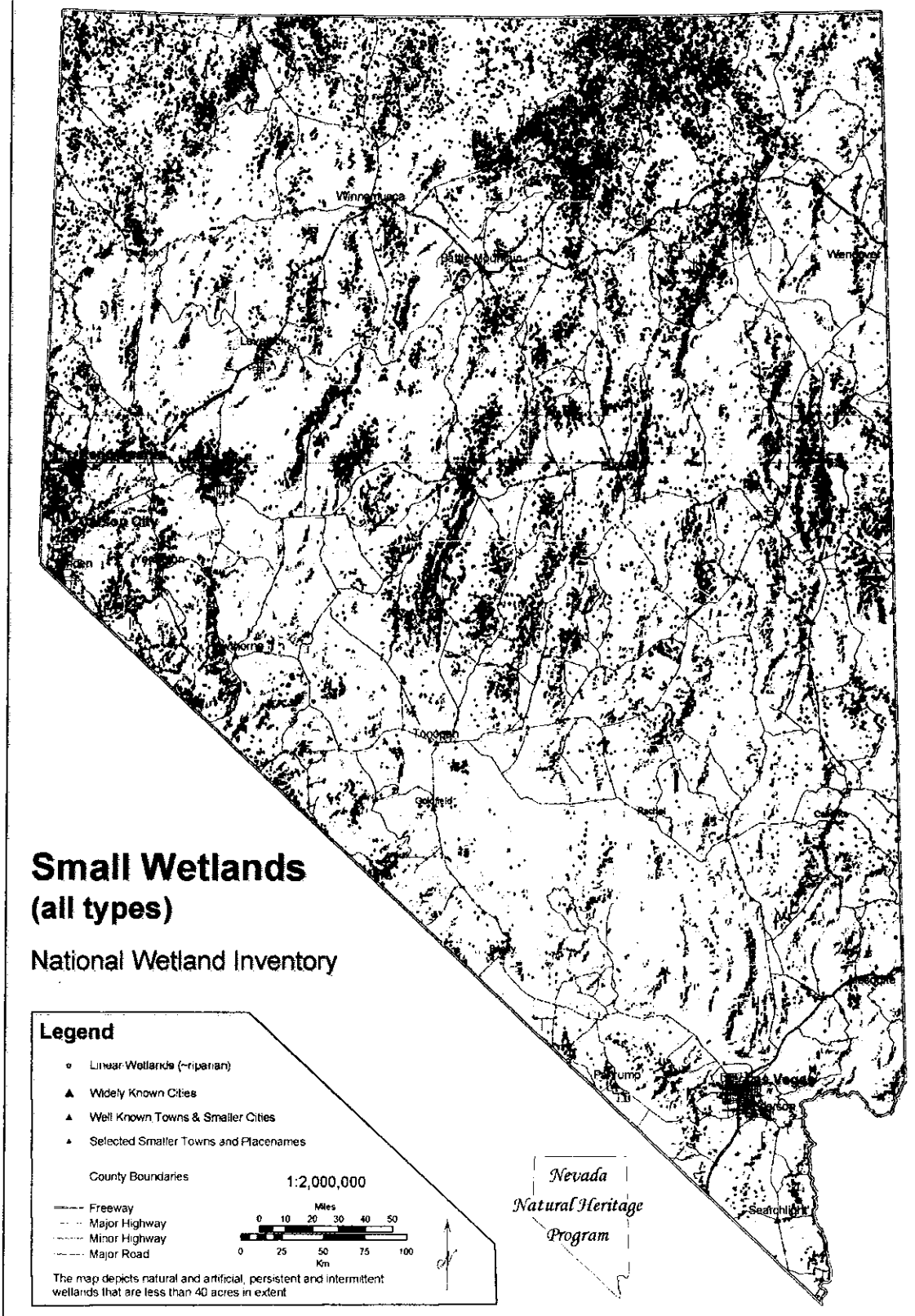
Nevada Wetlands Priority Conservation Plan

Technical Review Draft
January 2006

Nevada Natural Heritage Program

Edited by Ed Skudlarek

Figure 1.8 **Wetland Features Smaller Than Forty Acres Map, Nevada NWI**



Map compiled by the Nevada Natural Heritage Program, January 2005, from the National Wetland Inventory (NWI) database. The NWI mapped wetlands in Nevada at the 1:250,000 scale using 1:58,000 scale color infrared aerial photographs taken in the summer from 1980 through 1986. The NWI is a branch of the U.S. Fish and Wildlife Service.

backsliding, thereby weakening protections wetlands on federal and nonfederal lands. Notwithstanding setbacks, after the federal program review agencies are better positioned than states to protect wetlands.

