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Nevada Division of Environmental Protection
Bureau of Water Quality Planning
Clean Water Act 305(b) Report

QA:N/A

The Federal Water Pollution Control Act, commonly known as the Clean Water Act, establishes a process for states to develop information on the quality of the Nation's water resources. The requirements for this process are found in Sections 106(e), 204(a), 303(d), 305(b) and 314(a) of the Clean Water Act. Each State must develop a program to monitor the quality of its surface water and prepare a report describing the status of its water quality.

EPA is to compile the data from the State reports, summarize them and transmit the summaries to Congress along with an anlysis of the status of water quality nationwide. This 305(b) process is the principal means by which EPA, Congress and the public evaluate whether U.S. waters meet water quality standards, the progress made in maintaining and restoring water quality, and the extent of remaining problems.

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Executive Summary\Overview

This 2004 Reporting Cycle, 305(b) Report for Nevada assesses water quality data based on the last two years since the previous 305(b) Report. The number of data points for the assessed reaches varied from one data points to twelve data points. Some assessments used best professional judgment when no data was available. This report represents a general overall assessment of the Waters of the State and is not intended to indicate impaired waters which relate to 303(d) listing.

The State of Nevada operates an extensive monitoring program which encompasses the States 110,567 acres, regularly monitoring over 100 sampling points in the 14 hydrographic regions found in the state. In addition to these fixed monitoring stations, several water quality intensive field studies are conducted on the major water systems of Nevada. These studies included Truckee River, Carson River, Walker River and the Humboldt River. In addition a number of lakes and reservoirs have been added to the monitoring program.

There are approximately 14,988 miles of perennial rivers and streams, 126,257 miles of intermittent/ephemeral streams and channels, 1,782 miles of ditches/canals and 551 border miles of shared rivers. Nevada has 1,070 lakes, reservoirs or ponds with an approximate total acreage of 533,239 (these river and lake sizes are according to EPA's "Total Waters Report") and approximately 136,650 acres of wetlands.

This 305(b) report addresses a total of 3,002.70 stream miles and 1,359.53 river miles in Nevada. The overall use support of the streams are 2,360.60 miles fully supporting, 456.63 miles are partially supporting and 185.47 miles are non supporting. The overall use support of the rivers are 280.44 miles fully supporting, 304.45 miles are partially supporting and 774.64 miles are non supporting. The remaining river/stream miles are not assessed because of their inaccessibility due to there remote location and that the majority of these streams are ephemeral and intermittent.

Of the lakes and reservoirs addressed in this report 148,660.19 acres of reservoirs are included in this report. 141,660.19 acres are fully supporting, 4,393.00 acres are partially supporting and 2,695.54 acres are non supporting. 187,101.00 acres of lakes are included in this report. 151,611.00 acres are fully supporting and 35,490.00 acres are non supporting. 197,477.81 acres were not assessed in this report due to lack of data or information.

There are 136,650 acres of freshwater wetlands of which 51,826 acres are included in this report. 38,826 acres are fully supporting all assessed uses, 13,000 acres are non supporting for one or more uses while 84,824 acres were not assessed in this report due to lack of data or information.

Beneficial uses are assigned to classified waters in Nevada but not all waters have the same uses applied to it. These beneficial uses include aquatic life, wildlife propagation, recreation involving water contact, recreation not involving water contact, municipal drinking supply, stock watering, irrigation and industrial supply.

Since Nevada is a water poor state, the water which is available is under great demand and is heavily used. The major users are agriculture and municipal and industrial sources. The impacts on water quality from the municipal and industrial sources has been greatly reduced over the years with most point source polluters eliminated from direct discharges or are stringently controlled. Agriculture has the greatest impacts on the waters of Nevada due mainly to nonpoint source pollution along with naturally occurring causes. Some causes are directly related to irrigation, grazing and flow regulation practices. The reduction in flows in many of the rivers account for much of the non support of beneficial uses. Temperature, pH, DO, nutrients and suspended solids are the main pollutants of concern and are being targeted in the Nonpoint Source Program.

Water quality has generally been improving due to the removal of point sources and more stringent standard being implemented on the remaining point sources. Most exceedances are seasonal and are of a natural condition.

The Nonpoint source program will help to further improve water quality by promoting public awareness, grazing and irrigation practices, erosion control measures and implementation of Best Management Practices.

The Carson River water quality standard for total phosphates was exceeded. Temperature, Turbidity and Suspended Solids exceedances generally occur during the summer months at low flows. The major causes can be attributed to nonpoint sources in Carson Valley, a major agricultural area and growing urban area. Drought conditions followed by sever flooding is felt to be the major contributing factor to water quality problems in the river. A fish consumption health advisory has been issued for portions of the Lower Carson River and Lahontan Reservoir since 1985 due to high levels of mercury. Portions of the river are a designated EPA Superfund Site.

The Walker River has seen improvement in pH, nitrates and phosphates during this reporting cycle. Temperature continues to be a problem in the system and TDS continues to be a problem for the lower reach including Walker Lake.

The Humboldt River showed improvements to water quality with turbidity continuing to be a problem during this reporting cycle. The river normally has a highly variable flow with a major irrigation / recreation reservoir on the lower end of the system (Rye Patch Reservoir) and a terminal sink. Major point sources have all but been eliminated.

Agricultural and rangeland nonpoint sources are contributing the large sediment and nutrient loads to the waters of the State. Urban drainage systems contribute nutrients, heavy metals and organic loads to the nonpoint source load. The Nonpoint Source Program which is being implemented should achieve reductions of these nonpoint source loads.

Background

State Atlas

Topic	Value
State Population*	2,241,154
State surface area	110,567
Total miles	143,578
- Miles of perennial rivers/streams	14,988
- Miles of intermittent/ephemeral streams	126,257
- Miles of ditches and canals	1,782
- Border miles of shared rivers/streams	551
Number of lakes/reservoirs/ponds	1,070
Acres of lakes/reservoirs/ponds	533,239
Acres of freshwater wetlands	136,650

*Estimated 2003 population from the US 2000 Census showed the State of Nevada's population increase by 12.2% from 2000 to 2003.

The following pages contain the Water body Index. The Index is based on river basins and river sections (reaches) within those basins. A description and length of each reach is also described.

Waterbody Stream Index

Nevada 305(b) 2004

ID	NAME	DESCRIPTION	SIZE	CU
BCL	Birch Creek		10	16060004
BD1	Beaver Creek		8.9	15010010
BICCU	Big Creek Upper		4	16040107
BIGCL	Big Creek Lower		5.8	16040107
CABINCK	Cabin Creek		4.5	16040102
CAMP	Camp Creek		14	17040213
CLEARC	Clear Creek		6.6	16060012
COLDC1	Cold Creek		5	16060014
Creek	Wisconsin		5.1	16060004
CS1	Crystal Springs		2	15010011
CW1	Cottonwood Creek		8.7	16060005
FALLS	Falls Canyon		4	16040201
HC	Huntington Creek		30	16040103
HC1	Horse Canyon		6	16040201
HCU	Hunter Creek Upper		7.6	16050102
JC	Jack Creek		5.5	17050102
K14	Mayhew Creek		3	16060007
KCL	Kingston Creek Lower		4.6	16060004
KCU	Kingston Creek Upper		4.6	16060004
LYEC	Lye Creek		4	16040109
MCL	Martin Creek		37	16040109

ID	NAME	DESCRIPTION	SIZE	CU
MV1	Meadow Valley Wash above Elgin		40	15010013
MV2	Meadow Valley Wash above Echo Canyon Reservoir		16	15010013
NT1	North Fork Twin River		7	16060004
NV02-BL-03-A	Negro Creek		25.99	16040203
NV02-BL-05-A	Mahogany Creek		10.83	16040202
NV02-BL-06-A	Leonard Creek		7.29	16040202
NV02-BL-07-A	Bilk Creek		19.88	16040202
NV02-BL-08-B	Bilk Creek		7.93	16040202
NV02-BL-10-A	Bottle Creek		7.84	16040201
NV02-BL-11-A	Quinn River		40.92	16040201
NV02-BL-12-B	Quinn River		1.39	16040201
NV02-BL-13-D	Quinn River		5.34	16040201
NV02-QUI-01-T01-A	Crowley Creek		10.11	16040201
NV02-QUI-01-T02-A	Washburn Creek		16.42	16040201
NV02-QUI-01-T03-01-	Riser Creek		17.86	16040201
NV02-QUI-01-T03-A	McDermitt Creek		6.59	16040201
NV03-BR-17-B	76 Creek		11.12	17050102
NV03-JR-15-A	Bear Creek		4.16	17050102
NV03-OW-22-A	Deep Creek		16.75	17050104
NV03-OW-23-A	Penrod Creek		87.72	17050104
NV03-OW-24-A	Hendricks Creek		4.22	17050104
NV03-OW-26-A	Brown's Gulch		4.98	17050104

ID	NAME	DESCRIPTION	SIZE	CU
NV03-OW-28-A	Jack Creek		8.84	17050105
NV03-OW-29-B	Jack Creek		8.19	17050105
NV03-OW-33-A	Mill Creek		3.48	17050104
NV03-OW-34-C	Mill Creek	From Rio Tinto Mine to the Owyhee River	1.44	17050104
NV03-SNA-20-T01-01	Merritt Creek		7.75	17050102
NV03-SNA-50-T01-01	East Fork Trout Creek		10.06	17040213
NV03-SNA-50-T01-01	West Fork Trout Creek		9.16	17040213
NV03-SR-01	Big Goose Creek	Big Goose Creek	27.3	17040211
NV03-SR-02	Salmon Falls Creek	Salmon Falls Creek	37.2	17040213
NV03-SR-03	Shoshone Creek	Shoshone Creek	11.51	17040213
NV03-SR-06-A	Camp Creek		6.45	17040213
NV03-SR-07-B	Camp Creek		10.41	17040213
NV03-SR-08-A	Cottonwood Creek		8.35	17040213
NV03-SR-09-B	Cottonwood Creek		7.97	17040213
NV03-SR-10-A	Canyon Creek		8.2	17040213
NV03-SR-11-B	Canyon Creek		14.75	17040213
NV04-HR-12-A	Secret Creek		6.75	16040101
NV04-HR-13-B	Secret Creek		19.69	16040101
NV04-HR-14-A	Lamoille Creek		11.19	16040101
NV04-HR-15-B	Lamoille Creek		24.61	16040101
NV04-HR-25-A	Maggie Creek Tributaries	From their origin to the point where they become Maggie Creek	230.59	16040101
NV04-HR-26-B	Maggie Creek	From its origin to its confluence with Jack Creek	28.07	16040101

ID	NAME	DESCRIPTION	SIZE	CU
NV04-HR-27-C	Maggie Creek	From its confluence with Jack Creek to the Humboldt River	23.74	16040101
NV04-HR-28-A	Denay Creek		5.05	16040104
NV04-HR-30-B	Denay Creek		18.66	16040104
NV04-HR-32-A	Rock Creek		26.87	16040106
NV04-HR-33-C	Rock Creek		75.09	16040106
NV04-HR-34-A	Willow Creek		17	16040106
NV04-HR-53-A	Pole Creek		7.72	16040108
NV04-HR-54-A	Water Canyon Creek		5.07	16040108
NV04-HR-55-B	Pine Creek	From its origin to the north edge of T. 29 N. and R. 52 E.	38.36	16040104
NV04-HR-56-C	Pine Creek	From the north edge of T. 29 N. and R. 52 E. to its confluence with the Humboldt River	15.92	16040104
NV04-HUM-01-T05-1	Rock Creek		14	16040108
NV04-HUM-01-T09-A	Sherman Creek		8.11	16040101
NV04-HUM-01-T10-A	Jackstone Creek		7.24	16040101
NV04-LH-45-A	NF Little Humboldt River	From its origin to the National Forest	13.22	16040109
NV04-LH-46-B	NF Little Humboldt River	From the National Forest boundary to its confluence with the south fork of the Little Humboldt River	41.01	16040109
NV04-LH-47-C	Little Humboldt River		53.52	16040109
NV04-LH-48-A	South Fork Little Humboldt		26.03	16040109
NV04-LH-49-B	South Fork Little Humboldt		19.94	16040109
NV04-LH-50-A	Martin Creek		13.34	16040109
NV04-LH-51-B	Martin Creek		13.04	16040109
NV04-LH-52-A	Dutch John Creek		10.71	16040109

ID	NAME	DESCRIPTION	SIZE	CU
NV04-MR-11-A	Tabor Creek		12.14	16040101
NV04-NF-16-A	NF Humboldt River	From its origin to the national forest boundary	15.6	16040102
NV04-NF-17-B	NF Humboldt River	NF Humboldt River from the National Forest Boundary to the Humboldt River (Class B)	84.67	16040102
NV04-RR-37-A	Reese Creek		17.02	16040107
NV04-RR-38-B	Reese River B		62.69	16040107
NV04-RR-39-C	Reese River C		104.4	16040107
NV04-RR-40-A	San Juan Creek		6.23	16040107
NV04-RR-41-A	Big Creek		4.5	16040107
NV04-RR-42-B	Big Creek		2.36	16040107
NV04-RR-43-A	Mill Creek		7.56	16040107
NV04-RR-44-A	Lewis Creek		3.96	16040107
NV04-SF-18-A	SF Humboldt River and Tributaries		102.27	16040103
NV04-SF-19-B	SF Humboldt River	SF Humboldt River from Lee to Humboldt River (Class B)	32.75	16040103
NV04-SF-20-A	Huntington Creek		14.16	16040103
NV04-SF-21-B	Huntington Creek		44.33	16040103
NV04-SF-22-A	Green Mountain Creek		5.72	16040103
NV04-SF-23-B	Green Mountain Creek		1.27	16040103
NV04-SF-24-A	Toyn Creek		6.24	16040103
NV06-SC-41-C	Steamboat Creek	Steamboat Creek from Washoe Lakes to Sec 33, T18N, R20E (Class C)	5.41	16050102
NV06-SC-42-D	Steamboat Creek	Steamboat Creek from Sec 33, T18N, R20E to the Truckee River (Class D)	13.71	16050102
NV06-SC-43-A	Franktown Creek	From its origin to Hobart Reservoir	1.57	16050102
NV06-SC-45-B	Franktown Creek	From Hobart Reservoir to Washoe Lake	9.07	16050102

ID	NAME	DESCRIPTION	SIZE	CU
NV06-SC-46-A	Ophir Creek		5.57	16050102
NV06-SC-47-B	Ophir Creek		0.87	16050102
NV06-SC-50-A	Galena Creek	From origin to east line of S18, T17N, R19E (Class A)	4.08	16050102
NV06-SC-51-B	Galena Creek	From east line of S18, T17N, R19E to S2, T17N, R19E (Class B)	4.34	16050102
NV06-SC-52-C	Galena Creek	Galena Creek from Sec 2, T17N, R19E to Steamboat Creek (Class C)	3.63	16050102
NV06-SC-53-A	White's Creek	White's Creek from source to east line of Sec 33, T18N, R19E (Class A)	8.83	16050102
NV06-SC-54-B	White's Creek	White's Creek from east line of Sec 33, T18N, R19E to Steamboat Creek (Class B)	8.36	16050102
NV06-SC-55-A	Thomas Creek	Thomas Creek from source to National Forest Boundary (Class A)	4.34	16050102
NV06-SC-56-B	Thomas Creek	Thomas Creek from National Forest Boundary to Steamboat Creek (Class B)	9	16050102
NV06-SC-59-A	Browns Creek		1.1	16050102
NV06-SC-60-B	Browns Creek		2.3	16050102
NV06-SC-61-A	Evans Creek		2	16050102
NV06-SC-62-B	Evans Creek		1.3	16050102
NV06-TB-09	First Creek	Tahoe Basin	1.8	16050101
NV06-TB-10	Second Creek	Tahoe Basin	2.45	16050101
NV06-TB-11	Wood Creek	Tahoe Basin	1.24	16050101
NV06-TB-12	Third Creek	Tahoe Basin	0.31	16050101
NV06-TB-13	EF Third Creek	Tahoe Basin	6.57	16050101
NV06-TB-14	WF Incline Creek	Tahoe Basin	3.11	16050101
NV06-TB-15	EF Incline Creek	Tahoe Basin	4.66	16050101
NV06-TB-16	Incline Creek		4.5	16050101

ID	NAME	DESCRIPTION	SIZE	CU
NV06-TB-17	Mill Creek	Tahoe Basin	1.86	16050101
NV06-TB-18	Tunnel Creek	Tahoe Basin	1.86	16050101
NV06-TB-20	Marlette Creek	Tahoe Basin	1.86	16050101
NV06-TB-21	Secret Harbor Creek	Tahoe Basin	3.09	16050101
NV06-TB-22	North Canyon Creek	Tahoe Basin	5.45	16050101
NV06-TB-23	Bliss Creek	Tahoe Basin	1.44	16050101
NV06-TB-24	Slaughterhouse Canyon Creek	Tahoe Basin	2.3	16050101
NV06-TB-26	Glenbrook Creek	Tahoe Basin	3.83	16050101
NV06-TB-27	North Logon House Creek	Tahoe Basin	3	16050101
NV06-TB-28	Logan House Creek	Tahoe Basin	3.08	16050101
NV06-TB-29	Lincoln Creek	Tahoe Basin	5.17	16050101
NV06-TB-30	Zephyr Creek	Tahoe Basin	5.45	16050101
NV06-TB-31	McFaul Creek	Tahoe Basin	4	16050101
NV06-TB-32	Burke Creek	Tahoe Basin	6.23	16050101
NV06-TB-33	Edgewood Creek	Tahoe Basin	5.37	16050101
NV06-TB-34	Eagle Rock Creek		1.74	16050101
NV06-TR-35	Gray Creek		7.31	16050102
NV06-TR-36	Bronco Creek		6.74	16050102
NV06-TR-37-A	Hunter Creek		1.33	16050102
NV06-TR-39-B	Hunter Creek		6.69	16050102
NV06-TR-57-D	Long Valley Creek		18.55	16050102
NV08-CR-02	Bryant Creek	Bryant Creek	3.9	16050201

ID	NAME	DESCRIPTION	SIZE	CU
NV08-CR-14-A	Daggett Creek		2.96	16050201
NV08-CR-15-A	Genoa Creek		2.29	16050201
NV08-CR-16-A	Sierra Canyon Creek		3.22	16050201
NV08-CR-17-A	Clear Creek		7.98	16050201
NV08-CR-18-B	Clear Creek		4.2	16050201
NV08-CR-19-A	Kings Canyon		3.32	16050201
NV08-CR-20-A	Ash Canyon		4.88	16050201
NV08-CR-21-C	V-Line Canal		10.05	16050203
NV08-CR-24-C	Diagonal Drain		22.57	16050203
NV09-WR-05	Sweetwater Creek	Sweetwater Creek from CA stateline to the East Walker River	8.07	16050301
NV09-WR-12	Desert Creek	Desert Creek from the CA stateline to the West Walker River	23.39	16050302
NV09-WR-15-A	Cottonwood Creek		10.91	16050304
NV09-WR-16-A	Squaw Creek		2.98	16050304
NV09-WR-17-A	Rose Creek		4.82	16050304
NV09-WR-18-A	Corey Creek		8.33	16050304
NV09-WR-19-A	Rough Creek		1.27	16050301
NV09-WR-20-B	Rough Creek		12.12	16050301
NV09-WR-21-A	Bodie Creek		2.58	16050301
NV09-WR-22-B	Bodie Creek		7.53	16050301
NV10-CE-01	Chiatovich Creek		13.41	16060010
NV10-CE-02	Indian Creek		1.98	16060010
NV10-CE-03	Leidy Creek		1.45	16060010

ID	NAME	DESCRIPTION	SIZE	CU
NV10-CE-05-A	Star Creek		3.21	16060001
NV10-CE-07-A	Peavine Creek		21.44	16060003
NV10-CE-08-A	Jett Creek	From its origin to the National Forest	11.12	16060004
NV10-CE-09-A	Twin River SF		8.29	16060004
NV10-CE-10-A	Twin River NF		8.15	16060004
NV10-CE-11-A	Kingston Creek		5.36	16060004
NV10-CE-13-B	Kingston Creek		9.17	16060004
NV10-CE-14-A	Birch Creek		8.57	16060004
NV10-CE-15-B	Birch Creek		1.68	16060004
NV10-CE-16-A	Skull Creek		8.67	16060004
NV10-CE-17-A	Steiner Creek		6.01	16060004
NV10-CE-18-A	Pine Creek		9.19	16060005
NV10-CE-19-A	Barley Creek		17.19	16060005
NV10-CE-20-A	Mosquito Creek		8.26	16060005
NV10-CE-21-A	Stoneberger Creek		10.81	16060005
NV10-CE-22-A	Roberts Creek		7.91	16060005
NV10-CE-23-B	Roberts Creek		15.66	16060005
NV10-CE-28-A	Pole Canyon Creek		5.26	16060007
NV10-CE-29-A	Goshute Creek		8.41	16060008
NV10-CE-30-C	Gleason Creek		7.62	16060008
NV10-CE-31-D	Gleason Creek		12.08	16060008
NV10-CE-32-D	Murry Creek		7.41	16060008

ID	NAME	DESCRIPTION	SIZE	CU
NV10-CE-34-A	North Creek		6.56	16060008
NV10-CE-35-A	East Creek		4.94	16060008
NV10-CE-36-A	Bird Creek		1.16	16060008
NV10-CE-37-A	Timber Creek		2.93	16060008
NV10-CE-38-A	Berry Creek		5.22	16060008
NV10-CE-39-A	Duck Creek		13.16	16060008
NV10-CE-40-A	Cleve Creek		7.82	16060008
NV10-CE-41-A	Cave Creek		4.54	16060008
NV10-CE-43-A	Pine Creek		1.33	16060008
NV10-CE-44-A	Ridge Creek		1.17	16060008
NV10-CE-45-A	Current Creek		11.5	16060012
NV10-CE-46-B	Current Creek		6.65	16060012
NV10-CEN-001-T01-	Coyote Creek		5.84	16060001
NV10-CEN-001-T02-	Union Creek		7	16060001
NV10-CEN-001-T03-0	Willow Creek		10.47	16040104
NV10-CEN-001-T03-0	Big Den Creek		7	16060001
NV10-CEN-001-T03-0	Horse Creek		14	16060001
NV10-CEN-001-T04-0	Cherry Creek		13.36	16060001
NV10-CEN-001-T04-	Edwards Creek		7.63	16060001
NV10-CEN-014-T03-0	North Cottonwood Creek		10.17	16060014
NV11-GS-01	Snake Creek		9.49	16020301
NV11-GS-02-C	Snake Creek		5.18	16020301

ID	NAME	DESCRIPTION	SIZE	CU
NV11-GS-03-A	Baker Creek		7.64	16020301
NV11-GS-04-A	Lehman Creek		6.75	16020301
NV11-GS-05-A	Silver Creek		11.09	16020301
NV11-GS-06-A	Hendrys Creek		8.64	16020301
NV13-CL-05	Las Vegas Wash	From Telephone Line Rd to Treatment Plants	5.23	15010015
NV13-CL-06	Las Vegas Wash	From Lake Mead to Telephone Line Rd	5.12	15010015
NV13-CL-10	Beaver Dam Wash		0.81	15010010
NV13-CL-13	Meadow Valley Wash		18.85	15010013
NV13-CL-15-A	White River		12.44	15010011
NV13-CL-16-B	White River		7.17	15010011
NV13-CL-18-B	Sunnyside Creek		7.14	15010011
NV13-CL-26-B	Clover Creek		35.01	15010013
NV13-COL-01-T02-01	Forest Home Creek		10	15010011
OC1	Ophir Creek		6.6	16060004
PC1	Pine Creek		8	16060005
ROAD	Road Creek		4.5	16040109
SAMMYCK	Sammy Creek		1.5	16040102
SH1	Stonehouse Creek		4	16040109
SHU	Stonehouse Creek		4	16040109
SJC	San Juan Creek		5.5	16040107
ST1	South Fork Twin River at Trailhead		7	16060004
SUNCK	Sun Creek		10	17040213
TABOR	Tabor Creek		32	16040101

ID	NAME	DESCRIPTION	SIZE	CU
VN03-SNA-50-T01-01	Trout Creek Mainstem		5.73	17040213
WC1	Willow Creek		2	16060014
WCU	Washington Creek		6	16040107
WILLC	Willow Creek		6	16040101
		Total Stream	**3,002.70**	

