Nevada Priority Wetlands Inventory 2007

Addendum to
Nevada's 2003 Statewide Comprehensive Outdoor Recreation Plan

Prepared For

Prepared By

In Cooperation With

Suggested Citation: Nevada Natural Heritage Program. 2008. *2007 Nevada Priority Wetlands Inventory*. E. Skudlarek (ed.) Prepared for Nevada Division of State Parks. Carson City, Nevada.

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The Nevada Natural Heritage Program, a division of the Nevada Department of Conservation and Natural Resources, is dedicated to helping coordinate the resource needs of Nevada's diverse biological heritage with human activities. We maintain an inventory and current databases on the locations, biology, conservation, and management status of all threatened, endangered, sensitive, and at-risk species and biological communities, and of noxious weed infestations. Using the best available biological data, we continually evaluate conservation priorities for 700 kinds of native animals and plants at greatest risk of extinction or serious decline. We supply information and analytical services to meet diverse conservation, planning, development, land management, and research needs. In effect, these public services provide a cost-effective "early warning system" to minimize future resource conflicts and help prevent species from becoming threatened or endangered, and to support proactive conservation measures before more costly and burdensome actions become necessary.

Cover Page Photograph:
Moores Creek montane riparian wetlands. Toquima Range. 1991. Jim Morefield. The aspen woodland and wet meadow habitats of the Toquima Range are high priority wetland conservation targets.

Acknowledgements Page Photograph:
Wall Canyon riparian wetland. Hays Canyon Range. 2005. Eric Miskow. The stream riparian habitats of Bordwell Creek and tributaries are high priority wetland conservation targets

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Acknowledgements

Many people knowledgeable about wetland fauna and flora, ecosystems, and management contributed to the priority assessment process and information conveyed in the report. We sincerely appreciate their contributions and moreover their dedication to conservation of wetland habitats.

Aaron Ambos	Southern Nevada Water Authority
Alan Jenne	Nevada Department of Wildlife
Ali Chaney	Nevada Natural Heritage Program
Bill Fisher	U.S. Bureau of Land Management
Bill Henry	U.S. Fish and Wildlife Service
Bob Boyd	U.S. Bureau of Land Management
Bridget Nielsen	U.S. Fish and Wildlife Service
Connie Lee	Nevada Department of Wildlife
Craig Garner	Ducks Unlimited
Cris Tomlinson	Nevada Department of Wildlife
Cristi Baldino	U.S. Fish and Wildlife Service
Curt Deuser	U.S. National Park Service
Damian Higgins	U.S. Fish and Wildlife Service
David Catalano	Nevada Department of Wildlife
David Potter	U.S. Fish and Wildlife Service
Don McIvor	Lahontan Audubon Society
Don Sada	Desert Research Institute
Douglas Merkler	U.S. Natural Resources Conservation Service
Duane Crimmins	U.S. Bureau of Land Management
Ed Skudlarek**	Nevada Natural Heritage Program
Elmer Bull	Nevada Department of Wildlife
Eric Miskow	Nevada Natural Heritage Program
Gary Johnson	Nevada Department of Wildlife
James Hurja	U.S. Forest Service
Jason Williams	Nevada Department of Wildlife
Jeff Mackey	U.S. Fish and Wildlife Service
Jeff Petersen	Nevada Department of Wildlife
Jen Ballard	Great Basin Bird Observatory
Jennifer Newmark	Nevada Natural Heritage Program
Jennifer Scanland	Nevada Division of State Parks
Jeri Krueger	U.S. Fish and Wildlife Service
Jim Heinrich	Nevada Department of Wildlife
John Elliott	Nevada Department of Wildlife
John Ranlett	Ducks Unlimited
John Swett	U.S. Bureau of Reclamation
John Warpeha	Washoe Tribe of Nevada and California
Jon Sjoberg	Nevada Department of Wildlife
Kari Martin	Nevada Department of Wildlife
Larry Gilbertson	Nevada Department of Wildlife
Larry Neel**	Nevada Department of Wildlife
Laura Richards	Nevada Department of Wildlife
Leilani Takano	U.S. Fish and Wildlife Service
Marc Maynard	U.S. Bureau of Land Management
Marilyn Mackett	Red Rock Audubon Society
Mark Slaughter	U.S. Bureau of Land Management
Marti Collins	U.S. Fish and Wildlife Service
Matt Chouinard	U.S. Fish and Wildlife Service
Mauricia Baca	The Nature Conservancy
Michael Vermeys	U.S. Bureau of Land Management
Norm Saake	Wetlands Consultant
Pat Kelly	Nevada Department of Wildlife
Patrick Coffin	U.S. Bureau of Land Management
Patrick Putnam	U.S. Bureau of Land Management
Pete Bradley	Nevada Department of Wildlife
Polly Conrad	Nevada Department of Wildlife
Randy Moore	Nevada Division of State Parks
Robin Powell	Lahontan Audubon Society
Roy Leach	Nevada Department of Wildlife
Russell Woolstenhulse	Nevada Department of Wildlife
Sarah Peterson	U.S. Bureau of Land Management
Scot Franklin	U.S. Bureau of Land Management
Seth Shanahan	Southern Nevada Water Authority
Shawn Espinosa	Nevada Department of Wildlife
Shawn Goodchild	U.S. Fish and Wildlife Service
Steve Caicco	U.S. Fish and Wildlife Service
Steve Foree	Nevada Department of Wildlife
Susan Abele**	The Nature Conservancy

** NPWI project team leaders

Federal and state grants were indispensable to the project. We thank our benefactors at the U.S. National Park Service (Land and Water Conservation Fund) (L&WCF), U.S. Environmental Protection Agency, Region 9 (Wetland Program Development Grant), and the Nevada Department of Wildlife (Q1 Nevada Conservation Bond). We are grateful for the special support provided by Stephanie Wilson, EPA Nevada project officer; Jenny Scanland and Steve Weaver, Nevada Division of State Parks, present and past L&WCF grants coordinator, Laura Richards and Larry Neel, NDOW Wildlife Diversity Bureau chief and senior conservation planner; Susan Abele, The Nature Conservancy conservation planner; and, Glenn Clemmer and Jennifer Newmark, retired and current Nevada Natural Heritage Program administrators.

Executive Summary

The *2007 Nevada Priority Wetlands Inventory* (NPWI) was prepared for the Nevada Division of State Parks (NDSP) by the Nevada Natural Heritage Program (NNHP). It is prepared as an addendum to Nevada's 2003 Statewide Comprehensive Outdoor Recreation Plan. Project partners were the Nevada Department of Wildlife (NDOW) and The Nature Conservancy (TNC) of Nevada. The NPWI was completed as outlined in Part 4 of the *Nevada Wetlands Priority Conservation Plan, Technical Review Draft* (NNHP, 2006) and was developed to conform with salient provisions of Section 303, Emergency Wetlands Resources Act of 1986 (EWRA) and guidance in the National Wetlands Priority Conservation Plan (NWPCP). Project co-funders include the U.S. National Park Service (State Assistance Grant, Land and Water Conservation Fund), the U.S. Environmental Protection Agency (Wetland Program Development Grant Program, Clean Water Act section 104(b)(3)) and the Nevada Conservation and Resource Protection (Q1) Grant Program administered by the NDOW.

Project purposes are:

- Inform land and natural resource managers and conservation partners about priority wetlands, their locations, priority rank, and factors determining priority status.
- Satisfy federal requirements in the EWRA and planning guidance in the NWPCP to maintain Land and Water Conservation Fund (L&WCF) grant eligibility for Nevada.

The L&WCF program in most years provides matching grants to the NDSP and through NDSP to local governments for the acquisition and development of parkland. To meet federal EWRA criteria for L&WCF grant eligibility, the NDSP updated the Statewide Comprehensive Outdoor Recreation Plan in 2003 and commissioned the NNHP to prepare a state priority wetlands conservation plan. The EWRA specifies that the state plan development must follow procedural guidance set forth by the U.S. Fish and Wildlife Service (USFWS) in the NWPCP and must include consultation with the state wildlife management agency (USFWS, 1989). The NWPCP directs states to identify and rank priorities using a comparative evaluation process that gives preference to wetlands that are declining or rare, vulnerable to human activities, or possess unique or diverse ecosystem functions and societal values, including outdoor recreation. Many wetland areas have been preserved or restored through the acquisition of land for state parks.

The USFWS estimates Nevada wetland losses amounted to 52% during the period 1780 to 1980 (Dahl, 1990). *Wetland loss* refers to former water and wetland resource areas that were altered by the diversion, channelization, or accelerated erosion of waterways, or by draining, dredging, filling, leveling, or inundation. California and Utah studies estimate losses of 95% and 90%, suggesting Nevada losses probably are somewhat greater than previously calculated (NDOW 2006). The state has not implemented a comprehensive wetland inventory program, so the information and analytical framework is lacking to estimate accurately current rates of loss or to reliably assess where, which resources, and how serious are the impacts. Therefore, the process of assessing ecosystem functions and socioeconomic values, historic impacts and modern threats of priority wetlands, draws on the collective knowledge and professional judgment of Nevada resource managers and scientists familiar with these wetland resources.

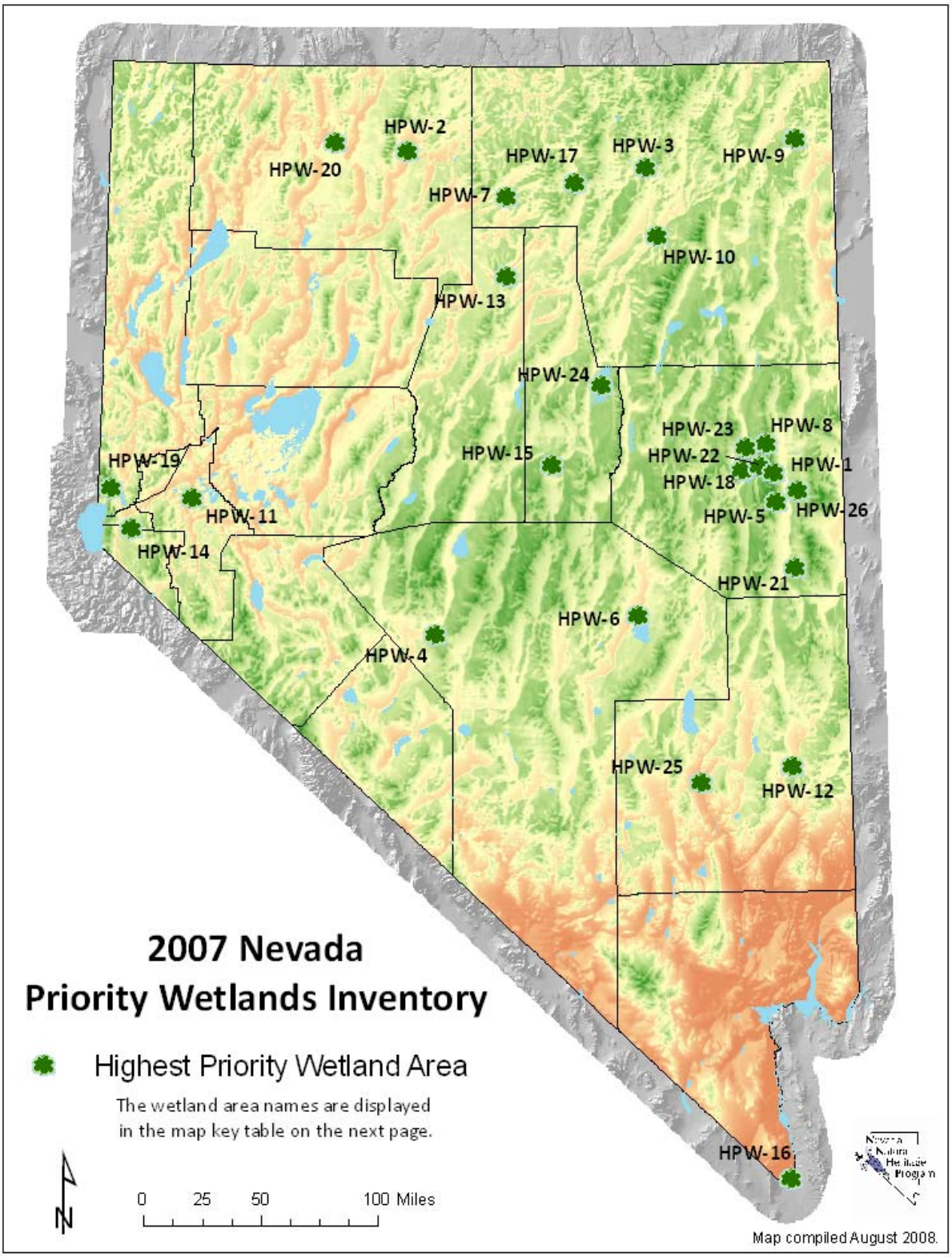
The NPWI identifies 234 valuable and vulnerable wetland areas listed in rank order (highest to lowest priority). The location map of Nevada's highest priority wetland areas appears on page 7. The rank of each wetland area is based on its group rating of stewardship urgency and then its combined rank score, which is the sum total of ratings (high=3, moderate=2, low=1, not applicable=0) of seven measures of wildlife and ecological function, a socioeconomic importance measure, and nine measures of land use and disturbance intensity. Notwithstanding the rank order, each priority wetland area in the inventory possesses some combination of wildlife, ecological, and socioeconomic characteristics and some combination of threats and deteriorating ecosystem health, which in the aggregate indicate elevated conservation importance and need. Nevada, whether urban or rural, agricultural or industrial, cannot afford the continuation of unmitigated wetland losses and achieve objectives to maintain and enhance our wildlife, water, and outdoor recreation resources.

The Evaluation Method section of the report summarizes the approach we developed to identify candidate priority areas, to systematically rate measures of historic impact, function and value, and threats, and the process of conducting evaluations. The Results section presents a tabulation of the ranked priority wetland areas and observations obtained from the evaluation process about priority wetlands. Lastly, the Strategic Direction section of the report identifies applicable programmatic strategies appropriate for wetland conservation in Nevada, particularly the affiliation of the NPWI to the Nevada Wildlife Action Plan (NDOW, 2006).

Schell Creek Range – A Priority Wetlands Landscape

The northern portion of the Schell Creek Range might be characterized as a priority wetland landscape. The stream riparian zones, wet meadows, and spring brooks were each ranked as highest priority wetlands. The aspen woodland habitat here also ranked high as a conservation priority. Photo by Susan Abele, The Nature Conservancy of Nevada.

NEVADA'S 26 HIGHEST PRIORITY WETLANDS



Map Key – Nevada's 26 Highest Priority Wetlands

Map No.	Priority Wetland Area Name	Rank
NPW-1	Schell Creek Range - stream riparian	1
NPW-2	Little Humboldt - below Chimney Res; Cottonwood, Martin lower, Santa Rosa east side creeks	2
NPW-3	North Fork Humboldt - Beaver Creek to headwaters, and tributaries	3
NPW-4	San Antonio Site - spring/brook	3
NPW-5	Schell Creek Range - wet meadow	3
NPW-6	Railroad Valley springs and marshes	4
NPW-7	Rock Creek upper, Squaw Valley - stream riparian woodland, wet meadow, marsh, springs/brooks	4
NPW-8	Schell Creek Range - spring/springbrook	4
NPW-9	Twentyone Mile Marsh - stream riparian marsh, wet meadow, springs/brooks	5
NPW-10	Humboldt River - Elburz to Palisade	6
NPW-11	Lahontan Reservoir, Carson river (above) – open water, riparian woodland	6
NPW-12	Meadow Valley Wash Lower - Elgin north to, including Clover Creek	6
NPW-13	Argenta marsh	7
NPW-14	Carson River/Carson Valley - river open water, Calif. border to Carson Valley exit	7
NPW-15	Clover Valley (north) spring pools and outlfows	7
NPW-16	Colorado River below Davis Dam Mojave river riparian	7
NPW-17	Owyhee South Fork - Independence Valley w/tribs	7
NPW-18	Steptoe Valley Middle - Bassett Lake	7
NPW-19	Truckee River Trib.s (Franktown, Galena, Whites, Thomas, Hunter, other creeks) - stream riparian	7
NPW-20	Quinn River Lakes - (near Kings River confluence) intermittent ponds	8
NPW-21	Spring Valley - Baking Powder Flat playa/ephemeral pool, spring pool/brook	8
NPW-22	Steptoe Valley Middle - Duck Creek discharge area	8
NPW-23	Steptoe Valley Middle - Basset Slough riparian meadow, marsh	9
NPW-24	Diamond Lake Playa - playa lake/pool, spring pool/brook	10
NPW-25	Pahranagat River/Valley - springs/brooks	10
NPW-26	Spring Valley - Yelland Lake playa/ephemeral pool, spring/brook, lowland stream, wet meadow, marsh	10

To view the entire list of priority wetland areas in rank order see Appendix 1 (page 25) and in alphabetical order by wetland area name see Appendix 2 (page 37).

EVALUATION METHOD

To meet the objective of producing a ranked list of priority wetlands, the NNHP, NDOW, and TNC collaborated to design an objective, systematic procedure to qualitatively rate specific wetland factors and a process to conduct evaluations in consultation with scientists and managers knowledgeable about wildlife, habitats and related wetland resources. The evaluation method is described in Appendix 3, Nevada Priority Wetlands Evaluation and Ranking Procedure.

Wetland Definition

The definition of wetland adopted by the USFWS is representative of the range of wetland types applied by resource managers familiar with Nevada's wildlife, water, and water influenced vegetation resources.

> *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes, (2) the substrate is predominantly undrained hydric soil, and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year*. (Cowardin 1979)

The definition encompasses isolated spring and stream riparian zone, intermittently flowing wash, and ephemeral playa lake and pool, most of which would not be included as wetland habitats if we applied the federal regulatory definition for the delineation of wetlands under Section 404 of the Clean Water Act. The categorizations of priority wetland types parallels the key habitat categories conceived for the Nevada Wildlife Action Plan (NWAP) (NDOW 2006). Narrative descriptions of the wetland habitat types can be viewed in the NWAP report at the page numbers indicated in parenthesis.

Aspen woodland (pp. 145 – 148)
Intermountain riparian (pp. 159 – 164)
Mojave riparian (pp. 179 – 183)
Sierran riparian (pp. 171 – 173)
Spring / springbrook (pp. 197 – 200)
Marsh, riverine marsh (pp. 211 – 214)
Wet meadow (pp. 189 – 192)
Playa lake / ephemeral pool (pp. 231 – 233)
Playa with spring, marsh, or phreatophytes (pp. 231 – 233)
Mojave wash (pp. 205 – 207)
Terminal lake / delta / shore (pp. 221 – 224)
Pond / reservoir (pp. 221 – 224)

The wetland habitat narratives in the NWAP also report on the importance of the habitat type to wildlife and problems facing the habit and wildlife. The NWAP can be viewed on the Internet at the NDOW website address http://ndow.org/wild/conservation/cwcs/#plan.

Candidate Priority Wetland Areas

The list of candidate priority wetland areas was compiled researching applicable conservation plans prepared by state and federal agencies and by conservation organizations oriented toward

important biological resources. The draft candidate list was distributed to reviewers of the Nevada Wetlands Priority Conservation Plan (NNHP 2006) and subsequently amended to include a number of additional wetland areas. The conservation plan source reports included:

- Nevada Wildlife Action Plan. Nevada Department of Wildlife. 2006.
- Scorecard, Highest Priority Conservation Sites. Nevada Natural Heritage Program. 2000.
- Great Basin Ecoregion-Based Conservation Blueprint. The Nature Conservancy. 2002.
- Mojave Desert Ecoregion-Based Conservation Report. The Nature Conservancy. 2002.
- Important Bird Area Program. Lahontan Audubon Society. 2005.
- Coordinated Implementation Plan for Bird Conservation in Nevada. Nevada Affiliate Intermountain West Joint Venture. 2002.
- Lahontan Cutthroat Trout Recovery Implementation Team Plans (Truckee and Walker River systems). U.S. Fish and Wildlife Service; and Lahontan Cutthroat Trout Species Management Plan for the Upper Humboldt River Drainage Basin. Nevada Department of Wildlife.
- Approved Threatened or Endangered Species Recovery Plans and Recovery Implementation Team Plans in Nevada, U.S. Fish and Wildlife Service (See Tables 4.7 and 4.8 in the Technical Review Draft, Nevada Wetlands Priority Conservation Plan for the tabulation of species and habitats represented (NNHP, 2006)).
- Approved Habitat Conservation Plans and Candidate Conservation Agreements in Nevada, U.S. Fish and Wildlife Service (See Table 4.6 in the Technical Review Draft, Nevada Wetlands Priority Conservation Plan for the tabulation of species and habitats represented (NNHP, 2006))
- 303(d) List of Impaired Waters, Biennial Report 2002-2003. Nevada Division of Environmental Protection. 2004.