The resource conservation plans reviewed as part of NvWP preparation identify threats to wetland resources. The following list presents a composite itemization of threats identified by government agencies and conservation organizations.

- Diversions of surface flow, primarily for irrigation of farmed land, but increasingly for municipal and various industrial use;
- Groundwater withdrawals that deplete aquifers that discharge at springs, seeps, and streams;
- Drainage ditches and other excavations undertaken to dewater saturated soils;
- Water developments (storage, diversion, and flood control dams/reservoirs) and the water storage/delivery procedures that alter seasonal flow patterns;
- Full allocation of river and stream systems and lack of water rights for *in situ* (e.g., instream) beneficial uses;
- Overgrazing primarily for livestock production, but may include native or introduced ungulates;
- Farmland encroachment for crop and livestock forage production;
- Modifications to the geomorphology and flow regimes of streams, springs, shorezones, and floodplains that generate and perpetuate accelerated erosion and unstable conditions;
- Nonpoint source pollutants carried from irrigated farmland, feedlots, mines, and urbanized areas;
- Mine development, including abandoned mines, and sand and gravel extraction in floodplains;
- Urban and rural development;
- Highway construction and utility corridors;
- Geothermal energy and water development;
- Outdoor recreation, including water based recreation developments and activities, foot and vehicle trails, golf courses, and manipulation of habitat for particular wildlife species;
- Off-highway vehicle misuse;
- Introduction and spread of invasive/nonnative plant species;
- Land use planning and major project review without adequate wetland, watershed and floodplain analyses;
- Incomplete federal and state agency oversight of wetlands, insufficient data management (collection, sharing, analysis, dissemination);
- Fire suppression strategies that interfere with natural succession of fire adapted wetland and riparian ecosystems (e.g., aspen), and
- Improper/inadequate control of stormwater runoff from urban, rural, agricultural, mineral, and transportation developments.

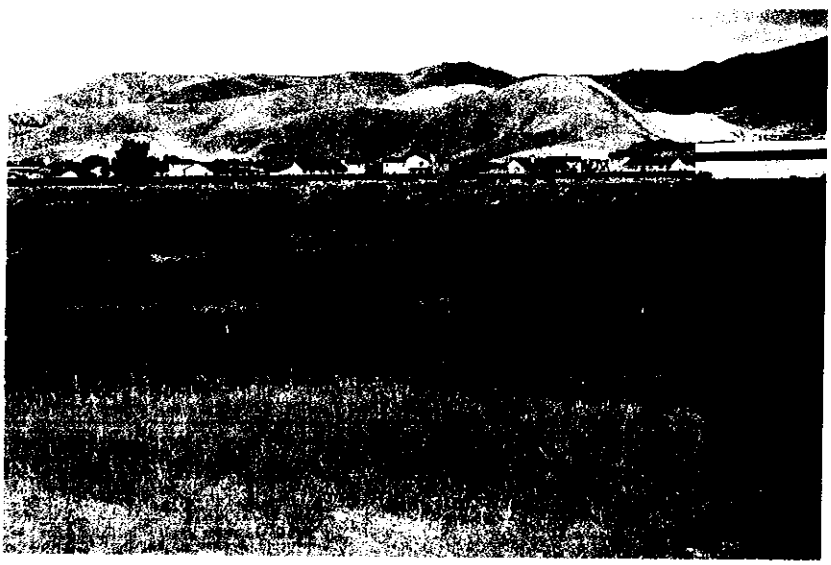
Conventionally, wetland threats are portrayed as individual types of land uses or particular resource management strategies. Actually, however, multiple stressors precipitate wetland declines, and do so through direct and indirect ways. Oversimplified approaches to the identification and assessment of wetland threats (the Nevada Wetland Priority Conservation Plan is no exception) tends to mislead people into thinking solutions or strategies are straightforward. In reality, the effects of human activities on natural attributes and processes that lead to wetland loss and degradation arise from multiple sources of disturbance, both direct and indirect. We are tuned into the obvious wetland losses, such as those that disappear under the blade of a backhoe, but the means to protect those that slowly expire due to cumulative effects requires a kind of coordinated monitoring or assessment process that does not exist. Without the mechanisms to discern unlooked for losses that come about "incidentally," we cannot certain what proportion of the wetland resource base may be succumbing to cumulative effects.

