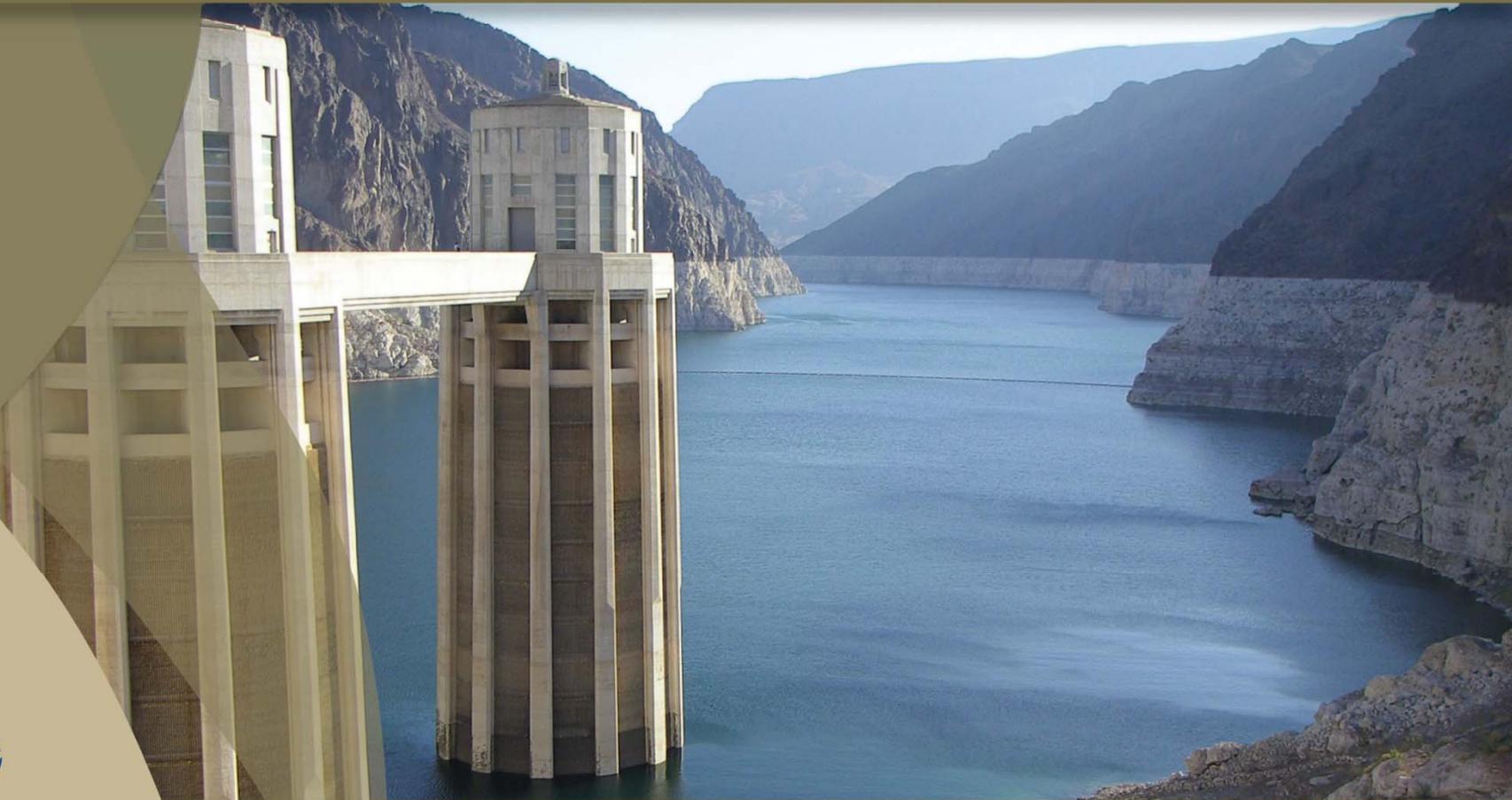


Spring, Cave, Dry Lake and Delamar Valleys



SOUTHERN NEVADA
WATER AUTHORITY

Presentation For;
Rick Holmes Testimony

RICHARD B. HOLMES
Southern Nevada Water Authority
100 City Parkway, Suite 700
Las Vegas, Nevada 89106
702.862-3708
richard.holmes@snwa.com

PROFESSIONAL EXPERIENCE

Southern Nevada Water Authority and Las Vegas Valley Water District

Deputy General Manager: Engineering/Operations ***May 2010 – Present***

Executive Team member with organization-wide assignments. Accountable for engineering, operations, and resource management.

Las Vegas Valley Water District (Since March 2011): Responsible for two departments – Engineering and Operations – that support and provide for the delivery of water to customers of Nevada’s largest water utility.

Southern Nevada Water Authority (Since May 2010): Responsible for five departments – Engineering, Environmental Resources, Groundwater Resources, Surface Water Resources, and the Southern Nevada Water System – that manage the region’s water resources and develop solutions that will ensure adequate future water supplies for the Las Vegas Valley.

Director of Environmental Resources ***December 2007 – May 2010***

Primary responsibilities included water conservation programs, sustainability strategic planning, enhancement of Las Vegas Wash environmental resources, organizational response to climate change issues, and management of agricultural/ranching land holdings in Eastern Nevada.

Focus Property Group – Las Vegas, Nevada

Vice President of Community Development ***October 2005 – November 2007***

Planning and development of master-planned communities including the 1700 acre Kyle Canyon Gateway in Las Vegas and the 1900 acre Inspirada community in Henderson. Prepared and managed schedules and budgets and coordinated infrastructure construction, marketing, and community design review.

Key Achievements

- ◆ Negotiated Kyle Canyon site plan, parks/trails plan, and design standards.
- ◆ Instrumental in City adoption of the Kyle Canyon Development Agreement.
- ◆ Prepared mixed-use design standards for Inspirada.