Waterbody River Index

Nevada 305(b) 2004

ID	NAME	DESCRIPTION	SIZE	CU
NV03-BR-16	Bruneau River	Bruneau River	50	17050102
NV03-JR-12	EF Jarbidge River	EF Jarbidge River	18.6	17050102
NV03-JR-13	Jarbidge River	Jarbidge River above the town of Jarbidge to source	7.44	17050102
NV03-JR-14	Jarbidge River	Jarbidge River below the town of Jarbidge to the Idaho stateline	8.98	17050102
NV03-OW-18	Owyhee River	Owyhee River from Wildhorse Reservoir to Mill Creek	13.75	17050104
NV03-OW-19	Owyhee River	Owyhee River from Mill Creek to China Dam	14.71	17050104
NV03-OW-20	Owyhee River	Owyhee River from China Dam to the Idaho Stateline	6.31	17050104
NV03-OW-21-A	Owyhee River above Wild Horse Reservoir		12.33	17050104
NV03-OW-27	SF Owyhee River	SF Owyhee River	75	17050105
NV04-HR-01	Humboldt River	Humboldt River from the upstream source of the main stem to Osino	66.12	16040101
NV04-HR-02	Humboldt River	Humboldt River from Osino to Palisade	64.39	16040101
NV04-HR-03	Humboldt River	Humboldt River from Palisade to Battle Mountain	76.5	16040105
NV04-HR-04	Humboldt River	Humboldt River from Battle Mountain to Comus	81.36	16040105
NV04-HR-05	Humboldt River	Humboldt River from Comus to Imlay	114.09	16040108
NV04-HR-06	Humboldt River	Humboldt River from Imlay to Woosley	44.42	16040108

ID	NAME	DESCRIPTION	SIZE	CU
NV04-HR-07-C	Humboldt River	Humboldt River from Woosley to Rodgers Dam (Class C)	13.22	16040108
NV04-HR-08-D	Humboldt River	Humboldt River from Rodgers Dam to the Humboldt Sink (Class D)	22.77	16040108
NV04-MR-09-A	Mary's River	From its origin to the point where Mary's River crosses the east line of T42N, R59E (Class A)	24.36	16040101
NV04-MR-10-B	Mary's River	Mary's River from T42N, R59E to the Humboldt River (Class B)	53.2	16040101
NV06-TR-02	Truckee River	Truckee River from CA stateline to Idlewild	15.7	16050102
NV06-TR-03	Truckee River	Truckee River from Idlewild to East McCarran Blvd	6.25	16050102
NV06-TR-04	Truckee River	Truckee River from East McCarran Blvd to Lockwood	5.85	16050102
NV06-TR-05	Truckee River	Truckee River from Lockwood to Derby Dam	15.15	16050102
NV06-TR-06	Truckee River	Truckee River from Derby Dam to Wadsworth	11.22	16050102
NV06-TR-07	Truckee River	Truckee River from Wadsworth to Pyramid Lake	28.07	16050103
NV08-CR-04	EF Carson	EF Carson River from Stateline to Riverview Mobile Home Park	10.48	16050201
NV08-CR-05	EF Carson	EF Carson River at Riverview Mobile Home Park to Muller Lane	10.53	16050201
NV08-CR-06	EF Carson / WF Carson	EF Carson River at Muller Lane (2.59 Mi) and WF from stateline to Genoa Lane (13.23 Mi) Brockliss Slough (11.89 Mi)	27.71	16050201
NV08-CR-07	Carson River	Genoa Lane to Cradlebaugh Bridge	5.88	16050201
NV08-CR-08	Carson River	Cradlebaugh Bridge to Mexican Ditch Gage	6.34	16050201
NV08-CR-09	Carson River	Mexican Ditch Gage to New Empire	7.82	16050202
NV08-CR-10	Carson River	New Empire to Dayton Bridge	16.82	16050202

ID	NAME	DESCRIPTION	SIZE	CU
NV08-CR-11	Carson River	Dayton Bridge to Weeks Bridge at Highway 95	25.5	16050202
NV08-CR-12	Carson River	Weeks Bridge at Highway 95 to Lahontan Dam	29.17	16050202
NV08-CR-13-C	Lower Carson River	Class C Waters: From below Lahontan Res. to Carson Sink	40.46	16050203
NV09-WR-03	West Walker River	West Walker River from CA stateline to Wellington	16.9	16050302
NV09-WR-04	West Walker River	West Walker River from Wellington to the confluence with the E. Walker	25.69	16050302
NV09-WR-07	East Walker River	East Walker River from CA stateline to the confluence with the W. Walker	58.45	16050301
NV09-WR-09	Walker River	From the confluence of the West and East Walker River to the inlet of Weber Reservoir	41.15	16050303
NV09-WR-10	Walker River	Walker River from the outlet of Weber Reservoir to the inlet of Walker Lake	25.68	16050303
NV13-CL-01	Colorado River	Colorado River from Lake Mojave inlet to CA stateline	60.94	15030101
NV13-CL-02	Colorado River	Colorado River from Hoover Dam to Lake Mojave inlet	31.27	15030101
NV13-CL-07	Virgin River	Virgin River from Arizona stateline to Mesquite	4.5	15010010
NV13-CL-09	Virgin River	Virgin River from Mesquite to river mouth at Lake Mead	25.75	15010010
NV13-CL-11	Muddy River	Muddy River from river source to Glendale	13.63	15010012
NV13-CL-12	Muddy River	Muddy River from Glendale to river mouth at Lake Mead	25.07	15010012
		Total River	**1,359.53**	

Waterbody Reservoir and Lake Index

Nevada 305(b) 2004

ID	NAME	DESCRIPTION	SIZE	CU
NV01-NW-01-A	Boulder Reservoir		6	16040204
NV01-NW-02-A	Blue Lakes		26	16040205
NV01-NW-03-A	Catnip Reservoir		93	17120008
NV01-NW-04-B	Wall Canyon Reservoir		72	16040204
NV01-NW-05-B	Knott Creek Reservoir		89	16040205
NV01-NW-06-B	Onion Valley Reservoir		79	16040205
NV02-BL-02-B	Squaw Creek Reservoir		46	16040203
NV02-BL-04-B	Summit Lake	Summit Lake	560	16040202
NV02-QUI-R01-01	Bilk Creek Reservoir		38	16040202
NV03-OW-25-B	Wild Horse Reservoir	Wild Horse Reservoir	2830	17050104
NV03-OW-30-B	Bull Run Reservoir		105	17050105
NV03-OW-31-B	Wilson Reservoir	Wilson Reservoir	828	17050105
NV04-HR-29-A	Tonkin Reservoir		4	16040104
NV04-HR-31-C	J D Ponds		9	16040104
NV04-HR-35-B	Willow Creek Reservoir		576	16040106

ID	NAME	DESCRIPTION	SIZE	CU
NV04-HR-36-B	Iowa Canyon Reservoir		27	16040105
NV06-SC-40-C	Washoe Lakes	Washoe Lakes (Class C)	6100	16050102
NV06-SC-44-B	Hobart Reservoir	Hobart Reservoir	15	16050102
NV06-SC-48-A	Price Lake		4	16050102
NV06-SC-49-B	Davis Lake		3	16050102
NV06-TB-08	Lake Tahoe	Tahoe Basin (NV Portion)	36812	16050101
NV06-TB-19	Marlette Lake	Tahoe Basin	350	16050101
NV06-TB-25	Spooner Lake	Tahoe Basin	69	16050101
NV06-TR-38-A	Hunter Lake		1	16050102
NV06-TR-58-C	Tracy Pond		30	16050102
NV08-CR-22-C	Rattlesnake Reservoir (S-Line Reservoir)		500	16050203
NV08-CR-26-C	Harmon Reservoir		200	16050203
NV08-CR-28-D	Stillwater Point Reservoir		1920	16050203
NV09-WAL-R01-01	Mason Valley Wildlife Area North Pond		1300	16050303
NV09-WR-02	Topaz Lake	Topaz Lake (Nevada portion)	987.54	16050302
NV09-WR-11	Walker Lake	Walker Lake	35490	16050304
NV09-WR-14-C	Weber Reservoir	Weber Reservoir (Class C)	950	16050303

ID	NAME	DESCRIPTION	SIZE	CU
NV10-CE-04-C	Fish Lake		7.49	16060010
NV10-CE-12-B	Groves Lake		14	16060004
NV10-CE-24-B	Fish Springs Pond		4	16060006
NV10-CE-25-B	Illipah Reservoir		29.7	16060007
NV10-CE-27-A	Angel Lake		12	16060007
NV10-CE-33-C	Comins Reservoir		136	16060008
NV10-CE-42-B	Cave Lake	Cave Lake	32	16060008
NV11-GS-07-B	Silver Creek Reservoir		5	16020301
NV13-CL-03	Colorado R (Lake Mead)	Lake Mead (Nevada portion)	90000	15010005
NV13-CL-04	Colorado R(Las Vegas Bay)		3840	15010005
NV13-CL-14-C	Schroeder Reservoir		15	15010010
NV13-CL-17-B	Dacey Reservoir		215	15010011
NV13-CL-19-B	Adams McGill Reservoir		683	15010011
NV13-CL-20-B	Hay Meadow Reservoir		126	15010011
NV13-CL-21-C	Nesbitt Lake		202	15010011
NV13-CL-22-C	Pahranagat Reservoir		370	15010011
NV13-CL-23-C	Bowman Reservoir		86	15010012

ID	NAME	DESCRIPTION	SIZE	CU
NV13-CL-24-B	Eagle Valley Reservoir		45	15010013
NV13-CL-25-C	Echo Canyon Reservoir		58	15010013
NV13-MOH	Lake Mohave	Lake Mohave (Nevada portion only)	14000	15030101
NV4-RPR	Rye Patch Reservoir	Rye Patch Reservoir	11400	16040108
NV4-SFR	South Fork Reservoir	South Fork Reservoir	1650	16040103
NV6-PYR	Pyramid Lake	Pyramid Lake	108000	16050102
NV8-LAH	Lahontan Reservoir	Lahontan Reservoir	14800	16050202
		Total Reservoir and Lake	**335,849.73**	

Waterbody Wetlands Index

Nevada 305(b) 2004

ID	NAME	DESCRIPTION	SIZE	CU
NV08-CR-23-C	Indian Lakes		3500	16050203
NV08-CR-25-C	Carson Lake	Carson Lake	2000	16050203
NV08-CR-27-C	Stillwater Marsh	Stillwater Marsh (Class C Waters and Class D Waters)	19326	16050203
NV09-WR-13-C	Mason Valley Wildlife Area		13000	16050303
NV10-CE-26-B	Ruby Marsh		14000	16060007
		Total Wetland	**51,826.00**	

Methodologies

Waterbody assessments were performed at three levels, monitored, best professional judgment and evaluated. Monitored waters utilized numeric ambient water quality data from the years 2002-2003 and evaluated waters were based on known land use patterns, location of pollution sources, information provided by wildlife agencies, available documentation and best professional judgment.

For each hydrographic region, river system control points where water quality standards/criteria are specified, sampling stations associated with each of these control points have been located. Water quality data from these stations were compared to numeric beneficial use standards established at control points and percent violations were calculated. If there were three or less available samples during the reporting period and an exceedance was noted it was given an assessment value of partially supporting. If no exceedance was noted it was given an assessment value of fully supporting. Beneficial use attainment classification was determined based on the following criteria.

Fully Supporting - For all pollutants, criteria exceeded in less than or equal to 10% of measurements and mean of measurements is less than criteria. Pollutants are not found at levels of concern.

Partially Supporting - For any one pollutant, criteria exceeded in 11 - 25% of measurements and mean of measurements is less than criteria; or criteria exceeded in less than or equal to 10% of measurements and mean of measurements is greater than criteria. Pollutants are not found at levels of concern.

Non Supporting - For any one pollutant, criteria exceeded in greater than or equal to 25% of measurements and mean of measurements is less than criteria; or criteria exceeded in less than or equal to 11 - 25% of measurements and mean of measurements is greater than criteria. Pollutants are found at levels of concern.

Beneficial use attainment classification for major tributaries was determined individually by comparing data for the tributary to standards set for the tributary or at the appropriate downstream main stem control point.

Evaluated assessment also included review of published and unpublished technical reports, studies, documents, file records, and personal communication with qualified resource management professionals. Utilization of these sources to establish beneficial use attainment levels requires professional judgement and is necessarily subjective.

Waters which are unclassified are generally small, isolated streams and may have intermittent surface flows. Many of these streams are spring fed or originate from snow pack and both sources are highly influenced by climatic trends. Nevada is a drought prone state with an average rainfall of less than 6" per year. Due to the remote location of these waters many are impossible to monitor or evaluate.

The State determines which waters are to be classified by interaction and mutual agreement with several state agencies (Div. of Wildlife, Div. of Water Resources and Div. of Environmental Protection) and public comments via the public notice/hearing process.

Summary of Fully Supporting, Threatened, and Impaired

(National and State Uses)

Type of Waterbody: Stream — All Sizes in

Degree of Use Support	Evaluated	Monitored	Total
Size Fully Supporting All Assessed	1703.90	656.70	2360.60
Size Fully Supporting All Assessed Uses but Threatened for at Least One	0.00	0.00	0.00
Size Impaired for One or More Uses:	42.86	599.24	642.10
Size Not Attainable for Any Use and Not Included in the Line Items Above	0.00	0.00	0.00
Total	1746.76	1255.94	3002.70

Summary of Fully Supporting, Threatened, and Impaired

(National and State Uses)

Type of Waterbody: River — All Sizes in

Degree of Use Support	Evaluated	Monitored	Total
Size Fully Supporting All Assessed	44.32	236.12	280.44
Size Fully Supporting All Assessed Uses but Threatened for at Least One	0.00	0.00	0.00
Size Impaired for One or More Uses:	104.17	974.92	1079.09
Size Not Attainable for Any Use and Not Included in the Line Items Above	0.00	0.00	0.00
Total	148.49	1211.04	1359.53

Summary of Fully Supporting, Threatened, and Impaired

(National and State Uses)

Type of Waterbody: Freshwater Reservoir — All Sizes in Acre

Degree of Use Support	Evaluated	Monitored	Total
Size Fully Supporting All Assessed	128340.19	1920.00	130260.19
Size Fully Supporting All Assessed Uses but Threatened for at Least One	0.00	0.00	0.00
Size Impaired for One or More Uses:	11489.00	6999.54	18488.54
Size Not Attainable for Any Use and Not Included in the Line Items Above	0.00	0.00	0.00
Total	139829.20	8919.54	148748.80

Summary of Fully Supporting, Threatened, and Impaired

(National and State Uses)

Type of Waterbody: Freshwater Lake — All Sizes in Acre

Degree of Use Support	Evaluated	Monitored	Total
Size Fully Supporting All Assessed	114799.00	36812.00	151611.00
Size Fully Supporting All Assessed Uses but Threatened for at Least One	0.00	0.00	0.00
Size Impaired for One or More Uses:	0.00	35490.00	35490.00
Size Not Attainable for Any Use and Not Included in the Line Items Above	0.00	0.00	0.00
Total	114799.00	72302.00	187101.00

Summary of Fully Supporting, Threatened, and Impaired

(National and State Uses)

Type of Waterbody: Freshwater Wetlands — All Sizes in Acre

Degree of Use Support	Evaluated	Monitored	Total
Size Fully Supporting All Assessed	38826.00	0.00	38826.00
Size Fully Supporting All Assessed Uses but Threatened for at Least One	0.00	0.00	0.00
Size Impaired for One or More Uses:	0.00	13000.00	13000.00
Size Not Attainable for Any Use and Not Included in the Line Items Above	0.00	0.00	0.00
Total	38826.00	13000.00	51826.00

Individual Use Support Summary

(National and State Uses)

Type of Waterbody: Stream

Note: All numbers are in Miles

Use	Size Assessed	Size Fully Supporting	Size Fully Supporting but	Size Partially Supportin	Size Not Supporting	Size Not Attainable
Overall Use Support	348.93	348.93	0.00	0.00	0.00	0.00
Watering of Livestock	2,661.70	2,642.44	0.00	17.82	1.44	0.00
Irrigation	2,661.70	2,660.26	0.00	0.00	1.44	0.00
Aquatic Life Support	2,651.35	2,032.87	0.00	438.13	180.35	0.00
Fish Consumption	19.69	19.69	0.00	0.00	0.00	0.00
Propagation of Wildlife	2,661.70	2,631.75	0.00	1.44	28.51	0.00
Recreation With Contact	2,580.75	2,506.05	0.00	12.95	61.75	0.00
Recreation Without Contact	2,655.13	2,653.69	0.00	1.44	0.00	0.00
Municipal or Domestic	2,496.08	2,380.55	0.00	56.15	59.38	0.00
Secondary Contact (Recr)	7.62	7.62	0.00	0.00	0.00	0.00
Industrial Supply	2,625.02	2,625.02	0.00	0.00	0.00	0.00
Enhancement of Water	73.82	73.82	0.00	0.00	0.00	0.00
Maintenance Freshwater	10.35	10.35	0.00	0.00	0.00	0.00

Individual Use Support Summary

(National and State Uses)

Type of Waterbody: River

Note: All numbers are in Miles

Use	Size Assessed	Size Fully Supporting	Size Fully Supporting but	Size Partially Supportin	Size Not Supporting	Size Not Attainable
Watering of Livestock	1,359.53	1,155.66	0.00	48.92	154.95	0.00
Irrigation	1,359.53	1,155.66	0.00	48.92	154.95	0.00
Aquatic Life Support	1,359.53	280.44	0.00	367.21	711.88	0.00
Propagation of Wildlife	1,359.53	1,359.53	0.00	0.00	0.00	0.00
Recreation With Contact	1,153.72	1,057.20	0.00	16.34	80.18	0.00
Recreation Without Contact	1,359.53	1,359.53	0.00	0.00	0.00	0.00
Municipal or Domestic	1,292.88	864.35	0.00	108.60	319.93	0.00
Industrial Supply	1,359.53	1,359.53	0.00	0.00	0.00	0.00

Individual Use Support Summary

(National and State Uses)

Type of Waterbody: Freshwater Reservoir

Note: All numbers are in Acre

Use	Size Assessed	Size Fully Supporting	Size Fully Supporting but	Size Partially Supportin	Size Not Supporting	Size Not Attainable
Overall Use Support	950.00	950.00	0.00	0.00	0.00	0.00
Watering of Livestock	147,798.70	136,398.70	0.00	11,400.00	0.00	0.00
Irrigation	147,798.70	136,398.70	0.00	11,400.00	0.00	0.00
Aquatic Life Support	147,798.70	140,710.20	0.00	4,393.00	2,695.54	0.00
Propagation of Wildlife	147,798.70	147,798.70	0.00	0.00	0.00	0.00
Recreation With Contact	142,038.70	139,343.20	0.00	987.54	1,708.00	0.00
Recreation Without Contact	147,798.70	147,798.70	0.00	0.00	0.00	0.00
Municipal or Domestic	142,038.70	140,680.70	0.00	1,358.00	0.00	0.00
Industrial Supply	146,148.70	146,148.70	0.00	0.00	0.00	0.00

Individual Use Support Summary

(National and State Uses)

Type of Waterbody: Freshwater Lake

Note: All numbers are in Acre

Use	Size Assessed	Size Fully Supporting	Size Fully Supporting but	Size Partially Supportin	Size Not Supporting	Size Not Attainable
Overall Use Support	108,000.00	108,000.00	0.00	0.00	0.00	0.00
Watering of Livestock	79,101.00	79,101.00	0.00	0.00	0.00	0.00
Irrigation	79,101.00	43,611.00	0.00	0.00	35,490.00	0.00
Aquatic Life Support	79,101.00	43,611.00	0.00	0.00	35,490.00	0.00
Propagation of Wildlife	79,101.00	43,611.00	0.00	0.00	35,490.00	0.00
Recreation With Contact	79,101.00	79,101.00	0.00	0.00	0.00	0.00
Recreation Without Contact	79,101.00	79,101.00	0.00	0.00	0.00	0.00
Municipal or Domestic	79,032.00	43,542.00	0.00	0.00	35,490.00	0.00
Industrial Supply	79,101.00	79,101.00	0.00	0.00	0.00	0.00
Drinking Water Supply	36,812.00	36,812.00	0.00	0.00	0.00	0.00
Enhancement of Water	451.00	451.00	0.00	0.00	0.00	0.00

Individual Use Support Summary

(National and State Uses)

Type of Waterbody: Freshwater Wetlands

Note: All numbers are in Acre

Use	Size Assessed	Size Fully Supporting	Size Fully Supporting but	Size Partially Supportin	Size Not Supporting	Size Not Attainable
Watering of Livestock	51,826.00	51,826.00	0.00	0.00	0.00	0.00
Irrigation	51,826.00	38,826.00	0.00	0.00	13,000.00	0.00
Aquatic Life Support	51,826.00	38,826.00	0.00	0.00	13,000.00	0.00
Propagation of Wildlife	51,826.00	38,826.00	0.00	0.00	13,000.00	0.00
Recreation With Contact	32,500.00	19,500.00	0.00	0.00	13,000.00	0.00
Recreation Without Contact	51,826.00	51,826.00	0.00	0.00	0.00	0.00
Municipal or Domestic	32,500.00	19,500.00	0.00	0.00	13,000.00	0.00
Industrial Supply	51,826.00	51,826.00	0.00	0.00	0.00	0.00

Total Stream Use

SUPPORT DESCRIPTION Partial

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
P	NV02-QUI-01-T01-A	Crowley Creek	10.11	M
P	NV02-QUI-01-T02-A	Washburn Creek	16.42	M
P	NV02-QUI-01-T03-A	McDermitt Creek	6.59	M
P	NV03-SNA-20-T01-0	Merritt Creek	7.75	M
P	NV03-SNA-50-T01-0	East Fork Trout Creek	10.06	M
P	NV03-SNA-50-T01-0	West Fork Trout Creek	9.16	M
P	NV04-HR-14-A	Lamoille Creek	11.19	M
P	NV04-HR-33-C	Rock Creek	75.09	M
P	NV04-HUM-01-T09-	Sherman Creek	8.11	M
P	NV04-HUM-01-T10-	Jackstone Creek	7.24	M
P	NV04-LH-47-C	Little Humboldt River	53.52	M
P	NV04-NF-17-B	NF Humboldt River	84.67	M
P	NV06-SC-41-C	Steamboat Creek	5.41	M
P	NV06-SC-42-D	Steamboat Creek	13.71	M
P	NV06-SC-52-C	Galena Creek	3.63	M
P	NV06-SC-54-B	White's Creek	8.36	M
P	NV06-SC-56-B	Thomas Creek	9.00	M
P	NV06-TB-09	First Creek	1.80	M
P	NV06-TB-10	Second Creek	2.45	M
P	NV06-TB-11	Wood Creek	1.24	M
P	NV06-TB-13	EF Third Creek	6.57	M
P	NV06-TB-14	WF Incline Creek	3.11	M
P	NV06-TB-15	EF Incline Creek	4.66	M
P	NV06-TB-16	Incline Creek	4.50	M
P	NV08-CR-02	Bryant Creek	3.90	M
P	NV08-CR-17-A	Clear Creek	7.98	M
P	NV08-CR-18-B	Clear Creek	4.20	M
P	NV09-WR-18-A	Corey Creek	8.33	M
P	NV10-CEN-001-T03-	Willow Creek	10.47	M
P	NV10-CEN-001-T03-	Big Den Creek	7.00	M

P	NV10-CEN-001-T03-	Horse Creek	14.00	M
P	NV10-CEN-001-T04-	Cherry Creek	13.36	M
P	NV10-CEN-014-T03-	North Cottonwood Creek	10.17	M
P	NV13-CL-18-B	Sunnyside Creek	7.14	M
P	VN03-SNA-50-T01-0	Trout Creek Mainstem	5.73	M
Sum			456.63	Miles
Percent of Total			15.21%	

SUPPORT DESCRIPTION Not supporting

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
N	NV03-OW-34-C	Mill Creek	1.44	M
N	NV03-SR-02	Salmon Falls Creek	37.20	M
N	NV03-SR-03	Shoshone Creek	11.51	M
N	NV04-HR-55-B	Pine Creek	38.36	M
N	NV04-NF-16-A	NF Humboldt River	15.60	M
N	NV04-SF-19-B	SF Humboldt River	32.75	M
N	NV06-SC-45-B	Franktown Creek	9.07	M
N	NV08-CR-14-A	Daggett Creek	2.96	M
N	NV09-WR-05	Sweetwater Creek	8.07	M
N	NV09-WR-12	Desert Creek	23.39	M
N	NV13-CL-06	Las Vegas Wash	5.12	M
Sum			185.47	Miles
Percent of Total			6.18%	