The modification of the hydrology and geomorphology of water bodies is widespread. Few streams are without dam structures built either to divert water to offstream uses or to store water and control flow rates to supply cities and farms with water and to control floods. Dams, levees, channelization, armoring, are some of the hydro-modifications prevalent on rivers and streams that negatively impact wetland resources. In addition to the loss of wetland area to the footprint of storage dams and reservoirs, the shorezones provide poor sites for wetland establishment due to fluctuating water levels. The operation of diversion dams alters the flow regime and consequently native aquatic and wetland ecosystems. Typically, the management of stream diversions is based on utilitarian criteria with little or no consideration of the effects on water temperature, water quality, sediment transport, native vegetation community composition, and channel maintenance. Severe riparian losses have occurred in the middle and lower reaches of the major and minor stream systems where diversion and storage/release operations magnify fluctuations during the growing season and base flow period. Fresh ideas are needed to adapt water storage and diversion schedules so that needs of both offstream users and aquatic/wetland ecosystems might be met. In the Truckee River Basin, water users and managers are coordinating efforts to conserve water, adjust reservoir releases to mimic natural flow pattern, and acquire water rights for instream uses. One early success has been the regeneration of riparian woodland patches. This joint venture exemplifies the innovative ideas and cooperation needed to plan for the multiple use management of the states water and wetland resources.

Urban and Rural Land Use and Development

Even though vegetated wetlands and riparian areas occupy such a small portion of the landscape (about 0.9 percent), a large number of development projects are proposed for wetland sites each year. The ACOE from 1998 to 2003 took administrative action on 2154 individual permit applications and a larger number of nationwide permit applications, mostly for activities associated with some form of urban or rural land development. In the Reno-Carson City area, fourteen percent of the wetland resource base was lost to urban development during the 1980 – 1999 period. Urban and rural land use includes the construction of roads and highways, residential and commercial subdivisions, industrial sites, linear utility facilities, airfields, mining operations, irrigation ditches,

Marsh Wetland – Urban Encroachment



The Federal Emergency Management Agency administers a nationwide program that encourages and offers incentives to local governments that employ regulations, floodplain management ordinances, or local master land use or open space plans to avoid or minimize floodplain development. Counties through floodplain zoning ordinances specify the kinds of development permissible and conditions that must be met to obtain permission. Such ordinances may be an appropriate mechanism for local government to protect wetlands. The control of flooding and water pollution and the provision of outdoor recreation are valued wetland functions in urban floodplains. This marshland in Carson City occurs in a floodplain at the confluence of drainages conveying perennial flow from small springs and large sub-watersheds altered by wildfire, cheat grass, gully erosion, roads, mining, and residential and industrial subdivisions. Ongoing construction of a highway and stormwater interceptor will consume a third of the remaining wetlands. Section 404 approval to fill the marsh complex for a series of industrial, residential, and highway projects specified mitigation both onsite, which entailed a stormwater detention basin, and offsite, which expanded ponds and marsh in Washoe Valley. Eagle Valley will experience a net loss in acreage and function. Attrition of the marsh may abate since The Nature Conservancy acquired and donated the property to the Carson City Open Space Program. Ed Skudlarek photo.

Table 3.2 Population Change, Nevada Counties, 2003 – 2004			
County	Population Change %	Vegetated Wetland Acres	Linear Wetland Miles
Carson City	1.2	350	50
Churchill	0.4	27,150	750
Clark	4.8	11,500	750
Douglas	2.8	27,950	350
Elko	0.9	181,900	8,790
Esmeralda	-2.6	5,700	180
Eureka	-4.9	37,700	1,560
Humboldt	2.0	134,350	3,380
Lander	0.8	79,400	1,490
Lincoln	0.2	11,650	1,240
Lyon	7.2	16,950	840
Mineral	2.6	9,750	1,160
Nye	5.3	30,800	2,750
Pershing	-0.7	19,450	1,650
Storey	5.8	100	40
Washoe	2.6	22,200	1,800
White Pine	-0.2	49,200	1,600
Nevada	4.1	666,100	29,800
Sources: Population data from U.S. Census Bureau. Wetland data from NWI, Wetlands of Nevada.			

