

I-80 CORRIDOR STUDY TECHNICAL REPORT

Appendix D
Environmental Resources

PREPARED FOR
NEVADA DEPARTMENT OF TRANSPORTATION





Nichols Consulting Engineers, Chtd.

Engineering & Environmental Services

P.O. Box 1760

Zephyr Cove, NV 89448

(775) 588-5205

Nevada Department of Transportation I-80 Corridor Study



FINAL ENVIRONMENTAL RESOURCES TECHNICAL MEMORANDUM

November 2008

Nevada Department of Transportation
1263 South Stewart Street
Carson City, Nevada 89712



TABLE OF CONTENTS

1.0	Introduction	1
1.1	Purpose	1
1.2	Project Background	1
1.3	Project Location	1
	Table 1.1 NDOT I-80 Corridor Study Area	
	Figure 1.1 Land Ownership and Project Study Area	
2.0	Vegetation	4
2.1	Vegetation Types	4
2.2	Special Status Plant Species	4
2.3	Habitat For Special Status Species	6
2.4	Noxious Weeds	8
2.5	Future Considerations	8
	Table 2.1 Vegetation Special Status Species Occurrences in the Study Area	
	Figure 2.1 Vegetation Cover Types in the Study Area	
	Figure 2.2 Special Status Vegetation in the Study Area	
	Figure 2.3 Noxious Weeds in and around the Study Area	
3.0	Fisheries And Wildlife	11
3.1	Special Status Species	11
3.2	Special Habitat Areas	12
3.3	Riparian Habitats And Associated Wildlife	14
3.4	Wildlife Passages	15
3.5	Future Considerations	17
	Table 3.1 Wildlife Special Status Species Occurrences in the Study Area	
	Figure 3.1 Special Status Wildlife in the Study Area	
	Figure 3.2 Sage Grouse Habitat in and around the Study Area	
	Figure 3.3 Mule Deer Habitat in the Study Area	
	Figure 3.4 Pronghorn Antelope Habitat in and around the Study Area	
	Figure 3.5 Desert Bighorn Sheep Habitat in and around the Study Area	
4.0	Water Resources	21
4.1	Floodplains	21
4.2	Wetlands	21
4.3	Future Considerations	22

	Table 4.1	Descriptions of 100-Year Floodplains in the Vicinity of the Study Area	
	Table 4.2	Wetlands of Interest along the I-80/Truckee River Corridor	
	Figure 4.1	Wetlands in and around the Study Area	
	Figure 4.2a	Wetlands between the CA/NV Border and the East Verdi Exit	
	Figure 4.2b	Wetlands between the East Verdi and West McCarran Exits	
	Figure 4.2c	Wetlands between the East McCarran and Mustang Exits	
5.0	Air Resources		26
	5.1	Future Considerations	27
6.0	Hazardous And Contaminated Areas		28
	6.1	Future Considerations	28
	Table 6.1	Phase I Environmental Project Tracking Database	
	Table 6.2	Hazardous Waste Sites in the Study Area	
7.0	Geological		32
	7.1	Geologic Units	32
	7.2	Geologic Hazards	32
	7.3	Future Considerations	33
	Figure 7.1	Geologic Formations in the Study Area	
8.0	Cultural		34
	8.1	Inventory Data	34
	8.2	Site Data	35
	8.3	Future Considerations	36
	Figure 8.1	Cultural Resource Inventories and Sites in and around the Study Area	
	Figure 8.2	General Land Office Plat Map Data in and around the Study Area	
9.0	Scenic		37
	9.1	Future Considerations	38
	Figure 9.1	Scenic Opportunities in and around the Study Area	
10.0	Recreation		39
	10.1	Future Considerations	39
	Figure 10.1	Recreation Resources in and around the Study Area	
11.0	Summary		41
	Table 11.1	Summary of Recommended Actions	
12.0	References		44

APPENDICES

Appendix A	Environmental Resource Investigation Contacts and Correspondence
Appendix B	Description of Vegetation Cover Types found in the Study Area
Appendix C	Special Status Species Defined
Appendix D	Descriptions of Wetlands Classifications Found in the Study
Appendix E	FEMA Flood Insurance Rate Maps
Appendix F	Cultural Resource Investigation Tables
Table F-1	Cultural Resource Investigation
Table F-2	Recorded Cultural Resources
Table F-3	Properties Listed on the National Register of Historic Places Located Within the Study Area
Appendix G	Environmental Constraint Ranking Memorandum

1.0 INTRODUCTION

1.1 PURPOSE

Nichols Consulting Engineers, Chtd. (NCE) as part of the PBS&J Team has been contracted by the Nevada Department of Transportation (NDOT) to document and map potential environmental resources of concern within a portion of the I-80 Corridor. The purpose of this report is to provide preliminary baseline information and mapping for environmental and resource management issues within and directly adjacent to the proposed project area.

This report is a compilation of literature review and data analysis to identify resources of concern including: vegetation types, special status plant and wildlife species, noxious weeds, plant and wildlife habitat, riparian habitats and associated wildlife, wildlife passages, floodplains, wetlands, air resources, geological, hazardous sites, cultural, scenic, and recreation. To obtain this information, an initial internet search was performed to find relevant documentation, followed by agency contacts and informal consultations. Appropriate federal, state and local resource agencies were contacted including the United States Army Corps of Engineers (USACOE), United States Bureau of Reclamation (USBOR) United States Fish and Wildlife Service (USFWS), United States Forest Service (USFS), Bureau of Land Management (BLM), Nevada Division of Environmental Protection (NDEP), Nevada Division of State Lands (NDSL), Nevada Division of Forestry (NDF), Nevada Department of Wildlife (NDOW), Nevada State Historic Preservation Office (SHPO), Washoe County, Storey County, the City of Fernley, The City of Sparks, The City of Reno, the Pyramid Lake Paiute Tribe, the Washoe Tribe, and the Reno/Sparks Colony. Private, non-governmental, and academic organizations were contacted as well. A more detailed list of contacts and resources obtained is summarized in **Appendix A**.

1.2 PROJECT BACKGROUND

The NDOT Interstate 80 (I-80) Corridor Study is being undertaken by NDOT to provide decision makers with an action plan for addressing transportation needs for sections of I-80 from the California Stateline to West McCarran Boulevard; and from East McCarran to Wadsworth-Pyramid. Several interchanges and overpasses have been constructed or proposed in these areas due to increased housing development and population growth. As a result of these changes, The Federal Highway Administration (FHWA) has asked NDOT to assess the future transportation needs for these sections of I-80. As part of this project, NDOT has requested that existing documented environmental resources be examined at a preliminary level to assist with future planning efforts.

1.3 PROJECT LOCATION

The overall study area for the I-80 Corridor includes five miles north and south of I-80 from Verdi to Fernley, Nevada, for an overall project width of 10 miles. Although resources were considered throughout the 10-mile width, focus was placed on a 1-mile width of the project area with a more in-depth review of resources existing 0.5 mile north and south of I-80. The project does not include portions of Reno and Sparks between the West and East McCarran exits (**Figure 1.1**). The study area lies in the Truckee River Basin, a 3,060 square mile drainage in east-central California and northwestern Nevada; and the Great Basin, an 188,000 square mile region that includes most of Nevada and portions of eastern California and western Utah (USDI and CDWR 2008).

The Truckee River bisects the study area and forms the county boundary between Washoe and Storey Counties. The region west of Reno and north of the Truckee River falls under Washoe County jurisdiction, while the southern portion (east of Sparks) lies in Storey County. A small region in the

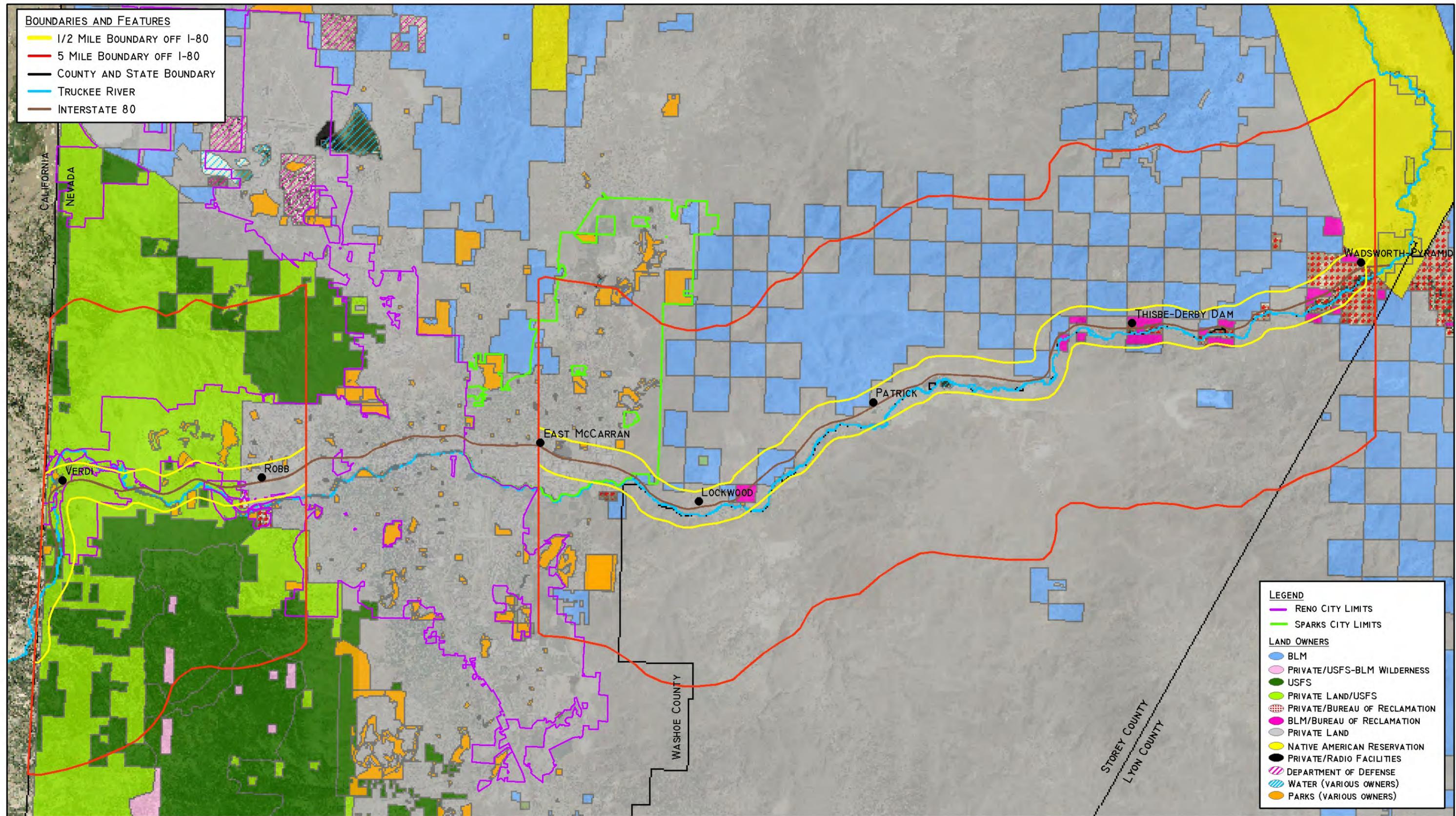
eastern portion of the project area is within Lyon County and the Pyramid Lake Reservation. There are three main cities within the study areas boundaries: two major metropolitan areas (Reno and Sparks), and Fernley, a less populated city. Most of the land along the corridor is private; however there are considerable portions of public land owned by the BLM in the northeastern portion of the project (Figure 1.1), and one USFS parcel in Verdi (McMorran 2007).

The study area spans 14 U.S. Geological Survey (USGS) 7.5-minute quadrangle maps. Table 1.1 lists the maps, townships, and ranges for the study area, as well as the county and/or Native American reservation each section passes through. Although background research was conducted for the whole listed area (Table 1.1), efforts were concentrated on those within a 1-mile radius of I-80.

Table I.1. NDOT I-80 Corridor Study Area

Nevada County/ Native American Reservation	USGS 7.5 Minute Quadrangle Map	Township	Range
Washoe	Verdi	19N	18E
Washoe	Verdi	20N	18E
Washoe	Mount Rose NW	18N	18E
Washoe	Mount Rose NW	19N	18E
Washoe	Verdi	19N	19E
Washoe	Verdi	20N	19E
Washoe	Mount Rose NW	18N	19E
Washoe	Mount Rose NW	19N	19E
Washoe	Mount Rose NE	19N	19E
Washoe	Mount Rose NE	18N	19E
Washoe	Reno	19N	19E
Washoe	Reno	20N	19E
Washoe/Storey	Vista	19N	20E
Washoe	Vista	20N	20E
Washoe/Storey	Steamboat	19N	20E
Washoe/Storey	Steamboat	18N	20E
Washoe/Storey	Vista	19N	21E
Washoe	Vista	20N	21E
Washoe/Storey	Steamboat	18N	21E
Storey	Steamboat	19N	21E
Washoe	Patrick	19N	21E
Washoe/Storey	Patrick	20N	21E
Storey	Chalk Hills	19N	21E
Washoe	Spanish Springs Peak	20N	21E
Washoe	Patrick	20N	22E
Storey	Patrick	19N	22E
Storey	Chalk Hills	19N	22E
Washoe/Storey	Derby Dam	20N	22E
Storey	Derby Dam	19N	22E
Washoe	Spanish Springs Peak	20N	22E
Washoe	Olinghouse	20N	22E
Washoe	Olinghouse	21N	22E
Washoe/Storey	Derby Dam	20N	23E
Storey	Derby Dam	19N	23E
Washoe	Olinghouse	20N	23E
Washoe	Olinghouse	21N	23E
Washoe/Storey	Fernley West	20N	23E
Storey/Lyon	Fernley West	19N	23E
Washoe	Wadsworth	20N	23E
Washoe/ Pyramid Reservation	Wadsworth	21N	23E
Storey/Lyon	Fernley West	19N	24E
Washoe/Storey/ Lyon	Fernley West	20N	24E
Washoe/ Pyramid Reservation	Wadsworth	20N	24E
Washoe/ Pyramid Reservation	Wadsworth	21N	24E

- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80



- LEGEND**
- RENO CITY LIMITS
 - SPARKS CITY LIMITS
- LAND OWNERS**
- BLM
 - PRIVATE/USFS-BLM WILDERNESS
 - USFS
 - PRIVATE LAND/USFS
 - PRIVATE/BUREAU OF RECLAMATION
 - BLM/BUREAU OF RECLAMATION
 - PRIVATE LAND
 - NATIVE AMERICAN RESERVATION
 - PRIVATE/RADIO FACILITIES
 - DEPARTMENT OF DEFENSE
 - WATER (VARIOUS OWNERS)
 - PARKS (VARIOUS OWNERS)



NDOT I-80 CORRIDOR STUDY
LAND OWNERSHIP AND PROJECT STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; SAGEMAP
 DRAWN BY: MS/NCE MARCH 2008

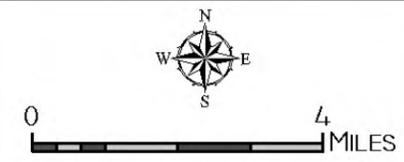


FIGURE:
1.1

2.0 VEGETATION

Background research and agency contacts were used to gather information pertaining to vegetation regulations and occurrences. Federal, state, county, city, academic, private, and non-profit organizations were contacted to request reports, studies, maps, and GIS data pertaining to the proposed study area. A detailed record of contacts and findings are listed in **Appendix A**. The Nevada Natural Heritage Program (NNHP) performed a search for recorded special status plant species and noxious weeds within a 10-mile width of the I-80 Corridor. The special status vegetation search is summarized in **Section 2.2**, **Table 2.1**, and illustrated in **Figure 2.2**. The noxious weed search is summarized in **Section 2.4** and illustrated in **Figure 2.3**.

The study area falls within the Great Basin Ecoregion, where salt tolerant shrubs and playas prevail in the lower valleys. Expanses of sagebrush and other shrub communities cover most of the higher valleys and slopes, and occasionally mix with grasses, especially at higher elevations. Piñon and juniper woodlands occupy large portions of lower elevation mountain slopes and ranges. Conifer and hardwood forests occur in widely dispersed patches, as do wetlands and riparian areas (NCNR 2001). The variety of vegetation types encompassed by the study area, ranging from barren deserts to wetlands, provide habitat for a wide range of plant species.

2.1 VEGETATION TYPES

Vegetation types described in this report were mapped by the Gap Analysis Program (GAP) (USGS 2008), a national program of the USGS Biological Resources Division that maps the distribution of plant communities and selected animal species (Kepner et al. 2005). Eighteen vegetation cover types were identified from the GAP coverage data within the 10-mile wide study area, and are shown in **Figure 2.1**.

The study area is dominated by the Sagebrush cover type, which is the most widespread and abundant cover type in Nevada. This type is principally dominated by one of three sagebrush species (*Artemisia* spp.), and is associated with various conifers, shrubs, and grasses. The Sagebrush cover type typically occurs above 5000 feet. The second-largest cover type in the study area is Salt Desert Scrub, which occurs along the I-80 Corridor between Lockwood and Wadsworth. This type can be dominated by any of 11 various shrub species, with additional shrub, forb, and grass species associated with the type. Refer to **Appendix B** for a full description of each vegetation cover type in the study area.

2.2 SPECIAL STATUS PLANT SPECIES

During the late 1960's and early 1970's, Congress enacted a series of environmental laws in response to a heightened sense of awareness that some of the nation's vital resources were in grave danger. This resulted in the National Environmental Policy Act (NEPA) of 1969 and the Endangered Species Act (ESA) of 1973. The ESA made harming listed species a federal violation, punishable under law, while NEPA created policy that required potential impacts to protected species to be analyzed and publicly presented before new projects are approved. In addition, NEPA allowed federal and state agencies to create provisions similar to ESA on a regional scale. As a result, several ranking schemes with varying degrees of protection and enforcement have been formed. These listings are discussed below, and illustrated in **Appendix C**.

Information on known species occurrences and their listing status summarized in this section was derived from a data search performed by NNHP (NNHP 2008a). It is important to note that while NNHP strives for accuracy and completeness, new information is constantly received, and in no case will the data represented here be a complete representation of potentially occurring species (NNHP 2006).

Endangered Species Act

The highest form of protection falls under the ESA, which is enforced by the United States Fish and Wildlife Service (USFWS). Federally threatened and endangered species listed by the USFWS are protected nationwide, regardless of landownership. None of the species found within the study area are listed under the ESA.

Federal Management Plans

The Regional Forester for each National Forest can designate species that are vulnerable to local disturbances, or have regionally impaired populations, as “sensitive species.” The Regional Foresters List is enforced by the USFS, and must be considered on projects proposed on USFS land, or that are funded by the USFS. The Humboldt-Toiyabe National Forest is located from the California-Nevada Stateline to the western periphery of Reno. No USFS sensitive species were reported within the study area.

The BLM also maintains a special status species list for vulnerable plants and animals. Their policy as described in BLM Manual 6840.06 C is to “ensure that actions authorized, funded, or carried out do not contribute to the need for the species to become listed”. BLM special status species will need to be evaluated by NDOT for projects that are proposed on BLM land, or that are funded by the BLM. BLM land is found from Sparks to Wadsworth, predominately north of I-80. Three BLM special status species were reported within a 10-mile width of the I-80 Corridor: altered andesite buckwheat (*Eriogonum robustum*), oryctes (*Oryctes nevadensis*), and altered andesite popcornflower (*Plagiobothrys glomeratus*) (NNHP 2008a). Refer to Table 2.1 for details of these occurrences. If construction is proposed on BLM and/or USFS land, and a biological assessment is required, then consultations with these agencies may be required.

State Programs

Nevada maintains its own list of special status species that are protected within state boundaries under the Nevada Revised Statutes (NRS) 527.260-.300; however none of the species found within the study area are on this state list.

The NNHP, a state regulated data clearinghouse, maintains an inventory of rare plant and wildlife species throughout Nevada, and an “at-watch” list of sensitive species. They use global and state rank (G-rank and S-rank) indicators, which are administered by NNHP and Nature Serve, a non-profit conservation organization. A “G” or “S” rank does not designate state or federal protection; rather, these are indicators of species status at a global and statewide level. The USFWS does, however, recommend that conservation of “G” and “S” rank species be taken into account during project planning and scoping to ensure that their populations are kept viable and out of a federal or state protection program. All of the special status vegetation species with reported occurrences in the study area have both “G” and “S” ranks (Table 2.1). Refer to Appendix C for specific descriptions of “G” and “S” ranks.

Non-Profit Watch Groups

The Nevada Native Plant Society (NNPS) tracks rare and potentially vulnerable native plant species in Nevada under several categories of conservation concern. The NNPS category assignments for these taxa are reviewed at least annually at the Nevada Rare Plant Workshop, and are updated as necessary. Because these assignments represent the consensus of dozens of botanical experts and resource professionals throughout Nevada and surrounding states, they are maintained in the databases of the NNHP, and are considered by the NNHP when making status assignments and recommendations; however, the NNPS assignments do not represent any legal protection (NNHP 2007). One species in the study area, Steamboat monkeyflower (*Mimulus ovatus*), is on the NNPS threatened list. Three species in the study area are on the NNPS watch list: altered andesite buckwheat (*Eriogonum robustum*), oryctes (*Oryctes nevadensis*), and altered andesite popcornflower (*Plagiobothrys glomeratus*). Three species in the study area have been de-listed, as they are no longer a species of concern to the NNPS, and include

Margaret rushy milkvetch (*Astragalus convallarius* var. *margaretiae*), Lahontan milkvetch (*Astragalus porrectus*), and Lemmon buckwheat (*Eriogonum lemmonii*).

Additional Species to Consider

Personal communication with the USFWS indicated that the Webber's ivesia (*Ivesia webberi*), a candidate for federal listing under ESA, may occur in the study area or be affected by the project (USFWS 2007). This species is considered threatened by the NNPS and is recommended for full protection by the State of Nevada (City of Reno 2007). Recent surveys documented eight existing populations in Nevada and seven in California. This species prefers shallow, clayey soils derived from andesite with a rocky pavement-like surface (Witham 2000).

Personal communication with the BLM suggested that the outcrops of diatomaceous-bentonite earth along the I-80 Corridor provide habitat for another endemic plant known as the Churchill Narrows buckwheat (*Eriogonum diatomaceum*) (Tonenna 2008). Inventory of this species is currently being performed, so occurrence and population data are unknown at this time.

Although occurrences of these additional species were not identified as being within the 10-mile study area by the NNHP data search, surveys for the Webber's ivesia and Churchill Narrows buckwheat should be conducted before any project implementation occurs, and contact should be made with the BLM to obtain the most recent survey data.

2.3 HABITAT FOR SPECIAL STATUS SPECIES

The study area contains a wide range of vegetation types, including conifer forests and woodlands, shrublands, perennial grasslands, riparian areas, and marshes and wetlands (Appendix B and Figure 2.1). These varying vegetation types provide habitat for species that require anything from dry, barren ground to lush watery areas, creating potential homes for special status species throughout the study area (Figure 2.1). Habitat for special status species known to occur in the study area is summarized below (NNHP 2001). Proper surveys and inventories should be conducted prior to any project implementation for these and other special status species. As mentioned earlier, records of known species locations are constantly updated and can not be considered a complete data set at any one time (NNHP 2006). Additionally, it is important to note that a substantial amount of information about the following species is unknown as many have incomplete, outdated, or no survey data (NNHP 2001).

MARGARET RUSHY MILKVETCH (*Astragalus convallarius* var. *margaretiae*)

Habitat and Range: Rocky slopes and flats among sagebrush in the pinyon-juniper and sagebrush zones; appears to be endemic to the Pine Nut and Virginia mountain ranges of Nevada.

Local Occurrences: Eight occurrences of the Margaret rushy milkvetch have been mapped in Nevada (>0.1 mile separation). Total number of individuals, total estimated area, and population trend are all unknown, as the most recent survey was recorded in 1989, and systematic surveys have not yet been performed.

LAHONTAN MILKVETCH (*Astragalus porrectus*)

Habitat and Range: Open, calcareous or alkaline, sandy to gravelly washes, alluvium, or gullies on clay badlands, knolls, or playa edges; endemic to the state of Nevada.

Local Occurrences: Twenty nine occurrences of the Lahontan milkvetch have been mapped in Nevada (>0.1 mile separation), with over 15,000 estimated individual plants covering a total estimated area of over 39 acres. Systematic surveys have not yet been performed, and the current population trend is unknown.

LEMMON BUCKWHEAT (*Eriogonum lemmonii*)

Habitat and Range: Open, light-colored, sometimes silty or sandy clay soils on bluffs and badlands derived from fluviolacustrine silt and volcanic ash deposits; endemic to the state of Nevada.

Local Occurrences: Nineteen occurrences have been mapped in Nevada (>0.1 mile separation), with over 8,855 estimated individual plants covering a total estimated area of over 10 acres. Systematic surveys have not yet been performed, and the current population trend is unknown.

ALTERED ANDESITE BUCKWHEAT (*Eriogonum robustum*)

Habitat and Range: Barren areas with dry, shallow, highly acidic gravelly clay soils derived from weathering of hydrothermal sulfide deposits formed in andesite, or sometimes rhyolitic or granitoid rocks. It is endemic to the state of Nevada and only observed in Storey and Washoe counties.

Local Occurrences: The most recent surveys conducted in the late 1990s document the altered andesite buckwheat at 129 sites in Nevada (>0.1 mile separation) covering about 808 acres, and totaling about 1,615,000 individual plants. Its ideal habitat consists of such high mineral content that mining is one of the main enemies and reasons for decline of the species. In addition, the barren habitat that this buckwheat prefers is often in close proximity to urban areas and is ideal for off-road vehicle use, resulting in additional human destruction. This species is capable of recolonizing moderate to severe past disturbances within its specific habitat and soil type, but appears incapable of surviving sustained disturbance or spreading to new habitats. The altered andesite buckwheat does not currently meet the definition of a candidate for listing as threatened or endangered under the ESA, but may in the future if the current trend of rapid decline continues (Morefield 2000).

NEVADA WATERWEED (*Elodea nevadensis*)

Habitat and Range: Submerged in ponds, ditches, lakes, and streams, often in somewhat alkaline areas; dependant on aquatic or wetland habitats. It is known to occur only from the lower Truckee River area near Pyramid Lake, and therefore probably endemic to the state of Nevada.

Local Occurrences: The occurrence of this species near Wadsworth (Figure 2.2) is the only one that has ever been mapped anywhere in the world, and that occurrence is no longer in existence. Total estimated individuals and area are unknown, and the current trend is assumed to be in rapid decline. Extensive surveys of potential habitat were conducted in 1973 without relocating the Nevada waterweed; however, surveys are not yet considered exhaustive. The species appears to be either an invalid taxon and/or presumed extinct (Cronquist et al. 1977).

STEAMBOAT MONKEYFLOWER (*Mimulus ovatus*)

Habitat and Range: Dry to somewhat moist, loose, sandy to gravelly slopes, often in barren areas; endemic to the state of Nevada. Depending on the defined limits of the species (which vary), occurrences may extend as far as Peavine Mountain to the north and Carson City to the south.

Local Occurrences: The steamboat monkeyflower is also commonly known as the eggleaf or Carson monkeyflower. Only six occurrence locations have been mapped in Nevada (>0.1 mile separation), and the total estimated area and number of individual plants is unknown; however, no systematic surveys have been performed. The population trend for this monkeyflower is unknown.

ORYCTES (*Oryctes nevadensis*)

Habitat and Range: Deep loose sand of stabilized dunes, washes, and valley flats on various slopes and aspects. Known to exist only in California and Nevada; range in Nevada unknown.

Local Occurrences: Sixty-eight occurrences of oryctes have been mapped in Nevada (>0.1 mile separation), with over 24,000 estimated individual plants covering a total estimated area of over 146 acres. The trend for the oryctes population is unknown, as surveys have been extensive in some areas, but most potential habitat has not been explored. It is a difficult species to inventory, as it only appears in years with optimal rainfall and temperatures.

ALTERED ANDESITE POPCORNFLOWER (*Plagiobothrys glomeratus*)

Habitat and Range: Dry, shallow, mostly acidic gravelly clay soils in barren areas, derived from weathering of hydrothermal sulfide deposits formed in andesite, or sometimes rhyolitic or granitoid rocks. One observation is recorded outside the state of Nevada in eastern California (CalFlora 2008);

however, there is some dispute over species confusion and the altered andesite popcornflower may be endemic to Nevada. In Nevada, it has only been observed in Storey and Washoe counties.

Local Occurrences: Eleven occurrences of the altered andesite popcornflower have been mapped in Nevada (>0.1 mile separation), with total estimated individuals and area unknown. The current trend of this species is a decline in population.

2.4 NOXIOUS WEEDS

The Federal Noxious Weed Act [Public Law 93-629 (7 U.S.C. 2801 et seq.; 88 Stat. 2148)] established a Federal program to control the spread of noxious weeds in January 1975. The Act identifies a noxious weed as:

Any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind which is of foreign origin, is new to or not widely prevalent in the U.S., and can directly or indirectly injure crops, other useful plants, livestock, poultry or other interests of agriculture, including irrigation, navigation, fish and wildlife resources, or the public health (64 FR 6183).

The Act was updated with Executive Order 13112 in February, 1999, which requires federal agencies to prevent the introduction of invasive species and provide for their control or removal.

Preliminary data of mapped noxious weeds was provided by NNHP (NNHP 2008b) and is shown in Figure 2.3. Complete maps of known weed locations are still being created, so data should be obtained and updated before project implementation. Six noxious weed species were identified in the vicinity of the study area by NNHP, and include tall whitetop (also commonly referred to as perennial pepperweed) (*Lepidium latifolium*), yellow star-thistle (*Centaurea solstitialis*), Scotch thistle (*Onopordum acanthium*), purple loosestrife (*Lythrum salicaria*), musk thistle (*Carduus nutans*), and Canada thistle (*Cirsium arvense*). All six species are considered “noxious weeds” by the NRS 555, which advises that the control of noxious weeds is the responsibility of every landowner or occupant.

Additionally, several stretches of the study area, especially where I-80 is adjacent to the Truckee River, are known to contain noxious and invasive weeds (Harvey 2007). Non-native grasses have been aggressively invading sagebrush ecosystems of the Western United States over the last century. Cheatgrass (*Bromus tectorum*) dominates or infests over 80% of all public lands in Nevada (UIUC 2003), and is therefore expected to occur within the study area. The Truckee River Management Project identified tall whitetop, tamarisk/saltcedar (*Tamarix* spp.), and Russian olive (*Elaeagnus angustifolia*) as problem invasive species in the vicinity of the river (USACE and TNC 2005). Because disturbance to ecosystems is a main cause of invasion by non-native species (Lonsdale 1999), any project implementation that will cause disturbance should be carefully planned and monitored to prevent such invasions.

2.5 FUTURE CONSIDERATIONS

In summary, the study area includes a wide variety of vegetation types and ecosystems, creating habitat for many common and rare plant species. Below are highlighted recommendations and considerations. These points, in addition to all species discussions and occurrences presented here, should be re-evaluated and verified with field visits and surveys prior to project planning and implementation.

- Contact the NNHP for current noxious weeds and special status species occurrences.
- Conduct an inventory of plant and noxious weed species through proper surveys prior to project implementation.
- Eight special-status plant species have been documented within the study area. The known locations should be protected with the appropriate measures for each species. Potential habitat for rare and special-status species should also be evaluated and taken into consideration.

- The Federal Noxious Weed Act, Executive Order 13112, and NRS 555 should be reviewed and applied before any disturbance occurs. A noxious and invasive weed survey and management plan should be developed to identify additional species and further investigate the risks of spreading noxious weeds during project implementation.
- Finally, a number of existing environmental documents discuss portions of the proposed study area and should be reviewed for background knowledge and additional information. These include, but are not limited to, the Truckee River Operating Agreement Final Environmental Impact Statement/ Environmental Impact Report, the City of Reno Open Space and Greenways Plan, the Truckee River Flood Project Living River Plan, and the McCarran Ranch – Truckee River (Project Modification for Improvement of the Environment) Project Report and Environmental Assessment.

Table 2.1. Vegetation Special Status Species Occurrences in the Study Area

Species	USFWS	BLM	USFS	NNHP	NNPS	State	Reported Occurrences	Survey Months
Margaret rushy milkvetch <i>Astragalus convallarius</i> var. <i>margaretiae</i>				G5 S2	D		One occurrence 6.4 miles south of I-80, near Patrick.	May-June
Lahontan milkvetch <i>Astragalus porrectus</i>				G3? S3?	D		One occurrence 0.2 miles north of I-80, between Lockwood and Mustang.	May-June
Lemmon buckwheat <i>Eriogonum lemmonii</i>				G3? S3?	D		Three occurrences near Orchard and Painted Rock: <ul style="list-style-type: none"> • 1.6 mile north of I-80 • 0.8 miles north of I-80 • 0.7 miles south of I-80 	May-June
Altered andesite buckwheat <i>Eriogonum robustum</i>		N		G2 S2S3	W		One occurrence 1.1 miles south of I-80, southeast of Lockwood.	May-Sept.
Nevada waterweed <i>Elodea nevadensis</i>				GQH SH			One occurrence 1.7 miles north of I-80, near Wadsworth.	July
Steamboat monkeyflower <i>Mimulus ovatus</i>				G1G2Q S1S2	T		One occurrence 2.5 miles north of I-80, north of Robb.	May-October
Oryctes <i>Oryctes nevadensis</i>		N		G2G3 S2S3	W		One occurrence 1.6 miles north of I-80, northeast of Wadsworth.	May-June
Altered andesite popcornflower <i>Plagiobothrys glomeratus</i>		N		G2G3 S2S3	W		One occurrence 3.0 miles north of I-80, northwest of Robb.	June-July

Source: Nevada Natural Heritage Program (NNHP 2008a and NNHP 2001)

Key to Symbols

US Fish & Wildlife Service (USFWS)

E Endangered
T Threatened
C Candidate

Bureau of Land Management (BLM)

N Nevada Special Status Species
C California Special Status Species

United States Forest Service (USFS)

S Sensitive Species
T Threatened Species

Nevada Native Plant Society (NNPS)

PE Possibly Extirpated
E Endangered
T Threatened
D Dropped, no longer of concern
M Marginal
A Absent, erroneously reported from Nevada
W Watch list

Nevada Natural Heritage Program (NNHP)

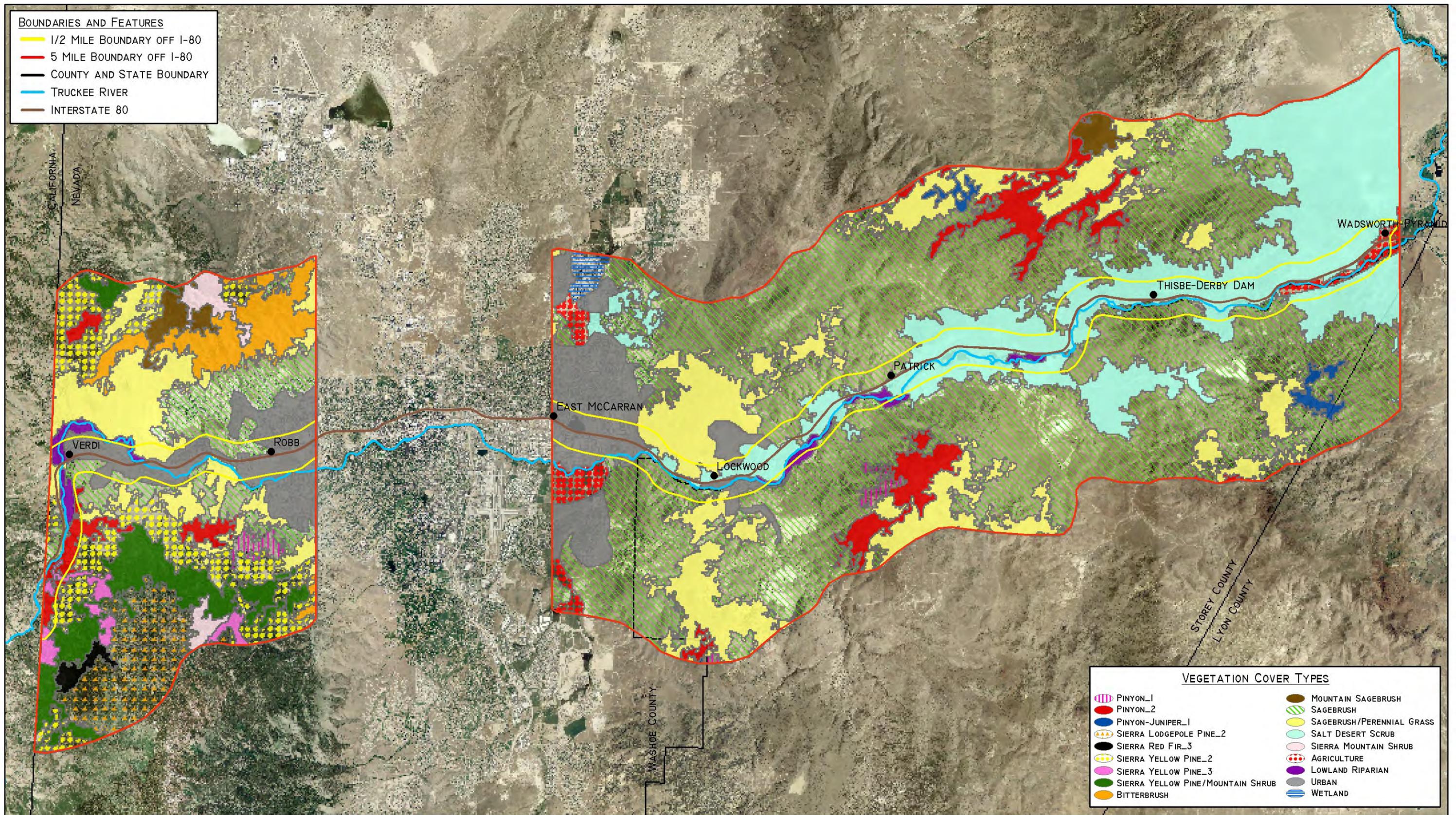
G Global rank indicator, based on worldwide distribution
S State rank indicator, based on distribution within Nevada
1 Critically imperiled and vulnerable to extinction
2 Imperiled due to rarity or other demonstrable factors
3 Vulnerable to decline because rare/ very restricted range
4 Long-term concern, though now apparently secure
5 Demonstrably secure, widespread, and abundant
A Accidental within Nevada
B Breeding status within Nevada
H Historical; could be rediscovered
N Non-breeding status within Nevada
Q Taxonomic status uncertain
U Unrankable
Z Enduring occurrences cannot be defined
? Assigned rank uncertain

State

CE Critically Endangered, protected under NRS 527.260-.300

BOUNDARIES AND FEATURES

- 1/2 MILE BOUNDARY OFF I-80
- 5 MILE BOUNDARY OFF I-80
- COUNTY AND STATE BOUNDARY
- TRUCKEE RIVER
- INTERSTATE 80



VEGETATION COVER TYPES

- | | |
|--|---|
| ▨ PINYON_1 | ■ MOUNTAIN SAGEBRUSH |
| ■ PINYON_2 | ▨ SAGEBRUSH |
| ■ PINYON-JUNIPER_1 | ▨ SAGEBRUSH/PERENNIAL GRASS |
| ▨ SIERRA LODGEPOLE PINE_2 | ■ SALT DESERT SCRUB |
| ■ SIERRA RED FIR_3 | ■ SIERRA MOUNTAIN SHRUB |
| ▨ SIERRA YELLOW PINE_2 | ▨ AGRICULTURE |
| ▨ SIERRA YELLOW PINE_3 | ■ LOWLAND RIPARIAN |
| ■ SIERRA YELLOW PINE/MOUNTAIN SHRUB | ■ URBAN |
| ▨ BITTERBRUSH | ▨ WETLAND |



NDOT I-80 CORRIDOR STUDY
VEGETATION COVER TYPES IN THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; USGS (GAP)

DRAWN BY: MS/NCE MARCH 2008

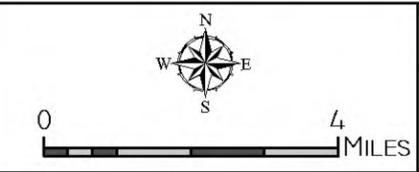
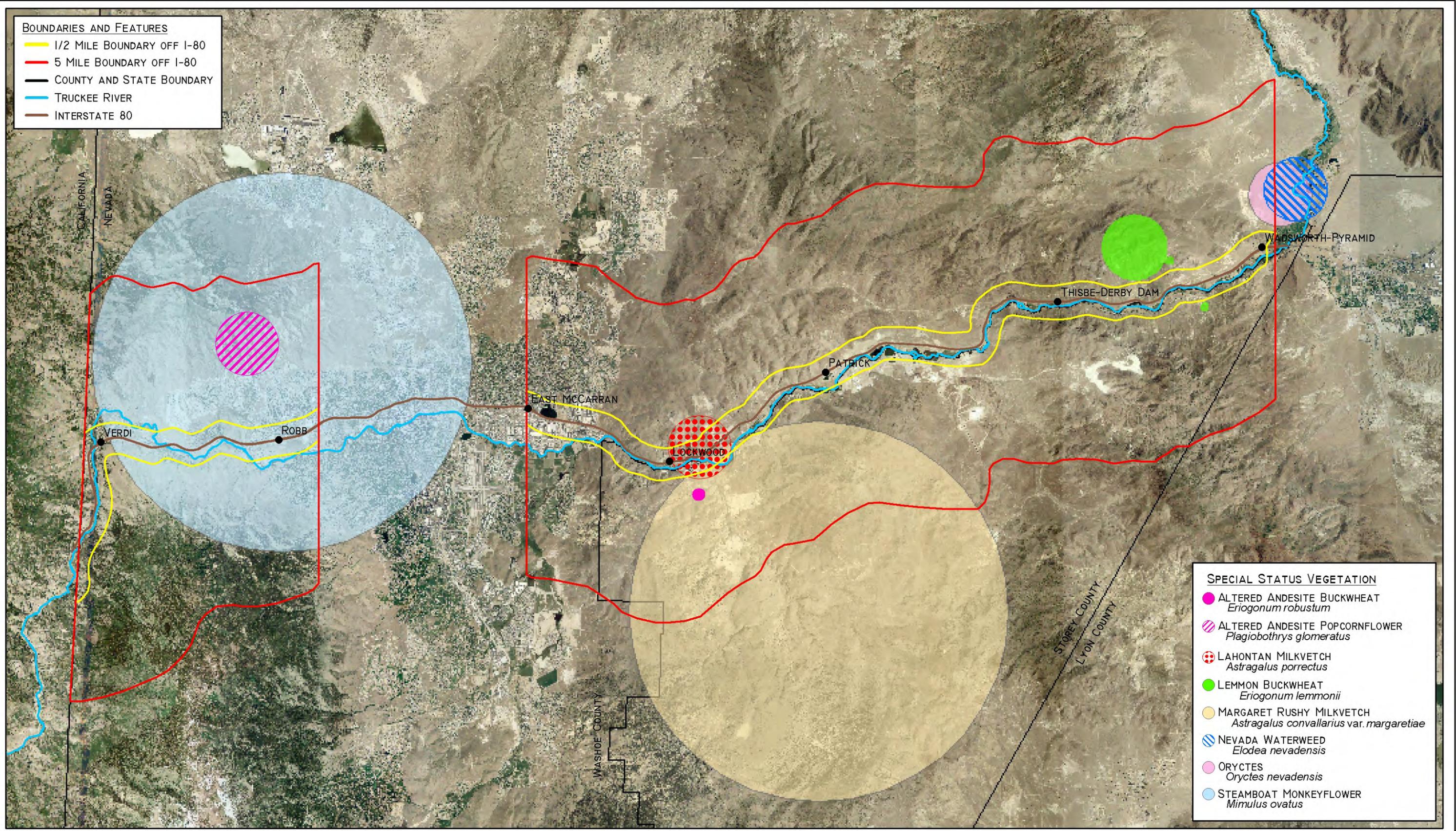


FIGURE:
2.1

- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80



- SPECIAL STATUS VEGETATION**
- ALTERED ANDESITE BUCKWHEAT
Eriogonum robustum
 - ▨ ALTERED ANDESITE POPCORNFLOWER
Plagiobothrys glomeratus
 - LAHONTAN MILKVETCH
Astragalus porrectus
 - LEMMON BUCKWHEAT
Eriogonum lemmonii
 - MARGARET RUSHY MILKVETCH
Astragalus convallarius var. *margaretiae*
 - ▨ NEVADA WATERWEED
Elodea nevadensis
 - ORYCTES
Oryctes nevadensis
 - STEAMBOAT MONKEYFLOWER
Mimulus ovatus



NDOT I-80 CORRIDOR STUDY
SPECIAL STATUS VEGETATION IN THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; NNHP
DRAWN BY: MS/NCE MARCH 2008

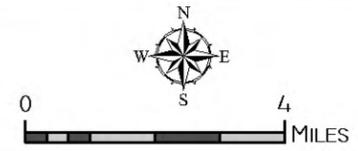
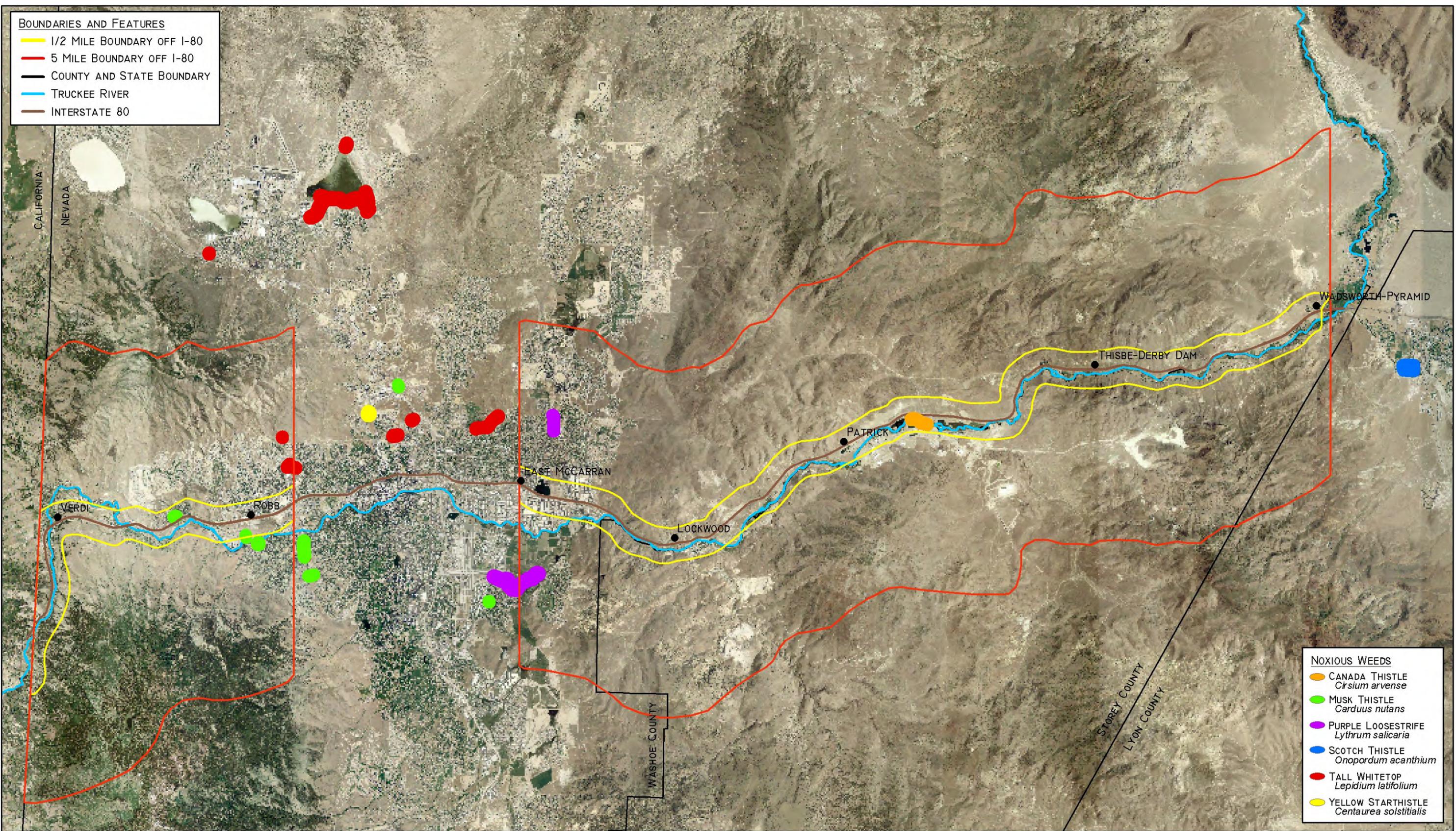


FIGURE:
2.2

- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80



- NOXIOUS WEEDS**
- CANADA THISTLE
Cirsium arvense
 - MUSK THISTLE
Carduus nutans
 - PURPLE LOOSESTRIFE
Lythrum salicaria
 - SCOTCH THISTLE
Onopordum acanthium
 - TALL WHITETOP
Lepidium latifolium
 - YELLOW STARTHISTLE
Centaurea solstitialis



NDOT I-80 CORRIDOR STUDY
NOXIOUS WEEDS IN AND AROUND THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE
DATABASE; PBS&J; WASHOE COUNTY;
NNHP
DRAWN BY: MS/NCE MARCH 2008

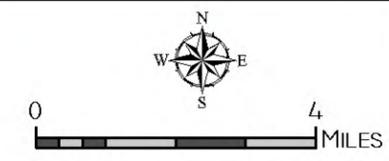


FIGURE:
2.3

3.0 FISHERIES AND WILDLIFE

Background research and agency contacts were used to gather information pertaining to wildlife management considerations and special status species occurrences. Federal, state, county, city, academic, private and non-governmental organizations were contacted to request reports, studies, maps, and GIS data pertaining to the study area. A detailed record of contacts and findings are listed in **Appendix A**. The NNHP performed a search for recorded special status plant and wildlife species within a 10-mile width centered on the I-80 Corridor. The results of this search are summarized in **Section 3.1** and **Table 3.1**, and illustrated in **Figure 3.1**. Special habitat areas (**Section 3.2**) are regions that are significant to special status species and regulated by the NDOW. Riparian habitats (**Section 3.3**) are areas that also require special consideration because of the wildlife and other associated special status species found there. Lastly, wildlife passages and vehicular crashes are examined in **Section 3.4**.

The Truckee River connects two of Nevada's four major ecoregions, the Sierra Nevada Range and Central Basin and Range, creating a corridor with food, shelter, and water for several wildlife species (USFWS 2003). The Truckee River enters Nevada through the Sierra Nevada ecoregion, providing mixed conifer, riparian, and mountain shrub habitat. The majority of the corridor is in the drier and warmer Central Basin and Range ecoregion, which is characterized by sagebrush, lowland riparian, sporadic spring environments, and various shrub habitats. At the terminus of the Truckee River is Pyramid Lake, an alkaline lake with no outlets (TRRIT 2003). Unique fish species can be found in this small remnant of the ancient Lake Lahontan, some of which have federal protection. Many of these species use the Lower Truckee River for spawning and passage, which in turn, provide food sources for both migrating and resident birds and mammals (USFWS 1992).

The Pah Rah Range (located northeast of Reno) contains breeding, wintering, and/or summering habitat for species such as sage-grouse, mule deer, desert bighorn sheep, and pronghorn antelope. This range offers many habitat types for migrating birds and game mammals such as sagebrush, scrub-shrub, and pockets of aspen woodlands. The southern aspect and foothill sections of this range are included in the study area. Other mountains with wildlife considerations include Peavine and the Carson Range in the western portion of the I-80 Corridor.

3.1 SPECIAL STATUS SPECIES

The term special status species is defined in **Section 2.2**. Information on documented species occurrences and their listing status was obtained from the NNHP, and is summarized below. It is important to note that while NNHP strives for accuracy and completeness, new information is constantly received, and in no case will the data represented here be a complete representation of potentially occurring species (NNHP 2006).

Endangered Species Act

Federally threatened and endangered species listed by the USFWS are protected nationwide, regardless of landownership. One endangered species, the cui-ui (*Chasmistes cujus*), and one threatened species, the Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), are found within the study area. Details of their occurrences are found in **Section 3.2** and **Table 3.1**. If a project is required to prepare a biological assessment, then a formal consultation with the USFWS is necessary to determine recommendations and mitigation needs for these federally protected species.

Federal Management Plans

The Humboldt-Toiyabe National Forest is located from the California-Nevada Stateline to the western periphery of Reno. Five USFS sensitive or threatened species are found in the study area and are shown

in Table 3.1 and Figure 3.1. BLM land is found from Sparks to Wadsworth, predominately north of I-80. There are 17 BLM special status species reported in the study area and are shown in Table 3.1 and Figure 3.1. If construction is proposed on BLM and/or USFS land, and a biological assessment is required, then consultations with these agencies may be required

State Programs

Eleven reported species in the I-80 Corridor are protected within state boundaries under NRS Title 45, Chapter 501. Table 3.1 lists these species and their known occurrences. All reported species have a NNHP Global or State rank, which are indicators of species status at a global and statewide level. Ranking definitions and other agency designations discussed here are further illustrated in Appendix C.

Additional Species and Related Management Plans

There are additional species and legislation that will need to be considered in project planning and implementation as well. These include:

Bald Eagles

Bald eagles were de-listed from federally threatened in August 2007, but are still protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.S. 703 *et seq.*) (USFWS 2007). Bald eagles historically nested at Pyramid Lake and Lake Tahoe, where they still have isolated nesting areas. They are known to winter along the Truckee River and reservoirs within the study area (USDI and CDWR 2008). Projects that require a biological assessment would need to consider bald eagle habitat and distribution in their analysis.

Migratory Birds

The USFWS is concerned about the potential impacts projects in the study area may have on migratory birds (USFWS 2007). Under the MBTA, migratory birds and their nests are protected; therefore the USFWS recommends that “any land clearing or other surface disturbances associated with proposed actions within the project areas be timed to avoid potential destruction of bird nests or young, or birds that breed in the area.” This entails that disturbances would occur outside of the breeding season, or if that is not feasible, then a qualified biologist would survey the area prior to any land clearing and protective buffers would be observed around any nests or nesting activity.

Bats

Numerous bat species with varying degrees of protection are found throughout the state of Nevada. The Nevada Bat Working Group (NBWG), a subcommittee of the Western Bat Working Group (WBWG) prepared a comprehensive conservation plan for Nevada’s 23 bat species. This plan assesses the current state of bat conservation in Nevada and suggests proactive strategies for improving and standardizing the conservation of Nevada’s bats (Bradley et al. 2008). The most recent version can be found at: <http://www.ndow.org/about/pubs/plans/batplan2006-06.pdf>.

3.2 SPECIAL HABITAT AREAS

NDOW has designated special habitat areas, and has been involved with conservation planning for many Nevada wildlife species. It is essential to review the stated management plans and engage in formal consultations with the appropriate landowners (BLM, USFS, USFWS, and /or Tribal Consuls) in the early stages of project planning.

GREATER SAGE-GROUSE (*Centrocercus urophasianus*)

Status: Nevada Special Status Species – designated by the State Office, protected under NRS 501
Management Plan: The Greater Sage-Grouse Conservation Plan for Nevada and Eastern California (NDOW 2004) and the Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats (Connelly et al 2000) present guidelines to protect sage-grouse habitat.

Habitat location and criteria: NDOW has divided the state into Local Area Conservation Planning Units for greater sage-grouse. The study area encompasses two units: Washoe/Modoc (north of the Truckee River), and Bi-state (south of the Truckee River). They have further divided the state into Sage Grouse Population Management Units (PMUs). The Pah Rah PMU encompasses the I-80 Corridor, and is shown on **Figure 3.2**. Sage-grouse habitat is defined as nesting, summer, winter, and lek sites. Winter habitat is present within a 1-mile width of the I-80 Corridor, while summer and nesting habitat is included in a 10-mile width of the corridor. Typical vegetation structure of wintering habitat includes 20% canopy cover, and a composition of big sagebrush (*Artemisia tridentata*), low sagebrush (*A. arbuscula*), black sagebrush (*A. nova*), fringed sagebrush (*A. frigida*), and silver sagebrush (*A. cana*), which are all preferred food sources (Connelly et al. 2000). Wintering grouse are most susceptible to herbicide treatments, sagebrush reduction, and possibly fire (long term affects not certain yet, Connelly et al. 2000). Indirect activities such as development, automobile traffic, addition of powerlines, and fences are also known hazards.

MULE DEER (*Odocoileus hemionus*)

Status: NDOW Game Mammal

Management Plan: Mule Deer Population Dynamics: Issues and Influences (Wasley 2004).

Habitat location and criteria: Habitat areas are designated as yearlong, summer, and crucial winter, all of which are present rather continuously throughout a 10-mile width of the I-80 Corridor. Higher elevations provide forage opportunities during the summer, but are not hospitable during the winter. When temperatures drop, deer make their way to lower elevations, which bring them closer to I-80. They are found year round in areas that consistently provide opportunities for foraging and have access to mates, cover, and water. Such areas are present on both sides of the Truckee River, throughout the study area. Habitat GIS data showing mapped regulated zones was obtained through NDOW, and shown on **Figure 3.3**.

PRONGHORN ANTELOPE (*Antilocapra americana*)

Status: NDOW Game Mammal

Management Plan: Nevada's Pronghorn Antelope Ecology, Management and Conservation (Tsukamoto et al. 1983).

Habitat location and criteria: Like the other ungulates presented here, pronghorn require widely available water sources. They are found in sagebrush plains, deserts, and foothills. These areas are present from Sparks to Fernley, within five miles north of the Truckee River. Habitat GIS data was obtained through NDOW and shown on **Figure 3.4**.

BIGHORN SHEEP (*Ovis canadensis nelsoni*)

Status: NDOW Game Mammal

Management Plan: Population status reports are available from NDOW, but no formal management plans have been adopted.

Habitat location and criteria: Bighorn sheep prefer areas with rocky and steep terrain, typical of desert canyons and washes. This habitat is present between Verdi and Reno, south of the Truckee River; between Sparks and Fernley on both sides of the Truckee River; and north of Fernley, east of the Truckee River. Habitat GIS data was obtained through NDOW and shown on **Figure 3.5**.

CUI-UI (*Chasmistes cujus*)

Status: Federally Endangered, Nevada Special Status Species - designated by USFWS, protected under NRS 501.

Management Plan: Cui-ui Recovery Plan (USFWS 1992).

Habitat location and criteria: Cui-ui is a lakesucker found only in Pyramid Lake and the Lower Truckee River (USFWS 1992). Cui-ui spawn in the Lower Truckee River beginning in early April and lasting

until late June. Shallow, fast-moving waters over gravel beds are optimal spawning habitats, and are regulated to promote the recovery of this fish.

LAHONTAN CUTTHROAT TROUT (*Oncorhynchus clarki henshawi*)

Status: Federally Threatened, Nevada Special Status Species – designated by USFWS, USFS Threatened, protected under NRS 501.

Management Plan: Short-Term Action Plan for Lahontan Cutthroat Trout in the Truckee River Basin (TRRIT 2003).

Habitat location and criteria: The Lahontan cutthroat trout is native to the Lahontan Basin of northern Nevada, eastern California, and southern Oregon (NFWO 2007). In the Truckee River, it is present in both natural and stocked populations. Habitats that are regulated to ensure the recovery of this species include clear, cool flowing water and rocky areas that are used for spawning. Well-vegetated and stable stream banks are also important for cover.