The priority area list compiled from these sources represents wetlands demonstrably important for conservation of species or community diversity as well as population occurrences of rare or sensitive species or communities. These wetlands include focal areas for species of conservation priority identified by the NDOW, highest priority conservation sites with species ranked as rare and at risk by the NNHP, and the critical or otherwise vital habitats of species listed as threatened, endangered, or candidates for listing by the USFWS.

Because aquatic wildlife and their habitat needs are sensitive to water quality, we identified the stream reaches and water bodies from the 303(d) List of Impaired Waters (NDEP, 2004) that coincided with locations of priority wetland areas. Priority wetland areas associated with "303(d)-listed" waters were flagged as water quality stressed if the pollutants not in attainment of standards included nitrogen or phosphorous compounds, total suspended solids, turbidity, or temperature. The nonattainment status was a factor in selecting and ranking priority wetlands.

Evaluation Process and Procedure

The evaluation process required extensive consultation with scientists and managers knowledgeable about wetlands in the priority areas and associated wildlife, habitats, water resources, and their use and management. The project team staffed by NNHP, NDOW, and TNC

conducted two rounds of three regional expert workshops held in Reno, Elko, and Las Vegas. Training and group application of the evaluation method was conducted during the first round of workshops, and many experts attending the workshops volunteered to perform unfinished evaluations individually or in concert with other knowledgeable individuals. A second round of workshops was held after evaluations were completed and the results compiled. The second workshops provided the opportunity to review and fine-tune the group's ratings and rankings.

Each priority wetland area name includes identification of the geographic unit and type of wetland habitat(s). An entire range or watershed was identified as the geographic unit for some priority areas, which were often differentiated by wetland habitat types for the evaluation. An example is the Schell Creek Range, which is represented as four priority wetland areas differentiated by wet meadows, aspen woodlands, stream riparian, and spring/springbrook habitats. A full stepwise explanation of the evaluation procedure appears as Appendix 3. The metrics, factors, and approach to rating are summarized below.

- *Historical Impact*. An estimate of the historical impact of human activity expressed as a percent of the priority wetlands intact, eliminated, converted, or degraded (sum of percentages = 100) in the priority wetland area. Considering the manner and effects of historic land use on wetlands gives context for the evaluation of stressors and stress intensity.

- *Ecosystem Functions and Values and Socioeconomic Importance*. Ecosystem functions and values were measured qualitatively using the four level rating system (rating of high=3, moderate=2, low=1, or not applicable=0). See Table 3.A. and Table 3.B. (Appendix 3) for descriptions of the functions and values and for factors and measures to guide rating decisions. Seven measures of ecosystem function/value were rated:

  Wildlife habitat, diversity, food web support
  Special status wetland dependent taxa
  Hydrology and water supply
  Erosion and sediment control
  Flood control
  Water quality maintenance
  Outdoor recreation

  Socioeconomic Importance is an inferred measure of the cultural and economic benefits and the socioeconomic services that surrounding communities receive from the ecosystem functions and values attributed to the priority wetlands in the area. This metric was rated as high (3), moderate (2), or low (1).

- *Sources of Stress and Stress Intensity and Stewardship Urgency*. Stressors and stress intensity analysis is equivalent to the threats assessment of the national priority wetland planning guidance. Step 4 in Appendix 3 describes the types of stressors (threats) and rating criteria. A four-level rating system also was used to rate intensity of the ten stressors:

  Surface water diversion / development
  Groundwater pumping
  Hydrogeomorphic modification
  Land development
  Farming
  Livestock grazing
  Mining
  Outdoor recreation
  Nonnative plants or animals
  Energy development
  Military mission

Stewardship Urgency was rated as high (=3), moderate (=2), or low (=1). The rating rationale implicitly weighs historic impacts and modern land use and disturbance, but the principle consideration is the status of conservation plan implementation, management, and funding, and is a measure of the immediacy of need for new or enhanced management response to mitigate or reverse threats of further loss, degradation or fragmentation. Rating criteria for stewardship urgency appears in Table 4C, Appendix 3.

Rank Score, Tier, and Rank Position

A rank score for each priority wetland area was computed by totaling the ratings of the seven ecosystem function/value factors, the socioeconomic importance factor, and the ten stressor/stress intensity factors. To superimpose the importance of the relationship between wildlife and wetlands in an arid state, the ratings of the wildlife habitat/diversity/food web support and special status wetland dependent taxa factors were doubled (rating of high=6, moderate=4, low=2, not applicable=0.

A tiered structure was used to group wetland areas by priority class and stewardship urgency rating. Priority wetland areas with rank scores of 40 or greater were placed in the high priority class. The middle priority class included wetland areas with rank scores in the 39 to 30 range. Wetland areas with rank scores less than 30 were classified as low priority.

Each wetland area was placed in a bi-modal tier. The tier structure is as follows:

Tier Order	Priority Class	Stewardship Urgency
Highest	High	High
	High	Moderate
	Middle	High
	High	Low
	Middle	Moderate
	Low	High
	Middle	Low
	Low	Moderate
Lowest	Low	Low

Using a tiered system provided the flexibility for adjusting the priority ranking order with deference to the stewardship urgency rating. Giving greater weight to stewardship urgency recognizes the limited authority and operational capacity of conservation agencies to protect wetlands. Thus, wetland areas in the high priority class with a slightly lower rank score but considered to be at relatively greater risk, or immediately threatened, occupy a higher rank position. Within each tier, the wetland areas were prioritized according to the rank score.

Results

Nevada's priority wetlands inventory is presented in rank order (descending) as Appendix 1. The priority inventory lists 234 wetland areas; however, the lowest rank position is 81. A rank position is occupied by multiple wetland areas for those wetland areas that qualified for the same tier (determined by stewardship urgency rating and priority class) and had an identical rank score. Modifying the rank order such that each rank position would correspond with only one wetland area would necessitate making speculative or subjective distinctions, and moreover would not improve the quality of information conveyed to resource managers, land use planners, and other end users of the NPWI.

Appendix 2 displays an alphabetical list of the 234 priority wetland areas with evaluation scoring details for each factor, metric, and total score. Consult Appendix 3 for definitions of terms and descriptions of measures and rating criteria.

The first tier wetland areas were designated "highest priority wetland areas" and are listed in the table below. The Stewardship Urgency for these priority areas was rated high and they also obtained a rank score of forty or greater, the threshold for placement in the High Priority Class.

Nevada's 26 Highest Priority Wetland Areas (2007 Inventory)

Rank	Wetland Area	Strategic Emphasis	Groundwater Basin*	Conservation Plan Sources	Wetland Type
1	Schell Creek Range - stream riparian	Restoration	Steptoe Valley* Spring Valley	NDOW, TNC, IBA, NAIWJV	Intermountain Riparian
2	Little Humboldt - below Chimney Res; Cottonwood, Martin lower, Santa Rosa east side creeks	Easement / Incentive	Paradise Valley* Winnemucca Segment*	NDOW	Intermountain Riparian
3	North Fork Humboldt - Beaver Creek to headwaters, and tributaries	Easement / Incentive	North Fork Area*	NDOW	Intermountain Riparian
3	San Antonio Site - spring/brook	Restoration	Big Smoky Valley-Tonopah Flat*	NDOW	Spring / Springbrook
3	Schell Creek Range - wet meadow	Restoration	Steptoe Valley* Spring Valley	NDOW, TNC, IBA, NAIWJV	Wet Meadow
4	Railroad Valley springs and marshes	Restoration	Railroad Valley Northern Part	NDOW, TNC, IBA, NAIWJV, NNHP, USFWS/HCP	Spring / Springbrook
4	Rock Creek upper, Squaw Valley - stream riparian woodland, wet meadow, marsh, springs/brooks	Preservation	Willow Creek Valley Rock Creek Valley	NDOW	Intermountain Riparian
4	Schell Creek Range - spring/springbrook	Restoration	Steptoe Valley * Spring Valley	NDOW, TNC, IBA, NAIWJV	Spring / Springbrook

Nevada's 26 Highest Priority Wetland Areas (2007 Inventory)					
Rank	**Wetland Area**	**Strategic Emphasis**	**Groundwater Basin***	**Conservation Plan Sources**	**Wetland Type**
5	Twentyone Mile Marsh - stream riparian marsh, wet meadow, springs/brooks	Preservation	Thousand Springs*	NNHP, NDOW	Riparian Marsh
6	Humboldt River - Elburz to Palisade	Restoration	Elko Segment* Lamoille Valley*	NDOW, TNC, IBA, NAIWJV, NDEP-WQ	Intermountain Riparian
6	Lahontan Reservoir, Carson river (above) – open water, riparian woodland	Easement / Incentive	Churchill Valley*	IBA, NAIWJV	Intermountain Riparian
6	Meadow Valley Wash Lower - Elgin north to, including Clover Creek	Restoration	Lower Meadow Valley Wash*	NDOW, TNC, IBA, NAIWJV, USFWS/T&E	Intermountain Riparian
7	Argenta marsh	Restoration	Boulder Flat Lower* Reese River Valley	NDOW, TNC, IBA, NAIWJV, NDEP-WQ	Riparian Marsh
7	Carson River/Carson Valley - river open water, CA border to Carson Valley exit	Restoration	Carson Valley*	NDOW, TNC, IBA, NAIWJV	Intermountain Riparian
7	Clover Valley (north) spring pools and outlfows	Easement / Incentive	Clover Valley*	NDOW, NNHP	Spring / Springbrook
7	Colorado River below Davis Dam Mojave river riparian	Restoration	Colorado River Valley*	IBA, NAIWJV; USFWS/T&E	Mojavean Riparian
7	Owyhee South Fork - Independence Valley w/tribs	Restoration	Independence Valley*	NDOW, NDEP-WQ	Intermountain Riparian
7	Steptoe Valley Middle - Bassett Lake	Preservation	Steptoe Valley*	NDOW, TNC, IBA, NAIWJV	Pond / Reservoir
7	Truckee River Trib.s (Franktown, Galena, Whites, Thomas, Hunter, other creeks) - stream riparian	Easement / Incentive	Washoe Valley* Truckee Meadows*	NDOW, IBA, NAIWJV, USFWS/LCT, NDEP-WQ	Sierran Riparian
8	Quinn River Lakes - (near Kings River confluence) intermittent ponds	Preservation	Quinn River Valley*	NDOW, IBA, NAIWJV	Pond / Reservoir
8	Spring Valley - Baking Powder Flat playa/ephemeral pool, spring pool/brook	Preservation	Spring Valley	NDOW	Playa w/Springs
8	Steptoe Valley Middle - Duck Creek discharge area	Preservation	Steptoe Valley*	NDOW	Marsh
9	Steptoe Valley Middle - Basset Slough riparian meadow, marsh	Preservation	Steptoe Valley*	NDOW, TNC, IBA, NAIWJV	Wet Meadow
10	Diamond Lake Playa - playa lake/pool, spring pool/brook	Restoration	Diamond Valley*	NDOW, TNC	Playa w/Springs
10	Pahranagat River/Valley - springs/brooks	Easement / Incentive	Pahranagat Valley	NDOW, NNHP, USFWS/T&E	Spring / Springbrook

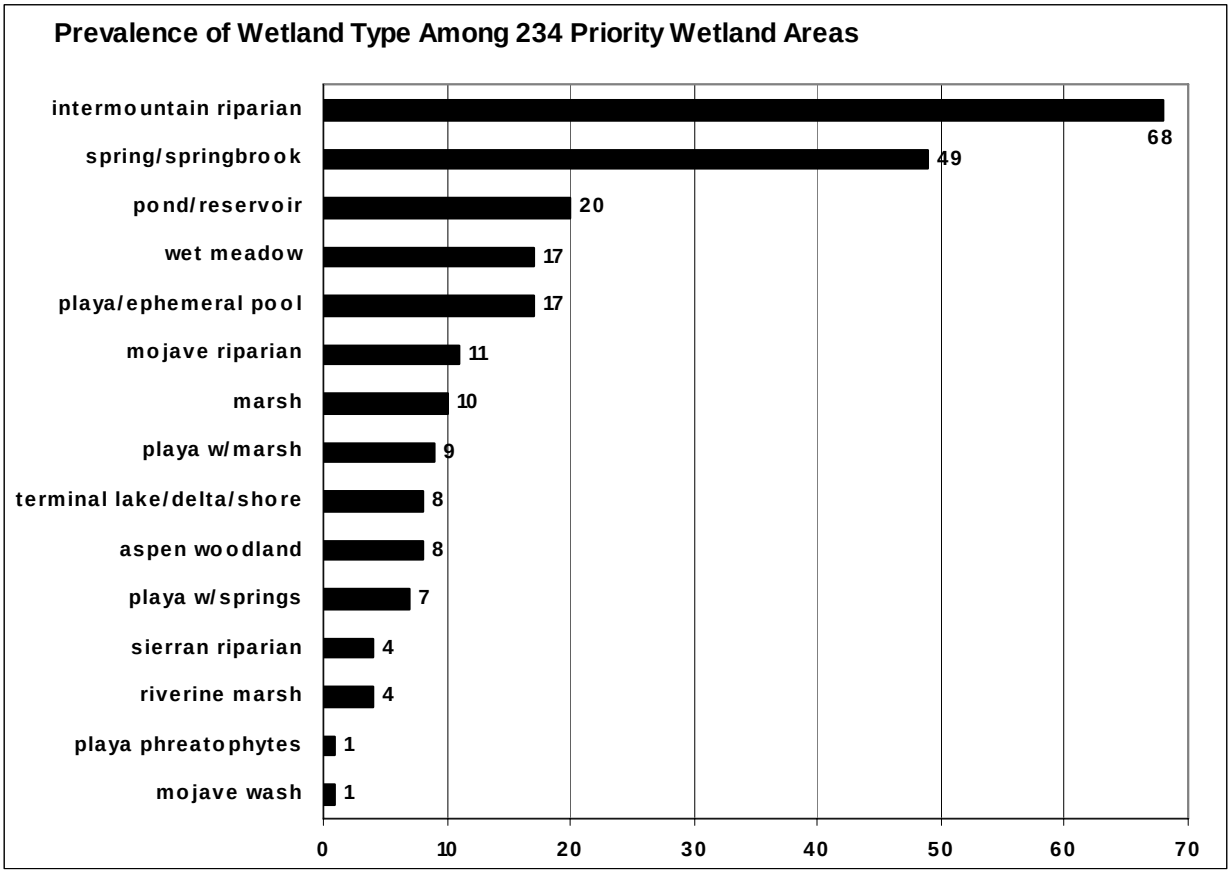
Nevada's 26 Highest Priority Wetland Areas (2007 Inventory)					
Rank	**Wetland Area**	**Strategic Emphasis**	**Groundwater Basin***	**Conservation Plan Sources**	**Wetland Type**
10	Spring Valley - Yelland Lake playa/ephemeral pool, spring/brook, lowland stream, wet meadow, marsh	Preservation	Spring Valley	NDOW	Playa w/Springs

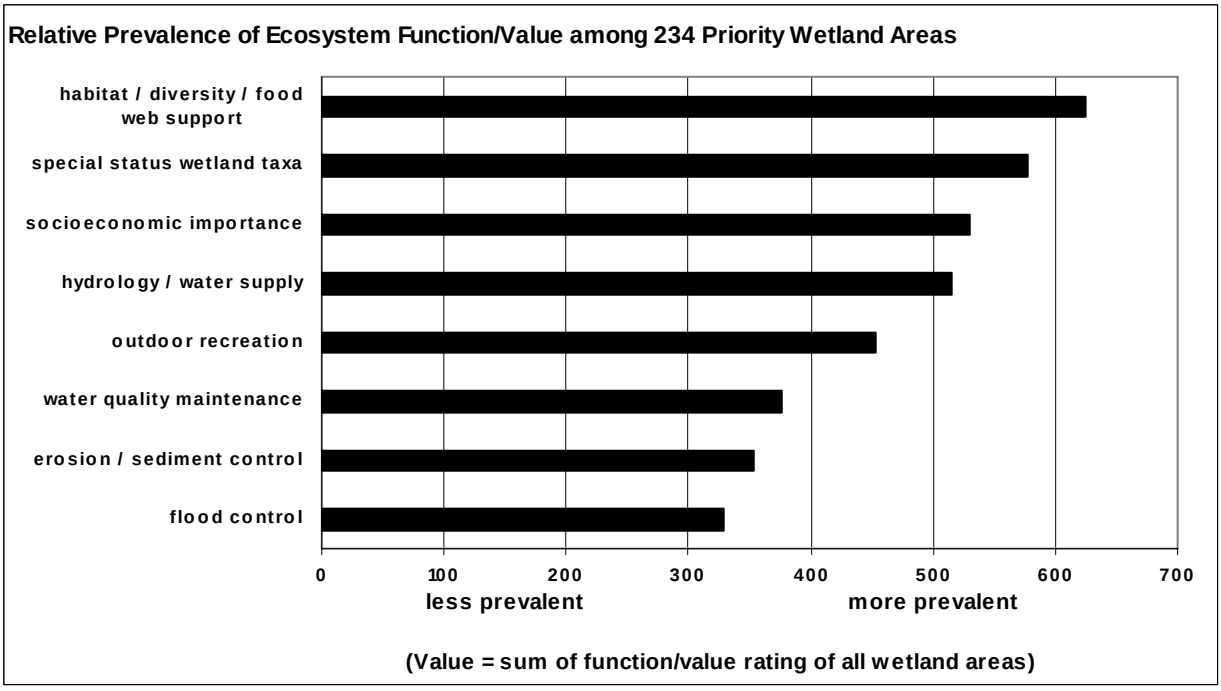
Column 5 Key Code:
NDOW – Nevada Wildlife Action Plan. Nevada Department of Wildlife. 2006.
NNHP – Scorecard, Highest Priority Conservation Sites. Nevada Natural Heritage Program. 2000.
TNC – Great Basin Ecoregion-Based Conservation Blueprint. The Nature Conservancy. 2002.
TNC – Mojave Desert Ecoregion-Based Conservation Report. The Nature Conservancy. 2002.
IBA – Important Bird Area Program. Lahontan Audubon Society. 2005.
NAIWJV – Coordinated Implementation Plan for Bird Conservation in Nevada. Nevada Affiliate Intermountain West Joint Venture. 2002.
USFWS/LCT – Lahontan Cutthroat Trout Recovery Implementation Team Plans, Truckee and Walker River systems, USFWS; and, Lahontan Cutthroat Trout Species Management Plan for the Upper Humboldt River Drainage Basin, Nevada Department of Wildlife.
USFWS/T&E – Approved Threatened or Endangered Species Recovery Plans and Recovery Implementation Team Plans in Nevada, U.S. Fish and Wildlife Service (See Tables 4.7 and 4.8, Nevada Wetlands Priority Conservation Plan for the tabulation of species and habitats represented.)
USFWS/HCP – Approved Habitat Conservation Plans and Candidate Conservation Agreements in Nevada, U.S. Fish and Wildlife Service (See Table 4.6, Nevada Wetlands Priority Conservation Plan for the tabulation of species and habitats represented.)
NDEP-WQ – 303(d) List of Impaired Waters, Biennial Report 2002-2003. Nevada Division of Environmental Protection. 2004.