Economic Development Potential in Spring, Cave, Dry Lake, and Delamar Valleys, Nevada

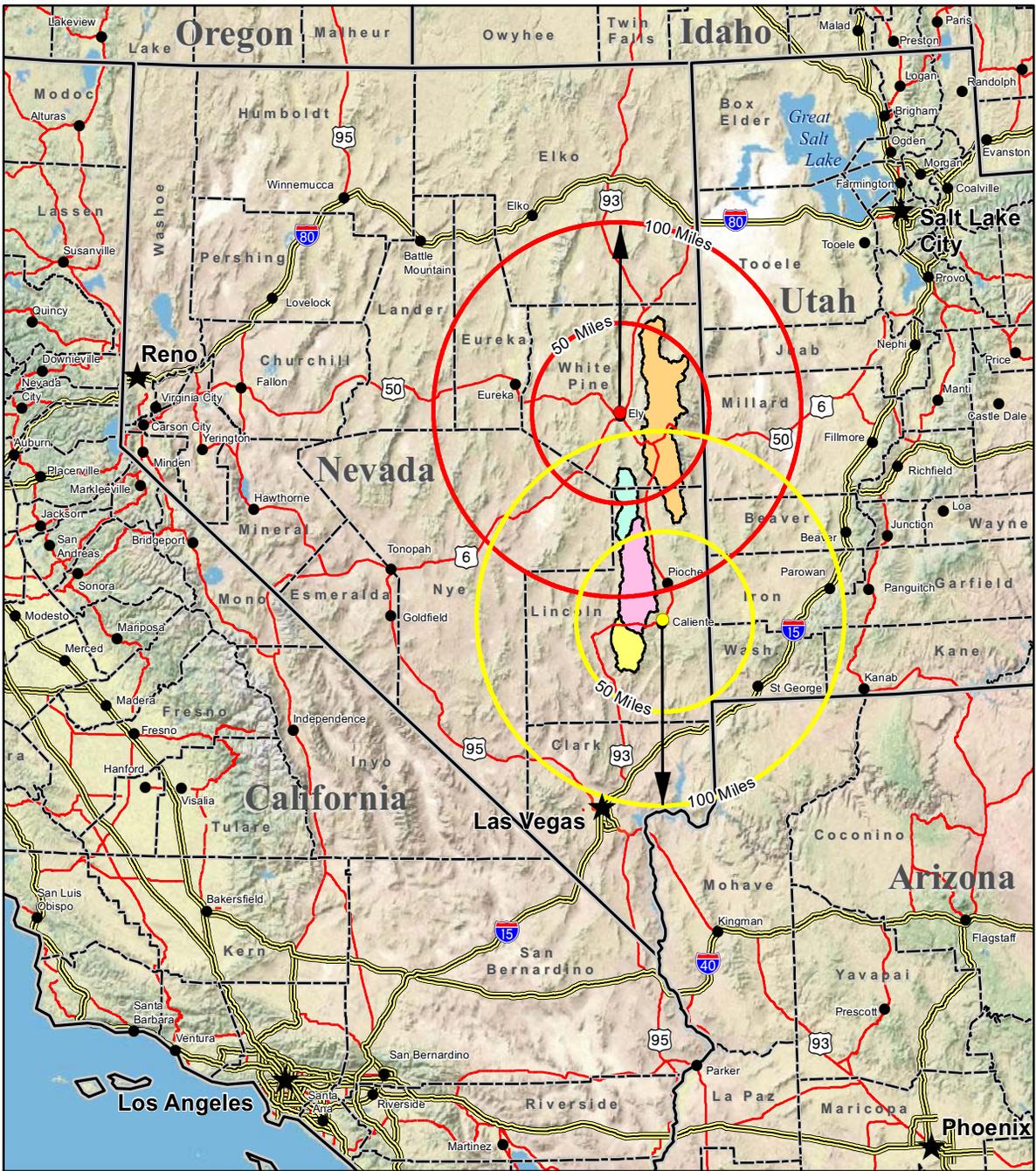
PRESENTATION TO THE OFFICE OF THE NEVADA STATE ENGINEER

Prepared by



**SOUTHERN NEVADA
WATER AUTHORITY**

June 2011



Basin of Origin Legend

- 180 Cave Valley
- 181 Dry Lake Valley
- 182 Delamar Valley
- 184 Spring Valley

Proximity legend

- Distance from the Town of Caliente
- Distance from the City of Ely



MAP ID 18447-3220 04/26/2011 MMW

Figure 2-1
Proximity to Major Metropolitan Centers

Understanding Rural Population Loss

David A. McGranahan
Calvin L. Beale

Strong national economic growth in the 1990s included much of the rural U.S., in sharp contrast with the previous decade. Poverty rates declined in 85 percent of nonmetro counties between 1989 and 1999. In the previous decade, only 35 percent of these counties had decreases in poverty. Nevertheless, over 1 in 4 nonmetro counties lost population in 1990-2000, often exceeding 5 percent. Many of these counties are agricultural and many have been losing population for decades, with no solution in sight.

This article identifies three characteristics of counties that were likely to lose population in 1990-2000: location away from metro areas, low population density, and a low level of natural amenities (as measured by climate, topography, and the presence of lakes and ponds). We argue that these qualities explain why many agricultural areas have been losing population. We then turn the question of population loss on its head, and ask why some of the counties with

Despite a widespread decline in rural poverty in the 1990s, a quarter of nonmetro counties lost population over the decade. Poverty rates were no higher in these counties than in counties without population loss. We identify remote (from metro areas), thinly settled counties as “frontier” counties, arguing that the lack of access to services and the small labor market sizes in these counties inhibits the immigration of people and businesses, particularly in the absence of compensating natural amenities. In two of every three low-amenity frontier counties, population loss exceeded 5 percent in 1990-2000. Most of these counties are farming-dependent, less because of their abundance of agriculture than because of their dearth of other economic activities. Some low-amenity frontier counties did gain population in the past decade. We look at these exceptions to see if there are rural development lessons to be learned.

these characteristics did not lose population in the 1990s. Industrial agriculture, casinos, prisons, and idiosyncratic events such as the creation of a lake helped some counties maintain their populations. In no case did small business entrepreneurship alone appear to be the critical factor.