SUPPORT DESCRIPTION Fully

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
F	BCL	Birch Creek	10.00	M
F	BD1	Beaver Creek	8.90	M
F	BICCU	Big Creek Upper	4.00	M
F	BIGCL	Big Creek Lower	5.80	M
F	CABINCK	Cabin Creek	4.50	M
F	CAMP	Camp Creek	14.00	M
F	CLEARC	Clear Creek	6.60	M
F	COLDC1	Cold Creek	5.00	M

F	Creek	Wisconsin	5.10	M
F	CS1	Crystal Springs	2.00	M
F	CW1	Cottonwood Creek	8.70	M
F	FALLS	Falls Canyon	4.00	M
F	HC	Huntington Creek	30.00	M
F	HC1	Horse Canyon	6.00	M
F	HCU	Hunter Creek Upper	7.60	M
F	JC	Jack Creek	5.50	M
F	K14	Mayhew Creek	3.00	M
F	KCL	Kingston Creek Lower	4.60	M
F	KCU	Kingston Creek Upper	4.60	M
F	LYEC	Lye Creek	4.00	M
F	MCL	Martin Creek	37.00	M
F	MV1	Meadow Valley Wash above	40.00	M
F	MV2	Meadow Valley Wash above	16.00	M
F	NT1	North Fork Twin River	7.00	M
F	NV02-BL-03-A	Negro Creek	25.99	M
F	NV02-BL-05-A	Mahogany Creek	10.83	M
F	NV02-BL-06-A	Leonard Creek	7.29	M
F	NV02-BL-07-A	Bilk Creek	19.88	M
F	NV02-BL-08-B	Bilk Creek	7.93	M
F	NV02-BL-10-A	Bottle Creek	7.84	M
F	NV02-BL-11-A	Quinn River	40.92	M
F	NV02-BL-12-B	Quinn River	1.39	M
F	NV02-BL-13-D	Quinn River	5.34	M
F	NV02-QUI-01-T03-0	Riser Creek	17.86	M
F	NV03-BR-17-B	76 Creek	11.12	M
F	NV03-JR-15-A	Bear Creek	4.16	M
F	NV03-OW-22-A	Deep Creek	16.75	M
F	NV03-OW-23-A	Penrod Creek	87.72	M
F	NV03-OW-24-A	Hendricks Creek	4.22	M
F	NV03-OW-26-A	Brown's Gulch	4.98	M
F	NV03-OW-28-A	Jack Creek	8.84	M
F	NV03-OW-29-B	Jack Creek	8.19	M
F	NV03-OW-33-A	Mill Creek	3.48	M

F	NV03-SR-01	Big Goose Creek	27.30	M
F	NV03-SR-06-A	Camp Creek	6.45	M
F	NV03-SR-07-B	Camp Creek	10.41	M
F	NV03-SR-08-A	Cottonwood Creek	8.35	M
F	NV03-SR-09-B	Cottonwood Creek	7.97	M
F	NV03-SR-10-A	Canyon Creek	8.20	M
F	NV03-SR-11-B	Canyon Creek	14.75	M
F	NV04-HR-12-A	Secret Creek	6.75	M
F	NV04-HR-13-B	Secret Creek	19.69	M
F	NV04-HR-15-B	Lamoille Creek	24.61	M
F	NV04-HR-25-A	Maggie Creek Tributaries	230.59	M
F	NV04-HR-26-B	Maggie Creek	28.07	M
F	NV04-HR-27-C	Maggie Creek	23.74	M
F	NV04-HR-28-A	Denay Creek	5.05	M
F	NV04-HR-30-B	Denay Creek	18.66	M
F	NV04-HR-32-A	Rock Creek	26.87	M
F	NV04-HR-34-A	Willow Creek	17.00	M
F	NV04-HR-53-A	Pole Creek	7.72	M
F	NV04-HR-54-A	Water Canyon Creek	5.07	M
F	NV04-HR-56-C	Pine Creek	15.92	M
F	NV04-HUM-01-T05-	Rock Creek	14.00	M
F	NV04-LH-45-A	NF Little Humboldt River	13.22	M
F	NV04-LH-46-B	NF Little Humboldt River	41.01	M
F	NV04-LH-48-A	South Fork Little Humboldt	26.03	M
F	NV04-LH-49-B	South Fork Little Humboldt	19.94	M
F	NV04-LH-50-A	Martin Creek	13.34	M
F	NV04-LH-51-B	Martin Creek	13.04	M
F	NV04-LH-52-A	Dutch John Creek	10.71	M
F	NV04-MR-11-A	Tabor Creek	12.14	M
F	NV04-RR-37-A	Reese Creek	17.02	M
F	NV04-RR-38-B	Reese River B	62.69	M
F	NV04-RR-39-C	Reese River C	104.40	M
F	NV04-RR-40-A	San Juan Creek	6.23	M
F	NV04-RR-41-A	Big Creek	4.50	M
F	NV04-RR-42-B	Big Creek	2.36	M

F	NV04-RR-43-A	Mill Creek	7.56	M
F	NV04-RR-44-A	Lewis Creek	3.96	M
F	NV04-SF-18-A	SF Humboldt River and	102.27	M
F	NV04-SF-20-A	Huntington Creek	14.16	M
F	NV04-SF-21-B	Huntington Creek	44.33	M
F	NV04-SF-22-A	Green Mountain Creek	5.72	M
F	NV04-SF-23-B	Green Mountain Creek	1.27	M
F	NV04-SF-24-A	Toyn Creek	6.24	M
F	NV06-SC-43-A	Franktown Creek	1.57	M
F	NV06-SC-46-A	Ophir Creek	5.57	M
F	NV06-SC-47-B	Ophir Creek	0.87	M
F	NV06-SC-50-A	Galena Creek	4.08	M
F	NV06-SC-51-B	Galena Creek	4.34	M
F	NV06-SC-53-A	White's Creek	8.83	M
F	NV06-SC-55-A	Thomas Creek	4.34	M
F	NV06-SC-59-A	Browns Creek	1.10	M
F	NV06-SC-60-B	Browns Creek	2.30	M
F	NV06-SC-61-A	Evans Creek	2.00	M
F	NV06-SC-62-B	Evans Creek	1.30	M
F	NV06-TB-12	Third Creek	0.31	M
F	NV06-TB-17	Mill Creek	1.86	M
F	NV06-TB-18	Tunnel Creek	1.86	M
F	NV06-TB-20	Marlette Creek	1.86	M
F	NV06-TB-21	Secret Harbor Creek	3.09	M
F	NV06-TB-22	North Canyon Creek	5.45	M
F	NV06-TB-23	Bliss Creek	1.44	M
F	NV06-TB-24	Slaughterhouse Canyon Creek	2.30	M
F	NV06-TB-26	Glenbrook Creek	3.83	M
F	NV06-TB-27	North Logon House Creek	3.00	M
F	NV06-TB-28	Logan House Creek	3.08	M
F	NV06-TB-29	Lincoln Creek	5.17	M
F	NV06-TB-30	Zephyr Creek	5.45	M
F	NV06-TB-31	McFaul Creek	4.00	M
F	NV06-TB-32	Burke Creek	6.23	M
F	NV06-TB-33	Edgewood Creek	5.37	M

F	NV06-TB-34	Eagle Rock Creek	1.74	M
F	NV06-TR-35	Gray Creek	7.31	M
F	NV06-TR-36	Bronco Creek	6.74	M
F	NV06-TR-37-A	Hunter Creek	1.33	M
F	NV06-TR-39-B	Hunter Creek	6.69	M
F	NV06-TR-57-D	Long Valley Creek	18.55	M
F	NV08-CR-15-A	Genoa Creek	2.29	M
F	NV08-CR-16-A	Sierra Canyon Creek	3.22	M
F	NV08-CR-19-A	Kings Canyon	3.32	M
F	NV08-CR-20-A	Ash Canyon	4.88	M
F	NV08-CR-21-C	V-Line Canal	10.05	M
F	NV08-CR-24-C	Diagonal Drain	22.57	M
F	NV09-WR-15-A	Cottonwood Creek	10.91	M
F	NV09-WR-16-A	Squaw Creek	2.98	M
F	NV09-WR-17-A	Rose Creek	4.82	M
F	NV09-WR-19-A	Rough Creek	1.27	M
F	NV09-WR-20-B	Rough Creek	12.12	M
F	NV09-WR-21-A	Bodie Creek	2.58	M
F	NV09-WR-22-B	Bodie Creek	7.53	M
F	NV10-CE-01	Chiatovich Creek	13.41	M
F	NV10-CE-02	Indian Creek	1.98	M
F	NV10-CE-03	Leidy Creek	1.45	M
F	NV10-CE-05-A	Star Creek	3.21	M
F	NV10-CE-07-A	Peavine Creek	21.44	M
F	NV10-CE-08-A	Jett Creek	11.12	M
F	NV10-CE-09-A	Twin River SF	8.29	M
F	NV10-CE-10-A	Twin River NF	8.15	M
F	NV10-CE-11-A	Kingston Creek	5.36	M
F	NV10-CE-13-B	Kingston Creek	9.17	M
F	NV10-CE-14-A	Birch Creek	8.57	M
F	NV10-CE-15-B	Birch Creek	1.68	M
F	NV10-CE-16-A	Skull Creek	8.67	M
F	NV10-CE-17-A	Steiner Creek	6.01	M
F	NV10-CE-18-A	Pine Creek	9.19	M
F	NV10-CE-19-A	Barley Creek	17.19	M

F	NV10-CE-20-A	Mosquito Creek	8.26	M
F	NV10-CE-21-A	Stoneberger Creek	10.81	M
F	NV10-CE-22-A	Roberts Creek	7.91	M
F	NV10-CE-23-B	Roberts Creek	15.66	M
F	NV10-CE-28-A	Pole Canyon Creek	5.26	M
F	NV10-CE-29-A	Goshute Creek	8.41	M
F	NV10-CE-30-C	Gleason Creek	7.62	M
F	NV10-CE-31-D	Gleason Creek	12.08	M
F	NV10-CE-32-D	Murry Creek	7.41	M
F	NV10-CE-34-A	North Creek	6.56	M
F	NV10-CE-35-A	East Creek	4.94	M
F	NV10-CE-36-A	Bird Creek	1.16	M
F	NV10-CE-37-A	Timber Creek	2.93	M
F	NV10-CE-38-A	Berry Creek	5.22	M
F	NV10-CE-39-A	Duck Creek	13.16	M
F	NV10-CE-40-A	Cleve Creek	7.82	M
F	NV10-CE-41-A	Cave Creek	4.54	M
F	NV10-CE-43-A	Pine Creek	1.33	M
F	NV10-CE-44-A	Ridge Creek	1.17	M
F	NV10-CE-45-A	Current Creek	11.50	M
F	NV10-CE-46-B	Current Creek	6.65	M
F	NV10-CEN-001-T01-	Coyote Creek	5.84	M
F	NV10-CEN-001-T02-	Union Creek	7.00	M
F	NV10-CEN-001-T04-	Edwards Creek	7.63	M
F	NV11-GS-01	Snake Creek	9.49	M
F	NV11-GS-02-C	Snake Creek	5.18	M
F	NV11-GS-03-A	Baker Creek	7.64	M
F	NV11-GS-04-A	Lehman Creek	6.75	M
F	NV11-GS-05-A	Silver Creek	11.09	M
F	NV11-GS-06-A	Hendrys Creek	8.64	M
F	NV13-CL-05	Las Vegas Wash	5.23	M
F	NV13-CL-10	Beaver Dam Wash	0.81	M
F	NV13-CL-13	Meadow Valley Wash	18.85	M
F	NV13-CL-15-A	White River	12.44	M
F	NV13-CL-16-B	White River	7.17	M

F	NV13-CL-26-B	Clover Creek	35.01	M
F	NV13-COL-01-T02-0	Forest Home Creek	10.00	M
F	OC1	Ophir Creek	6.60	M
F	PC1	Pine Creek	8.00	M
F	ROAD	Road Creek	4.50	M
F	SAMMYCK	Sammy Creek	1.50	M
F	SH1	Stonehouse Creek	4.00	M
F	SHU	Stonehouse Creek	4.00	M
F	SJC	San Juan Creek	5.50	M
F	ST1	South Fork Twin River at	7.00	M
F	SUNCK	Sun Creek	10.00	M
F	TABOR	Tabor Creek	32.00	M
F	WC1	Willow Creek	2.00	M
F	WCU	Washington Creek	6.00	M
F	WILLC	Willow Creek	6.00	M
Sum			2,360.60	Miles
Percent of Total			78.62%	
Grand Total			3,002.70	Miles

Total River Use

SUPPORT DESCRIPTION Partial

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
P	NV03-JR-12	EF Jarbidge River	18.60	M
P	NV03-JR-13	Jarbidge River	7.44	M
P	NV03-JR-14	Jarbidge River	8.98	M
P	NV03-OW-27	SF Owyhee River	75.00	M
P	NV04-HR-06	Humboldt River	44.42	M
P	NV04-HR-07-C	Humboldt River	13.22	M
P	NV04-MR-09-A	Mary's River	24.36	M
P	NV06-TR-02	Truckee River	15.70	M
P	NV06-TR-03	Truckee River	6.25	M
P	NV06-TR-06	Truckee River	11.22	M
P	NV06-TR-07	Truckee River	28.07	M
P	NV08-CR-11	Carson River	25.50	M
P	NV09-WR-04	West Walker River	25.69	M
Sum			304.45	Miles
Percent of Total			22.39%	

SUPPORT DESCRIPTION Not supporting

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
N	NV03-OW-18	Owyhee River	13.75	M
N	NV03-OW-19	Owyhee River	14.71	M
N	NV04-HR-03	Humboldt River	76.50	M
N	NV04-HR-04	Humboldt River	81.36	M
N	NV04-HR-05	Humboldt River	114.09	M
N	NV04-HR-08-D	Humboldt River	22.77	M
N	NV04-MR-10-B	Mary's River	53.20	M
N	NV06-TR-04	Truckee River	5.85	M
N	NV08-CR-04	EF Carson	10.48	M
N	NV08-CR-05	EF Carson	10.53	M
N	NV08-CR-06	EF Carson / WF Carson	27.71	M
N	NV08-CR-07	Carson River	5.88	M
N	NV08-CR-08	Carson River	6.34	M

N	NV08-CR-09	Carson River	7.82	M
N	NV08-CR-10	Carson River	16.82	M
N	NV08-CR-12	Carson River	29.17	M
N	NV09-WR-03	West Walker River	16.90	M
N	NV09-WR-07	East Walker River	58.45	M
N	NV09-WR-09	Walker River	41.15	M
N	NV13-CL-01	Colorado River	60.94	M
N	NV13-CL-02	Colorado River	31.27	M
N	NV13-CL-07	Virgin River	4.50	M
N	NV13-CL-09	Virgin River	25.75	M
N	NV13-CL-11	Muddy River	13.63	M
N	NV13-CL-12	Muddy River	25.07	M
Sum			774.64	Miles
Percent of Total			56.98%	

SUPPORT DESCRIPTION Fully

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
F	NV03-BR-16	Bruneau River	50.00	M
F	NV03-OW-20	Owyhee River	6.31	M
F	NV03-OW-21-A	Owyhee River above Wild Horse	12.33	M
F	NV04-HR-01	Humboldt River	66.12	M
F	NV04-HR-02	Humboldt River	64.39	M
F	NV06-TR-05	Truckee River	15.15	M
F	NV08-CR-13-C	Lower Carson River	40.46	M
F	NV09-WR-10	Walker River	25.68	M
Sum			280.44	Miles
Percent of Total			20.63%	
Grand Total			1,359.53	Miles

Total Reservoir Use

SUPPORT DESCRIPTION Partial

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
P	NV01-NW-05-B	Knott Creek Reservoir	89.00	A
P	NV02-QUI-R01-01	Bilk Creek Reservoir	38.00	A
P	NV03-OW-25-B	Wild Horse Reservoir	2,830.00	A
P	NV09-WAL-R01-01	Mason Valley Wildlife Area	1,300.00	A
P	NV10-CE-33-C	Comins Reservoir	136.00	A
Sum			4,393.00	Acres
Percent of Total			2.95%	

SUPPORT DESCRIPTION Not supporting

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
N	NV09-WR-02	Topaz Lake	987.54	A
N	NV13-CL-25-C	Echo Canyon Reservoir	58.00	A
N	NV4-SFR	South Fork Reservoir	1,650.00	A
Sum			2,695.54	Acres
Percent of Total			1.81%	

SUPPORT DESCRIPTION Fully

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
F	NV01-NW-01-A	Boulder Reservoir	6.00	A
F	NV01-NW-03-A	Catnip Reservoir	93.00	A
F	NV01-NW-04-B	Wall Canyon Reservoir	72.00	A
F	NV01-NW-06-B	Onion Valley Reservoir	79.00	A
F	NV02-BL-02-B	Squaw Creek Reservoir	46.00	A
F	NV02-BL-04-B	Summit Lake	560.00	A
F	NV03-OW-30-B	Bull Run Reservoir	105.00	A
F	NV03-OW-31-B	Wilson Reservoir	828.00	A
F	NV04-HR-29-A	Tonkin Reservoir	4.00	A
F	NV04-HR-31-C	J D Ponds	9.00	A

F	NV04-HR-35-B	Willow Creek Reservoir	576.00	A
F	NV04-HR-36-B	Iowa Canyon Reservoir	27.00	A
F	NV06-SC-44-B	Hobart Reservoir	15.00	A
F	NV06-TR-58-C	Tracy Pond	30.00	A
F	NV08-CR-22-C	Rattlesnake Reservoir (S-Line	500.00	A
F	NV08-CR-26-C	Harmon Reservoir	200.00	A
F	NV08-CR-28-D	Stillwater Point Reservoir	1,920.00	A
F	NV09-WR-14-C	Weber Reservoir	950.00	A
F	NV10-CE-04-C	Fish Lake	7.49	A
F	NV10-CE-12-B	Groves Lake	14.00	A
F	NV10-CE-24-B	Fish Springs Pond	4.00	A
F	NV10-CE-25-B	Illipah Reservoir	29.70	A
F	NV11-GS-07-B	Silver Creek Reservoir	5.00	A
F	NV13-CL-03	Colorado R (Lake Mead)	90,000.0	A
F	NV13-CL-04	Colorado R(Las Vegas Bay)	3,840.00	A
F	NV13-CL-14-C	Schroeder Reservoir	15.00	A
F	NV13-CL-17-B	Dacey Reservoir	215.00	A
F	NV13-CL-19-B	Adams McGill Reservoir	683.00	A
F	NV13-CL-20-B	Hay Meadow Reservoir	126.00	A
F	NV13-CL-22-C	Pahranagat Reservoir	370.00	A
F	NV13-CL-23-C	Bowman Reservoir	86.00	A
F	NV13-CL-24-B	Eagle Valley Reservoir	45.00	A
F	NV13-MOH	Lake Mohave	14,000.0	A
F	NV4-RPR	Rye Patch Reservoir	11,400.0	A
F	NV8-LAH	Lahontan Reservoir	14,800.0	A
Sum			141,660.19	Acres
Percent of Total			95.23%	
Grand Total			148,748.73	Acres

Total Lake Use

SUPPORT DESCRIPTION Not supporting

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
N	NV09-WR-11	Walker Lake	35,490.00	A
Sum			35,490.00	Acres
Percent of Total			18.97%	

SUPPORT DESCRIPTION Fully

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
F	NV01-NW-02-A	Blue Lakes	26.00	A
F	NV06-SC-40-C	Washoe Lakes	6,100.00	A
F	NV06-SC-48-A	Price Lake	4.00	A
F	NV06-SC-49-B	Davis Lake	3.00	A
F	NV06-TB-08	Lake Tahoe	36,812.00	A
F	NV06-TB-19	Marlette Lake	350.00	A
F	NV06-TB-25	Spooner Lake	69.00	A
F	NV06-TR-38-A	Hunter Lake	1.00	A
F	NV10-CE-27-A	Angel Lake	12.00	A
F	NV10-CE-42-B	Cave Lake	32.00	A
F	NV13-CL-21-C	Nesbitt Lake	202.00	A
F	NV6-PYR	Pyramid Lake	108,000.00	A
Sum			151,611.00	Acres
Percent of Total			81.03%	
Grand Total			187,101.00	Acres

Total Wetland Use

SUPPORT DESCRIPTION Not supporting

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
N	NV09-WR-13-C	Mason Valley Wildlife Area	13,000.0	A
Sum			13,000.00	Acres
Percent of Total			25.08%	

SUPPORT DESCRIPTION Fully

SUPPORT	WB ID	WATER BODY NAME	WB SIZE	UNIT
F	NV08-CR-23-C	Indian Lakes	3,500.00	A
F	NV08-CR-25-C	Carson Lake	2,000.00	A
F	NV08-CR-27-C	Stillwater Marsh	19,326.0	A
F	NV10-CE-26-B	Ruby Marsh	14,000.0	A
Sum			38,826.00	Acres
Percent of Total			74.92%	
Grand Total			51,826.00	Acres

Summary of National and State Causes Impairing Waters

Type of Waterbody: Stream

Cause/Stressor Category	Total Size (Miles)
Metals	258.84
Arsenic	19.12
Cadmium	127.90
Copper	258.84
Iron	1.44
Zinc	50.22
Boron	19.12
Unionized Ammonia	12.95
Nutrients	163.84
Nitrogen	5.12
Total Phosphates	158.72
pH	123.91
Organic enrichment/Low DO	231.74
Salinity/TDS/chlorides	19.94
Thermal modifications	88.52
Temperature	88.52
Suspended solids	55.27
Turbidity	146.47

Summary of National and State Causes that are not Impairing

Type of Waterbody: Stream

Cause/Stressor Category	Total Size (Miles)
Metals	44.66
Copper	35.59
Iron	9.07
Zinc	9.07
Nutrients	38.36
Total Phosphates	38.36
pH	16.42
Salinity/TDS/chlorides	38.36
Thermal modifications	16.42
Temperature	16.42
Turbidity	38.36

Summary of National and State Causes Impairing Waters

Type of Waterbody: River

Cause/Stressor Category	Total Size (Miles)
Metals	517.79
Mercury Advisory	71.49
Arsenic	47.84
Cadmium	55.36
Copper	440.78
Lead	7.44
Zinc	44.67
Boron	317.96
Unionized Ammonia	14.65
Nutrients	175.10
Nitrogen	15.89
Total Phosphates	163.71
pH	22.02
Organic enrichment/Low DO	221.28
Salinity/TDS/chlorides	13.22
Thermal modifications	419.55
Temperature	419.55
Suspended solids	81.80
Turbidity	411.76

Summary of National and State Causes that are not Impairing

Type of Waterbody: River

Cause/Stressor Category	Total Size (Miles)
Metals	24.36
Zinc	24.36
Nutrients	22.15
Nitrogen	8.40
Total Phosphates	13.75
Suspended solids	13.75
Turbidity	24.28

Summary of National and State Causes Impairing Waters

Type of Waterbody: Freshwater Reservoir

Cause/Stressor Category	Total Size (Acre)
Metals	6767.54
Arsenic	1300.00
Cadmium	2287.54
Copper	6767.54
Boron	1300.00
Nutrients	2830.00
Total Phosphates	2830.00
pH	6012.00
Organic enrichment/Low DO	3046.00
Salinity/TDS/chlorides	1358.00
Thermal modifications	5525.54
Temperature	5525.54
Suspended solids	3817.54

Summary of National and State Causes that are not Impairing

Type of Waterbody: Freshwater Reservoir

Cause/Stressor Category	Total Size (Acre)
Boron	11400.00

Summary of National and State Causes Impairing Waters

Type of Waterbody: Freshwater Lake

Cause/Stressor Category	Total Size (Acre)
Metals	35490.00
Arsenic	35490.00
Boron	35490.00
Nutrients	35490.00
Total Phosphates	35490.00

Summary of National and State Causes Impairing Waters

Type of Waterbody: Freshwater Wetlands

Cause/Stressor Category	Total Size (Acre)
Metals	13000.00
Arsenic	13000.00
Boron	13000.00
pH	13000.00
Salinity/TDS/chlorides	13000.00