3.3 RIPARIAN HABITATS AND ASSOCIATED WILDLIFE

Riparian corridors have been shown to be key landscape features that maintain high levels of biodiversity due to the variety of habitats offered and ecological functions available in these systems (Naiman et al. 1992). Areas along or adjacent the Truckee River create a riparian corridor with an emphasis placed on palustrine, scrub-shrub, and forested wetlands as they are the most productive riparian habitats in the study area (USDI and CDWR 2008). A discussion of wildlife associated with riparian habitats is presented below.

Birds

Birds generally show more dependence on aquatic habitats than do other types of wildlife (USDI and CDWR2008). Scrub-shrub, mature Fremont cottonwood forest, and pole-sapling Fremont cottonwood habitats have the greatest avian species diversity with 93, 57, and 48 species respectively (Lynn et al. 1998). Lower elevation wetlands and riparian areas tend to have greater species abundance and diversity. An example of this is seen downstream from Sparks where greater amounts of scrub-shrub and Fremont cottonwood forests are available. The palustrine scrub-shrub habitat is important for neotropical migratory birds that breed and forage in the vegetation and surrounding riparian environment. These species include warbling vireos, yellow warblers, willow flycatchers, song sparrows, and red-winged blackbirds (USDI and CDWR2008). Fremont cottonwood forests and other forested wetlands are of importance to raptor and owl species and provide nesting opportunities for some migratory species.

Amphibians and Reptiles

The reach between Derby Diversion Dam and Pyramid Lake contain the greatest species diversity of amphibians in the Truckee River due to sufficient breeding and adult habitat (USDI and CDWR2008). The northern leopard frog, a USFS and BLM sensitive species, has been observed in this area. The northwestern pond turtle, also a USFS sensitive species, is known to inhabit wetlands and tributaries downstream from Reno. Above Reno, near Verdi, Pacific treefrog, garter snake, bullfrog, and western toad are present.

Mammals

Mammals associated with riparian habitats include common muskrat, American mink, northern river otter, mountain beaver, raccoon, striped and western spotted skunk, and insectivorous bats such as hoary and western red bat (WAPT 2006). Mule deer and migrating mammals also utilize riparian areas for water, cover, food, and breeding. Several small mammals such as shrew, mole, gopher, mice, rat, and vole species are common residents to cottonwood forest systems, riparian thickets, and grasslands. Palustrine scrub-shrub and cottonwood forests are the most significant riparian habitats for mammals in the study area (USDI and CDWR2008).

Springs

Springs occur when groundwater flows to the surface and forms a body of water. There are three main types of springs: cold springs (temperatures near or below ambient temperature), thermal springs (41-50°F), and hot springs (>50°F, WAPT 2006). These small, isolated bodies of water support endemic gastropod and aquatic invertebrate populations. They also serve as an oasis for birds and mammals that depend on them as a vital water source, cover, and feeding area. Many fish species thrive in spring systems because of the unique temperature gradients and nutrients they offer, which satisfy their thermoregulation needs (WAPT 2006). Springs are sensitive areas because they harbor several federally and state protected species such as springsnails, macroinvertebrates, and endemic butterflies such as Carson's wandering skipper (*Pseudocopaeodes eunus obscurus*). The USFWS recommends including springs and associated springsnails and other macroinvertebrates in project planning and implementation (USFWS 2007). The BLM is a signatory to 1998 multi-party Memorandum of Understanding (MOU) regarding spring habitats, and has created a Guide to Managing, Restoring, and Conserving Springs in the Western United States to facilitate implementation of this MOU (USDI 2001).

3.4 WILDLIFE PASSAGES

I-80 fragments portions of focal habitats by introducing highway traffic to migrating and residential wildlife. Areas that intersect drainages, are near water sources, have good foraging resources, or open stretches of road are prime locations for wildlife crossings (British Columbia Conservation Foundation 2008).

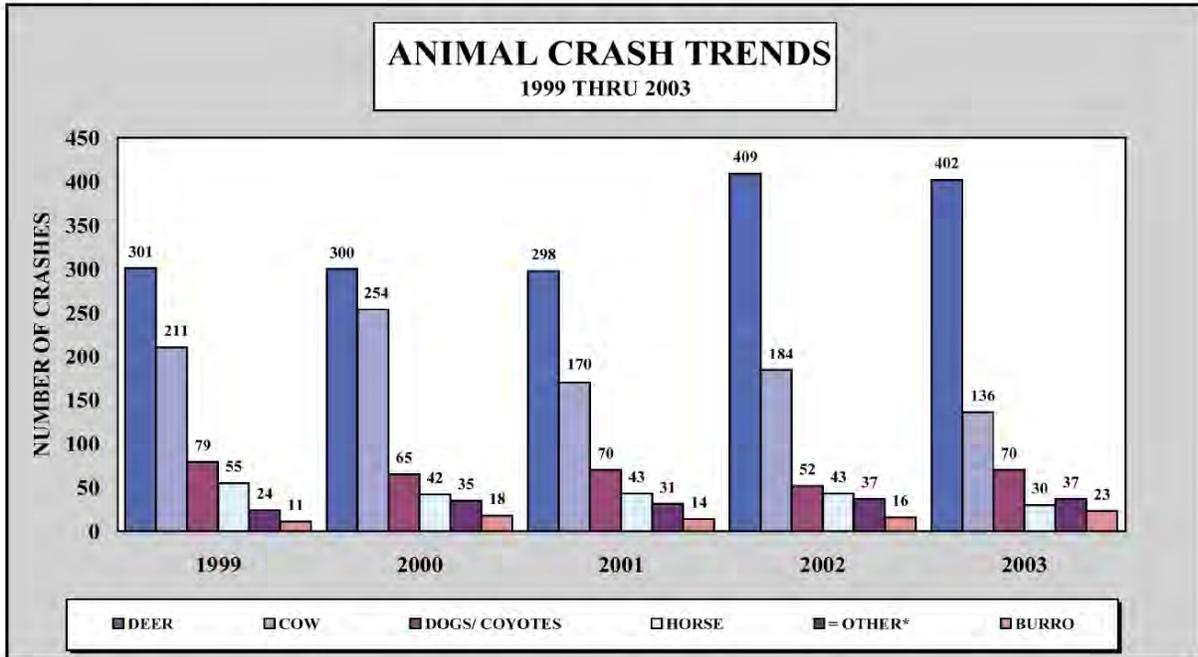
According to the NDOT Nevada Crashes Report, there were 698 wildlife collisions in 2003 (NDOT 2003). Of these, 402 (58%) involved deer and 37 (4%) involved bighorn sheep, antelope, or elk. The remaining crashes involved cows, dogs/coyotes, horses, and burros. This information is illustrated in **Figure 3a**. In a separate report generated by NDOT for roadkill data on the I-80 segment between the California state line and Fernley, NV, 197 cases of animal on-road sightings and/or collisions during 2003-2008 were documented (NDOT 2008). These incidents involved 175 deer (89%), 6 bears (3%), 1 mountain lion (1%), 1 antelope (1%), 6 dogs/coyotes (3%), and 7 other undisclosed animals (4%). **Figure 3b** illustrates these animal-vehicular incidents. Both of these reports clearly indicate that most wildlife collisions are deer-related, and that of six other medium to large size species are affected by a small fraction vehicular collisions as well.

Besides types of animals hit in roadway crashes, **Figure 3b** also shows sections of I-80 with the most collisions. Of the 197 animal crashes reported from 2003-2008, 133 (68%) of them occurred between the California state line and West McCarran Blvd (NDOT 2008). This area also marks the boundaries of the Sierra Nevada ecoregion of the study area. This ecoregion supports more diverse habitat types, which in turn can support more wildlife populations. Deer use both sides of the Truckee River in this area for summer and wintering habitat, which could indicate a highly used migration corridor. **Figure 3b** also shows a fairly uniform trend in incidents from East McCarran Blvd. to Fernley with spikes near Lockwood and the Lyon County line. This area has mapped deer, antelope, and bighorn sheep habitat near, or on both sides of I-80. This wide open stretch also correlates with the Pah Rah Range, another highly used wildlife area. Furthermore, current restoration projects directed in part by The Nature Conservancy at McCarran Ranch, Lockwood, Mustang Ranch, and 102 Ranch have the potential to increase the frequency of wildlife in these areas.

Constructing safe passages along the I-80 Corridor would increase safety for both humans and wildlife utilizing sections of this highway. Special consideration should be placed near Verdi and areas surrounding McCarran Ranch, Lockwood, Mustang Ranch, and 102 Ranch where habitat restoration efforts are underway. The Defenders of Wildlife have created [Getting Up To Speed: A Conservationist's Guide to Wildlife and Highways](#) (Defenders of Wildlife 2007). This comprehensive guide presents design alternatives and references to increase highway safety and plan accordingly for safe passages.

Other useful resources include: Critter Crossings, Linking Habitats and Reducing Roadkill (USDOT 2000), and the Federal Highway Administration website, “Keeping It Simple: Easy Ways to Protect Wildlife along Roads” (USDOT 2008).

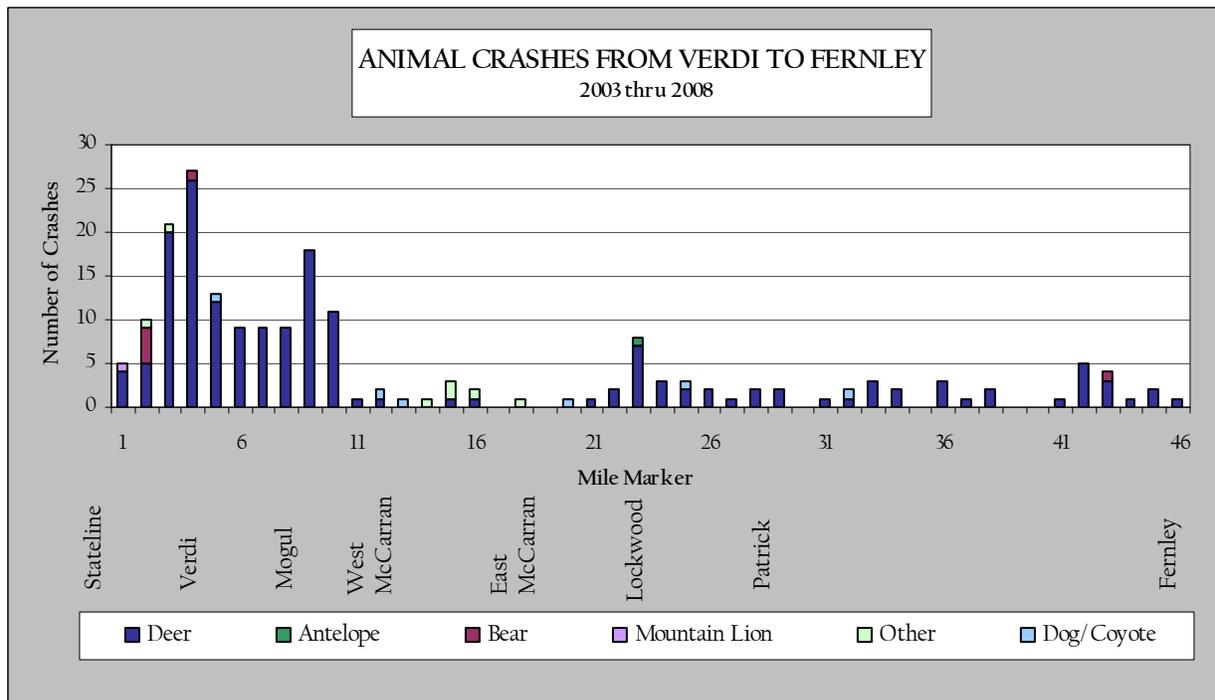
Figure 3a



Source: Nevada Crashes Report (NDOT 2003)

*Other includes bighorn sheep, antelope, and elk

Figure 3b



Source: (NODT 2008)

3.5 FUTURE CONSIDERATIONS

In summary, the study area includes a large portion of viable habitat for Nevada's diverse wildlife populations. Below are highlighted recommendations and considerations. These points, in addition to all species discussions and occurrences presented here, should be re-evaluated and verified with field visits and surveys prior to project planning and implementation.

- Most of the special-status species occurrences are concentrated in the western (Verdi) and far eastern segments of the study area. It should be expected that projects in these areas will encounter more wildlife than those proposed between Lockwood and Wadsworth (refer to **Figure 3.1**).
- Cui-ui (federally endangered) is found between Pyramid Lake and Derby Dam. Projects that propose work that will directly or indirectly affect stream habitat and/or flow will need to consider this species and review the Cui-ui Recovery Plan prior to planning.
- Lahontan cutthroat (federally threatened) is present throughout the Truckee River. Projects that propose work that will directly or indirectly affect stream habitat and/or flow will need to consider this species and review the Short-term Action Plan for Lahontan Cutthroat prior to planning.
- There is a considerable amount of wintering sage grouse habitat in the east/central portion of the study area, 0.5 -5 miles north of I-80. There is also summer and nesting habitat within 3-5 miles north of I-80 (**Figure 3.2**). It can be expected that projects proposed in this area will encounter mitigation, special use permits, and/or more in-depth environmental documentation.
- There are large portions of NDOW game mammal (bighorn sheep, mule deer, and pronghorn antelope) habitat throughout the study area (**Figures 3.3-3.5**). NDOW should be contacted to determine management considerations in these areas prior to project planning.
- Projects proposed near riparian habitat (**Figure 2.1**) should expect to encounter more wildlife and subsequent mitigation considerations.
- Wildlife passages and barriers should be considered along I-80 near Verdi (refer to **Figure 3b**).

Table 3.1. Wildlife Special Status Species Occurrences in Study Area

Species	USFWS	BLM	USFS	NNHP	State	Reported Occurrence and Notes
BIRDS						
Western Burrowing Owl <i>Athene cucularia hypugaea</i>		N,C		G4 S3B	Yes	<ul style="list-style-type: none"> 1977: Nest at Brookside Golf Course, near Reno International Airport fencing.
Golden Eagle <i>Aquila chrysaetos</i>		N		G5 S4	Yes	<ul style="list-style-type: none"> 1976: Nest south of I-80 along Truckee River Canyon; 4 miles west of Fernley 1979: Nest on south side of Truckee River between Sparks and Lockwood 1979: Nest south side of Truckee River, near Derby Dam.
Greater sage-grouse <i>Centrocercus urophasianus</i>		N,C		G4 S3S4	Yes	<ul style="list-style-type: none"> Winter, Summer and Nesting habitat See mapped habitat areas in Figure 3.2.
Prairie Falcon <i>Falco mexicanus</i>		N		G5 S4	Yes	<ul style="list-style-type: none"> 1961: Nest in Logarmazino Canyon 2-3 miles south of I-80 and 1 mile east of Reno. 1976: Six different nests in area south of Truckee River near Painted Rock. 1981: Nest along Long Valley Creek (Logarmazino Canyon).
Swainson's Hawk <i>Buteo swainsoni</i>		N		G5 S2B	Yes	<ul style="list-style-type: none"> 1979: Wadsworth, east side of railroad near Conestogo Trailer Park. 1994: Wadsworth.
Tricolored blackbird <i>Agelaius tricolor</i>		N,C		G2G3 S1B	Yes	<ul style="list-style-type: none"> 1972: Reno.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>		N		G4 S3B	Yes	<ul style="list-style-type: none"> 1949: Mud Flats near Fernley Sink.
MAMMALS						
Desert bighorn sheep <i>Ovis canadensis nelsoni</i>				G4		<ul style="list-style-type: none"> NDOW Game Mammal. See mapped habitat areas in Figure 3.5.
Mule deer <i>Odocoileus hemionus</i>				G5		<ul style="list-style-type: none"> NDOW Game Mammal. See mapped habitat areas in Figure 3.3.
Pronghorn antelope <i>Antilocapra americana</i>				G5		<ul style="list-style-type: none"> NDOW Game Mammal. See mapped habitat areas in Figure 3.4.
Mountain pocket gopher <i>Thomomys monticola 1</i>				G5 S3		<ul style="list-style-type: none"> 1946: Near Verdi along the Truckee River.
Trowbridge's shrew <i>Sorex trowbridgii</i>				G5 S2		<ul style="list-style-type: none"> 1981: Verdi.
Spotted bat <i>Euderma maculatum</i>		N	S	G4 S2	Yes	<ul style="list-style-type: none"> 1965: Downtown Reno.

Species	USFWS	BLM	USFS	NNHP	State	Reported Occurrence and Notes
Townsend's big-eared bat <i>Corynorhinus townsendii</i>		N,C	S	G4 S2	Yes	<ul style="list-style-type: none"> 1972: Exact location not listed- middle portion of study area.
Big brown bat <i>Eptesicus fuscus</i>		N		G5 S4		<ul style="list-style-type: none"> 1996: Exact location not listed- western portion of study area.
Yuma myotis <i>Myotis yumanensis</i>		N,C		G5 S3S4		<ul style="list-style-type: none"> 1972: Exact location not listed- western portion of study area.
Brazilian free-tailed bat <i>Tadarida brasiliensis</i>		N		G5 S3S4	Yes	<ul style="list-style-type: none"> 1997: Exact location not listed- western portion of study area.
FISH						
Cui-ui <i>Chasmistes cujus</i>	E	N		G1 S1		<ul style="list-style-type: none"> Occurs in Lower Truckee River, east of Derby Dam to Pyramid Lake.
Lahontan cutthroat trout <i>Oncorhynchus clarki henshawi</i>	T	N	T	G4 S3		<ul style="list-style-type: none"> Occurs throughout the Truckee River.
Amphibians						
Northern leopard frog <i>Rana pipiens</i>		N	S	G5 S2S3		<ul style="list-style-type: none"> West Fernley, no further information supplied.
Northwestern pond turtle <i>Actinemys marmorata marmorata</i>			S	G3G4Q S3		<ul style="list-style-type: none"> 2003: Two individuals seen at McCarran Ranch. 1941: Wadsworth Slough (East of Truckee River). 1941: South of Truckee River, between Reno & Sparks. 1940: Truckee River, 1 mile east of Sparks.
Sierra Alligator Lizard <i>Elgaria coerulea palmeri</i>		N		G5 S2S3	Yes	<ul style="list-style-type: none"> 1988: Sparks (likely an escaped specimen).
INSECTS						
Nevada Viceroy <i>Euphydryas editha monoensis</i>				G5 S1S2		<ul style="list-style-type: none"> 1966: West Fernley. Truckee River, 5 miles west of Wadsworth. 1966: 0.5 miles east of Fernley. 1972: I-80 west of Wadsworth. 1972: 1 mile south of Fernley. 1972: 1 mile west of Wadsworth. 1977: Wadsworth. 1978: Fernley. 1979: Fernley. 1980: Truckee River, 0.1 miles east of Washoe County line. 1981: Fernley Canal.
Mono checkerspot <i>Limnitis archippus</i>		N		G5 S1		<ul style="list-style-type: none"> 1918: Reno. 1994: Verdi.

Sources: Nevada Natural Heritage Program (NNHP 2008a), (USFWS 2008), (NatureServe 2008)

Key to Symbols:

US Fish & Wildlife Service (USFWS)

- E Endangered
- T Threatened
- C Candidate

Nevada Natural Heritage Program (NNHP)

- G Global rank indicator, based on worldwide distribution
- S State rank indicator, based on distribution within Nevada
 - 1 Critically imperiled and vulnerable to extinction
 - 2 Imperiled due to rarity or other demonstrable factors

Bureau of Land Management (BLM)

N Nevada Special Status Species
C California Special Status Species

United States Forest Service (USFS)

S Sensitive Species
T Threatened Species

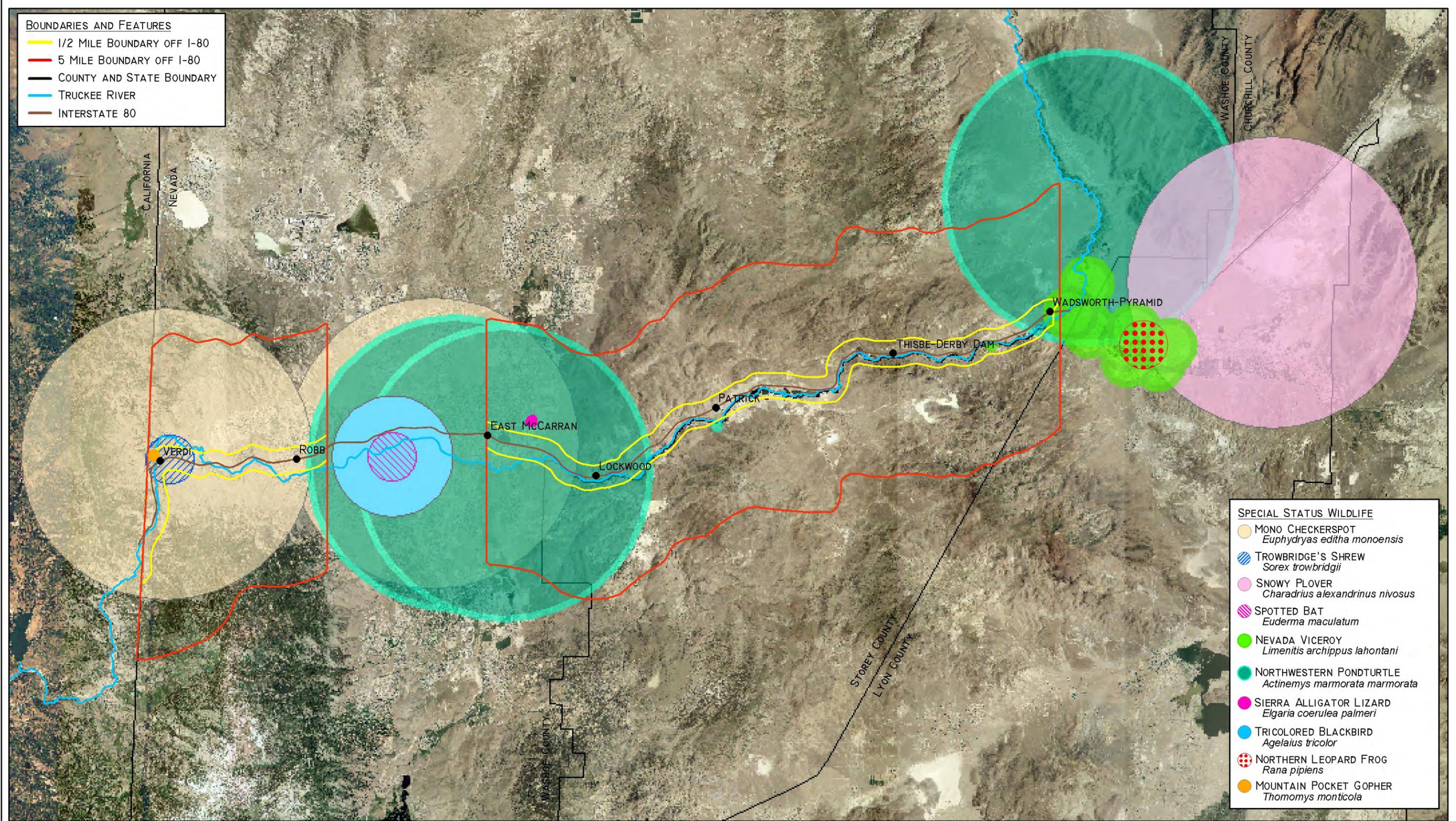
State

YES Indicates the species protected under NRS 501.

3 Vulnerable to decline because rare/ very restricted range
4 Long-term concern, though now apparently secure
6 Demonstrably secure, widespread, and abundant
A Accidental within Nevada
B Breeding status within Nevada
H Historical; could be rediscovered
N Non-breeding status within Nevada
Q Taxonomic status uncertain
U Unrankable
Z Enduring occurrences cannot be defined
? Assigned rank uncertain

BOUNDARIES AND FEATURES

- 1/2 MILE BOUNDARY OFF I-80
- 5 MILE BOUNDARY OFF I-80
- COUNTY AND STATE BOUNDARY
- TRUCKEE RIVER
- INTERSTATE 80



- SPECIAL STATUS WILDLIFE**
- MONO CHECKERSPOT
Euphydryas editha monoensis
 - ▨ TROWBRIDGE'S SHREW
Sorex trowbridgii
 - SNOWY PLOVER
Charadrius alexandrinus nivosus
 - ▨ SPOTTED BAT
Euderma maculatum
 - NEVADA VICEROY
Limenitis archippus lahontani
 - NORTHWESTERN POND TURTLE
Actinemys marmorata marmorata
 - SIERRA ALLIGATOR LIZARD
Elgaria coerulea palmeri
 - TRICOLORED BLACKBIRD
Agelaius tricolor
 - NORTHERN LEOPARD FROG
Rana pipiens
 - MOUNTAIN POCKET GOPHER
Thomomys monticola



NDOT I-80 CORRIDOR STUDY
SPECIAL STATUS WILDLIFE IN THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; NNHP
DRAWN BY: MS/NCE MARCH 2008

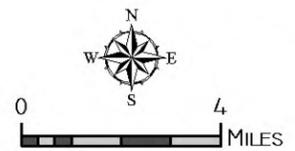
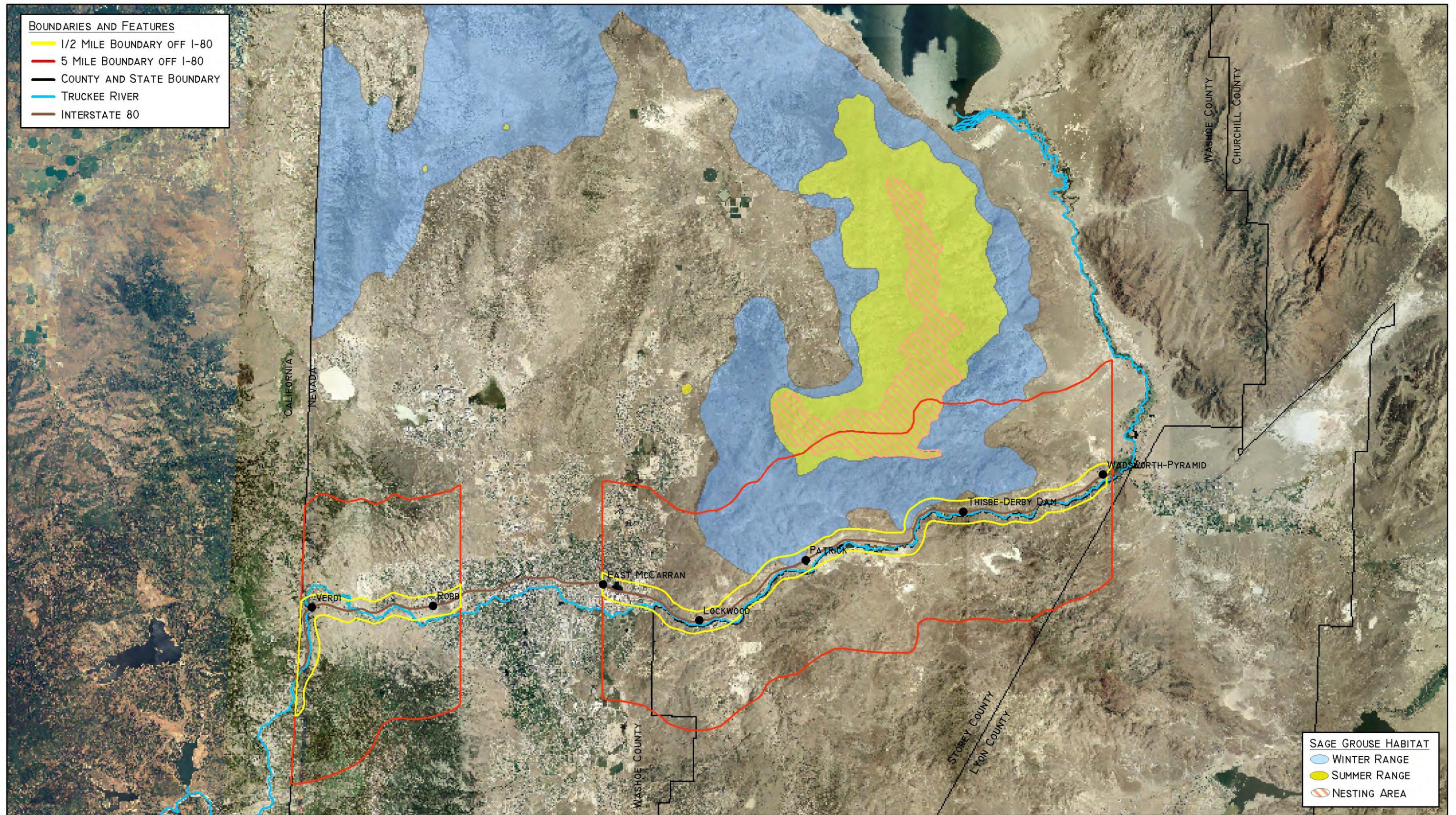
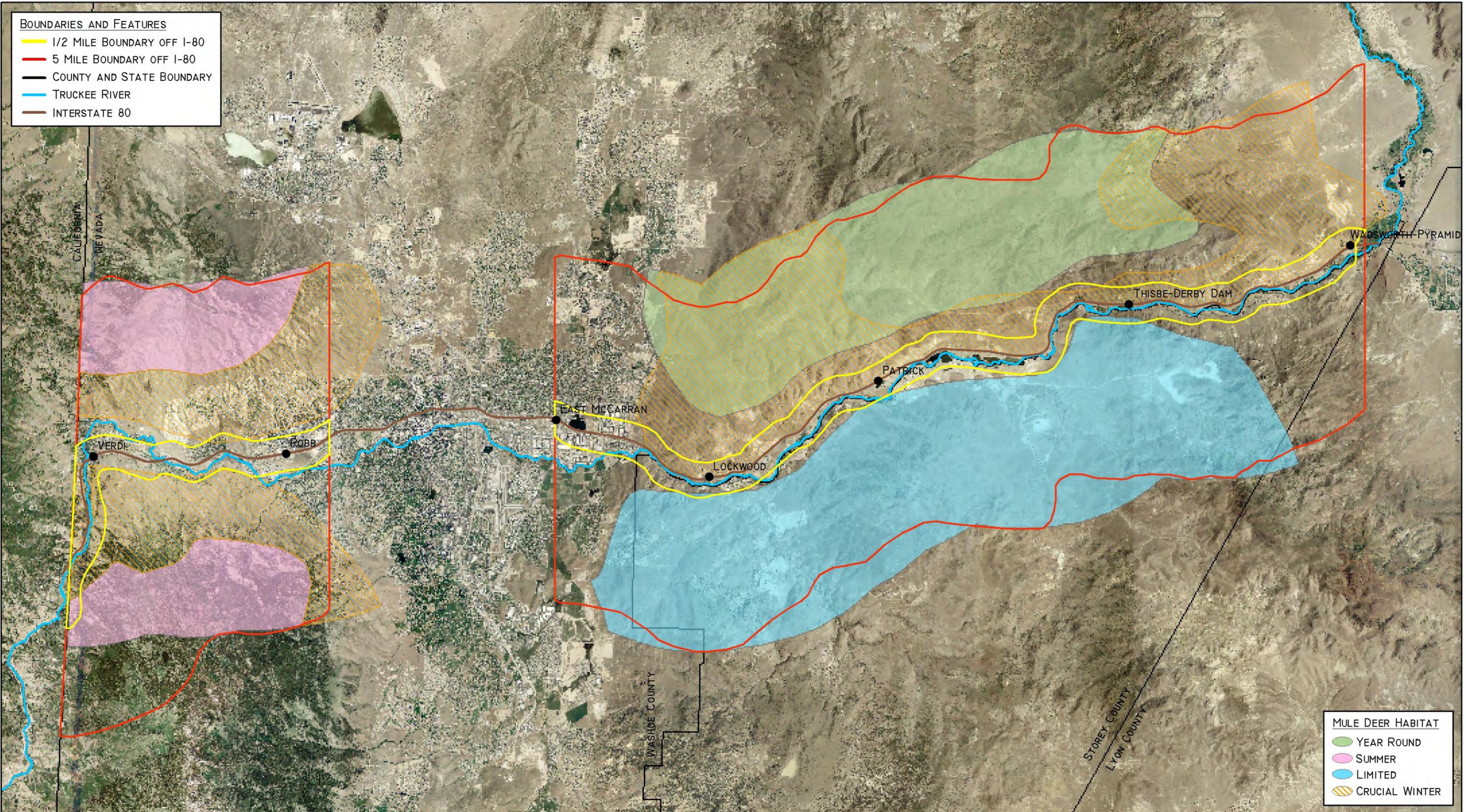


FIGURE:
3.1



- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80



- MULE DEER HABITAT**
- YEAR ROUND
 - SUMMER
 - LIMITED
 - CRUCIAL WINTER



NDOT I-80 CORRIDOR STUDY
MULE DEER HABITAT IN THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; NDOW
DRAWN BY: MS/NCE MARCH 2008

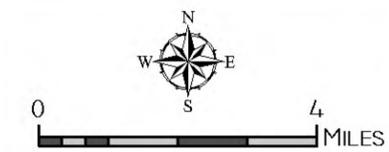
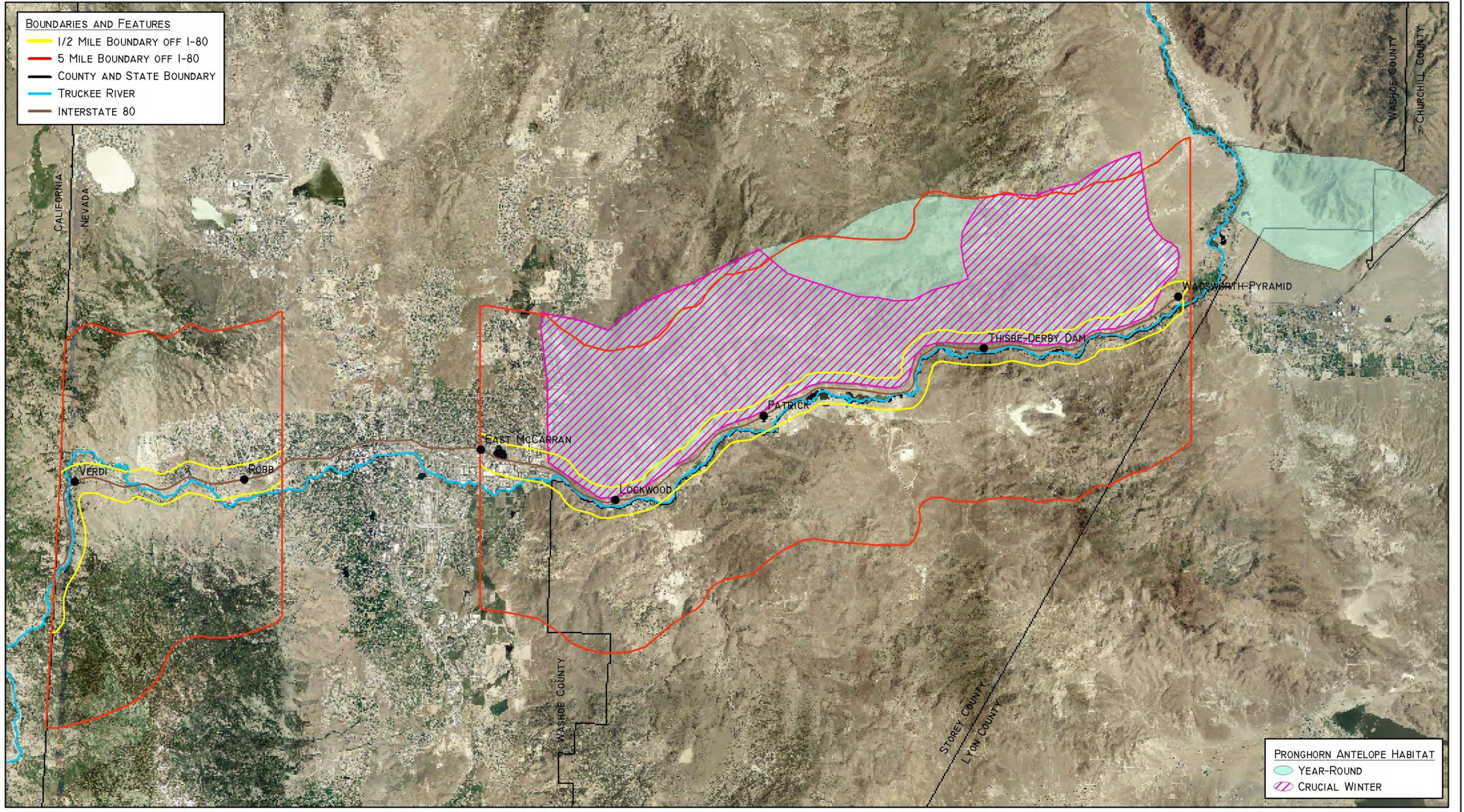


FIGURE:
3.3

- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80



- PRONGHORN ANTELOPE HABITAT**
- YEAR-ROUND
 - ▨ CRUCIAL WINTER



NDOT I-80 CORRIDOR STUDY

PRONGHORN ANTELOPE HABITAT IN AND AROUND THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE
 DATABASE; PBS&J; WASHOE COUNTY;
 NDOW

DRAWN BY: MS/NCE MARCH 2008

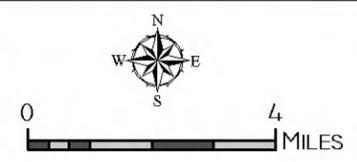


FIGURE:
3.4



- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80

- LEGEND**
- DESERT BIGHORN SHEEP HABITAT



NDOT I-80 CORRIDOR STUDY

DESERT BIGHORN SHEEP HABITAT IN AND AROUND THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; NDOW
 DRAWN BY: MS/NCE MARCH 2008

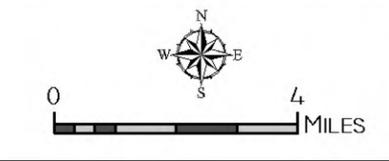


FIGURE:
3.5

4.0 WATER RESOURCES

The Truckee River stretches 150 miles in a generally north by northeast direction from Lake Tahoe to Pyramid Lake (DCNR 1997). I-80 parallels the Truckee River in Northern Nevada from the California/Nevada border through urban areas of Reno and Sparks and rural areas near the highway. At Wadsworth, the river turns north and heads towards Pyramid Lake. The Truckee River and its physical attributes result in the existence of many water resources within and adjacent to the I-80 Corridor, including floodplains, wetlands, lakes, ponds, marshes and springs.

The Truckee River is considered a “Waters of the United States” according to the definitions given in the USACOE Regulatory Program Regulations (Section 328.3). A portion of the Truckee River within the study area from East McCarran to the Pyramid Lake Reservation is listed as an Impaired Waterbody on the Nevada Environmental Protection Agency (EPA) Approved Final Impaired Waters List (NDEP 2005).

4.1 FLOODPLAINS

Flood Insurance Rate Maps (FIRMs) were obtained and used to identify floodplains within the I-80 Corridor. A complete set of FIRMs for the I-80 Corridor are found in **Appendix E**. FIRMs were created as a requirement of the National Flood Insurance Act of 1968, and are based on hydrologic and hydraulic studies of flood risks developed by the Federal Emergency Management Agency (FEMA). A FIRM depicts the spatial extent of Special Flood Hazard Areas (SFHAs) and other thematic features related to flood risk assessment. SFHAs are areas subject to inundation by a flood having a one-percent or greater probability of being equaled or exceeded during any given year. This flood is referred to as the “one percent annual chance flood” or the “100-year flood,” and is the national standard on which the floodplain management and insurance requirements are based (FEMA 1996).

The primary flooding concerns in southern Washoe County are located in the Truckee River Watershed (Washoe County 2008). The Truckee River parallels I-80 for the entire length of the study area, resulting in the 100-year floodplain crossing or being very near the highway in many locations. The expected potential for encountering a floodplain during construction and improvements is generally high throughout the study area. Approximate floodplain locations in the vicinity of the study area have been identified and are described in **Table 4.1** in a west to east direction along the I-80 Corridor. Distances from I-80 are included as a general reference only, and should not be considered accurate locations of 100-year floodplains without further investigation.

4.2 WETLANDS

Wetlands are areas that are periodically saturated with or covered by water. This saturation is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin et al. 1979). Wetlands and riparian areas cover a relatively small percentage of land in the arid state of Nevada, but provide a significant amount of diversity. Better water quality, abundance of vegetation and wildlife, and recreation opportunities are some examples of the resources wetlands contribute to an ecosystem (NCNR 2001).

A review of the National Wetlands Inventory (NWI) was performed, and results indicate five types of wetlands existing within a 1-mile width centered on I-80 (USFWS 2007b). These wetland classifications include Riverine, Freshwater Emergent Wetland, Freshwater Forested/Shrub Wetland, Freshwater Pond, and Lake, and are further described in **Appendix D**.

The mapped wetlands in the vicinity of the I-80 Corridor appear concentrated in the western half of the study area (Figure 4.1); however, it is important to note that wetland data is not currently available for the eastern portion of the study area (between the Mustang and Wadsworth-Pyramid exits) through the NWI (Droster 2007). It is extremely likely that wetlands exist along the Truckee River in this unmapped area, and they should be delineated by a certified wetland scientist or qualified delineation professional before any project implementation occurs.

The Truckee River is classified as a Riverine System, and spans the entire length of the study area. The River crosses I-80 in two locations in the western portion of the study area: between the West Verdi and Verdi exits, and between the Garson-Boomtown and East Verdi exits (Figure 4.2a). Wetlands or wetland features will be encountered if project activity occurs along I-80 in either of these two locations.

Other classifications of wetlands are clustered along the Truckee River, and consist of Freshwater Emergent Wetlands, Forested/Shrub Wetlands, and Freshwater Ponds. One Lake is also found between the East McCarran and Sparks exits. Wetland size and proximity to the highway vary. Noteworthy wetlands of relatively larger size, or that are in close proximity to I-80 are shown in Table 4.2. Refer to Figures 4.2a-4.2c for locations of individual wetlands.

4.3 FUTURE CONSIDERATIONS

- FIRMs should be further studied during project planning in order to design improvements in appropriate locations regarding the 100-year floodplain. The maps can be accessed through the FEMA website at <http://www.fema.gov/>.
- Wetlands need to be delineated in the eastern portion of the project area before any project planning or implementation occurs. Additionally, a field study or review should be conducted to confirm the presence or absence of wetlands in the proposed project area before any construction occurs.

Table 4.1. Descriptions of 100-Year Floodplains in the Vicinity of the Study Area

Segment	Description	Washoe County Map Number(s)	Risk of Encountering a Floodplain Along Segment*
From: CA/NV border To: West Verdi Exit	The 100-year floodplain follows the general direction of I-80 at a distance ranging from 1000 feet to less than 100 feet.	32031C3150 E and 32031C2963 E	High
From: West Verdi Exit To: Verdi Exit	The Truckee River and the 100-year floodplain cross I-80 about halfway between these two exits. The highway curves and travels east, while the river and floodplain continue north.	32031C2963 E	High
From: Verdi Exit To: Garson-Boomtown Exit	The 100-year floodplain does not come within 2000 feet of I-80 in this section.	32031C2963 E and 32031C2964 E	Low
From: Garson-Boomtown Exit To: East Verdi Exit	The Truckee River and the 100-year floodplain cross I-80 about halfway between these two exits. The 100-year floodplain parallels I-80 after it crosses to the south side of the highway, and comes within 250 feet in one location.	32031C2964 E	High
From: East Verdi Exit To: Mogul Exit	The 100-year floodplain does not come within 500 feet of I-80 along this section.	32031C2968 F	Medium
From: Mogul Exit To: West 4 th Street Exit	The 100-year floodplain for Mogul Creek comes within 50 feet of I-80 to the north and the Truckee River 100-year floodplain comes with 250 feet to the south. The portion of Mogul Creek which runs under I-80 to the Truckee River is not currently mapped.	32031C2968 F	High
From: West 4 th Street Exit To: Robb Exit	The 100-year floodplain is within 500 feet near the W. 4 th St. exit, then moves a significant distance to the south as you approach Robb Drive.	32031C2968 F and 32031C2969 E	High to Medium
From: Robb Exit To: West McCarran Exit	The 100-year floodplain does not come within 2000 feet of I-80 along this section.	32031C2969 E and 32031C2988 E	Low
From: East McCarran Exit To: Sparks Exit	The 100-year floodplain is directly adjacent to I-80 on both the north and south boundaries.	32031C3013 E and 32031C3014 E	High
From: Sparks Exit To: Vista-Greg Exit	The 100-year floodplain is directly adjacent to I-80 on both the north and south boundaries. The floodplain ends on the north boundary just east of Lillard Drive.	32031C3014 E	High
From: Vista-Greg Exit To: Lockwood Exit	The 100-year floodplain follows I-80 on the south boundary for most of this section.	32031C3014 E 32031C3018 E and 32031C3019 E	High

Segment	Description	Washoe County Map Number(s)	Risk of Encountering a Floodplain Along Segment*
From: Lockwood Exit To: Mustang Exit	The 100-year floodplain parallels I-80 for over half this section, and comes within 250 feet in two places before turning south east while the highway turns north east.	32031C3019 E	High
From: Mustang Exit To: Patrick Exit	The 100-year floodplain parallels I-80 for most of this section, and comes within 250 feet of the highway in two places.	32031C3038 E 32031C3036 E and 32031C3037 E	High
From: Patrick Exit To: Tracy-Clark Station Exit	The 100-year floodplain is very wide in some locations of this section, but generally parallels the highway to the south. Several locations of the floodplain are 50 feet from I-80.	32031C3037 E 32031C3041 E 32031C3033 E and 32031C3034 E	High
From: Tracy-Clark Station Exit To: Thisbe-Derby Dam Exit	The 100-year floodplain is very wide in some locations, and parallels the highway at a distance of 200-1000 feet for most of the section. The Truckee River and floodplain cross the highway in two places (as part of an oxbow bend in the river) in this section. The 100-year floodplain abuts I-80 near the Thisbe-Derby Dam exit.	32031C3034 E 32031C3053 E 32031C3054 E and 32031C3060 E	High
From: Thisbe-Derby Dam Exit To: Orchard Exit	The 100-year floodplain parallels I-80 at a distance of about 100-150 feet for most of this section.	32031C3060 E	High
From: Orchard Exit To: Painted Rock Exit	The 100-year floodplain parallels I-80 at a distance of about 100-150 feet for most of this section.	32031C3060 E and 32031C3078 E	High
From: Painted Rock Exit To: Wadsworth-Pyramid Exit	The 100-year floodplain comes within 50 feet of I-80 in a few places along the first third of this section, then parallels the highway at a distance of about 1000 feet for the remainder.	32031C3078 E 32031C3076 E 32031C3077 E and 32031C3081 E	High

Sources: FEMA 1994 and FEMA 2000

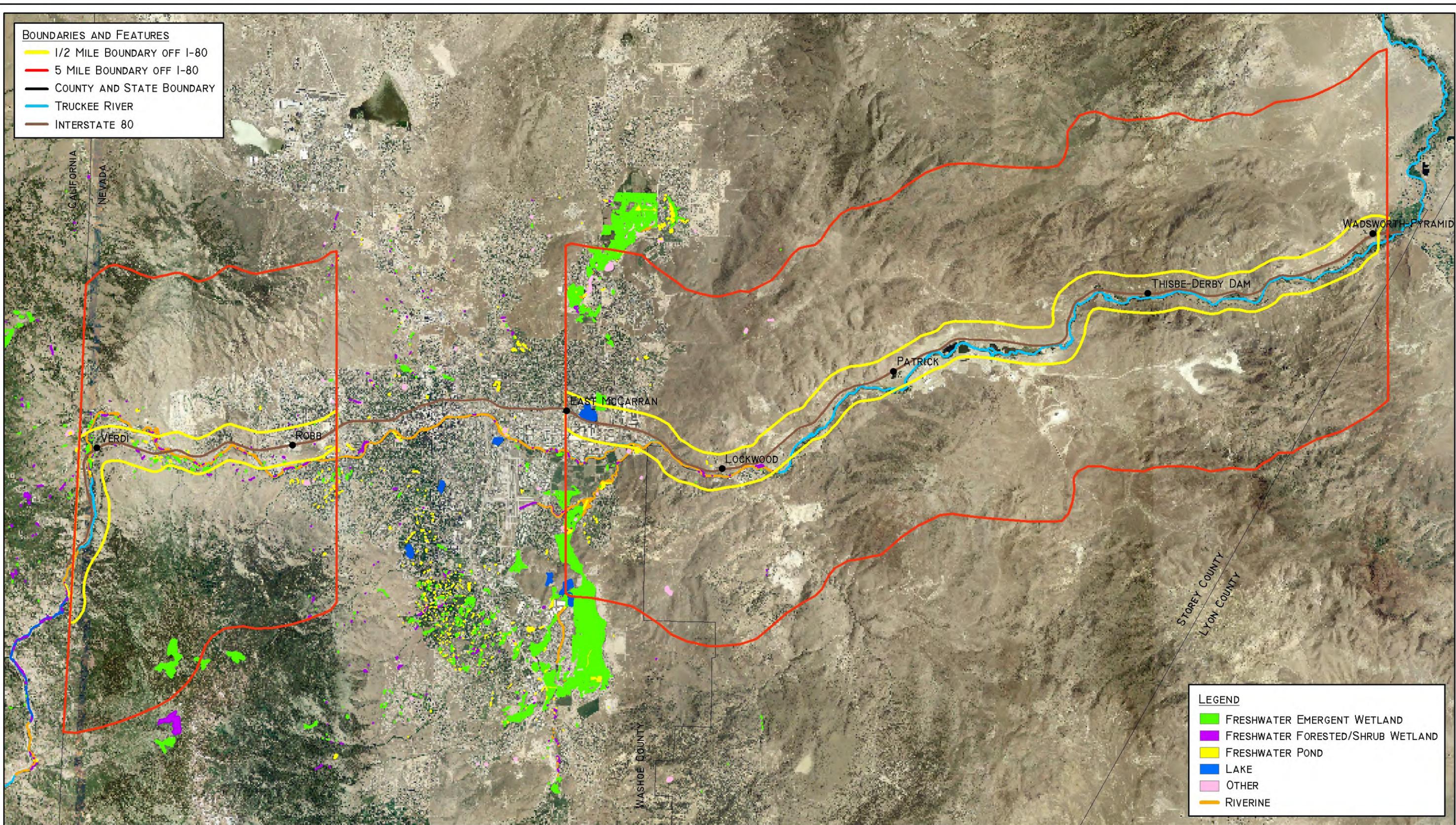
*Risk of encountering a floodplain was based on estimated distance of the 100-year floodplain from the highway:
 High = floodplain within 500 feet;
 Medium = floodplain between 500 and 2000 feet;
 Low = floodplain not within 2000 feet.

Note: All distances are estimates and should not be used for design.