Population Loss Is More Than a Question of Job Availability

Economic models of regional growth and decline suggest that areas of high poverty should also be areas of population loss. As opportunities decline in an area, poverty rates rise and people move to other areas in search of better opportunities. Outmigration subsequently reduces the poverty rate, such that poverty rates should ultimately equalize across areas.

But two facts about rural distress in the U.S. refute this model.

First, areas with poverty rates of over 20 percent and areas with population loss have usually had these conditions for decades. Second, these are quite distinct areas. High poverty is concentrated in the South and scattered across the Midwest, particularly where populations are largely Native American (fig. 1). Population loss, meanwhile, was most pronounced in the center of the country and in scattered areas of the Northeast and South. Rural counties with high poverty in 1990 were no more likely to have population loss in 1990-2000 than were other rural counties.

It is not difficult to explain why counties with high poverty do not always have population loss. High-poverty areas are almost inevitably areas where the rates of high school completion among young adults are relatively low. Over the

David A. McGranahan is a senior economist and Calvin L. Beale is a senior demographer in the Food and Rural Economics Division, Economics Research Service, USDA.

Table 2-1 Population Estimate for the Basins of Origin (2000)

Basin	Population
Spring Valley HB	77
Cave Valley HB	2
Dry Lake Valley HB	3
Delamar Valley HB	0

Source: U.S. Census Bureau, National Historic Geographic Information System (2000)

White Pine County Historical Population (1950-2009) & NV. State Demographer's Forecast (2010-2030)

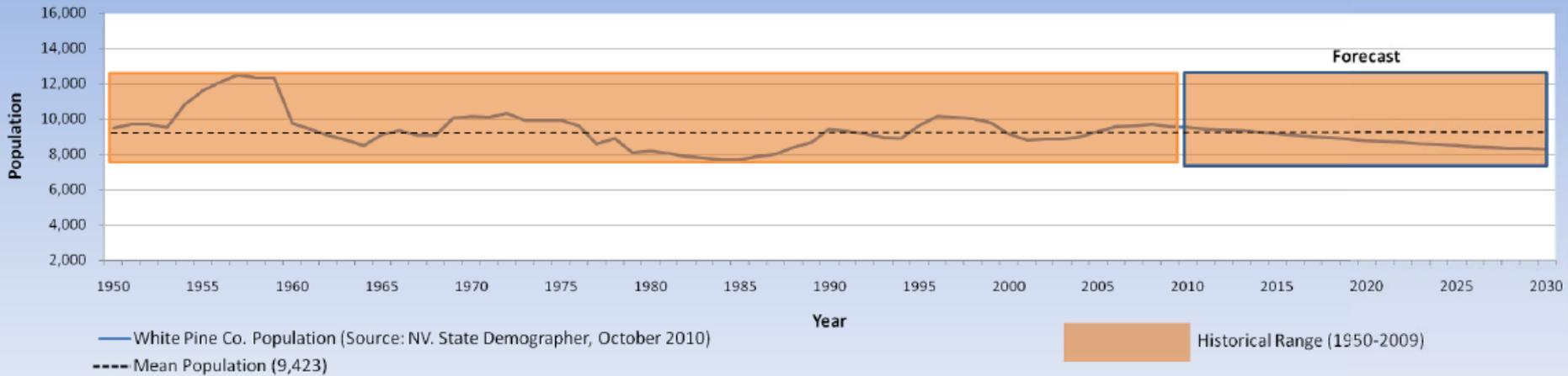


Figure 2-7

Historical Population Growth and Forecast for White Pine County, Nevada

Lincoln County Historical Population (1950-2009) & NV. State Demographer's Forecast (2010-2030)