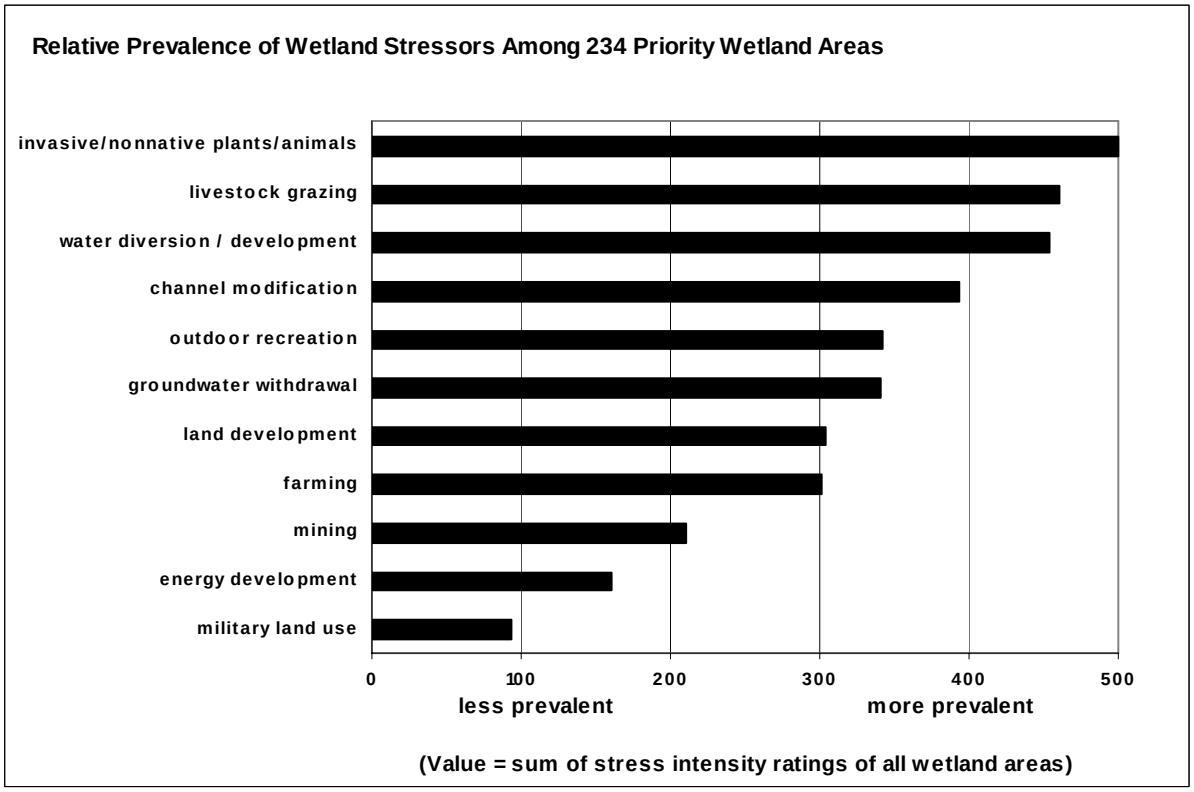
In the preceding table, groundwater basin names followed by an * indicates the basin is in a "designated" status. A groundwater basin is "designated" by order of the Nevada State Engineer. A basin may be designated when the combined permitted groundwater rights approach or exceed the estimated average annual recharge and the groundwater resources are being depleted or require additional administration in the interest of public welfare declare Preferred Uses (e.g., municipal and industrial, domestic, agriculture, etc.) (Nevada Division of Water Planning, 1998). A basin's status as designated is an indicator of potential hydrologic risk for priority wetland areas supported by groundwater.

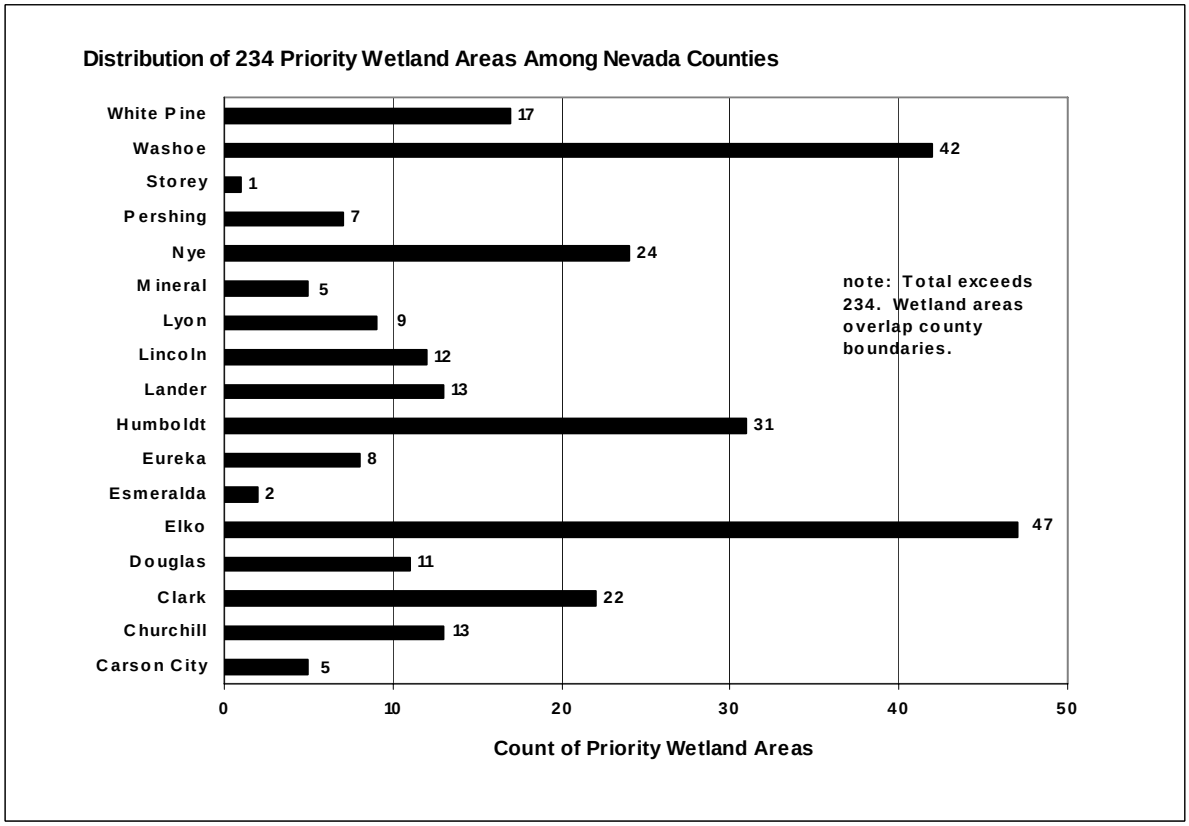
Four bar charts are presented below to highlight characteristics about the set of 234 priority wetland areas in Nevada. The information about the relative prominence of wetland types, ecosystem functions and values, stressor, and frequency of occurrence by county in Nevada may be useful in other conservation planning contexts. The charts are titled:

- Prevalence of Wetland Types among 234 Priority Wetland Areas;
- Relative Prevalence of Ecosystem Functions and Values among 234 Priority Wetland Areas;
- Relative Prevalence of Wetland Stressors among 234 Priority Wetland Areas; and,
- Distribution of 234 Priority Wetland Areas among Nevada Counties.


Prevalence of Wetland Type Among 234 Priority Wetland Areas
intermountain riparian
spring/springbrook
pond/reservoir
wet meadow
playa/ephemeral pool
mojave riparian
marsh
playa w/marsh
terminal lake/delta/shore
aspen woodland
playa w/springs
sierran riparian
riverine marsh
playa phreatophytes
mojave wash
68
49
20
17
17
11
10
9
8
8
7
4
4
1
1
0
10
20
30
40
50
60
70


Relative Prevalence of Ecosystem Function/Value among 234 Priority Wetland Areas
habitat / diversity / food web support
special status wetland taxa
socioeconomic importance
hydrology / water supply
outdoor recreation
water quality maintenance
erosion / sediment control
flood control
0
100
200
300
400
500
600
700
less prevalent
more prevalent
(Value = sum of function/value rating of all wetland areas)

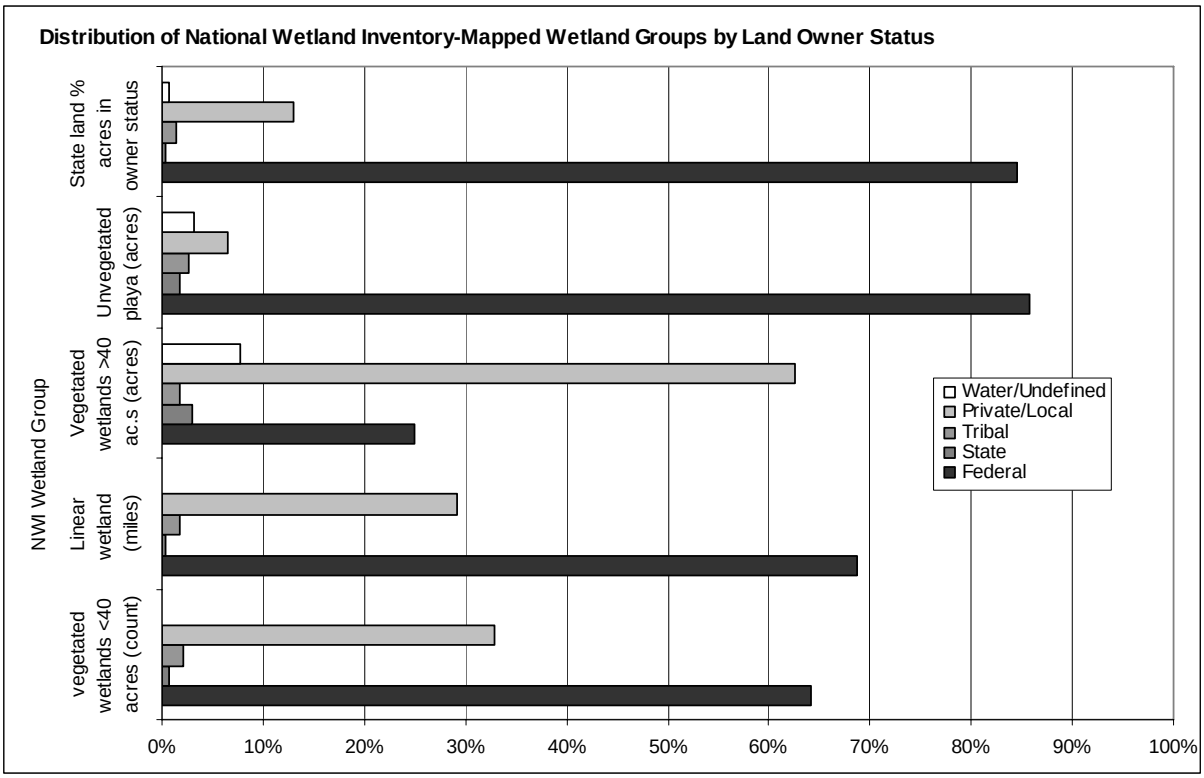

Relative Prevalence of Wetland Stressors Among 234 Priority Wetland Areas
invasive/nonnative plants/animals
livestock grazing
water diversion / development
channel modification
outdoor recreation
groundwater withdrawal
land development
farming
mining
energy development
military land use
0
100
200
300
400
500
less prevalent
more prevalent
(Value = sum of stress intensity ratings of all wetland areas)


Distribution of 234 Priority Wetland Areas Among Nevada Counties
White Pine 17
Washoe 42
Storey 1
Pershing 7
Nye 24
Mineral 5
Lyon 9
Lincoln 12
Lander 13
Humboldt 31
Eureka 8
Esmeralda 2
Elko 47
Douglas 11
Clark 22
Churchill 13
Carson City 5
note: Total exceeds 234. Wetland areas overlap county boundaries.
0
10
20
30
40
50
Count of Priority Wetland Areas

Strategic Guidance

The National Wetlands Priority Conservation Plan (USFWS, 1991) emphasizes public acquisition as the overarching strategy to initiate wetland conservation action (USFWS, 1989). The purpose of acquiring fee title interest or less than fee title interest (e.g., conservation easement, deed restriction on development) is to permanently protect and/or improve the public interest values deriving from a wetland with regard to its biological and ecological attributes and socioeconomic benefits. Federal and state agencies also administer private landowner incentive programs that involve an agreement to pay owners to restore wetland habitats.

A large amount of Nevada is administered by federal land management agencies, but a comparatively greater share of wetlands occurs on private land. In the bar chart (below), the top bar cluster shows the proportionate distribution of total land surface (acres) by owner status: private/local (11.5% / 1.5%), tribal (1.4%), state (0.3%), and federal (84.6%). Subsequent bar clusters display the percentages of wetland groups partitioned by owner status. Totals for each wetland group were obtained from mapping by the National Wetland Inventory (NWI) (USFWS, 2002) and spatial analysis by the NNHP. The chart shows that in Nevada a larger share of wetlands occur on private land compared to the small percentage of private/local land (with the exception of unvegetated playas). The area of each linear wetland (e.g., narrow riparian zones) and vegetated wetlands less than 40 acres (e.g., springs) were too small to estimate at the mapped scale. For vegetated wetlands >40 acres (e.g., marsh, wet meadow, and river and stream riparian zones) 62% of the total acreage occurs on private land and 25% on federal (NNHP, 2006). In general, wetland owner status is used as an indicator of the level of protection, the intensity of land use or management, and the appropriateness of acquisition as a conservation strategy.



Strategic Emphasis

The "strategic emphasis" for each priority wetland area is shown in column seven of the Nevada Priority Wetland Inventory – Rank Order Index (Appendix 1). The general strategic conservation alternatives are preservation, restoration, or easement/incentives. The primary factor used to identify the more suitable strategic emphasis was the proportionate amount of a wetland area estimated to be historically impacted – i.e., intact, degraded, or converted. The impact factors are defined in the Priority Wetlands Evaluation and Ranking Procedure (Appendix 3). Other factors taken into consideration to discern appropriate strategic direction included ownership, federal protection status, public land management status, and characteristics of potentially applicable acquisition or incentive funding programs.

Priority areas identified as Preservation targets were estimated to have ≥ 40% of the wetlands rated as "intact." Generally, intact wetland areas occur on public lands, exhibit a high degree of natural form and function, and may require additional management to retain natural attributes. Priority areas identified as Restoration targets were estimated to have ≥ 50% of the wetlands rated as "degraded." Priority areas in the Easement/Incentive strategy class were estimated to have ≥ 50% of the wetlands rated as "converted." Converted wetlands are defined as having been modified for land use, such as grazing, farming, water development, or recreation, but vestiges of natural characteristics and functions exist. Converted wetlands by definition are located on private land or on public land with the land use permitted by a management agency.

Conservation Strategies

Conservation strategies for wetland habitat types and species of conservation priority have been created for the NWAP. Strategies and implementation actions for each of the priority wetland types can be viewed in the NWAP on the pages shown in parentheses. The NWAP can be viewed on or downloaded from the Internet at http://ndow.org/wild/conservation/cwcs/#plan.

Aspen woodland (pp. 145 – 148)
Intermountain riparian (pp. 164 – 167)
Mojave riparian (pp. 183 – 186)
Sierran riparian (pp. 173 – 176)
Spring / springbrook (pp. 200 – 203)
Marsh, riverine marsh (pp. 215 – 218)
Wet meadow (pp. 192 – 194)
Playa lake / ephemeral pool (pp. 233 – 235)
Playa with spring, marsh, or phreatophytes (pp. 231 – 233)
Mojave wash (pp. 207 – 209)
Terminal lake / delta / shore (pp. 225 – 228)
Pond / reservoir (pp. 225 – 228)

In addition, the indicated pages provide guidance on partnerships, plans and programs to assist in implementation actions which are applicable to the wetland areas in the NPWI. Some of these strategies are part of ongoing implementation plans, others have recently been initiated, while the remainder will begin as human resources and funding becomes available.

The final NPWI report will be distributed to federal, state, and tribal agencies, as well as nongovernmental conservation organizations. These entities will be asked and encouraged to make decisions and take actions that positively impact Nevada's priority wetlands in their grant,

incentive, conservation planning, and resource management programs and give special deference to project activities that would improve protection and restoration of the ecology and environment of the 26 highest priority wetland areas.

Another approach to encouraging conservation of the priority wetlands is through grant programs which provide funding for protective acquisition or conservation easements and wildlife habitat restoration or water quality improvement. The Nevada Conservation and Resource Protection (Q1) Grant Program administered by the Nevada Division of State Lands plans to adjust their project ranking criteria so that extra weight is given to proposed acquisition applications that will result in protection of highest priority wetland areas. Several conservation organizations and agencies preparing grant applications have already requested information from the NPWI to include with their Q1 grant applications. Managers of other state grant programs have been contacted and expressed willingness to make similar project criteria ranking accommodations when the NPWI is approved. Potential state agency partners include the Nevada Division of State Parks (Q1 and L&WCF grant programs), Nevada Division of Environmental Protection (Clean Water Act Section 319 grant funding for nonpoint source pollution control) and the Nevada Department of Wildlife (Q1 Grant and Landowner Incentive programs).

The bar graph on page 16 of this report indicates that springs and brooks are a prominent wetland type that is in need of additional conservation attention. The NNHP is implementing the Nevada Wetland Information System and Spring Habitat Conservation Plan project, in partnership with the Desert Research Institute (DRI), and The Nature Conservancy (TNC). The purpose of the project is to advance conservation of biologically important spring wetlands by providing current data and analytical results describing the biology, ecology, stresses, disturbance conditions, and conservation status.

- Conduct biological surveys at approximately 300 springs associated with rare and at risk species.
- Establish a comprehensive database for spring and other wetland communities as part of the development of a statewide wetland information clearinghouse service in the NNHP.
- Update the NNHP Biotics databases with pertinent spring survey data, including spatial, rare and at risk and exotic species occurrences, site and plant community characteristics, etc.
- Update the DRI desert spring dataset for a study of changes in the biological integrity since the springs were surveyed previously.
- Develop a springs conservation plan using TNC's Conservation Action Planning process to evaluate ecological integrity of surveyed springs and identify conservation strategies.

The wetland information system and spring conservation project is scheduled to be completed in June 2010. The results and conclusions of the springs conservation plan will be presented in a public workshop and the final report widely distributed. This project is jointly funded by the U.S. Environmental Protection Agency as a Wetland Program Development Grant project and the State of Nevada Q1 Program grant administered by the Nevada Division of State Lands for the development of habitat conservation plans.

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APPENDICES

APPENDIX 1. Nevada Priority Wetlands Inventory – Rank Order Index

APPENDIX 2. Alphabetical Listing and Factor Ratings for 234 Nevada Priority Wetland Areas

APPENDIX 3. Nevada Priority Wetlands Evaluation and Ranking Procedure

APPENDIX 1. Nevada Priority Wetlands Inventory – Rank Order Index

Column Heading	Explanation
Rank	The priority rank position (number) of each wetland area. The rank is a function first of the placement of the wetland area in the appropriate Priority Class/Stewardship Urgency tier, and second, the rank score position within the tier. Priority areas within the same tier and with the same rank score occupy the same rank position.
Rank Score	Rank Score = total of the sum (seven ecosystem function and value ratings) + (socioeconomic importance rating) + sum (ten stress intensity ratings). The rank score is used to place wetland areas in priority rank position.
Priority Class	High, Middle, or Low priority. Wetland area priority class is determined by range of rank score. High Priority = Rank score ≥ 40 Middle Priority = Rank score < 40 and ≥ 30 Low Priority = Rank score < 30
Stewardship Urgency	Relative measure of the immediacy of the need for a management response to current or imminent threats determined by evaluation of the impact of protective regulations (if any) and management actions (if any) on deterring the loss or degradation of priority wetlands. *High* - No regulatory protection or limited protection weakly enforced. Management plans not prepared or plans done but management actions not implemented or funding not authorized. *Moderate* - Certain wetlands protected by regulation, or certain wetland resources protected by regulation; enforcement weak or infrequent. Management plans prepared but implementation a low priority; funding intermittent or uncertain. *Low* - Regulations provide limited protection of wetlands and/or wetland-associated resources; enforcement often adequate. Management plans partially implemented and generally funded.
Wetland Area	Two part naming convention representing the geographic place name of the wetland area (e.g., valley, basin, range, creek, marsh, ranch, etc.) and description of the wetland type(s).
Wetland Habitat Type	The predominant wetland habitat of the priority wetland area. Some priority areas have multiple wetland types (e.g., Toquima Range wet meadow and Toquima Range aspen woodland). The wetland habitat type corresponds with the key habitat classification used for wetland and aquatic systems in the Nevada Wildlife Action Plan (NDOW, 2006).
Strategic Emphasis	Preservation, Restoration, or Easement/Incentive class; determined by Historic Impact rating as follows: Preservation: ≥ 40% of the wetlands in the priority area rated "intact" Restoration: ≥ 50% of the wetlands in the priority area rated "degraded" Easement/Incentive: ≥ 50% of the wetlands in the priority area rated "converted"
Administrative Groundwater Basin	The groundwater basin(s) containing the priority wetland area. Administrative Groundwater Basins are used by the Nevada State Engineer in the administration of state water law. Source map: Designated Groundwater Basins of Nevada. Department of Conservation and Natural Resources, Office of the State Engineer. September 2005.
County	The county or counties in which the priority wetland area is located.