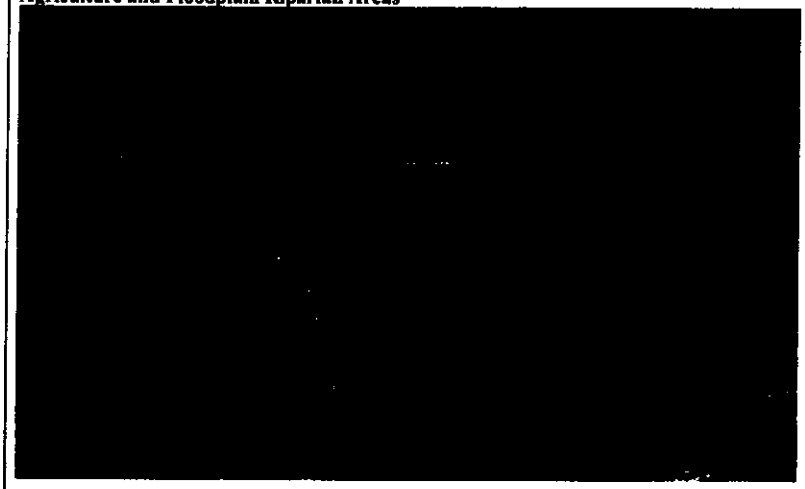
dams/reservoirs, channel realignment or relocation, water recreation, and bridges and other water passage structures. Federal wetland fill and dredge regulations, which in most of the state is the only wetland protection program, pertain to all of these forms of urban and rural development, although their applicability is limited if the acreage affected is not large enough to trigger provisions requiring an individual permit.

Planning and approval of urban and rural development projects is under the regulatory purview of counties and municipalities. Conservation districts may also influence land use decisions with their authority to plan and act on the conservation of natural resources within district boundaries. Urbanization is a comparatively new phenomenon in rural counties, and local governments might not be prepared with master land use plans, zoning ordinances, or other planning tools to elevate wetland protection. New development encroaching into wetlands as depicted in the photo inset above is a common scene replayed in cities, towns, and satellite subdivisions popping up in surrounding valleys. Table 3.2 shows the recent population growth rates in Nevada counties along with NWI wetland statistics. Rural counties now experiencing rapid rates of growth include Nye, Storey, and Lyon. Given that population growth accelerates residential, commercial, and industrial land development, counties must be prepared to avert wetland losses related to land development practices in floodplains and on slopes that can profoundly affect watershed hydrology and riparian vegetation. Without appropriate regulations, there is a tendency for private and public development projects to remove excessive amounts of vegetation and soil disturbance that impairs watershed conditions and increases overland flow. With the expansion of impervious coverage brought on by buildings, roads, and compacted soils, less water infiltrates and recharges groundwater bodies, which intensifies local and downstream flooding but diminishes subsurface water reaching local waterways. The altered hydrology of urbanized watersheds concentrates runoff, which impacts stream channel stability and water quality. Sediment loads typically increase, as do the levels of nutrients, pesticides, petrochemical products, heavy metals, harmful bacteria, and salts.

Similar to other places in the West experiencing rapidly expanding populations and urban development, land use planning authorities in Nevada are confronted with the issue of effective use of land resources. With respect to wetlands and water resources, a major concern is the widespread practice of allowing extensive construction of residential, commercial, and industrial subdivisions in floodplains, followed by the need to build a series of costly flood control structures to protect property and lives. To some extent, urban development is occurring on land already intensively used in the past for production of crops, livestock, and wood materials. The additional layer of urban sprawl compounds the cumulative effects that contribute to the environmental stresses incrementally wearing down the wetland resource base. Federal land management agencies have identified over a million acres of public land suitable for acquisition by private or local entities for urban and rural development. However, federal agencies analyze land disposal plans in an environmental assessment process, which generally results in conservation of land resources rich in ecological and public interest values. Still, a variety of land use activities occur on public lands to meet urban or rural development infrastructure needs with potential wetland impacts. The most common cases are those involving rights-of-way to build conveyance systems: e.g., roads, electricity, liquid and gaseous fuels, water supply, floodwater, wastewater. The

extraction of rock, sand, and gravel and expansion of developed parkland are additional types of projects built in response to urban growth that may intersect wetland resources. The impact on wetlands due to urban growth-driven developments on public land are probably minimized in most cases, since agency regulations and Section 404 wetland protection regulations apply.

Agriculture and Floodplain Riparian Areas



This pastoral stretch of Pahranagat Valley is both typical and atypical of fluvial landscapes in Nevada. Vast floodplain stretches in major and minor river systems were converted to crop, hay, or livestock fields long ago. A less common site are the riparian buffers, indicated by the belts of willows and cottonwoods, which reduce pollutants in runoff, control erosion, and provide wildlife habitat. Clearing riparian vegetation, leveling the floodplain, diverting stream flow, and channel modifications were necessary to establish farms and ranches. We now know that removing riparian habitat and separating the stream from its floodplain lowers the natural fertility, moisture content, stability, and productivity of the soil. Near the end of the White River system, springs feed Pahranagat Creek, which is used to irrigate fields and fill reservoirs and marshlands. The aquatic and wetland communities are in peril. The endangered Pahranagat roundtail chub population nears extinction, and two taxa of endemic White River springfishes are at risk. Pahranagat National Wildlife Refuge marshes host migratory waterfowl, endangered Southwestern Willow Flycatcher, sensitive Yellow-billed Cuckoo, and many other bird populations declining with desert riparian losses. The valley also hosts the rare, endemic Pahranagat Valley montane vole. Due to the occurrence of many at risk taxa and the need for management action, the valley is a NNHP Highest Priority Conservation Site.