Table 4.2. Wetlands of Interest along the I-80/Truckee River Corridor

Classification	Size	Approximate Locations
Freshwater Emergent Wetland	5 acres	<ul style="list-style-type: none"> • 550 feet from I-80 • East of the West Verdi Exit
Freshwater Emergent Wetland	9.5 acres	<ul style="list-style-type: none"> • 200 feet northwest of I-80 • Between West Verdi and Verdi Exits
Freshwater Emergent Wetland	4 acres	<ul style="list-style-type: none"> • 100 feet north of I-80 • West of the Garson-Boomtown Exit
Cluster of small Ponds	Less than 0.1 acres each	<ul style="list-style-type: none"> • 100 feet south of I-80 • East of the Garson-Boomtown Exit
Freshwater Emergent Wetland	0.2 acres	<ul style="list-style-type: none"> • 290 feet northeast of I-80 • East of the East Verdi Exit
Pond	0.6 acres	<ul style="list-style-type: none"> • 200 feet northeast of I-80 • East of the East Verdi Exit
Freshwater Emergent Wetland	15 acres	<ul style="list-style-type: none"> • 1800 feet south of I-80 • Between East Verdi and Mogul Exits
Forested/Shrub Wetland	0.5 acres	<ul style="list-style-type: none"> • 75 feet north of I-80 • East of the West 4th Street Exit
Lake	87 acres	<ul style="list-style-type: none"> • 165 feet north of I-80 • Sparks Marina Park and Pond between East McCarran and Sparks Exits
Freshwater Emergent Wetland	Portion of wetland is in study area; total size is 47 acres	<ul style="list-style-type: none"> • 1900 feet north of I-80 • Northeast of Sparks Marina Park
A few Forested/Shrub & Freshwater Emergent Wetlands	Between 0.4 and 0.9 acres each	<ul style="list-style-type: none"> • 190 feet south of I-80, clustered along Truckee River • West of the Lockwood Exit
Cluster of small Ponds	Between 0.2 and 0.5 acres each	<ul style="list-style-type: none"> • 780 feet north of I-80 • West of the Lockwood Exit
A few Forested/Shrub Wetlands & Ponds	Between 0.1 and 2.5 acres each	<ul style="list-style-type: none"> • 340 feet south of I-80, clustered along Truckee River • Between Lockwood and Mustang Exits

Source: USFWS 2007



BOUNDARIES AND FEATURES

- 1/2 MILE BOUNDARY OFF I-80
- 5 MILE BOUNDARY OFF I-80
- COUNTY AND STATE BOUNDARY
- TRUCKEE RIVER
- INTERSTATE 80

LEGEND

- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- LAKE
- OTHER
- RIVERINE



NDOT I-80 CORRIDOR STUDY
WETLANDS IN AND AROUND THE STUDY AREA

SOURCES: USDA: GREAT BASIN GEOSCIENCE
 DATABASE: PBS&J; WASHOE COUNTY;
 USFWS/NWI
 DRAWN BY: MS/NCE MARCH 2008

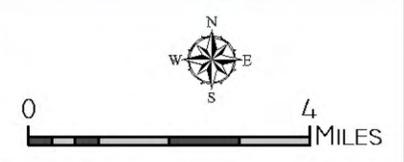
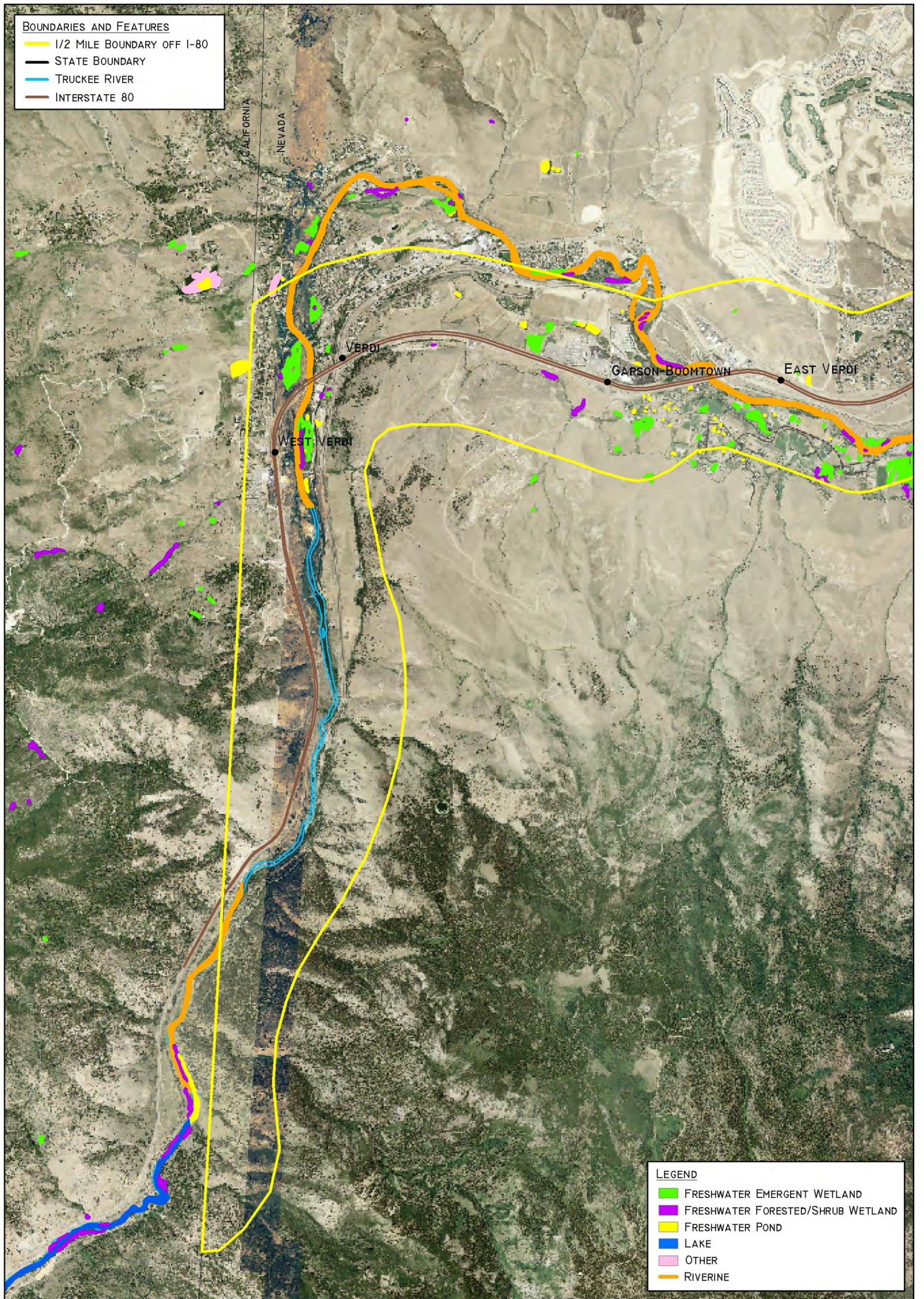


FIGURE:
4.1



BOUNDARIES AND FEATURES

- 1/2 MILE BOUNDARY OFF I-80
- STATE BOUNDARY
- TRUCKEE RIVER
- INTERSTATE 80

LEGEND

- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- LAKE
- OTHER
- RIVERINE



NDOT I-80 CORRIDOR STUDY

**WETLANDS BETWEEN THE CALIFORNIA/NEVADA
BORDER AND THE EAST VERDI EXIT**

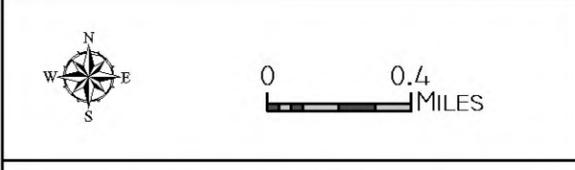
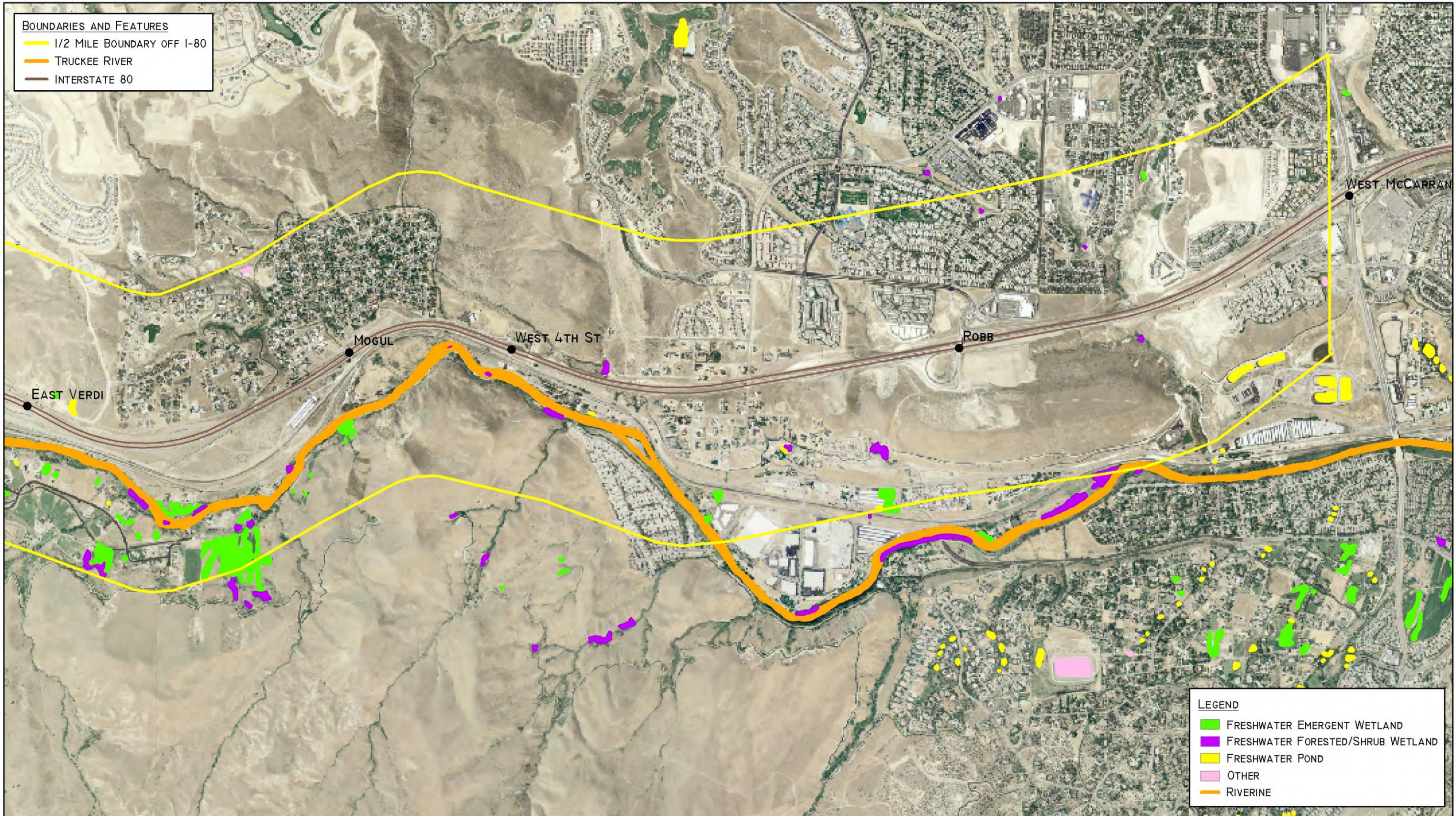


FIGURE:
4.2A

SOURCES: USDA; GREAT BASIN GEOSCIENCE
 DATABASE: PBS&J; WASHOE COUNTY;
 USFWS/NWI

DRAWN BY: MS/NCE
 MARCH 2008



BOUNDARIES AND FEATURES
 — 1/2 MILE BOUNDARY OFF I-80
 — TRUCKEE RIVER
 — INTERSTATE 80

LEGEND
 ■ FRESHWATER EMERGENT WETLAND
 ■ FRESHWATER FORESTED/SHRUB WETLAND
 ■ FRESHWATER POND
 ■ OTHER
 — RIVERINE



NDOT I-80 CORRIDOR STUDY
WETLANDS BETWEEN THE EAST VERDI AND WEST MCCARRAN EXITS

SOURCES: USDA; GREAT BASIN GEOSCIENCE
 DATABASE: PBS&J; WASHOE COUNTY;
 USFWS/NWI
 DRAWN BY: MS/NCE MARCH 2008

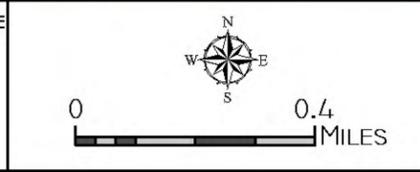
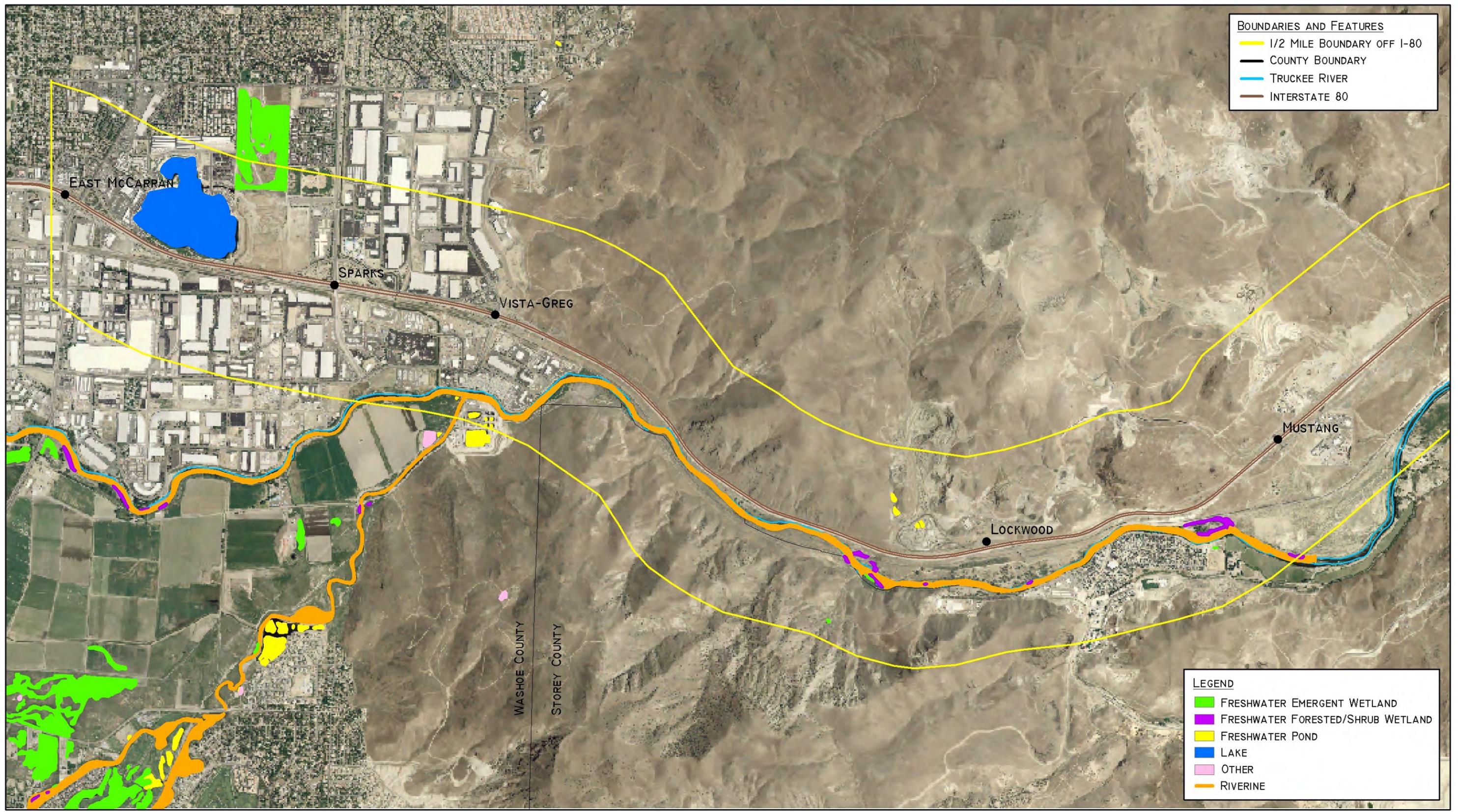


FIGURE:
4.2B



BOUNDARIES AND FEATURES

- 1/2 MILE BOUNDARY OFF I-80
- COUNTY BOUNDARY
- TRUCKEE RIVER
- INTERSTATE 80

LEGEND

- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- LAKE
- OTHER
- RIVERINE



NDOT I-80 CORRIDOR STUDY
WETLANDS BETWEEN THE EAST MCCARRAN AND MUSTANG EXITS

SOURCES: USDA; GREAT BASIN GEOSCIENCE
 DATABASE: PBS&J; WASHOE COUNTY;
 USFWS/NWI
 DRAWN BY: MS/NCE MARCH 2008

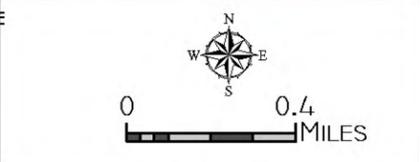


FIGURE:
4.2c

5.0 AIR RESOURCES

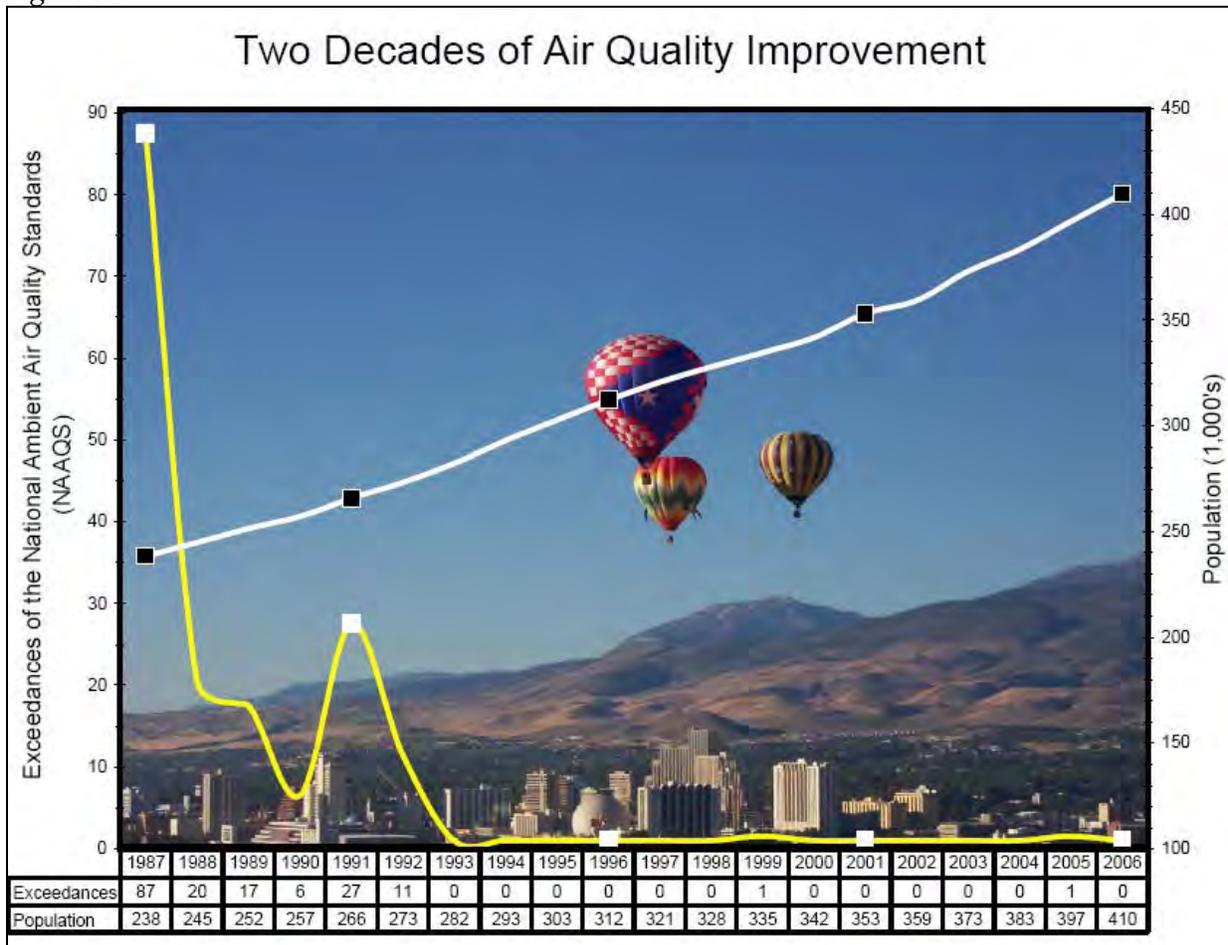
Air quality is determined by the concentration of certain pollutants in the atmosphere within a given area. Consideration for this resource was first established in the 1970 Clean Air Act (CAA), which laid ground rules for air quality protection. According to Section 110 of the CAA, all states are required to develop a State Implementation Plan (SIP) that outlines how the state will be in compliance with the National Ambient Air Quality Standards (NAAQS), and programs they are adopting to reach these standards (USDI and CDWR 2008, PROACT 2000). Nevada's standard for pollutant concentrations follows the NAAQS for the federal concentration levels of: particulate matter (PM10), sulfur dioxide (SO2), carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), and lead (Pb).

NAAQS are applied and enforced in certain geographic areas or "air quality control regions" throughout the U.S. in order to protect and enhance the quality of the nation's air resources. CAA regulations require that any owner/operator proposing a new source by a) building a new major stationary source of criteria air pollutants; or b) performing major modifications to an existing stationary source of criteria air pollutants must apply for a preconstruction air emissions permit and submit to certain preconstruction review requirements and mitigation (PROACT 2000). These review regulations fall under two major programs: 1) Prevention of Significant Deterioration (PSD) provisions (for attainment areas); and 2) Nonattainment Area (NAA) provisions. These two programs are collectively known as the New Source Review (NSR) program.

The Nevada Bureau of Air Pollution Control (BAPC) has jurisdiction over all counties except for Washoe and Clark. The Washoe County District Health Department Air Quality Management Division (AQMD) has jurisdiction over Washoe County. In Washoe County, the Truckee Meadows hydrographic basin (area 87) is designated as being in nonattainment for PM10 and CO, and all of Washoe County is considered in nonattainment for the 1-hour O3 (Washoe County 2007); therefore the NSR program in this area is enforced by NAA provisions (PROACT 2000). NAA provisions are designed to improve degraded air quality and bring nonattainment areas into attainment. Preconstruction permits in this area are issued to sources that can demonstrate they will improve air quality through appropriate technology, site analysis, and compliance certification. **Figure 5a** is from the Washoe Open Space and Natural Resource Plan and shows that Truckee Meadows has been aggressive in improving air quality measures. In fact, it could eventually reach attainment for CO levels since the Truckee Meadows' air quality has been increasing in recent years (Washoe County 2008).

The Fernley area and I-80 Corridor are within the Tracey Segment (hydrographic area 83), and is considered in attainment with the NAAQS (NDEP 2008a); therefore, this basin falls into the PSD program. PSD provisions are designed to keep an attainment area in continued compliance with the NAAQS by tracking increment consumption, which is the maximum allowable increase in concentration that is allowed to occur above the baseline concentration for a pollutant (PROACT 2000). In this portion of Nevada, increment standards exist for three pollutants: PM10, NO2, and SO2 (NDEP 2008a). Projects proposed in this segment that will result in a new source with significantly increased emissions will be subject to the PSD provisions. Regulations pertaining to the state and federal PSD program are found in Title 40 CFR 51.166 and 52.21, respectively, and in the Revised Air Quality Modeling Report (NDEP 2003).

Figure 5a.



Source: Washoe Open Space and Natural Resource Plan (Washoe County 2008)

5.1 FUTURE CONSIDERATIONS

In summary, the study area is divided into two major hydrographic areas: Truckee Meadows (area 87); and the Tracy Segment (area 83), both of which have different air quality considerations:

- The Truckee Meadows is in nonattainment for PM10 and CO. Preconstruction permits in this area are issued to sources that can demonstrate they will improve air quality through appropriate technology, site analysis, and compliance certification.
- The Tracy segment is in attainment, and therefore in the PSD program. Projects proposed in this segment that will result in a new source with significantly increased emissions will be subject to the PSD provisions.
- Additional permitting information for Storey County can be found at the Nevada Bureau of Air Pollution Control (<http://ndep.nv.gov/bapc/>).
- Additional permitting information for Washoe County can be found at the Washoe County District Health Department Air Quality Management Division (http://www.co.washoe.nv.us/health/aqm/home.html-color=grey&text_version=).

6.0 HAZARDOUS AND CONTAMINATED AREAS

Information on environmental hazards and contaminated sites was obtained from database records at the NDEP and the EPA. Public NDEP records were searched on February 22, 2008 completing the initial stages of a Phase I Environmental Investigation. This search includes the Registered Underground Storage Tank (UST) database, which contains information on all USTs tracked and administered through the State of Nevada's UST Program; as well as the Project Tracking Database, a compilation of all site cleanup activities through the State's Corrective Action, Brownfields, Voluntary Cleanup, and Leaking Underground Storage Tank (LUST) programs. The information is maintained by the Bureau of Corrective Actions. A table summarizing this search and sites within the study area is provided in Table 6.1.

The NDEP Project Tracking Database search found seven LUST program sites, eight non-LUST sites, one mobile source, and eleven contaminated sites not identified with a program exist within the study area (NDEP 2008b). These sites occur throughout the length of the study area, and all have impacted soil; about half the sites have impacted groundwater. Most contamination is from hydrocarbons—gasoline, diesel, and motor oil—either from leaking underground fuel tanks or from surface spills. Three sites in Verdi are being investigated for solvent contamination. No Brownfield sites are located within the study area (NDEP 2008b).

The EPA maintains a list of National Priorities (NPL) among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories (EPA 2008b). The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. Those that do require further consideration and involvement enter the Superfund program, a federal program established to clean up abandoned hazardous waste sites. An online search for Superfund and NPL sites was conducted through the EPA on February 22, 2008. It was found that no Superfund, NPL or proposed NPL sites exist in the study area (EPA 2008b). Four non-NPL hazardous sites were identified and shown in Table 6.2.

6.1 FUTURE CONSIDERATIONS

The searches discussed here did not yield Superfund, NPL, or Brownfield hazardous waste sites; however it was found that hazardous sites do exist within the study area. The following are recommended actions proposed projects should take regarding hazardous and contaminated sites:

- Phase I investigations should be completed, where appropriate.
- Care should be taken to fully investigate areas adjacent to potentially contaminated sites prior to any potential real estate acquisition or earthwork activities.

Table 6.1. Phase I Environmental Project Tracking Database, Active Cases as of January 8, 2008

Site	County	Facility Name	Facility Address	Report Date	Program	File Location	Media	Event	Contaminant
C000025	Storey	Golden Gate/S.E.T. Petroleum Partners of Nevada	500 Ireland Drive, McCarran 89434	7/23/2007	non-LUST	NDEP: Carson City	S	CR	TPH
C000025	Storey	Golden Gate/S.E.T. Petroleum Partners of Nevada, APN 004-092-25	500 Ireland Drive, McCarran 89434	2/6/2007	non-LUST	NDEP: Carson City	S	I	TPH
D000003	Storey	Marten Transportation	Frontage Road, Mustang	5/4/1998	-	WCDHD: Reno	S	CR	Diesel: punctured fuel tank - 80 gallons
4000039	Washoe	Boomtown Hotel and Casino Fun Center	2100 West I-80, Verdi 89439	12/23/1991	LUST	WCDHD: Reno	GW	CR	Gasoline
4000300	Washoe	Gold Ranch Casino	350 Gold Ranch Road, Verdi 89439	1/1/1900	LUST	WCDHD: Reno		CR	Gasoline
4000428	Washoe	Sierra Sid's 76 Inc.	200 North McCarran Boulevard, Sparks 89431	1/29/2000	LUST	WCDHD: Reno	GW	CR	Diesel
4000484	Washoe	Washoe County School District	1850 Kleppe Lane, Sparks 89431	1/22/2002	LUST	WCDHD: Reno	GW	CR	-
4000563	Washoe	Western Mountain Oil	350 North McCarran Boulevard, Sparks	9/29/2000	LUST	WCDHD: Reno	GW	CR	Gasoline
4000653	Washoe	Winner's Corner Store #508	1365 Baring Boulevard, Sparks	1/1/1900	LUST	WCDHD: Reno	GW	CR	Gasoline
4000743	Washoe	United Parcel Service	369 East Glendale Avenue, Sparks	1/11/1111	non-LUST	WCDHD: Reno	S	CR	Motor Oil
4000924	Washoe	Hidden Valley Country Club	3575 Hidden Valley Drive, Reno 89502	1/1/1900	LUST	WCDHD: Reno	GW	CR	Gasoline
D000011	Washoe	Schultz Trucking	State Route 447 @ Mile Marker 03, Wadsworth	8/20/1999	-	WCDHD: Reno	S	CR	Diesel
D000012	Washoe	On-Time Trucking & Transportation	I-80 @ Exit 4 (Garson Road), Verdi	8/20/1999	-	WCDHD: Reno	S	CR	Diesel
D000025	Washoe	Reno Drain Oil Service	11970 I-80 East, Sparks 89434	5/4/2000	-	WCDHD: Reno	S	CR	Motor Oil
D000066	Washoe	S-S Ranch	Wadsworth	5/14/2002	non-LUST	NDEP: Carson City	GW	CR	Gasoline

FINAL Environmental Resources Technical Memorandum

Site	County	Facility Name	Facility Address	Report Date	Program	File Location	Media	Event	Contaminant
D000084	Washoe	Sparks Solvent/Fuel Site	Sparks	8/21/1987	non-LUST	NDEP: Carson City	S & GW	CR	Other: TPH and Solvents: MTBE, BTEX, PCE, TCE dissolved in groundwater
D000119	Washoe	Truckee River Canyon	North of I-80, Mustang	12/9/2003	non-LUST	WCDHD: Reno	S	I	Other: Sealing Oil (300 - 500 gallons)
D000147	Washoe	Reno-Sparks Ready Mix Mobile Source	I-80 @ Clark Station Road, Tracy-Clark	5/6/2004	non-LUST	NDEP: Carson City	S & GW	CR	Other: Coal Fly Ash
D000244	Washoe	Steve Coombes Mobile Source	I-80 near Lockwood Exit	6/2/2005	Mobile Source	WCDHD: Reno	S	CR	Diesel
D000561	Washoe	Wells Manufacturing Company	2 Erik Circle, Verdi 89439	7/15/1991	non-LUST	NDEP: Carson City	GW	CR	Solvents: PCE, TCE, DCE, TCA
D001120	Washoe	Viking Metallurgical Corporation	1 Erik Circle, Verdi	7/15/1991	-	NDEP: Carson City	GW	I	Solvents
D001121	Washoe	River Belle Trailer Park	Verdi	7/15/1991	-	NDEP: Carson City	GW	I	Solvents
D001267	Washoe	Truck Spill	Thomas Creek and Welcome Way, Reno	6/16/1998	-	WCDHD: Reno	S	CR	Diesel: 30-40 gallons from saddle tank
D001274	Washoe	Allied Washoe Fuel	2282 Larkin Circle, Sparks 89513	7/16/1998	-	WCDHD: Reno	-	CR	Motor Oil
D001301	Washoe	Bergendahl Residence	1000 Dog Valley Road, Bordertown	11/17/1998	-	WCDHD: Reno	S	CR	Diesel
D001307	Washoe	Baggie Farms Express (Accident)	I-80 (outside Reno), Rural	4/16/1999	-	WCDHD: Reno	S	CR	Other: Corrosives (trailer weld failure)
D001308	Washoe	D'Andrea Golf Course	Vista Boulevard, Sparks	4/16/1999	-	WCDHD: Reno	S	CR	Diesel: Diesel/Hydraulic Oil; truck rollover; P. Donald

Source: Nevada Division of Environmental Protection (NDEP 2008b)

Key

- S: Soil
- GW: Groundwater
- LUST: Leaking Underground Storage Tanks
- CR: Confirmed Release
- I: Investigation

Table 6.2. Hazardous Waste Sites in the Study Area

City	Site Name	Site Location	NPL Status	Status
Verdi	River Belle Mobile Home	1795 Old Highway 40	Non-NPL	Other Cleanup Activity: State-Lead Cleanup
Sparks	Sparks Solvent/Fuel Site	1 mile from Truckee River	Non-NPL	Removal Only Site- No Site Assessment Work Needed
Lockwood	Sierra Chemical Explosion	10 Miles East Of Reno	Non-NPL	Removal Only Site- No Site Assessment Work Needed

Source: EPA National Priority List (EPA 2008)

7.0 GEOLOGICAL

NCE obtained and reviewed local geologic and seismic reference maps to assess local geology. No field reconnaissance or mapping was completed for this project. The study area is a generally rocky and sparsely vegetated area adjacent to the Truckee River. The western area is mostly developed with residential and commercial structures and supporting infrastructure, whereas the eastern area is generally open, un-developed slopes with smaller areas of developed residential and industrial parcels. The study area is marked by steep to rolling topography, and has elevations ranging from approximately 4100 to 8350 feet above mean sea level with slopes generally ranging from about 5% to 50%; however there are road cuts that are significantly steeper than adjacent natural slopes.

The study area is located in the eastern Sierra Nevada geologic province and the western Basin and Range geologic province. A geologic map of the study area is shown in Figure 7.1. Mesozoic granitic batholiths intruded into country rock and gave form to and are the core material of the Sierra Nevada Range. Mesozoic sedimentary and metamorphic rocks over-lie the granitic rocks. In the Tertiary, multiple volcanic eruptions covered these older rocks. Volcanic rocks were deposited as flows, intrusions, and ash-fall deposits. The adjacent Basin and Range geologic province was the product of tectonic activity that resulted in roughly north-south oriented normal faults giving shape to the mountains and valleys of the eastern portion of the study area.

During the Pleistocene, glaciation and the resulting glacial melting carved into the older rocks creating the Truckee River drainage and deposited fluvial and outwash deposits. The Truckee River flows prominently through the study area and discharges to Pyramid Lake, a remnant of historic Lake Lahontan, which covered much of the study area 10,000 years ago. Recent (Quaternary) deposits include river deposits and unconsolidated colluvial and alluvial sediments which are being deposited along much of the site area from active weathering, erosion, and downward migration of soil and rock materials.

7.1 GEOLOGIC UNITS

Volcanic and Granitic Bedrock

Mesozoic granitic rocks are sparse in the study area, and are associated with the Sierra Nevada batholiths, and are generally buried by younger rocks. Tertiary Volcanic rocks include andesite and basalt flows, breccias, ash fall and ash flow tuff, intrusive volcanic rocks, and volcanogenic clastic rocks.

Quaternary Sedimentary Deposits

The low elevation areas adjacent to the Truckee River are predominantly alluvium, colluvium, land slide deposits, and flood plain deposits; these generally consist of silty sand with abundant cobbles and boulders.

Recent Fill Materials

Artificial fill and fill soils are associated with road and railroad beds, parking areas, buildings and around building footprints. Fill is often a mix of crushed quarry rock with some native soil component.

7.2 GEOLOGIC HAZARDS

Seismicity and Faulting

The project site is located within a seismically active region. Holocene and Pleistocene age faults occur within the study area and generally trend to the north-northwest. The study area lies within the northern portion of the Walker Lane Fault zone. Several active faults with observed historic magnitudes of 6 to 7 occur within or adjacent to the project boundaries, including the magnitude 6.5 Olinghouse

Fault which ruptured in 1860. The more significant active faults in the region are capable of generating future moderate to major earthquakes. Because of the steepness of existing native slopes and road cuts, seismically induced landslides and rock falls may be possible throughout the study area. Rock falls generally occur on slopes greater than 40 degrees in fractured bedrock or in sedimentary deposits with loose boulders.

Avalanche hazard

In the far western portion of the study area, steep slopes and the likelihood of greater snowfall could contribute to avalanche hazards.

Impacts of the localized surface erosion on long term slope stability

Active erosion is apparent along slopes and larger road cuts throughout the study area. Fractured bedrock and unconsolidated soils are susceptible to surface sloughing and structural degradation, often as a result of freeze-thaw cycles. In some portions of the study area, rock fall protection devices have been installed and periodic maintenance is actively removing soil and rock material at the base of slopes, and behind barriers at the base of slopes. The surface drainage along I-80 is generally well controlled by engineered structures; however, as development increases within the study area, stormwater needs to be properly conveyed from adjacent impervious surfaces. Drainage from adjacent roads, facilities, and development should be directed away from slopes adjacent to the highway. During storm events, flow may become concentrated; high flow velocities may overwhelm existing stormwater conveyance facilities or undermine structures, as well as remove topsoil and organic materials.

Flooding

The area immediately adjacent to the Truckee River and its floodplain may be subject to flooding during extreme precipitation events. Flooding hazards exist both from precipitation within the study area, as well as storm events that may occur in the Truckee River watershed directly west of the study area.

Liquefaction

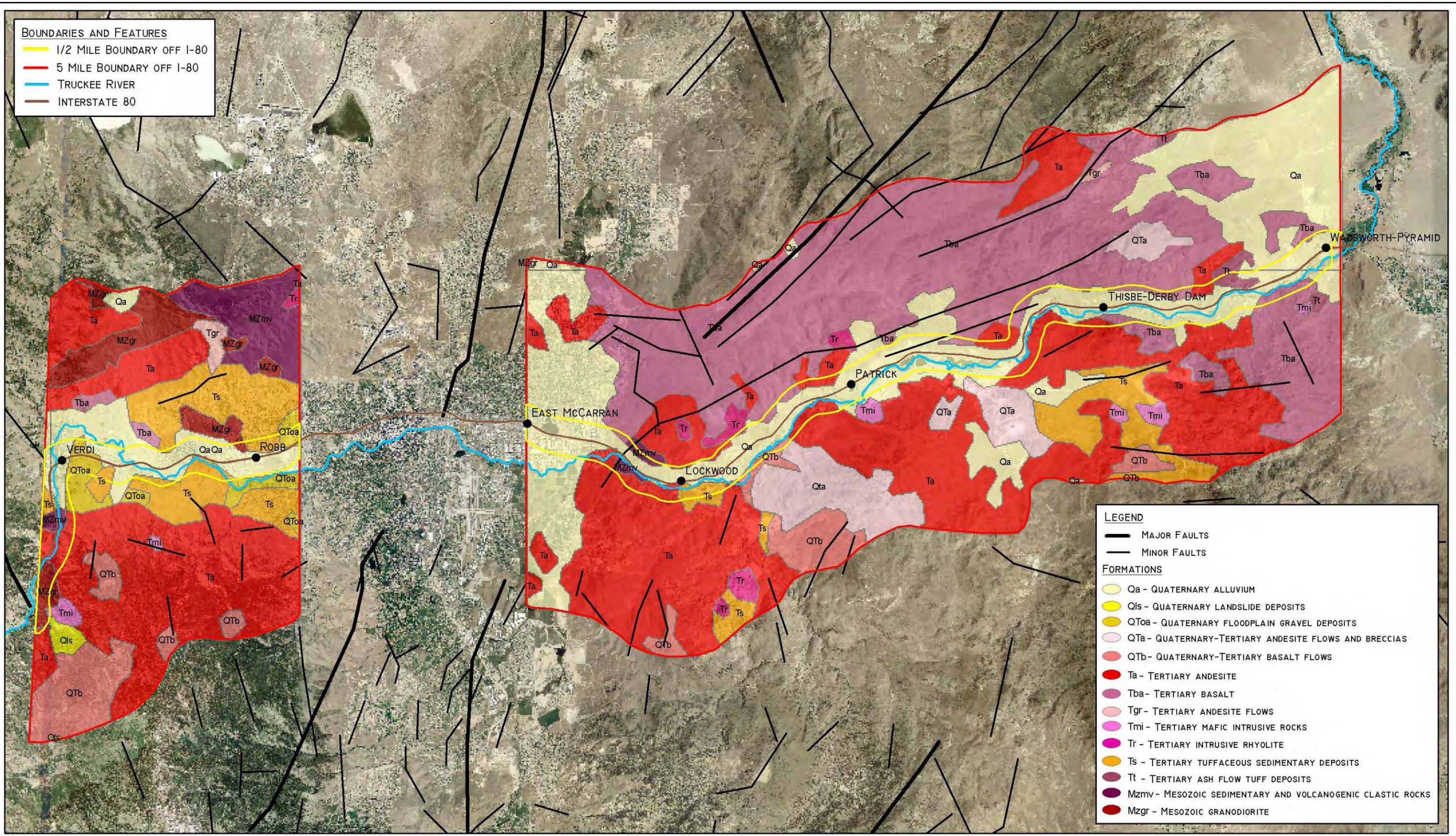
The soils immediately adjacent to the Truckee River and its floodplain may be subject to liquefaction during severe ground shaking events.

Slope stability and landslide potential

There is potential for landslides or soil or rock movement within the study area. Historic landslide features may or may not be visible at the surface; they may be covered with colluvial soils, organic soil, vegetation, or may be obscured by manmade improvements. The over-steepened slopes associated with road cuts are subject to active erosion, which may lead to slope instability. Other hazards may develop and may include rock and tree fall hazards--cobble, boulders, or trees may become displaced and/or undercut from surface erosion. Slope failure could lead to damage to roadway infrastructure and pavement, as well as potential creating instability to any existing structures above the cut slopes. In areas where over-steepened slopes introduce potential hazards from rock or tree fall from eroded slopes, barriers should be placed to impede movement of these materials down slope.

7.3 FUTURE CONSIDERATIONS

- Field mapping is recommended to identify surficial conditions such as topography, vegetation cover, erosion and drainage features, exposed soils and rock formations, soil and rock-related distress including landslides, or any other obvious geotechnical or geologic concerns.
- Because of the steepness of existing native slopes and road cuts, seismically induced landslides and rock falls may be possible and should be further evaluated.
- Further study should be done in areas of active erosion adjacent to existing roadbeds or structures to assess potential impacts to the foundations of these structures.



BOUNDARIES AND FEATURES

- 1/2 MILE BOUNDARY OFF I-80
- 5 MILE BOUNDARY OFF I-80
- TRUCKEE RIVER
- INTERSTATE 80

LEGEND

- MAJOR FAULTS
- MINOR FAULTS

FORMATIONS

- Qa - QUATERNARY ALLUVIUM
- Qls - QUATERNARY LANDSLIDE DEPOSITS
- QToa - QUATERNARY FLOODPLAIN GRAVEL DEPOSITS
- QTa - QUATERNARY-TERTIARY ANDESITE FLOWS AND BRECCIAS
- QTb - QUATERNARY-TERTIARY BASALT FLOWS
- Ta - TERTIARY ANDESITE
- Tba - TERTIARY BASALT
- Tgr - TERTIARY ANDESITE FLOWS
- Tmi - TERTIARY MAFIC INTRUSIVE ROCKS
- Tr - TERTIARY INTRUSIVE RHYOLITE
- Ts - TERTIARY TUFFACEOUS SEDIMENTARY DEPOSITS
- Tt - TERTIARY ASH FLOW TUFF DEPOSITS
- MZmv - MESOZOIC SEDIMENTARY AND VOLCANOGENIC CLASTIC ROCKS
- Mzgr - MESOZOIC GRANODIORITE



NDOT I-80 CORRIDOR STUDY
GEOLOGIC FORMATIONS IN THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY
 DRAWN BY: MS/NCE MARCH 2008

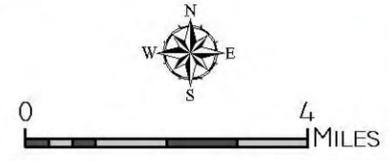


FIGURE:
7.1

8.0 CULTURAL

The need to preserve historic properties and control their scientific investigation was recognized legally as early as 1906. Numerous legislative acts and administrative regulations have followed since that time. Taken together, they define a legal framework that defines how historic properties are to be managed by federal agencies. This legal context provides processes to identify, evaluate, and protect historic properties in advance of federal approved, permitted, or funded projects. Key recent elements of that legal context include the following:

- National Historic Preservation Act of 1966.
- Executive Order 11593, May 13, 1971, Protection and Enhancement of the Cultural Environment.
- Archeological and Historic Preservation Act of 1974.
- Public Buildings Cooperative Use Act of 1976.
- American Indian Religious Freedom Act of 1978.
- Archaeological Resources Protection Act of 1979.
- Native American Graves Protection and Repatriation Act of 1990.
- Executive Memorandum, April 29, 1994, Government-to-Government Relations with Native American Tribal Governments.
- Executive Order 13007, May 24, 1996, Indian Sacred Sites.
- Executive Order 13175, November 6, 2000, Consultation and Coordination with Indian Tribal Governments.

Information regarding cultural resources associated with study corridor was gathered through the review of existing electronic databases, and information gathered as a result of preliminary agency contacts. Primary sources of information included the Nevada Cultural Resource Information System (NVCRIIS) cultural resources information system maintained by the SHPO, and paper files maintained by the BLM Carson City Field Office. Specific information sought included the location of previous cultural resource investigations and the location of previously recorded cultural resources. Other sources of information were gathered that, while not site specific, are of value in assessing the likelihood that cultural resources might be present in an area. For example, as part of a recent fire management program BLM prepared maps that depict areas highly sensitive with regard to the presence of cultural resources. General Land Office (GLO) maps of the study area dating to the 1800s were examined in an attempt to define areas that would be likely to contain historic period cultural resources. Each square mile was assessed as to whether or not buildings or features are shown on the maps that might remain as a tangible cultural resource. Nevada entries in the National Register of Historic Places (National Register), maintained by the SHPO, were reviewed to determine which properties are located within the study corridor.

Results of these inquiries are provided in two formats. The location of previously inventoried areas and cultural resource locations are shown in **Figure 8.1**. BLM defined sensitive areas are also depicted on this figure. Results of the analysis of GLO plat maps are presented on **Figure 8.2**. In addition, information regarding previous cultural resource investigations and previously recorded cultural resources is listed in tabular form in **Appendix F, Tables F-1 and F-2** respectively. Finally, a listing of all resources currently listed on the National Register is provided (**Appendix F, Table F-3**).

8.1 INVENTORY DATA

Sources queried as part of the present effort resulted in the identification of 351 previous cultural resource investigations within the 10-mile wide planning corridor. All of the reports were prepared in

advance of a proposed action of some sort. While many were conducted by private companies, most were prepared by federal or state agencies (Table 8a). The earliest report was prepared in 1960, the most recent in 2007.

Table 8a. Cultural Resource Investigations by Decade and Performing Entity

Decade	Number of Reports	Organization	Number of Reports
No Date	26	BLM	95
1960 – 1977	27	Other Federal Agencies	17
1978 – 1987	111	NDOT	49
1988 – 1997	123	Other State Agencies	22
1998 – 2007	64	Private Firms	168
Total	351	Total	351

Many of the reports were prepared in advance of linear projects located along transportation corridors and utility easements. Others reviewed large blocks of land scheduled for residential development (for example, the Mogul and Spanish Springs areas) or other land uses such as mining (Olinghouse). Small land use projects constitute a majority of reports prepared by federal agencies.

An informal standard employed by the SHPO is that inventory reports more than 10 years in age need to be reviewed to determine if they have become stale-dated. Of the 351 reports prepared that address portions of the study corridor, only 64 (18.2%) are less than 10 years in age. The remaining 287 reports would be subject to review if a project was proposed within the inventoried area. That review would assess changes in the status of the land (developed or not) and methods employed as part of the original inventory effort.

8.2 SITE DATA

Sources queried as part of the present effort resulted in the identification of 1,080 previous recorded cultural resource within the 10-mile wide planning corridor. Of these, 306 consisted of nothing more than a map plot; a site form or other detailed descriptive material was not available. Of the 774 resources for which information is available, most date to the prehistoric period (Table 8b). Sites ascribed to the historic period are also numerous. Sites directly associated with ethnographic period sites (Native American Sites occupied during the historic period) are quite few in number.

Table 8b. Cultural Resources by Period and National Register Eligibility

Historic Period	Eligible	Not Eligible	Not Evaluated	Total
Prehistoric	35	172	299	506
Historic	22	124	49	195
Prehistoric and Historic	16	16	35	67
Ethnographic	-	-	5	5
Unknown	-	-	1	1
Total	73	312	389	774

The National Register was established by the Historic Preservation Act as the barometer of which cultural resources are significant and deserve special planning consideration. Examination of a listing maintained by the SHPO indicates that 67 properties located within the study corridor have been formally nominated to and listed in the National Register (Appendix F, Table F-3). With only three exceptions (a dam, a bridge, and a boundary marker) all of the listed properties are buildings, most of which are located within older portions of Reno, Sparks, and Fernley.

Of the resources recorded as part of an archaeological inventory, a National Register eligibility recommendation is provided for 385 resources by the recording entity. Of these, 73 (19.0%) have been recommended as National Register eligible. The remaining 312 (81.0%) resources were not considered to be National Register eligible. It is not known whether a federal agency and the SHPO concurred with the offered recommendation. In the absence of other information, these National Register eligibility recommendations can serve as an indication of relative sensitivity.

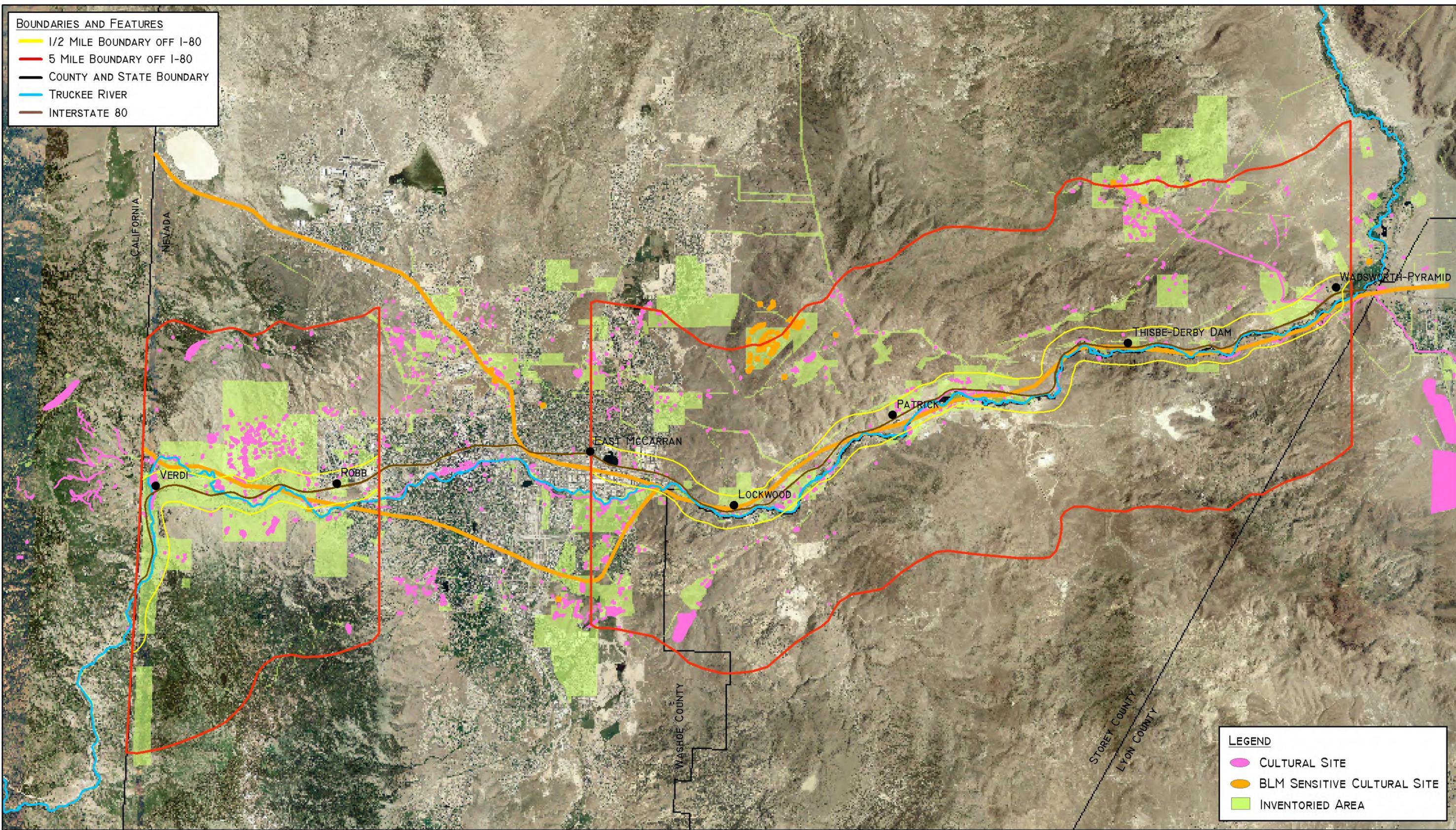
Although it cannot be determined with precision, approximately 275 (35.6%) of the previously recorded resources were documented on forms that predate use of Intermountain Antiquities Computer System (IMACS) forms (IMACS forms have been in use since the early 1980s). As such, these early recordation forms do not meet current standards. The cultural resources noted by these early forms would need to be re-recorded should an action be proposed nearby.

8.3 FUTURE CONSIDERATIONS

Prior to the onset of any proposed action within the study corridor that is federally funded or permitted, the lead federal agency will need to determine whether adequate efforts have been made to determine if National Register eligible cultural resource are present. Information provided herein should assist in this effort. It should be possible to determine whether or not a proposed project area has been examined previously and the likelihood that the inventory will still be considered to be current. Also, it should be possible to determine if cultural resources have been inventoried in an area previously and whether or not those resources were recommended as National Register eligible, or if they are listed in the National Register. It should be noted that the utility of this planning tool will diminish as additional work is completed by various entities that is not included in the present data compilation.

As noted, sources queried as part of the present effort focused on the review of existing electronic databases, and information gathered as a result of preliminary agency contacts. Numerous other sources of information are available.

- Information regarding architectural resources has typically been maintained by the SHPO. This information is in the process of being integrated into the NVCRIS system and was unavailable for review.
- The Nevada Historical Society, Nevada State Archives, the Washoe County Recorder's Office, and the Washoe County Assessor's Office contain a wealth of information that, if studied in detail, could provide details regarding the physical development of the Truckee Meadows, including that portion within the study corridor. This information would include road locations, land division and development over time, and residential and commercial development over time.
- The Oregon-California Trail Association (OCTA) has invested a considerable level of effort in locating and mapping the location of emigrant trail. This includes portions that extend through and along the study corridor. To date, none of this information has been integrated into a GIS format. Also, numerous present and past elements of the Nevada state highway system are present within the study corridor. NDOT maintains an archive of project plan sets for each of these roadways. Detailed examination of these plan sets would identify the location of old roadways, evidence regarding the modification of those roadways over time, and the presence of potential cultural resources in close association with the roadways.
- Native American tribes were not formally contacted to identify or collect information regarding the location of places that might be of interest to them. Consultation regarding such locations most often takes place within the context of a specific project and is often held as confidential by the tribal entity and the federal agency.



NDOT I-80 CORRIDOR STUDY
 CULTURAL RESOURCE INVENTORIES AND SITES IN AND AROUND THE STUDY AREA*

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; SHPO; NVCRIS; BLM
 DRAWN BY: MS/NCE MARCH 2008
 *THIS MAP NOT FOR PUBLIC DISPLAY

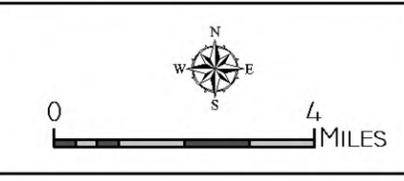
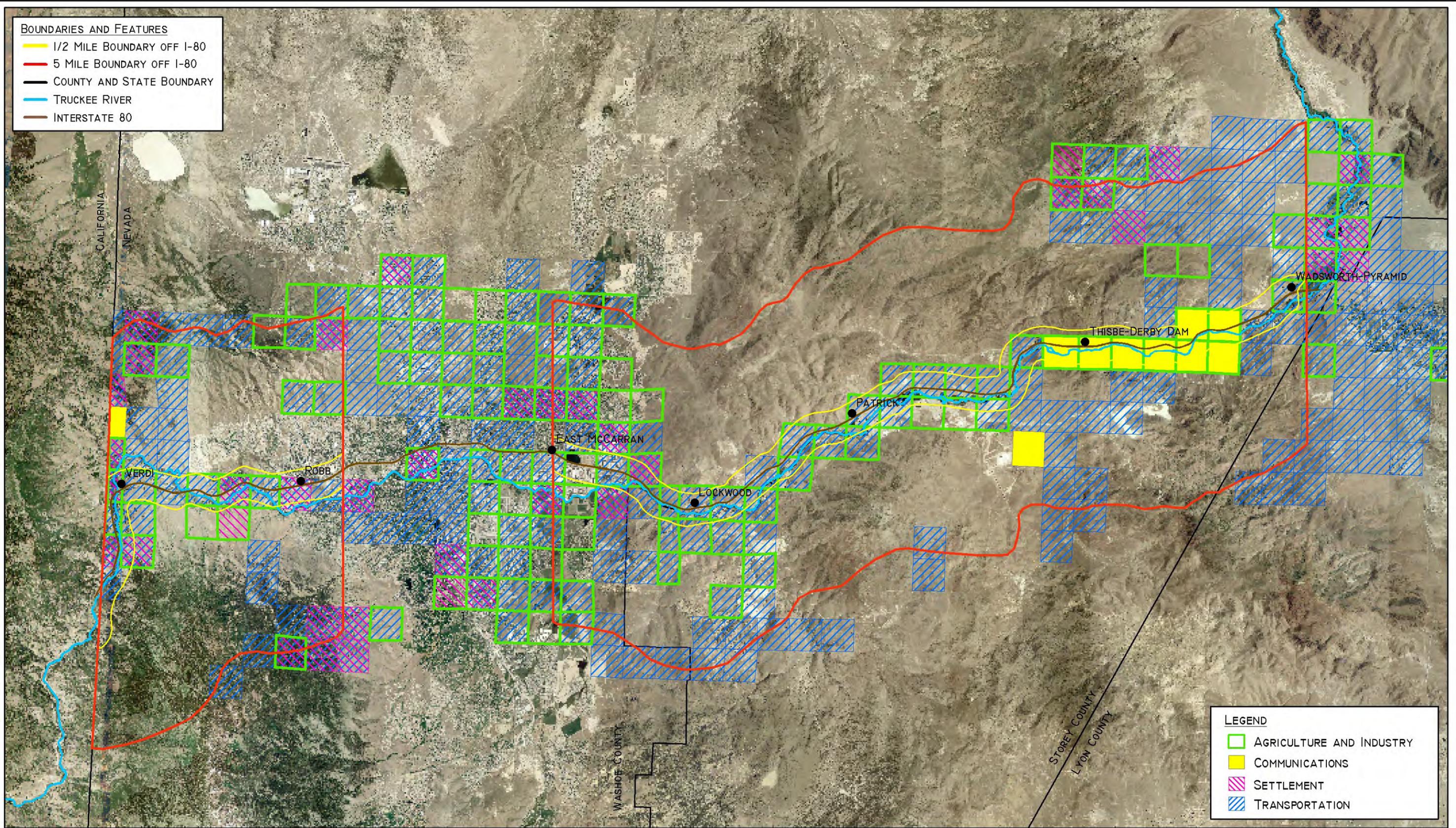


FIGURE:
 8.1

- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80



- LEGEND**
- AGRICULTURE AND INDUSTRY
 - COMMUNICATIONS
 - SETTLEMENT
 - TRANSPORTATION



NDOT I-80 CORRIDOR STUDY
GENERAL LAND OFFICE PLAT MAP DATA IN AND AROUND THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; GLO
 DRAWN BY: MS/NCE MARCH 2008

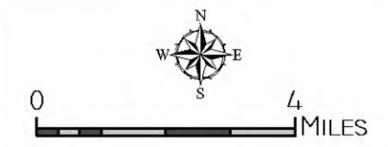


FIGURE:
8.2

9.0 SCENIC

Scenic and visual values are determined by the landscape and natural features present in a given area. These features enhance a region and have significant value to designers during development and planning. Viewsheds refer to all the elements visible from a fixed viewpoint such as bodies of water, ridges, hills, etc, and can also define viewing distance zones. These zones were determined for the I-80 Corridor in the I-80 Landscape and Aesthetics Corridor Plan prepared for NDOT by a consultant team led by Design Workshop (Design Workshop 2005). They determined that roughly three miles to the north and south are visible from I-80, and that many points of interest along this corridor are visible from several points along the highway. Areas that are visible from the highway and regions that have scenic opportunities are illustrated in **Figure 9.1**.

Design Workshop performed a visual analysis along the I-80 Corridor to evaluate existing views from the highway and rank them relative to their quality. The assigned ranks in the study were moderate, high and highest visual quality. Most portions of the I-80 Corridor have at least moderate viewing quality, while the western and eastern segments have high and highest visual appeal respectively (Design Workshop 2005). These areas, and the cities that contain the best vantage points, are mentioned in the descriptions below. The following areas have significant scenic values according to both the Washoe County Open Space and Natural Resource Plan (Washoe County 2008), and the I-80 Landscape and Aesthetics Corridor Plan (Design Workshop 2005).

Mt. Rose Wilderness Area

- Southwest of Reno; encompasses over 28,000 acres and includes 14 distinctive mountain peaks within the Carson Range.
- This area is a distinctive “landmark landscape” southwest of Reno and its scenic quality was cited by the general public (Washoe County 2008).
- The view looking north, south, or west at Verdi has highest visual quality (Design Workshop 2005).

Peavine Mountain

- Northwest of Reno.
- Includes both Peavine Peak and South Mountain.
- A good viewpoint can be taken from Mogul and northwest Reno.

Virginia Range

- Lies on the southeast side of Truckee Meadows.
- Forms a very significant backdrop to the eastern edge of Washoe County.
- Good vantage points of this range can be taken from Truckee Meadows, Sparks, and Vista.
- Scenic opportunities looking south from Patrick have high visual quality (Design Workshop 2005).

Pah Rah Range

- South of Pyramid Lake and north of the Truckee River
- Many peaks are visible along I-80 giving this area high visual quality (Design Workshop 2005).

Truckee River

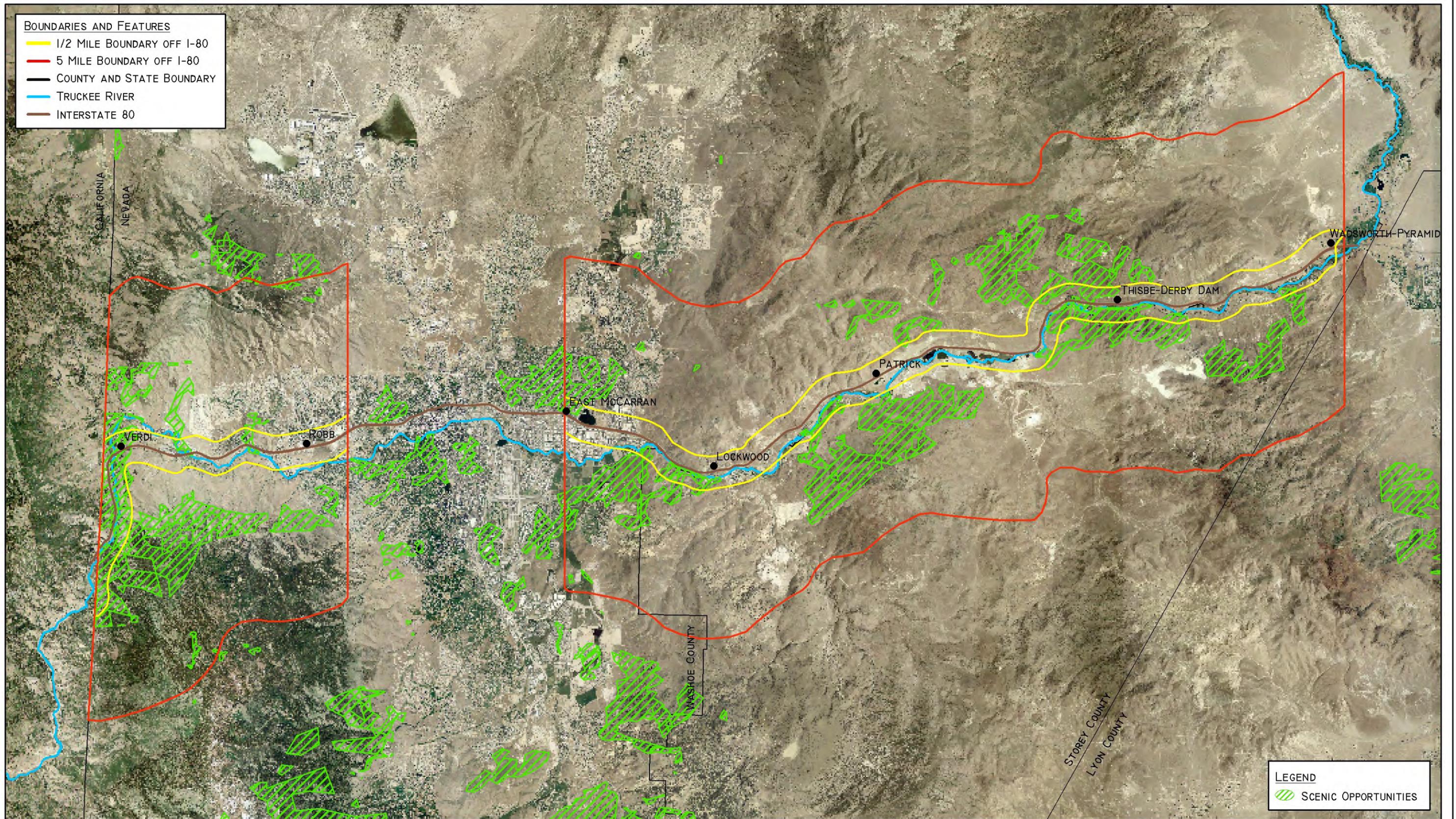
- Flows from west to east and provides a visual experience of “nature in the City,” especially in its easternmost reach through the City of Sparks (Washoe County 2008).
- Views along the Truckee River Corridor have highest visual quality (Design Workshop 2005).

9.1 FUTURE CONSIDERATIONS

In summary, there are five major scenic areas that should be considered in future project planning. These areas have varying degrees of scenic properties and unique viewing characteristics that can be meaningful for travelers along the I-80 Corridor. In order to preserve the essence of each major feature, highlights of each area are listed below:

- Mt. Rose Wilderness Area: This area is a distinctive “landmark landscape” southwest of Reno and its scenic quality was cited by the general public (Washoe County 2008).
- Peavine Mountain: A good viewpoint can be taken from Mogul and northwest Reno.
- Virginia Range: Forms a very significant backdrop to the eastern edge of Washoe County.
- Pah Rah Range: Many peaks are visible along I-80 giving this area high visual quality.
- Truckee River: Provides a visual experience of “nature in the City,” especially in its easternmost reach through the City of Sparks.
- In addition to these areas, site-specific scenic assessments should be evaluated on a project level to recognize and enhance scenic opportunities.

- BOUNDARIES AND FEATURES**
- 1/2 MILE BOUNDARY OFF I-80
 - 5 MILE BOUNDARY OFF I-80
 - COUNTY AND STATE BOUNDARY
 - TRUCKEE RIVER
 - INTERSTATE 80



NDOT I-80 CORRIDOR STUDY
SCENIC OPPORTUNITIES IN AND AROUND THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY; DESIGN WORKSHOP

DRAWN BY: MS/NCE MARCH 2008



FIGURE:
9.1

10.0 RECREATION

Nevada residents are active people with an appetite for open areas. In a survey conducted across Washoe County in 2006, 88% of the participants reported in at least two or more hours of physical recreational activities per week (Washoe County 2008). This is twice the national average. Many of the residents (75%) rated preservation of open areas for both recreation and wildlife habitat as a top priority for future funding. This suggests that “potential acquisition and development of selected sites could fulfill open space resource protection values as well as provide for compatible recreation” (Washoe County 2008). It can be expected that current popular undeveloped sites along the corridor could be secured by the county for future parks, open areas, and recreational facilities.