Rank Order Notes. Priority wetland areas are ordered first in tiers corresponding with Priority Class and Stewardship Urgency and then ordered by Rank Score within Priority Class/Stewardship Urgency tiers. Rank Scores in the High Priority Class range from 40 and above, Middle Priority score range from 30 to 39, and Low Priority scores range from 29 and below. The ordering of Priority Class/Stewardship Urgency tiers is: High/High, High/Moderate, Middle/High, High/Low, Middle/Moderate, Low/High, Middle/Low, Low/Moderate, and Low/Low. Multiple wetland areas in the same tier and with the same rank score occupy the same rank position in the inventory.

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
1	52	High	High	Schell Creek Range - stream riparian	Intermountain Riparian	Restoration	Steptoe Valley Spring Valley	White Pine
2	51	High	High	Little Humboldt - below Chimney Reservoir; Cottonwood, Martin lower, Santa Rosa east side creeks	Intermountain Riparian	Easement / Incentive	Paradise Valley Winnemucca Segment	Humboldt
3	47	High	High	North Fork Humboldt - Beaver Creek to headwaters, and tributaries	Intermountain Riparian	Easement / Incentive	North Fork Area	Elko

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
3	47	High	High	San Antonio Site - spring/brook	Spring / Springbrook	Restoration	Big Smoky Valley-Tonopah Flat	Nye
3	47	High	High	Schell Creek Range - wet meadow	Wet Meadow	Restoration	Steptoe Valley Spring Valley	White Pine
4	46	High	High	Railroad Valley springs and marshes	Spring / Springbrook	Restoration	Railroad Valley Northern Part	Nye
4	46	High	High	Rock Creek upper, Squaw Valley - stream riparian woodland, wet meadow, marsh, springs/brooks	Intermountain Riparian	Preservation	Willow Creek Valley Rock Creek Valley	Elko
4	46	High	High	Schell Creek Range - spring/springbrook	Spring / Springbrook	Restoration	Steptoe Valley Spring Valley	White Pine
5	45	High	High	Twentyone Mile Marsh - stream riparian marsh, wet meadow, springs/brooks	Riparian Marsh	Preservation	Thousand Springs	Elko
6	44	High	High	Humboldt River - Elburz to Palisade	Intermountain Riparian	Restoration	Elko Segment Lamoille Valley	Elko
6	44	High	High	Lahontan Reservoir, Carson river (upstream reach) – open water, riparian woodland	Intermountain Riparian	Easement / Incentive	Churchill Valley	Lyon Churchill
6	44	High	High	Meadow Valley Wash Lower - Elgin north to, including Clover Creek	Intermountain Riparian	Restoration	Lower Meadow Valley Wash	Lincoln
7	43	High	High	Argenta Marsh	Riparian Marsh	Restoration	Boulder Flat Lower Reese River Valley	Lander
7	43	High	High	Carson River/Carson Valley - river open water, California border to Carson Valley exit	Intermountain Riparian	Restoration	Carson Valley	Douglas
7	43	High	High	Clover Valley (north) spring pools and outflows	Spring / Springbrook	Easement / Incentive	Clover Valley	Elko
7	43	High	High	Colorado River below Davis Dam Mojave river riparian	Mojave Riparian	Restoration	Colorado River Valley	Clark
7	43	High	High	Owyhee South Fork - Independence Valley w/tributaries	Intermountain Riparian	Restoration	Independence Valley	Elko
7	43	High	High	Steptoe Valley Middle - Bassett Lake	Pond / Reservoir	Preservation	Steptoe Valley	White Pine
7	43	High	High	Truckee River Trib.s (Franktown, Galena, Whites, Thomas, Hunter, other creeks) - stream riparian	Sierra Riparian	Easement / Incentive	Washoe Valley Truckee Meadows	Washoe
8	42	High	High	Quinn River Lakes - (near Kings River confluence) intermittent ponds	Pond / Reservoir	Preservation	Quinn River Valley	Humboldt
8	42	High	High	Spring Valley - Baking Powder Flat playa/ephemeral pool, spring pool/brook	Playa w/Springs	Preservation	Spring Valley	White Pine
8	42	High	High	Steptoe Valley Middle - Duck Creek discharge area	Marsh	Preservation	Steptoe Valley	White Pine
9	41	High	High	Steptoe Valley Middle - Basset Slough riparian meadow, marsh	Wet Meadow	Preservation	Steptoe Valley	White Pine
10	40	High	High	Diamond Lake Playa - playa lake/pool, spring pool/brook	Playa w/Springs	Restoration	Diamond Valley	Eureka
10	40	High	High	Pahranagat River/Valley - spring/brook	Spring / Springbrook	Easement / Incentive	Pahranagat Valley	Lincoln
10	40	High	High	Spring Valley - Yelland Lake playa/ephemeral pool, spring/brook, lowland stream, wet meadow, marsh	Playa w/Springs	Preservation	Spring Valley	White Pine

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
11	53	High	Moderate	Big Smoky Valley springs / brooks (Charnock, Darroughs, Alkali Flat)	Spring / Springbrook	Restoration	Big Smoky Valley Northern Part	Nye Lander
11	53	High	Moderate	White Mountains - Wet Meadow	Wet Meadow	Restoration	Fish Lake Valley	Esmeralda
12	52	High	Moderate	Virgin River lower, state border to Halfway Wash - river riparian	Mojave Riparian	Restoration	Virgin River Valley	Clark
13	50	High	Moderate	Lamoille Valley	Intermountain Riparian	Preservation	Lamoille Valley	Elko
13	50	High	Moderate	Toquima Range - Wet Meadow	Wet Meadow	Restoration	Big Smoky Valley Northern Part Monitor Valley Northern Part	Nye
14	49	High	Moderate	Mason Valley - Walker River riparian	Intermountain Riparian	Easement / Incentive	Mason Valley	Lyon
14	49	High	Moderate	Toiyabe Range - stream riparian	Intermountain Riparian	Preservation	Big Smoky Valley Northern Part Upper Reese River Valley	Nye Lander
14	49	High	Moderate	Toiyabe Range - Wet Meadow	Wet Meadow	Restoration	Big Smoky Valley Northern Part Upper Reese River Valley	Nye Lander
15	48	High	Moderate	Monitor Range (upper elev.) - stream riparian	Intermountain Riparian	Preservation	Monitor Valley Southern Part Little Fish Lake Valley	Nye
15	48	High	Moderate	Monitor Range (upper elev.) - wet meadow	Wet Meadow	Restoration	Monitor Valley Southern Part Little Fish Lake Valley	Nye
16	47	High	Moderate	Ash Meadows spring complex w/stream, marsh	Spring / Springbrook	Restoration	Amargosa Desert	Nye
17	45	High	Moderate	Ash Meadows wet meadow	Wet Meadow	Restoration	Amargosa Desert	Nye
17	45	High	Moderate	Quinn River, Quinn River V. - lowland river riparian, shrubland, wet meadow	Wet Meadow	Preservation	Quinn River Valley	Humboldt
18	44	High	Moderate	Summit Lake tributaries (Mahogany, Summer Camp, Snow crk.s) - stream riparian	Intermountain Riparian	Preservation	Summit Lake Valley	Washoe
19	43	High	Moderate	Ash Meadows - riparian willow, ash, mesquite woodland; saltbush shrubland	Mojave Riparian	Restoration	Amargosa Desert	Nye
19	43	High	Moderate	Monitor Range (upper elev.) - Spring/brook	Spring / Springbrook	Preservation	Monitor Valley Southern Part Little Fish Lake Valley	Nye
19	43	High	Moderate	Washoe Valley - lake-reservoir riparian woodland, shrubland, marsh, wet meadow	Pond / Reservoir	Easement / Incentive	Washoe Valley	Washoe
20	42	High	Moderate	Humboldt River - Wells to Elburz	Intermountain Riparian	Easement / Incentive	Marys River Area Starr Valley Area	Elko
20	42	High	Moderate	Little Humboldt North Fork above the canyon (Chimney Reservoir) - stream riparian	Intermountain Riparian	Preservation	Little Humboldt Valley	Humboldt
20	42	High	Moderate	Montana/Double H Mountains - stream riparian	Intermountain Riparian	Restoration	Kings River Valley Quinn River Valley	Humboldt
20	42	High	Moderate	Virgin River lower, Halfway Wash to Lake Mead - river riparian	Mojave Riparian	Restoration	Virgin River Valley	Clark
20	42	High	Moderate	Wall Canyon middle - Bordwell Creek confluence to, including main reservoir stream riparian	Intermountain Riparian	Easement / Incentive	Duck Lake Valley	Washoe

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
21	41	High	Moderate	Little Humboldt South Fork, above Chimney Reservoir - stream riparian	Intermountain Riparian	Restoration	Little Humboldt Valley	Elko Humboldt
22	40	High	Moderate	Little Humboldt - Martin Creek upper, Martin Basin creeks	Intermountain Riparian	Preservation	Paradise Valley	Humboldt
22	40	High	Moderate	Monitor Range (upper elev.) - Aspen Woodland	Aspen Woodland	Restoration	Monitor Valley Southern Part Lower Fish Lake Valley	Nye
22	40	High	Moderate	Muddy River Lower - Glendale to Lake Mead, river riparian	Mojavean Riparian	Easement / Incentive	Lower Moapa Valley	Clark
22	40	High	Moderate	Toquima Range - Aspen Woodland	Aspen Woodland	Restoration	Big Smoky Valley Northern Part Monitor Valley Northern Part	Nye
22	40	High	Moderate	Virgin River upper, w/Beaver Dam Wash - stream riparian	Mojave Riparian	Preservation	Virgin River Valley	Lincoln
23	39	Middle	High	Dixie Valley springs, riparian	Spring / Springbrook	Restoration	Dixie Valley	Churchill
23	39	Middle	High	Whirlwind Valley Playa - ephemeral playa lake	Playa Lake / Ephemeral Pool	Preservation	Whirlwind Valley	Eureka
24	38	Middle	High	Muddy River Upper - Springs/brooks	Spring / Springbrook	Restoration	Muddy River Springs Area	Clark
24	38	Middle	High	Newark Lake - playa	Playa Lake / Ephemeral Pool	Preservation	Newark Valley	White Pine
24	38	Middle	High	Owyhee River - below Wildhorse Res, w/tributaries	Intermountain Riparian	Restoration	Owyhee River Area	Elko
24	38	Middle	High	Pahrump Valley - mequite-acacia complex (shrub phreatophytes)	Playa Phreatophytes	Restoration	Pahrump Valley	Nye Clark
25	37	Middle	High	White River Upper - springs/brooks (Lund, Preston, Ruppes Place/Boghole, The Cove)	Spring / Springbrook	Preservation	White River Valley	White Pine Nye
26	36	Middle	High	Fly Ranch / Geyser - spring complex	Spring / Springbrook	Preservation	Hualapai Flat	Washoe
26	36	Middle	High	Meadow Valley Wash Lower - Elgin south to Muddy River confluence	Intermountain Riparian	Restoration	Lower Meadow Valley Wash	Lincoln Clark
26	36	Middle	High	Monitor Valley springs riparian	Spring / Springbrook	Restoration	Monitor Valley Southern Part Monitor Valley Northern Part	Nye
26	36	Middle	High	Overton Wildlife Management Area - river riparian, marsh	Mojave Riparian	Restoration	Lower Moapa Valley Virgin River Valley	Clark
27	35	Middle	High	Franklin Lake (entire) w/ stream, big meadow (Duvall Ranch) to lake	Terminal Lake	Easement / Incentive	Ruby Valley	Elko
27	35	Middle	High	Pahranagat River/Valley - stream riparian	Mojave Riparian	Easement / Incentive	Pahranagat Valley	Lincoln
27	35	Middle	High	Schell Creek Range - aspen woodland	Aspen Woodland	Restoration	Steptoe Valley Spring Valley	White Pine
28	34	Middle	High	Muddy River Upper - upstream from Glendale, Mojave river/stream	Mojave Riparian	Restoration	California Wash	Clark
28	34	Middle	High	Reese River upper mainstem - Clear Creek to Hwy 50	Intermountain Riparian	Restoration	Upper Reese River Valley	Nye Lander

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
29	33	Middle	High	Meadow Valley Wash Upper - spring systems (about 25)	Spring / Springbrook	Easement / Incentive	Panaca Valley	Lincoln
30	32	Middle	High	Coyote Springs (Pleasant Valley, Pershing Co.) - spring complex, outflow	Spring / Springbrook	Easement / Incentive	Pleasant Valley	Pershing
30	32	Middle	High	Goose Creek and tributaries	Intermountain Riparian	Easement / Incentive	Goose Creek Area	Elko
31	30	Middle	High	Hot Spring Hill (Kobeh V.) high water table seep areas, forb/graminoid cover, wet/upland mosaic	Wet Meadow	Restoration	Kobeh Valley	Eureka
31	30	Middle	High	Hot Spring Hill (Kobeh V.) spring/brook - marsh, wet meadow, wet-/upland mosaic	Spring / Springbrook	Restoration	Kobeh Valley	Eureka
32	49	High	Low	Humboldt River South Fork, headwaters to S. Fk. Reservoir	Intermountain Riparian	Preservation	South Fork Area	Elko
33	47	High	Low	Carson River Trib.s - lowland ponds, reserviors, woodland-urban interface	Pond / Reservoir	Easement / Incentive	Eagle Valley Carson Valley	Douglas Carson City
33	47	High	Low	Truckee River Trib.s - lowland ponds / reserviors, woodland-urban interface	Pond / Reservoir	Easement / Incentive	Washoe Valley Truckee Meadows	Washoe
34	46	High	Low	Carson River Trib.s - aspen woodlands	Aspen Woodland	Restoration	Eagle Valley Carson Valley	Douglas Carson City
34	46	High	Low	Carson River Trib.s - lower wet meadows, mostly irrigated	Wet Meadow	Easement / Incentive	Eagle Valley Carson Valley	Douglas Carson City
34	46	High	Low	Truckee River Tribs. - aspen woodlands	Aspen Woodland	Restoration	Washoe Valley Truckee Meadows	Washoe
34	46	High	Low	Truckee River Tribs. - lower wet meadows, mostly irrigated	Wet Meadow	Easement / Incentive	Washoe Valley Truckee Meadows	Washoe
35	45	High	Low	Maggie Creek and tributaries	Intermountain Riparian	Restoration	Maggie Creek Area	Elko
36	44	High	Low	Lake Mead NRA BluePoint, Rogers, Corral springs	Spring / Springbrook	Preservation	Black Mountain Area	Clark
36	44	High	Low	Sheldon NWR - aspen on Virgin, Hell, Cottonwood, Wheeler crk.s, below basalt outcrops, snowpockets	Aspen Woodland	Restoration	Virgin Valley	Washoe Humboldt
36	44	High	Low	Sheldon NWR - marsh particularly in Virgin Valley	Riparian Marsh	Preservation	Virgin Valley	Washoe Humboldt
36	44	High	Low	Sheldon NWR - riparian shrubland, woodland Virgin, Thousand, Hell, Badger, Cottonwood, Catnip crk.s	Intermountain Riparian	Restoration	Guano Valley	Washoe Humboldt
37	43	High	Low	Mason Valley - Wildlife Management Area marsh	Marsh	Preservation	Mason Valley	Lyon
37	43	High	Low	Mason Valley - Wildlife Management Area riparian	Intermountain Riparian	Preservation	Mason Valley	Lyon
37	43	High	Low	Starr Valley	Intermountain Riparian	Preservation	Starr Valley Area	Elko
38	42	High	Low	Owyhee East Fork - w/tributaries, including Wildhorse Reservoir	Intermountain Riparian	Restoration	Owyhee River Area	Elko

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
38	42	High	Low	Sheldon NWR - lakes/reservoirs (Big Spring, Alkali, Catnip Reservoirs, Swan Lake)	Pond / Reservoir	Preservation	Swan Lake Valley	Washoe Humboldt
38	42	High	Low	Steptoe Valley WMA - Comins Lake	Pond / Reservoir	Preservation	Steptoe Valley	White Pine
38	42	High	Low	Topaz Lake - open water, reservoir	Pond / Reservoir	Easement / Incentive	Antelope Valley	Douglas
38	42	High	Low	Weber Reservoir - reservoir riparian woodland, shrubland, marsh, wet meadow	Pond / Reservoir	Restoration	Walker Lake Valley	Mineral
39	41	High	Low	Las Vegas Wash, above Lake of LV - riparian woodland, shrubland, marsh	Intermountain Riparian	Restoration	Las Vegas Valley	Clark
39	41	High	Low	Marys River and tributaries	Intermountain Riparian	Preservation	Marys River Area	Elko
39	41	High	Low	Ruby Lake NWR marsh	Marsh	Preservation	Ruby Valley	Elko
39	41	High	Low	Steptoe Valley WMA - springs, marsh, small ponds	Marsh	Restoration	Steptoe Valley	White Pine
40	40	High	Low	Bruneau River and tributaries - stream riparian	Intermountain Riparian	Preservation	Bruneau River Area	Elko
40	40	High	Low	Jarbidge River and tributaries	Intermountain Riparian	Preservation	Jarbidge River Area	Elko
41	39	Middle	Moderate	Carson River/Carson Valley - marshes	Riparian Marsh	Easement / Incentive	Carson Valley	Douglas
41	39	Middle	Moderate	Humboldt River - Rose Creek to Rye Patch Reservoir	Intermountain Riparian	Restoration	Imlay Area	Pershing
41	39	Middle	Moderate	Montana/Double H Mountains - spring/brook	Spring / Springbrook	Easement / Incentive	Kings River Valley Quinn River Valley	Humboldt
41	39	Middle	Moderate	Pahranagat River/Valley - marsh	Marsh	Restoration	Pahranagat Valley	Lincoln
41	39	Middle	Moderate	Quinn River - Q.R. Crossing vic. terminal/ephemeral wetlands and meadow	Playa w/Marsh	Preservation	Quinn River Valley	Humboldt
41	39	Middle	Moderate	Snow Water Lake (Clover V.) - terminal lake, ephemeral playa lake/pool, spring pool/brook	Playa w/Springs	Preservation	Clover Valley	Elko
41	39	Middle	Moderate	Wall Canyon lower - main reservoir to Duck Flat stream riparian, Duck Flat meadow	Intermountain Riparian	Easement / Incentive	Duck Lake Valley	Washoe
41	39	Middle	Moderate	White River Lower - springs/brooks (Camp, Emigrant, Moon River, Moorman, Sunnyside/Kirch)	Spring / Springbrook	Preservation	White River Valley	Nye
42	38	Middle	Moderate	O'Neil Basin - Salmon Falls River forks and tributaries	Intermountain Riparian	Preservation	Salmon Falls Creek Area	Elko
42	38	Middle	Moderate	Owyhee South Fork - narrows to stateline w/tribs	Intermountain Riparian	Restoration	South Fork Owyhee R. Area	Elko
43	37	Middle	Moderate	Chimney Reservoir	Pond / Reservoir	Preservation	Little Humboldt Valley	Humboldt
43	37	Middle	Moderate	Las Vegas Valley - Corn Creek springs/brooks	Spring / Springbrook	Easement / Incentive	Las Vegas Valley	Clark
43	37	Middle	Moderate	Montana/Double H Mountains - wet meadow	Wet Meadow	Restoration	Kings River Valley Quinn River Valley	Humboldt
43	37	Middle	Moderate	Oasis Valley stream riparian	Mojave Riparian	Restoration	Oasis Valley	Nye