Agriculture

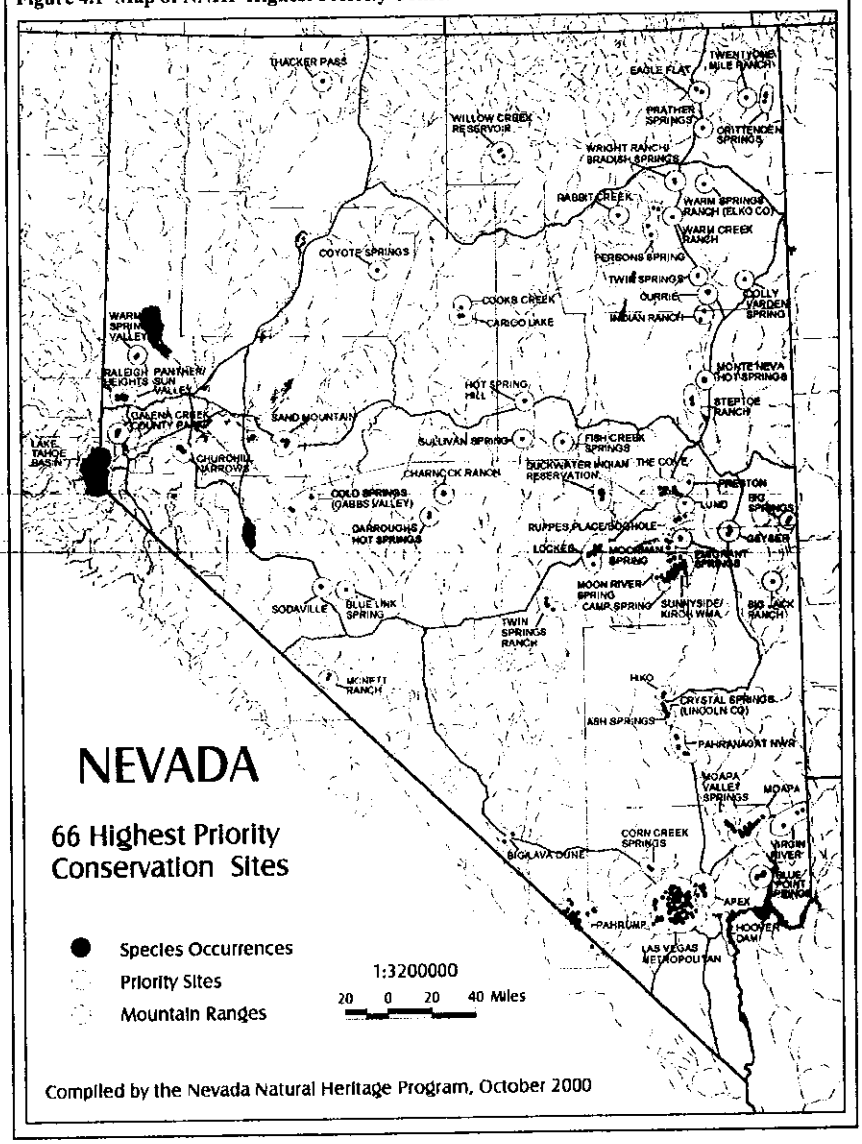
Ranching and farming practices that change the types of plants and their coverage influence how soil and water stay with the land. Historically, riparian and meadow livestock grazing and the conversion of floodplains to cropland caused enormous losses and damages to the quantity and quality of wetland resources, a problem exacerbated by upland grazing and deteriorating watershed conditions. It is clear in some areas of the state that renewable resource utilization is being aligned with the natural productive and ecological potential of rangeland and floodplain landscapes. Recovery and in some instances restoration efforts are working, but progress is far from universal. Table __ provides irrigated farming and livestock production statistics for the counties in Nevada. These data illustrate the relative extent of irrigated farming and livestock grazing throughout the state. Larger amounts of wetland acreage may be at risk in counties with more irrigated farms and livestock, but other factors must be evaluated.