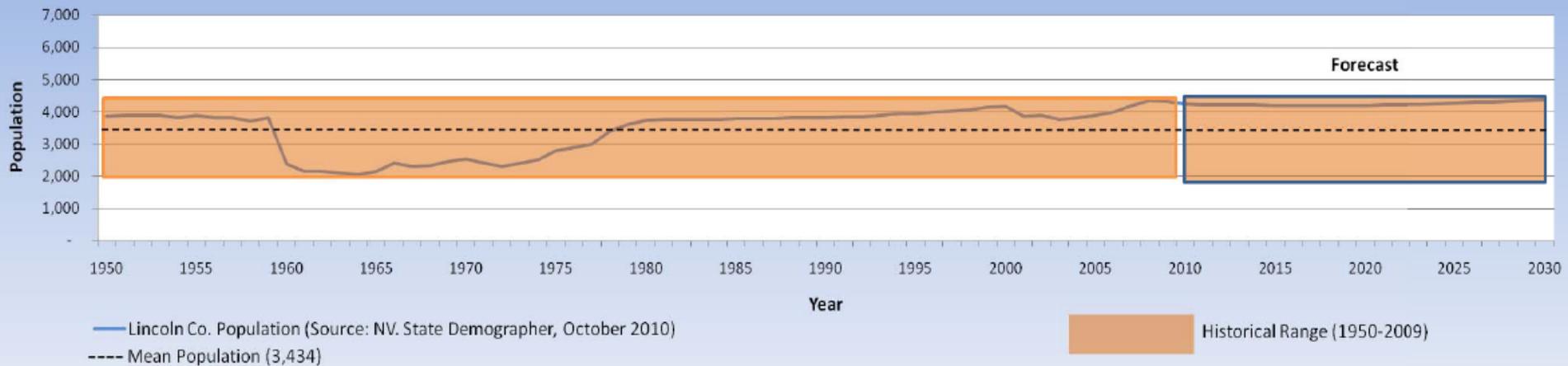
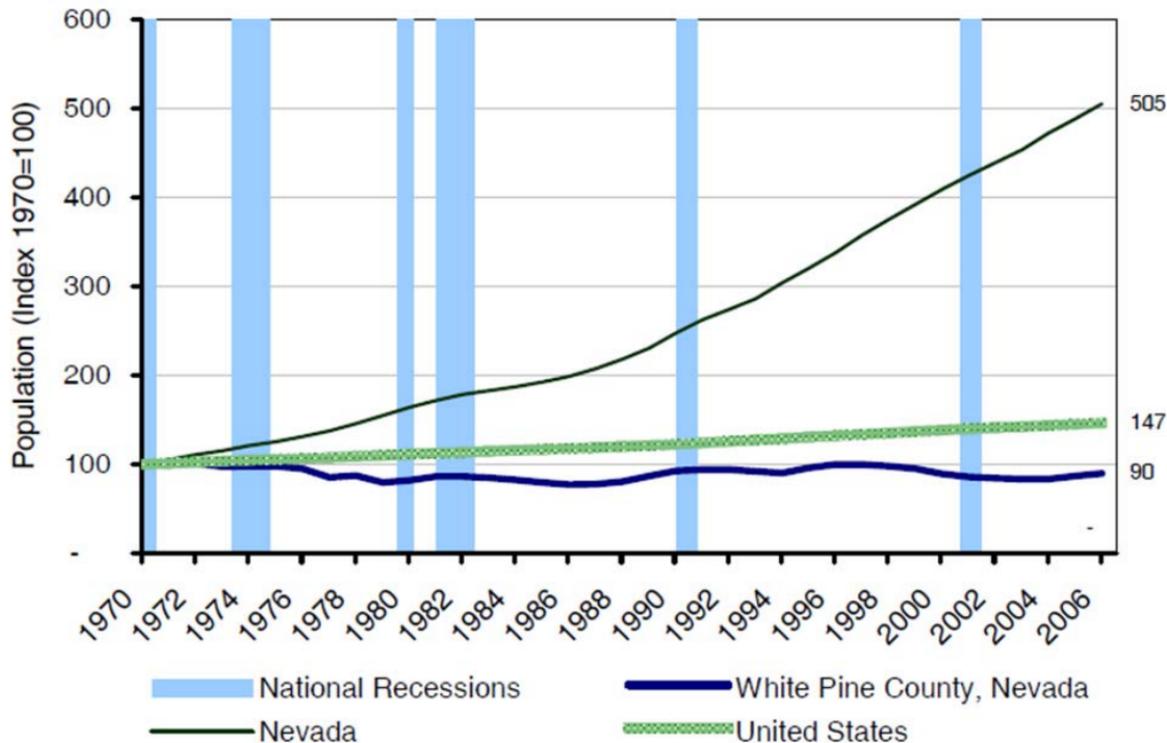


Figure 2-8

Historical Population Growth and Forecast for Lincoln County, Nevada

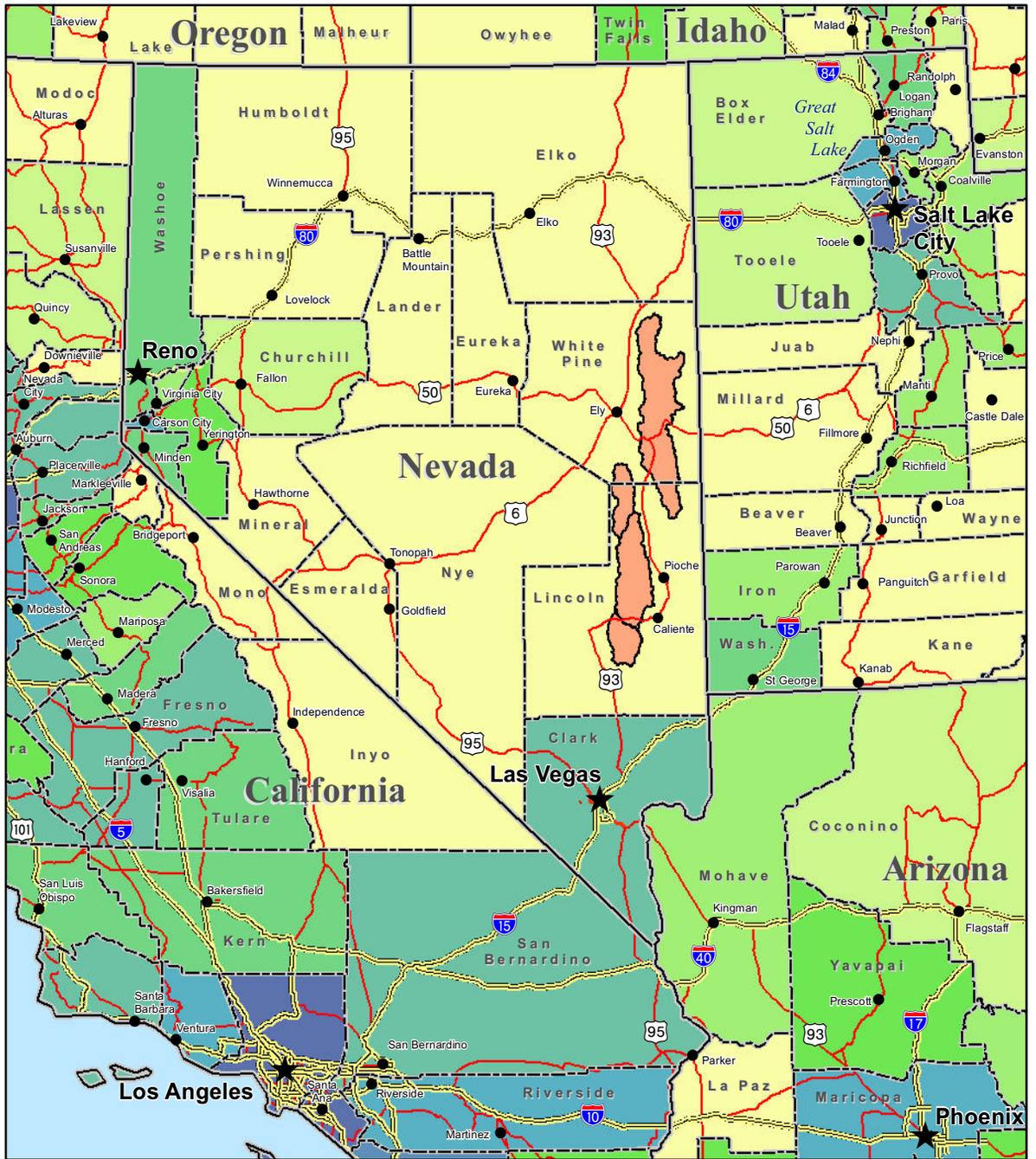
Population Comparison



Source: Headwaters Economics (2009)