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
43	37	Middle	Moderate	Pine Creek watershed	Intermountain Riparian	Restoration	Pine Valley	Eureka Elko
43	37	Middle	Moderate	Reese River upper headwaters and upper tributaries	Intermountain Riparian	Preservation	Upper Reese River Valley	Nye
43	37	Middle	Moderate	Steptoe Valley Upper - Currie springs	Spring / Springbrook	Easement / Incentive	Steptoe Valley	Elko
43	37	Middle	Moderate	Toiyabe Range - Aspen Woodland	Aspen Woodland	Restoration	Big Smoky Valley Northern Part Upper Reese River Valley	Nye Lander
44	36	Middle	Moderate	Jackson Mtn.s - stream riparian w/in Wilderness Area	Intermountain Riparian	Preservation	Desert Valley Black Rock Desert	Humboldt
44	36	Middle	Moderate	Oasis Valley spring complex marsh	Spring / Springbrook	Restoration	Oasis Valley	Nye
44	36	Middle	Moderate	Quinn River - upper Q.R. Valley springs, bogs, small marshes	Spring / Springbrook	Preservation	Quinn River Valley	Humboldt
44	36	Middle	Moderate	Spring Mountain - springs	Spring / Springbrook	Restoration	Las Vegas Valley Pahrump Valley	Clark
44	36	Middle	Moderate	Steptoe Valley Upper - Twin Springs	Spring / Springbrook	Easement / Incentive	Steptoe Valley	Elko
44	36	Middle	Moderate	Truckee River Trib.s - Steamboat Creek riparian, marsh, wet meadow	Intermountain Riparian	Easement / Incentive	Washoe Valley Truckee Meadows	Washoe
44	36	Middle	Moderate	Wall Canyon/Reservoir - spring systems (stream tributaries) riparian	Spring / Springbrook	Restoration	Duck Lake Valley	Washoe
45	35	Middle	Moderate	Carson Lake marshes	Marsh	Preservation	Carson Desert	Churchill
45	35	Middle	Moderate	Duck Flat Lake - playa, marsh	Playa w/Marsh	Preservation	Duck Lake Valley	Washoe
45	35	Middle	Moderate	Little Humboldt South Fork (Snowstorm Range) - stream riparian	Intermountain Riparian	Restoration	Little Humboldt Valley	Elko Humboldt
45	35	Middle	Moderate	Meadow Valley Wash Upper - main stem, Condor Canyon to Caliente	Intermountain Riparian	Easement / Incentive	Panaca Valley Lower Meadow Valley Wash	Lincoln
45	35	Middle	Moderate	Quinn River - low elev. stream riparian, marsh, oxbow, near Devil's Gate and Oregon Border	Intermountain Riparian	Preservation	Quinn River Valley	Humboldt
45	35	Middle	Moderate	Red Rock Canyon - spring/springbrook	Spring / Springbrook	Restoration	Las Vegas Valley	Clark
45	35	Middle	Moderate	Salmon Falls River and tributaries	Intermountain Riparian	Preservation	Salmon Falls Creek Area	Elko
45	35	Middle	Moderate	Steptoe Valley Upper - McDermid Creek	Intermountain Riparian	Restoration	Steptoe Valley	Elko
46	34	Middle	Moderate	Carico Lake tributaries	Intermountain Riparian	Restoration	Carico Lake Valley	Lander
46	34	Middle	Moderate	Dolly Varden Spring (Antelope V., Elko Co.) - pool/brook	Spring / Springbrook	Easement / Incentive	Antelope Valley/Northern Part	Elko White Pine
46	34	Middle	Moderate	Jackson Mtn.s - spring/brook w/in Wildnerness Area	Spring / Springbrook	Preservation	Desert Valley Black Rock Desert	Humboldt

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
46	34	Middle	Moderate	Summit Lake	Terminal Lake	Preservation	Summit Lake Valley	Washoe
47	33	Middle	Moderate	Carson River/Carson Valley - river riparian	Intermountain Riparian	Easement / Incentive	Carson Valley	Douglas
47	33	Middle	Moderate	Carson Sink playa / ephemeral pool; marsh	Playa w/Marsh	Preservation	Carson Desert	Churchill
47	33	Middle	Moderate	Goshute Lake (Steptoe Valley, north) - ephemeral playa lake/pools	Playa Lake / Ephemeral Pool	Preservation	Steptoe Valley	White Pine Elko
47	33	Middle	Moderate	Gridley Lake spring/brook	Spring / Springbrook	Restoration	Gridley Lake Valley	Washoe
48	32	Middle	Moderate	Fish Lake Valley (McNett) springs	Spring / Springbrook	Easement / Incentive	Little Smoky Valley Northern Part	Esmeralda
48	32	Middle	Moderate	Gridley Lake playa	Playa Lake / Ephemeral Pool	Preservation	Gridley Lake Valley	Washoe
49	31	Middle	Moderate	Carson River/Carson Valley - wet meadow, mostly irrigated	Wet Meadow	Restoration	Carson Valley	Douglas
49	31	Middle	Moderate	Continental Lake - Baltazor Meadow	Playa w/Marsh	Preservation	Continental Lake Valley	Washoe
49	31	Middle	Moderate	Grass Valley playa	Playa Lake / Ephemeral Pool	Preservation	Grass Valley	Lander
49	31	Middle	Moderate	Smoke Creek - stream outflow, including wells and springs	Playa w/Springs	Preservation	Smoke Creek Desert	Washoe
49	31	Middle	Moderate	Steptoe Valley Upper - Indian Ranch springs	Spring / Springbrook	Preservation	Steptoe Valley	White Pine Elko
50	30	Middle	Moderate	Warm Springs Ranch (Independence Valley) - springs	Spring / Springbrook	Easement / Incentive	Independence Valley	Elko
51	28	Low	High	Soda Spring Valley - Sodaville Scorecard site	Spring / Springbrook	Easement / Incentive	Soda Springs Valley	Mineral
52	27	Low	High	Rock Creek lower (county road to lowest gorge)	Intermountain Riparian	Restoration	Rock Creek Valley	Lander Eureka
53	25	Low	High	Fish Creek Springs	Spring / Springbrook	Restoration	Little Smoky Valley North Part	Eureka White Pine
53	25	Low	High	Hamlin Valley Big Springs - spring/brook	Spring / Springbrook	Restoration	Hamlin Valley	White Pine
54	24	Low	High	Carico Lake - playa, spring/brook	Spring / Springbrook	Restoration	Carico Lake Valley	Lander
55	23	Low	High	Walker Lake open water	Terminal Lake	Restoration	Walker Lake Valley	Mineral
55	23	Low	High	White Rock/Wilson Creek Range - Big Jack spring	Spring / Springbrook	Restoration	Spring Valley	Lincoln
56	22	Low	High	Prather Springs - Windemere Hills spring pool	Spring / Springbrook	Preservation	Thousand Springs Valley	Elko
56	22	Low	High	Red Rock Canyon - ephemeral pool	Playa Lake / Ephemeral Pool	Preservation	Las Vegas Valley	Clark
57	39	Middle	Low	Truckee River/Lake Tahoe Trib.s - montane lake, pond, reservoir	Pond / Reservoir	Restoration	Washoe Valley Truckee Meadows Tahoe Basin	Washoe

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
58	38	Middle	Low	Jackson Mtn.s - stream riparian, outside Wilderness Area	Intermountain Riparian	Restoration	Desert Valley Black Rock Desert	Humboldt
59	37	Middle	Low	Harmon Reservoir - riparian woodland, shrubland, marsh, wet meadow	Pond / Reservoir	Easement / Incentive	Carson Desert	Churchill
59	37	Middle	Low	Hot Creek Spring - spring/brook, terminal marsh	Spring / Springbrook	Easement / Incentive	Hot Creek	Nye
59	37	Middle	Low	Jackson Mtn.s - wet meadow	Wet Meadow	Restoration	Desert Valley Black Rock Desert	Humboldt
59	37	Middle	Low	Massie/Mahala Sloughs - riparian woodland, shrubland, wet mdw., emergent veg.	Intermountain Riparian	Easement / Incentive	Carson Desert	Churchill
59	37	Middle	Low	Mohave Reservoir aquatic	Pond / Reservoir	Restoration	Colorado River Valley	Clark
59	37	Middle	Low	Rock Creek upper and Willow Creek - stream riparian, springs/brooks	Intermountain Riparian	Restoration	Willow Creek Valley Rock Creek Valley	Elko
59	37	Middle	Low	Sheldon NWR - wet meadow, most w/stream riparian Virgin, Hell, Catnip, Big Spring, Fish crk.s	Wet Meadow	Preservation	Virgin Valley Guano Valley	Washoe Humboldt
59	37	Middle	Low	Walker River Forks - riparian	Intermountain Riparian	Restoration	Smith Valley East Walker Area	Lyon
60	36	Middle	Low	Carson Lake wet meadows	Wet Meadow	Preservation	Carson Desert	Churchill
60	36	Middle	Low	Grapevine - Sacatone Canyons - desert wash riparian	Mojave Wash	Preservation	Colorado River Valley	Clark
60	36	Middle	Low	Humboldt Sink - playa lake, marsh, wet meadow, shrub phreatophytes	Playa w/Marsh	Preservation	Lovelock Valley White Plains	Pershing Churchill
60	36	Middle	Low	Jackson Mtn.s - spring/brook, outside Wildnerness Area	Spring / Springbrook	Preservation	Desert Valley Black Rock Desert	Humboldt
60	36	Middle	Low	Lahontan Reservoir - aquatic	Pond / Reservoir	Preservation	Churchill Valley	Lyon Churchill
60	36	Middle	Low	Lake Tahoe tributaries - riparian	Sierra Riparian	Restoration	Lake Tahoe Basin	Douglas Carson City Washoe
60	36	Middle	Low	Meadow Valley Wash Upper - Condor Canyon	Intermountain Riparian	Restoration	Panaca Valley	Lincoln
60	36	Middle	Low	Quinn River - south and east forks (north flank Santa Rosa Range to confluence)	Intermountain Riparian	Preservation	Quinn River Valley	Humboldt
60	36	Middle	Low	Stillwater NWR - marsh, wet meadow	Marsh	Restoration	Carson Desert	Churchill
61	35	Middle	Low	Mason Valley - Wildlife Management Area open water, cooling ponds	Pond / Reservoir	Preservation	Mason Valley	Lyon
61	35	Middle	Low	Quinn River - upper elev. trib.s riparian shrubland, small wet meadows	Intermountain Riparian	Preservation	Quinn River Valley	Humboldt
61	35	Middle	Low	Ruby Lake NWR spring complex (pools/outflows)	Spring / Springbrook	Preservation	Ruby Valley	Elko
61	35	Middle	Low	Truckee River Lower - river riparian, oxbows	Intermountain Riparian	Restoration	Tracy Segment Dodge Flat	Washoe Storey

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
62	34	Middle	Low	Franklin Lake watershed - tributary streams, lower reaches	Intermountain Riparian	Preservation	Ruby Valley	Elko
63	33	Middle	Low	Carson River Trib.s (Clear, Ash, Kings, Vicee creeks) - perennial & intermittent stream riparian	Sierra Riparian	Restoration	Eagle Valley Washoe Valley	Carson City Washoe
63	33	Middle	Low	Quinn River - lowland tributaries riparian, intermittent flow, wet meadow (McDermitt, Washburn Crk.s)	Intermountain Riparian	Preservation	Quinn River Valley	Humboldt
63	33	Middle	Low	Rye Patch Reservoir	Pond / Reservoir	Restoration	Imlay Area	Pershing
63	33	Middle	Low	Smith Creek Playa - ephemeral playa lake/pool, spring pool/brook	Playa Lake / Ephemeral Pool	Preservation	Smith Creek Valley	Lander
63	33	Middle	Low	Soda Lakes - lake / reservoir	Pond / Reservoir	Preservation	Carson Desert	Churchill
63	33	Middle	Low	Walker Lake shorezone	Terminal Lake	Preservation	Walker Lake Valley	Mineral
64	32	Middle	Low	Buffalo Valley Playa - playa lake, ephemeral pool, spring/brook	Playa Lake / Ephemeral Pool	Preservation	Buffalo Valley	Lander Pershing
64	32	Middle	Low	Pahranagat River/Valley - lake / reservoir, Maynard playa lake	Pond / Reservoir	Preservation	Pahranagat Valley	Lincoln
64	32	Middle	Low	Truckee River Upper - river riparian, oxbows	Intermountain Riparian	Easement / Incentive	Truckee Meadows Truckee Canyon Segment	Washoe
65	31	Middle	Low	Hoover Dam Refugia	Spring / Springbrook	Restoration	Black Mountain Area	Clark
65	31	Middle	Low	Humboldt River South Fork, S. Fk. Reservoir to Humboldt River	Intermountain Riparian	Restoration	Dixie Creek Tenmile Creek Area	Elko
65	31	Middle	Low	Truckee Meadows vicinity - marshes Spanish Springs	Marsh	Preservation	Spanish Springs Valley	Washoe
66	30	Middle	Low	Walker Lake delta - unvegetated	Terminal Lake	Preservation	Walker Lake Valley	Mineral
67	29	Low	Moderate	Continental Lake springs	Playa w/Springs	Preservation	Continental Lake Valley	Washoe
68	28	Low	Moderate	Huntington Creek, headwaters to S. Fk. Humboldt confluence	Intermountain Riparian	Restoration	Huntington Valley	Elko
69	27	Low	Moderate	Sullivan Spring, Antelope V. - spring pool/brook	Spring / Springbrook	Preservation	Antelope Valley	Eureka
70	24	Low	Moderate	North Fork Humboldt - Elburz to Beaver Creek	Intermountain Riparian	Easement / Incentive	North Fork Area	Elko
71	21	Low	Moderate	Lake Valley Springs - spring bog/marsh	Spring / Springbrook	Preservation	Lake Valley	Lincoln
72	29	Low	Low	Fernley Sink playa/ephemeral pool, marsh	Playa Lake / Ephemeral Pool	Preservation	Fernley Area	Lyon
72	29	Low	Low	Massacre/Middle/West Lakes - playa/ephemeral pool	Playa Lake / Ephemeral Pool	Preservation	Massacre Lake Valley	Washoe
72	29	Low	Low	Owyhee Desert Playas - ephemeral playa lake/pools	Playa Lake / Ephemeral Pool	Preservation	Little Owyhee River Area	Elko Humboldt
72	29	Low	Low	Sheldon NWR - playas/ephemeral pools (near Swan Lake, Round Mountain)	Playa Lake / Ephemeral Pool	Preservation	Guano Valley Swan Lake Valley	Washoe Humboldt
73	28	Low	Low	Pyramid Lake delta	Terminal Lake	Preservation	Pyramid Lake Valley	Washoe

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
73	28	Low	Low	Reese River lower, Hwy 50 north to Humboldt River - stream riparian	Intermountain Riparian	Restoration	Middle Reese River Valley Lower Reese River Valley	Lander
73	28	Low	Low	Ruby Lake NWR wet meadow	Wet Meadow	Preservation	Ruby Valley	Elko
73	28	Low	Low	Soldier Meadows - springs/brooks above reservoir, wet meadows	Spring / Springbrook	Preservation	Mud Meadow	Washoe
73	28	Low	Low	Spring Mountain - aspen woodland	Aspen Woodland	Restoration	Las Vegas Valley Pahrump Valley	Clark
73	28	Low	Low	Warm Springs Ranch (Independence Valley) - marsh	Marsh	Preservation	Independence Valley	Elko
74	27	Low	Low	Sherman Creek	Intermountain Riparian	Restoration	Huntington Valley	Elko
74	27	Low	Low	White Plains, Humboldt Slough - playa lake marsh, wet meadow, shrub phreatophytes	Playa w/Marsh	Preservation	White Plains Carson Desert	Churchill
75	26	Low	Low	Black Rock Desert playa / ephemeral pool; springs/brooks	Playa w/Springs	Preservation	Black Rock Desert Mud Meadow	Pershing Humboldt
75	26	Low	Low	Lahontan Reservoir - marsh	Pond / Reservoir	Preservation	Churchill Valley	Churchill
75	26	Low	Low	Ruby Lake aquatic	Terminal Lake	Preservation	Ruby Valley	Elko
75	26	Low	Low	Truckee Meadows vicinity - Swan Lake marsh Lemmon Valley	Marsh	Preservation	Lemmon Valley	Washoe
75	26	Low	Low	Wall Canyon upper - headwater to Bordwell Creek confluence stream riparian	Intermountain Riparian	Preservation	Duck Lake Valley	Washoe
75	26	Low	Low	Winnemucca Lake - playa/ephemeral pool, marsh	Playa w/Marsh	Restoration	Winnemucca Lake Valley	Washoe Pershing
76	25	Low	Low	Calcutta, Middle, Cow lakes - playa/ephemeral pool	Playa w/Marsh	Preservation	Long Valley	Washoe
76	25	Low	Low	Quinn River - terminus, northern portion Black Rock playa lake	Playa w/Marsh	Preservation	Quinn River Valley	Humboldt
76	25	Low	Low	Spring Mountain - montane fen-bog	Spring / Springbrook	Preservation	Las Vegas Valley Pahrump Valley	Clark
77	24	Low	Low	Alkali Lake WMA	Playa Lake / Ephemeral Pool	Preservation	Smith Valley	Lyon
77	24	Low	Low	Alkali Lake/Forty-Mile Lake - playa / ephemeral pool	Playa Lake / Ephemeral Pool	Preservation	Long Valley	Washoe
77	24	Low	Low	Susie Creek	Intermountain Riparian	Restoration	Susie Creek Area	Elko
78	23	Low	Low	Carson River/Carson Valley - ponds / reservoirs near foothills	Pond / Reservoir	Restoration	Carson Valley	Douglas
78	23	Low	Low	Mohave Reservoir riparian woodland	Mojave Riparian	Restoration	Colorado River Valley	Clark
79	22	Low	Low	Carson River/Carson Valley - lowland tributaries to West, East Forks	Sierra Riparian	Restoration	Carson Valley	Douglas
79	22	Low	Low	Central Lake - playa / ephemeral pool	Playa Lake / Ephemeral Pool	Preservation	Long Valley	Washoe
79	22	Low	Low	New Year Lake - playa / ephemeral pool	Playa Lake / Ephemeral Pool	Preservation	Surprise Valley	Washoe

Rank	Rank Score	Priority Class	Stewardship Urgency	Wetland Area	Wetland Habitat Type	Strategic Emphasis	Administrative Groundwater Basin	County
80	21	Low	Low	Mosquito Lake - playa/ephemeral pool	Playa Lake / Ephemeral Pool	Preservation	Mosquito Valley	Washoe
80	21	Low	Low	Pyramid Lake open water	Terminal Lake	Preservation	Pyramid Lake Valley	Washoe
81	20	Low	Low	Black Canyon - springs/brooks	Spring / Springbrook	Restoration	Colorado River Valley	Clark
81	20	Low	Low	Ruby Valley sulphur hot springs, geothermal springs	Spring / Springbrook	Preservation	Ruby Valley	Elko

APPENDIX 2. Alphabetical Listing and Factor Ratings for 234 Nevada Priority Wetland Areas

Key to Table Column Heading Symbols

	Column Heading	Measure	Column Heading	Measure	
Estimated % Area Impacted	1A	% Priority Wetlands Area Intact	3A	Surface Water Diversion or Development	Stressors and Stress Intensity Rating
	1B	% Priority Wetlands Area Eliminated	3B	Groundwater Pumping	
	1C	% Priority Wetlands Area Converted	3C	Hydrogeomorphic Modification	
	1D	% Priority Wetlands Area Degraded	3D	Land Development	
Ecosystem Functions and Value Ratings	2A	Wildlife Habitat, Diversity, Food Web Support	3E	Farming	
	2B	Special Status Wetland Dependent Taxa	3F	Livestock Grazing	
	2C	Outdoor Recreation	3G	Mining	
	2D	Hydrology and Water Supply	3H	Outdoor Recreation	
	2E	Erosion and Sediment Control	3I	Nonnative Plants or Animals	
	2F	Flood Control	3J	Energy Development	
	2G	Water Quality Maintenance	3K	Military Mission	
	2H	Socioeconomic Importance	Sum 3A-L	Stressor/Stress Intensity Score	
	Sum 2A-H	Ecosystem Function/Values Score	Rank Score	Combined Sums of Ecosystem Function and Stress Intensity	
			SU	Stewardship Urgency	