Throughout the I-80 Corridor, several types of recreational activities are enjoyed along the Truckee River and the adjacent uplands. Population demographics, outdoor facilities, and environmental constraints tend to dictate the amount of use a given area will receive. To better understand the types of recreation and points accessed along the corridor, the study area has been divided into western and eastern segments. The western portion covers Verdi to Vista, while the eastern portion extends from Vista to Fernley. Figure 10.1 illustrates the location of parks, trails, and trailheads throughout the whole study area.

Western Segment

The far western portion of the study area (Verdi to West McCarran Blvd.) has more recreational use than the eastern segment. This is a result of a larger population with closer, more accessible points of entry. According to the Washoe County Parks Inventory and Assessment Report, this area is not anticipated to have a great need for traditional parks within an urban setting (Washoe County 2008). One reason for this projection is the limited growth in this area due to land use plans and steep slopes, which limit development. Another factor is the abundance of natural features popular with many outdoor enthusiasts such as Peavine Peak, Hunter Creek, Toiyabe National Forest, and the Mount Rose Wilderness. The Truckee River is popular with rafters and kayakers, and is considered suitable for advanced river runners (USDI and CDWR 2008). One popular area is Crystal Peak Park (west Verdi), which is well used by anglers and offers river access to boaters and swimmers. Spin, lure, and bait angling are the most common form of fishing in this reach of the study area.

Eastern Segment

Once outside of the urban parks and open spaces east Reno and Sparks offers, recreational use drops dramatically. This is in part due to the hot and dry desert environment, and because of smaller more spread out populations along the Truckee Canyon. Most recreational activities, such as camping, fishing and water sports, occur in close proximity to the river; however sections of this corridor are also popular with hunters. The Pah Rah range, located north of the Truckee River, is a well used hunting spot and is frequented during the fall and open seasons. Other factors limiting recreation east of Sparks is restricted river access. A large amount of land in this reach is private property, which limits access points. The most commonly used access point is near the Derby Diversion Dam (USDI and CDWR 2008). Public land in this region is owned by the BLM, and offers many recreational opportunities such as trails and access for off highway vehicles (OHV), biking, and hiking.

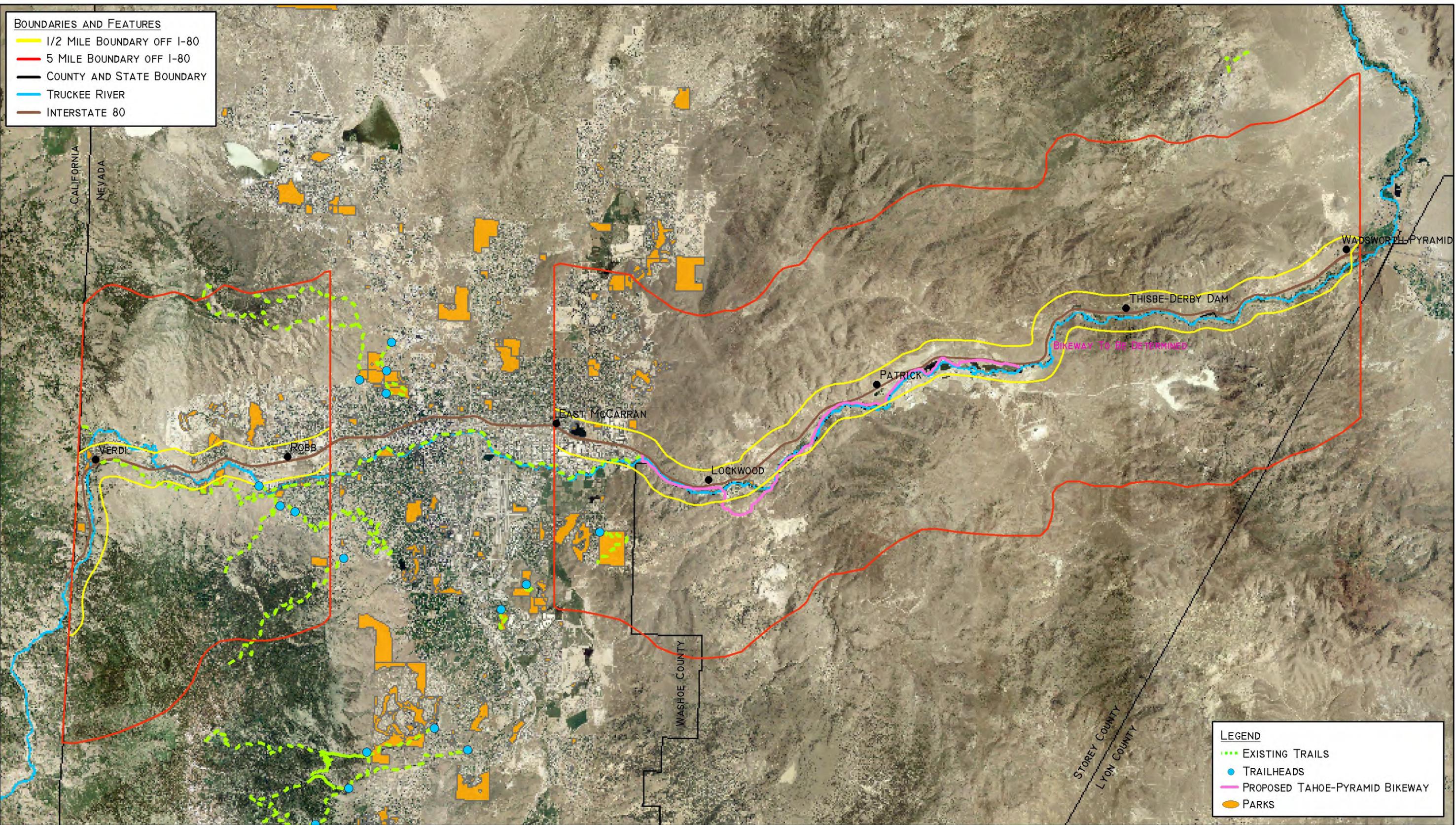
10.1 FUTURE CONSIDERATIONS

Recreation in the study area can be generalized by the statement that more opportunities exist between Verdi and Vista, and that although public land is available in the eastern segment of the region, private land restrictions in conjunction with climatic restrictions limit recreation east of Vista. Recommendations and considerations include the following:

- Projects proposed between Verdi and Vista, with a concentration on the area from Verdi to East McCarran Blvd., will need to consider recreational value in planning and implementation as it is a significant feature to the local population.
- Nevadans are significantly active people and feel that the preservation and development of recreational sites should be a top priority for future funding (Washoe County 2008).
- Proposed projects that would negatively impact the recreational value near Crystal Peak Park (west Verdi) should expect opposition from concerned citizens.

Research for recreational considerations was conducted using the following reports and figures:

- Truckee River Operating Agreement DEIS (USDI and CDWR 2008)
- Regional Open Space and Natural Resources Management Plan (Washoe County 2008)
- 2006 Regional Plan Annual Report (TMRPA 2007)
- City of Reno Master Plan: Open Space and Greenways – Draft (City of Reno 2007)
- East Truckee River Canyon Area Plan (City of Sparks and Washoe County 2005)
- Comprehensive Plan for the Verdi Area- Draft (Washoe County 2007)
- Tahoe-Pyramid Bikeway Plan (<http://www.tpbikeway.org/contact/>)



BOUNDARIES AND FEATURES

- 1/2 MILE BOUNDARY OFF I-80
- 5 MILE BOUNDARY OFF I-80
- COUNTY AND STATE BOUNDARY
- TRUCKEE RIVER
- INTERSTATE 80

LEGEND

- - - EXISTING TRAILS
- TRAILHEADS
- PROPOSED TAHOE-PYRAMID BIKEWAY
- PARKS



NDOT I-80 CORRIDOR STUDY

RECREATION RESOURCES IN AND AROUND THE STUDY AREA

SOURCES: USDA; GREAT BASIN GEOSCIENCE DATABASE; PBS&J; WASHOE COUNTY

DRAWN BY: MS/NCE MARCH 2008

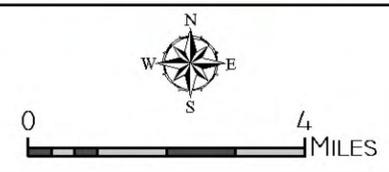


FIGURE:

10.1

II.0 SUMMARY

This baseline investigation is the result of thorough background research of existing natural resources within the I-80 Corridor. Research efforts were focused along a 1-mile width centered on the corridor between Verdi and Fernley, Nevada; however considerations within a 10-mile width centered on the corridor are included in this report. Existing environmental resources of concern that were investigated include: vegetation, noxious weeds, wildlife, habitat, wildlife passages, floodplains, wetlands, air resources, geology, hazardous sites, cultural, scenic, and recreational considerations. Appropriate agencies and watch groups were contacted, and their input has been integrated into this preliminary evaluation.

Information collected for this investigation is time and location sensitive; therefore, a general recommendation is to obtain current, location specific data regarding existing environmental, cultural, and historical resources prior to project implementation. To do this, data request letters detailing project location, purpose, and timeframe must be sent to the appropriate agencies. These agencies are shown in **Table I.1**. If a project requires a Biological Assessment or an Environmental Impact Statement, then formal consultations with state, federal, and tribal organizations will be required. The lead regulatory agency on a project is usually the entity that determines if documentation and formal consultations are required. After reviewing this report, the next step for potential projects within the I-80 Corridor is to perform the recommended actions presented in each section. A summary of these actions are shown in **Table II.1**.

In October 2008, NCE produced a supplemental memo to rank environmental constraint within the study area. This document, the Environmental Constraint Ranking Memorandum, is included in **Appendix H**. It explains the process and assumptions used to rank environmental constraints and impacts, as well as the calculations and analysis. It was found that interchange areas located in the western portion of the I-80 Corridor (Nevada Stateline to Reno city limits) have resources with high environmental constraint and impact rankings. Rankings tend to be moderate east of Sparks. In general, the southern interchange areas have higher rankings than the northern areas. This is in part due to the Truckee River which runs south of I-80 for most of corridor (crosses I-80 near the Garrison Interchange).

Field surveys and observations were not considered for this study as the report attempts to present baseline knowledge of the I-80 Corridor only. Additional information and constraints could be found in later stages of transportation planning in the I-80 Corridor. This document should, however, alert planners and concerned citizens to areas that are sensitive to disturbances, as well prepare project proponents for obstacles and challenges they should anticipate in future planning.

Table II.1 Summary of Recommend Actions

Resource	Recommended and/or Required Actions and Considerations
Vegetation	<ul style="list-style-type: none"> • Contact the NNHP for current noxious weeds and special status species occurrences. • Conduct an inventory of plant and noxious weed species through proper surveys prior to project implementation. • Locations where federally and state protected species occur must be protected with the appropriate measures. • Locations where “sensitive” species (not state or federally protected) occur should be protected with the appropriate measures. • Locate and protect habitat for rare and special-status species if it exists in proposed project areas.
Wildlife	<ul style="list-style-type: none"> • Contact the NNHP and USWFS for current special status species occurrences. • Appropriate and proper field surveys will need to be completed in proposed project areas prior to project implementation. • Special-status species occurrences are concentrated in the western (Verdi) and far eastern segments of the study area. It should be expected that projects in these areas will encounter more wildlife than those proposed between Lockwood Wadsworth. • Projects proposed near riparian habitat should expect to encounter more wildlife and subsequent mitigation considerations. • Wildlife passages and barriers should be considered along I-80 near Verdi. • Cui-ui (federally endangered) is found between Pyramid Lake and Derby Dam. Projects that propose work that will directly or indirectly affect stream habitat and/or flow will need to consider this species and review the Cui-ui Recovery Plan prior to planning. • Lahontan cutthroat (federally threatened) is present throughout the Truckee River. Projects that propose work that will directly or indirectly affect stream habitat and/or flow will need to consider this species and review the Short-term Action Plan for Lahontan Cutthroat prior to planning. • There is a considerable amount of wintering sage grouse habitat in the east/central portion of the study area, 0.5 -5 miles north of I-80. There is also summer and nesting habitat within 3-5 miles north of I-80. Projects proposed in this area will need to collaborate with NDOW, the Sage Grouse Conservation Team, and the appropriate Local Area Planning Groups. • Projects proposed in mapped NDOW game mammal (bighorn sheep, mule deer, and pronghorn antelope) habitat must contact NDOW to determine management considerations in these areas prior to project planning.
Water	<ul style="list-style-type: none"> • FIRMs should be further studied during project planning in order to design improvements in appropriate locations regarding the 100-year floodplain. The maps can be accessed through the FEMA website at http://www.fema.gov/. • Wetlands need to be delineated in the eastern portion of the study area before any project planning or implementation occurs. • It is highly recommended to perform a field study or review to confirm the presence or absence of wetlands in the proposed project area before any construction occurs.
Air	<ul style="list-style-type: none"> • Projects proposing “new sources” for air pollution in the Truckee Meadows will need preconstruction permits through the Washoe County District Health Department Air Quality Management Division (http://www.co.washoe.nv.us/health/aqm/home.html-color=grey&text version=). • Projects proposed “new sources” for air pollution east of Truckee Meadows (Tracy Segment) will be subject to the PSD provisions. Additional permitting information for Storey County can be found at the Nevada Bureau of Air Pollution Control (http://ndep.nv.gov/bapc/).

Resource	Recommended and/or Required Actions and Considerations
Geological	<ul style="list-style-type: none"> • Field mapping is recommended to identify surficial conditions such as topography, vegetation cover, erosion and drainage features, exposed soils and rock formations, soil and rock-related distress including landslides, or any other obvious geotechnical or geologic concerns. • Because of the steepness of existing native slopes and road cuts, seismically induced landslides and rock falls may be possible and should be further evaluated. • Further study should be done in areas of active erosion adjacent to existing roadbeds or structures to assess potential impacts to the foundations of these structures.
Hazardous Sites	<ul style="list-style-type: none"> • Phase I investigations should be completed, where appropriate. • Care should be taken to fully investigate areas adjacent to potentially contaminated sites prior to any potential real estate acquisition or earthwork activities.
Cultural	<ul style="list-style-type: none"> • Architectural resources found in the NVCRIS system should be reviewed once it is available. • Proposed projects will need to contact The Nevada Historical Society, Nevada State Archives, the Washoe County Recorder's Office, and the Washoe County Assessor's for information regarding, but not limited to, road locations, land division and development over time, residential and commercial development over time, • Proposed projects can obtain old roadways and information pertaining to the emigrant trail through The Oregon-California Trail Association and NDOT. • Consultation regarding areas of interest to Native Americans most often takes place within the context of a specific project and is often held as confidential by the tribal entity and the federal agency. Such consultation will need to be completed prior to project planning.
Scenic	<ul style="list-style-type: none"> • The Mt. Rose Wilderness Area, Peavine Mountain, Virginia Range, Pah Rah Range, and Truckee River provide visual appeal. The I-80 Landscape Corridor Plan prepared by Design Workshop for NDOT details considerations and recommended actions for these regions.
Recreation	<ul style="list-style-type: none"> • Projects proposed between Verdi and Vista, with a concentration on the area from Verdi to East McCarran Blvd., will need to consider recreational value in planning and implementation as it is a significant feature to the local population. • Proposed projects that would negatively impact the recreational value near Crystal Peak Park (west Verdi), should expect opposition from concerned citizens.

12.0 REFERENCES

- Bell, J. and Bonham Jr., H. (1987). Geologic Map of the Vista Quadrangle (Scale 1:24,000), Nevada Division of Mines and Geology.
- Bell, J., and Garside, L. (1987). Geologic Map of the Verdi Quadrangle (Scale 1:24,000), Nevada Division of Mines and Geology.
- Bradley, P., O'Farrell, M., Williams, J., and Newmark, J. (2006). *The Revised Nevada Bat Conservation Plan*, Nevada Working Group, Reno, NV.
- Branum, D., Wills, C., and DePolo, C. (2005). "Earthquake shaking potential map for portions of eastern California and western Nevada." California Geological Survey.
- British Columbia Conservation Foundation. (2008). "Wildlife Collision Prevention Program." ed. Retrieved Jan. 17, 2008, from <http://www.wildlifeaccidents.ca/default.htm>.
- Bonham Jr., H., and Bingler, E. (1973). Geologic Map of the Reno Area (Scale 1:24,000), Nevada Division of Mines and Geology.
- Calflora. (2008). "Information on California plants for education, research and conservation." The Calflora Database, ed. Berkeley, CA. Retrieved Feb. 6, 2008, from <http://www.calflora.org/>.
- Carlson, J., Stewart, J. (1978). Geologic Map of Nevada (Scale 1:500,000), United States Geological Survey.
- Connelly, J. W., Schroeder, M. A., Sands, A. R., and Braun, C. E. (2000). "Special Coverage- Hunters/Trappers and Wildlife Managers: Can The Partnership Survive?-Habitat and Management- Guidelines to manage sage grouse populations and their habitats." *Wildlife Society Bulletin*, 28(4), 967.
- Cowardin, L., Carter, V. Golet, F, LaRoe, E. (1979). "Classification of Wetlands and Deepwater Habitats of the United States." Performed for U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services. Washington, D.C.
- City of Reno. (2007). "Open Space and Greenways Plan, City of Reno Master Plan." Reno, NV.
- City of Sparks, and Washoe County. (2005). "East Truckee River Canyon Area Plan Draft Goals and Policies." Version I.3, Sparks, NV.
- Cronquist, A., Holmgren, A., Holmgren, N., Reveal, J., and Holmgren, P. (1977). *Intermountain flora vascular plants of the Intermountain West, U.S.A: Vol. 6 monocotyledons*. Published for the New York Botanical Garden by Columbia University Press, Bronx, NY. 584 pp.
- DCNR. (1997). "Truckee River Chronology Publication Series: A Chronological History of Lake Tahoe and the Truckee River and Related Water Issues." Nevada Dept. of Conservation and Natural Resources, Nevada Division of Water Resources. Accessed online at <http://water.nv.gov/WaterPlanning/truckee/trchrono.cfm>.

- Defenders of Wildlife. (2007). *Getting up to Speed: A Conservationist's Guide to Wildlife and Highways*. Washington, DC.
- DePolo, D. and DePolo, C. (1999). "Earthquakes of Nevada, 1852-1998." Nevada Seismological Lab and Nevada Bureau of Mines and Geology.
- Design Workshop, Mackay & Soms, JW Zunino & Assoc., CH2MHill, and Jones & Jones. (2005). "I-80 Landscape and Aesthetics Corridor Plan From Verdi to West Wendover & US 95 from Winnemucca to McDermitt." Prepared for the Nevada Dept. of Transportation.
- Droster, B. (2007). Wetlands Mapper Team. U.S. Geological Survey. Email correspondence with Megan Scheeline on 12/12/2007.
- EPA. (2007a). "Landscape Ecology: Nevada Geospatial (Text and Tabular Data), Map Class Descriptions for C. Homer's 1991-92 Nevada GAP map." United States Environmental Protection Agency, ed., Feb. 15, 2007, retrieved Jan. 2008 from http://www.epa.gov/esd/landsci/nv_geospatial/pages/nvgeo_textdata.htm.
- EPA. (2007b). "National Priorities List Sites in Nevada." U.S. Environmental Protection Agency, ed. Retrieved Dec. 20, 2007, from <http://www.epa.gov/superfund/sites/npl/nv.htm#statelist>.
- EPA. (2008a). "Enforcement & Compliance History Online." United States Environmental Protection Agency, ed. Retrieved Feb. 2008 from <http://www.epa-echo.gov/echo/>.
- EPA. (2008b). "Superfund Site Information Systems." US Environmental Protection Agency, ed. Retrieved Feb. 22, 2008, from <http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm>.
- FEMA. (1994). Flood Insurance Rate Map. Washoe County, NV and Incorporated Areas. Federal Emergency Management Agency, Washington, D.C.
- FEMA. (1996). *Q3 Flood Data Users Guide*. Draft March 1996. Federal Emergency Management Agency, Washington, D.C.
- FEMA. (2000). Flood Insurance Rate Map. Washoe County, NV and Incorporated Areas. Federal Emergency Management Agency, Washington, D.C.
- Harvey, R. (2007). Nevada Division of Forestry, Dept. of Conservation and Natural Resources. Personal comm. with M. Sheeline on November 2007. Carson City, NV.
- Jennings, C. and Saucedo, G. (1999). "Simplified Fault Activity Map of California." California Geological Survey.
- Kepner, W., Sajwaj, T., Bradford, D., and Evanson, E. (2005). "Nevada Geospatial Data Browser." EPA/600/C-05/005. U.S. Environmental Protection Agency, Office of Research and Development, ed. Las Vegas, NV. Retrieved Jan. 2008 from http://www.epa.gov/nerlesdl/landsci/nv_geospatial/nv_geospatial_data_browser.htm.
- Lonsdale, W. M. (1999). "Global patterns of plant invasions and the concept of invasibility." *Ecology* 80(5): 1522-1536.

- Lynn, S., Morrison, M., Kuenzi, A., Neale, J., Sacks, B., Hamlin, R., and Hall, L. (1998). "Bird Use of Riparian Vegetation along the Truckee River, California and Nevada." *Great Basin Naturalist*, 58(4), 328-343.
- McMorran, D. (2007). Resource Information Manager, Humboldt-Toiyabe National Forest. Personal comm. with M. Comer on Nov. 14, 2007, Zephyr Cove, NV.
- Morefield, J. (2000). "Current knowledge and conservation status of *Eriogonum robustum* E.Greene (Polygonaceae), the altered andesite buckwheat." Carson City: Nevada Natural Heritage Program, status report prepared for the US Fish and Wildlife Service. Reno, NV.
- Morefield, J. (2001). *Nevada Rare Plant Atlas*. Carson City: Nevada Natural Heritage Program, compiled for the U.S. Dept. of Interior, Fish and Wildlife Service. Portland, OR and Reno, NV.
- Naiman, R., DeCamps, H., and Pollock, M. (1992). "The Role of Riparian Corridors in Maintaining Regional Biodiversity." *Ecological Applications*, 3(2), 209-212.
- NatureServe. (2008). "An Online Encyclopedia of Life." Version 7.0, Ecological systems data last updated: June 2008, All other data last updated: Feb. 2008, Retrieved on Feb. 15, 2008 from <http://www.natureserve.org/explorer/>.
- NCNR. (2001). "Nevada Natural Resources Status Report." Dept. of Conservation and Natural Resource's Technical Working Group under the guidance of the NNRP Steering Committee for the Nevada Dept. of Conservation and Natural Resources, ed. Carson City, NV. Retrieved Feb. 5 from <http://dcnr.nv.gov/nrp01/content.htm>.
- NDEP. (2003). "Revised Air Quality Modeling Report: Assessment of PSD Increment in the Fernley Area and Truckee River Corridor." Prepared by Tetra Tech EM Inc. Boulder, CO.
- NDEP. (2005). "Nevada's 2004 303(d) Impaired Waters List." Prepared by Nevada Division of Environmental Protection, Bureau of Water Quality Planning. Carson City, NV.
- NDEP. (2008a). "Increment Tracking System." Nevada Division of Environmental Protection, Bureau of Air Quality Planning, ed. Carson City, NV. June 22, 2007, Retrieved Jan. 28, 2008 from <http://ndep.nv.gov/baqp/increment.html>.
- NDEP. (2008b). "Phase 1 Environmental Project Tracking Database, Active Cases as of Jan. 8, 2008," compiled by Nevada Division of Environmental Protection. Jan. 9, 2008, Retrieved Feb. 22, 2008 from <http://ndep.nv.gov/bca/data.htm>.
- NDOT. (2003). "Nevada Traffic Crashes 2003." Safety/Traffic Engineering Division with assistance from the Dept. of Motor Vehicles, Nevada Dept. of Public Safety, and State and Local Law Enforcement Agencies. Carson City, NV.
- NDOT. (2008). "Road Segment I-80 From CA State Line to Lyon County Line Beginning Crash Date : '01-Jan-2003' , Ending Crash Date : '01-Jan-2008'." Report generated by R. Towner, Safety Analyst at the Dept. of Transportation, Safety/Traffic Engineering Division. Carson City, NV.
- NDOW. (2004). *Greater Sage-Grouse Conservation Plan for Nevada and Eastern California*. Prepared for The Governor's Sage-Grouse Conservation Team and The Local Area Conservation Planning Groups. First Edition.

- NFWO. (2007). "Lahontan cutthroat trout Fact Sheet." Nevada Fish and Wildlife Office, ed. March 16, 2007, Retrieved Sept. 24, 2007 from http://www.fws.gov/nevada/protected_species/fish/species/lct.html.
- NNHP. (2001). "Nevada Native Plant Society Status Lists." Dept. of Conservation and Natural Resources, Carson City, NV. March 2007, Retrieved Jan. 2008 from <http://heritage.nv.gov/lists/nnpstat.pdf>.
- NNHP. (2006). Biotics Metadata. Nevada Natural Heritage Program, Dept. of Conservation and Natural Resources. Updated Jan. 2006. Carson City, NV.
- NNHP. (2007). "Nevada Native Plant Society Status Lists." Dept. of Conservation and Natural Resources, ed. Carson City, NV. March 2007, Retrieved Jan. 2008 from <http://heritage.nv.gov/lists/nnpstat.pdf>.
- NNHP. (2008a). "Record of endangered, threatened, candidate, and at risk plant and animal elements (taxa) within the NDOT I-80 Corridor Study Project." Nevada Natural Heritage Program. Dept. of Conservation and Natural Resources. Received Jan. 2008. Carson City, NV.
- NNHP. (2008b). "Invasive weeds known to occur in the vicinity of the study area." Nevada Natural Heritage Program, Dept. of Conservation and Natural Resources. GIS data received Feb. 12, 2008. Carson City, NV.
- PROACT. (2000). "The Clean Air Act: Prevention of Significant Deterioration (PSD) and New Source Review (NSR) (Construction Permits)." Air Force Civil Engineer Support Agency (AFCEA), Air Force Center for Engineering and the Environment (AFCEE), and AFCEE Regional Environmental Offices ed. Brooks City Base- San Antonio, TX. April 11, 2006, Retrieved Feb. 21, 2008 at <http://www.afcee.brooks.af.mil/pro-act/fact/caapsd.asp>.
- TMRPA. (2007). "2006 Regional Plan Annual Report." Truckee Meadows Regional Planning Agency, Reno, NV.
- TRRIT. (2003). "Short-Term Action Plan for Lahontan Cutthroat Trout in the Truckee River Basin." Truckee River Recovery Implementation Team, Prepared for the U.S. Dept. of Interior, Fish and Wildlife Service, Reno, NV.
- Tonenna, D. (2008). Ecologist, Bureau of Land Management Carson City Field Office. Personal comm. with M. Sheeline on February 2008, Carson City, NV.
- Tsukamoto, G., Tanner, G., Beckstrand, K., Gilbertson, L., Mortimore, C., and Himes, J. (1983). "Nevada's Pronghorn Antelope Ecology, Management and Conservation". *Biological Bulletin* No. 13. Reno, NV.
- UIUC. (2003). "Ecosystem consequences of cheatgrass invasion in the Great Basin." DeLucia Laboratory, Dept. of Plant Biology, University of Illinois at Urbana-Champaign, ed. Oct. 23, 2003, Retrieved Feb. 2008 from <http://www.life.uiuc.edu/delucia/greatbasin.htm>.
- USACE and TNC. (2005). "McCarran Ranch - Truckee River. Section 1135 Project Modification for Improvement of the Environment, Washoe and Storey Counties, Nevada. Final Detailed Project Report and Environmental Assessment." Prepared for the U.S. Dept. of Interior, Fish and Wildlife Service, Nevada State Office by the Sacramento District US Army Corp of Engineers and The Nature Conservancy, Reno, NV.

- USDI. (2001). "Riparian area management: A guide to managing, restoring, and conserving springs in the Western United States." Technical Reference 1737-17. Bureau of Land Management, Denver, CO.
- USDI and CDWR. (2008). "Truckee River Operating Agreement (Final EIS/EIR)." Bureau of Reclamation, U.S. Dept. of Interior Fish and Wildlife Service, Bureau of Indian Affairs, CA Dept. of Water Resources, Alpine, El Dorado, Nevada, Placer, and Sierra Counties, CA; Carson City, Churchill, Douglas, Lyon, Pershing, Storey, and Washoe Counties, NV.
- USDOT. (2000). "Critter Crossings, Linking Habitats and Reducing Roadkill." U.S. Dept. of Transportation, Federal Highway Administration, Office of Natural Environment. FHWA-EP-004. Washington, D.C.
- USDOT. (2008). *Keeping It Simple: Easy Ways to Help Wildlife along Roads*. Created for the U.S. Dept. of Transportation, Federal Highway Administration Natural and Human Environment Office. Washington D.C <http://www.fhwa.dot.gov/environment/wildlifeProtection/index.cfm>.
- USFWS. (1992). *Cui-ui (Chasmistes cujus) Recovery Plan*, Second Edition. Portland, OR. 47pp.
- USFWS. (2003). "Nevada's Ecoregions." Nevada Fish and Wildlife Office, Interior Geological Survey. Reston, VA.
- USFWS. (2007). "Species List for the I-80 Corridor Environmental Study, Washoe and Storey Counties, NV. File No. I-5-08-SP-041." Letter received by Nichols Consulting Engineers on Nov. 19, 2007. Stateline, NV.
- USFWS. (2007b). "National Wetlands Inventory (NWI)." 9/13/2007, Retrieved 12/2007 from <http://www.fws.gov/nwi/>.
- USGS. (2008). "The GAP Analysis Program." Accessed on Dec. 28, 2007 at <http://www.gap.uidaho.edu/Projects/FTP.htm> and <ftp://ftp.gap.uidaho.edu/products/nevada/>.
- WAPT. (2006). *Nevada Wildlife Action Plan*. Nevada Dept. of Wildlife, Wildlife Action Plan Team. Reno, NV.
- Washoe County. (2007). "Comprehensive Plan for the Verdi Area- Draft." Dept. of Community Development, Reno, NV.
- Washoe County. (2008). "Regional Open Space and Natural Resources Management Plan-Draft." Reno, NV.
- Wasley, T. (2004). "Mule Deer Population Dynamics: Issues and Influences." *Nevada's Mule Deer Biological Bulletin No.14*. NDOW. Reno, NV.
- Witham, C. (2000). "Current Knowledge and Conservation Status of *Ivesia webberi* Gray (Rosaceae), the Webber ivesia, in Nevada." Status report prepared for Nevada Natural Heritage Program, Dept. of Conservation and Natural Resources, Carson City, NV and U. S. Fish and Wildlife Service, Reno, NV.
- 64 FR 6183 Invasive Species, Executive Order No. 13112. (Feb. 3, 1999), amended by EO 13286 (Feb. 28, 2003).
- BLM Manual 6840 - Special Status Species Management Rel. 6-121, Supersedes Rel. 6-116. (Jan. 19, 2001).

Appendix A

Environmental Resource Investigation Contacts and Correspondence

Table A-1. Environmental Resource Investigation Contacts and Correspondence

Agency	Date	Summary of Results
NV Dept. of Wildlife <i>Dave Pulliam, Matt Maples, Ralph Phenix</i>	11/8/07	Conservation plans and GIS data for selected special-status species <u>Received:</u> <ul style="list-style-type: none"> • NDOW Statewide Fisheries Management Job Progress Report 200-2006 • Lahontan Cutthroat Trout Short-Term Plan • Guidelines to Manage Sage-Grouse Populations and Their Habitat • Greater Sage-Grouse Conservation Plan fo NV and Eastern California • NV Wildlife Action Plan • Bat Conservation Plan
NV Historical Society		Cultural and historical findings
NV Natural Heritage Program <i>Eric Miskow, Kim Williams</i>	11/9/07 & 1/4/08	Special status wildlife, plants, and noxious weeds occurrences in a 10-mile width of the project area <u>Received:</u> <ul style="list-style-type: none"> • GIS data files
NV State Archives		Cultural and historical findings
NV State Land Planning <i>Skip Canfield</i>	10/1/07	No additional information supplied
NV State Museum <i>Maggie Brown</i>		Cultural and historical findings
NV State Railroad Museum <i>Wendall Huffman</i>		Cultural and historical findings
State Historical Preservation Office <i>Rebecca Ossa</i>		Preliminary contact made; have not obtained info yet
County Contacts		
Storey County <i>Vince Griffith, Pat Whitten, Vince Angle</i>	11/8/07	There are no sensitive environmental areas from Patrick to Derby Dam. Standard wetland mitigation applies to wetland areas and adjacent the USA Parkway.
Washoe County <i>Bill Whitney</i>	11/7/07	Very informative internet site where we obtained all our information from the county. No additional information to report. <u>Received:</u> <ul style="list-style-type: none"> • GIS data for wildlife habitat, railroads, parks, faults, water bodies, trails • Mapped resources (pdf files) • Open Space, Parks and Recreation, and Natural Resources Reports
Lyon County		No initial contact made because the original project boundary given to NCE did not fall into Lyon county.
City Contacts		
City of Fernley <i>Eric Boyer</i>	11/8/07	Response letter received- no additional information to report

Table A-1. Environmental Resource Investigation Contacts and Correspondence

Agency	Date	Summary of Results
City of Reno <i>Terry Zeller</i>	11/8/07	We obtained our information from the city website. No additional information was reported to us. <u>Received:</u> <ul style="list-style-type: none"> • Open Space and Greenway Plan • City of Reno Master Plan
City of Sparks <i>Victor Villarreal, Jim Herman</i>	11/8/07	“Court of Antiquity” petroglyphs location <u>Received:</u> <ul style="list-style-type: none"> • List of Major Projects in Sparks
Tribal Contacts		
Reno/Sparks Indian Colony <i>Scott Nebesky</i>	1/8/08	Expressed their concern for the first interchange in Verdi where they have a Smokeshop. They depend on highway traffic and reliable to access to this establishment and wouldn't want that compromised.
Pyramid-Paiute Tribe <i>Mervin Wright</i>	11/8/07	Has not reported any concerns as of date. Last message left 1/10/08
Washoe Tribe <i>Marie Barry</i>	11/8/07	Has not reported any concerns as of date. Last message left 1/10/08
Non-profit and Academic Contacts		
Desert Research Institute (DRI) <i>Alan McKay, Sudeep Chandra, Laurel Saito</i>	11/9/07	Appropriate professors and researchers were contacted to establish existing study site locations. No study sites were found to be compromised due to the proposed project area. DRI researchers did not have relevant data information to share, but do have studies which regulate water quality, biological indicators, and fish feeding behavior and conditions which could be shared if funding alternatives were presented.
Keep Truckee Meadows Beautiful <i>Maia Dickerson</i>	11/9/07	Citizen concern regarding trash and abandoned cars near I-80 on and off-ramps.
Nature Conservancy <i>Mickey Hazelwood</i>	11/8/07	They have current restoration projects in the progress or planning stages at Lockwood, McCarran Ranch, Mustang ranch, and 102 Ranch <u>Received:</u> <ul style="list-style-type: none"> • McCarran Ranch – Truckee River Report and EA
OR/CA Trail Association <i>Leslie Fryman</i>		Cultural and historical findings
Sierra Club <i>Dennis Ghiglieri, David Von Seggern</i>	11/8/07	No additional information supplied
Tahoe-Pyramid Bikeway <i>Janet Phillips</i>	10/25/07	They have a proposed bike trail with access points along the Truckee River throughout the I-80 Corridor <u>Received:</u> <ul style="list-style-type: none"> • Bike Trail map pdf
Truckee Meadows Regional Planning Agency <i>Website Access</i>	1/10/08	Retrieved from website: <ul style="list-style-type: none"> • Truckee Meadows Regional Plan
Truckee River Watershed <i>Beth Christman</i>	11/8/07	Email response received- no additional information to report.

Table A-1. Environmental Resource Investigation Contacts and Correspondence

Agency	Date	Summary of Results
Truckee River Yacht Club <i>No contact given or listed on website; general letter sent</i>	11/9/07	No additional information reported
Private Organizations		
Lincoln Highway Association <i>Burt Bedeau, Gino Oliver</i>		Cultural and historical findings
Union Pacific Railroad <i>Mark Reimers, Brian Beezer</i>	11/16/07	Has not reported any concerns as of date. Last message left 1/10/08

Appendix B

Description of Vegetation Cover Types found in the Study Area

Description of Vegetation Cover Types found in the Study Area

This appendix defines the Nevada vegetation cover types shown on Figure 2.1. These map class descriptions are listed by principal species that define the cover type, but can include associated species that can substantially exist in localized areas. General descriptions of each cover type and a brief distribution of the cover type are included. Information and descriptions were obtained from the EPA Landscape Ecology program (EPA 2007a).

AGRICULTURE

Row crops, irrigated pasture and hay fields, dry farm crops.

Distribution: Located state-wide

BITTERBRUSH

Shrubland principally dominated or co-dominated by bitterbrush (*Purshia tridentata*). Primary associated shrub species include sagebrush (*Artemisia* spp.), rabbitbrush (*Chrysothamnus* spp.), manzanita (*Arctostaphylos* spp.), and buckbrush (*Ceanothus cuneatus*). Primary associated tree species include juniper (*Juniperus* spp.), pinyon (*Pinus* spp.), mountain mahogany (*Cercocarpus ledifolius*), Jeffrey pine (*Pinus jeffreyi*), and ponderosa pine (*Pinus ponderosa*).

Distribution: Almost entirely confined to the shrublands and benches on the east slope of the Sierra Mountains. Bitterbrush rarely extensively dominates the cover-type, but typically occurs with the associated shrubs listed above. Bitterbrush occurs throughout Nevada, but usually as a component of other shrublands or in microsites not mappable at this scale.

LOWLAND RIPARIAN

Localized vegetation influenced by the presence of abundant water in contrast to the surrounding landscape in lowland areas. Principal tree species include fremont cottonwood (*Populus fremontii*) and black cottonwood (*Populus trichocarpa*). Principal shrub species include salt cedar (*Tamarix pentandra*), velvet ash (*Fraxinus velutina*), desert willow (*Chilopsis linearis*) and mesquite (*Prosopis glandulosa*).

Distribution: Riparian areas generally lower than 4000 feet in the Mojave and 5000 feet in the remaining areas of Nevada. Velvet ash, desert willow and mesquite are only found in the Mojave. This class is common along the Carson, Colorado, Humboldt, Truckee, Virgin and Walker rivers.

MOUNTAIN SAGEBRUSH

Mountain shrubland dominated or co-dominated by mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*), subalpine sagebrush (*Artemisia tridentata* ssp. *spiciformis*), low sagebrush (*Artemisia arbuscula*) and silver sagebrush (*Artemisia cana*), in concert with mountain shrubs, grasses and forbs. Primary associated tree species include pinyon, mountain mahogany, limber pine (*Pinus flexilis*), white fir (*Abies concolor*), subalpine fir (*Abies lasiocarpa*), Engelmann spruce (*Picea engelmannii*), ponderosa pine, lodgepole pine (*Pinus contorta* var. *murrayana*), whitebark pine (*Pinus albicaulis*), and Jeffrey pine. Primary associated shrub species include snowberry, alder leaf mountain mahogany (*Cercocarpus montanus*), bitterbrush, littleleaf mountain mahogany (*Cercocarpus intricatus*), buckbrush, manzanita, ninebark (*Physocarpus alternans*), currant (*Ribes* spp.), squawbush (*Rhus* spp.) and cliffrose (*Cowania mexicana*).

Distribution: This class is widespread throughout Nevada mountains usually at elevations from 6500-10,000 feet. It is especially prevalent in central and northern Nevada where mountain forests are minimal.

PINYON_1

Conifer woodland principally dominated by single leaf pinyon (*Pinus monophylla*) at canopies less than 30 percent. Primary associated tree species include Utah juniper (*Juniperus osteosperma*), ponderosa pine, (white fir, mountain mahogany, and Jeffrey pine. Primary associated shrub species include sagebrush, Gambel oak (*Quercus gambelii*), alder leaf mountain mahogany, littleleaf mountain mahogany, cliffrose, manzanita, shrub live oak (*Quercus turbinella*), and bitterbrush .

Distribution: Pinyon is most widely distributed throughout eastern, central and western Nevada at elevations above the pinyon-juniper zone. It is absent in northern Nevada.

PINYON_2

Conifer forest principally dominated by single leaf pinyon at canopies from 30-60 percent. Primary associated tree species include Utah juniper, ponderosa pine, white fir, mountain mahogany, and Jeffrey pine. Primary associated shrub species include sagebrush, Gambel oak, alder leaf mountain mahogany, littleleaf mountain mahogany, cliffrose, manzanita, shrub live oak, and bitterbrush.

Distribution: Pinyon is most widely distributed throughout eastern, central and western Nevada at elevations above the pinyon-juniper zone. It is absent in northern Nevada.

PINYON-JUNIPER_1

Conifer woodland principally co-dominated by single leaf pinyon and Utah juniper at canopies less than 30 percent. The primary associated tree species is mountain mahogany. Primary associated shrub species include sagebrush, rabbitbrush, Gambel oak, alder leaf mountain mahogany, bitterbrush, littleleaf mountain mahogany, and cliffrose.

Distribution: Pinyon-Juniper is distributed throughout all but northern Nevada. It is most abundant in eastern and central Nevada. It typically occurs at elevations above the juniper zone and below the pinyon zone.

SAGEBRUSH

Shrubland principally dominated by big sagebrush, black sagebrush (*Artemisia nova*) or low sagebrush. Primary associated tree species include juniper, pinyon, mountain mahogany, Jeffrey pine, and ponderosa pine. Primary associated shrub species include rabbitbrush, snakeweed (*Gutierrezia sarothrae*), blackbrush (*Coleogyne ramosissima*), shadscale (*Atriplex confertifolia*), greasewood (*Sarcobatus* spp.), spiny hopsage (*Grayia spinosa*), and bitterbrush. Primary associated grass species include wheatgrasses (*Agropyron* spp.), cheatgrass (*Bromus tectorum*), bluegrasses (*Poa* spp.), needlegrasses (*Stipa* spp.), fescues (*Festuca* spp.), and galleta (*Hilaria jamesii*).

Distribution: Sagebrush is the most widespread and abundant cover-type in Nevada. Typically this class occurs above 5000 feet with associated grass species making up less than 25% of the sagebrush canopy.

SAGEBRUSH/PERENNIAL GRASS

Co-dominate sagebrush shrubland and perennial grassland. Co-dominance is defined by either shrub or grass occurring at canopies at least 25% of the other. Principle grass species include wheatgrasses, bluegrasses, needlegrasses, fescues, ricegrass (*Oryzopsis hymenoides*) and galleta. Primary associated shrub species include rabbitbrush, bitterbrush, and cliffrose. Primary associated grass species include cheatgrass and squirreltail (*Elymus elymoides*).

Distribution: This class typically occurs mid-elevation between sagebrush and mountain sagebrush classes in central Nevada, and is wide-spread as part of the sagebrush steppe of northern Nevada.

SALT DESERT SCRUB

Shrublands principally dominated by one or more of the following: shadscale, desert holly (*Atriplex hymenelytra*), bailey's greasewood (*Sarcobatus baileyi*), desert thorn (*Lycium* spp.), torrey saltbush (*Atriplex torreyi*), winterfat (*Ceratoides lanata*), budsage (*Artemisia spinescens*), fourwing saltbush (*Atriplex canescens*), mormon tea (*Ephedra* spp.), horsebrush (*Tetradymia canescens*) and snakeweed. Primary associated shrub species include greasewood (*Sarcobatus vermiculatus*), sagebrush, blackbrush, iodine bush (*Allenrolfea occidentalis*) and creosote (*Larrea tridentate*). The primary associated forb species is halogeten (*Halogeten glomeratus*). Primary associated grass species include saltgrass (*Distichlis spicata*) and cheatgrass.

Distribution: This is a broad abundant class which can occur in a variety of physiographic areas throughout the state. Typically this class occurs below 5000 feet (except for central Nevada) and especially dominates the Lahontan Basin of western Nevada.

SIERRA MOUNTAIN SHRUB

Shrubland principally dominated or co-dominated by foothill and montane chaparral shrub species locally abundant in the Sierra mountains including manzanita, buck/snow/tobacco brush, oak (*Quercus* spp.), currant, bitter cherry (*Prunus emarginata*), and snowberry (*Symphoricarpos albus*). Primary associated shrub species include sagebrush and bitterbrush. Primary associated tree species include pinyon, mountain mahogany, Jeffrey pine, ponderosa pine, red fir, western white pine (*Pinus monticola*), lodgepole pine, mountain hemlock (*Tsuga mertensiana*), and whitebark pine.

Distribution: Confined to the east slope of the Sierra Mountains. This class contains a wide latitude of shrubs and elevations zones.

SIERRA LODGEPOLE PINE_2

Conifer woodland principally dominated lodgepole pine in canopies between 30-60 percent. Primary associated tree species include mountain hemlock, and whitebark pine in the upper elevation zones and red fir, western white pine, whitebark pine, white fir, and Jeffrey pine in the lower elevation zones. Primary associated shrub species include sagebrush, manzanita, buck/snowbrush (*Ceanothus* spp.), ribes (*Ribes* spp.), willow (*Salix* spp.), potentilla (*Potentilla* spp.), labador tea (*Ledum glandulosum*) and mountain heather (*Phyllodoce breweri*).

Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 8000-9500 feet, but can range from 7200-10,000 feet on the east side of the Sierras. lodgepole pine tends to be found in a wider elevation range towards the southern end of the Sierra mountains.

SIERRA RED FIR_3

Conifer forest principally dominated by red fir in canopies above 59 percent. Primary associated tree species include lodgepole pine, Jeffrey pine, western white pine, mountain hemlock, white fir, and aspen (*Populus tremuloides*). Primary associated shrub species include manzanita, buck/snowbrush, oak, bitter cherry, honeysuckle (*Lonicera conjugalis*), and snowberry.

Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 7500-9000 feet. Red fir tends to be found in moist areas and shady aspects. Lodgepole pine is common within this zone on drier aspects.

SIERRA YELLOW PINE_2

Conifer forest principally dominated by Jeffrey pine, ponderosa pine, and washoe pine (*Pinus washoensis*) in canopies from 30-60 percent. Primary associated tree species include white fir, sugar pine (*Pinus lambertiana*), incense cedar (*Libocedrus decurrens*), pinyon, and western juniper (*Juniperus occidentalis*) on lower elevation zones. Red fir, western white pine, and lodgepole pine are more common associates at upper elevation zones. Primary associated shrub species include sagebrush, bitterbrush, and granite gilia (*Leptodactylon pungens*) in lower elevation areas and manzanita, buck/snowbrush, oak, ribes, bitter cherry, and snowberry in higher elevation areas.

Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 5000-7500 feet on the east side of the Sierras. White fir is common within this zone, but usually on north-facing aspects. Minor occurrences of this class can be found as far east as the Wassuk, Pine Nut and Virginia Mountains.

SIERRA YELLOW PINE_3

Conifer forest principally dominated by Jeffrey pine, ponderosa pine, and washoe pine in canopies above 59 percent. Primary associated tree species include white fir, sugar pine, incense cedar, pinyon, and western juniper on lower elevation zones. Red fir, western white pine, and lodgepole pine are more common associates at upper elevation zones. Primary associated shrub species include sagebrush, bitterbrush, and granite gilia in lower elevation areas, and manzanita, buck/snowbrush, oak, ribes, bitter cherry, and snowberry in higher elevation areas.

Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 5000-7500 feet on the east side of the Sierras. White fir is common within this zone, but usually on north-facing aspects.

SIERRA YELLOW PINE_/MOUNTAIN SHRUB

Conifer woodland or forest principally dominated by Jeffrey pine, ponderosa pine and washoe pine, co-dominant with Sierra foothill and montane chaparral shrub species including manzanita, buck/snow/tobacco brush, oak, currant, bitter cherry, and snowberry. Primary associated tree species include white fir, , sugar pine, incense cedar, pinyon, and western juniper on lower elevation zones with red fir, western white pine, and lodgepole pine more common associates on upper elevation zones. Primary associated shrub species include sagebrush and bitterbrush.

Distribution: This class is local to the Sierra Nevada Mountains, usually in elevations from 6000-7500 feet on the east side of the Sierras. It is especially prevalent in the Lake Tahoe area.

URBAN

Commercial, mining and residential areas.

Distribution: Located state-wide

WETLAND

Low elevation marsh and wetland areas. Principal species include cattail (*Typha latifolia*), bullrush (*Scirpus spp.*), burreed (*Sparganium spp.*), common reed grass (*Phragmites australis*), pondweed (*Potamogeton spp.*) and sedge (*Carex spp.*).

Distribution: This class occurs in limited areas throughout Nevada, typically in low elevation basins around a permanent water source. The largest expanses occur in Ruby valley and the Carson Sink.

Appendix C

Special Status Species Defined

Special Status Species Defined

<u>Federal Protection</u>	
	<p>Endangered Species Act (ESA):</p> <ul style="list-style-type: none"> ↳ Federal Program that is enforced <i>nation-wide</i> by the US Fish & Wildlife Service ↳ Denotes Federally Endangered & Threatened Species. ↳ This act allows federal landowners to enforce protection on a regional level on <i>land they own</i>: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Bureau of Land Management (BLM) Special Status Species US Forest Service (USFS) Sensitive & Threatened Species</p> </div> <div style="text-align: center;">  </div> </div>

<u>State Protection</u>	
	<p>Each state also has the ability to impose protection measures within their state:</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p>Nevada: Nevada Revised Statutes (NRS)</p> </div> <div style="text-align: center;">  <p>California: California Endangered Species Act (CESA)</p> </div> </div>

<u>Recommended Protection</u>	
	<p>Watch-groups: These species are not currently protected, but their conservation is recommended by the USFWS and State agencies.</p> <p style="text-align: center;">Nevada Natural Heritage Program (NNHP) ranks plants & animal status Nevada Native Plant Society (NNPS) categorizes plant status</p>

<u>Nevada Natural Heritage (NNHP)</u>	
<p>Grank Global rank indicator, based on worldwide distribution</p>	<p>1 Critically Imperiled</p> <p>2 Imperiled</p> <p>3 Vulnerable</p>
<p>Strank State rank indicator, based on distribution within Nevada</p>	<p>4 Concerned</p> <p>5 Secure</p>
<p><i>Example: G4 indicates the species global status is concerned</i></p>	

<u>Nevada Native Plant Society (NNPS)</u>	
<ul style="list-style-type: none"> • Possibly Extirpated • Endangered • Threatened • Dropped, no longer of concern • Marginal • Absent, erroneously reported from Nevada • Watch list 	

Appendix D

Descriptions of Wetlands Classifications Found in the Study

Descriptions of Wetlands Classifications Found in the Study

FRESHWATER EMERGENT WETLAND

The Emergent Wetland Class is part of the Palustrine System, and is characterized by erect rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

Emergent Wetlands maintain the same appearance year after year. They are found throughout the United States, and are known by many names, including marsh, meadow, fen, prairie pothole, and slough.

FRESHWATER FORESTED/SHRUB WETLAND

The classification Freshwater Forested/Shrub Wetland is a combination of two classes of wetlands: Forested Wetland and Scrub/Shrub Wetland.

Forested Wetlands are characterized by woody vegetation that is 20 feet or taller. They are common where moisture is relatively abundant, particularly along rivers and in the mountains, and can occur in both Palustrine and Estuarine Systems. They normally possess an overstory of trees, an understory of young trees or shrubs, and an herbaceous layer.

Scrub/Shrub Wetlands are dominated by woody vegetation less than 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are stunted because of environmental conditions. They may represent a successional stage leading to a Forested Wetland, or may be relatively stable communities. They occur in both Palustrine and Estuarine Systems, and are one of the most widespread classes of wetlands in the United States.

FRESHWATER POND

Ponds are part of the Palustrine System, and can be dominated by vegetation, or lack vegetation entirely. Requirements of wetlands in the Palustrine System include: (1) area less than 20 acres; (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 meters (6.5 feet) at low water; and (4) salinity due to ocean-derived salts less than 0.5%.

LAKE

The Lake Class is part of the Lacustrine System, which includes wetlands and deepwater habitats with the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30% areal coverage; and (3) total area exceeds 20 acres.

RIVERINE

A Riverine System is one in which water is usually, but not always, flowing. It includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts in excess of 0.5%.

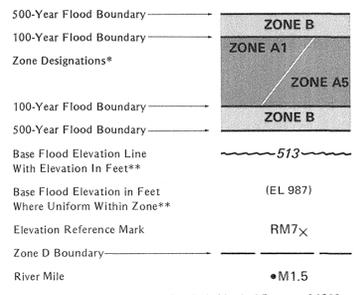
A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. Springs discharging into a channel are considered part of the Riverine System.

Excerpts taken from Classification of Wetland and Deepwater Habitats of the United States (Cowardin et al. 1979).

Appendix E

FEMA Flood Insurance Rate Maps

KEY TO MAP



*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.
 This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.
 For adjoining map panels, see separately printed Index To Map Panels.

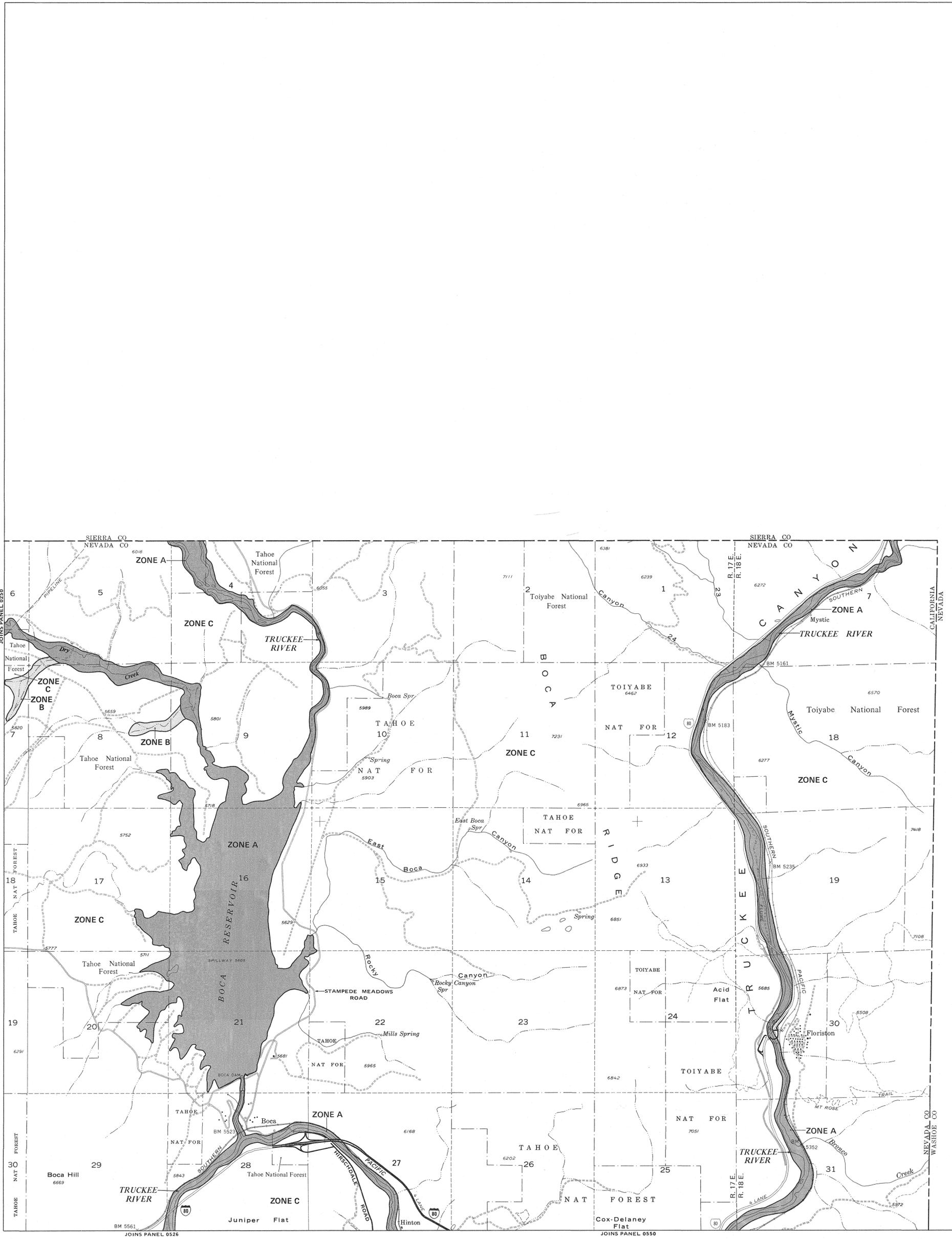
INITIAL IDENTIFICATION:
 SEPTEMBER 6, 1977

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
 JANUARY 19, 1983

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.
 To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

NEVADA COUNTY, CALIFORNIA
 (UNINCORPORATED AREAS)

PANEL 275 OF 775
 (SEE MAP INDEX FOR PANELS NOT PRINTED)

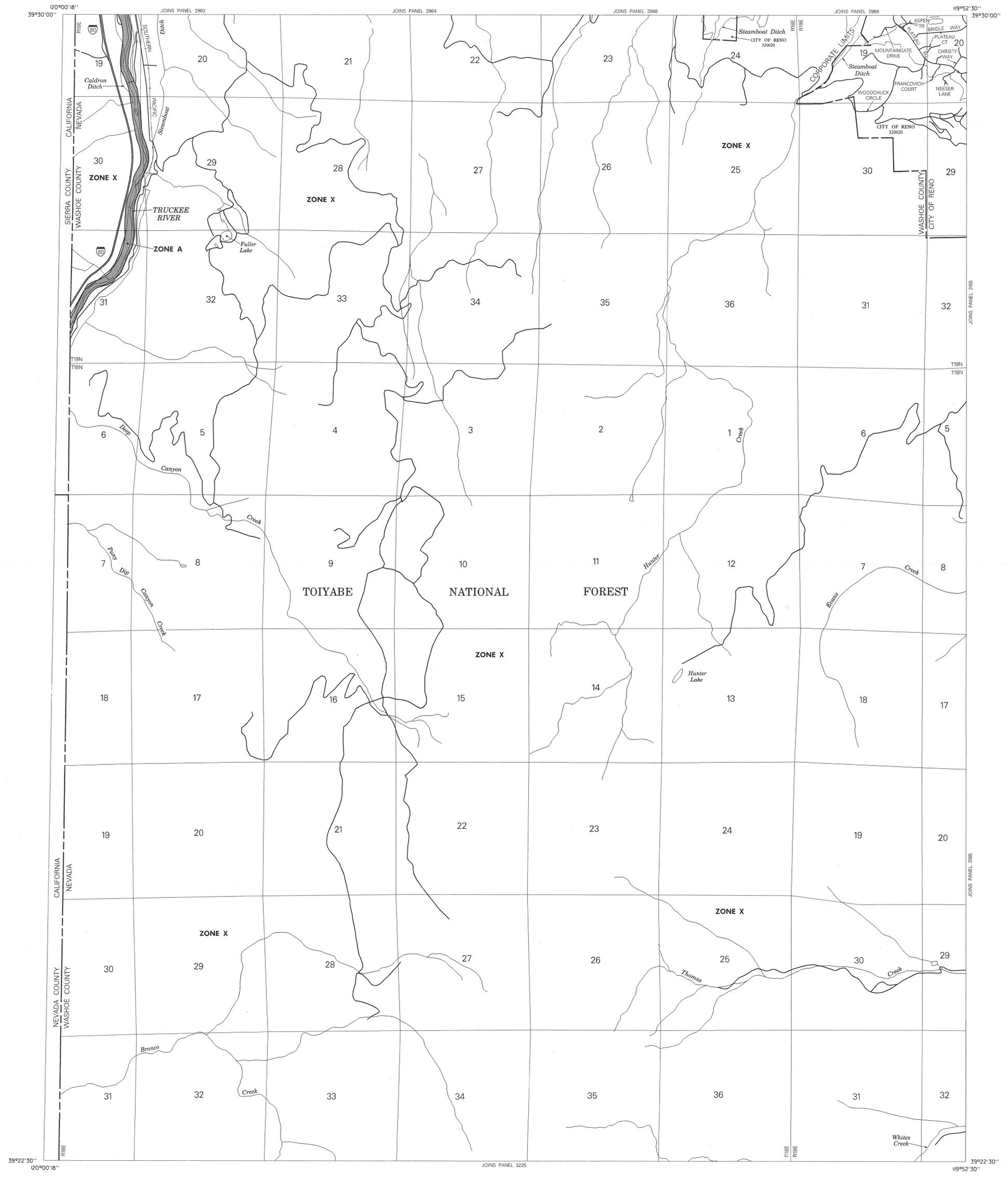
COMMUNITY-PANEL NUMBER
 060210 0275 B

EFFECTIVE DATE:
 JANUARY 19, 1983

Appendix E-1

Federal Emergency Management Agency





LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined; for areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line
Elevation in Feet. See Map Index for Elevation Datum.