Allowing too many livestock to graze riparian or meadow areas or for too long, or at times that prevent recovery of wetland vegetation also produces dry and compacted soil, an overload of nutrients and sediment, and populations of nonnative plants. Such degraded conditions intensify runoff, limit infiltration, reduce water-holding capacity, enhance wildfire frequency and severity, accelerate erosion, and interfere with wetland plant establishment, reproduction, and community succession. Overgrazing in nearby upland plant communities leads to the disintegration of the geomorphology and hydrology of adjacent wetlands. The BLM measures the hydrologic integrity of riparian areas and wetlands using the Proper Functioning Conditions (PFC) Assessment method. Recent results reported by the Nevada office of the BLM indicate about fifty percent of riparian areas and nearly forty percent of the wetlands within grazing allotments are in a nonfunctioning or functioning-at-risk condition. Similar data is not available from the NRCS or HTNF, although both agencies are part of the federal interagency riparian restoration initiative. More information about PFC is presented in the Public Land Management section of Part 5.

The impacts of cropland practices on wetlands are related to vegetation clearing, land leveling, soil tillage, draining zones of saturation, stream modifications, and surface and groundwater withdrawal. The

appropriate site. Once the NNHP staff determines stable site definitions and Biodiversity Significance Ranks, they meet with a network of expert biologists, botanists, and ecologists to review the sites. Each site is ranked according to its Protection Urgency and Management Urgency, again on scales from one to five (one signifying most urgent). Sites that rank highest (the lowest sum) for the combination of Biodiversity Significance, Protection Urgency, and Management Urgency, form the working list of "highest-priority" conservation sites. Biologists, land management, and conservation professionals, and other knowledgeable people throughout the state review the draft list and provide additional data and recommendations that are incorporated into the assessment process. The NNHP Scorecard points to sites with flora and fauna requiring immediate remedies to reduce the risk of extirpation or extinction.

Figure 4.1 Map of NNHP Highest Priority Conservation Sites – Scorecard 2000



Though wetlands cover a tiny fraction of the land base, a third of the at-risk species tracked by the NNHP are aquatic-wetland dependent. This means the species is found: 1) only in aquatic or wetland habitats; 2) in such habitats for a portion of their life cycle; or, 3) in habitats in close proximity to, or are otherwise influenced by, aquatic or wetland habitats (e.g., dry meadow margins, the shade of riparian vegetation, soils derived from parent material created by spring outflows, or the shore zones of lakes or ponds). Figure 4.2 shows the known occurrences of wetland dependent species considered to be of high biodiversity significance, vulnerable to human activities or degraded conditions resulting from land uses and development, and urgently requiring appropriate management action.

Using the NNHP Scorecard method in 2000 to evaluate the current conservation status of at-risk species and their known occurrences resulted in identification of sixty-six highest priority biodiversity conservation sites were identified. Fifty-eight of the priority conservation sites host one or more aquatic-wetland dependent sensitive species. Table 4.8 lists the Scorecard 2000 sites and pertinent where at-risk and sensitive wetland species occur.

Nevada Comprehensive Wildlife Conservation Strategy, NDOW, 2005. Congress created the federally funded State Wildlife Grants Program to encourage and assist states in efforts to prevent wildlife from becoming endangered. The grant program provides funding to NDOW for statewide wildlife management studies, plans, and habitat improvement activities. Eligibility for the federal funding requires completion of a Comprehensive Wildlife Conservation Strategy (CWCS). The Department of Wildlife completed the Nevada CWCS in August 2005. Traditionally, state wildlife agencies have focused conservation efforts on game species of wildlife. The purpose of the Nevada CWCS is to provide an action plan "for state wildlife conservation and funding by targeting the species of greatest conservation need and the key habitats on which they depend." The process was conducted in consultation with agency, research institution, and conservation organization biologists and ecologists, as well as knowledgeable people in special interest groups.

The Nevada CWCS process generated conservation strategies, objectives, and actions that address the biological and ecological needs of the species of conservation priority. The strategies are organized in a "key habitat" framework, each key habitat associated with an assemblage of birds, mammals, amphibians, fishes, reptiles, or invertebrates. Each key habitat comprises a group of ecological systems as classified and mapped by the Southwest Regional Gap Analysis Project (Southwest ReGAP, 2005). The species of conservation priority cover identified in the CWCS entail birds, fishes, mammals, reptiles, amphibians, and aquatic invertebrates, in particular, bivalves, gastropods, and insects. Criteria used to select priority taxa include federal or state regulatory protection status; rarity and sensitivity assessment rank by the NNHP; severity of threats to life history elements or habitat needs; percentage of native range in Nevada; limited knowledge of species; and, opportunity to learn more about or improve the conservation status. Appendix 4.3 lists the wetland and riparian key habitats and associated primary focal areas identified in the Nevada CWCS.