Wetland Area	Estimated % Area Impacted				Ecosystem Functions and Value Rating									Stressors and Stress Intensity Rating												Rank Score	SU
	1A	1B	1C	1D	2A	2B	2C	2D	2E	2F	2G	2H	Sum 2A-H	3A	3B	3C	3D	3E	3F	3G	3H	3I	3J	3K	Sum 3A-K		
Alkali Lake WMA	90	0	0	10	2	2	1	1	1	1	1	1	10	3	2	1	2	1	1	1	1	1	1	0	14	24	1
Alkali Lake/Forty-Mile Lake - playa / ephemeral pool	100	0	0	0	6	4	1	2	0	0	1	1	15	1	2	0	1	1	1	1	1	1	0	0	9	24	1
Argenta marsh	0	10	0	90	6	2	1	3	1	1	1	1	16	3	3	3	2	3	3	3	1	3	3	0	27	43	3
Ash Meadows - riparian willow, ash, mesquite woodland; saltbush shrubland	12	14	54	20	6	4	3	2	0	0	0	2	17	3	3	3	1	0	0	2	1	3	0	0	16	33	2
Ash Meadows spring complex w/stream, marsh	8	18	55	19	6	6	3	3	3	3	2	3	29	3	3	3	2	1	0	2	1	3	0	0	18	47	2
Ash Meadows wet meadow	4	18	58	20	6	6	2	2	2	3	2	3	26	3	3	3	2	0	0	2	1	3	0	0	17	43	2
Big Smoky Valley springs / brooks (Charnock, Darroughs, Alkali Flat)	40	10	20	30	6	6	1	3	3	3	2	3	27	3	3	3	3	2	3	3	1	2	2	1	26	53	2
Black Canyon - springs/brooks	80	0	0	20	4	4	2	1	0	0	0	2	13	1	1	0	0	0	0	0	2	3	0	0	7	20	1

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Black Rock Desert playa / ephemeral pool; springs/brooks	95	0	0	5	2	2	3	1	1	1	1	3	14	1	1	1	1	1	1	1	2	1	1	1	12	26	1
Bruneau River and tributaries - stream riparian	93	0	2	5	6	6	2	3	3	3	3	2	28	1	0	2	1	1	2	0	3	2	0	0	12	40	1
Buffalo Valley Playa - playa lake, ephemeral pool, spring/brook	70	0	15	15	6	4	1	2	1	1	1	1	17	1	2	1	1	1	3	1	1	2	1	1	15	32	1
Calcutta, Middle, Cow lakes - playa/ephemeral pool	100	0	0	0	6	4	1	2	0	0	1	1	15	1	2	0	1	1	1	1	1	1	1	0	10	25	1
Carico Lake - playa, spring/brook	20	0	0	80	4	6	1	1	0	0	0	1	13	2	1	0	0	1	3	2	1	1	0	0	11	24	3
Carico Lake tributaries	10	0	40	50	4	4	2	2	1	2	1	2	18	2	1	2	1	1	3	2	2	2	0	0	16	34	2
Carson Lake marshes	0	0	50	50	6	6	3	0	0	3	2	3	23	1	1	1	2	1	1	0	1	2	1	1	12	35	1
Carson Lake wet meadows	90	0	10	0	6	6	3	0	1	3	2	3	24	1	1	1	2	1	1	0	1	2	1	1	12	36	1
Carson River Trib.s - aspen woodlands	0	0	100	0	6	4	2	3	3	3	2	3	26	2	3	3	1	2	3	1	2	1	1	1	20	46	1
Carson River Trib.s - lower wet meadows, mostly irrigated	0	0	100	0	4	4	3	3	2	2	2	3	23	3	3	3	1	3	3	1	2	2	1	1	23	46	1
Carson River Trib.s - lowland ponds, reserviors, woodland-urban interface	50	0	0	50	6	4	3	3	2	2	2	3	25	2	3	2	2	3	3	1	2	2	1	1	22	47	1
Carson River Trib.s (Clear, Ash, Kings, Vicee crks.) - perennial & intermittent stream riparian	10	0	0	90	6	6	1	1	1	1	2	1	19	2	1	2	1	1	1	1	2	1	1	1	14	33	1
Carson River/Carson Valley - lowland tributaries to West, East Forks	20	0	0	80	2	2	1	1	1	1	2	1	11	1	2	1	1	1	2	0	1	2	0	0	11	22	1
Carson River/Carson Valley - marshes	20	60	0	20	6	4	1	3	2	2	3	3	24	3	3	1	2	2	1	0	1	2	0	0	15	39	2
Carson River/Carson Valley - ponds / reservoirs near foothills	100	0	0	0	4	2	1	2	1	1	1	2	14	1	2	1	1	1	1	0	1	1	0	0	9	23	1
Carson River/Carson Valley - river open water, CA border to Carson Valley exit	0	0	0	100	4	4	2	3	2	2	2	3	22	3	3	3	3	2	3	1	1	2	0	0	21	43	3
Carson River/Carson Valley - river riparian	1	95	0	4	4	4	1	1	1	1	1	3	16	3	2	3	2	2	2	0	1	2	0	0	17	33	2
Carson River/Carson Valley - wet meadow, mostly irrigated	20	0	0	80	4	2	1	3	1	1	2	3	17	1	2	1	3	1	3	0	1	2	0	0	14	31	2
Carson Sink playa / ephemeral pool; marsh	80	0	0	20	4	4	1	1	1	1	1	2	15	3	1	1	3	3	1	1	1	2	1	1	18	33	2
Central Lake - playa / ephemeral pool	100	0	0	0	4	4	1	2	0	0	1	1	13	1	2	0	1	1	1	1	1	1	0	0	9	22	1
Chimney Reservoir	100	0	0	0	6	2	3	3	3	3	3	3	26	0	2	0	0	1	0	2	2	3	1	0	11	37	2
Clover Valley (north) spring pools and outflows	20	0	60	20	6	6	1	3	1	1	1	3	22	3	1	3	1	2	3	1	2	2	2	1	21	43	3
Colorado River below Davis Dam Mojave river riparian	0	50	20	30	2	6	3	3	1	1	3	3	22	3	1	3	3	3	1	1	2	3	1	0	21	43	3
Continental Lake - Baltazor Meadow	80	0	10	10	6	2	2	2	1	1	1	2	17	2	2	1	1	1	2	1	1	1	2	0	14	31	2
Continental Lake springs	100	0	0	0	6	4	1	1	1	1	1	2	17	1	2	1	1	1	1	2	1	1	1	0	12	29	2
Coyote Springs (Pleasant Valley, Pershing Co.) - spring complex, outflow	10	0	50	40	6	6	1	2	0	0	2	2	19	3	1	3	0	0	3	0	1	1	1	0	13	32	3

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Diamond Lake Playa - playa lake/pool, spring pool/brook	35	0	15	50	6	6	1	2	1	1	1	1	19	1	3	1	1	2	3	2	3	2	2	1	21	40	3
Dixie Valley springs, riparian	10	10	15	65	6	6	1	3	0	0	1	3	20	3	2	3	1	1	3	0	1	1	3	1	19	39	3
Dolly Varden Spring (Antelope V., Elko Co.) - pool/brook	10	0	50	40	6	6	1	2	0	0	2	2	19	3	2	3	1	1	3	0	1	1	0	0	15	34	2
Duck Flat Lake - playa, marsh	100	0	0	0	6	6	2	2	1	1	3	2	23	1	2	1	2	1	1	1	1	1	1	0	12	35	2
Fernley Sink playa/ephemeral pool, marsh	100	0	0	0	2	4	1	1	1	1	1	1	12	3	2	1	3	1	1	1	1	2	1	1	17	29	1
Fish Creek Springs	25	0	25	50	4	6	0	2	0	0	1	1	14	3	1	2	1	2	1	0	0	1	0	0	11	25	3
Fish Lake Valley (McNett) springs	0	0	90	10	6	6	1	2	0	0	1	2	18	3	0	3	1	2	2	0	1	2	0	0	14	32	2
Fly Ranch / Geyser - spring complex	80	0	10	10	6	6	1	3	0	0	3	2	21	3	1	3	1	1	2	0	1	1	2	0	15	36	3
Franklin Lake (entire) w/ stream, big meadow (Duvall Ranch) to lake	35	0	10	55	6	6	2	2	1	0	0	2	19	2	1	2	2	2	3	0	1	3	0	0	16	35	3
Franklin Lake watershed - tributary streams, lower reaches	75	0	20	5	6	2	3	3	1	0	3	3	21	2	0	1	1	2	2	0	2	3	0	0	13	34	1
Goose Creek and tributaries	25	0	50	25	4	4	1	2	2	2	2	1	18	3	0	2	1	1	3	0	1	3	0	0	14	32	3
Goshute Lake (Steptoe Valley, north) - ephemeral playa lake/pools	70	0	15	15	6	4	1	2	1	1	1	1	17	1	3	1	1	1	3	1	1	2	1	1	16	33	2
Grapevine - Sacatone Canyons - desert wash riparian	90	0	0	10	6	4	2	3	3	1	1	2	22	1	1	1	1	1	1	1	2	3	1	1	14	36	1
Grass Valley playa	70	0	15	15	6	4	1	2	1	1	1	1	17	1	1	1	1	1	3	1	1	2	1	1	14	31	2
Gridley Lake playa	95	0	0	5	6	6	2	2	0	0	0	1	17	2	2	1	1	1	1	1	1	3	1	1	15	32	2
Gridley Lake spring/brook	0	0	0	100	6	6	2	2	0	0	0	1	17	2	2	1	1	1	2	1	1	3	1	1	16	33	2
Hamlin Valley Big Springs - spring/brook	25	0	25	50	4	6	1	1	0	0	1	1	14	1	1	3	0	1	3	0	1	1	0	0	11	25	3
Harmon Reservoir - riparian woodland, shrubland, marsh, wet meadow	0	0	80	20	4	4	3	2	3	3	1	2	22	3	1	1	1	2	1	1	1	2	1	1	15	37	1
Hoover Dam Refugia	0	5	5	90	4	6	1	2	1	1	1	2	18	1	1	1	1	1	1	1	1	3	1	1	13	31	1
Hot Creek Spring - spring/brook, terminal marsh	50	5	0	45	6	6	3	2	2	2	1	2	24	3	0	2	0	0	3	2	1	2	0	0	13	37	1
Hot Spring Hill (Kobeh V.) high water table seep areas, forb/graminoid cover, wet/upland mosaic	0	0	0	100	4	6	1	1	1	1	1	1	16	1	1	2	1	1	1	1	3	1	1	1	14	30	3
Hot Spring Hill (Kobeh V.) spring/brook - marsh, wet meadow, wet-/upland mosaic	0	0	0	100	4	2	1	3	1	1	1	1	14	3	1	2	1	1	2	1	2	1	1	1	16	30	3
Humboldt River - Elburz to Palisade	0	5	50	45	6	2	1	3	2	2	2	3	21	3	2	3	3	3	3	2	1	3	0	0	23	44	3
Humboldt River - Rose Creek to Rye Patch Reservoir	35	0	15	50	6	2	1	3	2	1	2	2	19	2	2	2	2	3	3	1	1	3	1	0	20	39	2
Humboldt River - Wells to Elburz	10	0	80	10	6	6	1	2	2	2	1	3	23	3	1	3	1	3	3	0	1	3	1	0	19	42	2
Humboldt River South Fork, headwaters to S. Fk. Reservoir	60	0	10	30	6	6	3	3	3	3	3	3	30	3	0	3	2	3	3	1	1	3	0	0	19	49	1
Humboldt River South Fork, S. Fk. Reservoir to Humboldt River	0	0	0	100	2	2	2	3	2	2	2	2	17	1	0	2	1	2	3	0	2	3	0	0	14	31	1

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Humboldt Sink - playa lake, marsh, wet meadow, shrub phreatophytes	80	0	20	0	6	4	2	1	1	3	1	1	19	3	1	1	1	3	1	1	1	3	1	1	17	36	1
Huntington Creek, headwaters to S. Fk. Humboldt confluence	0	0	25	75	2	2	1	3	2	2	2	1	15	1	1	1	1	2	3	0	1	3	0	0	13	28	2
Jackson Mtn.s - spring/brook w/in Wildnerness Area	70	0	0	30	6	4	2	2	1	1	1	2	19	2	1	1	1	1	3	1	2	1	1	1	15	34	2
Jackson Mtn.s - spring/brook, outside Wildnerness Area	60	0	20	20	6	4	2	2	1	1	1	3	20	2	1	2	1	1	3	1	1	2	1	1	16	36	1
Jackson Mtn.s - stream riparian w/in Wilderness Area	80	0	0	20	6	4	2	3	2	1	1	2	21	2	1	1	1	1	3	1	2	1	1	1	15	36	2
Jackson Mtn.s - stream riparian, outside Wilderness Area	30	0	50	20	6	4	2	3	2	1	1	3	22	2	1	2	1	1	3	1	1	2	1	1	16	38	1
Jackson Mtn.s - wet meadow	20	0	60	20	6	4	1	3	2	1	1	3	21	1	1	1	1	3	3	1	1	2	1	1	16	37	1
Jarbidge River and tributaries	94	0	1	5	6	6	3	3	3	3	3	3	30	1	0	1	1	1	1	1	3	1	0	0	10	40	1
Lahontan Reservoir - aquatic	100	0	0	0	6	4	3	3	3	3	1	3	26	1	1	1	1	1	1	0	2	2	0	0	10	36	1
Lahontan Res., Carson R. (upstream) – open water, riparian woodland	45	25	0	30	6	6	3	3	3	3	2	3	29	3	2	2	1	0	3	0	1	3	0	0	15	44	1
Lahontan Reservoir - marsh	75	25	0	0	6	4	1	1	1	1	1	1	16	1	2	1	1	0	2	0	1	2	0	0	10	26	1
Lake Mead NRA BluePoint, Rogers, Corral springs	50	5	15	30	6	6	3	3	2	1	1	3	25	3	1	3	1	1	1	1	3	3	1	1	19	44	1
Lake Tahoe tributaries - riparian	0	0	0	100	6	6	3	3	3	0	3	3	27	1	0	2	2	0	0	0	2	2	0	0	9	36	1
Lake Valley Springs - spring bog/marsh	75	0	0	25	4	6	1	1	1	1	1	1	16	1	0	0	0	0	2	0	1	1	0	0	5	21	2
Lamoille Valley	60	0	40	0	6	6	3	3	3	3	3	3	30	3	1	1	3	3	3	0	2	3	1	0	20	50	2
Las Vegas Valley - Corn Creek springs/brooks	5	0	75	20	6	6	3	3	0	0	0	3	21	3	3	3	1	1	0	0	2	3	0	0	16	37	2
Las Vegas Wash, above Lake of LV - riparian woodland, shrubland, marsh	20	20	0	60	6	6	3	3	2	2	2	3	27	3	0	3	2	0	0	0	3	3	0	0	14	41	1
Little Humboldt - below Chimney Res; Cottonwood, Martin lower, Santa Rosa east side crks	20	0	50	30	6	6	3	2.5	2	2	2	3	26.5	3	3	3	3	3	3	1	2	2	1	0	24	51	3
Little Humboldt - Martin Creek upper, Martin Basin creeks	80	0	0	20	6	6	2	3	3	2	3	3	28	1	1	1	2	0	2	2	1	1	1	0	12	40	2
Little Humboldt North Fork above the canyon (Chimney Reservoir) - stream riparian	90	0	0	10	6	6	2	3	3	3	3	3	29	1	1	1	1	1	2	2	1	2	1	0	13	42	2
Little Humboldt South Fork (Snowstorm Range) - stream riparian	40	0	10	50	6	6	1	3	3	3	3	1	26	1	0	1	1	1	2	1	1	1	0	0	9	35	2
Little Humboldt South Fork, above Chimney Reservoir - stream riparian	50	0	0	50	6	6	2	3	2	2	3	3	27	1	2	1	1	1	2	2	1	2	1	0	14	41	2
Maggie Creek and tributaries	60	0	0	40	6	6	2	3	3	3	3	3	29	2	2	1	1	1	2	3	1	3	0	0	16	45	1
Marys River and tributaries	60	0	10	30	6	6	2	3	3	3	3	2	28	2	1	1	1	2	3	0	1	2	0	0	13	41	1
Mason Valley - Walker River riparian	0	0	80	20	6	4	2	3	3	1	2	3	24	3	3	3	3	3	3	3	1	3	0	0	25	49	2
Mason Valley - Wildlife Management Area marsh	100	0	0	0	6	6	3	3	3	3	3	3	30	3	3	1	0	1	1	2	1	1	0	0	13	43	1
Mason Valley - Wildlife Management Area open water, cooling ponds	100	0	0	0	6	2	3	2	1	3	2	3	22	3	3	1	0	1	1	2	1	1	0	0	13	35	1

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Mason Valley - Wildlife Management Area riparian	90	0	10	0	6	6	3	2	3	3	2	3	28	3	3	3	0	1	1	1	1	2	0	0	15	43	1
Massacre/Middle/West Lakes - playa/ephemeral pool	100	0	0	0	6	4	2	1	1	1	1	2	18	1	1	0	1	1	3	1	1	1	1	0	11	29	1
Massie/Mahala Sloughs - riparian woodland, shrubland, wet mdw., emergent veg.	0	0	100	0	4	4	1	2	1	2	1	1	16	3	3	3	3	1	3	1	1	1	1	1	21	37	1
Meadow Valley Wash Lower - Elgin north to, including Clover Creek	15	10	15	60	6	6	2	3	0	1	2	3	23	3	2	3	2	3	2	1	2	2	1	0	21	44	3
Meadow Valley Wash Lower - Elgin south to Muddy River confluence	5	5	20	70	4	4	1	1	1	1	1	2	15	3	2	3	2	1	2	2	1	3	2	0	21	36	3
Meadow Valley Wash Upper - Condor Canyon	25	0	10	65	4	6	2	2	2	1	1	3	21	2	0	2	1	2	1	2	2	3	0	0	15	36	1
Meadow Valley Wash Upper - main stem, Condor Canyon to Caliente	0	5	90	5	4	2	1	1	1	1	1	3	14	3	3	3	2	3	3	1	1	2	0	0	21	35	2
Meadow Valley Wash Upper - spring systems (about 25)	10	10	40	40	4	4	1	3	0	0	3	3	18	3	1	3	1	0	3	1	1	2	0	0	15	33	3
Mohave Reservoir aquatic	0	0	100	0	6	6	3	3	3	3	3	3	30	0	0	0	0	0	0	0	3	3	1	0	7	37	1
Mohave Reservoir riparian woodland	0	50	0	50	4	2	3	1	1	1	2	3	17	0	0	0	0	0	0	0	3	3	0	0	6	23	1
Monitor Range (upper elev.) - Aspen Woodland	50	5	5	40	6	6	3	3	3	3	3	3	30	1	1	1	2.5	1	3	2	2	2	1	1	17.5	48	2
Monitor Range (upper elev.) - Spring/brook	50	5	5	40	6	6	2	3	2	2	3	2	26	2	1	1	2	1	2	2	2	2	1	1	17	43	2
Monitor Range (upper elev.) - stream riparian	40	5	5	50	6	6	3	2	3	2	1	1	25	1	1	1	2	1	2	2	2	1	1	1	15	40	2
Monitor Range (upper elev.) - wet meadow	10	15	5	70	6	6	3	3	3	3	3	3	30	2	1	1	2	1	3	2	2	2	1	1	18	48	2
Monitor Valley springs riparian	15	10	15	60	6	6	2	3	0	0	2	3	22	3	1	3	1	1	3	0	1	1	0	0	14	36	3
Montana/Double H Mountains - spring/brook	20	0	60	20	6	4	2	2	1	1	1	3	20	3	2	2	1	1	3	1	2	2	1	1	19	39	2
Montana/Double H Mountains - stream riparian	20	0	60	20	6	6	2	3	2	1	1	3	24	3	1	2	1	1	3	1	2	2	1	1	18	42	2
Montana/Double H Mountains - wet meadow	20	0	80	0	6	4	1	3	1	1	1	3	20	1	1	3	1	2	3	1	1	2	1	1	17	37	2
Mosquito Lake - playa/ephemeral pool	100	0	0	0	4	2	1	1	1	1	1	1	12	1	1	0	1	0	2	1	1	1	1	0	9	21	1
Muddy River Lower - Glendale to Lake Mead, river riparian	0	25	50	25	4	4	2	1	1	1	0	3	16	3	3	3	3	3	2	2	2	3	0	0	24	40	2
Muddy River Upper - Springs/brooks	0	0	0	100	6	6	1	3	1	1	2	3	23	2	3	2	2	1	1	0	1	3	0	0	15	38	3
Muddy River Upper - upstream from Glendale, Mojave river/stream	0	0	0	100	4	4	1	3	1	1	1	3	18	1.5	3	2	2	1.5	1	0	1	3	1	0	16	34	3
New Year Lake - playa / ephemeral pool	100	0	0	0	4	2	1	1	1	1	1	1	12	1	1	0	1	1	2	1	1	1	1	0	10	22	1
Newark Lake - playa	70	0	15	15	6	6	1	2	1	1	1	1	19	2	3	1	1	2	3	1	2	2	1	1	19	38	3
North Fork Humboldt - Beaver Creek to headwaters, and trib.s	10	0	45	45	4	6	3	3	2	2	3	3	26	3	0	2	1	3	3	3	3	3	0	0	21	47	3
North Fork Humboldt - Elburz to Beaver Creek	0	0	50	50	2	2	1	1	1	1	1	1	10	1	0	3	2	1	3	0	1	3	0	0	14	24	2