Cross Section Line

Base Flood Elevation in Feet Where Uniform Within Zone.
See Map Index for Elevation Datum.

Elevation Reference Mark

River Mile

Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

97°07'30", 32°22'30"

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

2000 0 2000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3150 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

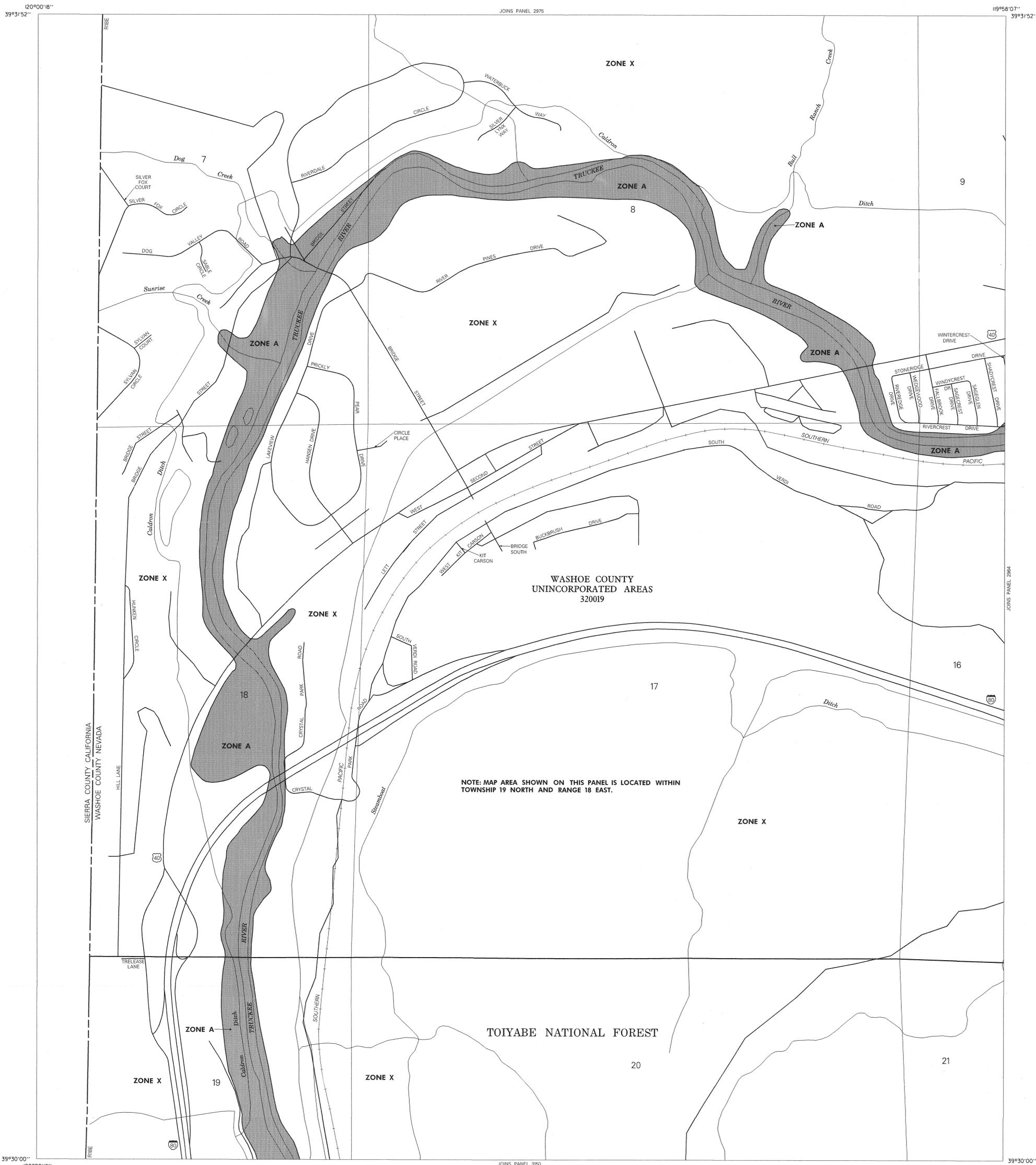
COMMUNITY	NUMBER	PANEL	SUFFIX
RENO, CITY OF	320020	3150	E
WASHOE COUNTY, UNINCORPORATED AREAS	320019	3150	E

MAP NUMBER
32031C3150 E

EFFECTIVE DATE:
SEPTEMBER 30, 1994

Appendix E-2

Federal Emergency Management Agency



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depth of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line. Elevation in Feet. See Map Index for Elevation Datum.

Cross Section Line. Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum. Elevation Reference Mark.

RM7

M2

97°07'30", 32°22'30"

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only to landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:

SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 2963 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

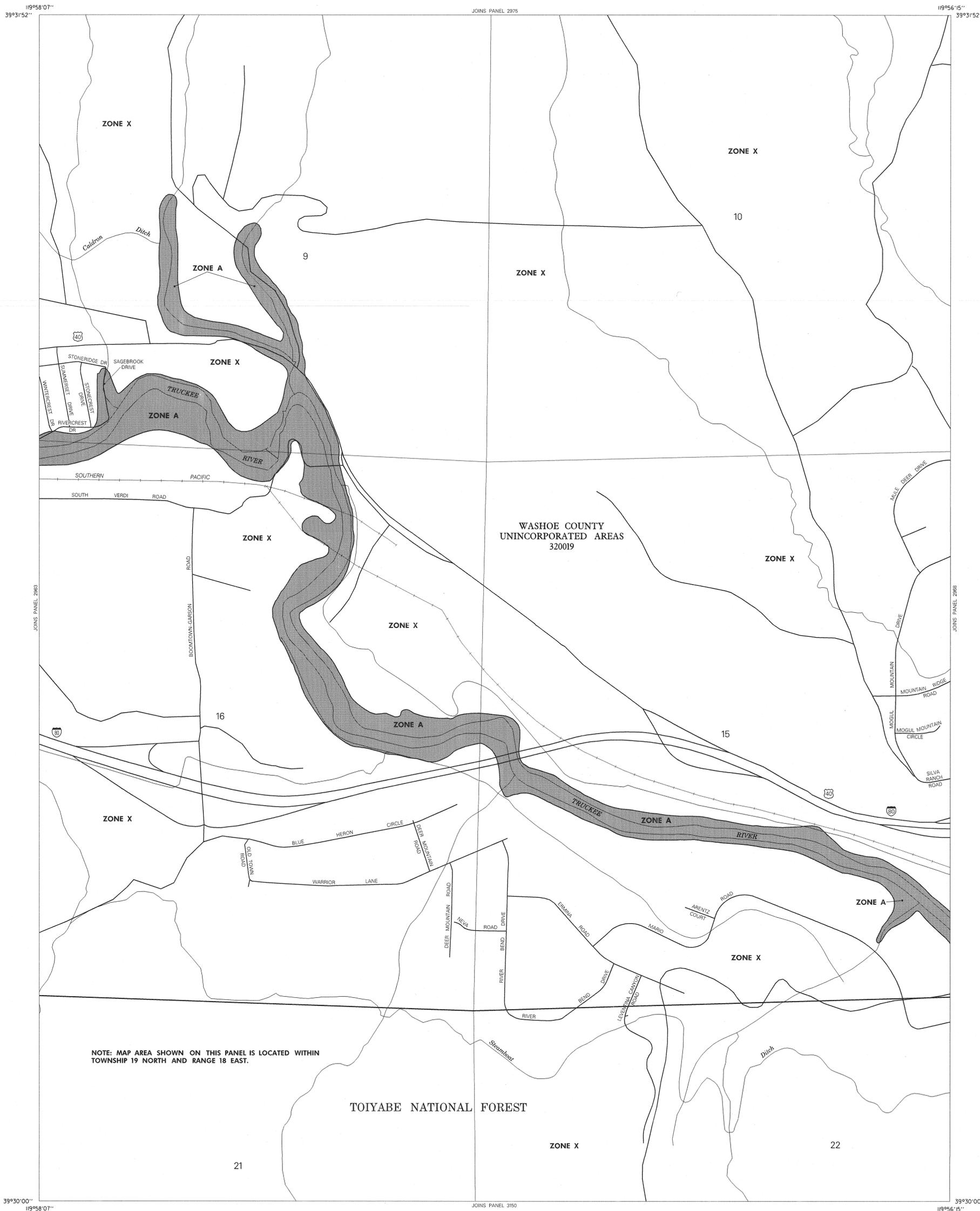
CONTAINS: COMMUNITY NUMBER PANEL SUFFIX
WASHOE COUNTY UNINCORPORATED AREAS 32009 2963 E

MAP NUMBER 32031C2963 E

EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-3
Federal Emergency Management Agency

A B C D E F



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Other Symbols:

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
- Elevation Reference Mark
- RM7
- M2
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning purposes.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System limits and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6623.

APPROXIMATE SCALE IN FEET
500 0 500

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 19 NORTH AND RANGE 18 EAST.

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

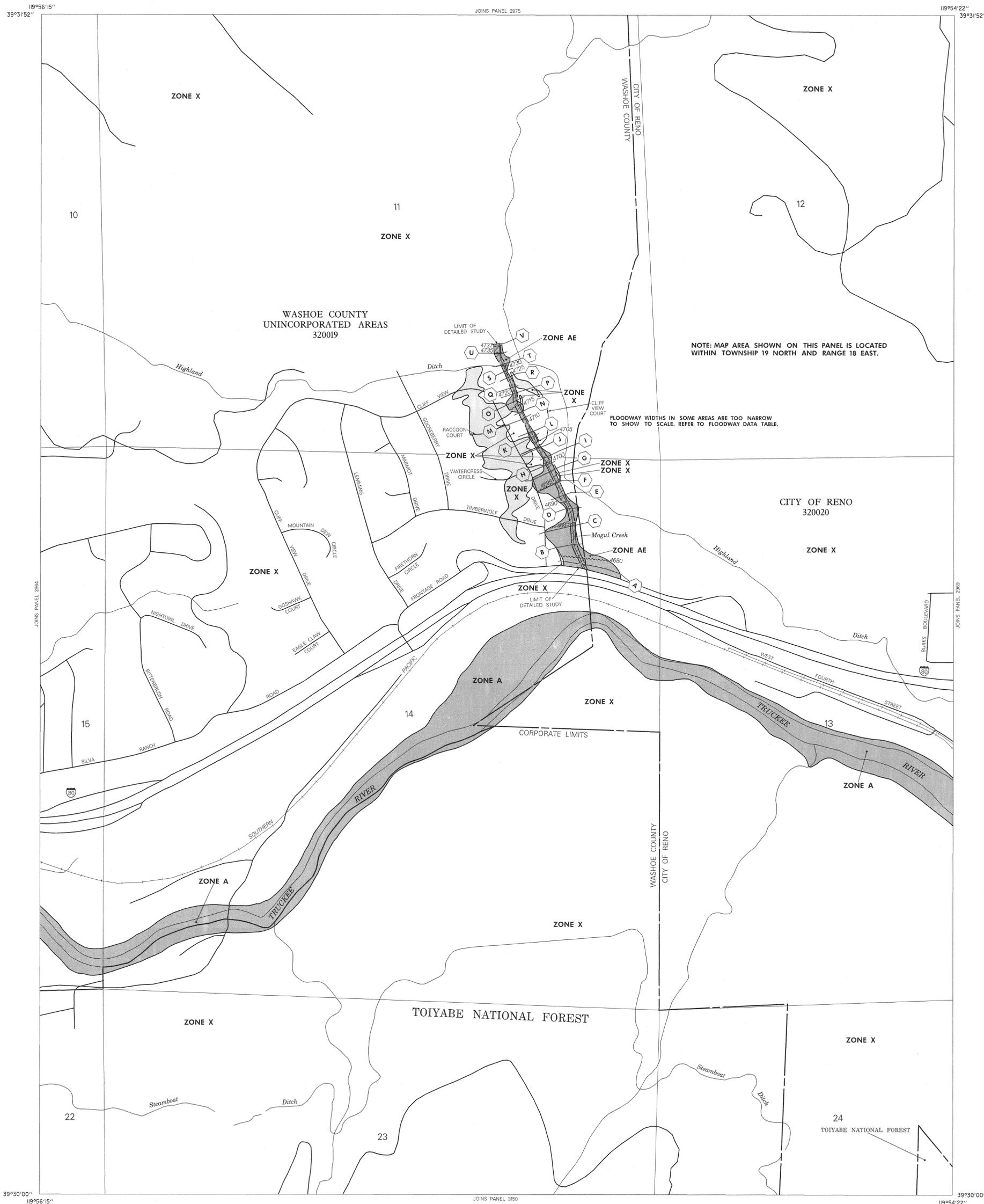
PANEL 2964 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	320019	2964	E

MAP NUMBER 3203IC2964 E

EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-4
Federal Emergency Management Agency



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined; for areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1993
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain Boundary
Floodway Boundary
Zone D Boundary
Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line; Elevation in Feet. See Map Index for Elevation Datum.
Cross Section Line
Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum, Elevation Reference Mark.

513
(EL 987)
RM7
M2
River Mile

97°07'30", 32°22'30"

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for more detailed data on BFE's, and for any information on floodway determinations, prior to use of this map for property purchase or construction purposes.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, A1-A30, AH, AO, A99, V, VE and V1-V30.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Refer to Floodway Data Table where floodway width is shown at 1/20 inch.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Map revised April 20, 2000 to add base flood elevations, to change special flood hazard areas, and to change zone designations.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET
500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 2968 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

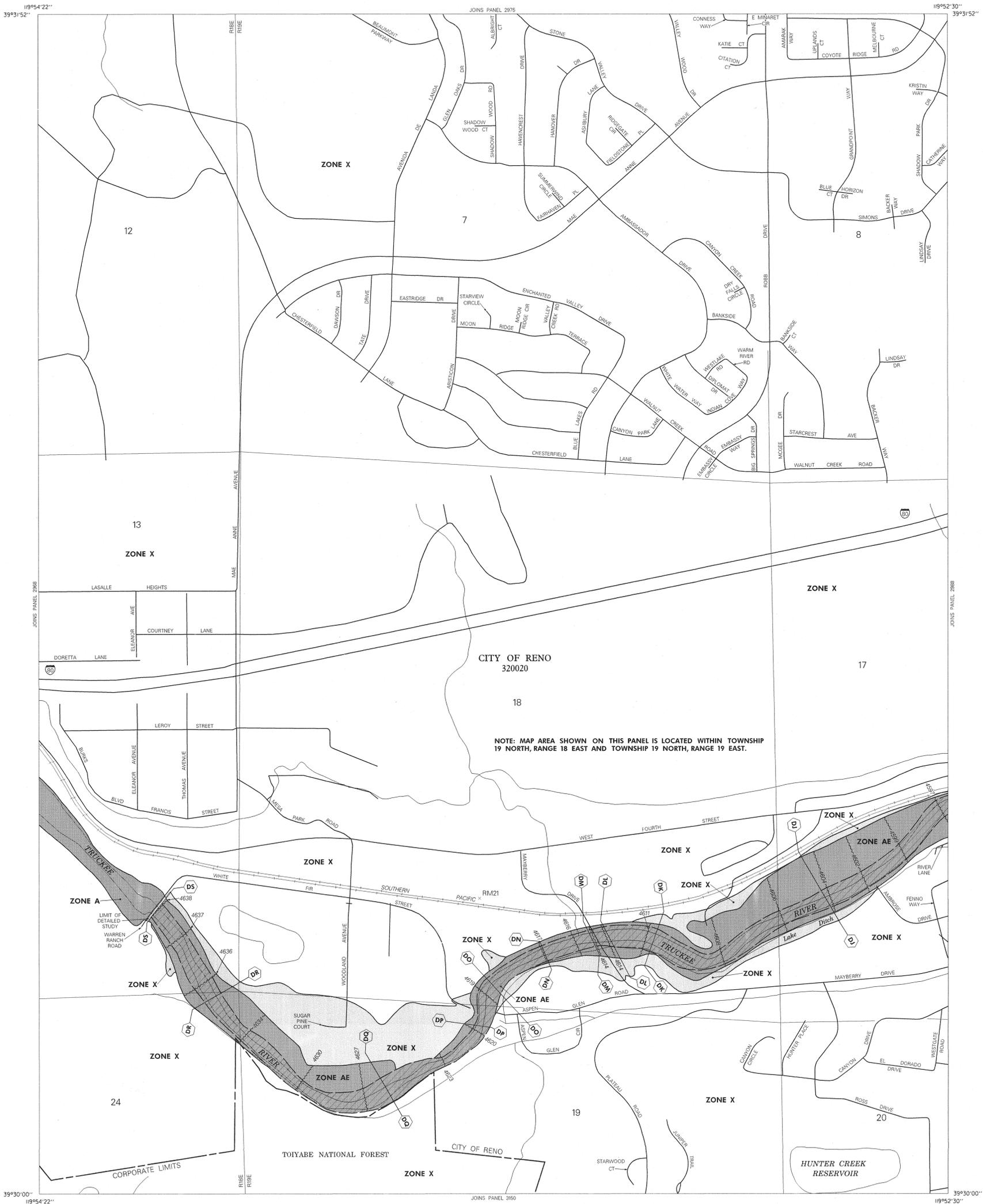
CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
RENO, CITY OF	320020	2968	F
WASHOE COUNTY, UNINCORPORATED AREAS	320208	2968	F

MAP NUMBER 32031C2968 F

MAP REVISED: APRIL 20, 2000

Appendix E-5
Federal Emergency Management Agency

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM21	4645.80	National Geodetic Survey bronze disk stamped "NGS No. J-9" set in the top of a large brown boulder projecting 5 feet above the ground and approximately level with the track, located approximately 4.8 miles west along the Southern Pacific Railroad from the station at Reno, three telegraph poles east of milepost number 238, 85.5 feet northeast of the west end of a large concrete headwall at milepost 238.05, 45.1 feet north of the north rail of the eastbound track and 14.0 feet east of the third pole east of milepost No. 238.



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATE
BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

OTHER FLOOD AREAS

- FLOODWAY AREAS IN ZONE AE**
- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Boundaries

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Elevation Lines

- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
- Elevation Reference Mark
- River Mile

Coordinates

Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection

97°07'30", 32°22'30"

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 2969 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY NUMBER PANEL SUFFIX
RENO, CITY OF 320020 2969 E

MAP NUMBER 3203IC2969 E

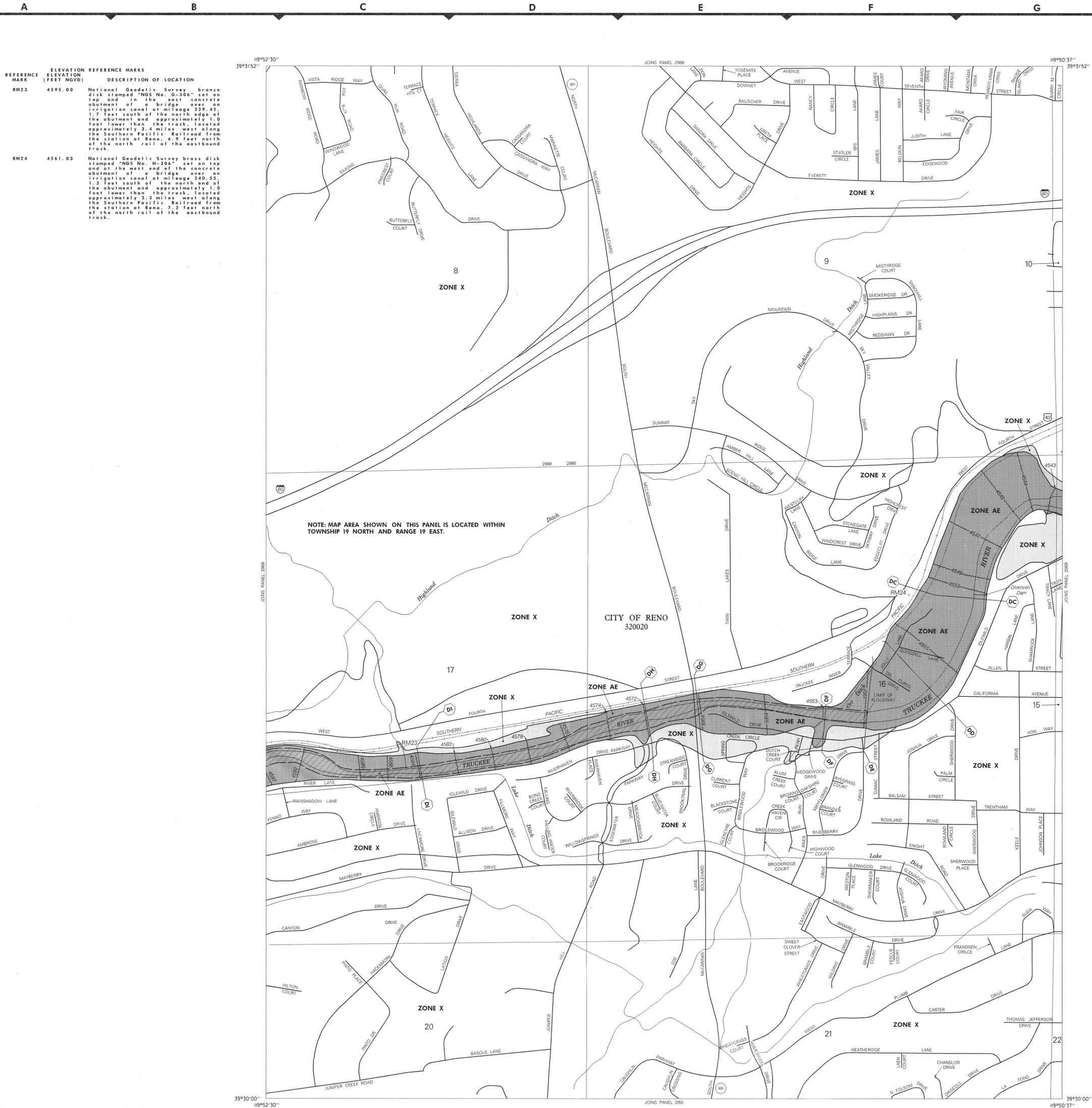
EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-6
Federal Emergency Management Agency

CITY OF RENO
320020

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 19 NORTH, RANGE 18 EAST AND TOWNSHIP 19 NORTH, RANGE 19 EAST.

39°30'00" 19°54'22" JOINS PANEL 2968 JOINS PANEL 2970 39°30'00" 19°52'30"



REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM23	4595.00	National Geodetic Survey bronze disk stamped "NGS No. G-306" set on top and in the east concrete abutment of a bridge over an irrigation canal at mileage 239.42, 1.7 feet south of the north edge of the abutment and approximately 1.0 foot lower than the track, located approximately 3.4 miles west along the Southern Pacific Railroad from the station at Reno, 6.9 feet north of the north rail of the eastbound track.
RM24	4561.03	National Geodetic Survey brass disk stamped "NGS No. H-306" set on top and at the west end of the concrete abutment of a bridge over an irrigation canal at mileage 240.55, 1.3 feet south of the north end of the abutment and approximately 1.0 foot lower than the track, located approximately 2.3 miles west along the Southern Pacific Railroad from the station at Reno, 7.2 feet north of the north rail of the eastbound track.

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 19 NORTH AND RANGE 19 EAST.

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined; for areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary
Floodway Boundary
Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line; Elevation in Feet. See Map Index for Elevation Datum.
Cross Section Line
Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
Elevation Reference Mark

EL 987

RM7

M2

River Mile
Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-691).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET
0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

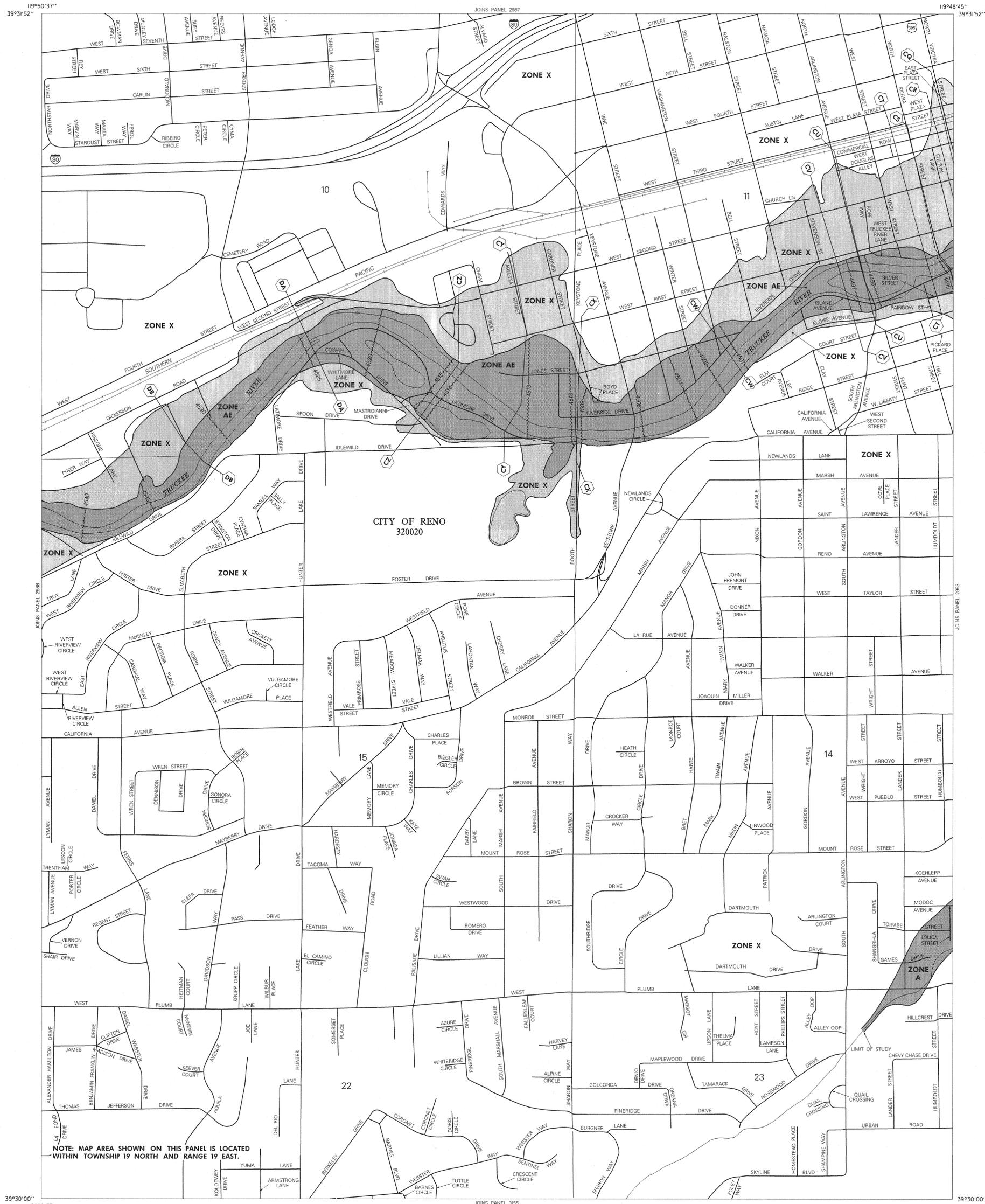
PANEL 2988 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
RENO CITY OF	320020	2988	E

MAP NUMBER 3203IC2988 E

EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-7
Federal Emergency Management Agency



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line; Elevation in Feet; See Map Index for Elevation Datum.

Cross Section Line

Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.

Elevation Reference Mark

RM7

M2

97°07'30", 32°22'30"

Horizontal Coordinates Based on North Datum of 1983 (NAD 83) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only to landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resources System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-581).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actual rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 2989 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY NUMBER PANEL SUFFIX
RENO CITY OF 320020 2989 E

MAP NUMBER 32031C2989 E

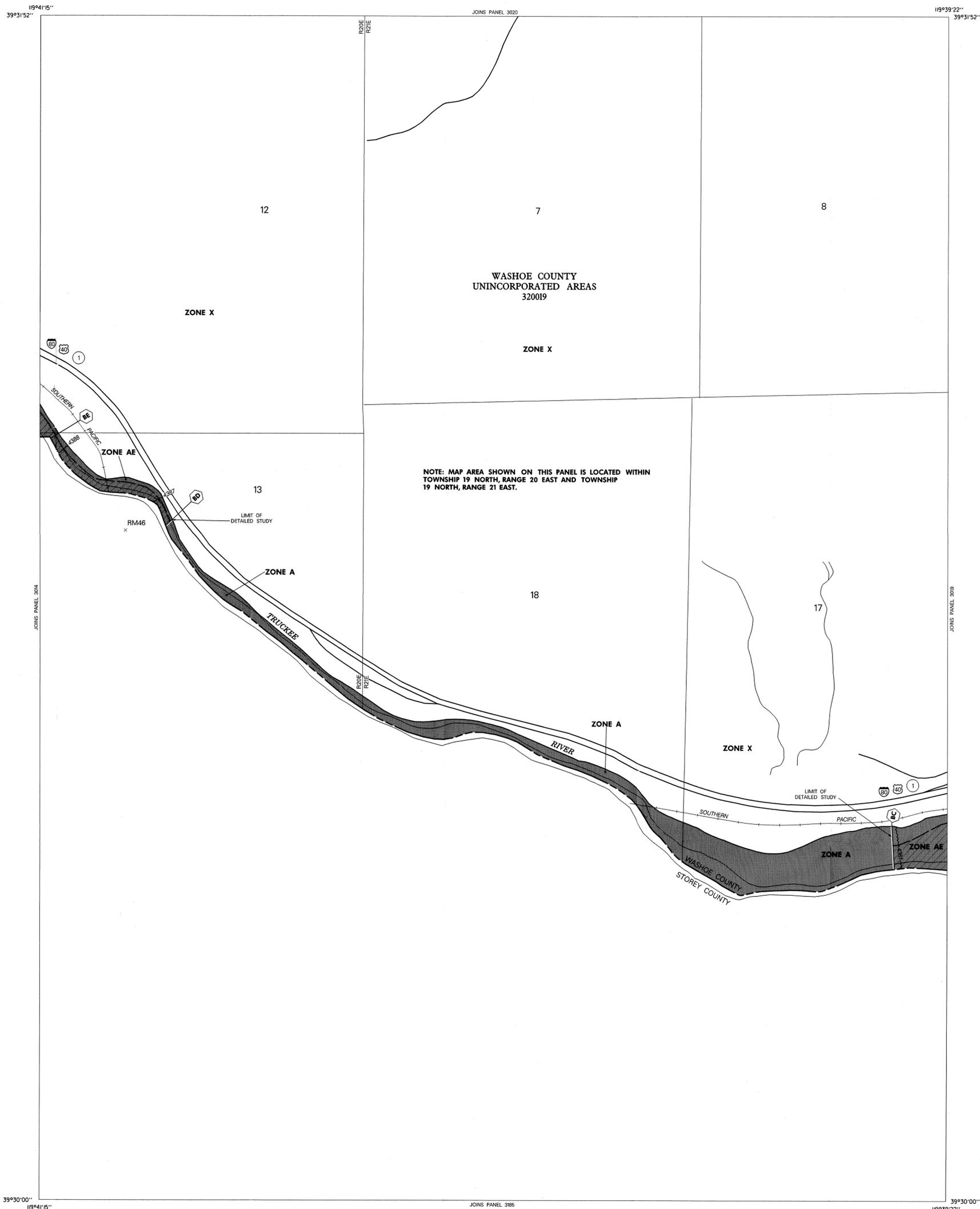
EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-8
Federal Emergency Management Agency

39°30'00" 19°50'37" 39°30'00" 19°48'45" 39°30'00" 19°48'45" 39°30'00" 19°50'37"

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 19 NORTH AND RANGE 19 EAST.

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM46	4404.95	Bronze disk on concrete 0.7 feet above ground, stamped "TU 1-14 Sacto Dist 1958." Approximately 150 feet southeast of railroad bridge at Vista, on small hill 5 feet above and south of track under telephone line. Established by U.S. Army Corps of Engineers.



LEGEND

SPECIAL FLOOD HAZARD AREAS UNINUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Boundaries:

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Elevation and Datum:

- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
- Elevation Reference Mark

Other Symbols:

- RM7
- M2
- River Mile

Coordinates: 97°07'30", 32°22'30"

NOTES

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1980 (PL 101-681).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actual rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6920.

APPROXIMATE SCALE IN FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3018 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

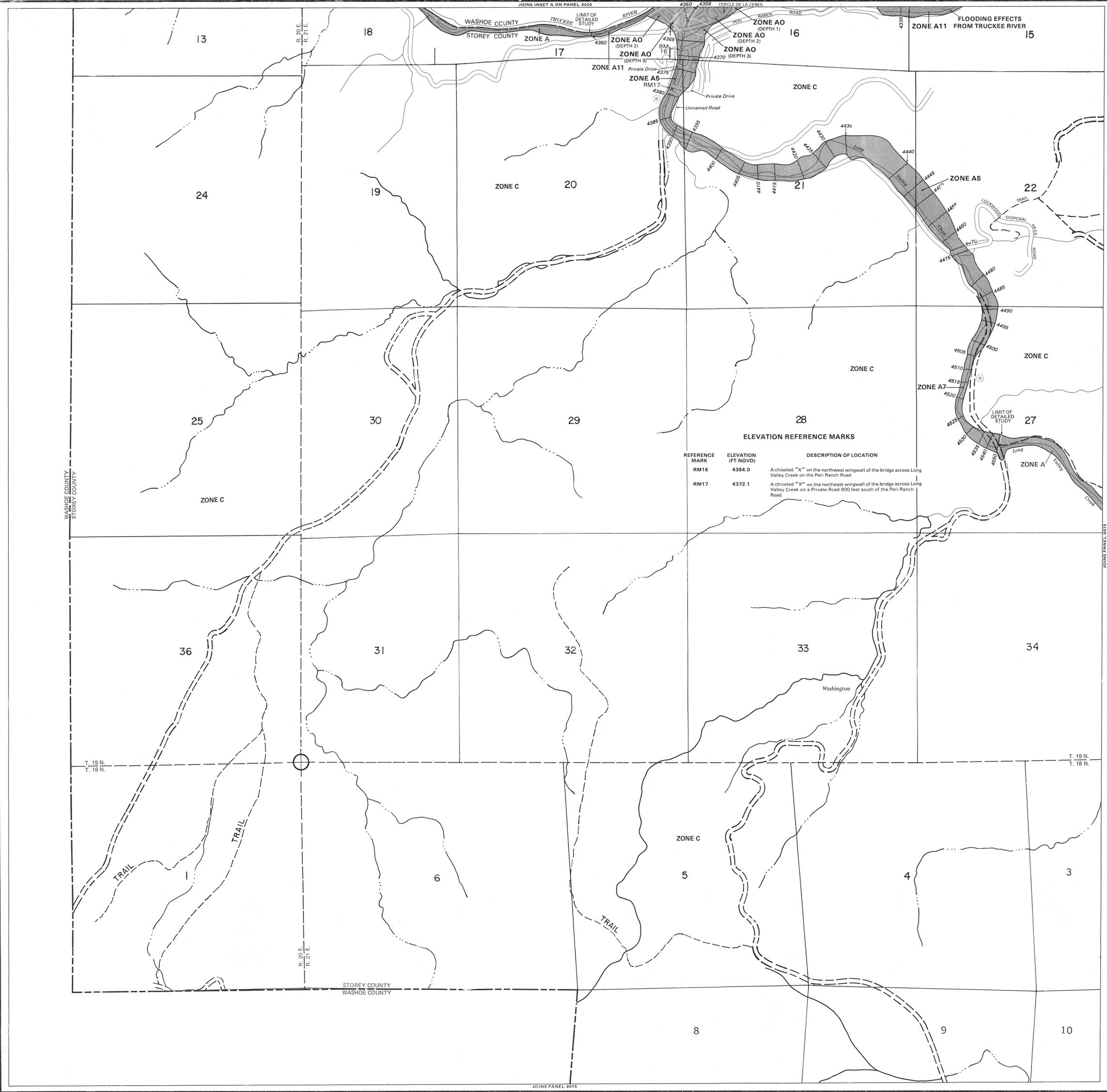
COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	32019	3018	E

MAP NUMBER
32031C3018 E

EFFECTIVE DATE:
SEPTEMBER 30, 1994

Appendix E-9

Federal Emergency Management Agency



KEY TO MAP

500-Year Flood Boundary
 100-Year Flood Boundary
 Zone Designations
 100-Year Flood Boundary
 500-Year Flood Boundary
 Base Flood Elevation Line With Elevation In Feet**
 Base Flood Elevation in Feet Where Uniform Within Zone**
 Elevation Reference Mark
 Zone D Boundary
 River Mile
 **Referenced to the National Geodetic Vertical Datum of 1929

Zone B
Zone A1
Zone A5
Zone B

•M1.5

EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Areas of special flood hazard (100-year flood) include Zones A, A1-30, AE, AH, AO, A99, V, V1-30 AND VE.

Certain areas not in the Special Flood Hazard Areas (Zones A and V) may be protected by flood control structures.

Coastal base flood elevations apply only landward of the shoreline shown on this map.

For adjoining map panels, see separately printed Index to Map Panels.

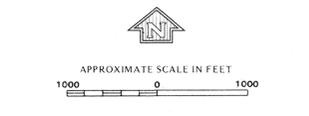
INITIAL IDENTIFICATION:
 JANUARY 10, 1978

FLOOD HAZARD BOUNDARY MAP REVISIONS:
 FLOOD INSURANCE RATE MAP EFFECTIVE:
 FEBRUARY 19, 1987

FLOOD INSURANCE RATE MAP REVISIONS:
 Map revised JULY 19, 1993 to change base flood elevations, to add base flood elevations, to change zone designations, and to add roads and road names.

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FT. MGD)	DESCRIPTION OF LOCATION
RM16	4364.0	A chiseled "X" on the northwest wingwall of the bridge across Long Valley Creek on the Peri Ranch Road.
RM17	4372.1	A chiseled "X" on the northeast wingwall of the bridge across Long Valley Creek on a Private Road 900 feet south of the Peri Ranch Road.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

STOREY COUNTY, NEVADA
 (UNINCORPORATED AREAS)

PANEL 55 OF 150
 (SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
 320033 0055 C

MAP REVISED:
 JULY 19, 1993

Appendix E-10
 Federal Emergency Management Agency

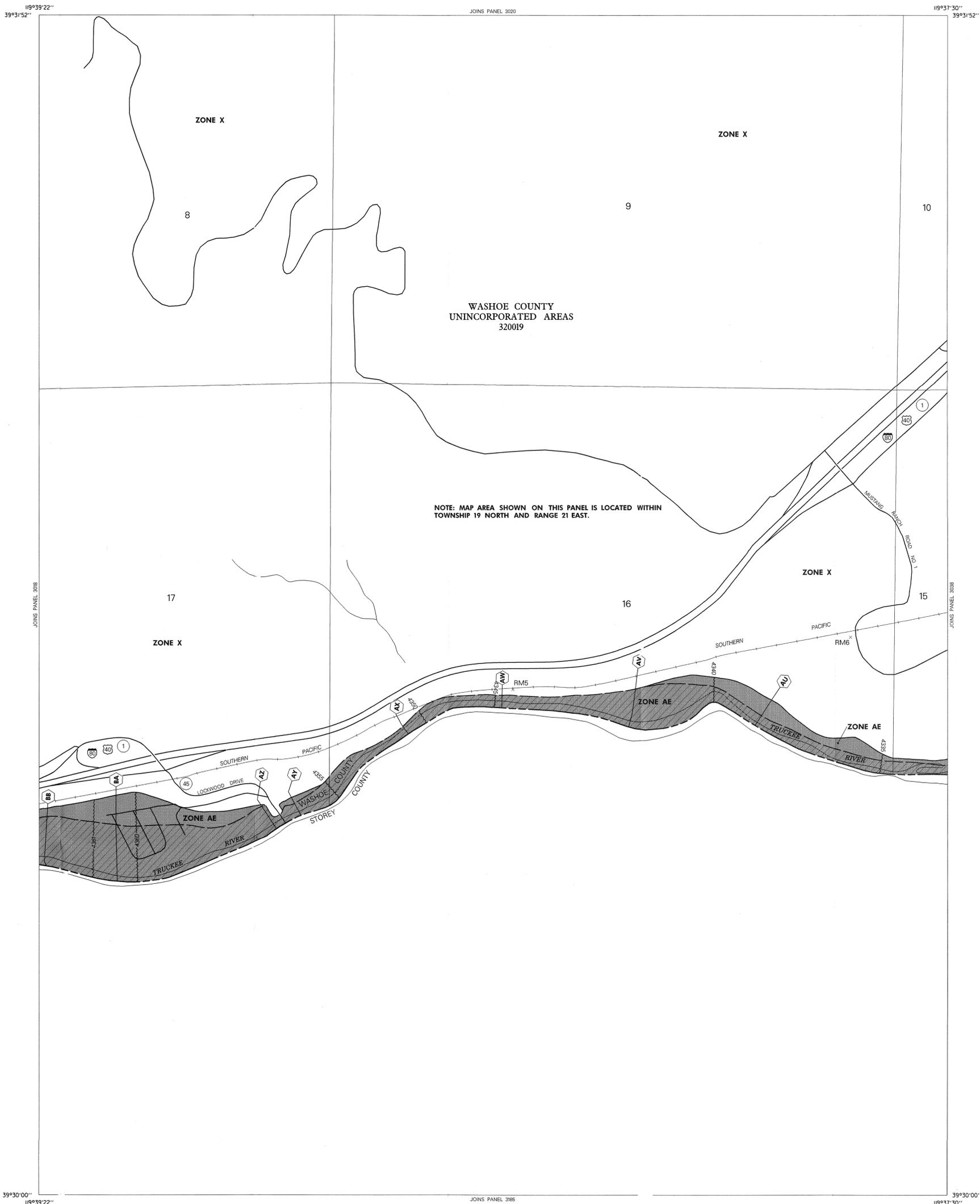
JOINS INSET A ON PANEL 0030

JOINS PANEL 0075

WASHOE COUNTY
 STOREY COUNTY

STOREY COUNTY
 WASHOE COUNTY

REFERENCE MARK	ELEVATION (FEET NGVD)	REFERENCE MARKS DESCRIPTION OF LOCATION
RM5	4386.00	Chiseled "X" on the northeast bolt of a railroad light signal, at the west end of Hared siding railroad mile 252.5, located along Interstate Route 80 eastbound. Take the Lockwood exit, turn right and go south from the railroad track overcrossing to a sharp bend in the road. Turn left on a dirt road and follow the railroad tracks east 0.6 mile to a light signal and the station. Established by Towill, Inc.
RM6	4376.34	Cut "X" on a bolt at the base of a railroad signal, on the south side of the tracks, located along Interstate Route 80 eastbound. Take the Mustang exit, turn right and go south 0.4 mile to a railroad crossing. Station is on the right. Established by Towill, Inc.



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.

Cross Section Line

Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.

EL 987'

RM7

M2

97°07'30", 32°22'30"

Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (P.L. 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3019 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY UNINCORPORATED AREAS	320019	3019	E

MAP NUMBER
32031C3019 E

EFFECTIVE DATE:
SEPTEMBER 30, 1994

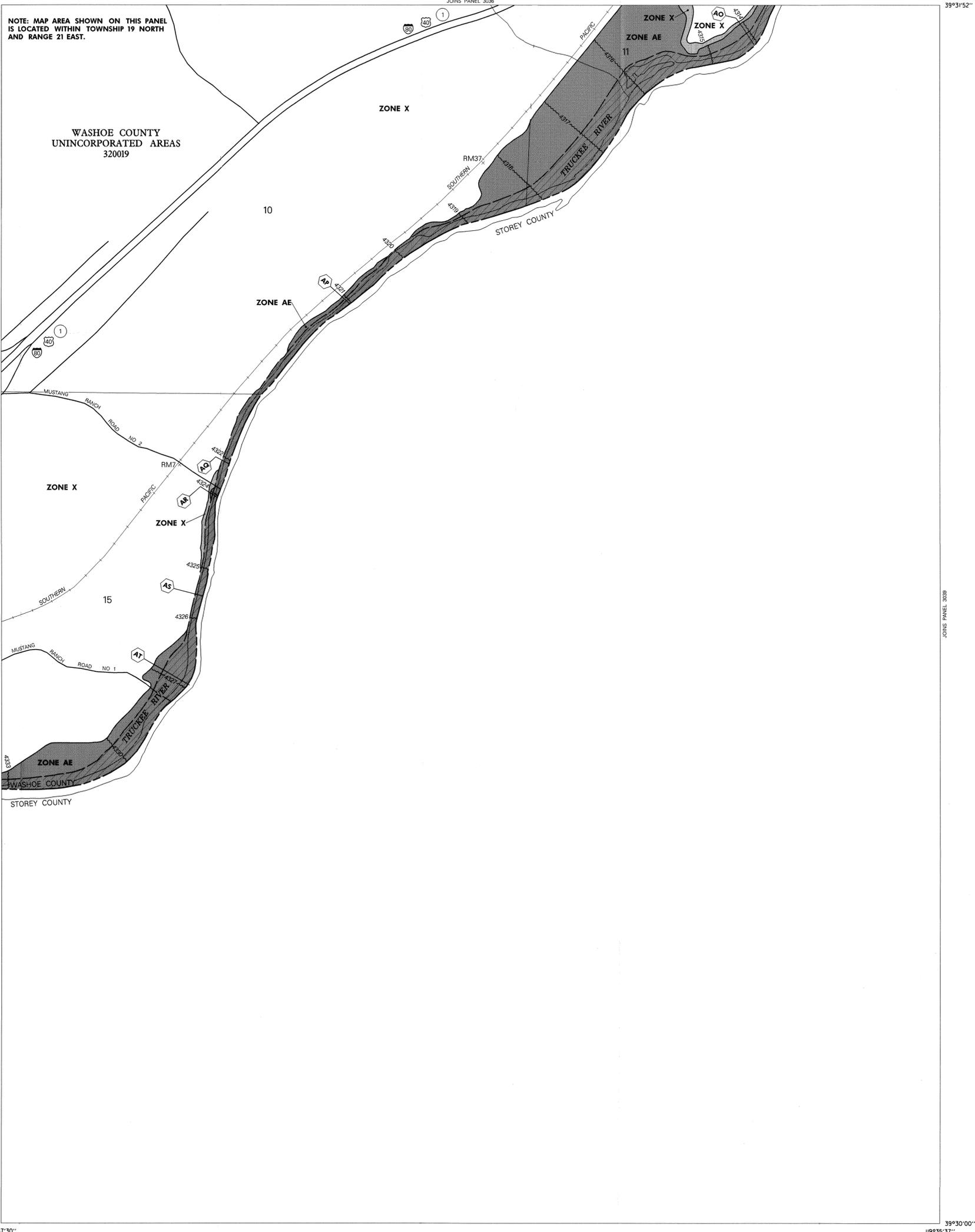
Appendix E-11

Federal Emergency Management Agency

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM7	4349.46	Chiseled square on the northeast corner of the westerly footing, located along Interstate Route 80 eastbound. Take the Mustang exit, go east on Frontage Road 412 0.6 mile to railroad bridge. Station is on the right. Established by Towill, Inc.
RM37	4349.16	Railroad spike in the most easterly pole of rock slide sensing device, approximately 200 feet east of a long curve in the tracks, located along Interstate Route 80 eastbound. Take the Mustang exit and go east 0.2 mile to a "Y" intersection. Take the left fork and go east on a paved road 1.25 miles to the railroad tracks where the tracks go from a cut to a long fill. Turn right and go west along the tracks 0.05 mile to a signal sending device and the station. Established by Towill, Inc.

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 19 NORTH AND RANGE 21 EAST.

WASHOE COUNTY
UNINCORPORATED AREAS
320019



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDAED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain; average depths determined. For areas of alluvial fan flooding, velocities also determined).
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary
Floodway Boundary
Zone D Boundary
Boundary Dividing Special Flood Hazard Zones and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
Cross Section Line
Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
Elevation Reference Mark
River Mile
Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (P.L. 101-691). Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET
0 500 500

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM
FLOOD INSURANCE RATE MAP**

**WASHOE COUNTY,
NEVADA AND
INCORPORATED AREAS**

PANEL 3038 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	320019	3038	E

**MAP NUMBER
32031C3038 E**

**EFFECTIVE DATE:
SEPTEMBER 30, 1994**

Appendix E-12
Federal Emergency Management Agency

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM4	4349.16	Railroad spike in the most easterly pole of rock slide sensing device, approximately 200 feet east of a long curve in the tracks, located along Interstate Route 80 eastbound, take the Mustang exit, go east 0.2 mile to a "Y" intersection, take the left fork and go east on a paved road 1.25 miles to the railroad tracks where the tracks go from a cut to a long fill, turn right and go west along the tracks 0.05 mile to a signal sending device and the station. Established by Towill, Inc.
RMS	4307.27	Railroad spike in a telephone pole on the projection of a bridge centerline, located along Interstate Route 80 eastbound, take the Patrick exit, turn right and go southwest on Frontage Road 414 0.55 mile to railroad crossing, continue and follow a farm road southwest along the tracks 0.6 mile to a "Y", take the right fork and go 0.05 mile to a pole and station on the right. Established by Towill, Inc.
RM6	4311.42	Railroad spike in telephone pole number 308, located along Interstate Route 80 eastbound, take the Patrick exit, turn right and go southwest on Frontage Road 414 0.55 mile to a railroad crossing, turn left and go northeast 0.2 mile to a railroad crossing, turn left and follow a dirt road on the north side of the tracks 0.18 mile to a railroad call box and the station on the left. Established by Towill, Inc.
RM7	4272.33	Railroad spike in the first set of poles, west of an angle point in the power line, 200 feet south of Interstate Route 80 and 0.12 mile west of a freeway exit sign, reading "Tracy Clark Station, Exit 1 mile", located along Interstate Route 80 eastbound, take the Tracy Clark station exit, turn right and go west on the Frontage Road 0.15 mile to a sharp bend in the road, continue straight ahead on a dirt road 0.42 mile to a double power pole and the station on the left. Established by Towill, Inc.
RM8	4265.13	Chialed square on the southeast corner of an electrical, located along Interstate Route 80 eastbound, take the Tracy Clark station exit on the off ramp south of a painted directional arrow. Established by Towill, Inc.



KEY TO MAP

500-Year Flood Boundary	ZONE B
100-Year Flood Boundary	ZONE A1
Zone Designations	ZONE A5
100-Year Flood Boundary	ZONE B
500-Year Flood Boundary	ZONE B
Base Flood Elevation Line With Elevation In Feet**	573
Base Flood Elevation In Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7x
Zone D Boundary	
River Mile	+M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

EXPLANATION OF ZONE DESIGNATIONS

ZONE A Areas of 100-year flood; base flood elevations and flood hazard factors not determined.

A0 Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.

AH Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.

A1-A30 Areas of 100-year flood; base flood elevations and flood hazard factors determined.

A99 Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.

B Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)

C Areas of minimal flooding. (No shading)

D Areas of undetermined, but possible, flood hazards.

V Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.

V1-V30 Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
JANUARY 19, 1978

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
FEBRUARY 19, 1987

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

STOREY COUNTY,
NEVADA
(UNINCORPORATED AREAS)

PANEL 20 OF 150
(SEE MAP INDEX FOR PANELS NOT PRINTED)

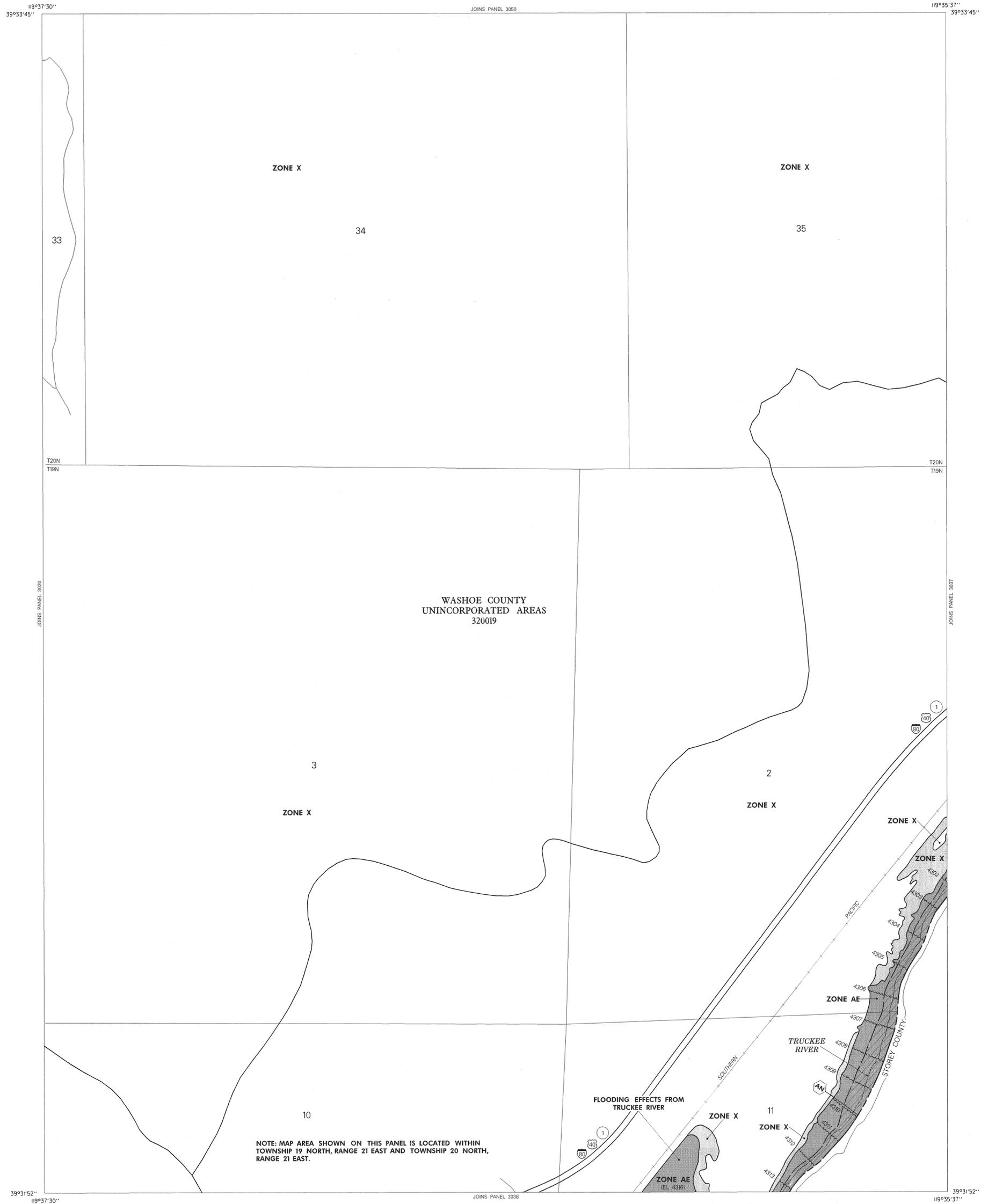
COMMUNITY-PANEL NUMBER
320033 0020 B

EFFECTIVE DATE:
FEBRUARY 19, 1987



Appendix E-13
Federal Emergency Management Agency

A B C D E F



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Boundary Symbols:

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Other Symbols:

- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum. Elevation Reference Mark.
- RM7 X
- M2
- River Mile

Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3036 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS		320019	3036	E

MAP NUMBER 32031C3036 E

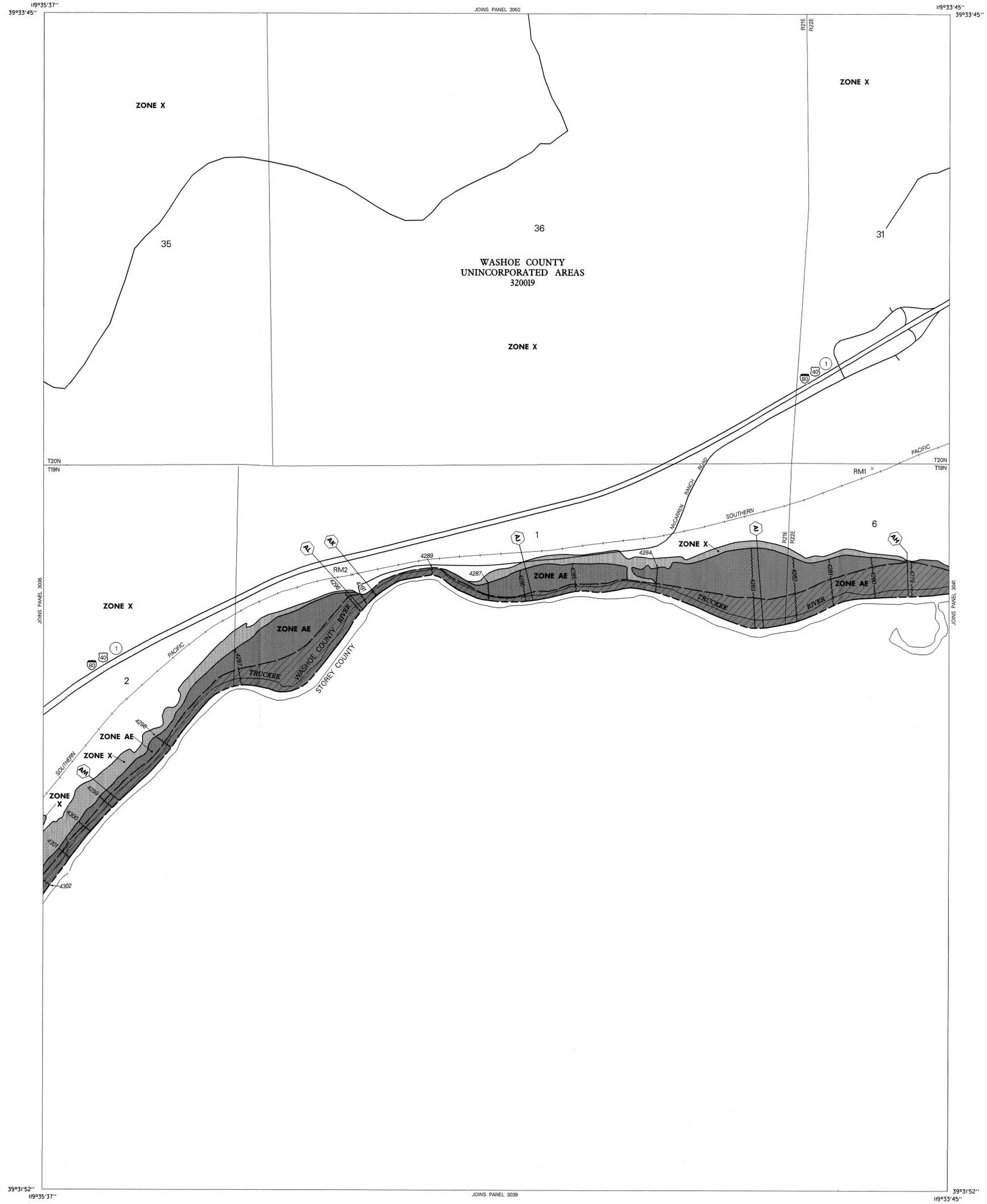
EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-14
Federal Emergency Management Agency

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 19 NORTH, RANGE 21 EAST AND TOWNSHIP 20 NORTH, RANGE 21 EAST.



REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM1	4311.42	Railroad spike in telephone pole number 308, located along Interstate Route 80 eastbound. Take the Patrick exit, turn right and go southwest on Frontage Road 414 0.55 mile to a railroad crossing. Turn left and go northeast 0.2 mile to a railroad crossing, then turn left and follow a dirt road on the north side of the tracks 0.18 mile to a railroad call box. Station is on the left. Established by Towill, Inc.
RM2	4307.27	Railroad spike in a telephone pole on the projection of a bridge centerline, located along Interstate Route 80 eastbound. Take the Patrick exit, turn right and go southwest on Frontage Road 414 0.55 mile to railroad crossing. Follow a farm road southwest along the tracks 0.6 mile to a "Y" intersection. Take the right fork and go 0.05 mile to a pole. Station is on the right. Established by Towill, Inc.



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1980
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Boundaries:
 - Flood Boundary
 - Floodway Boundary
 - Zone D Boundary
 - Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line:
 Elevation in Feet. See Map Index for Elevation Datum.

Cross Section Line:
 Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.

Other Symbols:
 - (EL 987) Elevation Reference Mark
 - M7 River Mile
 - M2 River Mile

97°07'30", 32°22'30"

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6820.

APPROXIMATE SCALE IN FEET
0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3037 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

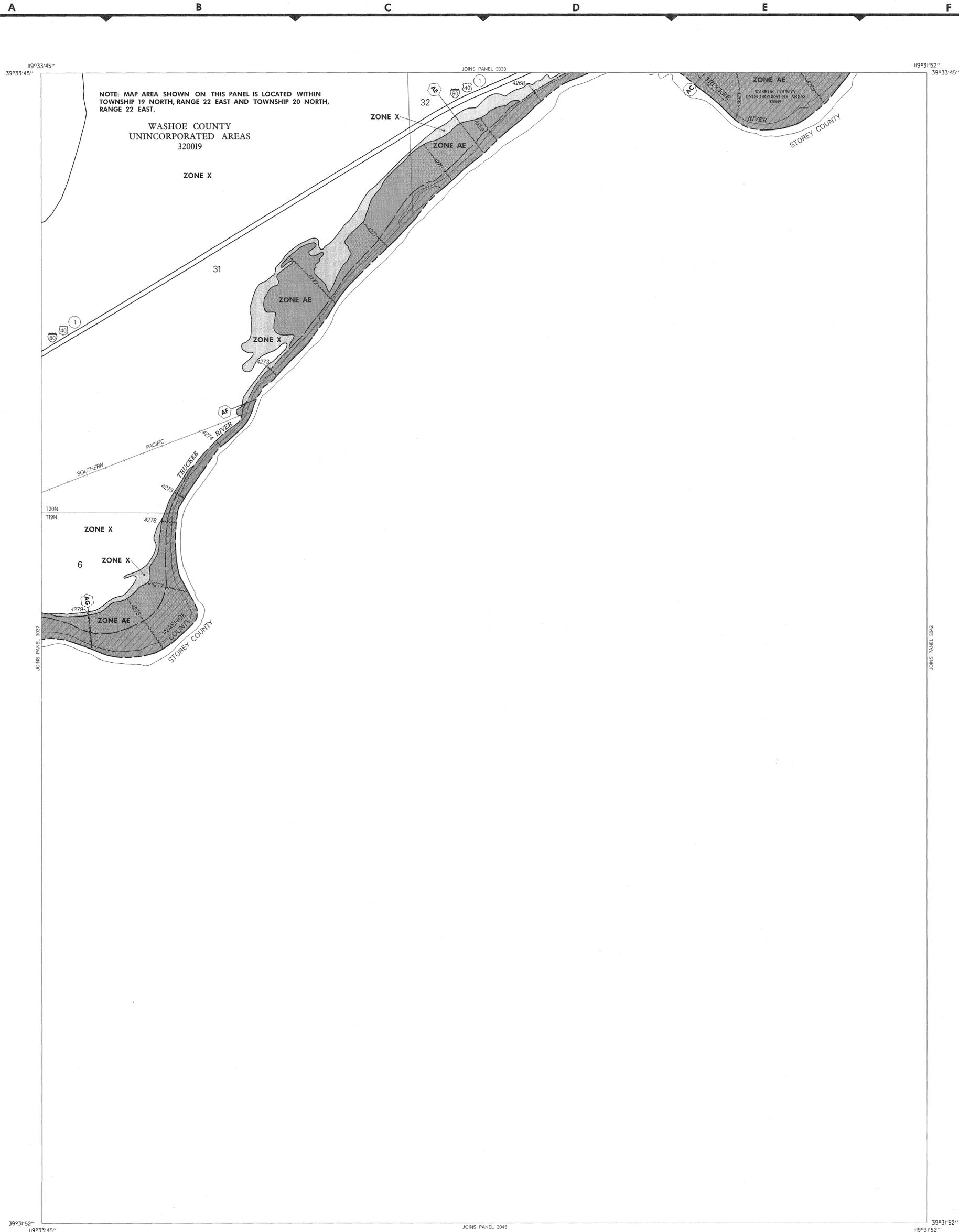
CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	320019	3037	E	

MAP NUMBER 32031C3037 E

EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-15

Federal Emergency Management Agency



LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- FLOODWAY AREAS IN ZONE AE
- OTHER FLOOD AREAS**
- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.
- UNDEVELOPED COASTAL BARRIERS**
- Identified 1983
- Identified 1990
- Otherwise Protected Area
- Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.
- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- Base Flood Elevation Line, Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
- Elevation Reference Mark
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET
500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3041 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

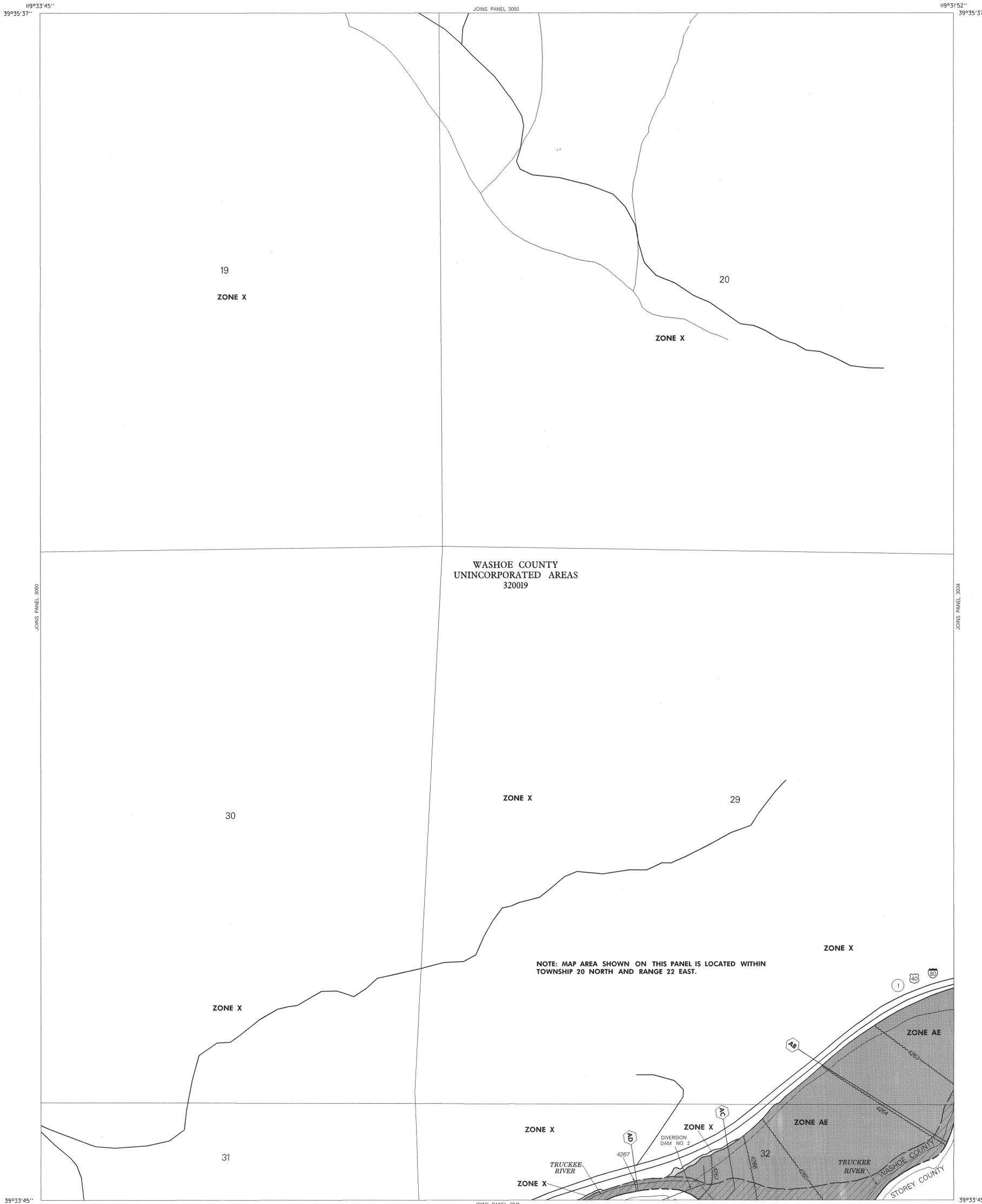
CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	320019	3041	E

MAP NUMBER
32031C3041 E

EFFECTIVE DATE:
SEPTEMBER 30, 1994

Appendix E-16
Federal Emergency Management Agency

A B C D E F



LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- FLOODWAY AREAS IN ZONE AE**
- OTHER FLOOD AREAS**
- ZONE X** Areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 100-year flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.
- UNDEVELOPED COASTAL BARRIERS**
- Identified 1983
- Identified 1990
- Otherwise Protected Areas
- Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.
- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
- Elevation Reference Mark
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-581).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY

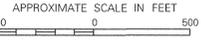
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
WASHOE COUNTY,
NEVADA AND
INCORPORATED AREAS

PANEL 3033 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY UNINCORPORATED AREAS	320019	3033	E

MAP NUMBER
32031C3033 E

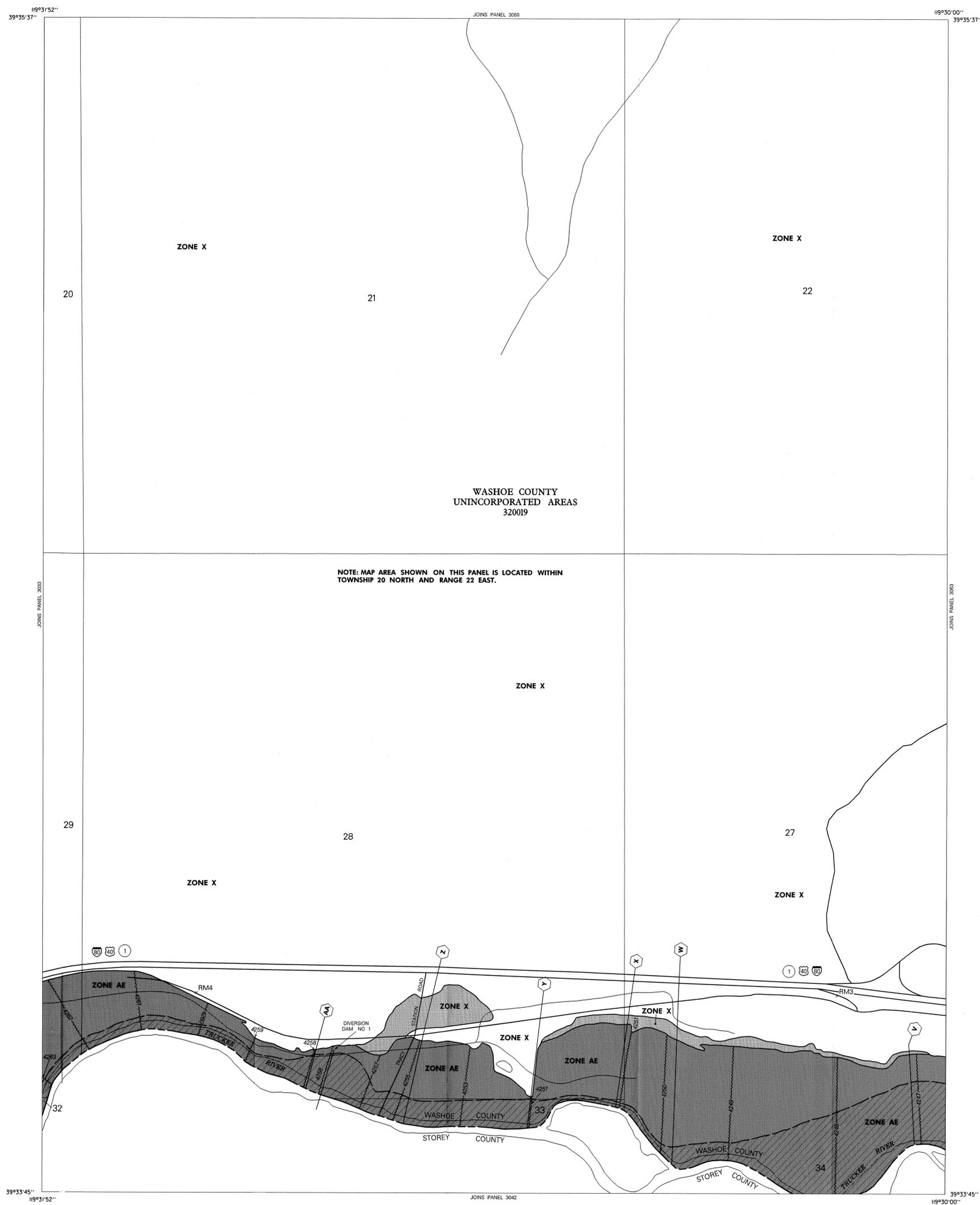
EFFECTIVE DATE:
SEPTEMBER 30, 1994



Appendix E-17

Federal Emergency Management Agency

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM3	4265.13	Chiseled square on the southeast corner of an electroliner, located along Interstate Route 80 eastbound. Take the Tracy Clark station exit on the off ramp south of a painted directional arrow. Established by Towill, Inc.
RM4	4272.33	Railroad spike in the first set of poles, west of an angle point in the powerline, 200 feet south of Interstate Route 80 and 0.13 mile west of a freeway exit sign reading "Tracy Clark Station, Exit 1 mile," located along Interstate Route 80 eastbound. Take the Tracy Clark Station exit, turn right and go west on the Frontage Road 0.75 mile to a sharp bend in the road. Continue straight ahead on a dirt road 0.42 mile to a double power pole. Station is on the left. Established by Towill, Inc.



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1963
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line; Elevation in Feet. See Map Index for Elevation Datum.

Cross Section Line

Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum, Elevation Reference Mark.

RM7 X

MZ

Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1982 (PL 101-501).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6820.

APPROXIMATE SCALE IN FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3034 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	320199	3034	E	

MAP NUMBER
32031C3034 E

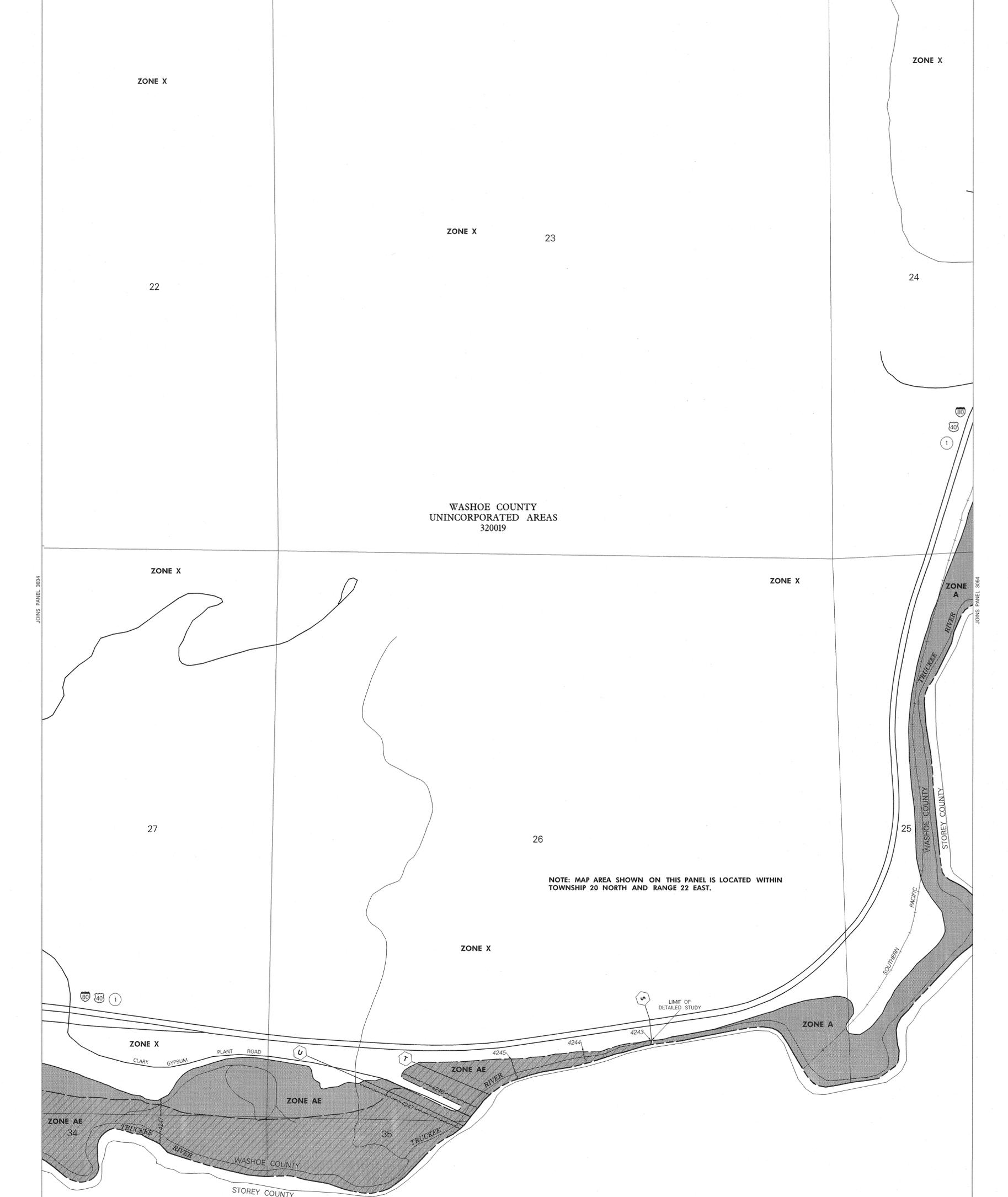
EFFECTIVE DATE:
SEPTEMBER 30, 1994

Appendix E-18

Federal Emergency Management Agency

A B C D E F

19°30'00" 39°35'37" JOINS PANEL 3055 19°28'07" 39°35'37"



39°33'45" 19°30'00" JOINS PANEL 3075 19°28'07" 39°33'45"

LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- FLOODWAY AREAS IN ZONE AE
- OTHER FLOOD AREAS**
- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.
- UNDEVELOPED COASTAL BARRIERS**
- Identified 1983
- Identified 1990
- Otherwise Protected Area
- Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.
- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones
- Base Flood Elevation Line; Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum. Elevation Reference Mark
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to county-wide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3053 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	320019	3053	E	

MAP NUMBER
32031C3053 E

EFFECTIVE DATE:
SEPTEMBER 30, 1994





KEY TO MAP

500-Year Flood Boundary	—	ZONE B
100-Year Flood Boundary	—	ZONE A1
Zone Designations		ZONE A5
		ZONE B
100-Year Flood Boundary	—	
500-Year Flood Boundary	—	
Base Flood Elevation Line With Elevation In Feet**	— 51.3 —	
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)	
Elevation Reference Mark	RM7x	
Zone D Boundary	—	
River Mile	•M1.5	

**Referenced to the National Geodetic Vertical Datum of 1929

EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A90	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
JANUARY 10, 1978

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
FEBRUARY 19, 1987

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

STOREY COUNTY,
NEVADA
(UNINCORPORATED AREAS)

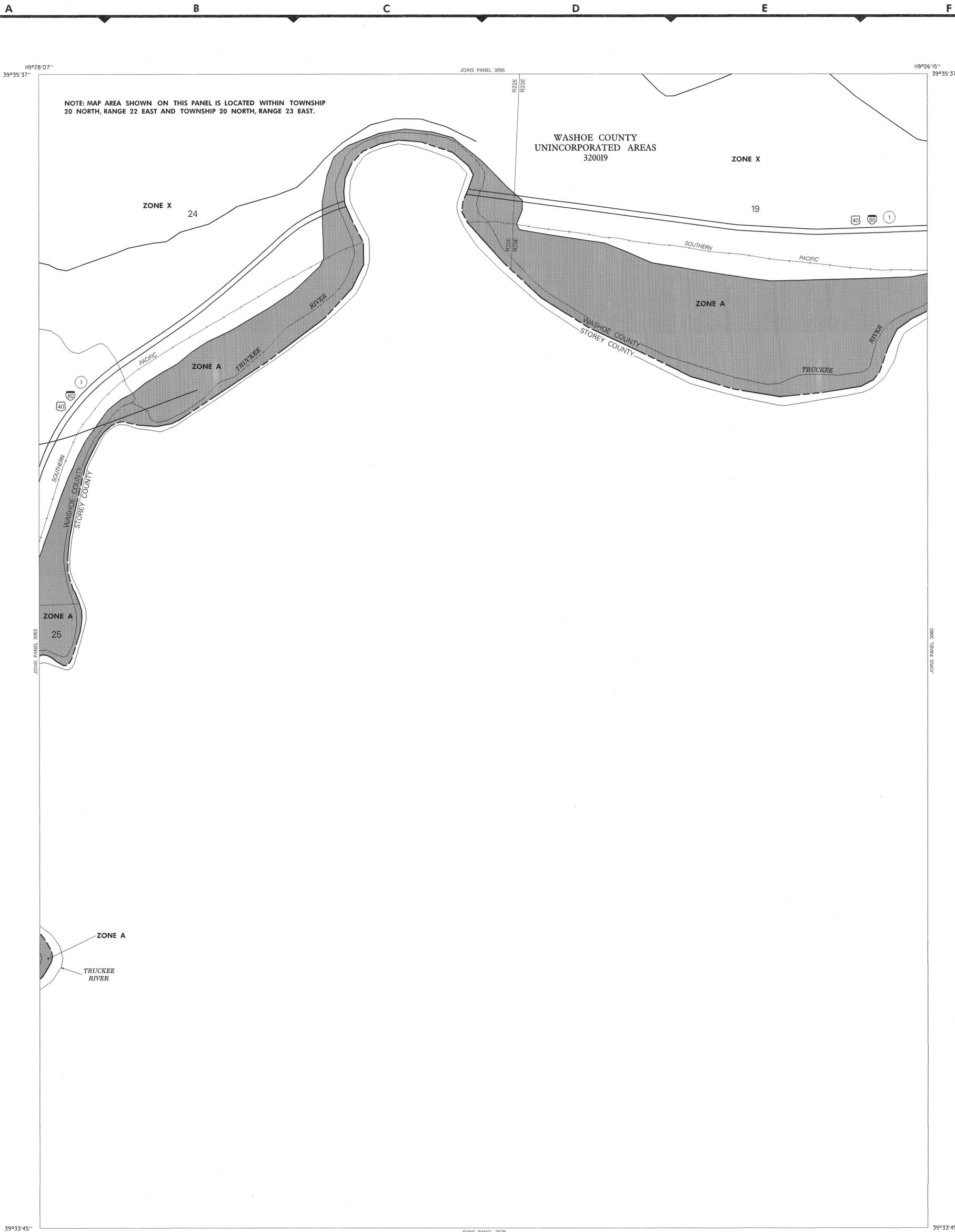
PANEL 40 OF 150
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
320033 0040 B

EFFECTIVE DATE:
FEBRUARY 19, 1987



Appendix E-20
Federal Emergency Management Agency



LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain; average depths determined. For areas of alluvial fan flooding, velocities also determined).
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- FLOODWAY AREAS IN ZONE AE
- OTHER FLOOD AREAS**
- ZONE X** Areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 100-year flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.
- UNDEVELOPED COASTAL BARRIERS**
- Identified 1983
- Identified 1990
- Otherwise Protected Areas
- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- Base Flood Elevation Line; Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum. Elevation Reference Mark.
- RM7
- M2
- River Mile
- 97°07'30", 32°22'30"
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

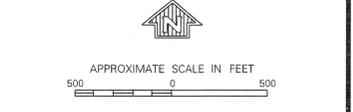
MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
WASHOE COUNTY,
NEVADA AND
INCORPORATED AREAS

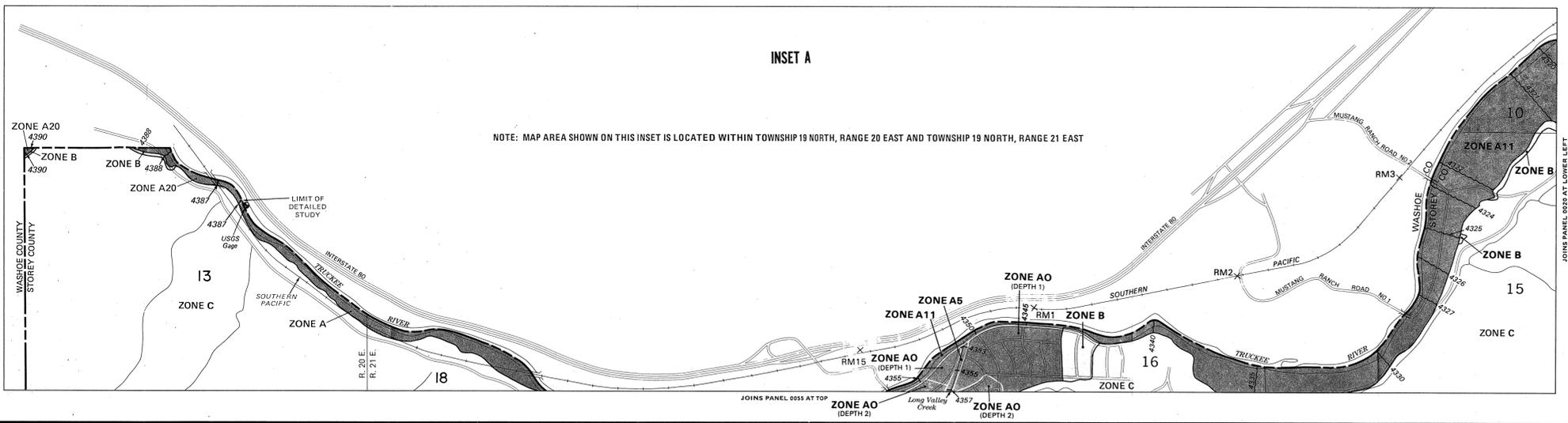
PANEL 3054 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY UNINCORPORATED AREAS		320019	3054	E

MAP NUMBER
32031C3054 E

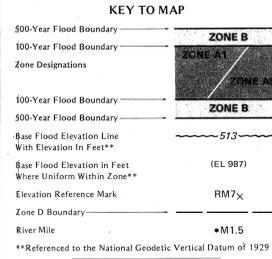
EFFECTIVE DATE:
SEPTEMBER 30, 1994





REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM1*	4388.00	Chisled X on the northeast bolt of a railroad light signal, at the west end of Hated siding railroad mile 252.5, located along Interstate Route 80 eastbound, take the Lockwood exit, turn right and go south from the railroad track overcrossing to a sharp bend in the road, turn left on a dirt road and follow the railroad tracks east 0.6 mile to a light signal and the station. Established by Towill, Inc.
RM2*	4376.34	Cut X on a bolt at the base of a railroad signal, on the south side of the tracks, located along Interstate Route 80 eastbound, take the Mustang exit, turn right and go south 0.4 mile to a railroad crossing and station on the right. Established by Towill, Inc.
RM3*	4349.46	Chisled square on the northeast corner of the westerly footing, located along Interstate Route 80 eastbound, take the Mustang exit, go east on Frontage Road 412 0.6 mile to railroad bridge and the station on the right. Established by Towill, Inc.
RM15*	4388.5	A U.S. Coast and Geodetic Survey brass disk stamped "C 339 1953" located 2.9 miles southeast along the Southern Pacific Company railroad from the siding sign at Vista, 16.5 feet northwest of milepost 252, at the crossing of a graded road, 75.8 feet northwest of the northwest corner of the concrete base of electric crossing signal 2521, 56 feet west of the centerline of the road, 45 feet north of the north rail, in line with a row of poles, 2.2 feet east of a witness post about 2 feet higher than the track, and set in the top of a concrete post projecting 0.4 foot above the ground.

*OUTSIDE CORPORATE LIMITS



EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile, or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Areas of special flood hazard (100-year flood) include Zones A, A1-30, AE, AH, AO, A99, V, V1-30 AND VE.

Certain areas not in the Special Flood Hazard Areas (zones A and V) may be protected by flood control structures.

Coastal base flood elevations apply only landward of the shoreline shown on this map.

For adjoining map panels, see separately printed Index to Map Panels.

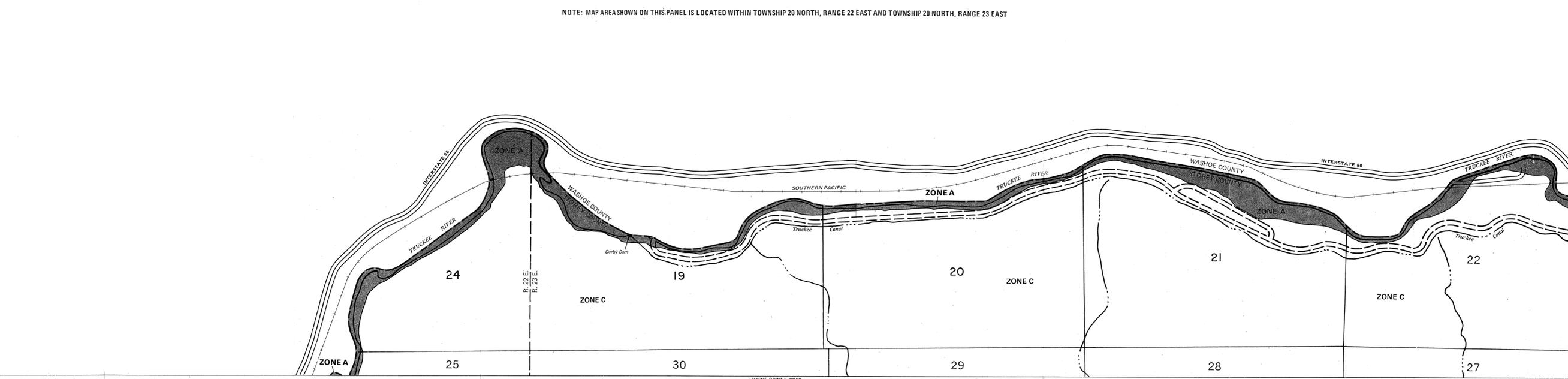
INITIAL IDENTIFICATION:
JANUARY 10, 1978

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
FEBRUARY 19, 1987

FLOOD INSURANCE RATE MAP REVISIONS:
Map revised JULY 19, 1993 to change base flood elevations, to add base flood elevations, to change zone designations, and to add roads and road names.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

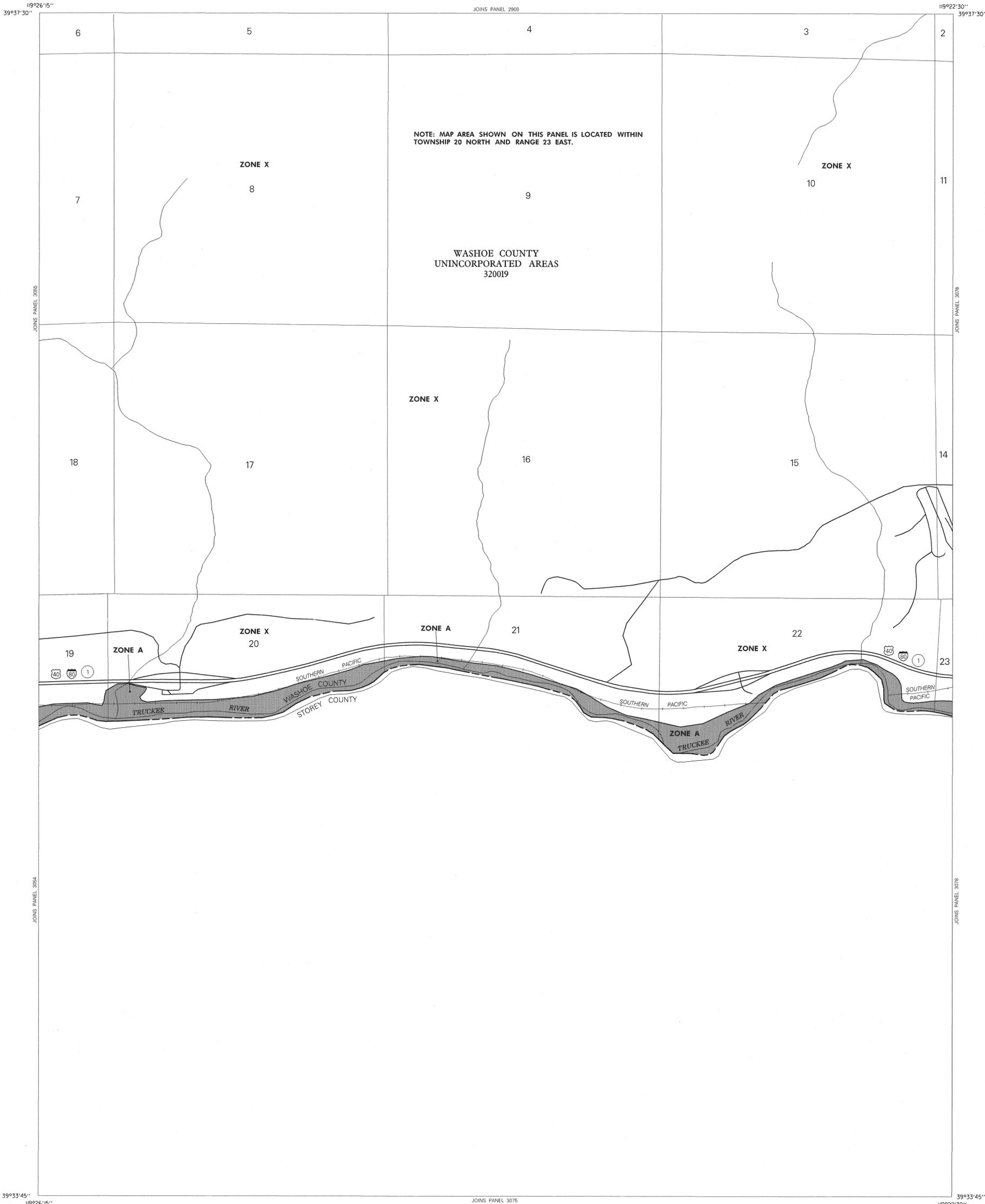
STOREY COUNTY,
NEVADA
(UNINCORPORATED AREAS)

PANEL 30 OF 150
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
320033 0030 C

MAP REVISED:
JULY 19, 1993

Appendix E-22
Federal Emergency Management Agency



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

BOUNDARIES

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones

ELEVATIONS

- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line: Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum. Elevation Reference Mark.

OTHER MARKERS

- RM7 X
- M2
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-651).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6622.

APPROXIMATE SCALE IN FEET
1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3060 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY UNINCORPORATED AREAS	320019	3060	E

MAP NUMBER
32031C3060 E

EFFECTIVE DATE:
SEPTEMBER 30, 1994

Appendix E-23
Federal Emergency Management Agency

19°22'30" 39°35'37"

JOINS PANEL 3076

19°20'37" 39°35'37"

WASHOE COUNTY UNINCORPORATED AREAS 320019

23

ZONE X

ZONE A

40 80 1

SOUTHERN

PACIFIC

RIVER

WASHOE COUNTY STOREY COUNTY

TRUCKEE

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 20 NORTH AND RANGE 23 EAST.

LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD**
- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- FLOODWAY AREAS IN ZONE AE**
- OTHER FLOOD AREAS**
- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.
- UNDEVELOPED COASTAL BARRIERS**
- Identified 1963
- Identified 1990
- Otherwise Protected Areas
- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line (EL. 987)
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum, Elevation Reference Mark.
- RM7 X
- M2
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF

COUNTYWIDE FLOOD INSURANCE RATE MAP:

SEPTEMBER 30, 1994

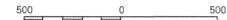
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.



APPROXIMATE SCALE IN FEET



NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3078 OF 3350 (SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY NUMBER, PANEL, SUFFIX

WASHOE COUNTY UNINCORPORATED AREAS 320019 3078 E

MAP NUMBER 32031C3078 E

EFFECTIVE DATE: SEPTEMBER 30, 1994



Appendix E-24

Federal Emergency Management Agency

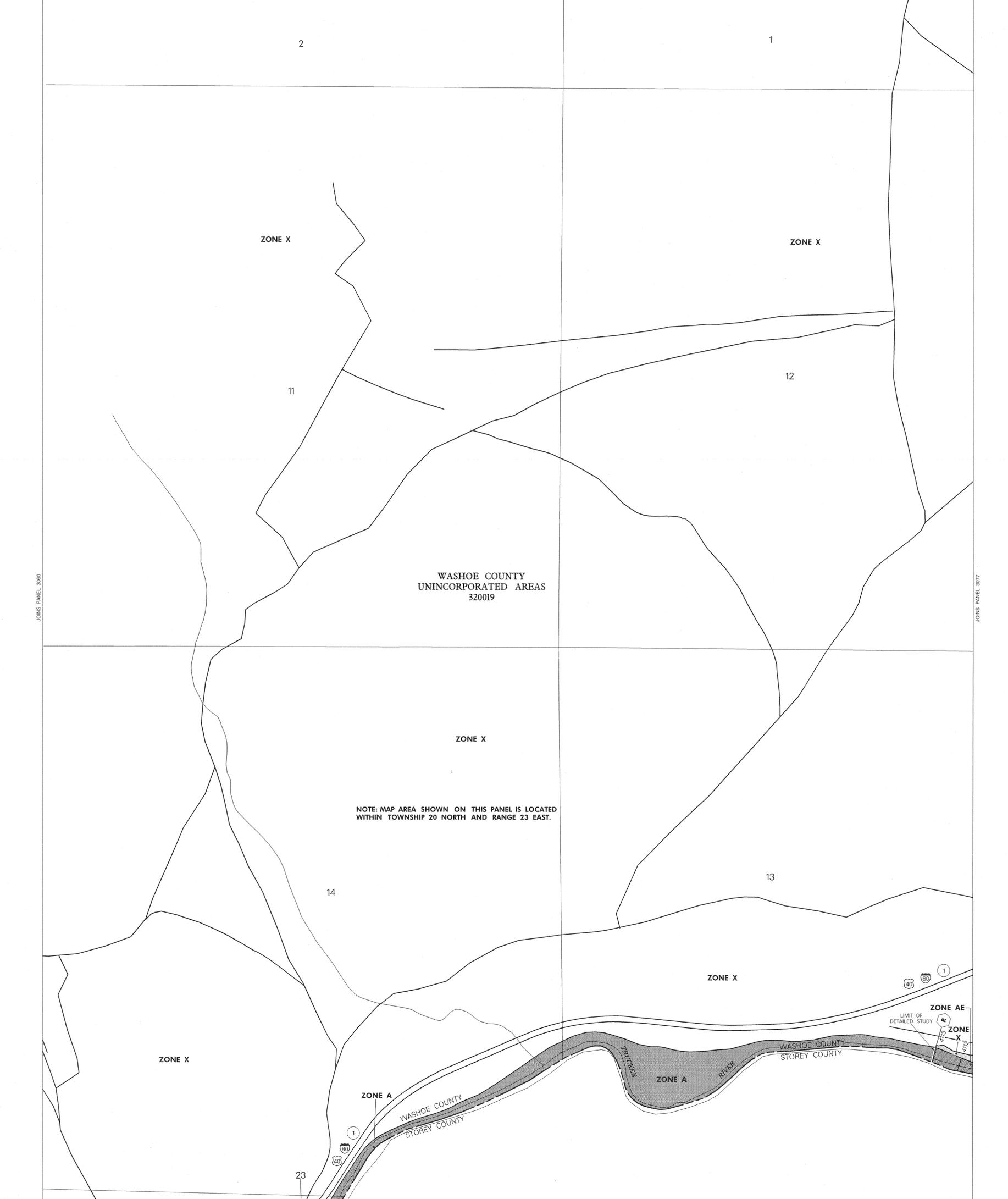
39°33'45" 19°22'30"

JOINS PANEL 3100

19°20'37" 39°33'45"

A B C D E F

119°22'30" 39°37'30" JOINS PANEL 2925 119°20'37" 39°37'30"



39°35'37" 119°22'30" JOINS PANEL 3078 119°20'37" 39°35'37"

LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
 - ZONE A** No base flood elevations determined.
 - ZONE AE** Base flood elevations determined.
 - ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
 - ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
 - ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
 - ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
 - ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
 - FLOODWAY AREAS IN ZONE AE
 - OTHER FLOOD AREAS**
 - ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
 - OTHER AREAS**
 - ZONE X** Areas determined to be outside 500-year floodplain.
 - ZONE D** Areas in which flood hazards are undetermined.
 - UNDEVELOPED COASTAL BARRIERS**
 - Identified 1983
 - Identified 1990
 - Otherwise Protected Areas
- Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.
- Flood Boundary
 - Floodway Boundary
 - Zone D Boundary
 - Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
 - Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
 - Cross Section Line
 - Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum. Elevation Reference Mark
 - River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

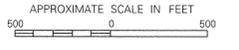
MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actual rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6629.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3076 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY UNINCORPORATED AREAS	320019	3076	E	

MAP NUMBER
32031C3076 E

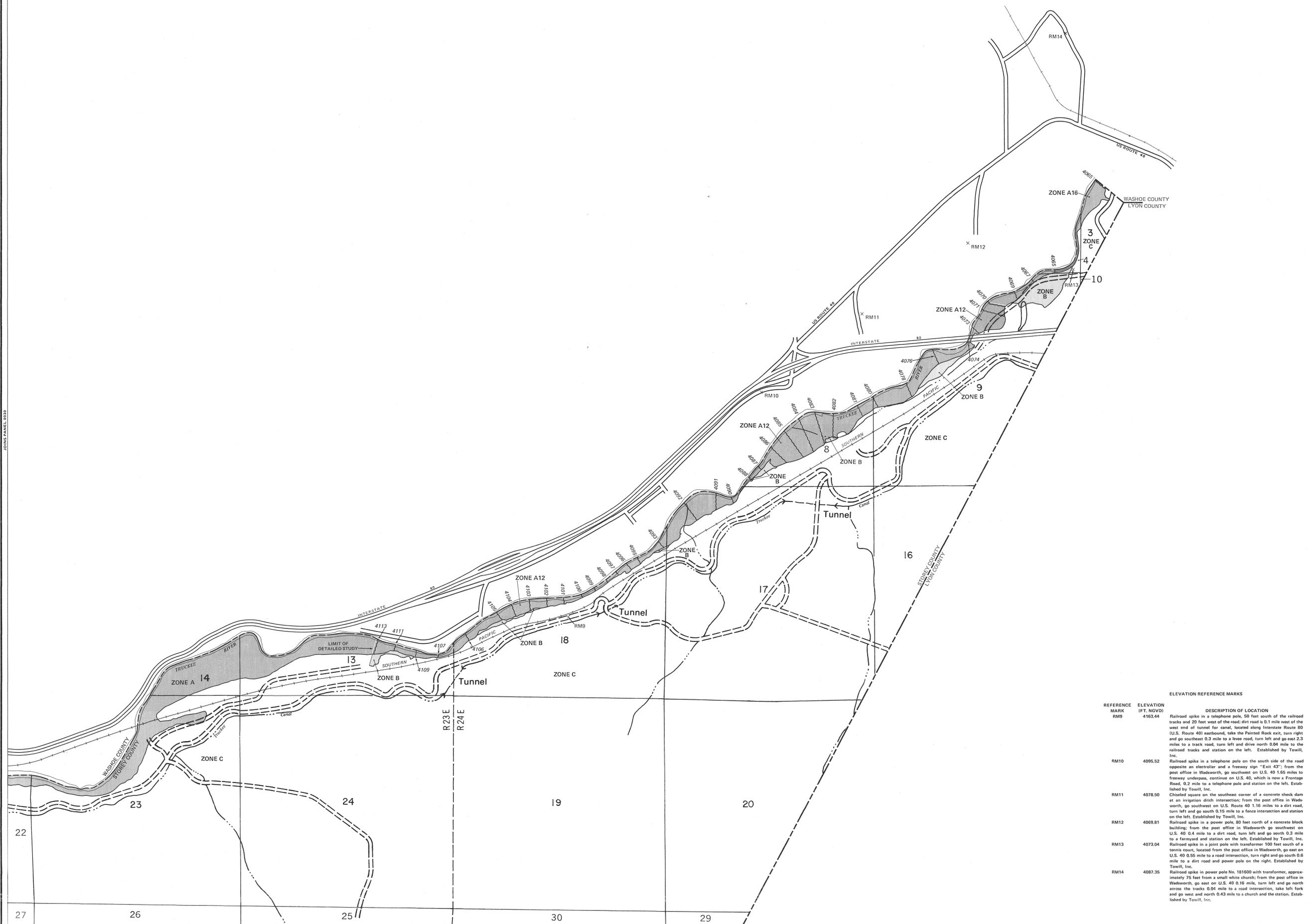
EFFECTIVE DATE:
SEPTEMBER 30, 1994



Appendix E-25

Federal Emergency Management Agency

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 20 NORTH, RANGE 23 EAST AND TOWNSHIP 20 NORTH, RANGE 24 EAST



KEY TO MAP

500-Year Flood Boundary	Zone B
100-Year Flood Boundary	Zone A1
Zone Designations	Zone A5
100-Year Flood Boundary	Zone B
500-Year Flood Boundary	Zone B
Base Flood Elevation Line With Elevation In Feet**	51.3
Base Flood Elevation In Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7x
Zone D Boundary	
River Mile	M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot on where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index to Map Panels.

INITIAL IDENTIFICATION:
JANUARY 10, 1978

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
FEBRUARY 19, 1987

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM9	4163.44	Railroad spike in a telephone pole, 50 feet south of the railroad tracks and 20 feet west of the road; dirt road is 0.1 mile west of the west end of tunnel for canal, located along Interstate Route 80 (U.S. Route 40) eastbound, take the Painted Rock exit, turn right and go southwest 0.3 mile to a levee road, turn left and go east 2.3 miles to a track road, turn left and drive north 0.04 mile to the railroad tracks and station on the left. Established by Towill, Inc.
RM10	4095.52	Railroad spike in a telephone pole on the south side of the road opposite an electroler and a freeway sign "Exit 43"; from the post office in Wadsworth, go southwest on U.S. 40 1.65 miles to freeway underpass, continue on U.S. 40, which is now a Frontage Road, 0.2 mile to a telephone pole and station on the left. Established by Towill, Inc.
RM11	4078.50	Chiselled square on the southeast corner of a concrete check dam at an irrigation ditch intersection; from the post office in Wadsworth, go southwest on U.S. Route 40 1.16 miles to a dirt road, turn left and go south 0.15 mile to a fence intersection and station on the left. Established by Towill, Inc.
RM12	4068.81	Railroad spike in a power pole, 80 feet north of a concrete block building; from the post office in Wadsworth go southwest on U.S. 40 0.4 mile to a dirt road, turn left and go south 0.3 mile to a farmyard and station on the left. Established by Towill, Inc.
RM13	4073.04	Railroad spike in a joint pole with transformer 100 feet south of a tennis court, located from the post office in Wadsworth, go east on U.S. 40 0.55 mile to a road intersection, turn right and go south 0.6 mile to a dirt road and power pole on the right. Established by Towill, Inc.
RM14	4087.35	Railroad spike in power pole No. 181600 with transformer, approximately 75 feet from a small white church; from the post office in Wadsworth, go east on U.S. 40 0.16 mile, turn left and go north across the tracks 0.04 mile to a road intersection, take left fork and go west and north 0.43 mile to a church and the station. Established by Towill, Inc.

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

STOREY COUNTY, NEVADA (UNINCORPORATED AREAS)

PANEL 35 OF 150 (SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER 320033 0035 B

EFFECTIVE DATE: FEBRUARY 19, 1987

Appendix E-26 Federal Emergency Management Agency



JOINS PANEL 0038

JOINS PANEL 0045

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
* RM34	4163.44	Railroad spike in a telephone pole, 50 feet south of the railroad tracks and 20 feet west of the west end of tunnel for canal, located along Interstate Route 80 (U.S. Route 40) eastbound. Take the Painted Rock exit, turn right and go southeast 0.3 mile to a levee road. Turn left and go east 2.3 miles to a track road, turn left and drive north 0.04 mile to the railroad tracks. Station is on the left. Established by Towill, Inc.

* LOCATED OUTSIDE STUDY AREA



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 20 NORTH, RANGE 23 EAST AND TOWNSHIP 20 NORTH, RANGE 24 EAST.

WASHOE COUNTY
UNINCORPORATED AREAS
320019

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet usually areas of ponding; base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet usually sheet flow on sloping terrain; average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified 1990
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Boundaries

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Elevation

- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
- Elevation Reference Mark
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

97°07'30", 32°22'30"

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System limits and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6920.

APPROXIMATE SCALE IN FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3077 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS		320019	3077	E

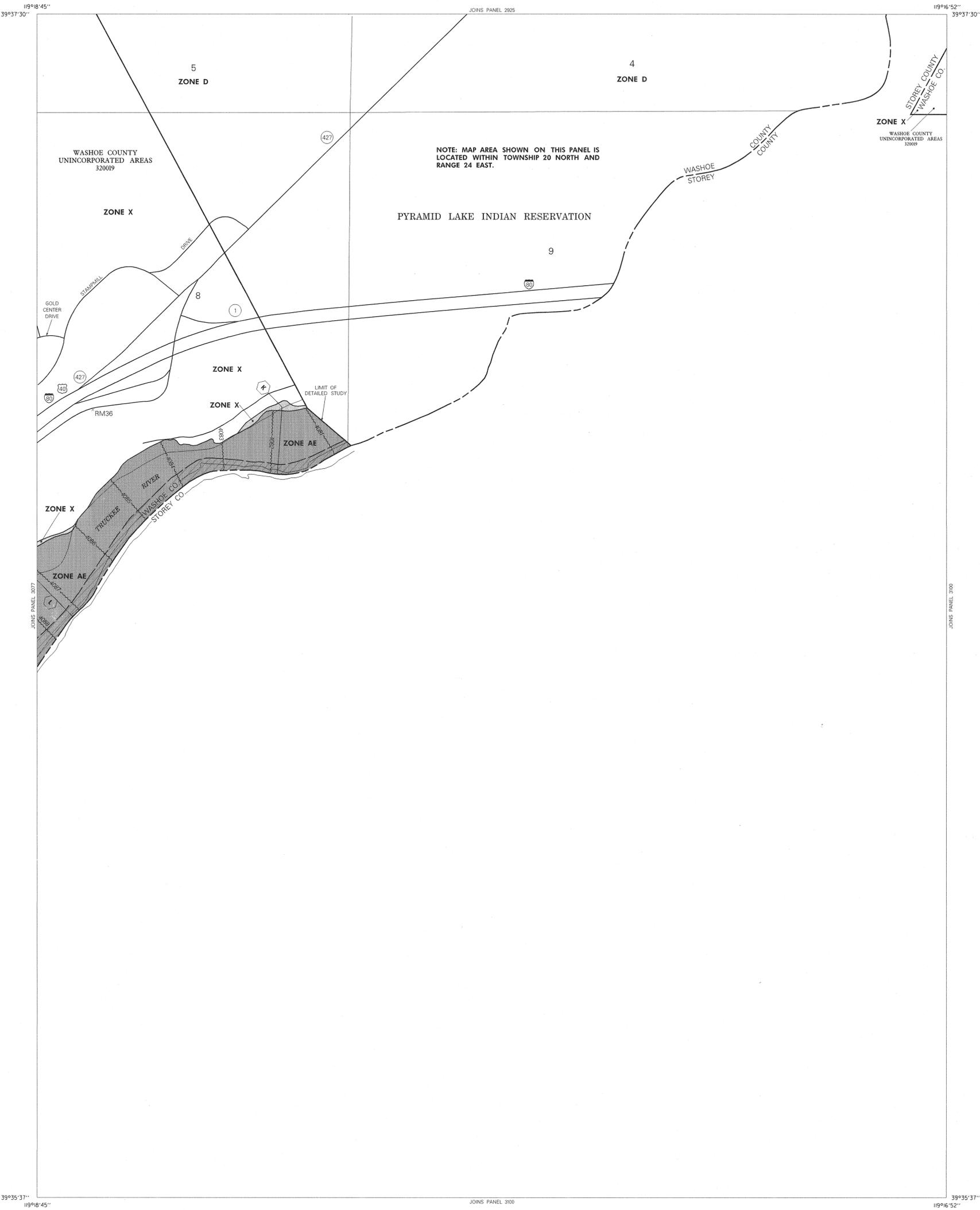
MAP NUMBER 32031C3077 E

EFFECTIVE DATE: SEPTEMBER 30, 1994

Appendix E-27

Federal Emergency Management Agency

REFERENCE MARK	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
RM36	4095.52	Railroad spike in a telephone pole on the south side of the road opposite an electric pole and a freeway sign reading "Exit 43." From the post office in Wadsworth, go southwest on U.S. 40 (which is now a Frontage Road) 0.2 mile to a telephone pole. Station is on the left. Established by Towill, Inc.



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 20 NORTH AND RANGE 24 EAST.

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDED BY 100-YEAR FLOOD

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AD** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

- Identified 1983
- Identified
- Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Boundary

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Line

- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet Where Uniform Within Zone. See Map Index for Elevation Datum.
- Elevation Reference Mark
- River Mile
- Horizontal Coordinates Based on North American Datum of 1927 (NAD 27) Projection.

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all panimetric features outside Special Flood Hazard Areas.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AD, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

This map may incorporate approximate boundaries of Coastal Barrier Resource System Units and/or Otherwise Protected Areas established under the Coastal Barrier Improvement Act of 1990 (PL 101-591). Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see Section 6.0 of the Flood Insurance Study Report.

For adjoining map panels and base map source see separately printed Map Index.

MAP REPOSITORY
Refer to Repository Listing on Map Index.