Summary of National and State Causes that are not Impairing

Type of Waterbody: Freshwater Wetlands

Cause/Stressor Category	Total Size (Acre)
Organic enrichment/Low DO	13000.00
Thermal modifications	13000.00
Temperature	13000.00

Summary of National and State Sources Impairing Waters

Type of Waterbody: Stream

Source Category	Total Size (Miles)
Municipal Point Sources	5.12
Agriculture	48.71
Grazing related Sources	87.07
Range grazing - Riparian and/or Upland	48.71
Resource Extraction	1.44
Mine Tailings	1.44
Acid Mine Drainage	1.44
Natural Sources	524.80
Natural Geothermal	15.41
Source Unknown	22.32

Summary of National and State Sources that are not Impairing

Type of Waterbody: Stream

Source Category	Total Size (Miles)
Agriculture	38.36
Natural Sources	60.37

Summary of National and State Sources Impairing Waters

Type of Waterbody: River

Source Category	Total Size (Miles)
Agriculture	328.97
Grazing related Sources	238.39
Construction	32.11
Land Development	32.11
Urban Runoff/Storm Sewers	16.22
Historic Mill Tailings	71.49
Hydromodification	123.32
Upstream Impoundment	13.75
Flow Regulation/Modification	63.77
Contaminated Sediments	16.82
Natural Sources	813.77
Source Unknown	7.44
Sources outside State Jurisdiction or Borders	10.48

Summary of National and State Sources that are not Impairing

Type of Waterbody: River

Source Category	Total Size (Miles)
Municipal Point Sources	5.85
Minor Municipal Point Source	5.85
Urban Runoff/Storm Sewers	5.85
Natural Sources	111.32

Summary of National and State Sources Impairing Waters

Type of Waterbody: Freshwater Reservoir

Source Category	Total Size (Acre)
Natural Sources	4169.54

Summary of National and State Sources that are not Impairing

Type of Waterbody: Freshwater Reservoir

Source Category	Total Size (Acre)
Natural Sources	14230.00

Summary of National and State Sources Impairing Waters

Type of Waterbody: Freshwater Lake

Source Category	Total Size (Acre)
Hydromodification	35490.00
Flow Regulation/Modification	35490.00
Source Unknown	35490.00

Summary of National and State Sources Impairing Waters

Type of Waterbody: Freshwater Wetlands

Source Category	Total Size (Acre)
Source Unknown	13000.00

Trends in Public Reservoirs

Type of Lake: Freshwater Reservoir

	Number of Lakes	Acreage of Lakes
Improving	0	0.00
Stable	18	142316.54
Fluctuating	0	0.00
Degrading	0	0.00
Trend Unknown	21	2204.19
Total Assessed for	39	144520.73

Trends in Public Lakes

Type of Lake: Freshwater Lake

	Number of Lakes	Acreage of Lakes
Improving	1	108000.00
Stable	10	79093.00
Fluctuating	0	0.00
Degrading	0	0.00
Trend Unknown	3	8.00
Total Assessed for	14	187101.00

Trophic Status of Reservoirs

Type of Lake: Freshwater Reservoir

Trophic Status	Number of	Total Size (Acre)
Eutrophic	1	14800.00
Mesotrophic	15	23516.54
Oligotrophic	2	104000.00
Unknown	21	2204.19
Total Assessed for Trophic Status:	39	144520.73

Trophic Status of Lakes

Type of Lake: Freshwater Lake

Trophic Status	Number of	Total Size (Acre)
Eutrophic	2	143490.00
Mesotrophic	6	6765.00
Oligotrophic	3	36838.00
Unknown	3	8.00
Total Assessed for Trophic Status:	14	187101

Wetlands of Nevada

Nevada wetlands may be classified as Palustrine-Forested, Palustrine Scrub-shrub, Palustrine-Emergent and Lacustrine wetlands. Within these classifications, riparian wetlands are included in the Palustrine-Forested and Palustrine Scrub-shrub types. The riparian zones are characteristically flooded on a seasonal or intermittent basis. Riparian wetlands are estimated to cover less than 1% of the land in Nevada. There is no data which quantifies the historic amount of riparian wetlands in Nevada. By estimating the amount of stream in the State prior to perturbation and using the approximate width of riparian zones that presently occur along unaltered streams there may have been approximately 90,900 acres of riparian habitat. There is no information on the quality of the wetlands prior to perturbation.

The amount of meadow wetlands during historic times is harder to estimate since there has never been an attempt to survey either their condition or size. Historical acreage is estimated at 246,000 with present acreage statewide estimated at 136,650 with an estimated net loss of 109,350 acres.

Wetlands are defined as land that has a predominance of hydric soils that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances does support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

In Nevada, the U.S. Army Corp of Engineers (COE) and the U.S. Environmental Protection Agency (EPA) have primary responsibility for the Section 404 permit program. Under amendments contained in the Clean Water Act (CWA), EPA has authorized the State to oversee specific parts of the CWA in respect to Section 404. The State has assumed part of the responsibility to review and comment on proposed projects under the 401 Certification Program and has the right to deny a 404 permit or to require the COE to place special restriction into the 404 permit. The State follows the 404 and 401 guidelines as published in the Federal Register and other amended guideline documents that have been adopted by EPA.

Within the Nevada Department of Conservation and Natural Resources, there are two agencies which are primarily responsible for the protection of wetlands. The Division of Environmental Protection (DEP) and the Division of State Lands (DSL) have legislative authority for indirect wetlands protection within the State. DEP has primary responsibility for the advising as well as permitting of projects that could effect water quality, which includes wetlands in the State. NDEP does not have a formal wetlands protection program. However, Section 401 of the Clean Water Act is utilized as a wetlands protection tool. Application is made with NDEP for 401 certification of a 404 permit. A 404 permit is administered through the Corps of Engineers and is required for wetland dredge and fill activities. NDEP may grant or deny certification for a federally permitted activity that may result in a discharge to the waters of the state or adversely impact downstream water quality. If the applicant can demonstrate that the proposed project is neutral with respect to water quality or water quality improvements are expected, 401 certification is given.

If the project is expected to negatively impact water quality, NDEP will require conditions in the permit to offset project impacts. If during the COE review process, DEP advises COE that a project does not meet the State criteria for projects under Section 404 review, the COE is prohibited from permitting the project.

The Nevada Revised Statues 445.131 through 445.354 inclusive, gave the State Environmental Commission (SEC) the legislative powers to pass Nevada Administrative Codes (NAC) 445.117 through 445.234 inclusive for the regulation of water quality in the State. These regulations provide the protection mechanism to insure that the water quality of the waters of Nevada is protected.

The Division of State Lands (DSL) permits projects that affect State lands. In respect to wetlands, the DSL may permit a project if that project is either on State property or crosses a navigable body of water within the State. The DSL has been given legislative approval through Nevada Revised Statue Chapter 321 inclusive. Another Statue mandates DSL to protect one of the nations pristine lakes, Lake Tahoe. Nevada Revised Statue 445.080 prescribes the regulations governing pier construction, deposit of fill, dredging or alteration of the Lake Tahoe Shoreline.

The Department of Wildlife may require a "Habitat Proliferation Permit", if prior to any dredging in any river, stream or lake in this state the Department determines that the dredging operation will be deleterious to fish or aquatic life. This authority is covered in Nevada Revised Statue 503.425. The DOW may also use NRS 503.430 which makes the deposit of substances deleterious to fish a misdemeanor. NRS 503.587 gives the Wildlife Commission the authority to manage land to carry out a program for conserving, protecting, restoring and propagating selected species of native fish, wildlife and other vertebrates and their habitats which are threatened with extinction and destruction.

Public Health and Aquatic and Wildlife Concerns

In Nevada there is only one public health advisory in effect. The advisory is issued by the Nevada Department of Health, Division of Consumer Health in conjunction with the Department of Wildlife. The areas of concern include the Carson River from Dayton to the Lahontan Dam and all waters in the Lahontan Valley. This is a no-consumption advisory for high levels of mercury in the tissue of fish. In Carson Lake a consumption advisory exists for high mercury in tissue of migratory waterfowl, specifically the Shoveler. The advisories read as follows:

STATE OF NEVADA
DEPARTMENT OF HUMAN RESOURCES
HEALTH DIVISION

HEALTH ADVISORY

The State Health Division has determined from studies performed by the State Division of Environmental Protection and the State Division of Wildlife that a public health problem exists from eating fish from the Carson River from Dayton to the Lahontan Dam and all waters in the Lahontan Valley. Elevated levels of mercury have been identified in gamefish and carp from these waters.

THE NEVADA DIVISION OF HEALTH ADVISES:

- **No gamefish or carp should be consumed from these waters.**

The study of this problem is ongoing and as information changes, the Health Division will issue new statements.

This advisory does not preclude other recreational uses of these water such as swimming and boating.

Dated: November 1997

For Carson Lake an advisory was issued recommending that:
No one under age 15 and no woman who is pregnant, nursing or considering pregnancy, should consume Shovelers from the Carson Lake area. Waterfowl livers should not be consumed.
Others intending to consume these waterfowl should do so in small portions and then only infrequently.

Surface Water Assessment
Water Quality Monitoring Plan

Introduction
State Requirements:

The State must conduct a water quality monitoring program in order to evaluate the quality of the waters of the State. This evaluation is necessary in order to determine if the quality of the waters of the State are suitable for the beneficial uses associated with them. This monitoring strategy has been developed in order to describe the manner in which the State intends to comply with EPA's monitoring requirements.

Federal Requirements:

A monitoring program is needed so the EPA can assess the State's progress towards the goals of P.L. 92-500.

State Authority:

The State authority for conducting a monitoring program is contained in Nevada Revised Statute (NRS) 445.214 and 445.216.

Federal Authority:

In order for the State to receive a Federal Grant for a water pollution control program, it must operate an appropriate monitoring program on the quality of the navigable bodies of water in the State (PL 92-500; Section 106(e)).

Monitoring Program

The Nevada Division of Environmental Protection (NDEP) surface water monitoring network is described in Table 1 and Table 2. Table 1 lists the parameters analyzed in the monitoring program. The monitoring network started with the one contained in the State's plan of implementation which was adopted in 1967. Modifications were made and are continuing to be made to reflect review of the data base, recognize resource constraints and to coordinate and utilize other government agencies monitoring activities. The selection of the stations in the monitoring network are based on land use, water quality, hydro modifications and topography. The monitoring network is used to assess compliance with water quality standards, conduct trend analysis, validate water quality models and set total maximum daily loads (TMDL's). The data is also used to conduct nonpoint source assessments, compile the 303(d) List, 208 Plan Amendments, and compile the 305(b) report.

Table 2 lists the sampling sites, frequency and STORET number of the routine monitoring network.

Table 1

List of parameters analyzed in NDEP's routine monitoring network

Conventional Pollutants
Total Dissolved Solids
Total Suspended Solids
Electrical Conductivity
Turbidity
Color
pH - field
pH - lab
Temperature
Alkalinity ($CaCO_3$)
Bicarbonate ($CaCO_3$)
Bicarbonate ($CaCO_3$)
Carbonate (Co_3)
Carbonate ($CaCO_3$)
Kjeldahl-N

Metals
Cadmium*
Zinc*
Chromium*
Arsenic*
Copper*
Boron*
Iron*
Selenium
Mercury
Lead*

*Total Recoverable Metals

Conventional Pollutants
Nitrate-NO_3
Nitrate-N
Nitrite-N
Ammonia-N
Total Nitrogen
Ortho - Phosphorus-P
Total Phosphorus-P
Chloride
COD
BOD
Sulfate
Calcium
Magnesium
Sodium
Hardness ($CaCo_3$)*
Sodium Absorption Ratio

Bacteriology
Fecal Coliform
Fecal Streptococcus
E. Coliform

Table 2
List of Ndep s Routine Monitoring Network

RIVER SYSTEM	Frequency Time/Year Agency	NDEP Station Number	STORET Number
WALKER RIVER SYSTEM			
Walker River at Wabuska	6 NDEP	W4	310030
Walker River at Schurz Bridge	6 NDEP	WSB	310127
Walker River at Mason Gage	6 NDEP	W9	310117
E.Walker River at Nordyke Road	6 NDEP	W3	310029
W.Walker River at Nordyke Road	6 NDEP	W4	310026
E.Walker River at the Elbow	6 NDEP	EFE	310109
E.Walker River at Ivy Ranch	6 NDEP	EF5	310112
W.Walker River at Hudson Gage	6 NDEP	W7	310118
E.Walker River at Stateline	6 NDEP	EFS	310028
W.Walker River at Topaz Lane	6 NDEP	W5	310023
W.Walker at Wellington	6 NDEP	W10	310025
Topaz Lake	6 NDEP	TOP	310024
Desert Creek	6 NDEP	DC	310033
Sweetwater Creek	6 NDEP	SWC	310027
Walker Lake at Sportsmans Beach	6 NDEP	WL	310652
HUMBOLDT RIVER SYSTEM			
Mary s River	6 NDEP	HS1	310087
N.F. Humboldt River at I-80	6 NDEP	HS2B	310188
N.F. Humboldt River at N.F. Ranch	6 NDEP	HS15	310585
N.F. Humboldt River at Taco Tunnel	6 NDEP	HS16	310584
Humboldt River at Osino Cutoff	6 NDEP	HS4	310080
S.F. Humboldt River below Dixie Cr	6 NDEP	HS3A	310089
Humboldt River near Carlin Bridge	6 NDEP	HS5	310081
Humboldt River near Palisade	6 NDEP	HS6	310082
Humboldt River at Battle Mountain	6 NDEP	HS7	310083
Humboldt River at Comus	6 NDEP	HS8	310084
Humboldt River near Imlay	6 NDEP	HS9	310085
Toulon Drain	6 NDEP	HS10	310091
Humboldt River near Humboldt Sink	6 NDEP	HS12	310086
Pine Creek	6 NDEP	HS13	310582
Maggie Creek	6 NDEP	HS14	310583
South Fork Reservoir	6 NDEP	SFR	310587
Below Rye Patch Reservoir	6 NDEP	H6	310079

Table 2 (Continued)
List of Ndep s Routine Monitoring Network

RIVER SYSTEM	Frequency Time/Year Agency	NDEP Station Number	STORET Number
COLORADO RIVER SYSTEM			
Colorado River at Willow Beach	4 NDEP	CL2	310054
Colorado River at Laughlin	4 NDEP	CL1	310055
Las Vegas Wash above Lake Las Vegas	4 NDEP	CL3	310070
Virgin River at Riverside Bridge	4 NDEP	CL6A	310032
Virgin River at Mesquite	4 NDEP	CL6	310037
Muddy River at Glendale	4 NDEP	CL4	310071
Muddy River near Overton	4 NDEP	CL11	310095
Muddy River above Reid Gardner	4 NDEP	MARG	
LAKE TAHOE TRIBUTARIES			
First Creek at Dale & Knotty Pine	6 NDEP	1A	310056
First Creek at Lakeshore Drive	6 NDEP	1B	310057
Second Creek at Second Creek Dr.	6 NDEP	2A	310058
Second Creek at Lakeshore Drive	6 NDEP	2B	310059
Wood Creek at Lakeshore Drive	6 NDEP	WO	310061
E.F. Third Creek at Hwy 27	6 NDEP	EF3A	310063
Third Creek at Lakeshore Drive	6 NDEP	3B	310064
W.F. Incline Creek at Hwy 27	6 NDEP	WFINCA	310065
Incline Creek at Lakeshore Drive	6 NDEP	INCL	310067
Lake Tahoe at Sand Harbor	6 NDEP	SH	310128
E.F. Incline Creek below Diamond Peak	6 NDEP	EFINCA	310066
Lake Tahoe at Cave Rock	6 NDEP	CR	310588
SNAKE RIVER SYSTEM			
E.F. Owyhee River below Slaughterhouse Creek	4 NDEP	E16	
E.F. Owyhee River below Mill Creek	4 NDEP	E15	
Mill Creek near Patsville	4 NDEP	E14	310591
E.F. Owyhee River above Mill Creek	4 NDEP	E4	310047
W.F. Bruneau River at Mind Ranch	4 NDEP	E5	310046
W.F. Jarbidge River below Jarbidge	4 NDEP	E6	310045
W.F. Jarbidge River above Jarbidge	4 NDEP	E7	310044
E.F. Jarbidge River above Murphys	4 NDEP	E11	310043
Salmon Falls Creek at Hwy 93	4 NDEP	E8	310041
Shoshone Creek	4 NDEP	E9	310042
Wildhorse Reservoir at Pier	4 NDEP	E13	310589
Below Wildhorse Reservoir	4 NDEP	E12	310586

Table 2 (Continued)
List of Ndep s Routine Monitoring Network

RIVER SYSTEM	Frequency Time/Year Agency	NDEP Station Number	STORET Number
TRUCKEE RIVER SYSTEM			
Truckee River at Farad	12 DRI	T1	310000
Truckee River at Circle C Ranch	12 DRI	T7	310092
Truckee River at Idlewild	12 DRI	T2	310001
Truckee River at McCarran Bridge	12 DRI	T3	310002
Truckee River at Vista Gage	12 DRI	T4A	310006
Truckee River at Tracy	12 DRI	T5	310004
Truckee River at Wadsworth	12 DRI	T6	310005
Truckee River at Nixon	12 DRI	T10	310514
North Truckee Drain	12 DRI	T9	310513
Steamboat Creek above WWTP	12 DRI	T8	310502
CARSON RIVER SYSTEM			
W.F. Carson near Paynesville	6 NDEP	C8	310008
E.F. Carson at Riverview	6 NDEP	C9	310011
E.F. Carson at Hwy 88	6 NDEP	C16	310152
E.F. Carson at Muller	6 NDEP	C15	310093
Brockliss Slough at Muller Lane	6 NDEP	C5	310060
W.F. Carson at Muller Lane	6 NDEP	C14	310165
Carson at Genoa Lane	6 NDEP	C3	310013
Carson at Cradlebaugh Bridge	6 NDEP	C2	310014
Carson at Mexican Gage	6 NDEP	C13	310167
Carson at New Empire Bridge	6 NDEP	C1	310015
Carson at Dayton Bridge	6 NDEP	C11	310022
Carson at Weeks Bridge	6 NDEP	C10	310016
Truckee Canal at Hwy 50	6 NDEP	C22	310510
Carson below Lahontan Dam	6 NDEP	C18	310106
Bryant Creek at Doud Springs	6 NDEP	BCU	310592
Daggett Creek at Foothill Roak	6 NDEP	C23	310007

Table 2 (Continued)
List of Ndep s Routine Monitoring Network

RIVER SYSTEM	Frequency Time/Year Agency	NDEP Station Number	STORET Number
STEAMBOAT CREEK SYSTEM			
Little Washoe Outfall	6 NDEP-WCCP*	SB1	310200
Steamboat Creek at Pleasant Valley	6 NDEP-WCCP	SB3	310201
Galena Creek	6 NDEP-WCCP	SB4	310202
Steamboat Creek at Rhodes Road	6 NDEP-WCCP	SB5	310203
Steamboat Ditch	6 NDEP-WCCP	SB6	310204
Steamboat Creek at Geiger Grade	6 NDEP-WCCP	SB7	310205
Whites Creek	6 NDEP-WCCP	SB8	310206
Thomas Creek	6 NDEP-WCCP	SB10	310207
Steamboat Creek at Short Lane	6 NDEP-WCCP	SB11	310208
Alexander Ditch	6 NDEP-WCCP	SB12	310209
Rio Poco Drain	6 NDEP-WCCP	SB14	310210
Boynton Slough	6 NDEP-WCCP	SB16	310211
Steamboat Creek near Pembroke Lane	6 NDEP-WCCP	SB17	310212
Yori Drain	6 NDEP-WCCP	SB18	310213
Steamboat Creek at Clean Water Way	6 NDEP-WCCP	SB19	310214

*Washoe County Comprehensive Planning

Other Sources of Water Quality Data

U.S. Geological Survey (USGS):

Water Resources data collected by the USGS also serves as a source of water quality data. Surface water resources data collected for the 1994 water year comprise the following record (Clary, S. et al. 1995).

1)Water discharge for 187 gaging stations on streams, canals and drains

2)Discharge data for 160 peak-flow stations and miscellaneous sites, and 66 springs

3)Stage and contents for 22 lakes and reservoirs

4)Water quality data for 177 streams, canals and drain sites, and 154 wells

NAWQA Program:

In addition to routine monitoring, USGS is also conducting the National Water Quality Assessment Program (NAWQA). The program's intent is to describe the status and trends in water quality conditions for a large, diverse, and geographically distributed part of the Nation s ground and surface water resources. Also, the intent of the program is to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

The Nevada Basin and Range NAWQA program, which includes the Las Vegas Valley area and the Carson and Truckee River basins, began in 1991. Data on physical, chemical, and biological properties of surface and ground water resources in the program study unit will be combined with data from up to 59 other study units to represent water quality conditions in resources that provide more than 60 percent of the Nation s drinking water supplies (Clary, S. et al 1994).

NASQAN Program:

Water chemistry stations maintained by the USGS include the National Stream - Quality Accounting Network (NASQAN). NASQAN is a nationwide data-collection network designed by USGS to meet needs of government agencies and other groups involved in water quality planning and management (Clary, S. et al 1994). The following stations are part of the NASQAN network in Nevada:

USGS	Station Number
Colorado River	
Virgin River at Littlefield, AZ	09415000
Colorado River Below Hoover Dam, AZ-NV	09421500
Carson River	
Carson River near Fort Churchill	10312000
Humboldt River	
Humboldt River near Carlin	10321000
Truckee River	
Truckee River near Nixon	10351700

The NASQAN program sampling frequency is six times per year for the parameters listed in Table 3.

Table 3
List of parameters analyzed in the USGS NASQAN Monitoring Program
(Analyses reported as dissolved unless otherwise noted)

Conventional Pollutants **Conventional Pollutants**

Flow
Specific conductance
Field pH
Temperature
Turbidity (NTU)
Dissolved Oxygen
Hardness (as $CaCo_3$)
Calcium
Magnesium
Sodium
Potassium
Bicarbonate (as HCO_3)
Carbonate (as Co_3)
Total Alkalinity (as $CaCo_3$)
Sulfate
Chloride
Fluoride

Silica
Suspended Sediments
Total Dissolved Solids
Nitrite - Nitrogen (total)
Nitrite-N
Nitrate + Nitrite Nitrogen (total)-N
Nitrate + Nitrite-N
Ammonia Nitrogen (total)-N
Ammonia Nitrogen-N
Ammonia + Organic Nitrogen (total)-N
Phosphorus (total)-P
Phosphorus-P
Ortho Phosphorus (total)-P
Ortho Phosphorus-P

Metals

Aluminum
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Copper
Iron
Vanadium
Lead
Lithium
Manganese
Mercury
Molybdenum
Nickel
Selenium
Silver
Strontium

Bacteriology

Fecal Coliform
Fecal Streptococcus

The NAWQA program in Nevada consist of various projects. Some of these include:

Lake Tahoe Basin Study

The USGS has 33 surface water stations where streamflow and water quality data are routinely collected around Lake Tahoe. The surface-water data will be used to provide a long term data base of streamflow and of sediment and nutrient loadings from major tributaries to Lake Tahoe.

Walker Lake Basin Study

Located in west-central Nevada and eastern California, the study will assess and monitor the flow and chemistry of water in the Walker Lake hydrographic basin. Stream flow and water chemistry are measured at eight gaging stations on the Walker River and its tributaries. Walker Lake water levels and chemistry are also measured. The study will be used to determine long-term average annual water and salt inputs to Walker Lake.

Carlin Trend Network

Located in north-Central Nevada, the study consists of 7 stream gaging stations, 15 sites for miscellaneous streamflow measurements, 1 site for surface water quality, and 25 wells for water level measurements. These sites are used for monitoring regional hydrologic conditions in basins near large mines along the trend.

Stillwater Environmental Monitoring

This program is located in the Stillwater National Wildlife Refuge and Carson Lake. USGS is responsible for the hydrologic component of a biological focused data-collection program. Water quality and drainflow measurements are made routinely at nine principal agricultural drains that enter the two wetland areas. The program began 1994 and will provide a long-term database with which to gage environmental changes that may occur as a result of changes in management of irrigation water of the Newlands Irrigation Project. Collecting and reporting of biological data are the responsibility of U.S. Fish and Wildlife Service.