Nevada Wetland Priorities

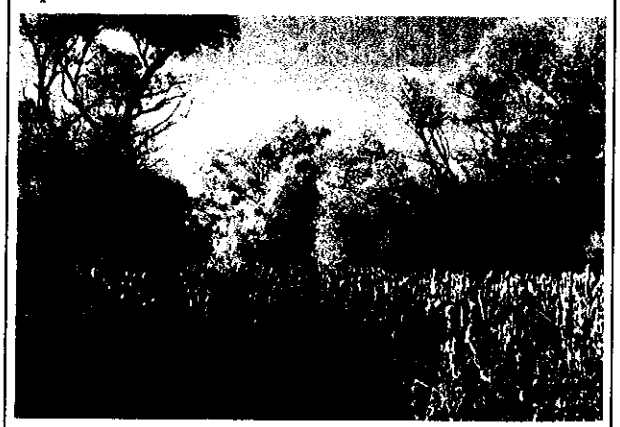
To be placed on the Nevada list of priority areas and sites (and thereby qualify for acquisition with a grant from the Land and Water Conservation Fund), a wetland must meet these criteria:

- Is a type of wetland identified as rare or as having undergone significant decline;
- Is subject to imminent loss and/or degradation by one or more ongoing or impending land use activities; and,
- Possesses important values, relative to the ecological and socioeconomic setting.

Rare or Significantly Declining Wetland Types. The following wetland types are considered to be rare or having undergone significant decline, based on information contained in the wetland and associated resource conservation plans that are summarized in Part 4. Inclusion of hydrographic regions refines the area of concern.

1. Riparian zone and marsh types adjacent to desert spring pools and brooks in Colorado River Basin, Death Valley Basin, and eastern and southern arms of the Central Region.
2. Riparian zone and marsh in floodplain of major and minor river valleys of the Carson, Colorado, Humboldt, Truckee, and the Walker River basins.

Riparian Woodland and Marsh



Patricia Stoddard photo
Courtesy of Nevada Biodiversity Initiative

Riparian zone of isolated streams and aspen woodland communities in the mountain ranges of the Northwest Region, Black Rock Desert Region, north-center and east arm of the Central Region, Colorado River Basin, Humboldt River Basin, and Snake River Basin.
Large marsh and marsh/upland complexes in lower elevation valleys and terminal basins in the Carson River Basin, Truckee River Basin, Walker River Basin, Death Valley Desert Basin, and Central Region
Wet meadows in mountain ranges of the Humboldt River Basin, Central Region, Northwest Region, and Black Rock Desert Region.
Ephemeral playa and pool in the Northwest Region, Western Region, Truckee River Basin, Carson River Basin, and Walker River Basin.

Major Threats. The land use activities frequently associated with the ongoing loss and deterioration of rare and declining wetland types include:

- Surface water diversion
- Groundwater withdrawal
- Hydrologic modifications
- Urban or rural development
- Domestic livestock grazing
- Farm encroachment
- Mine development
- Transportation and linear public utilities development
- Invasion of nonnative plant species

In the wetland priority evaluation process, a "threat" rank will be assigned to each proposed site that represents the relative degree of influence that these land use activities are having, or can reasonably be expected have on the site in the next five years.

Important Functions and Services. The ecological functions and socioeconomic services recognized as important to the natural and human communities in the state include:

- Hydrology and water resource maintenance
- Erosion and sediment control
- Flood control
- Water quality maintenance and improvement
- Wildlife habitat, food web support, and biodiversity
- Wetland compatible economic uses
- Outdoor recreation, research, and education

In the wetland priority evaluation process, a relative "value" rank will be assigned to each proposed site that represents known functions and services, and in addition, the opportunity for functions and services to occur based on wetland type characteristics and location.

Process for Evaluating and Ranking Wetland Priorities. The following is the NvWP list of areas and sites proposed for wetland conservation priority. It was compiled from the indexes presented in Appendices 4.1, 4.2, and 4.3. Technical advice from managers and scientists knowledgeable about wetland resources will be sought to refine the list and to evaluate and rank the proposed areas and sites.

Table 4.10 Provisional List of Proposed Areas and Sites of Wetland Conservation Priority Compiled from Various Nevada Wetland and Related Resource Plans

Areas and sites obtained from the management and conservation plans reviewed in Part 4 are listed below. They are grouped by hydrographic region. Some mountain ranges repeat, since watersheds drain into the basins of adjacent regions.