SNWA Exhibit 241

Figure 2-3
Population Growth Comparison United States,
State of Nevada, White Pine County (1970-2006)



2007 Population Density*
Persons per Square Mile

Basin of Origin with Population Density
 Less Than 1 Person per Square Mile

- Less than 5
- 5.1 - 10.0
- 10.1 - 25.0
- 25.1 - 50.0
- 50.1 - 100.0
- 100.1 - 250.0
- 250.1 - 500.0
- 500.1 - 1000.0
- 1000.1 - 10000.0
- Greater than 10,000

* County Population Density representation was derived from U.S. Census Dataset attributes associated with the U.S. Counties generalized county boundaries GeoData included on the ESRI® Data & Maps DVD's, Version 9.3.

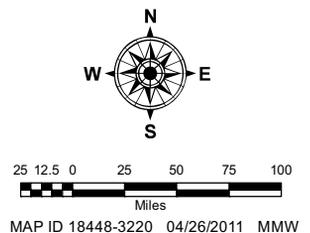
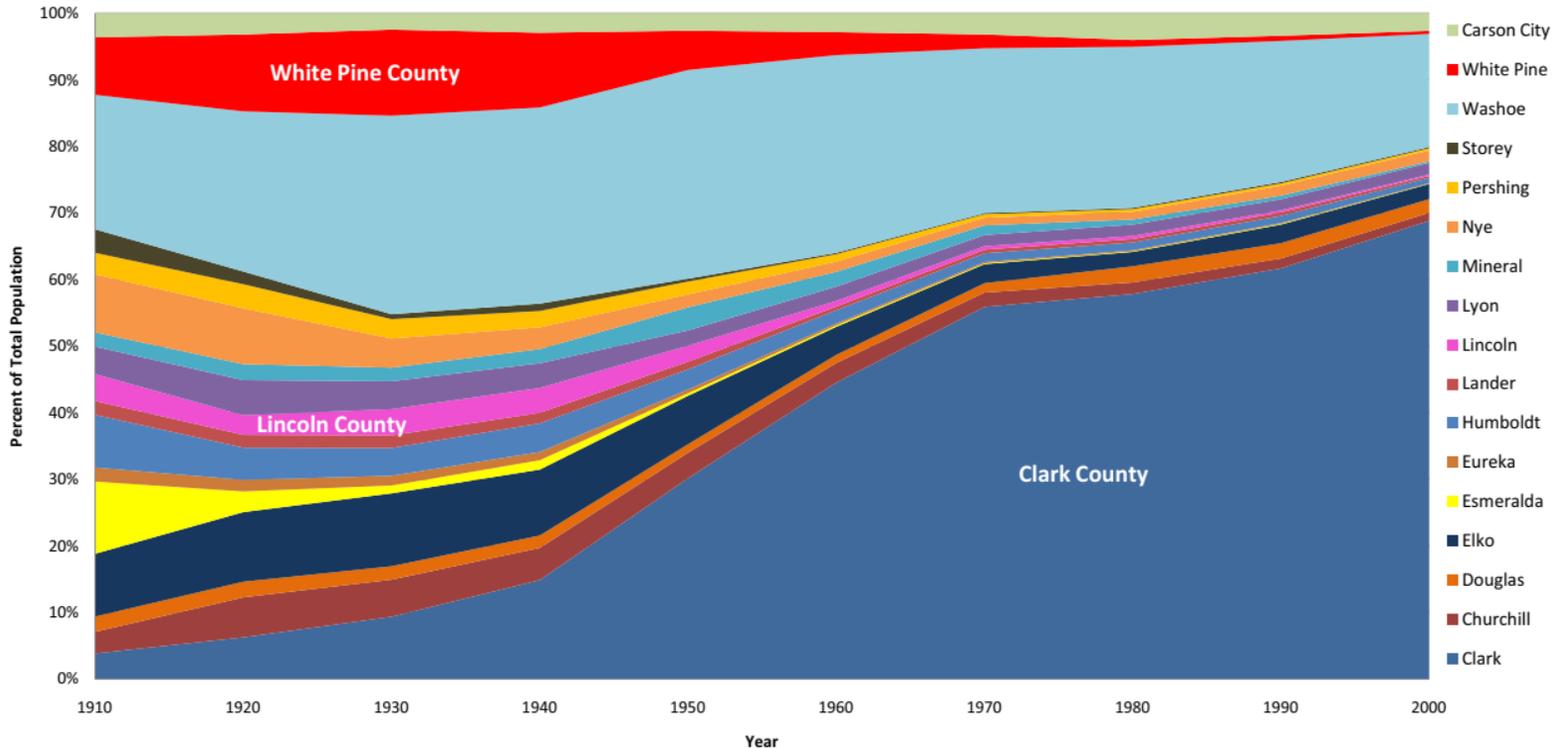


Figure 2-6
Population Density (2007)

Share of Nevada's Population by County (1910-2000)



Source: U.S. Census Bureau (1995) and U.S. Census 2000 population estimate for Nevada's counties.