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP:
SEPTEMBER 30, 1994

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when actuarial rates apply to structures in zones where elevations or depths have been established.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

WASHOE COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 3081 OF 3350
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
WASHOE COUNTY, UNINCORPORATED AREAS	320019	3081	E	

MAP NUMBER
32031C3081 E

EFFECTIVE DATE:
SEPTEMBER 30, 1994

Appendix E-28

Federal Emergency Management Agency

Appendix F

Cultural Resource Investigation Tables

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
08-0072	3-0342	BA	1979	Busby, C., J. Bard, B. Dawson, and P. Ogrey	Inventory of the Sierra Pacific Power Company's Transimission Line Corridor: Valmy to Mira Loma, Nevada
10-0051	3-0833	NL	1983	Matranga, P.	Pavement Overlay and Rehabilitation of US 95a from Silver Springs to Fernley. EA 71083
10-0100	2-0825	BL	1983	Till, S.	R & PP School Site for Lyon County
10-0141	3-0372	NL	0	Steinberg, L	Material Pit LY23-1, Southeast of Fernley
10-0142	3-0376	BL	1980	Pope, C.	R & PP-N-20284- Lyon County School District
10-0162	3-0974	BL	1985	Hatoff, B.	N-41595 Direct Sale, Nevada Cement Co.
10-0180	3-1083	BL	1986	Hatoff, B.	N-43685, Lyon County Access Road, Lyon County, Nevada
10-0196	3-1150	AR	0	Young, B	Inventory of a porposed Fibre Optic Cable Trench between Fernley and Silver Springs, Virginia Range
10-0207		NP	1987	Burke, T.	Inventory of the Eagle Substation/Nevada Cement Project Parcel Cultural Resources Reprot of the Eagle/Nevada Cement Project Parcel, Lyon County, Nevada
10-0223	3-1330	BL	1989	Pope. C.	Fernley Town Utilities, Right-of-Way Proposal N-51242, Lyon County, Nevada; Water Tank, Pipeline, and Access Road
10-0233		ME	1993	Kautz, R.	Unit No. 1 Cottonwood Ranches Subdivision Archaeological Survey, Lyon County, Nevada
10-0249	3-1657	BL	1994	Kautz, R.	Fernley Airport Emergenmcy East/West Landing Strip Survey, Lyon County, Nevada
10-0276		JB	1998	Prince-Mahoney, J and S. Billat	Inventory of the 37 acre Parcel in the Fernley Business Park, Lyon county, Nevada
10-0278	3-1842	BL	1998	Bowyer, G.	Fernley Nevada System Improvement Survey, Lyon County, Nevada
10-0279	3-1852	BL	1998	Hufnagle, J.	Sheri Hill Buried Utilities R/W, Lyon County, Nevada
10-0286		BL	1998	Bowyer, G. and M. Waski	Analysis of the Archaeological Sensitive Area South of Fernley, Lyon County, Nevada
10-0287		KF	1999	Hutchins, J. et al	Inventory of Tiger Field, Lyon County, Nevada
10-0288	3-1924	KF	1999	Hutchins, J. and D. Simons	Inventory of the Fernley- Silver Springs Fiber Optic Line, Lyon County, Nevada
15-0009		NE	0	Johnson, D	Archaeological Reconnaissance of 40 Acres in Lockwood
15-0016	3-1074	BL	1986	Pope, C.	Modified Cmppetitive Land Sale, Storey County, Nevada
15-0021		IF	1990	Stornetta, S.	Survey of a Proposed Gravel Pit in Storey County, Nevada, Near Patrick for Granite Construction
15-0030		EJ	1994	Ebasco Environmental	Sierra Pacific Power Company Pinon Pine Power Project Historic Properties Inventory and Archaeological Site Evaluation
15-0034	1-1264	AR	1997	Burke, T.	Inventory of a Proposed Water Tank Site, Storey County, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0003	3-0005	BL	1975	York, R.	Mustang Materials Exploration Permit, Cultural Resources Recon
16-0008		NE	1976	Dansie, A.	NAA Reporter: "Excavation in Washoe Valley, The Reynolds Site (26Wa2487)"
16-0010		NE	1975	Harrigan, W.	Installation of Approximately 3/4 Mile of 12.5 Kv Electric Service Line
16-0018	3-0053	BL	1976	Dunbar, H.	West 7th Street Community Pit
16-0023	3-1138	BL	1976	Botti, N. and R. Kautz	Cooperative Soil Survey on Southern Part Washoe County, Soil Survey Area #628
16-0030	3-0276	BL	1979	Pope, C.	Right-Of-Way - N-20913 - McClatchy Newspapers, Licensee of Radio Station KOH
16-0031	3-0054	BL	1976	Pinzl, J.	Right-Of-Way N-12662, Sierra Pacific Power Company Overhead 24.9 Kv Electric Powerline
16-0035	3-0167	NE	1977	Seelinger, E.	Investigation for Sun Valley Waste Water Transfer, Storage and Treatment Facilities
16-0039	3-0151	NF	1976	Touhy, D.	Pyramid Lake Fence Rehabilitation, Washoe County, Nevada
16-0041	3-0409	ND	1976	Townsend, G. and C. Covington	Preliminary Archeological Reconnaissance of the Ring Road from U.S. 40 N & E T U.S. 395 Nevada Highway Dept. RS-Su-821(5) Ea# 70473
16-0059	3-0175	BL	1977	Pinzl, J.	Right-Of-Way, N-17396, Silver State Asphalt
16-0081	3-0170	BL	1979	Bureau of Land Management	Addendum to Cultural Resources Report #3-170(P)
16-0082	3-0392	DA	0	Pippin, L	Preliminary Reconnaissance of the Reno-Sparks Sewage Effluent Sludge Disposal Alternative, Spanish Spring
16-0082	3-0475	DA	1980	McLane, A.	Inventory in Spanish Springs Valley, Washoe County, Nevada
16-0082	3-0705	NE	0	Johnson, D	High Basin Northeast and Spanish Springs Archaeology
16-0085		NL	1978	Turner, H.	R.W. Survey of Kietzke & Second, M-667(1), E.A. 70837
16-0086	3-0236	BL	1978	Harrigan, W.	Tracy-Valley Road 345 Kv Line
16-0087		NL	1978	Turner, H.	Sullivan Lane Sos-31(5), E.A. 70895
16-0090	3-0202	BL	1978	Pinzl, J.	Right-Of-Way, N-18448, Sierra Pacific Power Company
16-0093		NL	1978	Turner, H.	R/W on South Virginia, E.A. 70835, Sps-430(1), and (Neg), Spm 661(1)
16-0094		NL	1978	Turner, H.	Sos-31(2), E.A. 70877, Boynton Ln, R/W Survey
16-0096		NL	1978	Turner, H.	I-080-1(87)16, 70907, I-80-Sparks, Rock Blvd. and Pyramid Way Interchanges
16-0097		NL	1978	Stearns, S. and H. Turner	Sos-31(3), 70879
16-0099	2-0293	BL	1979	Smith, R.	Bureau of Motion Sale (N-21759) between Fernley and Wadsworth
16-0101	3-0479	NL	1980	Metcalf, M.	Use on Clear Acre Lane and Sun Valley Drive, E.A. #70970
16-0113	3-0657	DA	1981	Johnson, D.	Reconnaissance of Existing and Proposed Roadways for the Patrick Development Lower Pah-Pah Mountains, Washoe County, Nevada
16-0118		IF	0	James, S	Archaeological Reconnaissance of Proposed I-80/Sparks Boulevard and I-80/Vista Boulevard Interchanges

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0123	3-0542	BL	1981	Hatoff, B.	Double Diamond Development, Proposed Dam Site
16-0124	3-0804	NE	1981	Rusco, M.	Preliminary Review of Cultural Resources Along the Truckee River from Stateline to West Reno
16-0128		IH	1982	Werner, R.	Archaeological Reconnaissance of Three Parcels Located Near the Airport Authority of Washoe County, Reno, Nevada
16-0130	3-0508	NL	1980	Stearns, S. and H. Turner	I-80 from Vista to McCarran Hill, E.a 70954
16-0135	3-0656	NL	1981	Stearns, S.	I-80 Overlay (E.A. 70654) from Stateline to Verdi. Milepost WA 00 to WA 4.85
16-0142	3-0889	NL	0	James, S	An Addendum to the 1982 Vista Archaeological Investigations, Washoe County, Nevada
16-0151		NE	1980	Touhy, D.	Pyramid Lake Housing
16-0153	3-0187	BL	1977	Buder, R.	Exploration-Permit Application (Washoe CO. RDS), Spanish Spgs Valley
16-0154	3-0220	BL	1978	Hatoff, B.	Nev-044290 R/W - Spanish Springs Underground Cable - Bell Telephone
16-0157	3-0227	BL	1978	Pinzl, J.	Tup 030-203, Reno Hills Limited Partnership
16-0159	3-0411	ND	1976	Leventhal, A.	Archeological Reconnaissance of the Reno-Sparks Indian Colony
16-0160	3-0418	ND	1975	Elston, R.	Preliminary Site Investigation: Assessment of Impacts on Archeological Sites by Donner Springs, Unit 2
16-0161	3-0421	ND	1975	Phillips, H.	Survey of Raleigh Heights Area, Reno, Nevada. E.A. 70596-0
16-0163	3-0238	BL	1978	Hatoff, B.	R&PP, N6115 City of Sparks
16-0166	3-0245	BL	1978	Hatoff, B.	Right-Of-Way N-20955, Transierra Media, Inc.
16-0170	3-0260	BL	1978	Pope, C.	Cultural Resources Report: Right-Of-Way - N-20462 - Teleprompter of Reno
16-0174	3-0292	NL	1979	Turner, H.	West Wadsworth Interchange, Highway 80 Westbound On/Off Ramps
16-0178	3-0311	BL	1979	Hatoff, B.	N-24960 - Right-Of-Way - Southwest Gas Corporation
16-0180	3-0318	BL	1979	Pinzl, J.	N-21760 - Right-Of-Way - Page Enterprises
16-0181	3-0370	NL	1979	Steinberg, L.	70954, Vista to McCarran Hill, I-80
16-0182		KF	2005	Simons, D., M. Kimball, and R. Kautz	Inventory of the Proposed Eskaton Village Developmnet, Southwest Reno, Washoe County, Nevada
16-0184	3-0371	NL	1979	McNeil, D.	Slope Cutting Safety Project, ID- Ir- 080-1(89) 19 Ea.70954
16-0186	3-0341	BL	1979	Hatoff, B.	N-25627 R/W Jonsson Communications Corp.
16-0187	3-0343	BL	1979	Pinzl, J.	030-232 - Temporary Use Permit - Milne Truck Lines, Inc.
16-0189	3-0452	NL	1979	Tomlinson, G.	Material and Testing Survey, Material Pit and Application #: WA 82-3
16-0191	3-0351	BL	1979	Pope, C.	Temporary Use Permit 030-236, Nev. Bureau of Mines and Geology
16-0192	3-0470	NL	1979	Tomlinson, G.	Material and Testing Survey Patrick Area
16-0198	3-0389	BL	1980	Pope, C.	Right-Of-Way - N-29561 - Charles E. Griner (Comm. Site)

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0202	3-0477	NL	1980	Stearns, S.	Clear Acre Lane Sun Valley Drive E.A. 70970 from the Intersection of Clear Acre and McCarran North to 2nd Avenue
16-0203	3-0478	NL	0	Metcalf, M	Material Pit (Lots 35-11 & 35-12) for Clear Acre Lane and Sun Valley Drive
16-0205	3-0474	BL	1980	Pope, C.	Right-Of-Way - Telecab Communications, Inc. - N-29951
16-0206	3-0489	BL	1980	Pope, C.	Access Road Right-Of-Way - Centennial Homes, Inc.
16-0210		NL	1980	Steinberg, L.	Fra/WPRR Intermodal Freight Depot. W.O.29106
16-0211	3-0516	NL	1980	Stearns, S.	Sun Valley Drive - 2nd Avenue to 7th Avenue E.A. # 70970
16-0217	3-0574	BL	1981	Buder, R.	Proposed Mineral Sale to Granite Const. CO.
16-0219	3-0647	NL	1981	Steinberg, L.	I-80 Wadsworth Interchange Material Pits, E.A. 71045
16-0221	3-0638	BL	1981	Pope, C.	City of Reno Fire Station
16-0224	3-0669	BL	1981	Anderson, D.	Right-Of-Way Amendment, Sierra Pacific Power Company, Kame to Extension (Nev-062513)
16-0226	3-0699	BL	1981	Anderson, D.	Rest Area Right-Of-Way, Interstate 80
16-0227	3-0596	DA	1981	McLane, A.	Survey in Spanish Springs Valley, Washoe County, Nevada
16-0228	3-0416	ND	1976	Elston, R. and C. Covington	Archeological and Historical Reconnaissance of the Proposed Panther Valley Sewer Line, City of Reno, Purchase Order No.12100
16-0230	3-0709	BL	1981	Hatoff, B.	Huffaker Hills Recreation and Public Purposes
16-0232	3-0719	BL	1982	Hatoff, B.	N-35294 - KOH Radio Transmitter R/W 10' right-Of-Way to Be Trenched for Telephone Cable
16-0238	3-0822	BL	1983	Moore, R.	Phillips Petroleum Company - NOI for Geothermal Exploration in the Truckee River Valley
16-0241	3-0880	NL	1983	Matranga, P.	Archaeological Site Evaluations Along the S Alignment from the I-580 Connection in Reno to Winters Ranch in Washoe Valley
16-0243	3-0849	BL	1983	Hatoff, B.	R & PP: Children's Ranch of America N-38089
16-0245	3-0859	BL	1983	Hatoff, B.	Southern Pacific Olinghouse Plan of Operation NV-36-83-11(P)
16-0251	3-0878	BL	1983	Pope, C.	First Broadcasting of Nevada Communication Site and Access Road
16-0253	3-0890	NL	1983	Debunch, P.	Verdi Bridge Project Structures (B-1687, B-1688), E.A. 71151
16-0255	TY 84-352	FS	1984	Turner, A.	Summary Report Warehouse/So Land Exchange
16-0258	3-0906	AR	1984	Kuffner, C.	Archaeological Investigation of Sierra Pacific Tracy/Valley Road 345Kv Amendment in Sun and Spanish Springs Valleys, Washoe County, Nevada
16-0259		IF	1984	Stornetta, S.	Reconnaissance of Lands Proposed for Residential Development for Summit Engineering, Reno, Nevada
16-0260	3-0909	BL	1984	Pope, C.	Sun Valley Water and Sanitary District Water Tank, Pipeline and Access Road
16-0261	3-0921	BL	1984	Pope, C.	Western Telecommunications Communication Site

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0263	3-0922	NL	1984	Bunch, J.	Betterment Along Ir-80 from 1.4 Miles West of Patrick to Painted Rock, E.A. 71168
16-0264	3-0923	BL	1984	Pope, C.	Vista Boulevard Extension, Sewer and Drain System and Cinnabar Hill Ditch Siphon (Right-Of-Way N-39897)
16-0269		AR	1983	Kuffner, C.	Preliminary Archaeological Investigation of Pyramid Ranch Homes Development Parcels in Spanish Springs Valley, Washoe County, Nevada
16-0271	3-0947	NL	1983	McNeil, J.	Survey of Clark Station Old Highway 40 Alignment, E.A. 71124
16-0272		AR	1984	Kuffner, C.	Archaeological Investigation of the Sierra Highlands Parcel, Washoe County, Nevada
16-0273		NL	0	Turner, H.	Materials Pit near Gilpin
16-0276	3-0423	ND	1975	Townsend, G.	Preliminary Archeological Reconnaissance of Reno-Verdi Interceptor
16-0280	3-0589	BL	1975	Roberts, N.	Antiquities Site Inventory
16-0285	3-0996	PJ	1985	Peak, A.	Survey of the Proposed Patrick Reroute Transmission Line, Washoe County, Nevada
16-0286	3-0995	NC	1985	Rafferty, K.	Inventory of the Proposed Mogul Meadows Housing Project for Centex Homes Corporation of Reno, Nevada
16-0288	3-0435	ND	1980	Elston, R.	Correspondence with John Webster Brown, Civil and Structural Engineers, Inc., 642 N. Sierra Street, Reno, NV 89503 Concerning the Archive Search and Preliminary On-Foot Reconnaissance
16-0289	3-1011	IF	1985	Juell, K	An Intensive Archaeological Survey of the Tracy Development - BLM Land Exchange
16-0289 1		AR	0	Markos, J	Reexamination of 15 Prehistoric Sites in SE Spanish Springs Valley
16-0289 2	3-1011	IF	1985	Drews, M	Evaluation of Archaeological Sites 26Wa3236 and 26Wa3308 in the Truckee River Canyon
16-0300		BI	1985	Fryman, F.	Survey of Branch Roads Project PLIR Consoladated No. 5 Pyramid Lake Indian Reservation Washoe County, Nevada
16-0303	3-1103	NL	1986	Bunch, J.	Area From Verdi to Vista
16-0307	3-1159	IF	1986	Zeier, C.	Archaeological Report on Intensive survey of Donner Springs Housing Development
16-0309	3-1112	BL	1987	Pope, C.	Michael Joiner et al Access Road R/W
16-0311	3-1168	PJ	0	Peak, A	NW Reno Water Tank Project
16-0312	3-1167	PJ	1987	Peak, A.	Assessment of the Northeast Sparks Water Tank Project, Washoe County, Nevada
16-0316	3-1023	NL	1987	Sterns, S.	The Archaeological Test Excavation of 26Wa2623, Golden Valley, Nevada
16-0321		ND	1976	Townsend, G.	Preliminary Archaeological Reconnaissance, P.A.R for NHD, Wiedening of Glendale Road, Reno, Nevada
16-0323	3-1174	AR	1985	Stevenson, T.	Preliminary Investigation of the Edgewater Subdivision Project Parcel, Washoe County, Nevada
16-0324		AR	1985	Srewvenson, T. and E. Myles	Preliminary Cultural Resources Investigation of the Jones Ranch Development Project Parcel, Washoe County, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0329	3-1129	NL	1987	Bunch, J.	Redfield Material Pit
16-0331	3-1107	IF	1987	Stornetta, S.	Reconnaissance of Proposed Fiber Optic Cable Construction for Nevada Bell
16-0336		IH	1987	Orser, L.	Proposed Sparks Post Office
16-0338	3-1162	BL	1987	Pope, C.	Mustang 20-acre Modified-competitive Sale
16-0341	3-1179	AR	1987	Burke, T.	Inventory of the Desert Spring Parcel, Washoe County, Nevada
16-0342		IH	1987	Simmons, A.	Survey for the Peavine Postal Sub-Station, Reno, Nevada
16-0345	3-1195	BL	1987	Hatoff, B.	Sun Valley Water and Sanitary District R/W
16-0346		NE	1960	Shutler, R.	Watershed Work Plan, Peavine Mountain Watershed, City of Reno, Washoe County, Nevada
16-0355	2-0510	BL	1980	Gish, M.	Wadsworth Fence
16-0379		NL	1977	Jerrems, W.	Survey of US Highway 395 from Panther Valley Interchange to Stead Interchange Washoe County, Nevada
16-0381		NL	1980	Sterns, S.	Mira Loma Material Pit
16-0382		AR	1986	deLaureal, S.	Cultural Resource Inventory of Liberty Village Proposed Subdivision Parcel, Washoe County, Nevada
16-0387		NL	1988	Moore, J.	Western Pacific Railroad Crossing
16-0392		NL	1984	Rodman, V.	District II Right-of-way Project
16-0393	3-0954	BL	1984	Hatoff, B.	Bureau of Motion Competitive Sale
16-0394	3-0975	BL	1985	Pope, C.	Bureau of Motion non-competitive Sale
16-0408	3-1241	BL	1988	Hatoff, B.	R&PP City of Sparks
16-0409		AR	1988	Kuffner, C.	Inventory of a 160 Acre Development Parcel for Prospector Gaming Enterprises, Washoe County, Nevada
16-0417		AR	1988	Green, P.	Archaeological Monitoring of the Glendale Crossing of the Reno-Sparks Interceptor Sewer Line in Washoe County, Nevada
16-0418		DA	1988	Hicks, P.	Archaeological Survey of 108 Acres in Panther Valley for Sunset Homes.
16-0424	3-1258	BL	1988	Hufnagle, J.	Sierra Telecommunications R/W- Communications Site.
16-0427	3-1262	BL	1988	Hatoff, B.	National Weather Service Office
16-0442		AR	1989	McCabe, A.	Inventory of the Sharon Hill Subdivision in Northeastern Truckee Meadows, Washoe County, Nevada
16-0443	TY-89-0533	FZ	1989	Todd, C.	Sierra Pacific Power Co. Blue Heron Sub. Powerline
16-0444	TY-89-0536	FZ	1989	Todd, C.	Gary Bader- Road Reconstruction and Use
16-0455	3-1317	AR	1989	Young, B.	Inventory of the Proposed Mira Loma to Gregg Street Powerline, Washoe County, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0459	3-1283	KF	1989	Kautz, R.	Inventory of the Proposed New Gold, Inc. Placer Mining Operations at Lower Olinghouse, Near Wadsworth, Washoe County, Nevada
16-0465		DA	1987	Livinston, S.	Right-of-Way Extension for McCarran Boulevard
16-0467		ME	1990	Vierra, R.	Survey of the Juniper Ridge Development Project, Washoe County, Nevada
16-0473	3-1365	ME	1990	Kautz, R.	Survey of the Huffaker Hills, South Truckee Meadows, Nevada, Washoe Co. Waste Water Treatment Facility
16-0475	3-1360	NL	1990	Bunch, J.	Two Materials Pits near Sparks, Washoe County, for I-80
16-0484		AR	1990	Burke, T.	Inventory of the Reno International Raceway Project
16-0489	3-1282	ME	1992	Kautz, R.	Addendum to Report CR#-1282 Truckee Meqadows Water Project Cultural Resource Inventory Washoe County, Nevada
16-0490	3-1381	BL	1989	Hufnagle, J.	Washoe County School District Access Road
16-0494	3-1387	ME	1990	Kautz, R. and C. Pinto	Inventory of the Proposed Truckee Meadows Gas Line Project from Dodge Flat to Warm Springs Valley, Washoe County, Nevada
16-0495	3-1385	AR	1990	Burke, T.	Class I Overview for the Site I Alignment in Dodge Flat, Washoe County, Nevada
16-0496	3-1393	BL	1990	Hufnagle, J.	Extension of First Street in Sun Valley
16-0499		DA	1990	McLane, A.	Reconnaissance for the Wadsworth Community Sewer System and Lagoon, Washoe County, Nevada
16-0500		NL	1990	Sterns, S.	Proposed Interchange along I-80, 3 Miles West of Reno
16-0505		IF	1989	Schmitt, D.	Letter Repor To Mike Daniels Summit Engineering: Boomtown RV Park
16-0506		IF	1991	Stornetta, S.	Four Parcels in Spanish Springs Valley, Sparks, Nevada
16-0507		IF	1982	James, S.	Survey of a Proposed Cable Emplacement Along Highway 445, Spanish Springs Valley, Washoe Valley, Nevada
16-0508		AR	0	Rowley, W.	The Pioneer Ditch, An Hjistoric Evaluation
16-0511		IF	1991	Stornetta, S.	Barbeque Pavillion at Boomtown, Verdi, Washoe County, Nevada
16-0514	3-1334	BL	1990	Hufnagle, J.	Pond Peak Access Road R/W
16-0515	3-1341	BL	1990	Hufnagle, J.	Olinghouse County Road Upgrading
16-0516	3-1368	BL	1990	Hufnagle, J.	Pond Peak Buries Powerline R/W
16-0518		ME	1991	Kautz, R.	Reconnaissance of the Chalk Bluff Water Line, Washoe County, Nevada
16-0519	3-1418	NL	1991	Petersen, F.	SR 445R/W in Spanish Springs Valley
16-0520	3-1427	NL	1991	Sterns, S.	Proposed Haul Road, near the Patrick Exit.
16-0521		IF	1991	Momteleone, S.	Murphy Brothers Construction Co. Housing Development
16-0523	SU 18901	BL	1989	Bunten, H.	Overview of Washoe County Road Dept. R/W Grant for 26 mile on Highway 34
16-0528		AR	1990	Clay, V. L.	Results of Backhoe Trench Investigations for the Proposed Reno-Sparks Wastewater Treatment Faciities Expansion, Washeo County, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0539		AR	1989	Burke, T.	Inventory of the Double Diamond Ranch, Truckee Meadows, Washoe County, Nevada
16-0540	3-1424	NL	1991	Seldomridge, J.	Huffaker Hills Materials Pit Extension
16-0541		IH	1991	Rhode, D.	Vista Meadows Unit 1A, Phase II Survey, Washoe County, Nevada
16-0542		IF	1991	Botkin, S.	Inventory of 116 Acres for the Hidden Valley Properties, Washoe County, Nevada
16-0543		AR	1990	Wroblewski, D.	Inventory of 127 Acres (The Besso Property) in West Reno, Washoe County, Nevada: Chalk Bluff
16-0549		IH	1991	Neily, R.	Survey of the Proposed Reno Cannon International Airport Expansion Area, Washoe County, Nevada
16-0550		AR	1991	Burke, T.	Inventory for the Chalk Bluff Water Treatment Plant: Raw and Finished Water Pipeline Alternative Routes in Washoe County, Nevada
16-0552		IA	1991	Spencer, A.	Inventory of the Proposed Evan's Creek Floodwater Retarding Structure and Borrow Areas, Washoe County, Nevada
16-0560		AR	1986	Hemhill, M.	Inventory for the Hunter Creek Water Treatment Plant Project, Washoe County, Nevada
16-0579		IH	1992	Rhode, D.	Vista Meadows Unit 1A, Phase III Cultural Resources Survey, Washoe County, Nevada
16-0581		IF	1992	Stornetta, S.	Survey of Two Sewer Interceptor Crossings of the Truckee River Between Mogul and Mayberry Drive, Washoe County, Nevada on Behalf of the City of Reno
16-0582		ME	1991	Botti, N. and R. Kautz	Survey for the Rattlesnake Mountain Water Tank Project, Reno Nevada
16-0600	3-1503	BL	1992	Hufnagle, P.	Paiute Pipeline Temporary Access Reroute
16-0605		ME	1992	Kautz, R. and P. Mires	Inventory of Two Blocks in Wadsworth, Nevada
16-0615		NL	1993	Bunch, J.	Proposed Materials Pit, Spanish Springs Valley
16-0617		ME	1992	Mires, P.	Reconnaissance of Hidden Valley Cove Subdivision
16-0618		DA	1991	McLane, A.	History and Archaeology of the Dandini Research Park, Washoe County, Nevada
16-0619		RG	1993	Matranga, P.	Survey of a Proposed Aggregate Quarry Site North of Lockwood, Washoe County, Nevada
16-0625		ME	1992	Mires, P.	Pyramid Lake Housing Authority Wadsworth and Nixon, Nevada, Archaeological Survey
16-0634		ME	1993	Kautz, R.	Inventory in Panther Valley, Washoe County, Nevada
16-0640	3-1596	BL	1993	Pope, C.	Diablo Communications, Inc, Site R/W
16-0642		FF	1993	Waechter, S.	Inventory of 201 Acres on the Truckee River Between Verdi and Reno, Washoe County, Nevada
16-0644	3-1564	BL	1993	Mecham, P.	Spanish Springs Valley Water Test wells
16-0647		AR	1992	Moore, M. and T. Burke	Truckee River Flood Control Project, Washoe and Storey Counties, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0652		ME	1993	Kautz, R. and J. Johnson	Inventory of Two Blocks: One on Wadsworth and One in Nixon, Nevada
16-0655		SU	1994	Marken, M.	Letter report: Cultural Resources Inventory for the Proposed Sunridge Village Subdivision, Washoe County, Nevada
16-0656		NL	1994	Stermes, S.	Two Proposed US 395 Off Ramps
16-0662		AR	0	Hause, L	Hidden Meadows Subdivision, Hidden Valley
16-0666	3-1622	BL	1994	Hufnagle, J.	Nevada Bell Burial of Communications Cable, Mustang Area
16-0667	3-1620	RG	1994	Matranga, P.	Investigation of the Mustang Aggregate Quarry Site Washoe County, Nevada
16-0670		KF	1994	Kautz, R.	Inventory in East-Central Spanish Springs Valley, Washoe County, Nevada
16-0678		RG	1994	Matranga, P.	Investigations of the Meadowlake Subdivision Caughlin Ranch Washoe County, Nevada
16-0679		RG	1994	Matranga, P.	Investigations of Juniper Trails Unit #7 Caughlin Ranch, Washoe County, Nevada
16-0682		KF	1995	Kautz, R.	Letter Report to Nevada SHPO: Caughlin Creek Unit Four Project
16-0684		AR	1995	Hause, L. nad T. Burke	Inventory of 11 Acres for the Hidden Meadows Subdivision, Phase II, Washoe County, Nevada
16-0686		II	1994	Brown, J.	Sierra Pacific Power Co. Glendale Water Treatment Plant Project, Reno, Nevada: Cultural Resources Investigaqtion Final Technical Report
16-0687		JB	1994	JBR Environmental Copnsultants, Inc.	Inventory of the Morrill Avenue PCE Mitigation Project, Reno, Nevada
16-0703		NL	1991	Drews, M.	Replacement of the Booth Street Bridge Survey
16-0707		ME	1994	Mariah Associates, Inc.	Inventory of the Proposed Verdi Gas Pipeline Loop for Sierra PaCIFIC Power Co , Washoe County, Nevada
16-0708	3-1718	KF	1995	Kautz, R.	Survey of the Vista Boulevard Sewer Staging Block, Washoe County, nevada
16-0709		IH	1995	Kolvet, R.	Inventory of a 2.75 Mile Road Corridor from Spanish Springs to Sun Valley, Washoe County, Nevada
16-0710		JB	1995	Martin, M.	Inventory of a 170 Acre Area for the 102 Ranch Mine, along I-80, Washoe County, Nevada
16-0711	3-1717	FW	1995	Bryson, R. and M. Delacorte	Assessment for the Proposed Vista Boulevard-Spanish Springs Water Main Extension, Washoe County, Nevada
16-0726		AR	1996	Burke, T.	Previous Cultural Resources Investigations at the Proposed Interstate 80/Patrick Interchange: Summary and Recommendations
16-0733	3-1741	IH	1995	Kolvet, R. and S. Mehls	Inventory of Two Parcels in Cold Springs and North Reno For Western Resource Management's Proposed Land Exchange, Washoe County
16-0735	3-1760	BL	1996	Mecham, P.	Spanish Springs Water Haul Sites and Access

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0743	3-1733	BL	1995	Mecham, P.	Lemons Access R/W for Buried Utilities
16-0744	3-1766	BL	1996	Mecham, P.	Alan Johnson R/W (N-60425)
16-0750		KF	1996	Kautz, R. and J. Hutchins	Altuas 345 KV Transmission Line Corridor, Cultural Resource Inventory, Phase I, Class III Survey and Preliminary Evaluation of Cultural Resources
16-0750 2	TY 97-1032 A	KF	1994	Kautz, R.	Access Road Survey, Alturas Powerline
16-0751		IN	1994	Price, B.	Tuscarora Pipeline Project : Phase I' Survey, Inventory, and Prliminary Assessment of Cultural Resources
16-0754		LM	1996	Wrobleski, D. and L. Paskus	Survey of Two Housing Parcels on the Pyramid Lake Indian Reservation near Wadsworth, Nevada
16-0758		BI	1996	Williams, P.	Bureau of Indian Affairs Western Nevada Agency Branch of Land Operations: Cultural Resources Inventory Worksheet: Proj # RE-WNA-EA-91/01
16-0759	3-1684	JB	1995	Billat, et al	Inventory and Historical Assessment of the Alta Gold Olinhouse Project in the Pah Rah Range, Wasjoe Countu, Nevada
16-0760		IH	1996	Brown, J.	SPCCO Northgate Tank # 2 UEPA Project: Cultural Resources Investigation
16-0766	3-1583 B	FF	0	Glover, L	Malin to Tracy: Ancillary surveys along the Tuscarora Pipeline, Oregon to Tracy NV - addendum
16-0768		FF	1996	Glover, L. , et al	Supplemental Surveys and Test Investigations for Tuscarora Pipeline Reroutes and Ancillary Area, From Malin, Oregon to Tracy, Nevada: Part II
16-0770	3-1711	KF	1995	Kautz, R. and J. Hutchins	Assessment for the City of Sparks Spanish Springs Sports Complex/Golf Cource
16-0771	3-1797	FW	1997	Delecorte, M.	Ancillary Archaeological Survey of the Vista Boulevard-Spanish Springs Water Main and Pump No. 2, Washoe County, Nevada
16-0773	TY 94-1038	DA	1995	Amick, S. and A. McLane	Survey of the Proposed Boy Scout Land Exchange near Fuller Lake, Washoe County, Nevada
16-0774		ME	1995	McNees, L.	Investigations for the Proposed Sparks Effluent Pipeline Project (Phases 1-3) Washoe County, Nevada
16-0775		JB	1995	Billat, L.	Inventory of the Hunter Reservoir Upgrade Project, Reno, Nevada
16-0783		KF	1996	Christiansen. T.	Inventory of Selected Locations on the Kiley Ranch, Washoe County, Nevada, For the Nevada Hereford Ranch Project
16-0784		IH	1992	Harland Bartholomew & Associates, Inc.	SPCCO Socrates Tank UEPA Project: Cultural Resources Investigation
16-0786	3-1801	IH	1997	Stoner, E.	Inventory for the Proposed Sun Valley Elementary School, Washoe County, Nevada
16-0788	TY 96-1172	FW	1997	Waechter, S. and J. Berryman	Alturas Intertie Archaeological Survey: Toiyabe National Forest/ Highway 395 Alternate Route for the Altuas 345 KV Electrical Transmission Line Project
16-0789	TY 97-1196	SU	1997	Northrup, J.	SPPC North Valley Road to Penny's Tap Project, Washoe County, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0800	TY 98-1221	FS	1997	Birk, T.	Carson Ranger District Land Exchange
16-0815		BI	1998	Crozier, S.	PLIR Consolidated No. 9, Pyramid Lake Reservation, Washoe County, Nevada
16-0833	TY 98-1250	IH	1998	Lindstrom, S.	Reno Flood Warning System Environmental Assessment
16-0836	3-1873	BL	1998	Hutchins, J.	Red Peak Fiber Optic Cable R/W for Nevada Bell
16-0838		IH	1998	Jensen, P and S. Jensen	Inventory Survey: D'Andrea Proposed Subdivision Project, c.861 Acres at Sparks, Washoe County, Nevada
16-0846		IF	1998	Zeanah, D. and E. Obermayr	Inventory and Evaluation of the Proposed Village Of Wild Creek Subdivision
16-0848	TY 97-0012 C2827	IH	1998	Stoner, E.	Inventory of 180 Acres for the Fuller Lake Project, Washoe County, Nevada
16-0850	2-2754	BL	1998	Detweiler, K.	Washoe County Monitoring Wells
16-0851		KF	1999	Hutchins, J.	Letter report to: W.D. Diederich, Whao County Planning Manager: Cultural Resource Inventory, Wadsworth Aggregates Project
16-0858	TY 99-1289	FS	1999	Birk, T.	Peavine Map Project
16-0861	3-1886	BL	1999	Lasell, R.	R/W Ammendment
16-0866		AR	1992	Palmer, C. and A. McCabe	Reconnaissance for the Bartley-Anderson Park Master Plan, Washoe County, Nevada
16-0876		KF	1999	Hutchins, J. and D. Simons	Inventory of a 40-Acre parcel Along Evans Creek, Washoe County, Nevada
16-0878		WE	0	Deis, R	Inventory for the CFA Homecoming Project, Reno
16-0880		IH	1987	Orser, L.	Post Office at Wadsworth, Nevada
16-0881	3-1934	BL	1999	Hutchins, J.	Red Peak Fiber Optic Cable R/W for Nevada Bell, Sun Valley, Washoe County, Nevada
16-0882	3-1925	BL	1999	McQueen, R.	Holy Cross Catholic Community Church Survey
16-0885	3-1769 1	AR	1998	Mackey, B.	An Addendum to: Cultural Resources Report Olinghouse Open Pit Miner Project
16-0891		KF	1999	Hutchins, J. and T. Christensen	Inventory for a High School in Golden Valley, Washoe County, Nevada
16-0901		JB	0	Ferguson,	Inventory of the Silverado Ranch Estates Proj, 15 acre parcel on W 7th St
16-0902	3-1953	BL	1999	Raffetto, P.	Spanish Springs Well & Corral
16-0903	3-1960	BL	1999	Raffetto, P.	Spanish Springs Well Haul Site
16-0907	TY 4361	FW	1998	Waechter, S. et al	Alturas 345 KV Electircal Transmission Line Project: Additional Studies for the Toiyabe National Forest/ Highway 395 Alternate Route
16-0908	3-1857	KF	2000	Simmons, D. and R. Kautz	Inventory of a Proposed Land Exchange, Spanish Springs Valley, Washoe County, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
16-0909	3-1965	BL	2000	Creger, C.	Pah Rah Fire Vegetation Study Plots
16-0923	3-1974	IH	1999	Deis, R. et al	Inventory of Sprint Communications' Fiber Optic Cable From Reno (Washoe County) , Nevada to Red Rocl (Lassen County), California
16-0925	3-1946	BL	1999	Bowyer, G.	Pah Rah Fire Rehab Survey
16-0928	3-2003	KF	2000	Kautz, R.	Inventory of the Highland Ranch Park, Washoe County, Nevada
16-0941	3-1968	BL	1999	Lasell, R.	Johnson-Burkett Buried Electric Line R/W
16-0963	3-20211	BL	2001	Burke, T.	Inventory, Pah Rah Range Non-Federal Exchange Parcel, Washoe County, Nevada
16-0964	3-2008	KF	2001	Christensen, T. and R. Kautz	Wedekind Park Parcel: Inventory for the City of Sparks, Washoe County, Nevada
16-0965	3-1769	AH	1997	D'Angelo, J.	Cultural Resources Report Olinghouse Open Pit Mine Project, Washoe County, Nevada
16-0966		KF	0	Christiansen,T	Inventory for the Somersett Sewer Interceptor
16-0975	3-2038	FF	2001	McGuire K. and D. Young	Inventory for the Proposed Tuscarora 2002 Expansion Project/White Horse to Tracy 345-kV Line Project, California and Nevada.
16-0977		WE	0	Christian, L	Inventory for proposed Centex Homes, W th St & Robb Dr, Reno
16-0978		WE	0	Lennon, T	Inventory for the Proposed Sparks Effluent Pipeline
16-1005		NL	2002	Stearns, S	Survey of a Proposed Riprap Project, Bridge B-650, Clarks Station on Truckee River
16-1009	3-2066	WE	2001	Western Cultural Resources	Granite Construction Mustang/Lockwood Mineral Material Exploration
16-1011		WE	2002	Stoner, E	Inventory for the US395 Clear Acre/Sutro Interchange, Reno
16-1014	3-2016	BL	2000	McCabe, A.	Inventory of the Reno Complex Fire Rehab Project Parcels
16-1087		GA	2003	Gordon and Kranzush	Pyramid Lake Paiute Tribe Env. Worksheet for W-3A, East Side of Hill Ranch Road, Wadsworth
16-1089	3-2146	BL	2003	McCabe, S. and F. Hull	North Valley Fuels Treatment Project
16-1110		KF	2000	Kautz, R.	Inventory of the Somersett Development
16-1185		WE	2006	Stoner, E., J. Sigler, and M. Ringhoff	Inventory of Approximately 140 Acres for the Hunter Creek Trails Project, Reno, Washoe County, Nevada
18-0009	2-0083	NE	1974	Rusco, M. and E. Seelinger	Reconnaissance Along Proposed 230KV Transmission Line Right-of-Way of Sierra Pacific Power Company, Part I, Tracy, Nevada to Valmy, Nevada
18-0018	3-0102	IF	1976	Clerico, R.	Proposed Access Roads to Reroute of Sierra Pacific Power Company's Tracy to Oreana 230 KV Powerline
18-0050		NL	0	Steinberg, L	SPRR & WPRR x-ings Statewide 1977-1978 Off-System Railroad Improvement Program, vicinity Panther Valley
18-0094	3-0557	DA	1979	Budy, E.	Cultural Resources Survey of the Proposed Reno-Sparks Sewage Effluent Study

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
18-0226	3-1125	PJ	1987	Peak, A.	Assessment of the Three Small Transmission Line Projects, Washoe and Lyon Counties, Nevada
18-0239		IF	1981	Stornetta, S. and R. Elston	A Literature Review of Cultural Resources Along the Truckee River Between Floristan Dam and Washo Hydroelectric Plant
18-0241	2-0803	BL	1982	Till, S.	Communications Site R/W
18-0248	3-1022	NL	1985	Petersen, F.	District 2 US50A Betterment Between Fernley and Fallon
18-0252	3-1227	JF	1988	Johnson, F.	Survey of Southwest Gas Corporation Gas Transmission Mains in Carson City, Storey and Lyon Counties, Nevada
18-0253	2-2239	IF	1988	Elston, R.	An Archaeological Reconnaissance Between Wadsworth and Winnemucca, Nevada on Behalf of Nevada Bell's Rural Improvement Project
18-0281		AR	1990	Burke, T.	Reno-Sparks effluent pipeline wastewater treatment capacity increase project
18-0288	3-1433	JF	1991	Johnson, F. and D. Valentine	Southwest Gas proposed pipeline at three separate places
18-0288 1	3-1433 2	JF	1992	Johnson, F. and L. Lundemo	Survey of 12.6 miles of Pipeline and four valve assembly locations
18-0305		ME	1993	Mires, P. and J. Oothoudt	Survey of two proposed SPPCo Transformer Sites
18-0322	2-2359	NL	1990	Petersen, F.	Eight Proposed Mat Pits along I-80
18-0366	3-1884		1998	Wills, C.	Survey of 4.9 Miles of Proposed Pipeline Replacement Segments in Storey, Lyon, and Churchill Counties, Nevada
18-0366 1	3-1884		1998	Self, W.	Letter report to Mr. Dave Corman, Kinder Morgan Energy Partners, Orange County, CA
18-0378	3-1932	WE	2000	Stoner, E. and L. Christian	Inventory of Portions of the Paiute Pipeline Carson Lateral Project in Storey, Lyon, and Douglas County, Nevada
18-0446		UF	2003	Perry, R.	McCarran Ranch Reach Eco Restoration, Truckee River
18-0448		WSA	2003	Self, W.	Inventory of Line Section 55, Kinder Morgan, ST,LY &CH
18-0449	3-2183	BR	2003	Harmon, R.	US Army Corps Truckee Meadows Sample Drilling for River Flood Control
18-0461	3-1799	IF	1997	Stornetta, S.	Survey Near Fernley, Nevada on Behalf of the Wade / Fernley Land Exchange
	2-2499	NL	1985	Petersen, F.	Inventory Along I-80, Milepost Ly 0.0 to Ly 15.91.
	3-0049	NB	1969	Rusco, M.	Investigations in the Spanish Springs Canyon Area, Washoe County, Nevada
	3-0140	BL	1977	Pinzl, J.	R/W N-16406, Bell Telephone Company of Nevada
	3-0413	ND	1976	Leventhal, A.	Archaeological Reconnaissance for Clearance on the Proposed Areas of Land to be Acquired by the Reno International Airport
	3-0419	ND	1975	Phillips, H.	Construction Impact Assessment on the Archaeology of the Short Ranch Area, Reno, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
	3-0425	ND	1974	Townsend, G.	Intensive Archaeological Survey of El Rancho Buena Vista Subdivision
	3-0893	NL	1983	James, S. and D. Mathiesen	IR-80-WA 17.44 to 19.97, E.A. 71110
	3-1305	JF	1989	Johnson, F.	Survey of 230 Acres at the Wildhorse Exploration Area in Mineral County, Nevada
	3-1577	ME	1993	Mariah Associates, Inc.	Paiute Pipeline's Expansion II: Report on the Cultural Resource Inventory of Eight Pipeline Loop Segments and Compressor Facilities in Northern Nevada
	3-1595	NL	1994	Stearns, S.	Mira Loma Material Pit Expansion
	3-1658	BL	1994	Clark, B. and C. Pope	Sierra Nevada Landco Right of Way Application N-58193
	3-1725	BL	1995	Hufnagle, J.	Temporary Use Permit N-59913 for Sierra Stone dba All-Lite Aggregate Test Water Well
	3-1812	AR	1998	McCabe, A. and B. Mackey	Inventory for the Olinghouse Exploration Area, Washoe County, Nevada
	3-1909	BL	1998	Raffetto, P.	Spanish Springs Corral
	3-1910	BL	2001	Raffetto, P. and K. Leavitt	Spanish Springs Catchments Project
	3-2082	BL	2001	Lasell, R., and R. Tauchen	Hidden Valley Borrow Pit Reclamation Project
	3-2108	BL	2002	Nelson, K.	Temporary Use Permit, Material Site Water Pipeline for the "Spaghetti Bowl", Reno, NV
	3-2113	FF	2005	Young, D.	Historic Resource Evaluation and Treatment Plan for the Calle de la Plata APE of the Tracy to Silver Lake 120kV Transmission Line
	3-2149	BL	2003	Lasell, R. and T. Randolph	Mustang Road Construction and Widening Right-of-Way
	3-2179 1	KF	2004	Kautz, R. and D. Cozart	Inventory for the Tanamera Commercial Development (Sparks Mall) in Spanish Springs Valley, Washoe County, Nevada
	3-2221	BL	2004	McCabe, S., C. Miller and A. McLane	Spanish Springs Pipeline
	3-2228	BL	2004	Hufnagle, J.	Hidden Valley Roads - Lipera/Reeves
	3-2236	FF	2004	Young, D., T. Wriston, and S. Neidig	Gold Rush Expansion Project
	3-2267	KF	2005	Andrus, J.	Desert Way Survey
	3-2287	KF	2006	Andrus, J. and R. Ottenhoff	Hidden Valley Water Main
	3-2311	KF	2006	Malinky, B.	Inventory for a Water Detention Basin in Sparks, Nevada

Table F-1. Cultural Resource Investigation

NSM Report Number	Agency Report Number	Organization	Date	Author	Title
	3-2336	FF	2007	Young, D.	Sun Mesa - SPPC, Cultural Resources Inventory Spanish Springs Valley, Washoe County, Nevada
	3-2365	CE	2007	N/A	Inventory of the Truckee River Restoration Project, Washoe and Storey Counties, Nevada
	TY 84-0352	FS	0		
	TY 87-0984	AR	1987	Hemphill, M.	Inventory Along the Proposed AT&T Fiber Optic Facility Corridor Across Northern Nevada
	TY 89-0536	FS	0		
	TY 89-0541	FS	1989	Kuffner, C.	Inventory of the Chimney Peak Microwave Site, Washoe County, Nevada
	TY 91-0599	FS	0		
	TY 91-0828	FS	0		
	TY 91-1006	FS	0		
	TY 94-1032	KF	1994	Kautz, R	Addendum to Alturas Trans line, Secret Valley Alternative
	TY 94-1039	SY	0		

Key to symbols:

Organization Code	Organization Name	Organization Code	Organization Name
AH	Archaeological Services	JB	
AR	Archaeological Research Services	JF	Frank Johnson
BA	Basin Research	KF	Kautz & Associates, Inc.
BI	Bureau of Indian Affairs	LM	
BL	Bureau of Land management	ME	Mariah Associates
BR	Basin and Range Research	NB	Nevada Archaeological Survey
CE	Chambers Group, Inc.	NC	University of Nevada, Las Vegas
DA	Desert Research institute	ND	University of Nevada, Reno
EJ	Ebasco Environmental	NE	Nevada State Museum
FF	Far western Anthropological Research Group	NF	New Mexico State University
FS	Forest Service	NL	Nevada Department of Transportation
FW	Stillwater National Wildlife Refuge	NL	Nevada Department of Transportation
FZ		NP	A. K. Nielson & Associates
GA	Gordon and Kranzush	PJ	Peak and Associates
IA	Idaho Archaeological Consultants	RG	Research Archaeology
IF	Intermountain Research	SU	Southern Methodist University
IH	Independent Archaeological Consultants	SY	
II	Independent Archaeology	UF	U. S. Army Corps of Engineers
IN	Idaho Power Company	WSA	

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA0145			Washoe Camp	Ethno	Not Evaluated		
WA0146			Washoe Camp	Ethno	Not Evaluated		
WA0147			Washoe Camp	Ethno	Not Evaluated		
WA0148			Washoe Camp	Ethno	Not Evaluated		
WA0158	03-0949		Washoe Camp	Ethno	Not Evaluated		
WA1609	31-4587		Lithic Scatter, Petroglyphs / Debris Scatter	Hist/Prehis	Eligible	3-1583	16-751, 16-764
WA2131	03-0876		Petroglyphs / Debris Scatter	Hist/Prehis	Eligible		
WA3017	03-1787	SJ5	Base Camp (Vista) / Debris Scatter	Hist/Prehis	Eligible		16-118
WA5118	31-4272		Lithic Scatter / Spring	Hist/Prehis	Eligible	3-1387, 3-1812	16-494
WA5456			Rock Wall	Hist/Prehis	Eligible		16-697
WA5551			Lithic Scatter / Debris Scatter	Hist/Prehis	Eligible		16-634
WA5609	31-4583		Petroglyphs / Debris Scatter	Hist/Prehis	Eligible	3-1583	16-751, 16-752
WA5610	31-4584		Petroglyphs / Debris Scatter	Hist/Prehis	Eligible	3-1583	16-751
WA5639			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Eligible	3-1538A	16-765
WA5888	TY-3780		Lithic Scatter / Isolate	Hist/Prehis	Eligible	TY-94-1053	16-707
WA6417	03-4967		Lithic Scatter / Spring	Hist/Prehis	Eligible	3-1812	16-885-1
WA6421	03-5119		Lithic Scatter with Ground Stone / Spring Improvement	Hist/Prehis	Eligible	3-1812	16-885-1
WA6507	03-5207		Petroglyphs	Hist/Prehis	Eligible	3-1857	
WA6508	03-5208		Petroglyphs / Cairn	Hist/Prehis	Eligible	3-1857	
WA6766			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Eligible		16-1110
WA6776			Lithic Scatter / Isolate	Hist/Prehis	Eligible		16-1110
LY0476	03-3741		Lithic and Debris Scatter	Hist/Prehis	Not Eligible	3-1150, 3-1891	10-196-1
WA3638			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Eligible		16-382
WA3822			Isolate	Hist/Prehis	Not Eligible		16-418
WA5192			Isolate	Hist/Prehis	Not Eligible		16-647
WA5356			Lithic Scatter / Debris Scatter with Foundation	Hist/Prehis	Not Eligible		16-549
WA6402	03-5154		Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Eligible	3-1812	16-885-1
WA6403	03-5155		Lithic Scatter / Isolate	Hist/Prehis	Not Eligible	3-1812	16-885-1
WA6609			Isolate / Farm	Hist/Prehis	Not Eligible		16-878

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6686		KEC-183-5b	Ground Stone / Debris Scatter	Hist/Prehis	Not Eligible		16-1110
WA6738			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Eligible		16-1110
WA6751			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Eligible		16-1110
WA6769			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Eligible		16-1110
WA6782			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Eligible		16-1110
WA6925			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Eligible		
WA6926			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Eligible		
WA6978	03-4937		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Eligible	3-1769	16-965
WA0114	31-0762		Lithic Scatter / Mine	Hist/Prehis	Not Evaluated		
WA1058	03-0756		Lithic Scatter / CCC Camp	Hist/Prehis	Not Evaluated		
WA1061		KEC-183-51b	Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA2003	03-0860		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	2-83	18-9
WA2831	31-2468		Lithic Scatter / Foundation, Debris Scatter	Hist/Prehis	Not Evaluated	3-579	16-105
WA3016			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-118
WA5187			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-647
WA5190			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-647
WA5204			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-647
WA5439			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated		16-581
WA5442			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-581, 16-642
WA5638			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated	3-1538A	16-765
WA5655	TY-3833		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	TY-94-1038	16-773
WA5771			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated	3-1583	16-751
WA6200	TY-3681		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	3-1679	16-750
WA6202	TY-3683		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	3-1679	16-750
WA6203	TY-3684		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	3-1679	16-750
WA6204	TY-3685		Lithic Scatter / Isolate	Hist/Prehis	Not Evaluated	3-1679	16-750
WA6206	TY-3679		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	3-1679	16-750
WA6687			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6698			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6704			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6705			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6714			Lithic Scatter with Ground Stone / Isolate	Hist/Prehis	Not Evaluated		16-1110
WA6717			Cairn / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6722			Lithic Scatter with Ground Stone / Homestead	Hist/Prehis	Not Evaluated		16-1110
WA6725			Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6735			Isolate / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6758			Lithic Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6763			Lithic scatter with ground stone / Debris Scatter	Hist/Prehis	Not Evaluated		16-1110
WA6792	03-5321		Rock Alignment	Hist/Prehis	Not Evaluated	3-1992	
WA6793	03-5322		Rock Alignment	Hist/Prehis	Not Evaluated	3-1992	
WA6797	03-5326		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	3-1992	
WA6994	03-4953		Lithic Scatter / Debris Scatter	Hist/Prehis	Not Evaluated	3-1769	16-965
WA7002	03-4961		Lithic Scatter with Ground Stone	Hist/Prehis	Not Evaluated	3-1769	16-965
LY0917	03-5228		Truckee Canal	Historic	Eligible	3-1924	
WA3404			Western Pacific Railroad	Historic	Eligible		16-387, 16-907, 16-923, 16-943
WA4584	03-1687		Jamestown Station	Historic	Eligible		
WA5115	31-4269		Rock Wall with Mill	Historic	Eligible	3-1387	16-494, 16-965
WA5116	31-4270		Debris Scatter	Historic	Eligible	3-1387	16-494, 16-965
WA5121	31-4275		Power Plant	Historic	Eligible	3-1387, 3-1769	16-494
WA5234			Highland Ditch Segment	Historic	Eligible		16-518, 16-543, 16-618, 16-966
WA5352	31-4817	KEC-1-U	Orr irrigation ditch	Historic	Eligible	3-1712	16-550
WA5364			Lake Ditch	Historic	Eligible		16-550
WA5366			Mine	Historic	Eligible		16-552
WA5441			Last Chance Ditch	Historic	Eligible		16-581, 16-642, 16-779, 16-866
WA5445			Pioneer Ditch	Historic	Eligible		16-647

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA5457			Debris Scatter	Historic	Eligible		16-582, 16-583
WA6134	31-4843		Irrigation Ditch	Historic	Eligible	3-1741	16-733
WA6253	31-4745		Habitation Area	Historic	Eligible	3-1684	16-759
WA6538			Ranch	Historic	Eligible		16-846
WA6540			Cochran Ditch	Historic	Eligible		
WA6655			Rock Rings	Historic	Eligible		
WA6676	03-1712A		Culvert	Historic	Eligible	3-1769-1	16-885-1
WA6915		RT-102	Cistern	Historic	Eligible		
		B-1690	Railroad Bridge, Wadsworth	Historic	Eligible	NDOT bridge	
		G-490	Railroad bridge over Derby Dam road	Historic	Eligible		
LY0943			Airfield	Historic	Not Eligible		
LY0944			Emigrant Trail	Historic	Not Eligible		
ST0083			Debris Scatter	Historic	Not Eligible		15-21
ST0092			Isolate	Historic	Not Eligible		
ST0205			Debris Scatter	Historic	Not Eligible		15-34
WA2992	31-3380	NDOT 16-84R	Mine shaft	Historic	Not Eligible	3-922	16-263
WA3300	31-3536		Isolate	Historic	Not Eligible	3-1011	16-289-1
WA3338	31-3752		Debris Scatter	Historic	Not Eligible		16-307
WA3408	31-3801		Debris Scatter	Historic	Not Eligible	3-1179	16-341, 16-964
WA4603	31-4214		Hunting Blinds	Historic	Not Eligible	3-1365	16-473
WA5112	31-4266		Ranch	Historic	Not Eligible	3-1387	16-494, 16-759
WA5113	31-4267		Debris Scatter with Foundation	Historic	Not Eligible	3-1387	16-494, 16-759
WA5117	31-4271		Renegade Mine	Historic	Not Eligible	3-1387	16-494, 16-759
WA5127			Debris Scatter	Historic	Not Eligible		16-499
WA5128			Well	Historic	Not Eligible		16-499
WA5129			Isolate	Historic	Not Eligible		16-499
WA5130			Debris Scatter	Historic	Not Eligible		16-499
WA5172			Isolate	Historic	Not Eligible		16-647

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA5174			Isolate	Historic	Not Eligible		16-647
WA5179			Isolate	Historic	Not Eligible		16-647
WA5180			Isolate	Historic	Not Eligible		16-647
WA5182			Isolate	Historic	Not Eligible		16-647
WA5209			Debris Scatter	Historic	Not Eligible		16-506
WA5211			Rock Wall, Corral	Historic	Not Eligible		16-511
WA5212	03-1927		Debris Scatter	Historic	Not Eligible		18-281
WA5213	03-1947		Foundation	Historic	Not Eligible		18-281
WA5216			Debris Scatter	Historic	Not Eligible		18-281
WA5239			Isolate	Historic	Not Eligible		16-518
WA5241			Debris Scatter	Historic	Not Eligible		16-520
WA5257			Isolate	Historic	Not Eligible		
WA5349			Ditch	Historic	Not Eligible		16-542
WA5350			Adit with Debris Scatter	Historic	Not Eligible		16-543
WA5360			Debris Scatter	Historic	Not Eligible		16-550
WA5361			Fence	Historic	Not Eligible		16-550
WA5362			Debris Scatter	Historic	Not Eligible		16-550
WA5363			Ditch	Historic	Not Eligible		16-550
WA5365			Debris Scatter	Historic	Not Eligible		16-552
WA5371	31-4320		Debris Scatter	Historic	Not Eligible	3-1433	18-288
WA5394			Isolate	Historic	Not Eligible		16-618
WA5397			Mine	Historic	Not Eligible		16-618
WA5399			Mine	Historic	Not Eligible		16-618
WA5400			Mine	Historic	Not Eligible		16-618
WA5402			Debris Scatter	Historic	Not Eligible		16-618
WA5404			Isolate	Historic	Not Eligible		16-618
WA5405			Isolate	Historic	Not Eligible		16-618
WA5440			Ranch	Historic	Not Eligible		16-581
WA5455			Hunting Blinds	Historic	Not Eligible		16-582
WA5458			Debris Scatter	Historic	Not Eligible		16-697
WA5526			Debris Scatter with Foundation	Historic	Not Eligible		16-605
WA5550			Debris Scatter	Historic	Not Eligible		16-634
WA5553			Debris Scatter	Historic	Not Eligible		16-634
WA5554			Debris Scatter	Historic	Not Eligible		26-634

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA5555			Debris Scatter	Historic	Not Eligible		16-634
WA5619			Bridge	Historic	Not Eligible		16-642
WA5626			Debris Scatter	Historic	Not Eligible		16-652
WA5631			Debris Scatter	Historic	Not Eligible		16-656
WA5665			Debris Scatter	Historic	Not Eligible		16-670
WA5742			Peoples Drain Ditch	Historic	Not Eligible		
WA5890	31-4828		Debris Scatter	Historic	Not Eligible	3-1718	
WA6133	31-4841		Debris Scatter	Historic	Not Eligible	3-1741	16-733
WA6197	TY-3677		Debris Scatter	Historic	Not Eligible	3-1679	16-750
WA6242	31-4734		Keystone Mine	Historic	Not Eligible	3-1684	16-759
WA6243	31-4735		Road, Ditch, Debris Scatter	Historic	Not Eligible	3-1684	16-759
WA6244	31-4736		Mine	Historic	Not Eligible	3-1684	16-759
WA6247	31-4739		Mine	Historic	Not Eligible	3-1684	16-759
WA6248	31-4740		Mine	Historic	Not Eligible	3-1684	16-759
WA6249	31-4741		Mill	Historic	Not Eligible	3-1684	16-759
WA6250	31-4742		Habitation Area	Historic	Not Eligible	3-1684	16-759
WA6251	31-4743		Building Pad, Debris Scatter	Historic	Not Eligible	3-1684	16-759
WA6252	31-4744		Debris Scatter	Historic	Not Eligible	3-1684	16-759
WA6254	31-4746		Debris Scatter	Historic	Not Eligible	3-1684	16-759
WA6255	31-4747		Debris Scatter	Historic	Not Eligible	3-1684	16-759
WA6256	31-4748		Mine	Historic	Not Eligible	3-1684	16-759
WA6257	31-4749		Mine	Historic	Not Eligible	3-1684	16-759
WA6258	31-4850		Debris Scatter	Historic	Not Eligible	3-1684	16-759
WA6259	31-4751		Building	Historic	Not Eligible	3-1684	16-759
WA6260	31-4756		Shed	Historic	Not Eligible	3-1684	16-759
WA6261	31-4757		Habitation Area	Historic	Not Eligible	3-1684	16-759
WA6263			Debris Scatter	Historic	Not Eligible		16-760
WA6265			Debris Scatter	Historic	Not Eligible		16-760
WA6303	31-4936		Explosives Factory	Historic	Not Eligible		
WA6399	03-5151		Prospects	Historic	Not Eligible	3-1769-1	16-885-1
WA6400	03-5152		Debris Scatter	Historic	Not Eligible	3-1812	16-855-1
WA6401	03-5153		Debris Scatter	Historic	Not Eligible	3-1812	16-885-1
WA6404	03-5176		Debris Scatter	Historic	Not Eligible	3-1812	16-885-1
WA6419	03-5117		Spring Improvement	Historic	Not Eligible	3-1812	16-885-1