Other USGS Sampling

The USGS has a number of stations scattered around the State where discharge, chemistry and temperature are measured on a less frequent basis.

Hydrologic Bench-Mark Network

The USGS also maintains a monitoring network on small drainages whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected the activities of humans (Clary, S. et al 1994). The following three stations are part of Nevada's Bench-Mark Network

USGS	Station Number
Steptoe Creek near Ely	10244950
South Twin River near Round Mountain	10249300
Sagehen Creek near Truckee, CA	10343500

Permit Required Ambient Monitoring

Ambient off-site monitoring programs have been included as permit conditions on the Reno-Sparks Water Reclamation Facility (RSWRF) to monitor the Truckee River and Clark County Sanitation District and City of Las Vegas to monitor Lake Mead and Las Vegas Wash. These programs were developed to determine violations of water quality standards, maintain and validate water quality models, and to assess trends in water quality. These monitoring programs are described in Appendices A and B.

Desert Research Institute (DRI)

In addition to the monitoring requirement in the RSWRF permit, DRI maintains a State funded program on the Truckee River. The DRI program includes stations from above Farad at the California Stateline to Nixon, Nevada. The data is uploaded into STORET by NDEP several times per year and contains parameters similar to those listed in Table 1.

Biological Monitoring

NDEP has been developing a bioassessment program for the state. NDEP hopes to develop macroinvertebrate IBI for the Truckee and other major river system in the future. Approximately 200 bioassessment sites were monitored in the last two years but the results were not available for inclusion in this report.

NDEP has participated and will continue to participate with EPA in conducting intensive surveys, bioassessments and priority pollutant sampling.

Other Monitoring Programs

The sampling program to detect pesticides in ground water is a component of the Nevada State Ground Water Protection Pesticide Management Plan (SMP) developed by the Nevada Division of Agriculture. The goal of the sampling program is to evaluate potential and existing pesticide occurrences in ground and surface water. The sampling program is outlined in the SMP (currently in draft form). Due to limited resources dedicated to this project, the agricultural areas selected for sampling will rotate from year to year in a cyclic manner. Each area will be sampled twice during a growing season, once at the beginning and once toward the end of the irrigation period. Every effort will be made to sample the same locations during both phases of sampling. Approximately 25 samples each of surface and ground water will be taken during each phase of sampling. Sample locations most prone to pesticide contamination, based upon chemical usage and soil type will be targeted. This cooperative effort is the result of an MOU between the Division of Agriculture and the NDEP.

Other special monitoring programs are conducted under 319, 314, 205(j), and 604(b) grants. Details of these monitoring programs can be found in their respective workplans and quarterly reports.

Compliance Monitoring

Monitoring and Inspections

There are 11 NPDES dischargers in the State which are considered to be major and 72 minor NPDES discharges out of a total of 341 permitted discharges. At least once per year, an inspection will be made of each major discharger to determine compliance with permit conditions. The minor dischargers will be inspected once during the life of the permit. Sampling will be conducted on at least one third of the major dischargers each year. Operations and maintenance inspections will also be conducted concurrently on POTW's with zero and groundwater discharges (non NPDES).

A schedule for inspecting all major dischargers will be submitted to EPA annually. A list of inspections conducted during each quarter will be submitted to the Regional Administrator by July 15, October 15, January 15, and April 15, each year. Unless evidence of noncompliance is found, a maximum of one day will be spent at each facility.

Continuous compliance monitoring will be conducted by reviewing discharge monitoring reports, submittals in accordance with any implementation schedules, and spot checks of the facilities. Dischargers with incomplete or tardy reports will be notified.

A copy of the DMRs are submitted to the Regional Administrator. A copy of all inspection forms or reports along with any other pertinent testing will also be sent to the Regional Administrator. Separate files will be maintained for each discharge into which all data pertaining to the discharge will be filed.

Laboratory Support and Quality Assurance

The Nevada State Health Laboratory is the support laboratory for the water quality monitoring program. The laboratory is certified by EPA under the Safe Drinking Water Act, and meets the criteria established by the NDEP laboratory certification program. All data accepted by NDEP under Clean Water Act authority must be analyzed by a laboratory certified by NDEP's Certification Program.

All routine monitoring data collected by NDEP is uploaded into STORET, the EPA national data base. We are currently working with two major NPEDS dischargers who have ambient monitoring requirements to develop STORET capability. The Reno-Sparks Wastewater Treatment Facility currently provides chemical analysis data to NDEP for uploading into STORET.

Water Pollution Control Program
Point Source Control Program

The State of Nevada has been granted primacy to issue NPDES permits. In addition, point sources with discharges to the groundwater of the State are issued similar Nevada Groundwater Discharge permits. The application, issuance and compliance phases are similar for both types of permits.

The importance of these permits and compliance steps has resulted in a marked improvement of the surface water quality, even with increasing population demands on the limited water resources of the State.

The steps that the Division of Environmental Protection (DEP) follows to issue and then ensure compliance of the effluent limits on the permits, are listed below.

Permit Application Management

Anyone who discharges pollutants or proposes to discharge pollutants to the waters of the United States or waters of the State of Nevada must obtain a discharge permit except for those types of discharges that are defined under 40 CFR 122.3.

Direct dischargers in the State are permitted by DEP. These permits must be reapplied for renewal 180 days prior to the expiration of their current permit. For those that have not made application for a discharge permit or renewal of their existing permit, form letters are sent requesting that they file an application within 30 days. If there is no response to this request, the matter is referred for enforcement action. If an exemption is claimed, a site inspection will be conducted by the staff to determine the validity of the exemptions. All decisions may be appealed to the State Environmental Commission (SEC) within 20 days of this action. If an exemption is claimed or there is no response to a second request, an inspection of the site will be made by the staff. An inspection report will be completed, and depending upon the situation, appropriate action will be taken. If the discharger has simply refused to file, an application form will be given to him at the time of the field inspection. The discharger will be informed that the completed application must be received by staff within 15 days of the inspection. Should the discharger fail to submit the application, the Attorney General's office will be requested to take legal action.

When a permit application is received the application will be processed in accordance with the following procedures:

1. The application is reviewed to determine if it is accurate and complete. An application is deemed complete if sufficient information is supplied for the DEP to determine the quantity and quality of the effluent; the receiving water and point of discharge; that the discharge will not cause a violation of any water quality standard (WQS) or other regulations adopted by the SEC; and the discharge will be in compliance with the CWA and regulations and guidelines adopted thereunder.
2. Once the application is deemed complete, the applicable areawide water quality management plan (AWQMP) is reviewed to determine if the application for discharge is consistent with the plan and whether or not the AWQMP is current. Since WQS are reviewed once every three years, it is possible that an application for a permit may be received between WQS revisions and updates to the AWQMP necessitated by the WQS revisions.

The AWQMP evaluates the conditions necessary for achievement of the WQS for a given body of water. This evaluation determines if the Total Maximum Daily Loads (TMDL) are necessary to achieve the WQS; evaluates the total load, also called wasteload allocation (WLA), each point source can contribute, taking into account non-point source loading; recommends effluent limits (EL) for each point source given the expected flow for the 20 year planning period; and recommends methods of reducing non-point source loads to a given goal.

a. If the discharge is listed in a current AWQMP, EL are proposed in the draft permit consistent with and

at least as stringent as the recommended EL for the facility as contained in the AWQMP.

b. If the discharge is not listed in the current AWQMP, the AWQMP plan is not current or the application is for a flow volume greater than evaluated in the AWQMP, further evaluation is needed.

3. If the proposed discharge falls under 2b above, an evaluation must be made as to what EL are needed to meet the WQS of the receiving stream.

The WQS are set as one set of standards applicable to the entire body of water or as different sets of standards for different segments of a body of water. For stream segments, the applicable WQS is established by control points. The WQS delineated at a specified control point applies upstream to the next control point. For bodies of water, the boundaries of the set WQS applicable to it are established.

In order to apply this process, regulations have been adopted allowing a zone of mixing (NAC 445A.295-302). A zone of mixing allows the WQS not to be met in a specified area of the receiving water in order to allow the discharge to mix with the receiving water and meet the WQS at specified point(s) other than the point of discharge. A mixing zone is only allowed when the point source discharge has received the best degree of treatment or control practicable with current technology, it will not result in an esthetics problem within the zone of mixing, where acute toxicity values will not occur in the zone of mixing and for stream mixing zones, where a zone of passage (NAC 445A.299) will exist. In applying a zone of mixing some critical flow or volume is used to determine the expected "worst-case" dilution factor.

Therefore, for the case when further evaluation than that contained in the AWQMP is needed, EL are developed with the application of a zone of mixing.

EL developed in this manner are interim limits. If they are not consistent, they are modified to become consistent.

4. Once the EL are derived, they are incorporated into a draft permit. If the facility has the capability to meet the limits immediately, they become the limits proposed in the draft permit. If the facility cannot presently meet the limits, a compliance schedule must be proposed in the permit which allows the permittee a reasonable time to make whatever modification are necessary to enable the facility to meet the EL. During this time frame, interim limits must be met. The interim limits usually are proposed as the design parameters of the present plant.

After the draft permit has been prepared, it is routed through the Water Quality Section to insure compliance with the Basin plans and waste load allocations. The draft is also circulated in-house for other DEP sections comments and this also gives notice to these sections of any potential problems that may concern them. After all internal comments are received, the draft permit will be sent to the discharger and the EPA for comment unless the Regional Administrator waives his right to comment.

At the end of the 30 day review period, any changes the DEP feels are warranted, based on the applicant's and EPA's comments, are made and the proposed permit is public noticed (NAC 445.146) in a paper of local circulation and sent to interested persons on a mailing list. A period of not less than 30 days following the publication of the public notice is provided to receive comments on the proposed permit.

All comments and recommendations submitted by EPA must be addressed either by an appropriate version of the proposed permit or by a letter to EPA documenting why the modifications recommended by EPA were not incorporated.

If EPA objects to the proposed permit, it cannot be issued until all objections have been eliminated. Any objections submitted by EPA must specifically identify a lack of compliance with the CWA or regulations, policies or procedures adopted thereunder.

Should substantial changes be made to the draft permit due to comments received, the permit will be re-notified in

the manner stated above. Substantial changes in this instance means only those changes that tend to lessen the requirements of the permit. These would be such things as increases in effluent limits discharge or longer periods for compliance. If the permit conditions are relaxed due to comments or testimony received at a public hearing, the redrafted permit will be sent to the Regional Administrator for his concurrence.

The final permit is sent to the discharger, the Regional Administrator, and to those people or agencies on the mailing list to receive final permits. The issuance constitutes final agency action for the purpose of appeal under NRS 445.

Compliance Monitoring and Enforcement

At least once per year, an inspection is made of each major discharger to determine compliance with the permit conditions. The minor dischargers are inspected at least once during the life of the permit and possibly every two years. Sampling will be conducted on at least one-third of the major discharges (as defined by the EPA) each year. Operations and maintenance inspections are also conducted concurrently.

A schedule of inspections to be conducted during the year is submitted to the Regional Administrator with the workplan each year showing which dischargers will be sampled. Unless evidence of noncompliance is found, a maximum of one day is spent at each facility. In determining compliance, a checklist will be followed. Continuous compliance monitoring will be conducted in reviewing discharge monitoring reports, submittals in accordance with any implementation schedules and spot checks of the facilities.

DEP maintains and periodically reviews a tracking system to determine timely compliance by dischargers. The criteria reviewed are comprised of quarterly reporting dates, compliance schedule dates, and dates of expiration and reapplication, and other such dates as may be specified in the relevant permit.

All reports are reviewed for compliance with applicable permit requirements. In the case of non-compliance, appropriate enforcement is taken. The violation and enforcement action taken are logged on a master list.

In the event of non-compliance with either effluent limitations, implementations, or other permit conditions, contact will be made with the permittee by telephone to determine the cause of non-compliance which will then dictate the type of response from DEP. If the non-compliance is due to a single isolated effluent violation or lack of reporting progress, the permittee will be asked to correct the situation. Once a facility has been identified as having a history of permit violations, a review is conducted on the magnitude, frequency, and duration of the violations. If significant permit violations are identified, the Administrator will issue a Finding of Violation and Order. DEP's determination as to how to proceed in any legal enforcement action will be made pursuant to evaluation of the facts by DEP personnel. There is a Deputy Attorney General assigned to DEP specifically to handle environmental pollution matters. This deputy is physically located in the office of DEP. There is no necessity for any agreement with the office of the Attorney General because he is required by statute to assist in the enforcement of the Water Pollution Control Law at the request of the Director. NRS 445.354 states:

> "The Attorney General shall serve as legal counsel for the commission and the department and shall, at the request of the director, assist in the enforcement of the provision of NRS 445.131 to 445.354, inclusive."

Pursuant to Section 445.317 of the Law, whenever the Director finds that any person is engaged in or about to engage in any act or practice which violates any provisions of the Law or of any rule or regulation promulgated thereunder, the Director may refer the case to the Attorney General's office along with recommendations for such legal action as is deemed appropriate.

Wellhead Protection

As mandated by the 1986 amendments to the Safe Drinking Water Act (SDWA), all states are required to develop a State Wellhead Protection Program to guide local governments, communities and utility companies in the preparation of local Wellhead Protection Programs. Nevada's guidance document titled "The Nevada Wellhead Protection Program" was approved by U.S.EPA in February 1994. Wellhead protection is a voluntary program to empower local communities to develop local wellhead protection programs to protect their underground drinking water resources. The U.S. EPA provides funding and technical assistance to the states, who in turn, provide technical assistance, financial assistance when possible, and program guidance to local communities and public water system purveyors.

There are seven elements, or components, to the development of a comprehensive Wellhead Protection Program (WHPP). Inclusion of all of the components to an appropriate degree would make a local WHPP eligible for state endorsement:

- identify roles & responsibilities of all affected entities and form a WHPP team;
- delineate Wellhead Protection Areas (WHPAs);
- identify existing and potential contaminant sources;
- implement WHPA management strategies;
- make contingency plans;
- plan for the siting of new wells; and
- encourage public participation.

The basic concept of wellhead protection is to determine the land surface area, called the wellhead protection area, that should be managed in order to protect the ground water being pumped from a well. Then, all existing and potential contaminant sources within the wellhead protection area are located, inventoried and mapped within the wellhead protection area. Examples of potential contaminant sources include underground storage tanks, improperly abandoned wells, landfills, and septic systems. Using this information, various management options are considered, and appropriate types of management are enacted. Wellhead protection programs also include plans for dealing with emergencies or accidental contaminant exposure, while ensuring that the ground water is not affected. Public participation and education should be incorporated into all elements of a wellhead protection program. Wellhead protection is managed by NDEP, Bureau of Water Quality Planning.

The 1986 amendments to the Federal Safe Drinking Water Act mandated that each state develop a wellhead protection program for the purpose of protecting ground water which serves as a source for public drinking water supplies. NDEP has received approval from EPA for its wellhead protection program. Nevada's primary goal in wellhead protection is the protection of public drinking water supplies by the implementation of contaminant source control at the community level.

The Nevada Wellhead Protection Program involves a multifaceted, voluntary program at both the state and local level. The following primary objectives have been designed by the state to motivate and empower communities for their participation in wellhead protection activities.

* generate interest and participation in wellhead protection activities through public outreach and education;

* place responsibility for wellhead protection at the local level;

* develop program guidelines which will facilitate community involvement in all aspects of wellhead protection; and,

* provide technical assistance as requested.

A copy of the State of Nevada's Wellhead Protection Program may be obtained by writing to: Nevada Division of Environmental Protection, Bureau of Water Pollution Control, 333 West Nye Lane, Suite 138, Carson City, Nevada 89706-0851.

Ground Water Protection in Nevada

Legislation (and pursuant regulations) in Nevada that protects ground water reflects Nevada's overall approach to the protection of ground water. Nevada's approach, in general terms, is to focus on controlling specific sources of contamination and providing technical and financial support to communities wishing to develop local Wellhead Protection Plans (WHPPs). While there is no comprehensive ground water quality protection legislation in the state, Nevada has statutes that provide for source-specific controls and land use statutes that enable local authorities to implement Wellhead Protection Programs.

Source control statutes address mining, underground storage tanks, septic systems, hazardous waste and materials, solid waste, underground injection wells, agricultural practices, wastewater, and Resource Conservation and Recovery Act (RCRA) facilities. Additional statutory mandates empower municipalities to engage in wellhead protection activities by: enabling them to adopt zoning ordinances, subdivision regulations, and site plan review procedures; allowing them to participate in site plan review processes as part of state permitting procedures; and enabling them to implement certain source control programs at the local level.

CSGWPP Endorsement

Nevada has developed a Comprehensive State Ground Water Protection Program (CSGWPP) as recommended by U.S.EPA. Nevada s Core CSGWPP is described in the CSGWPP Profile, which describes Nevada s ground water protection efforts, and the CSGWPP Self-Assessment, which compares Nevada s efforts to U.S.EPA s criteria. The U.S. EPA endorsed Nevada s Core CSGWPP in November 1997.

Ground Water Protection Goal

Nevada's ground water protection goal is stated in water quality legislation. The Nevada Revised Statutes (NRS) include several bodies of law with direct applicability to the protection of ground water quality. The primary statute is the Nevada Water Pollution Control Law (NRS 445A, Sections 300 to 730). The goal of the Nevada Water Pollution Control Law, which provides authority for many source control programs, is as follows (NRS 445A.305(2)):

(a) To maintain the quality of the waters of the state consistent with the public health and enjoyment, the propagation and protection of terrestrial and aquatic life, the operation of existing industries, the pursuit of agriculture, and the economic development of the state; and

(b) To encourage and promote the use of methods of waste collection and pollution control for all significant sources of water pollution (including point and diffuse sources).

Ground water is included in this goal because NRS 445A.415 defines waters of the state as:
...all waters situated wholly or partly within or bordering upon this state, including but not limited to:

1. All streams, lakes, ponds, impounding reservoirs, marshes, water courses, waterways, wells, springs, irrigation systems and drainage systems; and
2. All bodies or accumulations of water, surface and underground, natural or artificial.

Goals for ground water protection programs such as Hazardous Waste Disposal, Solid Waste, and Chemical Accident Prevention are also contained in legislation (Nevada CSGWPP Profile, 1998). Upon comparison, the goals of these statutes are consistent with those of the Water Pollution Control Law.

In addition to statutes relating directly to water quality, Nevada's statutes regarding water quantity issues also include goals that address ground water quality issues. Title 48 of the Nevada Revised Statutes is comprised of 13 Chapters governing the use of waters in Nevada. Chapter 534 specifies that, like surface waters, ground water in Nevada is subject to appropriation for beneficial use. Legislative intent, as documented in NRS Chapter 534.020(2), of these particular statutes is: "...to prevent the waste of underground waters and pollution and contamination thereof...". The Nevada Division of Water Resources is responsible for enforcing these statutes and the regulations promulgated under their authority.

Nevada Continuing Planning Process

Nevada's Water Pollution Control Law mandates a Continuing Planning Process (CPP) to be carried out by the Department of Conservation and Natural Resources. Although the CPP was developed primarily for use in surface water planning and management, it has also been chosen as a tool for ground water protection planning. The Protection Plan identifies eight activities undertaken by the NDEP as part of the Continuing Planning Process, three of which address evaluating the state's progress in achieving its ground water protection goals:

* NDEP prepares and implements water quality management plans that include specific programs, priorities, and targets for preventing and controlling water pollution.

* NDEP develops the state strategy for major objectives, approaches and priorities over a five-year period.

* NDEP develops annual state program plans, based on the state strategy, which include a mechanism for reporting progress toward achieving program objectives.

The State of Nevada adopted a CPP in March 1973, and revised it in May 1976, July 1977, July 1984, and November 1985. As specified in the 106 Workplan, this document has been revised and expanded in 1993. The 1993 CPP went out for public comment in December of 2001 and the public comment period has since closed. Comments received are being reviewed and responded to, after which the CPP document will be submitted to EPA.

Ground water and wellhead protection has been identified as key concerns statewide. Efforts were coordinated with Region IX, EPA, and Fernley in support of a WHP project supported by EPA Special WHP Demonstration Project Funds. This funding was awarded to Fernley as Nevada's first WHP demonstration project.

Continuing NPS program activities include 319(h) grant funded projects in support of pollution prevention by educational outreach opportunities addressing ground water protection programs and WHP activities.

Nevada has also formed a Ground Water Protection Task Force which involves a cross section of different agencies which deal with groundwater and wellhead protection issues. This group will be instrumental in the revision of the state plan.

A copy of the State of Nevada's Comprehensive State Ground Water Protection Program Profile may be obtained by writing to: Nevada Division of Environmental Protection, Bureau of Water Pollution Control, 333 West Nye Lane, Suite 138, Carson City, Nevada 89706-0851.

Nonpoint Source Program

The primary goal of the State's Nonpoint Source (NPS) Management Program is to identify, control and abate the impacts of NPS pollution on the quality of the State's surface and ground water.

In 1987, the federal Clean Water Act (CWA) was amended to address diffuse or "nonpoint" sources of water pollution. Section 319 of the CWA required two major reports to be completed by the State: a State Assessment Report (SAR) which describes the nature, extent, effect and cause of NPS pollution; and a State Management Plan (SMP) which provides an overview of the State's NPS programs.

Except for the Colorado River, assessments for all major river basins have been completed. Updates to the SAR are made as additional work is completed. The State Management Plan was completed in 1989 and approved by US EPA Region 9 in January, 1990. The SMP is effectively updated with each yearly NPS workplan, however more comprehensive revisions will be initiated in 1996.

The SMP was also required to outline annual milestones for program implementation, sources of funding for supporting program implementation, and a methodology to review Federally funded programs and development projects to insure consistency with the State's Nonpoint Source Program.

Two important components the SMP addresses are: best management practices including measures to reduce pollutant loadings; and NPS programs (including as appropriate, nonregulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects) to achieve implementation of the best management practices.

Best Management Practices (BMPs) are those methods, measures, or practices designed to prevent or reduce water pollution, including, but not limited to structural and nonstructural controls, and including both operation and maintenance procedures. BMPs can be effective when applied both before, during or after pollution producing activities to eliminate or reduce the introduction of pollutants into receiving waters.

The State Conservation Commission prepared a handbook of BMPs which received considerable input from interest groups, localities, NDEP and Conservation Districts. NDEP is responsible to review the handbook every two years and revise as necessary. The last review and update was completed in 1994. NDEP consults with the State Conservation Commission regarding each review and revision.

The State's current approach to controlling nonpoint sources of water pollution is to seek voluntary compliance through non-regulatory programs of technical and financial assistance, training, technology transfer, demonstration projects and education. This approach includes coordination of land and water resource management agencies and public outreach. In addition to the various fact sheets, newsletters and displays developed by the NPS Program for outreach and training, each year several education and/or demonstration projects are funded with Section 319(h) grants awarded to local entities. The NPS State program has also entered into Memoranda of Understanding (MOUs) with various federal and state agencies to develop appropriate working procedures related to water quality protection and NPS pollution prevention and control activities in the State.

Nevada's 2002 303(d) Impaired Waters List

Introduction

Section 303(d) of the Clean Water Act requires that States develop a list of waterbodies needing additional work beyond existing controls to achieve or maintain water quality standards. This list, referred to as the Section 303(d) List, provides a comprehensive inventory of water bodies impaired by all sources, including point sources, nonpoint sources, or a combination of both. The 303(d) List is the basis for targeting water bodies for watershed-based solutions, and the Total Maximum Daily Load (TMDL) process provides an organized framework to develop these solutions.

Subpart C of 40 CFR (Code of Federal Regulations) Part 130 requires that states develop descriptions of the criteria and process used in generating their 303(d) lists. Following is a summary of the methodology utilized by the Nevada Division of Environmental Protection (NDEP) in developing the 2002 303(d) List and the listed waterbodies.

On July 11, 2000, past EPA Administrator Carol Browner signed new TMDL rules which represent significant changes to the current regulations and to content and format requirements of the 303(d) List. However at this time, the new TMDL regulations are not in effect and the exact future of these regulations is unknown. Because of the controversy, Congress prevented the implementation of the rule through passage of an appropriations bill which prohibits the obligation or expenditure of Fiscal Years 2000 and 2001 funds for the new TMDL rules or for any related technical assistance or guidance. This action moved the effective date of the rules to October 1, 2001. On July 16, 2001, EPA announced its plan to propose an 18-month extension of the effective date of the rule to provide time to review and possibly revise the rule. On October 18, 2001, the TMDL rule delay was made official. As a result of this action by EPA, the 2002 303(d) List is due to EPA on October 1, 2002 and the new TMDL rules have been delayed until April 30, 2003. Therefore, the 2002 303(d) List was developed in accordance with the current regulations.