SNWA Exhibit 241

Figure 2-5
Comparison of Population Share by Nevada County (1910–2000)

White Pine County Historical Population (1950-2009) & NV. State Demographer's Forecast (2010-2030)

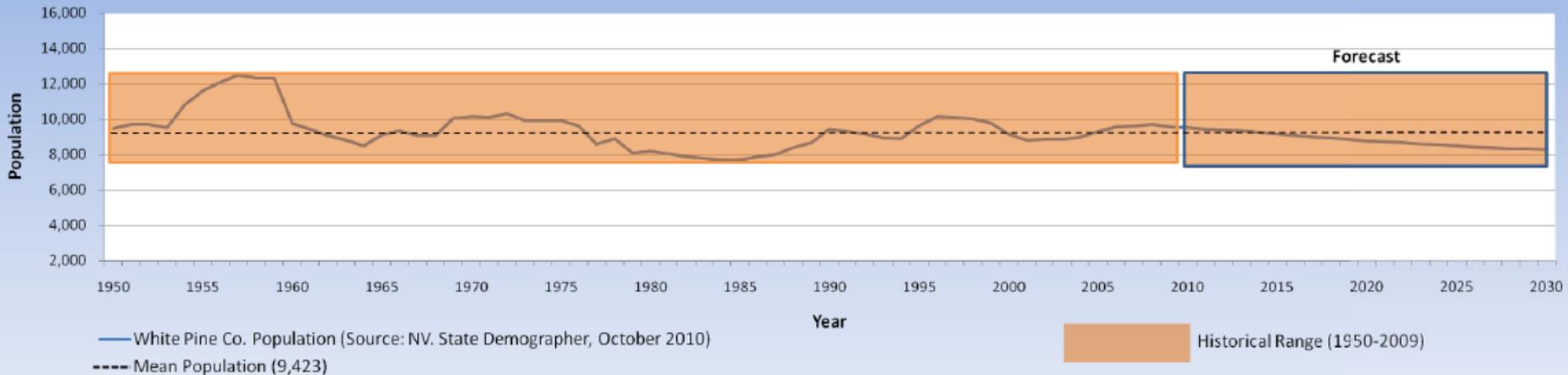


Figure 2-7

Historical Population Growth and Forecast for White Pine County, Nevada

Lincoln County Historical Population (1950-2009) & NV. State Demographer's Forecast (2010-2030)

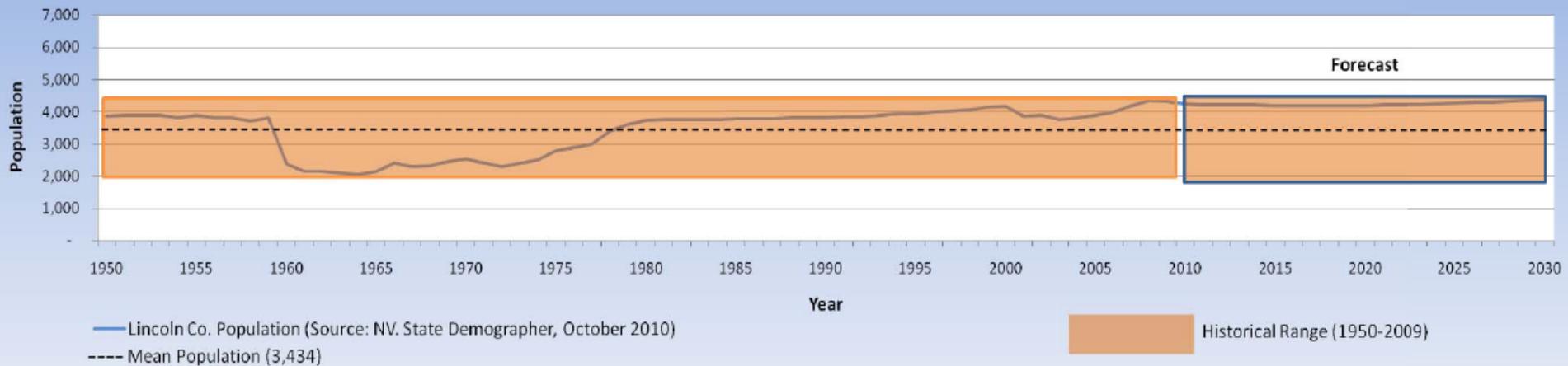
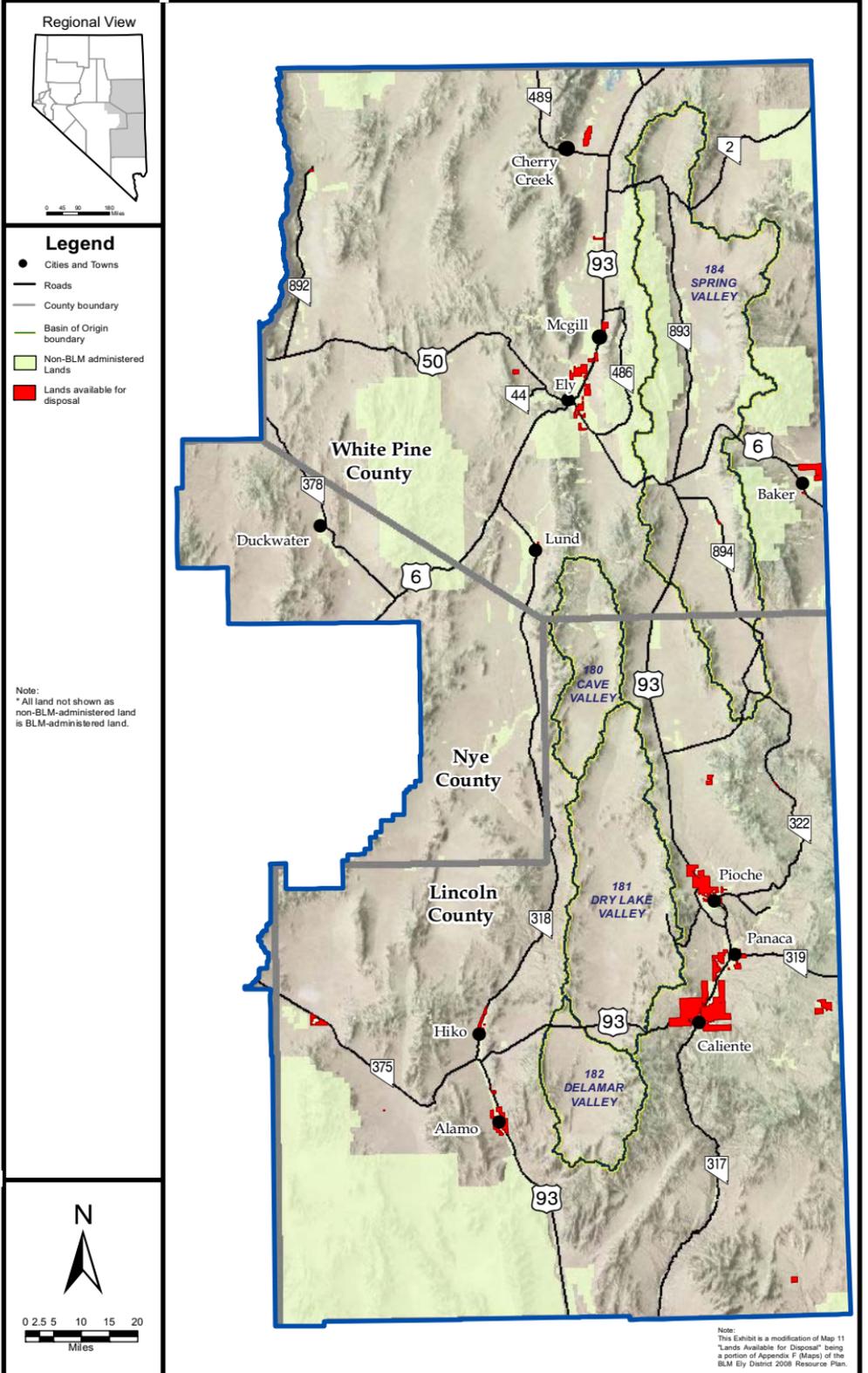


