6
Bradys Hot Springs Area*	75	West Central Region	4.5	3.9	3.8	3.1	3.6	3.7	4.8
Bruneau River Area	38	Snake River Basin	4.1	2.3	2.0	1.7	1.7	1.8	4.3

Appendix 14 cont.

BASIN NAME	BASIN NUMBER	BASIN REGION	REFERENCE ET <sub>ref</sub> (ft)	ALFALFA ET <sub>act</sub> (ft)	HIGHLY MANAGED PASTURE GRASS ET <sub>act</sub> (ft)	LOW MANAGED PASTURE GRASS ET <sub>act</sub> (ft)	GRASS HAY ET <sub>act</sub> (ft)	TURF GRASS ET <sub>act</sub> (ft)	SHALLOW OPEN WATER E <sub>ref</sub> (ft)
Crater Flat*	229	Death Valley Basin	5.6	5.2	4.6	3.7	4.0	5.1	5.9
Crescent Valley	54	Humboldt River Basin	4.2	3.6	3.6	3.0	3.4	3.4	4.4
Dayton Valley*	103	Carson River Basin	4.4	3.8	3.7	3.0	3.5	3.6	4.6
Deep Creek Valley*	193	Great Salt Lake Basin	4.2	3.3	3.2	2.6	3.1	3.0	4.4
Delamar Valley*	182	Central Region	5.1	4.6	4.2	3.4	3.9	4.4	5.4
Desert Valley	31	Black Rock Desert Region	4.3	3.8	3.7	3.0	3.5	3.6	4.5
Diamond Valley	153	Central Region	4.1	3.2	3.1	2.5	3.0	2.9	4.3
Dixie Creek-Tenmile Creek Area	48	Humboldt River Basin	4.3	3.4	3.3	2.7	3.0	3.1	4.5
Dixie Valley	128	Central Region	4.7	4.2	4.1	3.4	4.0	4.1	4.9
Dodge Flat	82	Truckee River Basin	4.6	3.9	3.8	3.1	3.7	3.7	4.8
Dry Lake Valley*	181	Central Region	4.9	4.3	4.1	3.3	3.8	4.0	5.1
Dry Valley*	19	Black Rock Desert Region	4.5	4.0	3.9	3.2	3.8	3.9	4.7
Dry Valley*	95	Western Region	4.1	3.4	3.2	2.6	3.2	3.1	4.3
Dry Valley*	198	Colorado River Basin	4.9	4.2	4.0	3.3	3.8	3.9	5.2
Duck Lake Valley*	16	Northwest Region	4.4	3.9	3.8	3.1	3.7	3.7	4.6
Eagle Valley	104	Carson River Basin	4.3	3.8	3.6	3.0	3.5	3.6	4.6
Eagle Valley*	200	Colorado River Basin	4.9	3.8	3.6	2.9	3.4	3.3	5.1
East Walker Area*	109	Walker River Basin	4.6	3.9	3.8	3.1	3.6	3.8	4.8
Eastgate Valley Area	127	Central Region	4.5	3.9	3.9	3.2	3.9	3.8	4.8
Edwards Creek Valley*	133	Central Region	4.5	3.7	3.6	2.9	3.5	3.4	4.7
Eldorado Valley	167	Central Region	5.4	5.1	4.3	3.5	3.1	5.0	5.7
Elko Segment	49	Humboldt River Basin	4.0	3.3	3.2	2.7	3.1	3.0	4.2
Emigrant Valley*	158A	Central Region	5.3	4.7	4.4	3.6	4.1	4.5	5.5
Emigrant Valley*	158B	Central Region	5.5	5.0	4.5	3.7	4.1	4.8	5.8
Escalante Desert*	197	Escalante Desert	4.9	4.3	4.0	3.3	3.8	4.0	5.2

Appendix 15. Mean annual Net Irrigation Water Requirement (NIWR) of alfalfa, grass hay, pasture grass, turf grass, and small shallow open water bodies for all HAs. Values of the NIWR for each HA were either assigned for HAs with single stations, computed using a valid period of record weighted average for HAs with multiple stations, or estimated from spatial interpolation for HAs with no stations. \* indicates that the NIWR was estimated using spatial interpolation.

BASIN NAME	BASIN NUMBER	BASIN REGION	ALFALFA NIWR (ft)	HIGHLY MANAGED PASTURE GRASS NIWR (ft)	LOW MANAGED PASTURE GRASS NIWR (ft)	GRASS HAY NIWR (ft)	TURF GRASS NIWR (ft)	SHALLOW OPEN WATER NIWR (ft)
Adobe Valley*	115	Central Region	3.9	3.8	3.0	3.6	3.7	4.8
Alkali Spring Valley*	142	Central Region	4.2	4.0	3.2	3.9	4.0	5.1
Alkali Valley*	111A	Central Region	3.7	3.5	2.8	3.4	3.5	4.5
Alkali Valley*	111B	Central Region	3.7	3.5	2.8	3.4	3.5	4.5
Amargosa Desert	230	Death Valley Basin	5.3	4.5	3.6	3.6	5.3	5.8
Antelope Valley	57	Humboldt River Basin	3.0	3.1	2.4	3.0	3.0	3.9
Antelope Valley	106	Walker River Basin	3.3	3.2	2.5	3.1	3.2	4.0
Antelope Valley*	186B	Central Region	2.6	2.6	2.0	2.5	2.4	3.6
Antelope Valley*	186A	Central Region	2.7	2.7	2.1	2.6	2.5	3.7
Antelope Valley*	93	Western Region	3.1	3.1	2.5	3.0	3.1	3.7
Antelope Valley*	151	Central Region	2.8	2.8	2.2	2.7	2.6	4.0
Bedell Flat*	94	Western Region	2.9	2.9	2.3	2.8	2.8	3.6
Big Smoky Valley	137B	Central Region	3.6	3.5	2.8	3.5	3.4	4.5
Big Smoky Valley	137A	Central Region	3.7	3.6	2.9	3.6	3.4	4.7
Black Mountains Area	215	Colorado River Basin	4.7	4.0	3.1	2.7	4.7	5.2
Black Rock Desert	28	Black Rock Desert Region	3.2	3.2	2.6	3.2	3.2	3.8
Boulder Flat*	61	Humboldt River Basin	2.8	2.8	2.2	2.7	2.7	3.6
Boulder Valley*	15	Northwest Region	3.3	3.2	2.6	3.2	3.2	3.9
Bradys Hot Springs Area*	75	West Central Region	3.5	3.4	2.7	3.3	3.3	4.2
Bruneau River Area	38	Snake River Basin	1.6	1.5	1.1	1.2	1.3	3.3