Background on Water Quality Standards

Nevada's water quality standards, contained in the Nevada Administrative Code (NAC) 445A.119 – 445A.225, define the water quality goals for a waterbody, or a portion of a waterbody, by: 1) designating beneficial uses of the water; and 2) setting criteria necessary to protect the beneficial uses. Beneficial uses include, but are not limited to, irrigation, recreation, aquatic life, fisheries, and drinking water. In many instances, NAC defines two or more reaches for a river system, with each reach possibly having different beneficial uses and water quality standards.

Both narrative and numeric criteria are included in Nevada's water quality standards. The narrative standards are applicable to all surface waters of the state and consist mostly of statements requiring waters to be "free from" various pollutants including those that are toxic. The numeric standards for

conventional pollutants are broken down into two types: class and waterbody specific. For the class waters, criteria for various pollutants are designed to protect the beneficial uses of classes of water, from A to D; with class A being the highest quality. The waterbodies belonging to these classes are named in the regulations.

For major waterbodies in Nevada, site-specific numeric standards have been developed. These waterbodies are often referred to as "designated" waters. The standards for designated waters include both criteria designed to protect the beneficial uses and antidegradation requirements. The antidegradation is addressed through the establishment of "requirements to maintain existing higher quality" or RMHQs. RMHQs are set when existing water quality (as evidenced by the monitoring data) for individual parameters is higher than the criteria necessary to protect the beneficial uses. This system of directly linking antidegradation to water quality standards provides a manageable means for implementing antidegradation through permits and other programs.

General Listing Criteria

The criteria for listing were developed to identify only those waterbody segments for which there is adequate documentation that beneficial uses are not being supported and water quality standards are not being met. In evaluating a given waterbody, NDEP considered "all existing and readily available water quality related data and information" such as chemical/physical properties of water column, sediment and fish tissue; biological information; toxicity testing results; narrative and qualitative information.

In general, a waterbody was included on the 2002 303(d) List when there is adequate documentation that beneficial uses were not being supported and/or beneficial use standards (NAC 445A.119 through 445A.225, including narrative and numeric standards) were not being met during the five-year period 1997 through 2001. Also, a waterbody was included on the 303(d) List if:

- A fishing, drinking, or swimming advisory had been in effect for the waterbody during the listing period.
- The waterbody was listed on a prior 303(d) List and insufficient information exists to delist the waterbody.

In developing the List, NDEP considered both beneficial use standards (BUs) and RMHQs. However, separate lists were developed for waterbodies exceeding BUs versus RMHQs. BUs were evaluated in developing the 2002 303(d) List. Waterbodies not meeting RMHQs are identified in a separate table for which TMDLs are not required.

Evaluating Numeric Standards and Data

For most waterbodies, the most comprehensive readily available water quality related data/information were physical and chemical water column monitoring data, and widely distributed scientifically defensible special studies (including chemical and biological information). Other types of data (sediment, fish tissue, narrative information, etc.) are generally not as common for Nevada waterbodies. While NDEP examined all types of readily available data, a majority of the listing decisions were based upon numeric data primarily because these types of data are most common.

In general, a waterbody was included on the 2002 303(d) List if any of its numeric beneficial use standards were exceeded more than 10 percent[1] of the time during the five-year listing period (January 1, 1997 to December 2001). There are some exceptions to this general rule as discussed in subsequent sections of this report.

Data Sources and Requirements

Data and Information Sources

As required by Section 303(d) of the Clean Water Act and Section 130.7(B)(5) of CFR, NDEP will compile and consider "all existing and readily available water quality related data and information" in identifying listed waters. Existing and readily available data and information includes, but is not limited to, the following:

- Most recent 303(d) List;
- Most recent 305(b) Report;
- Clean Water Act 319 nonpoint source assessments;
- Drinking water source water assessment under Section 1453 of the Safe Drinking Water Act;
- Dilution calculations, trend analyses, or predictive models for determining the physical, chemical or biological integrity of streams, rivers, lakes and estuaries; and
- Data, information, and water quality problems reported from local, State, Territorial, or Federal agencies (especially the USGS National Water Quality Assessment (NAWQA) and National Stream Quality Accounting Network (NASQAN)), Tribal governments, the public, and academic institutions.

All waters listed on the 1998 303(d) List were also included on the 2002 303(d) List, unless delisting was justified if available data indicates no impairment. Refer to the "Delisting" section for more information.

While NDEP is required to ***consider*** waterbodies identified in the 305(b) as "not fully supporting", NDEP is not required to include all such waterbodies in the 303(d) List. In fact, the two reports are developed using data for different time periods and using different methodologies. As a result, waterbodies identified as impaired on the 305(b) lists may not meet the 303(d) listing criteria. It must be noted that the 303(d) List and the 305(b) Report are setforth in the Clean Water Act to meet different needs. While the 303(d) List identifies waterbodies in need of additional actions, the

[1] It must be noted that previous 303(d) lists used an exceedance threshold of 25 percent since NDEP did not have the resources needed to develop TMDLs associated with a list developed using the 10 percent threshold. Also, past lists only used two years worth of data resulting in a majority of the datasets consisting of less than 10 samples. It was felt that it would not be statistically appropriate to apply a 10 percent threshold to such small sample sizes.

While NDEP's resources have not increased significantly, it was felt important to provide a more comprehensive 303(d) List. The 10% threshold was chosen so as to be consistent with Nevada's 305(b) Report to Congress on our water quality with uses the 10% threshold. The existence of both the 303(d) and the 305(b) has led to a lot of confusion throughout the country and efforts are underway to integrate these lists. Therefore, it was important to use similar methodologies.

305(b) Report has been intended to serve as a summary report to Congress on states water quality conditions. States and EPA are recognizing the confusion these two reports create for the public and the agencies. Nevada and other states are moving toward an integrated 303(d)/305(b) report in the future. Because of the significant differences in the the 303(d) and the 305(b) methodologies, the most recent 305(b) Report was used as a guide in identifying gaps in the 303(d) analysis.

The State of Nevada operates a monitoring program which encompasses the States 110,000 square miles, regularly monitoring over 100 sampling points in the 14 hydrographic regions found in the state (Appendix E). In addition to these fixed monitoring stations, several water quality intensive field studies are conducted on the major water systems of Nevada. These studies included Truckee River, Carson River, Walker River and the Humboldt River. In addition a number of lakes and reservoirs have been added to the monitoring program. As part of the monitoring, samples are collected from each major river basin in the state, and then analyzed for physical and chemical quality. In addition to this numeric information, NDEP also collects information pertinent to Nevada's narrative water quality standards.

Additional data was solicited from other entities prior to the completion of the 2002 303(d) List. Also, the public notice and comment period provided the opportunity for additional individuals and groups to present additional monitoring data, ongoing research or other publications for consideration. However, it is important that the decision to list a water body be based upon credible evidence.

It is relatively straightforward to define methods for evaluating numeric data for numeric standard compliance. However, it is much more challenging to define how other types of data and information will be used in the listing process. Other types of data and information that are available include:

- Fish tissue data
- Contaminated sediment data
- Toxicity testing data
- Bioassessment data and information
- Qualitative information or other studies

In general, NDEP examined these types of available information in order to identify evidence that any of the beneficial uses were impaired during the period 1997-2001. The data sources and decisions supporting each listing decision are documented in the appendices. Appendix F provides a summary of the major data compiled by NDEP and submitted to NDEP for possible use in the listing analyses.

Minimum Data Requirements and Listing

With a few exceptions, most of the listings in the 2002 303(d) Impaired Waters List were based upon data meeting the following minimum requirements:

- For the waterbodies in question, at least 10 water quality sample analyses were available for the five-year period January 1, 1997 and December 31, 2001.
- There were a sufficient number of samples to represent conditions in the waterbody reach during the five-year period. Best professional judgment was utilized to make this determination. Basically, the available samples were considered representative if collected during a variety of flow regimes and seasons throughout the five-year listing period and not biased toward extreme or unusual conditions. As discussed in the "Accounting for Extreme Events" section, data associated with samples collected during extreme high or low flows were not considered in the listing analysis.
- There was adequate documentation on data development and sampling location.

Waterbodies were included on the 303(d) List if any of its numeric beneficial use standards were exceeded more than 10 percent of the time during the five-year listing period (January 1, 1997 to December 2001). The decision to set a minimum number of samples for consideration was driven by our need to provide a clear definition of the criteria with results that are reproducible by others to the extent possible, and to provide a level of statistical reliability to our decisions.

In general, the goal for the 303(d) List was to identify those waters that are exceeding water quality standards over 10% of the time. However, the true exceedance percentage for most waterbodies and water quality criteria is unknown due to the limited data resulting from monthly or less frequent sampling. The State of Florida[2] has investigated the issue of minimum sample size for listing decisions from a statistical perspective. One basic conclusion was that greater sample sizes result in more reliable estimates of the true standards exceedances in a waterbody. The investigators recommended that a minimum of 10 samples be required for assessing impairment. NDEP deemed this to be an appropriate minimum threshold for data used in the listing decisions.

It must be noted that a few waterbodies were listed with sample sizes less than 10. For those waterbodies, other information such as severity and frequency of the exceedances warranted listing. A number of waterbodies had 8 to 9 samples but had numerous exceedances (4 or more). This was deemed to be a good indication that the water quality standards were consistently exceeded and these waterbodies were listed. The data sources and decisions supporting each listing decision are documented in the appendices.

NDEP thought it important to identify those waterbodies with minimal water samples but had the potential for water quality problems. With this in mind, a "List of Waterbodies Warranting Further Investigation" was included. In general, a waterbody were included on this list if there was not sufficient evidence to place the waterbody on the 303(d) List, but there was evidence from available data and information that a problem may exist. This list is intended to serve as a planning tool for future NDEP assessment activities. TMDLs are NOT required for these waterbodies

[2] "A Nonparametric Procedure for Listing and Delisting Impaired Waters Based on Criterion Exceedances", Pi-Erh Lin, Duane Meeter, Xu-Feng Niu, Department of Statistics, Florida State University, Technical Report Submitted to the Florida Department of Environmental Protection, October 2000.

As stated earlier, there were a few exceptions to the above 303(d) listing criteria. A few waterbodies, which did not meet the above listing criteria, were placed on the 2002 303(d) List because:

- A fishing, drinking, or swimming advisory had been in effect for the waterbody during the listing period indicating an impairment of a beneficial use for over 10% of the 5-year listing period.
- The waterbody was listed on a prior 303(d) List and insufficient information exists to delist the waterbody.
- Other information existed indicating impairment of beneficial use(s).

The data and information used in placing a waterbody on the List are documented in the appendices.

Detection Limits

Frequently, toxics concentrations in Nevada rivers are less than the detection limit[3] of the applicable laboratory procedure. According to Footnote (3) in NAC 445A.144, if the water quality standard:

> "...is less than the detection limit of a method that is acceptable to the division, laboratory results which show that the substance was not detected [below detection limit] will be deemed to show compliance with the standard unless other information indicates that the substance may be present."

Therefore for purposes of developing the 303(d) List, samples with toxic concentrations reported "as less than the detection limit" were assumed to comply with the water quality standards, but only if:

- the certified laboratory method is acceptable to NDEP; and
- no other information indicates that the substance in question exists in levels detrimental to the beneficial uses.

Toxics

NAC 445A.144 defines water quality standards for various toxic materials that are applicable to the water specified in NAC 445A.119 through 445A.225. For some of these constituents, the standards set 1-hour average (acute) and 96-hour average (chronic) maximum acceptable concentrations, with the 96-hour criteria being the most restrictive. Based upon EPA criteria recommendations, NAC 445A.144 states that "one-hour average and 96-hour average concentration limits may be exceeded only once every 3 years." For the 2002 303(d) List, waters were listed as "impaired" if:

- 10 samples were available; and
- 2 or more exceedances of the 1-hour criteria occurred during any 3 year period with the listing cycle (1997-2001).

[3] Detection limit is the minimum concentration of a constituent that can be detected using a particular laboratory procedure.

It must be noted that most of the data analyzed for this report were derived from monthly (or less frequent) grab samples and that grab samples may not be representative of conditions over a 4 day period depending upon the waterbody and constituent. For that reason, waterbodies exceeding the 96-hour criteria (with 10 samples, 2 or more exceedances during any 3 year period) but not the 1-hour criteria were placed on the "List of Waterbodies Warranting Further Investigation", unless 303(d) listing was warranted based upon other information such as biological data indicating impairment, or severity of exceedances.
It must be noted that a few waterbodies were listed with sample sizes less than 10. For those waterbodies, other information such as severity, frequency and magnitude of the exceedances, and sediment, fish tissue, biological conditions warranted listing. The data sources and decisions supporting each listing decision are documented in the appendices.

Accounting for Extreme Events

Drought and flood period are a part of the natural process, and data that shows impairment as a result of a major drought or flood event should not serve as the listing basis. Nevada Administrative Code 445A.121(8) states, "The specified standards are not considered violated when the natural conditions of the receiving water are outside the established limits, including periods of extreme high or low flow ...." Therefore, water chemistry data associated with samples collected during extreme high and low flows[4] were not considered in the listing analysis.

Field and Laboratory Data

In the case of pH, many of the available datasets include both field and laboratory values. Since pH can change over time before the sample arrives at the laboratory, the field pH is felt to be the more accurate measure. Therefore, field pH was the primary value evaluated for standards compliance. However, laboratory pH was utilized in some instances where field pH was not available.

Biological Assessments

Starting in 2000, NDEP has been performing biological assessments on the major waterbodies in Nevada. Data and information are being collected concerning macroinvertebrate abundance and diversity, and physical habitat conditions. As this program is in its infancy, none of NDEP's biological assessment or bioassay information were used in the 303(d) listing analysis. Laboratory identification and quantification of macroinvertebrate samples have yet to be received by NDEP. Reference sites and biological assessment protocols will be developed as NDEP collects additional data.

Some macroinvertebrate data were submitted to NDEP for consideration, but without any evaluation protocols, reference conditions and criteria specific to Nevada, BWQP was not able to incorporate these data into our listing decisions. As the biological assessment program develops, BWQP will be better suited to evaluate biological data for determinations of beneficial use support.

[4] $7Q10_{high}$ and $7Q10_{low}$ values as developed by USGS were used to establish the extreme flow conditions. The 7Q10 flows were developed from historic streamflow data and are defined as a predicted high or low flow for a consecutive seven day period with an expected recurrence interval of ten years.

Continuous Monitoring Data

Past 303(d) Lists have been developed based primarily upon grab sample data, which represent quality conditions for a specific point in time. Data collected on a more continuous basis, e.g. hourly or other frequencies, needs to be considered during the 303(d) List development. In recent years, NDEP and other groups have undertaken continuous monitoring of some parameters (such as dissolved oxygen, temperature, pH and specific conductance) for selected waterbodies. In most cases, the available continuous monitoring data did not have a complete record set for the five-year listing period (January 1, 1997 to December 31, 2001). These data were evaluated as follows for inclusion on the List:

- Each day of available data was examined to determine the number of violations. If the standards were violated for any length of time for a given day, it was considered as one violation.
- A reach was listed if standard violations occurred for more than 10% of the 1,826 days in the five-year period.

Additional Considerations during the Listing Assessments

Standards, Control Points and the Tributary Rule

For the major waterbodies, NAC sets water quality standards for specific control points (see NAC 445A.145). On a given stream, the standards apply to that control point and for the remainder of the river upstream, all surface waters upstream (in Nevada) or to the next control point upstream, if any. If there are no control points downstream from a particular control point, the standards for that control point apply for the remainder of the stream downstream, all surface waters downstream (in Nevada) or to the next waterbody downstream named in NAC. As a result, NAC has effectively divided many of the streams into reaches with varying standards.

As stated earlier, NDEP operates an extensive water quality monitoring network throughout Nevada. In many cases, the associated sampling locations are at control points. Data collected at these control points are evaluated as part of the listing process. If the standards are violated (in accordance to the criteria described herein) at the control point, the entire reach associated with that control point was listed unless there is available information to divide the reach into subreaches. In fact, there are some instances where two or more monitoring stations are located on a reach. These data were examined to determine whether or not to list the entire reach or only subreaches.

NAC 445A.145 is commonly referred to as the "tributary rule." In general, the tributary rule provides additional water quality criteria for those surface waters (in Nevada only) that are not defined as a class water (NAC 445A.123 through 127) nor as a designated water (NAC 445A.146 through 225). For those waters that are unclassified and undesignated, the water quality criteria for the nearest control point or classified water (upstream or downstream) may be applied to these water bodies in the listing analysis under certain conditions. According to NDEP's Continuing Planning Process document, the tributary rule is to be applied to an unclassified and undesignated water in the listing analysis if:

- there was a hydrologic connection during the listing period not just in response to storm events; and
- the hydrologic connection was for a long enough period such that a commingling of water and an exchange of beneficial uses, in particular aquatic life, was possible.

For purposes of the 2002 303(d), the tributary rule was applied to a given waterbody if USGS topographical maps showed a connection between the waterbody in question and a designated or class water. Tributary application decisions are denoted in the appendices.

Designated and Class Waters

The water quality of both the designated and the class waters will be evaluated for potential inclusion on the 2002 303(d) List. In general, only designated waters were included in past 303(d) Lists.

Single Value and Annual Average/Median Standards

For some reaches, the water quality standard for a parameter is defined in terms of a maximum annual average or annual median concentrations. The reach was listed if the annual average or median values exceeded the beneficial use standard at least once during the five-year listing period.

Some reaches have both single value standards and annual average standards for certain parameters. If either the single value standard were exceeded more than 10% of the time (assuming a minimum of ten samples) or the annual average standard was exceeded at least once, the reach was listed for that particular parameter.

Antidegradation Considerations

Nevada Revised Statutes (NRS) 445A.565 contain the State's antidegradation requirements. NRS 445A.565 states:

> "Any surface waters of the state whose quality is higher than the applicable standards of water quality as of the date when those standards became effective must be maintained in their higher quality. No discharges of waste may be made which will result in lowering the quality of these waters unless it has been demonstrated to the commission that the lower quality is justifiable because of economic or social considerations. This subsection does not apply to normal agricultural rotation, improvement or farming practices"

NRS 445A.565 is implemented through the establishment of requirements to maintain existing higher quality (RMHQs). An RMHQ is established when the monitoring data show that existing water quality for individual parameters is significantly better than the standard necessary to protect the beneficial uses. If adequate monitoring data exist, RMHQs are established at levels which reflect existing conditions. This system of directly linking antidegradation to numeric objectives provides a manageable means for implementing antidegradation through permits and other programs. In general, past Nevada 303(d) Lists have been developed based upon violations of the beneficial use standards and not the RMHQs. However in the case of the Truckee River, TDS was placed on the

1992 303(d) List due to violations of the TDS RMHQ. For this report, waterbodies violating RMHQs (in general, more than 10% of the time for sample sizes of 10 or greater) were placed in a separate table entitled "Waterbodies not meeting RMHQs (Requirements to Maintain Higher Water Quality)." TMDLs are NOT required for these waterbodies.

Tribal Water Quality Standards

Tribes have independent authority for setting water quality standards and implementing regulations for waters on reservation land under the 1987 Amendments to the Clean Water Act (CWA). At this time, the State of Nevada regulations include water quality standards for waterbodies on tribal lands throughout Nevada. However the State of Nevada has no authority to set standards on tribal lands, therefore the 2002 303(d) List does not included any impaired waterbodies that exist on tribal lands.

Natural Condition-Based Water Quality Standards

There are several instances in the regulations where the water quality criteria are defined as a certain level above or below the "natural conditions[5]" (Table 1). Application of these standards to the 303(d) listing process is difficult due to problems in quantifying natural conditions. In order to quantify natural conditions, data representing pre-human development conditions are needed. However, most of the available water quality data are based upon samples collected after upstream human impacts have occurred.

Violations of the natural condition-based standards were not evaluated for impairment status on the 2002 303(d) List, except for fecal coliform and TDS as follows:

> **Fecal coliform:** Criteria 1 and 3 in Table 1 are not natural condition-based standards and will be used in the listing analysis.
>
> **TDS:** The natural conditions portion of the standard will not be used, however the maximum TDS level of 500 mg/l in Table 1 will be used in the listing analysis.

[5] "Natural conditions" are considered to be the water quality characteristics that would exist in a waterbody without the impacts of modern human development. The Nevada Administrative Code does not define "natural conditions", but does provide the following definition of "natural waters" – "...waters which have not been degraded or enhanced by actions attributable to man."

Table 1. Summary of Natural Condition-Based Water Quality Standards

Parameter	Applicable Water Class	Standard
Alkalinity	various designated waters	"less than 25% change from ***natural conditions***
Color	various designated waters	"Increase in color must not be more than 10 PCU above ***natural conditions.***
Fecal coliform	Class C only	The more stringent of the following apply: "1. The fecal coliform concentration must not exceed a geometric mean of 1000 per 100 milliliters nor may more than 20 percent of total samples exceed 2400 per 100 milliters." "2. The annual geometric mean of fecal coliform concentration must not exceed that characteristic of ***natural conditions*** by more than 200 per 100 milliliter nor may the number of fecal coliform in a single sample exceed that characteristic of ***natural conditions*** by more than 400 per 100 milliliter." (italics added) "3. The fecal coliform concentration, based on a minimum of 5 samples during any 30-day period, must not exceed a geometric mean of 200 per 100 milliliters, nor may more than 10 percent of total samples during any 30-day period exceed 400 per 100 milliliters. This is applicable only to those waters used for primary contact recreation."
Total Dissolved Solids	Class A, B and C waters	"must not exceed 500 mg/l or one-third above that characteristic of ***natural conditions*** (whichever is less).
Turbidity	various designated waters	"Increase in turbidity must not be more than 10 NTU above ***natural conditions.***

NDEP is in the process of revising these natural condition-based standards to numeric criteria that are measurable and defensible.

Natural Background Considerations

In instances where a water quality standard is exceeded due solely to naturally occurring conditions, the exceedance is not considered a violation of the water quality standard. Refer to the following NAC references:

NAC 445A.120(2) states:

"...Natural water conditions may, on occasion, be outside the limits established by standards. The standards adopted in NAC 445A.120 to 445A.213, inclusive, relate to the condition of waters as affected by discharges relating to the activities of man."

NAC 445A.121(8) states:

> "The specified standards are not considered violated when the natural conditions of the receiving water are outside the established limits, including periods of extreme high or low flow..."

In determining whether or not a waterbody is impaired due solely to natural causes, NDEP examined available information and applied best professional judgment. The type of information needed for a waterbody to be considered as naturally impaired include (but not limited to):

- Human activities (e.g. urbanization, grazing, mining) within the affected waterbody shown not to be significant source of pollutant in question.
- The pollutant in question is known to occur naturally in the form found in the reach.
- A probable natural source (i.e. hot springs, mineralized outcropping) is located within the watershed.

During the development of the 2002 List, no waterbodies were found at this time to qualify as "impaired by natural causes." Additional studies are needed for some waterbodies to determine whether or not impairments are due to natural causes.

Narrative Standards

Narrative standards appear in two locations in the regulations:

> NAC 445A.121 contains narrative criteria that are applicable to all surface waters of the state and consist mostly of statements requiring waters to be "free from" various pollutants in sufficient levels so as to not: 1) be unsightly; 2) interfere with any beneficial uses; 3) create a public nuisance; 4) be toxic to human, animal, plan or aquatic life; etc.
>
> NAC 445A.203 – 445A.208 (Humboldt River) includes criteria which states that color is to not have "adverse effects" on the beneficial use (with municipal and domestic supply being the most restrictive use).

One example of available qualitative information includes information collected by NDEP. When grab samples are collected as part of NDEP's monitoring network operations, staff also notes whether or not the water contains substances attributable to domestic or industrial waste or other controllable sources including:

- Settleable solids that form bottom or sludge deposits;
- Floating debris;
- Oil, grease, scum and other floating materials;
- Odor; and
- Color, turbidity or other conditions.

These qualitative observations did not lead to any new listings but were used as a check on some listings that were based upon water column chemistry.