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Oasis Valley spring complex marsh	25	5	15	55	6	6	2	3	1	0	1	2	21	1	2	2	3	1	1	1	1	3	0	0	15	36	2
Oasis Valley stream riparian	10	0	20	70	6	6	3	3	1	1	0	3	23	1	2	3	2	0	1	0	2	3	0	0	14	37	2
O'Neil Basin - Salmon Falls River forks and tributaries	50	0	10	40	6	4	2	3	3	3	2	2	25	3	0	1	1	2	2	0	2	2	0	0	13	38	2
Overton Wildlife Management Area - river riparian, marsh	100	0	0	0	6	6	3	1	1	1	1	3	22	1	1	1	3	1	1	1	1	3	1	0	14	36	3
Owyhee Desert Playas - ephemeral playa lake/pools	80	0	10	10	4	4	1	2	1	1	1	1	15	1	1	1	1	1	3	1	1	1	1	2	14	29	1
Owyhee East Fork - w/tributaries, including Wildhorse Reservoir	27	12	6	55	4	4	3	3	2	2	2	3	23	3	0	3	1	2	3	1	3	3	0	0	19	42	1
Owyhee River - below Wildhorse Res, w/tributaries	20	0	20	60	4	4	2	3	2	3	2	2	22	2	0	2	2	2	3	1	1	3	0	0	16	38	3
Owyhee South Fork - Independence Valley w/tribs	0	0	50	50	6	6	3	1	3	2	3	3	27	3	0	1	1	3	3	2	1	2	0	0	16	43	3
Owyhee South Fork - narrows to stateline w/tribs	0	0	50	50	4	4	2	3	2	2	1	3	21	3	0	3	1	2	3	1	1	3	0	0	17	38	2
Pahranagat River/Valley - lake / reservoir, Maynard playa lake	100	0	0	0	6	6	3	3	0	0	1	3	22	1	1	1	1	1	1	0	2	2	0	0	10	32	1
Pahranagat River/Valley - marsh	30	20	20	30	6	6	3	1	2	2	1	3	24	3	1	3	3	1	2	0	1	1	0	0	15	39	2
Pahranagat River/Valley - spring/brook	0	0	0	100	6	6	3	3	0	1	1	3	23	1	3	3	1	1	2	0	3	3	0	0	17	40	3
Pahranagat River/Valley - stream riparian	0	0	90	10	6	4	1	3	1	0	1	3	19	3	3	3	1	2	2	0	0	2	0	0	16	35	3
Pahrump Valley - mequite-acacia complex (shrub phreatophytes)	20	20	15	45	6	6	2	2	0	0	0	1	17	3	3	2	3	2	1	0	3	3	1	0	21	38	3
Pine Creek watershed	10	0	40	50	4	6	2	2	2	2	1	1	20	2	1	3	1	2	3	0	1	3	1	0	17	37	2
Prather Springs - Windemere Hills spring pool	50	0	20	30	4	6	1	1	0	0	0	1	13	1	1	1	0	1	3	0	1	1	0	0	9	22	3
Pyramid Lake delta	100	0	0	0	6	6	3	1	3	0	2	2	23	0	0	0	0	0	1	0	1	3	0	0	5	28	1
Pyramid Lake open water	100	0	0	0	6	6	3	0	0	0	0	3	18	1	1	0	0	0	0	0	1	0	0	0	3	21	1
Quinn River - low elev. stream riparian, marsh, oxbow, near Devil's Gate and Oregon Border	90	0	0	10	6	4	1	2	3	3	3	2	24	1	1	1	1	1	1	1	1	1	1	1	11	35	2
Quinn River - lowland tributaries riparian, intermittent flow, wet meadow (McDermitt, Washburn Crk.s)	70	0	10	20	2	2	1	1	2	2	2	2	14	3	2	2	1	2	2	1	1	3	1	1	19	33	1
Quinn River - Q.R. Crossing vic. terminal/ephemeral wetlands and meadow	75	0	15	10	6	4	1	1	2	2	2	2	20	3	3	2	1	2	2	1	1	2	1	1	19	39	2
Quinn River - south and east forks (north flank Santa Rosa Range to confluence)	85	0	0	15	4	4	2	3	2	2	2	3	22	1	1	1	1	1	3	1	1	2	1	1	14	36	1
Quinn River - terminus, northern portion Black Rock playa lake	100	0	0	0	2	2	1	1	1	1	1	1	10	1	3	1	1	2	1	1	1	2	1	1	15	25	1
Quinn River - upper elev. trib.s riparian shrubland, small wet meadows	80	0	0	20	4	4	2	3	2	2	2	2	21	1	1	1	1	1	3	1	1	2	1	1	14	35	1

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Quinn River - upper Q.R. Valley springs, bogs, small marshes	85	0	10	5	6	4	1	2	3	2	2	2	22	1	1	1	1	2	2	1	1	2	1	1	14	36	2
Quinn River Lakes - (near Kings River confluence) intermittent ponds	75	0	15	10	6	6	1	2	3	2	1	2	23	2	3	3	1	2	2	1	1	2	1	1	19	42	3
Quinn River, Quinn River V. - lowland river riparian, shrubland, wet meadow	60	0	30	10	4	6	1	1	2	2	2	3	21	3	3	3	2	3	3	1	2	2	1	1	24	45	2
Railroad Valley springs and marshes	0	0	20	80	6	6	2	3	0	0	3	3	23	3	2	3	1	2	3	1	2	2	3	1	23	46	3
Red Rock Canyon - ephemeral pool	90	0	0	10	6	6	2	0	1	1	0	3	19	0	0	0	0	0	0	0	2	1	0	0	3	22	3
Red Rock Canyon - spring/springbrook	20	40	20	20	6	6	3	3	1	0	0	3	22	3	1	2	1	0	0	0	3	3	0	0	13	35	2
Reese River lower, Hwy 50 north to Humboldt River - stream riparian	20	0	25	55	2	2	1	1	1	1	1	1	10	3	3	1	2	2	3	1	0	3	0	0	18	28	1
Reese River upper headwaters and upper tributaries	80	0	0	20	6	6	3	3	3	3	3	3	30	1	0	1	0	0	2	0	1	2	0	0	7	37	2
Reese River upper mainstem - Clear Creek to Hwy 50	5	0	40	55	4	6	1	2	1	1	1	2	18	3	2	3	1	2	3	0	1	1	0	0	16	34	3
Rock Creek lower (county road to lowest gorge)	0	0	40	60	6	4	1	3	1	1	1	1	18	1	0	1	1	0	3	0	1	2	0	0	9	27	3
Rock Creek upper and Willow Creek - stream riparian, springs/brooks	30	0	5	65	6	6	2	3	3	3	3	2	28	1	0	1	0	0	2	1	2	2	0	0	9	37	1
Rock Creek upper, Squaw Valley - stream riparian woodland, wet meadow, marsh, springs/brooks	60	0	30	10	6	6	2	3	2	2	2	2	25	3	2	2	1	3	3	2	1	2	1	1	21	46	3
Ruby Lake aquatic	50	0	50	0	6	6	3	0	0	0	0	3	18	0	1	0	0	1	1	0	2	3	0	0	8	26	1
Ruby Lake NWR marsh	80	0	0	20	6	6	3	3	3	0	3	2	26	1	3	1	1	1	1	1	1	3	1	1	15	41	1
Ruby Lake NWR spring complex (pools/outflows)	50	0	38	12	4	4	2	3	3	0	2	2	20	1	3	1	1	1	1	1	1	3	1	1	15	35	1
Ruby Lake NWR wet meadow	71	0	0	29	6	0	2	0	3	0	0	1	12	1	3	1	1	1	2	1	1	3	1	1	16	28	1
Ruby Valley sulphur hot springs, geothermal springs	75	0	0	25	2	4	2	0	0	0	0	1	9	0	2	1	2	0	2	0	2	1	1	0	11	20	1
Rye Patch Reservoir	100	0	0	0	2	2	3	2	3	3	2	3	20	2	1	1	1	1	1	1	1	2	1	1	13	33	1
Salmon Falls River and tributaries	45	0	20	35	4	4	2	2	2	2	2	2	20	3	0	2	1	1	3	0	2	3	0	0	15	35	2
San Antonio Site - spring/brook	10	10	10	70	6	6	1	3	2	2	2	3	25	2	2	3	3	3	3	1	1	2	1	1	22	47	3
Schell Creek Range - aspen woodland	10	20	20	50	6	6	2	1	1	1	1	2	20	1	1	1	1	1	3	1	2	2	1	1	15	35	3
Schell Creek Range - spring/springbrook	5	10	30	55	6	6	3	3	1	1	2	3	25	3	2	3	2	1	3	1	2	2	1	1	21	46	3
Schell Creek Range - stream riparian	5	5	35	55	6	6	3	3	3	3	3	3	30	3	1	3	2	2	3	1	3	2	1	1	22	52	3
Schell Creek Range - wet meadow	20	10	30	40	6	6	2	2	3	2	3	2	26	3	1	3	2	1	3	1	3	2	1	1	21	47	3
Sheldon NWR - aspen on Virgin, Hell, Cottonwood, Wheeler crk.s, below basalt outcrops, snowpockets	40	0	0	60	6	6	3	3	3	3	3	3	30	1	1	1	1	1	1	2	2	2	1	1	14	44	1
Sheldon NWR - lakes/reservoirs (Big Spring, Alkali, Catnip Reservoirs, Swan Lake)	100	0	0	0	6	6	3	2	3	3	2	3	28	1	1	1	1	1	1	2	2	2	1	1	14	42	1
Sheldon NWR - marsh particularly in Virgin Valley	95	0	0	5	6	6	3	3	3	3	3	3	30	1	1	1	1	1	1	2	2	2	1	1	14	44	1

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Sheldon NWR - playas/ephemeral pools (near Swan Lake, Round Mountain)	100	0	0	0	4	4	1	1	1	1	1	2	15	1	1	1	1	1	1	2	2	2	1	1	14	29	1
Sheldon NWR - riparian shrubland, woodland Virgin, Thousand, Hell, Badger, Cottonwood, Catnip crk.s	35	0	0	65	6	6	3	3	3	3	3	3	30	1	1	1	1	1	1	2	2	2	1	1	14	44	1
Sheldon NWR - wet meadow, most w/stream riparian Virgin, Hell, Catnip, Big Spring, Fish crk.s	75	0	15	10	4	4	3	3	2	2	2	3	23	1	1	1	1	1	1	2	2	2	1	1	14	37	1
Sherman Creek	50	0	10	40	4	6	1	1	1	1	1	1	16	0	0	1	1	1	3	0	2	3	0	0	11	27	1
Smith Creek Playa - ephemeral playa lake/pool, spring pool/brook	70	0	15	15	6	4	1	2	1	1	1	1	17	2	1	1	1	1	3	1	1	2	1	2	16	33	1
Smoke Creek - stream outflow, including wells and springs	80	0	10	10	4	6	1	2	0	0	0	2	15	2	3	1	1	1	2	1	1	1	3	0	16	31	2
Snow Water Lake (Clover V.) - terminal lake, ephemeral playa lake/pool, spring pool/brook	70	0	15	15	6	6	2	2	1	1	1	1	20	2	3	1	1	2	3	1	2	2	1	1	19	39	2
Soda Lakes - lake / reservoir	80	0	0	20	4	2	3	1	1	1	1	2	15	2	2	1	3	1	1	1	3	1	2	1	18	33	1
Soda Spring Valley - Sodaville Scorecard site	0	25	50	25	2	4	1	1	0	0	0	1	9	3	2	3	3	1	1	2	1	3	0	0	19	28	3
Soldier Meadows - springs/brooks above reservoir, wet meadows	75	0	5	20	4	6	3	2	0	0	0	3	18	2	1	1	1	1	2	0	1	1	0	0	10	28	1
Spring Mountain - aspen woodland	65	15	0	20	6	6	3	2	1	0	0	2	20	1	0	1	1	0	0	0	2	3	0	0	8	28	1
Spring Mountain - montane fen-bog	80	0	0	20	6	6	1	3	1	0	0	1	18	1	0	2	1	0	0	0	1	2	0	0	7	25	1
Spring Mountain - springs	19	37	22	22	6	6	3	3	1	0	0	3	22	3	1	2	1	0	0	1	3	3	0	0	14	36	2
Spring Valley - Baking Powder Flat playa/ephemeral pool, spring pool/brook	70	0	15	15	6	6	1	2	1	1	1	2	20	3	3	1	1	3	3	3	1	2	1	1	22	42	3
Spring Valley - Yelland Lake playa/ephemeral pool, spring/brook, lowland stream, wet meadow, marsh	70	0	15	15	6	6	1	2	1	1	1	2	20	2	3	1	1	2	3	3	1	2	1	1	20	40	3
Starr Valley	60	0	40	0	6	6	1	3	3	3	3	2	27	3	0	1	2	3	3	0	1	3	0	0	16	43	1
Steptoe Valley Middle - Basset Slough riparian meadow, marsh	70	10	10	10	6	6	2	2	1	1	2	2	22	2	2	1	2	2	2	2	1	2	3	0	19	41	3
Steptoe Valley Middle - Bassett Lake	55	20	15	10	6	4	3	2	1	1	2	2	21	3	3	1	2	2	2	2	1	3	3	0	22	43	3
Steptoe Valley Middle - Duck Creek discharge area	60	10	10	20	6	6	2	2	1	1	2	2	22	2	3	1	2	2	2	1	1	3	3	0	20	42	3
Steptoe Valley Upper - Currie springs	35	10	20	35	6	6	2	2	1	1	1	1	20	2	1	2	1	2	2	1	1	2	2	1	17	37	2
Steptoe Valley Upper - Indian Ranch springs	55	10	15	20	6	4	1	2	1	1	1	1	17	2	1	2	1	1	1	1	1	2	1	1	14	31	2
Steptoe Valley Upper - McDermid Creek	10	10	20	60	6	4	1	2	1	1	1	1	17	2	1	2	1	2	3	1	1	2	2	1	18	35	2
Steptoe Valley Upper - Twin Springs	25	10	20	45	6	6	1	2	1	1	1	1	19	2	1	2	1	2	2	1	1	2	2	1	17	36	2
Steptoe Valley WMA - Comins Lake	90	0	0	10	6	6	3	3	3	3	3	3	30	1	1	0	1	0	1	2	2	2	2	0	12	42	1
Steptoe Valley WMA - springs, marsh, small ponds	35	10	30	25	6	6	3	2	3	3	3	3	29	1	1	1	1	0	1	1	2	2	2	0	12	41	1
Stillwater NWR - marsh, wet meadow	5	0	0	95	6	6	3	1	1	1	2	3	23	1	1	1	3	1	1	0	1	2	1	1	13	36	1

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Sullivan Spring, Antelope V. - spring pool/brook	50	10	20	20	6	6	1	1	0	0	2	1	17	2	1	2	1	1	2	0	0	1	0	0	10	27	2
Summit Lake	100	0	0	0	6	6	1	2	1	1	1	3	21	1	2	1	1	2	2	1	1	2	0	0	13	34	2
Summit Lake tributaries (Mahogany, Summer Camp, Snow crk.s) - stream riparian	90	0	0	10	6	6	3	3	2	2	3	3	28	1	2	1	1	2	2	1	3	3	0	0	16	44	2
Susie Creek	30	0	0	70	4	4	1	1	1	1	1	1	14	1	0	0	1	1	3	0	1	3	0	0	10	24	1
Toiyabe Range - Aspen Woodland	30	5	5	60	6	5	2	2	2	2	1	1	21	2	1	1	2	1	2	2	2	1	1	1	16	37	2
Toiyabe Range - stream riparian	60	5	5	30	6	6	3	3	3	3	3	3	30	2	1	2	2	1	3	2	2	2	1	1	19	49	2
Toiyabe Range - Wet Meadow	10	15	5	70	6	6	3	3	3	3	3	3	30	2	2	1	2	1	3	2	2	2	1	1	19	49	2
Topaz Lake - open water, reservoir	0	0	100	0	4	2	3	3	2	2	2	3	21	2	1	3	1	3	3	1	3	2	1	1	21	42	1
Toquima Range - Aspen Woodland	20	15	10	55	6	6	2	2	2	2	1	1	22	1	2	1	2	1	3	2	2	1	1	1	17	40	2
Toquima Range - Wet Meadow	10	15	5	70	6	6	2	3	3	3	3	3	29	2	2	1	3	1	3	2	2	3	1	1	21	50	2
Truckee Meadows vicinity - marshes Spanish Springs	60	20	20	0	4	2	3	2	0	2	1	3	17	3	2	1	3	0	0	0	2	3	0	0	14	31	1
Truckee Meadows vicinity - Swan Lake marsh Lemmon Valley	100	0	0	0	6	4	3	0	0	0	2	2	17	0	1	0	3	0	0	0	1	3	0	1	9	26	1
Truckee River Lower - river riparian, oxbows	5	5	15	75	6	6	2	3	1	1	1	3	23	1	1	1	1	1	1	1	1	3	1	0	12	35	1
Truckee River Trib.s - lowland ponds / reservoirs, woodland-urban interface	50	0	0	50	6	4	3	3	2	2	2	3	25	2	3	2	2	3	3	1	2	2	1	1	22	47	1
Truckee River Trib.s - Steamboat Creek riparian, marsh, wet meadow	0	75	5	20	4	2	2	3	3	3	3	3	23	1	1	3	3	0	0	0	1	3	1	0	13	36	2
Truckee River Trib.s (Franktown, Galena, Whites, Thomas, Hunter, other crk.s) - stream riparian	20	60	15	5	6	4	3	3	3	2	3	3	27	2	1	2	3	1	1	1	2	2	1	0	16	43	3
Truckee River Tribs. - aspen woodlands	0	0	100	0	6	4	2	3	3	3	2	3	26	2	3	3	1	2	3	1	2	1	1	1	20	46	1
Truckee River Tribs. - lower wet meadows, mostly irrigated	0	0	100	0	4	4	3	3	2	2	2	3	23	3	3	3	1	3	3	1	2	2	1	1	23	46	1
Truckee River Upper - river riparian, oxbows	0	60	0	40	4	6	3	3	1	1	1	3	22	1	1	2	2	0	0	0	1	3	0	0	10	32	1
Truckee River/Lake Tahoe Trib.s - montane lake, pond, reservior	25	10	0	65	6	6	3	3	2	1	2	3	26	1	1	2	1	1	1	1	2	1	1	1	13	39	1
Twentyone Mile Marsh - stream riparian marsh, wet meadow, springs/brooks	40	0	20	40	6	6	2	3	2	2	2	2	25	3	2	3	1	2	3	1	1	2	1	1	20	45	3
Virgin River lower, Halfway Wash to Lake Mead - river riparian	30	0	5	65	6	6	1	3	3	3	2	2	26	3	3	1	1	1	2	1	1	3	0	0	16	42	2
Virgin River lower, state border to Halfway Wash - river riparian	0	15	25	60	6	6	2	3	2	3	1	3	26	3	3	3	3	3	3	1	3	3	1	0	26	52	2
Virgin River upper, w/Beaver Dam Wash - stream riparian	60	0	5	35	6	6	3	3	3	1	2	3	27	2	1	3	0	0	3	0	2	2	0	0	13	40	2
Walker Lake delta - unvegetated	100	0	0	0	6	4	1	3	3	0	3	3	23	3	2	0	0	0	0	0	1	1	0	0	7	30	1
Walker Lake open water	0	0	65	35	4	4	3	0	0	0	3	3	17	3	2	0	0	0	0	0	1	0	0	0	6	23	3
Walker Lake shorezone	100	0	0	0	6	6	3	0	1	0	3	3	22	3	2	1	1	1	1	0	1	1	0	0	11	33	1
Walker River Forks - riparian	20	0	10	70	4	2	2	3	1	2	2	3	19	3	2	2	2	3	2	1	1	2	0	0	18	37	1