Figure 2-8

Historical Population Growth and Forecast for Lincoln County, Nevada



Source: Modified from BLM (2008)

Figure 3-1
Nominated Lands to be Sold are Near Existing Population Centers and Outside the Basins of Origin

The following pages briefly elaborate and document the seven rebuttal arguments outlined above. The evidence that the proposed withdrawals will desiccate the watersheds, and rebuttals to erroneous claims that the withdrawals will not unduly harm the natural balance in a significant section of the Great Basin, are being provided by other experts in other testimony.

(1) Appropriate Geographic Scope for Economic and Social Impact Analysis

The appropriate geographic scope for the analysis of the economic and social impact of the proposed water withdrawals and transfers is, at a minimum, the rural counties containing the four valleys and the downgradient basins in the same flow systems that also will experience a drawdown in their groundwater levels. The Bureau of Land Management (BLM) has reported that the impacts of the withdrawals on water availability extend well beyond the targeted valleys (BLM 2011). According to Nevada Revised Statutes § 534.110 (4.):

In determining a reasonable lowering of the static water level in a particular area, the State Engineer shall consider the economics of pumping water for the general type of crops growing and may also consider the effect of using water on the economy of the area in general.

The State Engineer could at a minimum apply the national standard practiced by the (BLM) in the draft environmental impact statement (BLM, 2011):

“The study area for socioeconomics and environmental justice is defined in terms of local county boundaries and includes Clark, White Pine, and Lincoln counties in Nevada and Juab and Millard counties in Utah. These five counties encompass virtually the entire extent of the four basic areal geographies associated with the proposed development and operation of the proposed ROW, groundwater development areas, and most of the area of potential indirect effects from groundwater level declines associated with groundwater pumping.” DEIS at p. 3.18-1.

The State Engineer should consider the area in general in order to adjudicate equitably and to avoid using a double standard. For the Applicant to argue that the focus should be only on the targeted valleys themselves would be disingenuous. The Applicant has stated that “the impacts on water resources will likely be in the developed areas such as Ely, Baker, and Caliente, where visitor and guest services are available, and not in the basins themselves.” SNWA Exhibit 241, at p. 5 (June 2011).

With respect to equitable treatment it must be noted that the Applicant, in basin 212 (Las Vegas Valley), is permitted to argue that it is the most relevant human community with respect to water rights issues in any hydrologic basins in its neighborhood, such as the contiguous basins 210 (Coyote Springs Valley), 215 (Black Mountain Valley), and 216 (Garnet Valley), for example. By the same token, the towns of Ely, in basin 179, (Steptoe Valley), and the towns of Pioche, Panaca, Caliente and other urbanized areas in basins contiguous to Spring, Cave, Dry Lake, and Delamar Valleys are communities that depend directly and indirectly on consumptive and non-consumptive uses of the water in the origin basins. According to the US Environmental Protection Agency, Steptoe and Spring Valleys are in the same watershed, the Spring-Steptoe Watershed (http://cfpub.epa.gov/surf/huc.cfm?huc_code=16060008). And just like Las Vegas’ concerns about future access to water in its neighboring basins, these towns also have future interests in locally available groundwater.

The Applicant is also allowed to concern itself with non-contiguous basins, including basins in other watersheds, such as basin 213 (Colorado Valley). Basins 213 and 212 are not even in the same watershed as Las Vegas. Basin 213 is in the Lake Mead watershed while 212 is in the Las Vegas Wash watershed.



APN: 012-660-06

After Recording, Return to:
Southern Nevada Water Authority
Attn: General Counsel
1001 South Valley View Blvd.
Las Vegas, NV 89153

The undersigned hereby affirms that this document, including any exhibits, submitted for recording does not contain the social security number of any person or persons. (Per NRS 239B.030)

NCS-419822-MS

Grant of Conservation Easement
Cave Valley Ranch, Nevada

THIS GRANT OF CONSERVATION EASEMENT ("*Easement*"), dated this 7th day of December, 2009, is made by Cave Valley Ranch, LLC a Nevada limited liability company whose address is 2216 Timber Rose Drive, Las Vegas, Nevada 89134-5915 (the "*Grantor*"), and the Southern Nevada Water Authority, a political subdivision of the State of Nevada whose address is 1001 South Valley View Blvd., Las Vegas, Nevada 89153 (the "*Grantee*", and together with Grantor, the "*Parties*");

RECITALS:

A. The Grantor is the sole owner in fee simple of certain real property in White Pine County and Lincoln County, Nevada, described in Exhibit "A" attached hereto and incorporated herein by this reference (the "*Property*"), which Property is approximately located on the map attached hereto as Exhibit "B" and incorporated herein by this reference, and owns the rights to identify, to conserve and protect in perpetuity, and to enhance by restoration the Property's significant, relatively natural habitat of fish, wildlife and plants and the Conservation Purposes identified in Section 170(h)(4)(A) of the Internal Revenue Code (the "*Code*").