Some data submitted to NDEP for consideration were for waterbodies that have no specific numeric criteria and are not tributary to waterbodies with criteria. In these instances, only NAC 445A.121 provides narrative criteria. For these waterbodies, there were insufficient data to list as impaired. However, some of these waterbodies were included on the "List of Waterbodies Warranting Further Investigation".

Special Considerations for Lakes

NDEP collects samples at a number of lakes throughout Nevada, however in some instances the sampling points are limited to one point that is easily accessible to the monitoring crew. The same may be true for other entities and their sampling programs. Depending upon the parameter in question, the resulting water quality data may or may not be representative of conditions in the lake. For instance, the samples may have been collected near shore at high use areas with water quality representative of only a limited portion of the lake. Other samples collected further out in the lake may indicate different water quality conditions. Lakes were included on the 2002 303(d) List if the data were deemed (based upon our experience with lakes and best professional judgment) to be representative of mid-lake conditions and sufficient standards exceedances were identified. Otherwise, waterbodies were placed on the "List of Waterbodies Warranting Further Investigation". Future monitoring is needed for these waterbodies to determine actual mid-lake conditions and relations with near shore conditions.

Delisting

As a general rule of thumb, it should take similar data to delist as to list. In other words, if the procedures described above are found to indicate a waterbody is not impaired, the waterbody will be delisted. Other reasons to delist include:

- The standard is no longer exceeded because of a change in the surface water quality standards.
- Faulty data or information, or errors in the analysis resulted in a listing error.

The above list is not intended to be inclusive of the only criteria considered for de-listing. NDEP reserves the right to use data or information that goes beyond the above criteria, and can include other types of information and best professional judgment. The lack of data was never justification for delisting a waterbody. For the 2002 303(d) List, waterbodies were delisted for the following reasons:

- the available 10 or more samples indicated exceedances at less than 10 percent;
- the waterbody was erroneously included on the 1998 303(d) List; and
- the waterbody is on tribal land.

TMDL Prioritization Schedule

40 CFR Part 130 requires that TMDLs be developed for those waterbodies on the 303(d) List, and that the 303(d) List contain a prioritized schedule for establishing TMDLs for these waters. Prioritizing water bodies enables the state to make efficient use of available resources to meet the

objectives of the Clean Water Act. Priority ranking takes into account the severity of the pollution and the uses to be made of such waters.

Targeting high priority waters for TMDL development reflects an evaluation of the relative value and benefit of water bodies within the state. The priority ranking was developed taking into consideration the following (not in order of priority):

- Risk to human and aquatic life
- Degree of public interest and support
- Recreational, economic, and aesthetic importance of a particular waterbody
- Vulnerability or fragility of a particular waterbody as an aquatic habitat
- Immediate programmatic needs such as:
    - waste load allocations
    - permits to be issued
    - new or expanding discharges
    - load allocations for needed Best Management Practices (BMPs)
- Severity of the impairment and the designated water uses
- Data availability
- Potential changes to water quality standards
- Appropriateness of standard
- TMDL complexity
- Staffing and other resources

The 2002 303(d) List (Appendix A) presents the TMDL development priorities for the various listed waterbodies as determined by the Bureau of Water Quality Planning based upon existing resources. In general, the following schedule applies for the different priority levels:

- (1) High priority: 0 to 2 years
- (2) Medium priority: 2 to 5 years
- (3) Low priority: beyond 5 years

NDEP did not go through any formal priority ranking process to develop the TMDL priorities. With our limited resources, it was clear that NDEP could only complete one to two TMDLs per year. Keeping this in mind along with our knowledge of the watersheds and other ongoing assessment efforts, staff used its judgment in prioritizing TMDLs into these three categories.

Summary of Methodology and Findings

Section 303(d) of the Clean Water Act requires that States develop a list of waterbodies needing additional work beyond existing controls to achieve or maintain water quality standards. This list, referred to as the Section 303(d) List, provides a comprehensive inventory of water bodies impaired by all sources, including point sources, nonpoint sources, or a combination of both. The 303(d) List is the basis for targeting water bodies for watershed-based solutions, and the Total Maximum Daily Load (TMDL) process provides an organized framework to develop these solutions.

Subpart C of 40 CFR (Code of Federal Regulations) Part 130 requires that states develop descriptions of the criteria and process used in generating their 303(d) lists. This report summarizes the basic methodology NDEP used in developing the 2002 303(d) List. The 2002 303(d) List is

included in Appendix A. In addition to impaired waters, this report also identified waterbodies in need of additional review:

- **List of Waterbodies with Exceedances of RMHQs:** Represents violations of Requirements to Maintain Higher Water Quality, TMDLs are not required (Appendix B). Additional investigations are needed to determine whether or not water quality is worsening. Available resources limit NDEP's ability to investigate these waterbodies.
- **List of Waterbodies Warranting Further Investigations:** Represents waterbodies with possible water quality problems, TMDLs are not required. (Appendix C). Additional investigations are needed to determine whether or not standards are being exceeded and the uses are being impaired. Available resources limit NDEP's ability to investigate these waterbodies.
- **Delisted Waters:** Waterbodies that were on the 1998 303(d) List but no longer qualify for inclusion as impaired on the 2002 303(d) List (Appendix D)

As stated above, the 303(d) Impaired Waters List begins to define those waterbodies in need of TMDLs as part of the solutions for a given waterbody. The next 2 tables included in this report (Waterbodies with Exceedances of RMHQs, and Waterbodies Warranting Further Investigation) identify waterbodies in need of additional review which could include additional monitoring, standards review and revision, or inclusion on future 303(d) List. Appendix D includes waters removed from the 303(d) List.

There are approximately 14,988 miles of perennial rivers and streams, 126,257 miles of intermittent/ephemeral streams and channels, 1,782 miles of ditches/canals and 551 border miles of shared rivers. Nevada has approximately 1,070 lakes, reservoirs or ponds with a approximate total acreage of 533,239 (these river and lake sizes are according to EPA's "Total Waters Report") and approximately 136,650 acres of wetlands. The 2002 303(d) Impaired Waters List identifies approximately 1,474 river miles as impaired, an increase of about 600 miles from the 1998 303(d) List. The most common causes of impairment for all listed streams is nutrient, metals, sediment, temperature, totals dissolved solids, pH and other parameters (Table 2). Impaired lake and reservoir acreages have increased from 36,812 acres in 1998 to 76,928 acres in the 2002 303(d) List. Impaired wetland acreages have remained essentially constant at 19,511 acres. The number of listed river miles and acreages have increased from the 1998 303(d) List due to changes in the listing methodology and the implementation of new standards, not from degradation of the water quality.

Table 2. Summary of Impaired Waterbodies and Associated Parameters

Parameter	***Impaired Rivers, miles***	***Impaired Lakes/Reservoirs, acres***	***Impaired Wetlands, acres***
TOTAL	*1,474*	*76,928*	*19,511*
Nutrients	*1,070*	*2,830*	*185*
Metals	*1,066*	*0*	*19,326*
Sediment	*672*	*0*	*0*
Temperature	*535*	*0*	*0*
Total Dissolved Solids	*251*	*35,500*	*185*
pH	*41*	*4,616*	*185*
Other	*19*	*36,812*	*0*

Appendix A

Nevada's 2002 303(d) List

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Snake River Basin											
NV03-SR-02	445A.216	Salmon Falls Creek	Above stateline	37.2	miles	None	Iron (total)	NDEP	3	X	
							Temperature		3		
							Total phosphorus		3	X	1
							Total suspended solids		3	X	
							Turbidity		3	X	
NV03-SR-03	445A.217	Shoshone Creek	Above stateline	11.51	miles	None	Iron (total)	NDEP	3	X	
							Temperature		3		
							Total phosphorus		3	X	1
							Total suspended solids		3	X	
							Turbidity		3	X	
NV03-JR-12	445A.218	East Fork Jarbidge River	Above stateline	18.6	miles	None	Temperature	NDEP	3	X	
NV03-JR-13	445A.219	Jarbidge River	Source to Town of Jarbidge	7.44	miles	None	Total phosphorus	NDEP	3	X	1
NV03-JR-14	445A.220	Jarbidge River	Town of Jarbidge to stateline	8.98	miles	None	Temperature	NDEP	3	X	
NV03-OW-18	445A.222	East Fork Owyhee River	Wildhorse Reservoir to Mill Creek	13.75	miles	Draft TMDL Iron, Total phosphorus, TSS, turbidity	Iron (total)	NDEP	1		
							Temperature		1	X	
							Total phosphorus		1		1
							Total suspended solids		1		
							Turbidity		1		
NV03-OW-19	445A.223	East Fork Owyhee River	Mill Creek to Duck Valley Indian Reservation	7.71	miles	Draft TMDL Iron, Total phosphorus, TSS, turbidity	Total phosphorus	NDEP	1		1,2
							Total suspended solids		1		1,2
							Turbidity		1		1,2
NV03-OW-25-B	445A.125	Wildhorse Reservoir	Entire Reservoir	2,830	Acres	None	pH	NDEP	3	X	3
							Total phosphorus		3	X	1
NV03-OW-27	445A.225	South Fork Owyhee River	Above Stateline	75	miles	None	Temperature	BLM - Elko District	3	X	
NV03-OW-100	Tributary to SF Owyhee River - 445A.225	Snow Creek	Below Jerritt Canyon Project	6	miles	None	Total dissolved solids	AngloGold-Meridian Jerritt Canyon Joint Venture	3	X	
NV03-OW-101	Tributary to SF Owyhee River - 445A.225	Jerritt Canyon Creek	Below Jerritt Canyon Project	6	miles	None	Total dissolved solids	AngloGold-Meridian Jerritt Canyon Joint Venture	3	X	
NV03-OW-102	Tributary to SF Owyhee River - 445A.225	Mill Creek	Below Jerritt Canyon Project	1	miles	None	Total dissolved solids	AngloGold-Meridian Jerritt Canyon Joint Venture	3	X	

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Snake River Basin											
NV03-OW-34-C	Tributary to EF Owyhee River - 445A.223	Mill Creek	Above East Fork Owyhee River	1.44	miles	Draft TMDL Iron, Total phosphorus, TDS, TSS	Cadmium (total)	NDEP	1	X	
							Copper (dissolved)		1	X	4
							Copper (total)		1	X	
							Dissolved oxygen		1	X	
							Iron (total)		1	X	
							pH		1	X	
							Temperature		1	X	
							Total dissolved solids		1	X	
							Total phosphorus		1	X	1
							Total suspended solids		1	X	
							Turbidity		1	X	
Humboldt River Basin											
NV04-HR-01	445A.203	Humboldt River	Origin to Osino	66.12	miles	none	Iron (total)	NDEP	2	X	5
							Total phosphorus		2	X	1
NV04-HR-02	445A.204	Humboldt River	Osino to Palisade	64.39	miles	Total phosphorus, TSS	Iron (total)	NDEP	2		
							Total phosphorus		2		1
							Turbidity		2		
NV04-HR-03	445A.205	Humboldt River	Palisade to Battle Mtn	76.5	miles	Total phosphorus, TSS	Iron (total)	NDEP	3		2
							Total phosphorus		3		1
							Total suspended solids		3	X	
							Turbidity		3		
NV04-HR-04	445A.206	Humboldt River	Battle Mtn to Comus	81.36	miles	Total phosphorus, TDS, TSS	Boron (total)	NDEP	3	X	
							Iron (total)		3		
							Total dissolved solids		3	X	
							Total phosphorus		3		1
							Total suspended solids		3	X	
							Turbidity		3		
NV04-HR-05	445A.207	Humboldt River	Comus to Imlay	114.09	miles	Total phosphorus, TDS, TSS	Iron (total)	NDEP	3		2
							Molybdenum	USGS	3	X	
							Total dissolved solids	NDEP	3	X	
							Total phosphorus		3		1
							Total suspended solids		3	X	
							Turbidity		3		
NV04-HR-06	445A.208	Humboldt River	Imlay to Woolsey	44.42	miles	None	Molybdenum	USGS	3	X	

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Humboldt River Basin											
NV04-HR-07-C	445A.126	Humboldt River	Woolsey to Rodgers Dam	13.22	miles	None	Total dissolved solids	NDEP	3	X	5
NV04-HR-08-D	445A.127	Humboldt River	Rodgers Dam to Humboldt Sink	22.77	miles	None	Boron (total)	NDEP, USGS	3		
							Iron (total)	NDEP	3		
							Molybdenum	USGS	3	X	
NV04-MR-10-B	445A.125	Mary's River	East line of T41N, R59E to Humboldt River	53.2	miles	None	Total phosphorus	NDEP	3	X	1
NV04-NF-16-A	445A.124	North Fork Humboldt River and its tributaries in the Independence Mountain Range (specifically Dry Creek, Sammy Creek, Water Canyon Creek	NF Humboldt - Confluence with Sammy Creek to National Forest Boundary	3.5	miles	None	Total dissolved solids	AngloGold Corporation	3	X	
			Dry Creek - waste rock to confluence with NF Humboldt	0.1	miles	None	Selenium (total)		3	X	4
							Total dissolved solids		3	X	
			Sammy Creek - above waste rock (upstream of Big Springs Mine)	0.6	miles	None	Arsenic (total)		3	X	
							Selenium (total)		3	X	4
			Sammy Creek - waste rock to confluence with NF Humboldt	0.6	miles	None	Total dissolved solids		3	X	
			Water Canyon Creek - waste rock to confluence with NF Humboldt	0.3	miles	None	Selenium (total)		3	X	4
							Total dissolved solids		3	X	
NV04-NF-17-B	445A.125	North Fork Humboldt River	National Forest Boundary to Humboldt River	84.67	miles	None	Iron (total)	NDEP	3	X	5
							Temperature		3	X	
							Total phosphorus		3	X	1
NV04-SF-19-B-01	445A.125	South Fork Humboldt River	Lee to Humboldt River	32.75	miles	None	Iron (total)	NDEP	3	X	
							Total phosphorus		3	X	1
NV04-SF-19-B-02	445A.125	South Fork Humboldt Reservoir	Entire Reservoir	1,650	acres	None	pH	NDEP	3	X	3
NV04-HR-26-B	445A.125	Maggie Creek	Where it is formed by tributaries to confluence with Jack Creek	28.07	miles	None	Total phosphorus	NDEP	3	X	1, 5

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Humboldt River Basin											
NV04-LH-47-C	445A.126	Little Humboldt River	Entire Length	53.52	miles	None	Total phosphorus	NDEP	3	X	1, 5
NV04-HR-56-C	Tributary to Humboldt River - 445A.205	Pine Creek	Upstream of Palisade	15.92	miles	None	Iron (total)	NDEP	3	X	5
							Total dissolved solids		3	X	
							Total phosphorus		3	X	1
							Total suspended solids		3	X	
							Turbidity		3	X	
NV04-HR-100-C	Tributary to Maggie Creek - 445A.126	Simon Creek	Above confluence with Maggie Creek	1	miles	None	Total dissolved solids	Newmont Mining Corporation	3	X	
NV04-HR-101	Tributary to Pine Creek & Humboldt River - 445A.205	Willow Creek	Below Buckhorn Mine	5	miles	None	Mercury (dissolved)	Cominco American Inc.	3	X	
NV-04-HR-102-B	Tributary to North Fork Humboldt River - 445A.125	Sheep Creek	Below Jerritt Canyon Project	6	miles	None	Total dissolved solids	AngloGold-Meridian Jerritt Canyon Joint Venture	3	X	
Lake Tahoe Basin											
NV06-TB-08	445A.191	Lake Tahoe	Mid-Lake and Index Station	36,812 (Nevada portion only)	acres	TMDL underdevelopment	Clarity	Tahoe Research Group	1	X	
NV06-TB-10-01	445A.1915	2nd Creek	2nd Creek Drive to Lake Tahoe	0.45	miles	None	Total phosphorus	NDEP	3	X	
							Turbidity		3	X	
NV06-TB-10-02	445A.1915	2nd Creek	Origin to 2nd Creek Drive	2	miles	None	Total phosphorus	NDEP	3	X	
									3		

Table 1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Lake Tahoe Basin											
NV06-TB-12	445A.1915	3rd Creek	Lake Tahoe to EF 3rd Creek at Highway 431 and to WF 3rd Creek Origin	0.31	miles	None	Total phosphorus	NDEP	3	X	
NV06-TB-15	445A.1915	EF Incline Creek	Ski resort to Origin	4.66	miles	None	Total phosphorus	NDEP	3	X	
NV06-TB-16	445A.1915	Incline Creek	Lake Tahoe to EF Incline Creek at ski resort and to WF Incline Creek at Highway 431	0.19	miles	None	Iron (total)	NDEP	3	X	
NV06-TB-26	445A.1915	Glenbrook Creek	Above Lake Tahoe	3.83	miles	None	Iron (total)	USGS	3	X	
							Total phosphorus		3	X	
NV06-TB-33	445A.1915	Edgewood Creek	Above Lake Tahoe	5.37	miles	None	Iron (total)	USGS	3	X	
Truckee River Basin											
NV06-TR-03	445A.186	Truckee River	Idlewild to East McCarran	6.25	miles	None	Temperature	TMWRF	3	X	
NV06-TR-04	445A.187	Truckee River	East McCarran to Lockwood	5.85	miles	Total nitrogen, total phosphorus, TDS	Total phosphorus	DRI/TMWRF	3		1
NV06-TR-05	445A.188	Truckee River	Lockwood to Derby Dam	15.15	miles	Total nitrogen, total phosphorus, TDS	Total phosphorus	DRI/TMWRF	3		1
							Turbidity		3		
NV06-TR-06	445A.189	Truckee River	Derby Dam to Pyramid Lake Reservation	11.22	miles		Temperature	DRI/TMWRF	3	X	
							Total phosphorus		3		1
							Turbidity		3		
NV06-SC-41-C	445A.126	Steamboat Creek	Washoe Lakes to Sec 33, T18N, R20E	5.41	miles	None	Iron (total)	NDEP	3	X	
							Mercury (total)	NDEP, UNR	3	X	6
							Total phosphorus	NDEP	3	X	1
NV06-SC-42-D	445A.127	Steamboat Creek	Sec 33, T18N, R20E to Truckee River	13.71	miles	None	Arsenic (total)	NDEP	3	X	7
							Boron (total)		3	X	7
							Iron (total)		3	X	
							Mercury (total)	NDEP, UNR	3	X	6
NV06-SC-45-B	445A.125	Franktown Creek	First irrigation diversion to Washoe Lake	9.07	miles	None	Dissolved oxygen	NDEP	3	X	

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Carson River Basin											
NV08-CR-02	445A.148	Bryant Creek	Near Stateline	0	miles	Draft TMDL Copper, Iron, Nickel	Arsenic (total)	NDEP	3	X	
							Copper	Leviathan Mine Database	1		2, 8
							Iron (total)	NDEP	1		
							Nickel	Leviathan Mine Database	1		2, 8
							Temperature	NDEP	3	X	
							Total suspended solids		3	X	
							Turbidity		3	X	
NV08-CR-04	445A.150	EF Carson River	Stateline to Highway 395	10.48	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Turbidity		2		
NV08-CR-05-01	445A.151	EF Carson River	Highway 395 to Highway 88	8.53	miles	BOD, Nitrate, Phosphates, TDS	Temperature	NDEP	3	X	
							Turbidity		2		
NV08-CR-05-02			Highway 88 to Muller Lane	2	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Temperature		3	X	
							Total phosphorus		2	X	1
							Turbidity		2		
NV08-CR-06-01	445A.152	WF Carson River	Stateline to Muller Lane	11.23	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Temperature		3	X	
							Total phosphorus		2		1
							Turbidity		2		
NV08-CR-06-02		EF/WF Carson River	Genoa Lane to EF Carson River at Muller Lane and to WF Carson River at Muller Lane	4.59	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Temperature		3	X	
							Total phosphorus		2		1
							Total suspended solids		2	X	
							Turbidity		2		

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Carson River Basin											
NV08-CR-07	445A.153	Carson River	Genoa Lane to Cradlebaugh Bridge	5.88	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Temperature		3	X	
							Total phosphorus		2		1
							Total suspended solids		2	X	
							Turbidity		2		
NV08-CR-08	445A.154	Carson River	Cradlebaugh Bridge to Mexican Ditch Gage	6.34	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Temperature		3	X	
							Total phosphorus		2		1
							Total suspended solids		2	X	
							Turbidity		2		
NV08-CR-09	445A.155	Carson River	Mexican Ditch Gage to New Empire	7.82	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Temperature		3	X	
							Total phosphorus		2		1
							Turbidity		2		
NV08-CR-10	445A.156	Carson River	New Empire to Dayton Bridge	16.82	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Mercury (total)		3		6, 9, 10
							Total phosphorus		1		1
							Total suspended solids		1	X	
NV08-CR-11	445A.157	Carson River	Dayton Bridge to Weeks	25.5	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3	X	
							Mercury (total)		3		6, 9, 10
							Total phosphorus		1		1
							Total suspended solids		1	X	
							Turbidity		1	X	
NV08-CR-12	445A.158	Carson River	Weeks to Lahontan Dam	29.17	miles	BOD, Nitrate, Phosphates, TDS	Iron (total)	NDEP	3		2
							Mercury (total)		3		6, 9, 10
							Total phosphorus		3		1
							Total suspended solids		3		
							Turbidity		3	X	
NV08-CR-13-C	445A.126	Carson River	Lahontan Reservoir to Carson Sink	40.46	miles	None	Mercury	NDEP	3	X	9, 10

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Carson River Basin											
NV08-CR-27-C	445A.126	Stillwater Marsh	Area of Stillwater Marsh east of Westside Road and north of the community of Stillwater	19,326 (Class C and Class D waters)	acres	None	Arsenic	NDEP	3		2
							Boron		3		2
							Mercury		3		10
NV08-CR-100	Tributary to Carson River - 445A.153	Brockliss Slough	Above Carson River	5	miles	None	Iron (total)	NDEP	3	X	11
							Temperature		3	X	11
							Total phosphorus		3	X	1, 11
							Turbidity		3	X	11
NV08-CR-101	Tributary to Carson River - 445A.151	Indian Creek	At Stateline	0	miles	None	Total phosphorus	South Tahoe Public Utilities District	3	X	1
Various	Not applicable	All waters below Lahontan Dam in Lahontan Valley	n/a	n/a	n/a	None	Mercury	NDEP, NDOW, Nevada Health Division	3	X	10
Walker River Basin											
NV09-WR-01	445A.160	West Walker River	At Stateline	0	miles	None	Iron (total)	NDEP	3	X	
							Total phosphorus		3	X	1
NV09-WR-03	445A.162	West Walker River	Stateline to Wellington	16.9	miles	None	Boron (total)	NDEP	3	X	
							Iron (total)		3	X	
							pH		3		
							Total phosphorus		3		1
NV09-WR-04	445A.163	West Walker River	Wellington to Confluence with East Walker River	25.69	miles	None	Iron (total)	NDEP	3	X	
							Total phosphorus		3		1
NV09-WR-05	445A.164	Sweetwater Creek	Stateline to Confluence with East Walker River	8.07	miles	None	E Coli	NDEP	3	X	
							Total phosphorus		3		1
NV09-WR-06	445A.165	East Walker River	At Stateline	0	miles	None	Nitrite	NDEP	3	X	
							pH		3		
							Temperature		3	X	
							Total phosphorus		3		1
NV09-WR-07	445A.166	East Walker River	Stateline to Bridge B-1475	22.7	miles	Total suspended solids	pH	NDEP	3	X	
							Total phosphorus		3	X	1

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Walker River Basin											
NV09-WR-08	445A.166	East Walker River	East Walker River from Bridge B-1475 to the confluence with the W. Walker	41.7	miles	Total suspended solids	Iron (total)	NDEP	3		2
							Temperature		3	X	
							Total phosphorus		3	X	1
							Total suspended solids		3		
NV09-WR-09	445A.167	Walker River	Confluence of East and West Walker Rivers to Walker River Indian Reservation Boundary	41.15	miles	Total suspended solids	Iron (total)	NDEP	3		
							Total suspended solids		3		
NV09-WR-11	To be assigned	Walker Lake	Entire Reservoir	35,500	acres	None	Total dissolved solids	NDEP, NDOW, USFWS, UC Berkeley, others	1	X	12
NV09-WR-12	445A.169	Desert Creek	Stateline to Confluence with West Walker River	23.39	miles	None	Temperature	NDEP	3	X	
NV-09-WR-13-C	445A.126	Mason Valley Wildlife Management Area (North Pond only)	North Pond	100	acres	None	pH	NDEP	3	X	3
							Total dissolved solids		3	X	
							Total phosphorus		3	X	1
Central Region											
NV10-CE-33-C	445A.126	Comins Lake	Entire Lake	136	acres	None	pH	NDEP	3	X	3
Colorado River Basin											
NV13-CL-06	445A.201	Las Vegas Wash	Telephone Line Road to Lake Mead	5.12	miles	Total ammonia, total phosphorus	Iron (total)	NDEP	3	X	13
							Total suspended solids	NDEP, Wash Discharger Monitoring Network	3	X	14
NV13-CL-07	445A.175	Virgin River	Stateline to Mesquite	4.5	miles	Draft TMDL Boron	Boron (total)	NDEP	1		
							Iron (total)		3	X	
							Temperature		3	X	
							Total phosphorus		3		1