Appendix 15 cont.

BASIN NAME	BASIN NUMBER	BASIN REGION	ALFALFA NIWR (ft)	HIGHLY MANAGED PASTURE GRASS NIWR (ft)	LOW MANAGED PASTURE GRASS NIWR (ft)	GRASS HAY NIWR (ft)	TURF GRASS NIWR (ft)	SHALLOW OPEN WATER NIWR (ft)
Crater Flat*	229	Death Valley Basin	4.8	4.2	3.4	3.8	4.8	5.4
Crescent Valley	54	Humboldt River Basin	2.9	3.0	2.4	2.9	2.9	3.7
Dayton Valley*	103	Carson River Basin	3.3	3.2	2.6	3.1	3.2	3.9
Deep Creek Valley*	193	Great Salt Lake Basin	2.7	2.7	2.1	2.6	2.5	3.6
Delamar Valley*	182	Central Region	4.1	3.7	2.9	3.4	3.9	4.6
Desert Valley	31	Black Rock Desert Region	3.1	3.2	2.5	3.1	3.1	3.8
Diamond Valley	153	Central Region	2.5	2.5	2.0	2.4	2.4	3.5
Dixie Creek-Tenmile Creek Area	48	Humboldt River Basin	2.8	2.7	2.1	2.4	2.6	3.7
Dixie Valley	128	Central Region	3.6	3.5	2.8	3.4	3.6	4.3
Dodge Flat	82	Truckee River Basin	3.5	3.4	2.7	3.3	3.3	4.3
Dry Lake Valley*	181	Central Region	3.7	3.5	2.7	3.3	3.5	4.3
Dry Valley*	19	Black Rock Desert Region	3.5	3.5	2.8	3.4	3.5	4.1
Dry Valley*	95	Western Region	2.9	2.9	2.3	2.7	2.7	3.6
Dry Valley*	198	Colorado River Basin	3.5	3.3	2.6	3.2	3.2	4.2
Duck Lake Valley*	16	Northwest Region	3.3	3.3	2.6	3.2	3.3	4.0
Eagle Valley	104	Carson River Basin	3.2	3.1	2.5	3.0	3.1	3.7
Eagle Valley*	200	Colorado River Basin	3.1	3.0	2.4	2.9	2.8	4.1
East Walker Area*	109	Walker River Basin	3.5	3.4	2.7	3.3	3.4	4.3
Eastgate Valley Area	127	Central Region	3.4	3.4	2.7	3.4	3.4	4.2
Edwards Creek Valley*	133	Central Region	3.2	3.1	2.4	3.0	3.0	4.0
Eldorado Valley	167	Central Region	4.6	3.9	3.1	2.9	4.6	5.1
Elko Segment	49	Humboldt River Basin	2.6	2.6	2.1	2.5	2.5	3.3
Emigrant Valley*	158A	Central Region	4.2	4.0	3.2	3.7	4.1	5.0
Emigrant Valley*	158B	Central Region	4.6	4.2	3.3	3.8	4.5	5.3
Escalante Desert*	197	Escalante Desert	3.6	3.4	2.7	3.2	3.4	4.3



Appendix 16. Mean annual Net Irrigation Water Requirement (NIWR) for selected HAs and crops. Values of the NIWR were either assigned or averaged for HAs with multiple stations according to the number of valid years used in computing the station annual average NIWR. The NIWR for corn is the average of silage, field, and sweet corn crops. For other areas and crops of interest, see electronic statistical summaries. Descriptions of the electronic statistical summaries are given in Appendix 9.

Basin Name	Basin Number	Garden Vegetables (general) NIWR (ft)	Corn NIWR(ft)	Spring Wheat NIWR (ft)	Winter Wheat NIWR (ft)	Garlic NIWR (ft)	Onion NIWR (ft)	Potatoes (baking-late harvest) NIWR (ft)	Potatoes (processing-early harvest) NIWR (ft)	Grapes NIWR (ft)	Melons NIWR (ft)
Carson Desert	101	2.8	2.6	2.0	2.1					2.4	1.7
Carson Valley	105	2.7	2.5	1.9	2.2						
Diamond Valley	153	2.2	2.2	2.0	2.1						
Lovelock Valley	73	3.4	3.1	2.3	2.5			2.9	2.5		
Mason Valley	108	2.7	2.4	1.9	2.0	2.3	2.4				
Paradise Valley	69	2.6	2.8	2.3	2.5	2.5	2.6	2.7	2.4		
Smith Valley	107	2.6	2.5	2.0	2.2	2.4	2.5				
Lake Valley	183	2.3	2.4	2.2	2.5	2.5	2.5	2.6	2.4		