Wetland Area	Estimated % Area Impacted				Ecosystem Functions and Value Rating									Stressors and Stress Intensity Rating												Rank Score	SU
	1A	1B	1C	1D	2A	2B	2C	2D	2E	2F	2G	2H	Sum 2A-H	3A	3B	3C	3D	3E	3F	3G	3H	3I	3J	3K	Sum 3A-K		
Wall Canyon lower - main reservoir to Duck Flat stream riparian, Duck Flat meadow	20	5	50	25	4	6	1	2	2	3	2	3	23	3	0	3	2	3	2	0	0	3	0	0	16	39	2
Wall Canyon middle - Bordwell Creek confluence to, including main reservoir stream riparian	20	5	50	25	6	6	3	2	2	3	2	3	27	3	0	3	1	0	2	0	3	3	0	0	15	42	2
Wall Canyon upper - headwater to Bordwell Creek confluence stream riparian	85	5	0	10	4	6	1	3	3	1	1	1	20	1	0	1	0	0	2	0	1	1	0	0	6	26	1
Wall Canyon/Reservoir - spring systems (stream tributaries) riparian	35	0	30	35	6	6	3	3	0	0	2	3	23	2	0	2	0	1	3	0	2	3	0	0	13	36	2
Warm Springs Ranch (Independence Valley) - marsh	80	0	0	20	4	6	1	1	1	1	1	1	16	1	1	1	1	1	2	1	1	2	1	0	12	28	1
Warm Springs Ranch (Independence Valley) - springs	0	0	100	0	4	2	2	2	1	1	1	1	14	1	1	3	1	1	2	1	2	3	1	0	16	30	2
Washoe Valley - lake-reservoir riparian woodland, shrubland, marsh, wet meadow	0	0	100	0	6	4	3	3	2	3	1	3	25	3	2	1	2	2	1	1	1	3	1	1	18	43	2
Weber Reservoir - reservoir riparian woodland, shrubland, marsh, wet meadow	0	0	100	0	4	4	3	3	2	3	2	3	24	3	3	2	2	3	1	1	1	2	0	0	18	42	1
Whirlwind Valley Playa - ephemeral playa lake	80	0	10	10	6	6	1	2	1	1	1	1	19	2	3	1	1	2	3	3	1	2	1	1	20	39	3
White Mountains - Wet Meadow	20	10	5	65	6	6	3	3	3	3	3	3	30	3	2	2	2	2	3	2	3	2	1	1	23	53	2
White Plains, Humboldt Slough - playa lake marsh, wet meadow, shrub phreatophytes	100	0	0	0	4	4	1	1	1	1	1	1	14	2	2	1	1	1	1	1	1	1	1	1	13	27	1
White River Lower - springs/brooks (Camp, Emigrant, Moon River, Moorman, Sunnyside/Kirch)	50	0	40	10	6	6	3	3	2	1	3	3	27	2	1	1	1	2	2	0	1	2	0	0	12	39	2
White River Upper - springs/brooks (Lund, Preston, Ruppes Place/Boghole, The Cove)	50	25	10	15	6	6	1	3	0	0	2	3	21	3	2	3	1	2	2	0	0	3	0	0	16	37	3
White Rock/Wilson Creek Range - Big Jack spring	50	0	0	50	4	6	1	1	0	0	1	1	14	1	0	2	0	1	3	0	1	1	0	0	9	23	3
Winnemucca Lake - playa/ephemeral pool, marsh	10	0	0	90	2	2	1	1	1	1	1	1	10	3	1	1	3	2	1	1	1	1	1	1	16	26	1

APPENDIX 3.

--- Nevada Priority Wetlands Evaluation and Ranking Procedure ---

Introduction

The evaluation procedure is designed to produce Nevada's inventory of priority wetlands, which will be used to:

- Inform resource scientists, managers, conservationists, and the interested public about the places in Nevada containing wetland conservation priorities.

- Satisfy federal regulations that tie state wetlands conservation planning and comprehensive outdoor recreation planning by the Nevada Division of State Parks to eligibility for federal Land and Water Conservation Fund grants.

The priority wetland evaluation process is intended to produce a ranked priority wetland list. The Nevada Wetlands Priority Conservation Plan, Technical Review Draft (NvWP) (NNHP, January 2006) presents a provisional list of 150 areas selected as locations of wetlands identified, broadly speaking, as valuable and vulnerable in resource management agency and conservation organization conservation plans.

The federal priority wetland planning guidance specifies three factors that must be used in the comparative evaluation process. For this project, these factors are identified as: 1) Historical Impact; 2) Ecosystem Functions/Values and Socioeconomic Importance; and, 3) Sources of Stress, Stress Intensity and Stewardship Urgency. A final report of the state's priority wetland inventory must be submitted for acceptance by the National Park Service and the U.S. Fish and Wildlife Service. The final report will be distributed to agencies, conservation organizations, and interested citizens participating in the priority evaluation process and to others whose work involves the management and conservation of wetlands. The NvWP must be updated every five years. A desired outcome of this process is establishment of a cooperative wetland conservation planning tradition and partnership to incrementally develop a comprehensive wetland information system.

This wetland priority project is a joint effort of the Nevada Natural Heritage Program, Nevada Department of Wildlife, and The Nature Conservancy. Three regional workshops will be held at which we will consult with biologists, hydrologists, and knowledgeable managers and scientists who are familiar with the candidate priority wetlands. The final list and ranking of priority wetland areas will be determined from the input obtained from participating experts.

The steps in the evaluation procedure, including definition of wetland factors and method of rating factors, are described below.

Step 1. Identify Important Wetlands and Locations in Priority Wetland Area (Sheet 1)

1. Identify important aquatic-wetland types and their geographic locations.
2. Consider whether the geographic scope of the area is an appropriate unit for evaluating important wetlands. If needed modify area scope to better fit the biology, hydrology, or management situation.

Step 2. Estimate Historical Impact – % Eliminated, Converted, Degraded, and Intact (Sheet 2)

For each important wetland type in the priority area, estimate the percentages of the type-area still intact and eliminated, converted, and/or degraded. Applying the best professional judgment of people knowledgeable about wetlands in the area to evaluate the extent of impacts is really the only approach available absent spatial data and analyses.

- **% Eliminated**. Wetland areas where the hydrology, soil, and vegetation have been entirely altered or destroyed (e.g., drained, filled, excavated, dredged, or built upon). Eliminated wetland acreage also includes areas transformed into upland communities or xeric conditions. Causes may be modification to channel sinuosity/geometry or flow rate that caused the stream to incise, widen or to lose hydraulic capacity to flood naturally; also, groundwater depletion due to pumping or loss of recharge area.

- **% Converted**. Wetland areas where the hydrology, soil, and/or vegetation were substantially modified for another land use (e.g., low impact crop production, grazing, outdoor recreation, or water development) or for resource management (e.g., marsh habitat converted to wet meadow) and some natural functions and characteristics remain (e.g., floodplain riparian corridor where wetland acreage has been converted to hay meadow cultivation, but hydric soils and the wetland water supply exist).

- **% Degraded**. Wetland areas where the hydrology, landform, soil, and/or vegetation have been altered, but most natural characteristics and ecosystem functions exist. Causes of alteration include sporadic or dispersed levels of low impact land use on-site, or cumulative effects of land, water, or vegetation use off-site.

- **% Intact**. Wetland areas where the hydrology, soil, and/or vegetation predominantly exhibit natural conditions in terms of vegetation, landform, surface runoff, geomorphic processes, and wildlife occupancy/utilization.

Step 3. Evaluate Ecosystem Functions/Values and Socioeconomic Importance (Sheet 3)

3.1 Identify which of the ecosystem functions or valued services the wetland is capable of performing. Functions and values are described in Table 3A.

Table 3A. Ecosystem Functions/Values for Evaluating Priority Wetlands

Function/Value	Description
Wildlife Habitat, Diversity, and Food Web Support	Wetland is inhabited by wetland dependent animal or plant species (i.e., are found only in such habitats or that they depend on such habitats for a portion of their life cycle, or that the habitats on which they depend exist only because of close proximity to, or other influence from, aquatic or wetland habitats). Wetland is the source of organic detritus, vegetable matter, or prey species that terrestrial or avian species require for survival. Wetland is critical habitat for reproduction/breeding of conservation priority species otherwise not considered wetland-dependent.
Special Status Wetland Dependent Taxa	Wetland is inhabited by wetland dependent species or subspecies identified as special status taxa, including, animals and plants tracked by the NNHP as rare/at risk; animals and plants listed under federal Endangered Species Act regulations as threatened, endangered, threatened/endangered candidate; plant species listed as fully protected by Nevada regulation (NAC 527); and species of mammals, birds, fishes, and amphibians listed as protected, threatened, endangered, or sensitive by Nevada regulation (NAC 503).
Hydrology & Water Supply	Wetland occurs in a watershed or adjacent to a water body that perennially or in most years conveys surface or subsurface flow or retains water seasonally, semi-permanently, or permanently. Includes wetlands in groundwater recharge zones; also, springs or seepage zones that discharge perennially into low elevation water bodies.
Erosion & Sediment Control	Wetland possesses vegetation, hydrology, and landform features that affect the movement and energy of surface water (e.g., channel flow, overland flow, and groundwater recharge) capable of influencing rates and patterns of erosion and/or sedimentation within and up- and down-gradient of wetland.
Flood Control	Wetland occurs in a river floodplain, swale drainage, or landscape depression that receives and holds channel flow or surface runoff during peak flow periods, usually associated with snow melt, rain-on-snow events, or summer convective storms. Includes beaver dams.
Water Quality Maintenance	Wetlands in a position to intercept or adsorb waterborne pollutants (dissolved, suspended) from manmade or natural sources and possess the physical, biological, and chemical properties necessary to retain pollutants or alter water quality in a manner that benefits wildlife, vegetation, or water supply for human uses.
Outdoor Recreation	Wetland known to be used as or planned or under consideration for use as outdoor recreation area. Wetlands with characteristics compatible and complementary to outdoor recreation activities in wetland/aquatic settings, including but not limited to fishing, hunting, wildlife watching, hiking, camping, wading/bathing, swimming, and picnicking.

3.2 Rate the effectiveness or capacity of the wetlands to perform the functions and services (high, moderate, low). Factors to consider when rating wetland effectiveness/capacity include:

- What natural functions are usually performed by this type of wetland?
- Are the wetlands in a natural landscape position to perform the functions?
- Are the natural biological, physical, and chemical properties still intact to perform functions?
- Do animals, plants, or people that benefit from the function occur in the area, or is access prevented?
- Is on- or off-site landform modification, land use, or disturbance (e.g., fire, invasive plants, or pollution) inhibiting the function?
- Have drier than normal conditions persisted (drought, increased water diversion) that might subdue or mask natural functions or values?

Table 3B. Alternative Factors and Measures to Aid in Rating Ecosystem Functions/Values

Ecosystem Function/Value	Factors to Consider in Rating Effectiveness/Capacity of Priority Wetlands to Provide Function or Value	Rating Value		
		LOW	MODERATE	HIGH
Wildlife Habitat, Diversity, and Food Web Support	• Richness/abundance of wetland dependent animal and plants species living entire life or portion of life cycle in wetland. • Richness/abundance of animal and plant species not wetland dependent but using wetlands for essential needs that cannot be met elsewhere • Amount of wetland sites providing adequate or better habitat conditions for native species and migrants	Few	Several	Many
Special Status Wetland Dependent Taxa	• Occurrences of special status wetland dependent taxa, including NNHP-tracked rare/at-risk taxa; ESA-threatened, endangered, and candidate taxa; or state protected plant taxa and state protected, sensitive, threatened, or endangered wildlife taxa.	Few	Several	Many
Outdoor Recreation	• Number of outdoor recreation visitors using wetlands • Number of outdoor recreation opportunities involving wetlands	Few	Several	Many
	• Public access to wetlands with recreation values	Private	Public/private	Public
Hydrology Water Supply	• Amount of riparian wetland coverage adjacent to perennial water • Amount of wetlands in upper watersheds that supply perennial streams/rivers or in groundwater recharge zones	Small	Medium	Large
Erosion and Sediment Control	• Overall degree that wetlands function properly; i.e., condition of the vegetation, landform, & large woody/stony debris is sufficient to dissipate stream energy, filter/distribute sediment, stabilize banks, and hold flood-water	Small	Medium	Large
Flood Control	• Amount of wetlands located in floodplains that function properly – condition of channel, vegetation, landform, large woody debris, and bedload is sufficient to attenuate flood flow energy and volume, retain flood-water, and aid the process of floodplain maintenance and development	Small	Medium	Large
Water Quality Maintenance	• Amount of wetland areas characterized as having the vegetation, soil, size, and position to intercept pollutants in stream flow or overland flow (typically lotic riparian wetland types)	Small	Modest	Large
Socioeconomic Importance	• Size of population center or commercial activity benefiting from wetland functions or values	Small	Medium	Large
	• Number of ecosystem functions performed and valuable services provided	1 to 2	3 to 4	5 or more
	• Degree of interest local community/government exhibits in wetland protection and recovery action: regulatory ordinance; conservation easement, acquisition, or plan; or formal agreements with land/resource management agencies	Small	Medium	Large

3.3 Socioeconomic Importance. Rate the relative significance of the wetlands in terms of local values: do these wetlands provide a high, medium, or low level of social and economic benefits to the surrounding communities? Consider how the well being of the community and economy benefit from the ecosystem functions and services the wetlands provide. Socio-economic services include: removal of pollutants in water supplies; preventing flood and erosion damage across urban and agricultural land; local access to outdoor recreation (e.g., hunting, fishing, photography, etc.); ecotourism; preserving biodiversity; and water supply replenishment. Include cultural and aesthetic aspects (e.g., scenic quality, heritage, rarity of wetlands, access to other wetlands; also, artistic inspiration, contemplative practices, appreciation of natural diversity).

Step 4. Evaluate Sources of Stress / Stress Intensity and Stewardship Urgency (Sheet 4)

4.1 Identify human sources of stress that are occurring or are likely to occur in the future (roughly next 5 years) and cause or contribute to negative impacts on wetland resources. Negative impacts, attributed to various activities, may include:

- Reduction in surface/groundwater reaching wetlands due to diversion, dam, pumping, or drainage.
- Deterioration in water quality due to nonpoint source discharges of macro/micro-nutrients, metals, and chemicals.
- Encroaching upland plant species or nonnative species due to wetland soil/hydrology disturbance.
- Soil resource degraded by compaction, salinity, limited organic litter, or altered erosion or sedimentation processes.
- Incising or widening channel due to grading, channel clearance/dredging, placing fill, or increased runoff.
- Changes in physical habitat conditions (vegetation community characteristics) that alter abundance/diversity of animal species, populations, or communities.

4.2 Rate the intensity of stress that wetlands might undergo as a result of the expansion, intensification, or commencement of stressful human activities that are ongoing or anticipated in the next five years. Human sources of stress are described in Table 4A. Stress intensity criteria are explained in Table 4B.

Table 4A. Human Activities (Current and Potential) As Stressors of Wetland Resources

Type of Activity	Description of Stressors
Surface Water Diversion or Development	All or a significant portion of the water that naturally accumulates or flows into, through, or from the wetland are being/will be diverted or stored in artificial conveyance or impoundment. Includes a diversion, conveyance, or storage structure that may be constructed/operated offsite such that the hydrology of the site is modified to the detriment of the wetland.
Groundwater Pumping	The development/use of groundwater is reducing/may reduce water naturally available to wetlands. Wetlands are in a Groundwater Basin the Nevada State Engineer has "designated" (i.e., groundwater in the basin is being depleted or in need of additional administration by Nevada Division of Water Resources).
Hydrogeomorphic Modification	Natural channels or depressions that customarily carry flow or accumulate standing water are being/will be mechanically altered (excavation, dredge or fill); wetlands are/will be inundated due to dam/reservoir development; accelerated erosion of landforms is occurring/will occur due to changes in surface runoff induced by onsite or surrounding land use activities; or, the clearance of vegetation or sediment is occurring/will occur resulting in alteration of hydrogeomorphic landforms or accelerated erosion.
Water Quality Impairment	The wetland water supply contains elevated levels of pollutants, such as sediment, dissolved solids, nutrients, metals, pesticides or other contaminants that come from point source discharges (e.g., wastewater treatment plant, industrial operation) or from nonpoint sources (e.g., irrigation drain, agricultural or urban runoff) are/will negatively impact the vegetation, wildlife, wildlife habitat, or ecological functions of the wetland. May include high turbidity; higher or lower temperature; or lower dissolved oxygen.
Land Development	The construction of buildings, roads, and other structures, or mechanical contouring of the surface for human occupation or enterprise are occurring/will occur within or adjacent to the wetlands resulting in wetland loss, degradation, or conversion (e.g., parks, golf course). Includes urban, rural, industrial and other uses.
Farming	Land surface, hydrology, and/or vegetation in the wetland area are being/will be altered for the cultivation or harvest of crops, including hay, or by structures built to support the production of crops.
Livestock Grazing	Land and/or vegetation in the wetland area that is being/will be altered by grazing, trampling or other impacts due to domestic livestock grazing or by ranch structures built to support the grazing operation.

Type of Activity	Description of Stressors
Mining	Mining operations or exploration (excavation, stockpiling, buildings, roads, etc.) that are resulting/may result in wetland impacts; including groundwater pumping for open pit mining that may alter water discharge in streams, springs, or seeps.
Outdoor Recreation	Dispersed or concentrated outdoor recreation activities are occurring/will occur in such that the level and types of uses are likely to cause additional wetland impacts. Includes amenities built or planned for operation of parks, wildlife management areas, campgrounds, etc.
Nonnative Plants or Animals	Invasive nonnative plants or introduced nonnative animal species are present or likely to increase, or are likely to be introduced to the site, causing alteration of wetland hydrology, vegetation, soil, and/or landform.
Energy Development	The construction of structures to explore, develop, refine, produce, transmit, or distribute energy resources (e.g., electricity, fossil fuel, or renewable forms of energy) is occurring/will occur and degrade wetlands.
Military Mission	The construction of structures or implementation of operations related to U.S. Department of Defense or of Energy activities that are impairing/will impair wetland resources upon or in proximity to DOD/DOE lands.

Table 4B. Rating Stress Intensity

Stress Intensity Rating	Considering current and likely future (5 year horizon) use/development in the priority area – qualitatively rate the relative intensity of stress placed on priority wetlands.
High	• Large amount of acreage likely to be eliminated or converted (>XX acres, or X%) • Stresses likely to seriously degrade or fragment substantial amount of acreage (>XX acres or X%)
Moderate	• Modest amount of acreage likely to be eliminated or converted (>XX acres, or X%) • Stresses likely to measurably degrade or fragment priority wetlands limited portion of the area
Low	• Small amount of acreage likely to be eliminated or converted (>XX acres, or X%) • Stresses likely to slightly degrade or fragment priority wetland locally or in patches across the area

4.3 Stewardship Urgency: 'Stewardship urgency' is a qualitative or interpretive measure of the extent that applicable protective regulations (if any) and management actions (if any) currently in place will deter loss or degradation in the next five years. Estimate Stewardship Urgency based on consideration of the overall protection and management situation for the important wetlands in the area. Table 4C describes stewardship urgency intensity ratings.

Table 4C. Rating Stewardship Urgency

Stewardship Urgency Rating	Consider the stresses that are being/likely will be placed on priority wetlands in the future and their overall stress intensity…What is the level of need for new or modified stewardship strategies to sustain priority wetlands?
High	No regulatory protection; or, limited protection weakly enforced. Management plans not prepared; or, plans done but management actions not implemented or funding not authorized.
Moderate	Certain wetlands protected by regulation, or certain wetland resources protected by regulation; enforcement weak or infrequent. Management plans prepared but implementation a low priority; funding intermittent or uncertain.
Low	Regulations provide limited protection of wetlands and/or wetland-associated resources; enforcement often adequate. Management plans partially implemented and generally funded.

5.0 Scoring and Ranking

The rank score of each priority wetland area is determined by totaling the sum of the ratings of seven ecosystem function and value factors, socioeconomic importance score, and the ten stressor/stress intensity factors.

Each priority wetland area was placed in a priority class based on the rank score. The break points for the high, middle, and low priority classes are, respectively 40 and greater; 39 to 30; and, 29 and lower.

The stewardship urgency score (3=high, 2=moderate, 1=low) is used as a weighting factor in combination with priority class to subdivide priority areas into tiers ordered from highest to lowest as follows:

Priority Class	Stewardship Urgency
High	High
High	Moderate
Middle	High
High	Low
Middle	Moderate
Low	High
Middle	Low
Low	Moderate
Low	Low

Priority wetland area ranks are ordered by highest to lowest rank score within each of the nine tiers. The “highest priority” wetlands are in the top tier, that is, the high priority class and the high stewardship urgency rating.

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2008