Table A-1. Nevada's 2002 303(d) List of Impaired Waterbodies (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Existing TMDLs	Pollutant or Stressor of Concern	Data Sources	TMDL Priority	New Listing?	Notes
Colorado River Basin											
NV13-CL-09	445A.177	Virgin River	Mesquite to Lake Mead	25.75	miles	Draft TMDL Boron	Boron (total)	NDEP	1		
							Iron (total)		3	X	
							Temperature		3	X	
							Total phosphorus		3		1
NV13-CL-11	445A.210	Muddy River	Source to Glendale	13.63	miles	None	Iron (total)	NDEP	3		
							Temperature		3	X	
							Total phosphorus		3		1
NV13-CL-12	445A.211	Muddy River	Glendale to Lake Mead	25.07	miles	None	Boron (total)	NDEP	3		
							Iron (total)		3	X	
							Temperature		3	X	

Footnotes:

1. The phosphorus standard may not be appropriate for eutrophication control.
2. Less than 10 samples were available at the control point for this parameter, however this parameter was on the 1998 303(d) List and the available data does not justify delisting.
3. Current pH standard is outdated and needs to be revised to 6.5 to 9.0 based upon current EPA recommendations. However, the available data show that the new pH criteria have not been met.
4. Both the 1-hour and 96-hour criteria were exceeded in over 10% of the samples.
5. 8 to 9 samples were available at the control point for this parameter, however there were significant exceedances (4 or more) in the available samples.
6. The 1-hour criteria were not exceeded, but the 96-hour criteria were exceeded in over 10% of the samples. Though grab samples may not representative of conditions (depending upon the situation) over a 96-hour period, the fact that the grab sample data consistently exceeded the 96-hour criteria by a factor of 50 to 100 times the standard is deemed to be a good indication that the 96-hour conditions are in fact in exceedance of the 96-hour standard.
7. Pollutant may be naturally occurring. Additional data should be collected prior to development of TMDLs
8. Leviathan Mine is listed on the National Priorities List (Superfund) because of acid mine drainage into adjoining creeks. Copper, iron and nickel have been found to be present in amounts that are harmful to public health, the environment and aquatic life.
9. Carson River from New Empire down to Carson Sink is listed on the National Priorities List (Superfund) due to mercury contamination from historic mining activities.
10. Nevada State Health Division has issued a fish consumption advisory for the Carson River from Dayton to Lahontan Dam and all waters in the Lahontan Valley.
11. While the Brockliss Slough has no specific numeric criteria, the tributary rule was applied thereby utilizing the numeric criteria for the Carson River: Genoa to Cradlebaugh Bridge Reach (NAC 445A.153). It needs to be recognized that at the junction of Brockliss Slough and the West Fork Carson River most of the West Fork Carson River flow enters the Brockliss Slough, with little flow continuing down the West Fork channel at this point.
12. In 2002, EPA approved the beneficial uses and criteria promulgated by the State of Nevada for Walker Lake. The propagation of aquatic life was included as one of the beneficial uses. While the standards do not include numeric criteria for TDS, the Nevada Division of Wildlife has shown that TDS levels have impaired the aquatic life beneficial use. NDOW found that hatchery LCT experienced high death rates upon release into the high TDS waters of Walker Lake. In the mid-1990s, NDOW began acclimating the hatchery trout in high TDS water prior to releasing into Walker Lake. While this acclimation process has improved initial fish survival, the health and lifespan of the LCT and its food sources are impaired due to the elevated TDS levels. Increasing TDS concentrations have caused significant biological changes in Walker Lake, including a reduction in biological diversity and the extinction of at least one zooplankton species. The declining water quality is also directly related to the loss of native species of fish (Tahoe sucker, Lahontan redside shiner, Lahontan speckled dace). Additionally, the 2002 305(b) Report identified Walker Lake as "Not Supporting". Sources include: "Walker Lake Limnological Report, 1995-1996", Horne & Beutel, UC Berkeley, 1997; Communications with M. Sevon, Nevada Division of Wildlife, various years; Written communications with Robert Williams, U.S. Fish and Wildlife Service, October 29, 2001.
13. Data indicates that a majority of the iron is in particulate form associated with sediment.
14. TSS levels have improved following the construction of erosion control structures and wetlands, with minimal exceedances of the TSS standard in 2001. Additional monitoring is needed to confirm standards compliance.

Appendix B

List of Waterbodies with Exceedances of RMHQs (Requirements to Maintain Higher Quality Water)

Table B-1. List of Waterbodies with Exceedances of RMHQs (Requirements to Maintain Higher Quality Water)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Pollutant or Stressor of Concern	Notes
Snake River Basin							
NV03-SR-02	445A.216	Salmon Falls Creek	Above stateline	37.2	miles	Fecal coliform	
NV03-JR-12	445A.218	East Fork Jarbidge River	Above stateline	18.6	miles	Fecal coliform	
NV03-JR-13	445A.219	Jarbidge River	Source to Town of Jarbidge	7.44	miles	Total phosphorus	
Humbolt River Basin							
NV04-HR-01	445A.203	Humboldt River	Origin to Osino	66.12	miles	pH	
NV04-HR-02	445A.204	Humboldt River	Osino to Palisade	64.39	miles	Chlorides	
						pH	
NV04-HR-03	445A.205	Humboldt River	Palisade to Battle Mtn	76.5	miles	pH	
NV04-HR-04	445A.206	Humboldt River	Battle Mtn to Comus	81.36	miles	Chlorides	
						pH	
						Total dissolved solids	
NV04-HR-05	445A.207	Humboldt River	Comus to Imlay	114.09	miles	Chlorides	
						pH	
NV04-HR-06	445A.208	Humboldt River	Imlay to Woosley	44.42	miles	Total dissolved solids	
Lake Tahoe Basin							
NV06-TB-09-00	445A.1917	1st Creek	Origin to Lake Tahoe	1.8	miles	pH	
						Total nitrogen	
NV06-TB-10-01	445A.1917	2nd Creek	2nd Creek Drive to Lake Tahoe	0.45	miles	pH	
						Total nitrogen	
NV06-TB-10-02	445A.1917	2nd Creek	Origin to 2nd Creek Drive	2	miles	pH	
						Total nitrogen	
NV06-TB-12	445A.1917	3rd Creek	Lake Tahoe to EF 3rd Creek at Highway 431 and to WF 3rd Creek Origin	0.31	miles	Chlorides	
						Total dissolved solids	

Table B-1. List of Waterbodies with Exceedances of RMHQs (Requirements to Maintain Higher Quality Water) (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Pollutant or Stressor of Concern	Notes
Lake Tahoe Basin							
NV06-TB-14	445A.1917	WF Incline Creek	Origin to Highway 431	3.11	miles	Chlorides	
						pH	
						Total dissolved solids	
						Total nitrogen	
						Turbidity	
NV06-TB-15	445A.1917	EF Incline Creek	Ski resort to Origin	4.66	miles	pH	
						Total nitrogen	
NV06-TB-16	445A.1917	Incline Creek	Lake Tahoe to EF Incline Creek at ski resort and to WF Incline Creek at Highway 431	0.19	miles	Chlorides	
						pH	
						Total nitrogen	
Truckee River Basin							
NV06-TR-02	445A.185	Truckee River	Stateline to Idlewild	15.7	miles	Total nitrogen	
NV06-TR-03	445A.186	Truckee River	Idlewild to East McCarran	6.25	miles	Total nitrogen	
NV06-TR-05	445A.188	Truckee River	Lockwood to Derby Dam	15.15	miles	Turbidity	
Carson River Basin							
NV08-CR-01	445A.147	WF Carson River	At Stateline	0	miles	pH	
						Total nitrogen	
						Total phosphorus	
NV08-CR-02	445A.148	Bryant Creek	Near Stateline	0	miles	Total nitrogen	
						Total phosphorus	
NV08-CR-04	445A.150	EF Carson River	Stateline to Highway 395	10.48	miles	pH	
						Total dissolved solids	
						Total nitrogen	

Table B-1. List of Waterbodies with Exceedances of RMHQs (Requirements to Maintain Higher Quality Water) (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Pollutant or Stressor of Concern	Notes
Carson River Basin							
NV08-CR-05	445A.151	EF Carson River	Highway 395 to Muller Lane	10.53	miles	pH	
						Total nitrogen	
NV08-CR-06	445A.152	EF/WF Carson River	Genoa Lane to EF Carson River at Muller Lane and to WF Carson River at Stateline	15.82	miles	pH	
						Total dissolved solids	
NV08-CR-07	445A.153	Carson River	Genoa Lane to Cradlebaugh Bridge	5.88	miles	Chlorides	
						pH	
						Total dissolved solids	
NV08-CR-08	445A.154	Carson River	Cradlebaugh Bridge to Mexican Ditch Gage	6.34	miles	Sulfate	
NV08-CR-09	445A.155	Carson River	Mexican Ditch Gage to New Empire	7.82	miles	pH	
NV08-CR-10	445A.156	Carson River	New Empire to Dayton Bridge	16.82	miles	Chlorides	
						pH	
						Turbidity	
NV08-CR-11	445A.157	Carson River	Dayton Bridge to Weeks	25.5	miles	Chlorides	
						Fecal coliform	
						pH	
						Turbidity	
NV08-CR-12	445A.158	Carson River	Weeks to Lahontan Dam	29.17	miles	Chlorides	
						Total dissolved solids	
						Turbidity	
Walker River Basin							
NV09-WR-01	445A.160	West Walker River	At Stateline	0	miles	Total suspended solids	
NV09-WR-02	445A.161	Topaz Lake	Topaz Lake (Nevada portion)	988	acres	Total nitrogen	
						Total suspended solids	
						Turbidity	

Table B-1. List of Waterbodies with Exceedances of RMHQs (Requirements to Maintain Higher Quality Water) (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Pollutant or Stressor of Concern	Notes
Walker River Basin							
NV09-WR-03	445A.162	West Walker River	Stateline to Wellington	16.9	miles	Chlorides	
						Total dissolved solids	
						Total nitrogen	
						Total phosphorus	
NV09-WR-04	445A.163	West Walker River	Wellington to Confluence with East Walker River	25.7	miles	Chlorides	
						Total phosphorus	
NV09-WR-05	445A.164	Sweetwater Creek	Stateline to Confluence with East Walker River	8.07	miles	Total nitrates	
NV09-WR-06	445A.165	East Walker River	At Stateline	0	miles	Total nitrogen	
NV09-WR-08	445A.166	East Walker River	East Walker River from Bridge B-1475 to the confluence with the W. Walker	41.7	miles	Sulfate	
Colorado River Basin							
NV13-CL-04	445A.195	Lake Mead/Las Vegas Bay	Las Vegas Bay	3,840	acres	chlorophyll a	1
NV13-CL-07	445A.175	Virgin River	Stateline to Mesquite	4.5	miles	Total nitrogen	

Notes:

Except as noted in the following, all data for identifying RMHQ exceedances were taken from NDEP ambient monitoring program. including Truckee River monitoring performed by Desert Research Institute and Truckee Meadows Wastewater Reclamation Facility.

1. Chlorophyll a exceeded more than 10% of samples at Stations LM4 (LVB2.7) and LM5 (LVB3.5). Based upon data collected by Las Vegas Wash Discharger Monitoring Network.

Appendix C

List of Waterbodies Warranting Further Investigation

Table C-1. List of Waterbodies Warranting Further Investigation

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Pollutant or Stressor of Concern	Data Sources	Notes
Black Rock Desert Region						
NV02-BL-09-B	445A.125	Bilk Creek Reservoir	Entire Reservoir	Dissolved oxygen	NDEP	1
				pH		2
				Total phosphorus		3
NV02-BL-100	445A.121	Charleston Gulch	Below National Mine site	Metals	NDEP	
				pH		
NV02-BL-101	445A.121	National Gulch	Below National Mine site	Metals	NDEP, USGS Open File Report 00-459	
				pH		
Snake River Basin						
NV03-OW-19	445A.223	East Fork Owyhee River	Mill Creek to Duck Valley Indian Reservation	Copper (dissolved)	NDEP	
				Iron (total)		
NV03-OW-25-B	445A.125	Wildhorse Reservoir	Entire Reservoir	Temperature	NDEP	1
Humbolt River Basin						
NV04-HR-07-C	445A.126	Humboldt River	Woolsey to Rodgers Dam	Iron (total)	NDEP	
NV04-NF-16-A	445A.124	North Fork Humboldt River and its tributaries in the Independence Mountain Range (specifically Dry Creek, Sammy Creek, Water Canyon Creek)	NF Humboldt - Confluence with Sammy Creek to National Forest Boundary	Selenium (total)	AngloGold Corporation	4, 5
			Sammy Creek - waste rock to confluence with NF Humboldt	Selenium (total)	AngloGold Corporation	4, 5
NV04-SF-19-B-02	445A.125	South Fork Humboldt Reservoir	Entire Reservoir	Temperature	NDEP	1
NV04-HR-26-B	445A.125	Maggie Creek	Where it is formed by tributaries to confluence with Jack Creek	Temperature	NDEP	
NV04-HR-27-C	445A.126	Maggie Creek	Confluence with Jack Creek to Humboldt River	pH	NDEP, Newmont Mining Corporation	6
NV04-RR-38-B	445A.125	Reese River	Confluence with Indian Creek to old Highway 50	Total dissolved solids	NDEP	
NV04-RR-39-C	445A.126	Reese River	North of old Highway 50	Total dissolved solids	NDEP	
				Total phosphorus		3
NV04-LH-45-A	445A.124	North Fork Little Humboldt River	Below Buckskin Mine site to forest boundary	Metals	NDEP, USFS	
				pH		
NV04-LH-47-C	445A.126	Little Humboldt River	Entire length	Dissolved oxygen	NDEP	
				Iron (total)		
				Temperature		

Table C-1. List of Waterbodies Warranting Further Investigation (continued)

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Pollutant or Stressor of Concern	Data Sources	Notes
Humboldt River Basin						
NV04-LH-49-B	445A.125	South Fork Little Humboldt River	Elko/Humboldt County Line to confluence with North Fork Little Humboldt River	Iron (total)	NDEP	
				Total phosphorus		3
NV04-HR-55-B	Tributary to Humboldt River -445A.205	Pine Creek	Above Tomera Ranch	E coli	NDEP	
				Iron (total)		
				Total dissolved solids		
				Total phosphorus		3
				Total suspended solids		
				Turbidity		
NV04-HR-101	Tributary to Pine Creek and Humboldt River - 445A.205	Willow Creek	Below Buckhorn Mine	Cyanide	Cominco American, Inc.	4
NV04-HR-103-A	Tributary to Maggie Creek - 445A.124	Coon Creek	Below Rip Van Winkle Mine	Acid mine drainage	Interagency AML Environmental Task Force, USGS Open File Report 00-459	
NV04-HR-104-A	Tributary to South Fork Humboldt River - 445A.124	Long Canyon Creek (near Lamoille)	Below American Beauty Mine	Metals	EPA-REMAP	
NV04-HR-105	445A.121	Long Canyon Creek (near Battle Mtn.)	Below historic mine site	Metals	USGS Open File Report 00-459; BLM Battle Mountain District	
NV04-HR-106	445A.121	Licking Creek (near Battle Mtn.)	Below historic mine site	Metals	USGS Open File Report 00-459; BLM Battle Mountain District	
NV04-HR-107	445.121	Butte Canyon (near Battle Mtn.)	Below historic mine site	Metals	USGS Open File Report 00-459; BLM Battle Mountain District	
NV04-HR-108	445.121	Galena Canyon (near Battle Mtn.)	Below historic mine site	Metals	USGS Open File Report 00-459; BLM Battle Mountain District	
NV04-HR-109	445.121	Rochester Canyon Creek (near Lovelock)	Below historic mine site	Metals	USGS Open File Report 00-459	
NV04-HR-110	445A.121	East Fork and West Fork Rock Creeks (near Battle Mtn.)	Below historic mine site	Metals	USGS Open File Report 00-459	

Table C-1. List of Waterbodies Warranting Further Investigation (continued)

Humboldt River Basin						
NV04-HR-111	Tributary to Pine Creek/Humboldt River - 445A.205	Trout Creek	Above Pine Creek	Total phosphorus	BLM - Elko District	
NV04-HR-112	445A.121	Little Cottonwood Creek (near Battle Mtn.)	Below historic mine site	Metals	BLM - Battle Mountain District	
NV04-HR-113	445A.121	Iron Canyon (near Battle Mtn.)	Below historic mine site	Metals	BLM - Battle Mountain District	
Lake Tahoe Basin						
NV06-TB-08	445A.191	Lake Tahoe	At Cave Rock Monitoring Site and Sand Harbor Monitoring Site	DO - % of saturation	NDEP	1
				Temperature		1
				Specific electrical conductance		1
				Total nitrogen		1
Truckee River Basin						
NV06-SC-40-C	445A.126	Little Washoe Lake	Little Washoe Lake	Iron (total)	NDEP	
				Mercury (total)		
NV06-TR-100	445A.121	Perry Canyon/Mullen Creek	Below mine site	Metals	Nevada Bureau of Mines and Geology	
				pH		
Carson River Basin						
NV08-CR-13-C	445A.126	Carson River	Lahontan Reservoir to Carson Sink	Iron (total)	NDEP	
NV08-CR-100	Tributary to Carson River - 445A.153	Brockliss Slough	Above Carson River	Fecal coliform	NDEP	7
NV08-CR-101	Tributary to Carson River - 445A.151	Indian Creek	At Stateline	Fecal coliform	South Tahoe Public Utilities District	
Walker River Basin						
NV09-WR-02	445A.161	Topaz Lake	Topaz Lake (Nevada portion)	Temperature	NDEP	1
NV09-WR-08	445A.166	East Walker River	East Walker River from Bridge B-1475 to the confluence with the W. Walker	Iron (total)	NDEP	
NV09-WR-12	445A.169	Desert Creek	Stateline to Confluence with West Walker River	Iron (total)	NDEP	
NV-09-WR-13-C	445A.126	Mason Valley Wildlife Management Area (North Pond only)	North Pond	Arsenic (total)	NDEP	
				Boron (total)		
				Dissolved oxygen		1
NV09-WR-18-A	445A.124	Corey Creek	Origin to point of diversion of the town of Hawthorne	Total dissolved solids	NDEP	
				Total phosphorus		3

Table C-1. List of Waterbodies Warranting Further Investigation (continued)

Central Region						
NV10-CE-14-A	445A.124	Birch Creek	Origin to National Forest Boundary	Iron (total)	Meridian Gold	8
NV10-CE-25-B	445A.125	Illipah Reservoir	Entire Reservoir	pH	NDEP	2
NV10-CE-33-C	445A.126	Comins Lake	Entire Lake	Temperature	NDEP	1
NV10-CE-100	445A.121	Tybo Creek	Below mine site	Acid mine drainage	BLM, NDOW	
Colorado River Basin						
NV13-CL-01	445A.192	Colorado River	Lake Mohave Inlet to CA stateline	Temperature	NDEP	1
NV13-CL-02	445A.193	Colorado River	Hoover Dam to Lake Mohave Inlet	Temperature	NDEP	1
NV13-CL-06	445A.201	Las Vegas Wash	Telephone Line Road to Lake Mead	Selenium (total)	NDEP	4
NV13-CL-07	445A.175	Virgin River	Stateline to Mesquite	Selenium (total)	NDEP	4
NV13-CL-09	445A.177	Virgin River	Mesquite to Lake Mead	Selenium (total)	NDEP	4
NV13-CL-16-B	445A.125	White River	National Forest boundary to confluence with Ellison Creek	Temperature	NDEP	
NV13-CL-25-C	445A.126	Echo Canyon Reservoir	Entire reservoir	Iron (total) Temperature	NDEP	 1
NV13-CL-100	445A.121	Caselton Wash	Below Caselton Tailings	Acid mine drainage	Interagency AML Environmental Task Force	

Footnotes

1. Sampling point may not be representative of conditions for this parameter.
2. Current pH standard is outdated and needs to be revised to 6.5 to 9.0 based upon current EPA recommendations. However, the available data show that the new pH criteria have not been met.
3. The phosphorus standard may not be appropriate for eutrophication control.
4. The 96-hour criteria was exceeded, but the 1-hour criteria was not exceeded.
5. A variety of biological information has been developed by US Fish and Wildlife Service, EPA and AngloGold Corporation as part of assessment activities below Big Springs Mine. However, the results of these studies are in conflict with respect to biological impairment from metals.
6. NDEP data shows exceedances of standard, while Newmont Mining data shows compliance with standard.
7. The fecal coliform criteria reads as follows: " Based on a minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100 ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml." NDEP collects 6 samples a year on the Brockliss Slough which is not frequent enough to evaluate the fecal coliform standard as written. For the Potential Problems list, NDEP dropped the 30-day time period solely for identifying possible problems needing further investigation.
8. Data indicates that the iron originates in the watershed upstream of the Austin Gold Venture Mine and not from the mine site.

Appendix D

List of Delisted Waterbodies

Table D-1. Delisted Waterbodies

Waterbody ID	NAC Reference	Waterbody Name	Reach Description	Size	Units	Pollutant or Stressor of Concern	Data Sources	Notes
Snake River Basin								
NV03-OW-20	445A.224	East Fork Owyhee River	Within Duck Valley Indian Reservation	6.31	miles	Iron Total phosphorus Total suspended solids Turbidity	not applicable	1
Humbolt River Basin								
NV04-HR-04	445A.206	Humboldt River	Battle Mtn to Comus	81.36	miles	Lead	NDEP	2
Truckee River Basin								
NV06-TR-04	445A.187	Truckee River	East McCarran to Lockwood	5.85	miles	Total nitrogen	DRI/TMWRF	2
NV06-TR-05	445A.188	Truckee River	Lockwood to Derby Dam	15.15	miles	Total nitrogen	DRI/TMWRF	2
NV06-TR-06	445A.189	Truckee River	Derby Dam to Wadsworth	11.22	miles	Total nitrogen	DRI/TMWRF	2
NV06-TR-07	445A.190	Truckee River	Wadsworth to Pyramid Lake	28.07	miles	Total nitrogen Total phosphorus Turbidity	not applicable	1
Carson River Basin								
NV08-CR-04	445A.150	EF Carson River	Stateline to Highway 395	10.48	miles	Total suspended solids	NDEP	2
NV08-CR-05-01	445A.151	EF Carson River	Highway 395 to Highway 88	8.53	miles	Total suspended solids	NDEP	2
NV08-CR-05-02	445A.151	EF Carson River	Highway 88 to Muller Lane	2	miles	Total suspended solids	NDEP	2
Walker River Basin								
NV09-WR-02	445A.161	Topaz Lake	Topaz Lake (Nevada portion)	988	acres	Total phosphorus Total suspended solids	NDEP	2 2
NV09-WR-04	445A.163	West Walker River	Wellington to Confluence with East Walker River	25.69	miles	pH	NDEP	2
NV09-WR-07	445A.166	East Walker River	Stateline to Bridge B-1475	22.7	miles	Iron (total)	NDEP	2
NV09-WR-10	445A.168	Walker River	Within Walker River Indian Reservation	11	miles	pH	not applicable	1
Colorado River Basin								
NV13-CL-12	445A.211	Muddy River	Glendale to Lake Mead	25.07	miles	Arsenic	NDEP	3

Footnotes:

1. State water quality standards not applicable within tribal lands
2. Standard exceeded less in less than 10% of the samples
3. This reach was listed in error. Waterbody reach does not have drinking water supply identified as a beneficial use, therefore there is no arsenic standard applicable for this reach