Northwest Region

- Calcutta Lake complex
- Continental Lake
- Duck Flat
- Ferguson Springs
- Gridley Lake
- Massacre Lakes
- Sheldon NWR
- Wall Canyon/Reservoir

Black Rock Desert Region

- Black Rock Desert
- Jackson Mountains
- Montana/Double H Mountains (Kings River)
  - Thacker Pass (spring)
- Quinn River
- Santa Rosa Range
- Soldier Meadow
- Smoke Creek Desert
- Summit Lake/Mahogany Creek

Snake River Basin

- Bruneau River/tributaries
- Fox Creek Range
- Goose Creek
- Independence Mountains
- Jarbidge Mountains
- Jarbidge River and tributaries
- O'Neil Basin
- Owyhee River and tributaries
- Salmon Falls Creek and tributaries
- Tuscarora Range
- Wild Horse Reservoir
- Wilson Reservoir

Humboldt River Basin

- Argenta Marsh
- Carico Lake Valley
- East Humboldt Range
- Fox Creek Range
- Humboldt Sink
- Independence Mountains
- Jarbidge Mountains
- Mary's River Range
- Mary's River
- Pleasant Valley
  - Coyote Springs
- Reese River
- Rye Patch Reservoir
- Santa Rosa Range
- Snowstorm Mountains
- South Fork Reservoir
- Tuscarora Range
- Willow Creek Valley (spring)

Truckee River Basin

- Lake Tahoe Basin
- Truckee River
- Truckee River, Lower
- Pyramid Lake
- Sierra Nevada East/Carson Range
- Washoe Valley/Lake
- Winnemucca Lake

Carson River Basin

- Carson River Delta/Lake
- Carson Sink
- Carson Valley
- Harmon Reservoir
- Lahontan Valley
- Lower Carson River
- Sierra Nevada East/Carson Range
- Soda Lakes
- Stillwater NWR

Walker River Basin

- Mason Valley
- Mason Valley WMA
- Sierra Nevada East/Carson Range
- Walker River
- Walker Lake
- Cottonwood Canyon

Central Region

- Antelope Valley (Elko/White Pine) – Dolly Varden Spring
- Antelope Valley (Eureka) – Sullivan Spring
- Big Smoky Valley
  - Charnock Ranch
  - Cooks Creek
  - Darroughs Hot Springs
- Diamond Valley
- East Humboldt Range
- Fish Creek Valley – Fish Creek Springs
- Fish Lake Valley
- Gabbs Valley – Cold Springs
- Hot Creek Valley – Twin Springs Ranch
- Independence/Clover Valleys
  - Ruby Valley
  - Bradish Spring
  - Snow Water Lake
  - Warm Creek Ranch
  - Warm Springs Ranch
  - Wright Ranch
- Kobeh Valley – Hot Spring Hill (springs)
- Lake Valley – Geyser (spring)
- Lamoille/Pleasant Valley – Rabbit Creek (spring)
- Monitor Range
- Monitor Valley
- Railroad Valley
  - Duckwater Indian Reservation
  - Lockes (spring system)
  - Duckwater/Bull Creek
- Ruby Mountains
- Ruby Valley
  - Persons Spring
  - Franklin Lake
- San Antonio Mountains
- Schell Creek Range
- Soda Spring Valley – Sodaville (spring)
- Snake Range
- Spring Valley (Snake Range)
- Spring Mountains/Pahrump Valley
- Steptoe Valley
  - Currie (spring)
  - Indian Ranch (spring system)
  - Monte Neva Hot Spring
  - Steptoe Ranch
  - Steptoe WMA
  - Twin Springs
- Toiyabe Range
- Toquima Range
- White Mountains

Great Salt Lake Basin

- Delano Mountains – Crittenden Springs
- Hamlin Valley – Big Springs
- Snake Range
- Thousands Springs Valley
  - Twentyone Mile Ranch
  - Windermere Hills – Prather Spring

Colorado River Basin

- Grapevine/Sacaton Canyons
- Lake Mead
  - Lake Mead NRA
  - Blue Point Springs
  - Black Canyon
  - Overton WMA
- Las Vegas Valley/Wash
  - Corn Creek Springs
- Lake Mojave
- Meadow Valley Wash
  - Clover Creek
  - Condor Canyon
  - Rainbow Canyon
- Moapa Valley
  - Moapa Valley Springs
  - Muddy River, Upper
  - Muddy River, Lower
- Pahranagat Valley
  - Ash Springs
  - Crystal Springs
  - Hiko (spring system)
  - Pahranagat NWR
- Red Rock Canyon
- Spring Mountains/Las Vegas Valley
- Virgin River
  - Virgin Valley
  - Beaver Dam Wash
- White River Valley
- White River Valley, Upper
  - Camp Spring
  - Emigrant Springs
  - Lund
  - Moon River Spring
  - Moorman Spring
  - Preston
  - Roopes Place/Boghole
  - Sunnyside/Kirch
  - The Cove
- White Rock/Wilson Creek Range – Big Jack Ranch (spring)