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6420	03-5118		Cairn	Historic	Not Eligible	3-1812	16-885-1
WA6472	03-5175		Lithic Scatter	Historic	Not Eligible	3-1812	16-885-1
WA6476	03-5180		Prospects	Historic	Not Eligible	3-1812	16-885-1
WA6534			Ranch	Historic	Not Eligible		16-838
WA6537			Debris Scatter	Historic	Not Eligible		16-846
WA6578			Debris Scatter	Historic	Not Eligible		16-876
WA6579			Road Grade	Historic	Not Eligible		16-876
WA6580			Road Grade	Historic	Not Eligible		16-847
WA6581			Flume, Road	Historic	Not Eligible		16-847
WA6606			Bartley Ranch	Historic	Not Eligible		16-866
WA6610			Rock Alignment	Historic	Not Eligible		16-891
WA6620	03-5241		Debris Scatter	Historic	Not Eligible		16-923
WA6653			Ditch	Historic	Not Eligible		
WA6671			Prospects	Historic	Not Eligible	TY-4361	
WA6699		KEC-183-6b	Hearth, Debris Scatter	Historic	Not Eligible		16-1110
WA6700		KEC-183-7a	Debris Scatter	Historic	Not Eligible		16-1110
WA6903	03-5456		Debris Scatter	Historic	Not Eligible	3-2021	16-963
WA6928			Claim Markers	Historic	Not Eligible		
WA6985	03-4944		Road	Historic	Not Eligible	3-1769	16-965
WA6986	03-4945		Adit	Historic	Not Eligible	3-1769	16-965
WA6987	03-4946		Adit	Historic	Not Eligible	3-1769	16-965
WA6990	03-4949		Road	Historic	Not Eligible	3-1769	16-965
WA6993	03-4952		Road	Historic	Not Eligible	3-1769	16-965
WA6996	03-4955		Campsite	Historic	Not Eligible	3-1769	16-965
WA6999	03-4958		Campsite	Historic	Not Eligible	3-1769	16-965
WA7003	03-4962		Road	Historic	Not Eligible	3-1769	16-965
WA7005	03-4964		Trap	Historic	Not Eligible	3-1769	16-965
WA7006	03-4065		Hunting Blind	Historic	Not Eligible	3-1769	16-965
WA7008	03-4968		Debris Scatter	Historic	Not Eligible	3-1769	16-965
WA7009	03-4969		Campsite	Historic	Not Eligible	3-1769	16-965
WA7010	03-4970		Adit	Historic	Not Eligible	3-1769	16-965
WA7012	03-4972		Posts	Historic	Not Eligible	3-1769	16-965
	03-4274		Debris Scatter	Historic	Not Eligible	3-1387	

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
	03-5038	814-3	Prospect pit & debris scatter	Historic	Not Eligible	3-1799; 2-2705	
	03-5040	814-5	Debris scatter	Historic	Not Eligible	3-1799; 2-2705	
	03-5043	814-8	Debris scatter (1930s)	Historic	Not Eligible	3-1799; 2-2705	
	03-5044	814-9	Debris scatter	Historic	Not Eligible	3-1799; 2-2705	
	03-5508	KEC-253-1	Road segment (old SR 33)	Historic	Not Eligible	3-2008	
ST0031			Stone Structure	Historic	Not Evaluated		18-94
WA1675	31-0853		Foundation	Historic	Not Evaluated		
WA2490	03-0880		Debris Scatter	Historic	Not Evaluated	2-83	18-9
WA2677	03-2786		Debris Scatter	Historic	Not Evaluated		18-94
WA2682			Log Structure	Historic	Not Evaluated		18-94
WA3005	03-1081		Rock Wall	Historic	Not Evaluated	3-657	16-113
WA3210	31-1650		Crystal Peak Townsite	Historic	Not Evaluated		
WA3403	31-3723		Insulators	Historic	Not Evaluated	3-1107	16-331
WA5114	31-4268		Rock Wall	Historic	Not Evaluated	3-1387	16-494
WA5122	03-1712		Nevada Railroad Grade	Historic	Not Evaluated	3-1385, 3-1769, 3-2038	16-495, 16-975
WA5191			Debris Scatter	Historic	Not Evaluated		16-647
WA5196			Debris Scatter	Historic	Not Evaluated		16-647
WA5200			Well	Historic	Not Evaluated		16-647
WA5215			Debris Scatter	Historic	Not Evaluated		18-281
WA5236			Debris Scatter	Historic	Not Evaluated		16-518
WA5238			Debris Scatter	Historic	Not Evaluated		16-518
WA5265			Claim Markers	Historic	Not Evaluated		16-523
WA5351			Rock Wall	Historic	Not Evaluated		16-543
WA5443	31-4414		Debris Scatter	Historic	Not Evaluated	3-1433	18-288
WA6095			North Truckee Drain	Historic	Not Evaluated		16-783
WA6199	TY-3675		Mine	Historic	Not Evaluated	3-1679	16-750
WA6205	TY-4034		Campsite	Historic	Not Evaluated	3-1679	16-750
WA6539			Farm	Historic	Not Evaluated		

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6666	03-1361		Utility Line	Historic	Not Evaluated	TY-4361	
WA6670			Prospects	Historic	Not Evaluated	TY-4361	
WA6672			Road	Historic	Not Evaluated	TY-4361	
WA6673			Prospects	Historic	Not Evaluated	TY-4361	
WA6674			Mine	Historic	Not Evaluated	TY-4361	
WA6712			Debris Scatter	Historic	Not Evaluated		16-1110
WA6729		KEC 183-33a	Debris Scatter	Historic	Not Evaluated		16-1110
WA6733		KEC 183-37a	Fence	Historic	Not Evaluated		16-1110
WA6734		KEC 183-38a	Fence	Historic	Not Evaluated		16-1110
WA6736		KEC 183-40a	Debris Scatter	Historic	Not Evaluated		16-1110
WA6791	03-5320		Petroglyphs	Historic	Not Evaluated	3-1992	
WA6794	03-5323		Debris Scatter	Historic	Not Evaluated	3-1992	
WA6795	03-5324		Debris Scatter	Historic	Not Evaluated	3-1992	
WA6820	03-5347		Cairn	Historic	Not Evaluated	3-2003	16-928
WA7007	03-4066		Rock Alignment	Historic	Not Evaluated	3-1769	16-965
	03-1516		Tracy Power Plant	Historic	Not Evaluated	CC Overview	
	03-1631		Boomtown	Historic	Not Evaluated	CC Overview	
	03-1677		Hafed	Historic	Not Evaluated	CC Overview	
	03-1699		Maston's House	Historic	Not Evaluated	CC Overview	
	03-1702		Mesa Park	Historic	Not Evaluated	CC Overview	
	03-1706		Mogul	Historic	Not Evaluated	CC Overview	
	03-1707		Mogul Highlands	Historic	Not Evaluated	CC Overview	
	03-1708		Mustang	Historic	Not Evaluated	CC Overview	
	03-1722		102 Ranch	Historic	Not Evaluated	CC Overview	
	03-1726		Patrick (Ditho)	Historic	Not Evaluated	CC Overview	
	03-1785		Verdi	Historic	Not Evaluated	CC Overview	
LY0475	31-3729		Lithic Scatter, Quarry	Prehistoric	Eligible	3-1150, 3-1924	10-196-1
ST0191			Lithic Scatter	Prehistoric	Eligible		15-30
WA1480			Lithic scatter with ground stone	Prehistoric	Eligible		16-539
WA1495	31-0847		Lithic Scatter	Prehistoric	Eligible	3-1177	16-324, 16-325
WA1601	03-0851		Petroglyphs, Lithic Scatter	Prehistoric	Eligible		18-281

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA2065	03-2683		Camp Site (Glendale)	Prehistoric	Eligible		16-321, 16-492
WA3308	31-3544		Lithic Scatter	Prehistoric	Eligible	3-1011	16-289-1
WA3330			Petroglyphs	Prehistoric	Eligible		16-518
WA3379	31-3785		Lithic Scatter	Prehistoric	Eligible	3-1177	16-324
WA3381	31-3786		Lithic Scatter	Prehistoric	Eligible	3-1177	16-324
WA3385	31-3790		Lithic Scatter	Prehistoric	Eligible	3-1177	16-324
WA3819			Lithic Scatter	Prehistoric	Eligible		16-418
WA3820			Lithic Scatter with Hearth	Prehistoric	Eligible		16-418
WA3821			Lithic Scatter with Ground Stone	Prehistoric	Eligible		16-418
WA4337		ARS 568	Petroglyphs	Prehistoric	Eligible		
WA5197			Lithic Scatter with Ground Stone	Prehistoric	Eligible		16-647, 16-684
WA5237			Petroglyphs	Prehistoric	Eligible		16-518
WA5240			Petroglyphs	Prehistoric	Eligible		16-518
WA5348			Lithic Scatter with Ground Stone	Prehistoric	Eligible		16-549
WA5372	31-4321		Lithic Scatter, Hunting Blind	Prehistoric	Eligible	3-1433	18-288
WA5374	31-4323		Lithic Scatter with Ground Stone	Prehistoric	Eligible	3-1433	18-288
WA5611	31-4585		Petroglyphs	Prehistoric	Eligible	3-1583	16-751
WA5612	31-4586		Lithic Scatter	Prehistoric	Eligible	3-1583	16-751
WA5613	31-4588		Lithic Scatter with Rock Rings	Prehistoric	Eligible	3-1583	16-751
WA5630			Lithic Scatter with Ground Stone	Prehistoric	Eligible		16-750
WA5635			Lithic Scatter with Ground Stone	Prehistoric	Eligible		16-662
WA5636			Lithic Scatter with Ground Stone	Prehistoric	Eligible		16-662
WA6509	03-5209		Petroglyphs	Prehistoric	Eligible	3-1857	
WA6510			Petroglyphs	Prehistoric	Eligible	3-1857	
WA6533			Lithic Scatter	Prehistoric	Eligible		16-838
WA6652			Lithic Scatter with Ground Stone	Prehistoric	Eligible		
WA6753		KEC 183-62b	Petroglyphs	Prehistoric	Eligible		16-1110
WA6764		KEC 183 74b	Lithic Scatter with Ground Stone and Petroglyphs	Prehistoric	Eligible		16-1110
WA6774		KEC 183-86b	Lithic Scatter with Ground Stone	Prehistoric	Eligible		16-1110
WA6904	03-5457		Lithic Scatter with Rock Rings	Prehistoric	Eligible	3-2021	16-963
LY0432			Lithic Scatter	Prehistoric	Not Eligible	3-372	10-141-2
ST0052	31-1219		Isolate	Prehistoric	Not Eligible	3-342	18-72

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
ST0056	31-1223		Isolate	Prehistoric	Not Eligible	3-342	18-72
ST0082			Lithic Scatter	Prehistoric	Not Eligible		15-21
ST0098			Isolate	Prehistoric	Not Eligible		
ST0190			Lithic Scatter	Prehistoric	Not Eligible		18-305
ST0192			Lithic Scatter	Prehistoric	Not Eligible		15-30
ST0193			Lithic Scatter	Prehistoric	Not Eligible		15-30
WA0176	03-0961		Lithic Scatter	Prehistoric	Not Eligible	3-1679	
WA1050	03-0941	KEC 183-54b	Isolate	Prehistoric	Not Eligible		16-1110
WA1063		KEC-183-93b	Lithic scatter with ground stone	Prehistoric	Not Eligible		16-1110
WA2234	03-2770		Isolate	Prehistoric	Not Eligible	3-435	16-288
WA2235	03-2771		Isolate	Prehistoric	Not Eligible	3-435	16-288
WA2237	03-2773		Isolate	Prehistoric	Not Eligible	3-435	16-288
WA2411	03-0056		Lithic Scatter	Prehistoric	Not Eligible	3-53	16-18
WA2469	31-3717		Isolate	Prehistoric	Not Eligible	3-1138	16-23
WA2489	03-0879		Isolate	Prehistoric	Not Eligible	2-83	18-9
WA2491	03-0881		Isolate	Prehistoric	Not Eligible	2-83	18-9
WA2493	03-0883		Isolate	Prehistoric	Not Eligible	2-83	18-9
WA2494	03-0884		Isolate	Prehistoric	Not Eligible	2-83	18-9
WA2495	03-0885		Isolate	Prehistoric	Not Eligible	2-83	18-9
WA2524	31-1186		Isolate	Prehistoric	Not Eligible		
WA2673	03-2781		Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		16-103, 16-582
WA2675	31-2785		Rock Wall	Prehistoric	Not Eligible	3-1365	16-103, 16-473
WA2687	31-1218		Isolate	Prehistoric	Not Eligible	3-342	18-72
WA2819	31-1148		Isolate	Prehistoric	Not Eligible	3-235	16-104
WA2820	31-1149		Isolate	Prehistoric	Not Eligible	3-235	16-104
WA2822	31-1151		Isolate	Prehistoric	Not Eligible	3-235	16-104
WA2824	31-1153		Isolate	Prehistoric	Not Eligible	3-235	16-104
WA2827	31-1156		Isolate	Prehistoric	Not Eligible	3-235	16-104
WA2854	31-2976		Isolate	Prehistoric	Not Eligible	3-705	16-82
WA2860	31-2982		Isolate	Prehistoric	Not Eligible	3-705	16-82
WA2981	31-0071		Isolate	Prehistoric	Not Eligible	3-542	16-123
WA2993	31-3381	NDOT 16-	Lithic scatter with ground stone	Prehistoric	Not Eligible	3-922	16-263

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
		84R					
WA2999	31-1291		Isolate	Prehistoric	Not Eligible	3-474	16-205
WA3004	03-1080		Isolate	Prehistoric	Not Eligible	3-657	16-113
WA3007	03-1083		Isolate	Prehistoric	Not Eligible	3-657	16-113
WA3032	03-1294		Isolate	Prehistoric	Not Eligible	3-508	16-130
WA3232	31-0072		Isolate	Prehistoric	Not Eligible	3-236	16-86
WA3235	31-0075		Isolate	Prehistoric	Not Eligible	3-236	16-86
WA3238	31-2464		Isolate	Prehistoric	Not Eligible	3-574	16-217
WA3251			Isolate	Prehistoric	Not Eligible		16-259
WA3252			Isolate	Prehistoric	Not Eligible		16-259
WA3256			Isolate	Prehistoric	Not Eligible		16-272
WA3257			Isolate	Prehistoric	Not Eligible		16-272
WA3302	31-3538		Isolate	Prehistoric	Not Eligible	3-1011	16-289-1
WA3303	31-3539		Isolate	Prehistoric	Not Eligible	3-1011	16-289-1
WA3305	31-3541		Isolate	Prehistoric	Not Eligible	3-1011	16-289-1
WA3306	31-3542		Isolate	Prehistoric	Not Eligible	3-1011	16-289-1
WA3326	31-3677		Lithic Scatter with Ground Stone	Prehistoric	Not Eligible	3-1129	16-329
WA3327	31-3678		Lithic Scatter with Ground Stone	Prehistoric	Not Eligible	3-1129	16-329
WA3382	31-3787		Isolate	Prehistoric	Not Eligible	3-1177	16-324
WA3383	31-3788		Isolate	Prehistoric	Not Eligible	3-1177	16-324
WA3388	31-3793		Isolate	Prehistoric	Not Eligible	3-1177	16-324
WA3389	31-3794		Isolate	Prehistoric	Not Eligible	3-1177	16-324
WA3391	31-3797		Lithic Scatter	Prehistoric	Not Eligible	3-1177	16-324
WA3655	31-3941		Isolate	Prehistoric	Not Eligible	2-2239	18-253
WA3823			Isolate	Prehistoric	Not Eligible		16-418
WA3824			Isolate	Prehistoric	Not Eligible		16-418
WA4096			Isolate	Prehistoric	Not Eligible		16-442
WA4097			Isolate	Prehistoric	Not Eligible		16-442
WA4586		ARS-555	Isolate	Prehistoric	Not Eligible		
WA4592	31-4195		Isolate	Prehistoric	Not Eligible	3-1360	16-475
WA4593	31-4196		Isolate	Prehistoric	Not Eligible	3-1360	16-475
WA4594			Isolate	Prehistoric	Not Eligible		16-467
WA4599	31-4210		Isolate	Prehistoric	Not Eligible	3-1365	16-473
WA4601	31-4212		Isolate	Prehistoric	Not Eligible	3-1365	16-473

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA4602	31-4213		Isolate	Prehistoric	Not Eligible	3-1365	16-473
WA4604	31-4215		Isolate	Prehistoric	Not Eligible	3-1365	16-473
WA4606	31-4217		Isolate	Prehistoric	Not Eligible	3-1365	16-473
WA4607	31-4218		Isolate	Prehistoric	Not Eligible	3-1365	16-473
WA4608	31-4219		Isolate	Prehistoric	Not Eligible	3-1365	16-473
WA4609	31-4220		Isolate	Prehistoric	Not Eligible	3-1365	16-473
WA4830			Isolate	Prehistoric	Not Eligible		16-484
WA4831			Isolate	Prehistoric	Not Eligible		16-484
WA4832			Isolate	Prehistoric	Not Eligible		16-484
WA4833			Isolate	Prehistoric	Not Eligible		16-484
WA4834			Lithic Scatter	Prehistoric	Not Eligible		16-484
WA5124	31-4240		Isolate	Prehistoric	Not Eligible	3-1385	16-495
WA5125	31-4241		Isolate	Prehistoric	Not Eligible	3-1385	16-495
WA5126			Isolate	Prehistoric	Not Eligible		16-499
WA5173			Isolate	Prehistoric	Not Eligible		16-647
WA5175			Isolate	Prehistoric	Not Eligible		16-647
WA5176			Isolate	Prehistoric	Not Eligible		16-647
WA5177			Isolate	Prehistoric	Not Eligible		16-647
WA5178			Isolate	Prehistoric	Not Eligible		16-647
WA5181			Isolate	Prehistoric	Not Eligible		16-647
WA5185			Isolate	Prehistoric	Not Eligible		16-647
WA5195			Isolate	Prehistoric	Not Eligible		16-647
WA5202			Isolate	Prehistoric	Not Eligible		16-647
WA5214			Lithic Scatter	Prehistoric	Not Eligible		18-281
WA5235			Isolate	Prehistoric	Not Eligible		16-518
WA5256			Isolate	Prehistoric	Not Eligible		
WA5258			Isolate	Prehistoric	Not Eligible		
WA5259			Lithic Scatter with Ground Stone	Prehistoric	Not Eligible	3-1424	16-540
WA5305			Lithic Scatter	Prehistoric	Not Eligible	3-1424	16-540
WA5357			Isolate	Prehistoric	Not Eligible		16-550
WA5367			Isolate	Prehistoric	Not Eligible		16-552
WA5368			Isolate	Prehistoric	Not Eligible		16-552
WA5369			Isolate	Prehistoric	Not Eligible		16-552
WA5373	31-4322		Lithic Scatter	Prehistoric	Not Eligible	3-1433	18-288

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA5395			Isolate	Prehistoric	Not Eligible		16-618
WA5396			Lithic Scatter	Prehistoric	Not Eligible		16-618
WA5398			Mine	Prehistoric	Not Eligible		16-618
WA5401			Isolate	Prehistoric	Not Eligible		16-618
WA5403			Isolate	Prehistoric	Not Eligible		16-618
WA5406			Isolate	Prehistoric	Not Eligible		16-618
WA5407			Bedrock Mortar	Prehistoric	Not Eligible		16-560
WA5408			Bedrock Mortar	Prehistoric	Not Eligible		16-560
WA5409			Isolate	Prehistoric	Not Eligible		16-560
WA5444	31-4415		Hunting Blinds	Prehistoric	Not Eligible	3-1433-2	18-288-1
WA5517			Lithic Scatter	Prehistoric	Not Eligible		
WA5552			Lithic Scatter	Prehistoric	Not Eligible		16-634
WA5614	31-4589		Lithic Scatter	Prehistoric	Not Eligible	3-1583	16-751
WA5627			Lithic Scatter	Prehistoric	Not Eligible		16-656
WA6096			Lithic Scatter	Prehistoric	Not Eligible		
WA6196	TY-3678		Lithic Scatter	Prehistoric	Not Eligible	3-1679	16-750
WA6201	TY-3682		Lithic Scatter	Prehistoric	Not Eligible	3-1679	16-750
WA6262			Lithic Scatter	Prehistoric	Not Eligible		16-760
WA6264			Lithic Scatter	Prehistoric	Not Eligible		16-760
WA6278			House Pit, Hearth	Prehistoric	Not Eligible		
WA6283	03-5012		Lithic Scatter	Prehistoric	Not Eligible		16-771
WA6332	03-5016		Lithic Scatter	Prehistoric	Not Eligible	3-1801	16-786
WA6333	03-5017		Lithic Scatter	Prehistoric	Not Eligible		16-786
WA6346	TY-4325		Lithic Scatter	Prehistoric	Not Eligible	TY-98-1221	16-800
WA6378	TY-4388		Lithic Scatter with Ground Stone	Prehistoric	Not Eligible	TY-98-1240	16-826
WA6418	03-5116		Lithic Scatter	Prehistoric	Not Eligible	3-1812	16-885-1
WA6505			Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		
WA6528			Hunting Blinds	Prehistoric	Not Eligible		16-838
WA6529			Hunting Blinds	Prehistoric	Not Eligible		16-838
WA6530			Hunting Blinds	Prehistoric	Not Eligible		16-838
WA6531			Hunting Blinds	Prehistoric	Not Eligible		16-838
WA6532			Hunting Blinds	Prehistoric	Not Eligible		16-838
WA6576			Lithic Scatter	Prehistoric	Not Eligible		16-848
WA6611			Lithic Scatter	Prehistoric	Not Eligible		16-891

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6650			Lithic Scatter	Prehistoric	Not Eligible		
WA6654			Lithic Scatter	Prehistoric	Not Eligible		
WA6678			Lithic Scatter	Prehistoric	Not Eligible		
WA6688		KEC-183-83b	Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		16-1110
WA6689			Lithic Scatter	Prehistoric	Not Eligible		16-1110
WA6693		KEC-183-3a	Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		16-1110
WA6715		KEC-183-18a	Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		16-1110
WA6716		KEC 183-19a	Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		16-1110
WA6719		KEC 183-22a	Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		16-1110
WA6730		KEC 183-34a	Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		16-1110
WA6739		KEC 183-43b	Lithic Scatter	Prehistoric	Not Eligible		16-1110
WA6740		KEC 183-44b	Lithic Scatter	Prehistoric	Not Eligible		16-1110
WA6824			Lithic Scatter with Ground Stone	Prehistoric	Not Eligible		
WA6825			Lithic Scatter	Prehistoric	Not Eligible		
WA6913			Lithic Scatter	Prehistoric	Not Eligible		
WA6927			Lithic Scatter	Prehistoric	Not Eligible		
WA6979	03-4938		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6980	03-4939		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6981	03-4940		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6982	03-4941		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6983	03-4942		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6984	03-4943		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6989	03-4948		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6991	03-4950		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6992	03-4951		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6995	03-4954		Lithic Scatter with Quarry	Prehistoric	Not Eligible	3-1769	16-965
WA6997	03-4956		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA6998	03-4957		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA7000	03-4959		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA7001	03-4960		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA7004	03-4963		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
WA7011	03-4971		Lithic Scatter	Prehistoric	Not Eligible	3-1769	16-965
	03-5041	814-6	Lithic scatter	Prehistoric	Not Eligible	3-1799; 2-2705	

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
	03-5716	KC-15	Small lithic scatter	Prehistoric	Not Eligible	3-2113	
	03-5949	LC-1	Lithic scatter with ground stone	Prehistoric	Not Eligible	3-1932	
	03-5951	LC-2	Lithic scatter	Prehistoric	Not Eligible	3-1932	
WA1701			Isolate	Prehistoric	Not Eligible		
WA6679			Lithic Scatter	Prehistoric	Not Evaluated		
LY0020	31-0320		Lithic Scatter, Quarry	Prehistoric	Not Evaluated		
LY0022	22-5580		Base Camp	Prehistoric	Not Evaluated	2-2499	
ST0025			Lithic Scatter, Quarry	Prehistoric	Not Evaluated		18-94
ST0026			Camp Site with Ground Stone	Prehistoric	Not Evaluated		18-94
ST0027			Camp Site with Ground Stone	Prehistoric	Not Evaluated		
ST0028			Lithic Scatter, Quarry	Prehistoric	Not Evaluated		18-94
ST0029			Quarry	Prehistoric	Not Evaluated		18-94
ST0030			Quarry	Prehistoric	Not Evaluated		18-94
ST0050	31-0504		Camp Site	Prehistoric	Not Evaluated		
ST0051	31-0505		Quarry	Prehistoric	Not Evaluated		
ST0053	31-1220		Lithic Scatter	Prehistoric	Not Evaluated	3-342	18-72
ST0054	31-1221		Rock Shelter	Prehistoric	Not Evaluated	3-342	18-72
ST0055	31-1222		Quarry	Prehistoric	Not Evaluated	3-342	18-72
ST0057	31-1224		Lithic Scatter	Prehistoric	Not Evaluated	3-342	18-72
ST0084	03-6457		Lithic scatter with ground stone	Prehistoric	Not Evaluated	3-2365	
ST0194			Lithic Scatter	Prehistoric	Not Evaluated		15-30
ST0195			Lithic Scatter	Prehistoric	Not Evaluated		15-30
ST0196			Lithic Scatter	Prehistoric	Not Evaluated		15-30
ST0197			Lithic Scatter	Prehistoric	Not Evaluated		15-30
WA0002	03-0914		Petroglyphs - Ct. of Antiquity	Prehistoric	Not Evaluated	3-508	16-86
WA0030	31-0741		Lithic Scatter	Prehistoric	Not Evaluated		
WA0100	31-0754		Lithic Scatter	Prehistoric	Not Evaluated		
WA0105	31-0757		Lithic Scatter	Prehistoric	Not Evaluated		
WA0111	31-0761		Lithic Scatter	Prehistoric	Not Evaluated		
WA0115	03-2599		Lithic Scatter	Prehistoric	Not Evaluated		
WA0122	31-0763		Lithic Scatter	Prehistoric	Not Evaluated		
WA0128	31-0765		Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated		
WA0154	03-0945		Lithic Scatter	Prehistoric	Not Evaluated		
WA0179			Lithic Scatter	Prehistoric	Not Evaluated		

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA0185	31-0773		Lithic Scatter	Prehistoric	Not Evaluated		
WA0192	31-0777		Lithic Scatter	Prehistoric	Not Evaluated		
WA0194	31-0779		Lithic Scatter	Prehistoric	Not Evaluated		
WA1051	03-0942		Lithic Scatter	Prehistoric	Not Evaluated		
WA1052	03-0778		Lithic Scatter	Prehistoric	Not Evaluated		
WA1053	03-0765		Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated		
WA1054	03-0755		Lithic Scatter	Prehistoric	Not Evaluated		
WA1055	03-0764		Lithic Scatter	Prehistoric	Not Evaluated		
WA1056	31-0767		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1059	03-0779		Lithic Scatter	Prehistoric	Not Evaluated		
WA1060	03-0943		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1067	03-0757		Lithic Scatter	Prehistoric	Not Evaluated		
WA1068	03-0754		Lithic Scatter	Prehistoric	Not Evaluated		
WA1070	03-0766		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1072	03-0758		Lithic Scatter	Prehistoric	Not Evaluated		
WA1077			Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1090	03-0968		Lithic Scatter	Prehistoric	Not Evaluated		
WA1091	03-0969		Lithic Scatter	Prehistoric	Not Evaluated		
WA1092			Lithic Scatter	Prehistoric	Not Evaluated		
WA1093	31-0971		Lithic Scatter	Prehistoric	Not Evaluated		
WA1094			Lithic Scatter	Prehistoric	Not Evaluated		
WA1098	31-0975		Lithic Scatter	Prehistoric	Not Evaluated		
WA1104	31-0980		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1110	31-0985		Lithic Scatter	Prehistoric	Not Evaluated		
WA1112	31-0987		Lithic Scatter	Prehistoric	Not Evaluated		
WA1113			Lithic Scatter	Prehistoric	Not Evaluated		
WA1114	31-0989		Lithic Scatter	Prehistoric	Not Evaluated		
WA1120			Lithic Scatter	Prehistoric	Not Evaluated		
WA1122			Lithic Scatter	Prehistoric	Not Evaluated		
WA1401	03-0999		Lithic Scatter	Prehistoric	Not Evaluated		
WA1402	03-1000		Lithic Scatter	Prehistoric	Not Evaluated		
WA1403	03-0795		Lithic Scatter	Prehistoric	Not Evaluated		
WA1404	03-1001		Lithic Scatter	Prehistoric	Not Evaluated		
WA1405	03-0796		Lithic Scatter	Prehistoric	Not Evaluated		

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA1406	03-0797		Petroglyphs	Prehistoric	Not Evaluated	3-423	16-276
WA1407	31-0798		Bedrock Mortar	Prehistoric	Not Evaluated	3-423	16-276
WA1408			Lithic Scatter	Prehistoric	Not Evaluated		
WA1409	03-0800		Rock Shelter	Prehistoric	Not Evaluated		
WA1410	03-0801		Ground Stone	Prehistoric	Not Evaluated		
WA1411	03-0802		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1412	03-0794		Bedrock Mortar	Prehistoric	Not Evaluated		
WA1456			Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1462	03-0823		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1482	03-0838		Lithic Scatter	Prehistoric	Not Evaluated		
WA1487	03-0841		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1491	31-1006		Lithic Scatter & Bedrock Mortar	Prehistoric	Not Evaluated		16-160
WA1492	31-0844		Lithic Scatter	Prehistoric	Not Evaluated		16-160
WA1493	03-0845		Lithic scatter with ground stone	Prehistoric	Not Evaluated		
WA1497	03-1007		Lithic Scatter	Prehistoric	Not Evaluated		
WA1498	03-0849		Lithic Scatter	Prehistoric	Not Evaluated		
WA1602	03-2606		Lithic Scatter	Prehistoric	Not Evaluated		
WA1603	31-1052		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-49	16-99
WA1604	31-1053		Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated	3-49	16-99
WA1606	31-1054		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-49	16-99
WA1607			Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated	3-49	16-99
WA1608	31-1055		Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated	3-49	16-99
WA1611	31-1057		Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated	3-49	16-99
WA1612	31-1058		Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated	3-49	16-99
WA1613	31-1059		Lithic Scatter, Petroglyphs	Prehistoric	Not Evaluated	3-49	16-99
WA1614	31-1060		Petroglyphs	Prehistoric	Not Evaluated	3-49	16-99
WA1617	03-1063		Lithic Scatter	Prehistoric	Not Evaluated		
WA1696	03-0854		Lithic Scatter	Prehistoric	Not Evaluated	3-150	
WA1697	03-0855		Lithic Scatter	Prehistoric	Not Evaluated	3-150	
WA1698	03-0856		Lithic Scatter	Prehistoric	Not Evaluated	3-150	
WA1699	03-0857		Lithic Scatter	Prehistoric	Not Evaluated	3-150	
WA1700	03-0858		Lithic Scatter	Prehistoric	Not Evaluated	3-150	
WA2005	03-0862		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	2-83	18-9
WA2006	03-0863		Lithic Scatter	Prehistoric	Not Evaluated	2-83	18-9

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA2035	03-0422		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-42
WA2057	31-2675		Lithic Scatter	Prehistoric	Not Evaluated		
WA2058	31-2676		Lithic Scatter	Prehistoric	Not Evaluated		
WA2081	31-2695		Lithic Scatter	Prehistoric	Not Evaluated		
WA2155	03-2719		Lithic Scatter	Prehistoric	Not Evaluated	3-423	16-276
WA2156	03-2720		Bedrock Mortar	Prehistoric	Not Evaluated	3-423	16-276
WA2165	31-2722		Lithic Scatter	Prehistoric	Not Evaluated	3-435	16-228
WA2180	03-2735		Lithic Scatter	Prehistoric	Not Evaluated	3-435	16-228
WA2217	03-2753		Lithic scatter with ground stone	Prehistoric	Not Evaluated	3-435	16-288
WA2226	03-2762		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-435	16-288
WA2227	03-2763		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-435	16-288
WA2228	03-2764		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-435	16-288
WA2229	03-2765		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-435	16-288
WA2230	03-2766		Ground Stone	Prehistoric	Not Evaluated	3-435	16-288
WA2231	03-2767		Lithic Scatter	Prehistoric	Not Evaluated	3-435	16-288
WA2232	03-2768		Ground Stone	Prehistoric	Not Evaluated	3-435	16-288
WA2233	03-2769		Hearth	Prehistoric	Not Evaluated	3-435	16-288
WA2236	03-2772		Hunting Blinds	Prehistoric	Not Evaluated	3-435	16-288
WA2260	03-2774		Lithic Scatter	Prehistoric	Not Evaluated		16-10
WA2458	03-0878		Lithic Scatter	Prehistoric	Not Evaluated		
WA2492	03-0882		Lithic Scatter	Prehistoric	Not Evaluated	2-83	18-9
WA2521	03-2776		Lithic Scatter	Prehistoric	Not Evaluated		16-103
WA2623	31-3562		Lithic Scatter	Prehistoric	Not Evaluated		16-316, 16-379
WA2645	31-1029		Lithic Scatter	Prehistoric	Not Evaluated	3-170	16-81
WA2667			Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-94
WA2674	31-2784		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-1365	16-103, 16-473
WA2678	03-2787		Lithic Scatter	Prehistoric	Not Evaluated		18-94
WA2679	31-2788		Lithic Scatter	Prehistoric	Not Evaluated		18-94
WA2680			Lithic Scatter	Prehistoric	Not Evaluated		18-94
WA2681			Lithic Scatter	Prehistoric	Not Evaluated		18-94
WA2686	03-1217		Lithic Scatter	Prehistoric	Not Evaluated	3-342; 3-2038	18-72

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA2698	03-2025		Lithic Scatter	Prehistoric	Not Evaluated	3-479	16-101
WA2818	31-1147		Lithic Scatter	Prehistoric	Not Evaluated	3-235	16-104
WA2821	31-1150		Lithic Scatter	Prehistoric	Not Evaluated	3-235	16-104
WA2823	31-1152		Lithic Scatter	Prehistoric	Not Evaluated	3-235	16-104
WA2825	31-1154		Lithic Scatter	Prehistoric	Not Evaluated	3-235	16-104
WA2826	31-1155		Lithic Scatter	Prehistoric	Not Evaluated	3-235	16-104
WA2828	31-1157		Lithic Scatter	Prehistoric	Not Evaluated	3-235	16-104
WA2829	31-1158		Lithic Scatter	Prehistoric	Not Evaluated	3-235	16-104
WA2845	31-2484		Lithic Scatter	Prehistoric	Not Evaluated	3-579	16-105
WA2847	31-2969		Lithic Scatter	Prehistoric	Not Evaluated	3-705	16-82
WA2848	31-2970		Lithic Scatter	Prehistoric	Not Evaluated	3-705	16-82
WA2849	31-2971		Lithic Scatter	Prehistoric	Not Evaluated	3-705	16-82
WA2850	31-2972		Lithic Scatter, Rock Rings, Petroglyphs	Prehistoric	Not Evaluated	3-705	16-82
WA2851	31-2973		Lithic Scatter, Rock Rings	Prehistoric	Not Evaluated	3-705	16-82
WA2852	31-2974		Petroglyphs	Prehistoric	Not Evaluated	3-705	16-82
WA2853	31-2975		Lithic Scatter	Prehistoric	Not Evaluated	3-705	16-82
WA2855	31-2977		Lithic Scatter, Rock Rings	Prehistoric	Not Evaluated	3-705	16-82
WA2856	31-2978		Stone Circle	Prehistoric	Not Evaluated	3-705	16-82
WA2857	31-2979		Ground Stone	Prehistoric	Not Evaluated	3-705	16-82
WA2858	31-2980		Rock Rings	Prehistoric	Not Evaluated	3-705	16-82
WA2859	31-2981		Hunting Blinds	Prehistoric	Not Evaluated	3-705	16-82
WA2861	31-2983		Rock Rings	Prehistoric	Not Evaluated	3-705	16-82
WA2862	31-2983		Ground Stone	Prehistoric	Not Evaluated	3-705	16-82
WA2909			Lithic Scatter	Prehistoric	Not Evaluated		16-128
WA2911	03-1077		Lithic Scatter	Prehistoric	Not Evaluated	3-656	16-135
WA2994	31-3382	NDOT 16-84R	Lithic Scatter	Prehistoric	Not Evaluated	3-922	16-263
WA3002	03-1078		Lithic Scatter, Rock Rings	Prehistoric	Not Evaluated	3-657	16-113
WA3003	03-1079		Lithic Scatter, Rock Rings	Prehistoric	Not Evaluated	3-657	16-113
WA3006	03-1082		Rock Rings	Prehistoric	Not Evaluated	3-657	16-113
WA3014		SJ2	Lithic Scatter	Prehistoric	Not Evaluated		16-118
WA3015			Lithic Scatter	Prehistoric	Not Evaluated		16-118
WA3018		SJ6	Lithic Scatter, Bedrock Mortar, Petroglyphs	Prehistoric	Not Evaluated		16-118
WA3027			Ground Stone	Prehistoric	Not Evaluated		

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA3033	03-1295		Rock Shelter	Prehistoric	Not Evaluated	3-508	16-130
WA3067	31-3323		Lithic Scatter	Prehistoric	Not Evaluated	3-889	16-142
WA3204	22-1729		Lithic Scatter	Prehistoric	Not Evaluated	2-293	16-399, 18-284
WA3205	22-1730		Lithic Scatter	Prehistoric	Not Evaluated	2-293	16-399, 18-284
WA3215			Talus Pit, Petroglyph	Prehistoric	Not Evaluated		
WA3233	31-0073		Ground Stone	Prehistoric	Not Evaluated	3-236	16-86
WA3234	31-0074		Lithic Scatter	Prehistoric	Not Evaluated	3-236	16-86
WA3236	31-0076		Lithic Scatter	Prehistoric	Not Evaluated	3-236	16-86
WA3237	31-1303		Lithic Scatter	Prehistoric	Not Evaluated	3-542, 3-1365	16-123
WA3301	31-3537		Lithic Scatter	Prehistoric	Not Evaluated	3-1011	16-289-1
WA3304	31-3540		Lithic Scatter	Prehistoric	Not Evaluated	3-1011	16-289-1
WA3307	31-3543		Lithic Scatter	Prehistoric	Not Evaluated	3-1011	16-289-1
WA3317			Petroglyphs	Prehistoric	Not Evaluated		
WA3339			Lithic Scatter	Prehistoric	Not Evaluated		16-381
WA3340			Lithic Scatter, Bedrock Mortar	Prehistoric	Not Evaluated		
WA3341			Lithic Scatter	Prehistoric	Not Evaluated		16-465
WA3342			Lithic Scatter	Prehistoric	Not Evaluated		16-465
WA3343			Lithic Scatter	Prehistoric	Not Evaluated		16-465
WA3380	31-3785		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA3384	31-3789		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA3386	31-3791		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA3387	31-3792		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA3390	31-3796		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA3392	31-3798		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA3393	31-3799		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA3394	31-3800		Lithic Scatter	Prehistoric	Not Evaluated	3-1177	16-324
WA4094			Lithic Scatter	Prehistoric	Not Evaluated		16-442
WA4095			Lithic Scatter	Prehistoric	Not Evaluated		16-442
WA4340		ARS 568	Lithic Scatter	Prehistoric	Not Evaluated		
WA4585		ARS-555	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		
WA4587			Lithic Scatter	Prehistoric	Not Evaluated		

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA4588			Lithic Scatter	Prehistoric	Not Evaluated		
WA4589			Lithic Scatter	Prehistoric	Not Evaluated		
WA4590			Quarry	Prehistoric	Not Evaluated		
WA4600	31-4211		Lithic Scatter	Prehistoric	Not Evaluated	3-1365	16-473
WA4605	31-4216		Lithic Scatter	Prehistoric	Not Evaluated	3-1365	16-473
WA5108	31-4262		Lithic Scatter	Prehistoric	Not Evaluated	3-1387	16-494
WA5109	31-4263		Lithic Scatter	Prehistoric	Not Evaluated	3-1387	16-494
WA5110	31-4264		Lithic Scatter	Prehistoric	Not Evaluated	3-1387	16-494
WA5111	31-4265		Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated	3-1387	16-494
WA5119	31-4273		Lithic Scatter	Prehistoric	Not Evaluated	3-1387	16-494
WA5183			Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-647
WA5184			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5186			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5188			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5189			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5193			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5194			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5198			Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-647
WA5199			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5201			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5203			Lithic Scatter	Prehistoric	Not Evaluated		16-647
WA5205			Hearth with Ground Stone	Prehistoric	Not Evaluated		16-647
WA5358			Bedrock Mortar	Prehistoric	Not Evaluated		16-550
WA5359			Bedrock Mortar	Prehistoric	Not Evaluated		16-550
WA5654	TY-3832		Lithic Scatter	Prehistoric	Not Evaluated	TY-94-1038	16-773
WA5656	TY-3834		Rock Enclosure	Prehistoric	Not Evaluated	TY-94-1038	16-773
WA6198	TY-3676		Lithic Scatter	Prehistoric	Not Evaluated	3-1679	16-750
WA6217			Lithic Scatter / Debris Scatter	Prehistoric	Not Evaluated		
WA6541			House Pit	Prehistoric	Not Evaluated		
WA6680			Rock Shelter	Prehistoric	Not Evaluated		
WA6681			Rock Enclosure	Prehistoric	Not Evaluated		
WA6690		KEC-183-1b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6691		KEC-183-2a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6692			Lithic Scatter	Prehistoric	Not Evaluated		16-1110

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6694		KEC-183-3b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6695		KEC-183-4a	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6696		KEC-183-4b	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6697		KEC-183-5a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6701			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6702		KEC-183-8a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6703			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6706		KEC-183-10a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6708		KEC-183-11a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6709		KEC-183-12a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6710		KEC-183-13a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6711			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6713		KEC-183-16a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6718		KEC 183-21a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6720		KEC 183-23a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6721			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6723		KEC 183-26a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6724		KEC 183-27a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6726		KEC 183-30a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6727			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6728		KEC 183-32a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6731		KEC 183-35a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6732		KEC 183-36a	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6737		KEC 183-41b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6741		KEC 183-45b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6742		KEC 183-46b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6743		KEC 183-47b	Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6744		KEC 183-48b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6745			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6746		KEC 183-50b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6747		KEC 183-52b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6748		KEC 183-53b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6750		KEC 183-56b	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6752		KEC 183-61b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6754			Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6755			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6756			Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6757		KEC 183-67b	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6759		KEC 183-69b	Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6760		KEC 183-70b	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6761			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6762		KEC 183-72b	Hunting Blinds	Prehistoric	Not Evaluated		16-1110
WA6765			Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6767		KEC 183-78b	Rock Alignment	Prehistoric	Not Evaluated		16-1110
WA6768			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6770			Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6771		KEC 183-82b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6772		KEC 183-84b	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6773			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6775			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6777			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6778		KEC 183-91b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6780		KEC 183-94b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6781		KEC 183-95b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6783		KEC 183-97b	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6784		KEC 183-98b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6785		KEC 183-99b	Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6786			Prospects	Prehistoric	Not Evaluated		16-1110
WA6787			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6788			Lithic Scatter	Prehistoric	Not Evaluated		16-1110
WA6789		KEC 183-65b	Lithic Scatter with Ground Stone	Prehistoric	Not Evaluated		16-1110
WA6892	03-5455		Lithic Scatter	Prehistoric	Not Evaluated	3-2021	16-963
WA6905	03-5458		Talus Pits	Prehistoric	Not Evaluated	3-2021	16-963
WA6906	03-5464		Depression	Prehistoric	Not Evaluated	3-2021	16-963
WA6907	03-5465		Rock Rings	Prehistoric	Not Evaluated	3-2021	16-963
WA6908	03-5466		Rock Alignment	Prehistoric	Not Evaluated	3-2021	16-963
WA6909	03-5467		Leveled Area	Prehistoric	Not Evaluated	3-2021	16-963
WA6950			Rock Circle	Prehistoric	Not Evaluated		

Table F-2. Recorded Cultural Resources

NSM Site Number	Agency Site Number	Other Number	Description	Period	National Register Eligibility	Agency Report Number	NSM Report Number
WA6951			Rock Alignment	Prehistoric	Not Evaluated		
WA2004	03-0861		Rock Shelter	Prehistoric	Not Evaluated	2-83	18-9
WA4591			Lithic Scatter with Quarry	Prehistoric	Not Evaluated		
	03-6123		Lithic scatter	Prehistoric	Not Evaluated		
WA6790	03-5319		Rock Alignment	Unknown	Not Evaluated	3-1992	

Table F-3. Properties Listed on the National Register of Historic Places Located Within the Study Area

Name	County	Address / Location	Type	Date Entered
Fernley & Lassen RR Depot	Lyon	675 E. Main, Fernley	Building	6/01/05
Fernley Community Church	Lyon	80 South Central, Fernley	Building	5/16/03
Derby Diversion Dam	Storey	19 miles east of Sparks	Structure	4/26/78
State Boundary Marker	Washoe	Northwest of Verdi	Object	8/27/81
20th Century Club	Washoe	335 West First, Reno	Building	4/21/83
Alpha Tau Omega House	Washoe	205 University, Reno	Building	1/28/04
Bank of Sparks	Washoe	948 Victorian, Sparks	Building	9/28/07
Barnard House	Washoe	950 Joaquin Miller Dr., Reno	Building	8/22/02
Bethel AME Church	Washoe	226 Bell Street, Reno	Building	6/12/01
Billinghurst House	Washoe	729 Evans, Reno	Building	11/08/74
Brown Ranch	Washoe	12945 Old Virginia Rd., Reno	Building	12/23/94
Burke House	Washoe	36 Stewart Street, Reno	Building	5/31/84
Burke-Berryman House	Washoe	418 Cheney St., Reno	Building	9/05/04
California Building	Washoe	1000 Cowan Drive, Reno	Building	9/23/92
Clifford House	Washoe	339 Ralston, Reno	Building	3/07/83
El Cortez Hotel	Washoe	239 W. Second, Reno	Building	6/13/84
Field Matron's Cottage	Washoe	1995 E. Second, Reno	Building	5/16/03
First Church of Christ	Washoe	501 Riverside Dr., Reno	Building	8/20/99
First United Methodist Church	Washoe	First and West Streets, Reno	Building	2/24/83
Fleischmann Atmospherium	Washoe	North Virginia St., Reno	Building	9/22/94
Francovich House	Washoe	557 Washington, Reno	Building	4/25/83
Frey Ranch	Washoe	1140 W. Peckham, Reno	Building	3/05/99
Garvey House	Washoe	589 California Ave., Reno	Building	1/28/04
Giraud House	Washoe	442 Flint St., Reno	Building	4/05/84
Glendale School	Washoe	Victorian Square, Sparks	Building	1/30/78
Graham House	Washoe	548 California St., Reno	Building	3/07/83
Gray House	Washoe	457 Court St., Reno	Building	11/20/87
Greystone Castle	Washoe	970 Joaquin-Miller Dr., Reno	Building	8/22/02
Hawkins House	Washoe	549 Court St., Reno	Building	12/17/79
Humphrey House	Washoe	467 Ralston, Reno	Building	3/07/83
Immaculate Conception Church	Washoe	590 Pyramid Way, Sparks	Building	12/23/92
Kind House	Washoe	751 Marsh, Reno	Building	10/05/05
Lake Mansion	Washoe	250 Court St., Reno	Building	6/29/72
Landrum's Hamburger Stand	Washoe	1300 S. Virginia St., Reno	Building	10/30/98
Levy House	Washoe	111 California Ave., Reno	Building	2/24/83
Mackay School of Mines	Washoe	University of Nevada Campus	Building	4/01/82
Nichols School	Washoe	400 Pyramid Way, Sparks	Building	10/30/02
McCarthy-Platt House	Washoe	1000 Plumas St., Reno	Building	5/31/84
McKinley Park School	Washoe	Riverside Drive, Reno	Building	9/16/85
Miller Rowe Holgate House	Washoe	18 Winter St., Reno	Building	5/26/05
Morrill Hall	Washoe	University of Nevada Campus	Building	5/01/74
Mt. Rose Elementary School	Washoe	915 Lander St., Reno	Building	11/25/77
NCO Railroad Depot	Washoe	325 E. Fourth, Reno	Building	2/08/80
NCO Railway	Washoe	401 E. Fourth, Reno	Building	5/09/83
Newlands House	Washoe	7 Elm Court, Reno	Building	10/15/66
Nortonia Boarding House	Washoe	150 Ridge St., Reno	Building	2/24/83
Nystrom Guest House	Washoe	333 Ralston St., Reno	Building	4/06/00
Patrick Ranch House	Washoe	1225 Gordon Ave., Reno	Building	5/16/03
Upton House	Washoe	937 Jones St., Reno	Building	8/14/03
Peavine Ranch	Washoe	11220 N. Virginia, Reno	Building	4/06/00

Table F-3. Properties Listed on the National Register of Historic Places Located Within the Study Area

Name	County	Address / Location	Type	Date Entered
Pincolini Hotel	Washoe	214 Lake St., Reno	Building	10/11/84
Pioneer Theater	Washoe	100 S. Virginia, Reno	Building	1/19/05
Rainer Bottling Plant	Washoe	310 Spokane, Reno	Building	3/26/80
Reno Post Office	Washoe	50 S. Virginia, Reno	Building	2/28/90
Reno National bank	Washoe	204 N. Virginia, Reno	Building	8/06/86
Riverside Hotel	Washoe	17 S. Virginia, Reno	Building	8/06/86
Robison House	Washoe	409 13 th Street, Sparks	Building	9/29/06
Southside School	Washoe	190 E. Liberty, Reno	Building	8/05/93
Twaddle Mansion	Washoe	485 W. Fifth, Reno	Building	3/07/83
Tyson House	Washoe	242 W. Liberty, Reno	Building	2/24/83
University of Nevada	Washoe	University of Nevada Campus	Building	2/25/87
Vachina Apartments	Washoe	45 California Ave., Reno	Building	8/06/86
Veterans Memorial School	Washoe	1200 Locus St., Reno	Building	4/04/95
Virginia Street Bridge	Washoe	Spans Truckee River	Structure	12/10/80
Wadsworth Union Church	Washoe	Wadsworth	Building	4/15/04
Washoe County Courthouse	Washoe	117 S. Virginia, Reno	Building	8/06/86
Washoe County Library	Washoe	814 Victorian Ave., Sparks	Building	3/09/92

Appendix G

Environmental Constraint Ranking Memorandum



ENVIRONMENTAL CONSTRAINT
RANKING MEMORANDUM

For the:
NEVADA DEPARTMENT OF TRANSPORTATION
I-80 CORRIDOR STUDY

Prepared For:
Nevada Department of Transportation
1263 South Stewart Street
Carson City, Nevada 89712

Prepared by:
Nichols Consulting Engineers, Chtd.
Engineering & Environmental Services
P.O. Box 1760
Zephyr Cove, NV 89448

PURPOSE

To facilitate transportation planning in the I-80 Corridor between West Verdi and Fernley, and identify areas that could potentially encounter the highest level of environmental constraints due to corridor improvements, a ranking scheme has been developed and applied to resources of concern within the study area. These resources were initially identified in the Nevada Department of Transportation (NDOT) I-80 Corridor Study, Draft Environmental Resources Technical Memo prepared by Nichols Consulting Engineers in February 2008. This memo explains the process and assumptions used to rank environmental constraints and impacts.

ASSUMPTIONS

Vegetation, fisheries and wildlife, water, air, cultural, scenic and recreational resources were examined in this analysis. Research conducted for the Environmental Resources Technical Memo did not yield any Superfund, National Priority Listed (NPL), or Brownfield hazardous waste sites. As a result, this resource was not included in this analysis. It should be noted that underground leaking tanks are present throughout the project area, but these sites were not a part of this investigation, and will need to be examined when NDOT completes a Phase I Environmental Investigation for hazardous and contaminated sites. In addition, geological resources were not included in this evaluation because no general growth restraints were found to exist in the project study area based on the level of analysis completed for the Environmental Technical Memo. Again, site-specific investigations will need to be completed on a project level in order to adequately assess the potential implications of geologic resources.

This analysis also assumes that the environmental setting within each interchange area is constant; it does not account for a project's proximity to the Truckee River. A close proximity to the Truckee River or other major water sources such as wetlands, springs, and confluences will increase the environmental constraint and impact due to development. This can be applied to all resources but is especially significant when examining wetlands and floodplains, fisheries, and cultural resources. NDOT will need to need to consider a project's distance to the Truckee River when assessing environmental constraints and impacts.

PROCEDURE

Resources for each interchange area were ranked based on a qualitative comparison to each other. To



quantify the importance of each resource for this scale of study, a point system was developed. Environmental constraint and impact rankings considered the regulatory, financial, and time investment unique to each resource and its associated mitigation. Such considerations were quantified based on three categories: compliance, effort, and mitigation. These are defined below:

Compliance

To account for the difference in regulatory demands between resources, a **compliance score** was applied. This score is based on the amount of regulation, plans, permits, and level of protection in place for this resource.

Effort

To account for the variation in time and cost required to evaluate impacts, conduct studies, and report analysis, an **effort score** was applied.

Mitigation

To account for the range in mitigation measures, a **mitigation score** was applied. This score is based on the scale, complexity, and the potential area of impact to the resource in question.

The scoring matrix shown in Table 1 defines how compliance, effort, and mitigation scores were determined. The sum of these scores is referred to as the **resource index**. To relate resource significance to density at each interchange area, a **weighted value** was calculated by multiplying the resource index by the rate of occurrence. This weighted comparison accounts for areas that contain many occurrences of low-scoring resources. An example of this process is as follows:

Nevada Department of Wildlife (NDOW) game mammals (big horn, mule deer, and pronghorn) have relatively few compliance measures, mitigation, and time/cost investments when compared to the federally endangered Cui-ui. For this reason, NDOW game mammals received a score of one each for compliance, effort, and mitigation. The resource index for game mammals is three (1+1+1). By itself, this score is not a significant value, but if there are several occurrences in one area, then the weighted value is increased. At the North Patrick Interchange, for instance, there are three game mammal habitat areas. This would make the weighted value equal nine (3 x 3), which accounts for density, as well as significance.

Table 1. Resource Scoring Matrix

Level	Compliance	Effort	Mitigation
3	Substantial regulation exists for this resource.	Time and costs are expected to be high.	Mitigation measures are substantial.
2	Moderate levels of regulation exist for this resource.	Time and costs are expected to be moderate.	Mitigation measures are moderate.
1	Little to no regulation exists for this resource.	Time and costs are expected to be low.	Mitigation measures are low.

To assess the environmental constraint and impact ranking at each interchange area, the calculated totals were compared to each other using the ranking scale shown in Table 2.

Table 2. Environmental Constraint and Impact Ranking Scale

Level	Range (32-172)	Description
High	100-172 points	Indicates that the environmental impact or the cost of the physical constraints is extremely high and cause corridor improvements to become prohibitive.
Medium High	85-99 points	Indicates that the environmental impact or the cost of physical constraints is significant in implementing corridor improvements. Mitigation measures can be cost prohibitive.
Medium Low	52-84 points	Indicates that the environmental impact or the cost of physical constraints is of secondary importance to the need for corridor improvements. Mitigation measures are acceptable.
Low	32-51 points	Indicates that the environmental impact or the cost of physical constraints is only remotely significant in implementing corridor improvements.



EXCEPTIONS

Based on the unique constraints of cultural and floodplain features, the following exceptions were made to calculate these ranking indices:

Cultural

Exact cultural site locations and descriptions are not legally allowed for public review, but generalizations can be made based on existing studies, proximity to water, and mapped culturally significant resources. General Land Office (GLO) maps attempt to define areas that would likely contain historic period cultural resources, and can be used to estimate sensitivity. The corridor was examined for evidence of a) agriculture and industry, b) communication, c) settlement, and d) transportation. One point is given for each cultural resources found in each area. The highest occurrence value possible for a given interchange is 4, indicating that evidence of agriculture and industry, communication, settlement, and transportation are all shown there.

Floodplain

Flood Insurance Rate Maps (FIRMs) were obtained and used to identify floodplains within the NDOT I-80 Corridor Study Area. A FIRM depicts the spatial extent of Special Flood Hazard Areas (SFHAs) and other thematic features related to flood risk assessment. SFHAs are areas subject to inundation by a flood having a one-percent or greater probability of being equaled or exceeded during any given year. Flood risk is defined as low, medium, and high as shown on the FIRM. Occurrence values used to assess the environmental constraint and impact ranking range from 1 (low flood risk) to 3 (high flood risk).

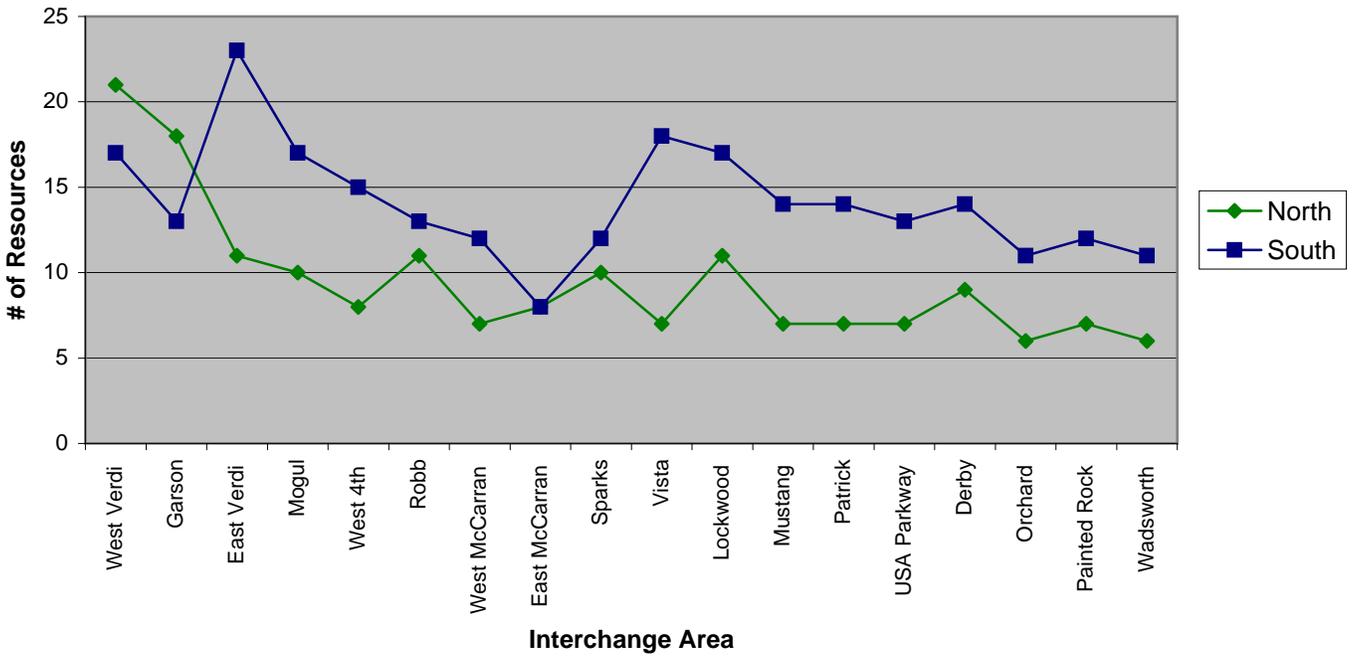
RESULTS

It was found that interchange areas located in the western portion of the I-80 corridor have resources with high environmental constraint and impact rankings. Rankings tend to be moderate east of Sparks. In general, the southern interchange areas have higher rankings than the northern areas. This in part due to the Truckee River which runs south of I-80 for most of corridor (crosses I-80 near the Garrison Interchange). Table 3 shows the environmental constraint and impact ranking for each interchange area.

Table 3. Environmental Constraint and Impact Rankings for Each Interchange Area

Interchange Area	Environmental Constraint and Impact Ranking	
	North	South
West Verdi	High	High
Garson	High	Medium High
East Verdi	Medium Low	High
Mogul	Medium Low	High
West 4th	Medium Low	High
Robb	Medium Low	Medium Low
West McCarran	Low	Medium Low
East McCarran	Low	Medium Low
Sparks	Medium Low	Medium Low
Vista	Low	High
Lockwood	Medium Low	Medium High
Mustang	Low	Medium High
Patrick	Low	Medium High
USA Parkway	Low	Medium Low
Derby	Low	High
Orchard	Low	Medium Low
Painted Rock	Low	Medium High
Wadsworth	Low	Medium High

Number of Resources



Environmental Ranking with Weighted Resource Value