B. Grantor is the sole owner in fee simple of the water rights described in Exhibit "C" attached hereto and incorporated herein by this reference ("*Water Rights*"), which Water Rights are currently used on, and appurtenant to, the Property.

C. The protection of the Property's Conservation Values (as such term is defined in Recital D below, retains or protects natural resources, assures the availability of the Property to perpetuate certain Grantor uses, maintains or enhances the quality of air or water, and is authorized by and recognized in the Nevada Uniform Conservation Easement Act, NRS 111.390 through 111.440, inclusive (the "*Act*"). Grantor intends to convey this Easement pursuant to the Act and other applicable provisions of Nevada Revised Statutes. Grantee is a governmental body empowered

APN: 005-021-05

After Recording, Return to:
Southern Nevada Water Authority
Attn: General Counsel
1001 South Valley View Blvd.
Las Vegas, NV 89153

DOC # 0134971

12/10/2009 04:07 PM

Official Record

Recording requested By
FIRST AMERICAN TITLE COMPANY

Lincoln County - NV

Leslie Boucher - Recorder

Fee: \$63.00 Page 1 of 25

RPTT: Recorded By: AE

Book- 252 Page- 0591



0134971

The undersigned hereby affirms that this document, including any exhibits, submitted for recording does not contain the social security number of any person or persons. (Per NRS 239B.030)

Escrow NCS-419822-ms

Grant of Conservation Easement Cave Valley Ranch, Nevada

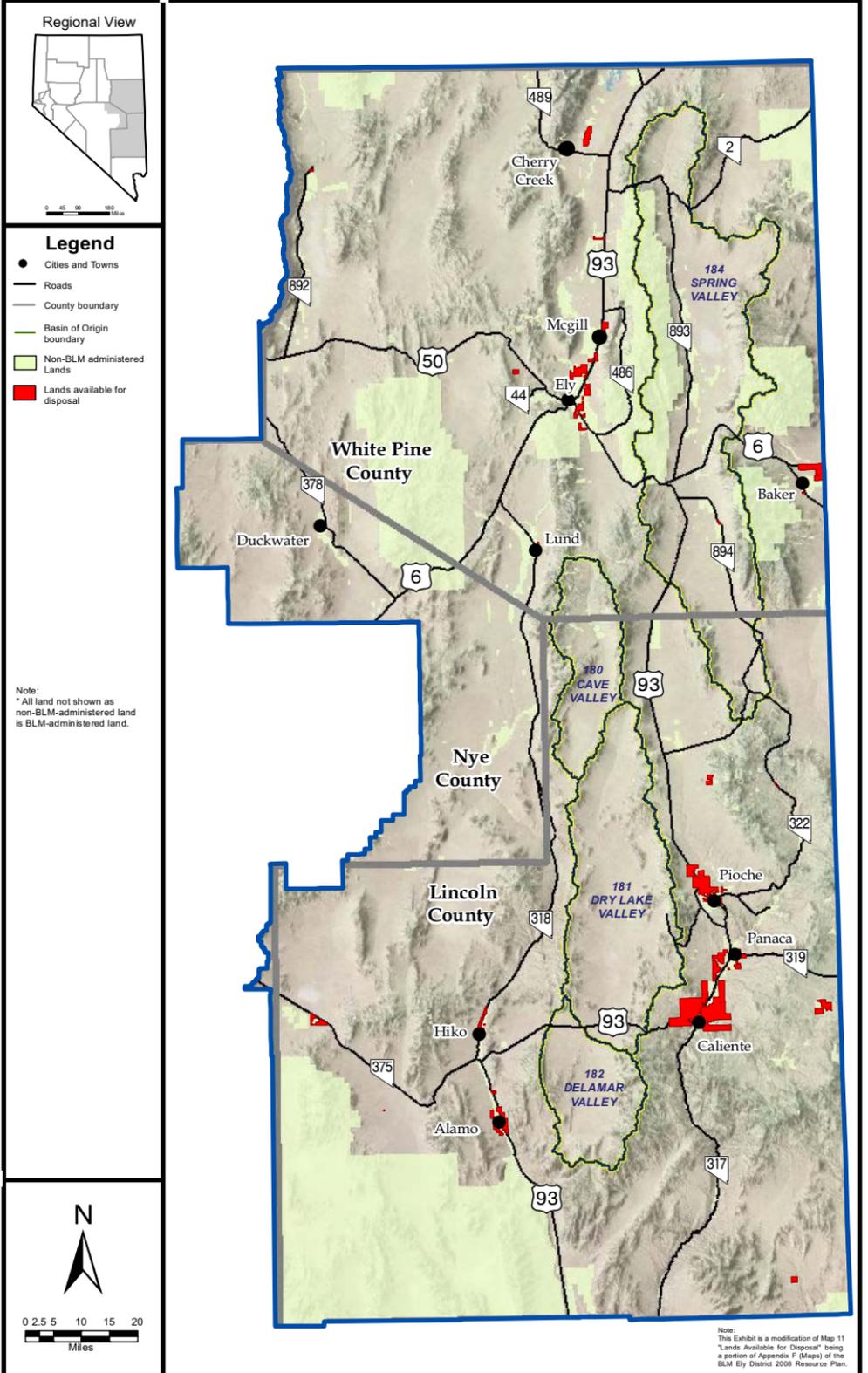
THIS GRANT OF CONSERVATION EASEMENT ("*Easement*"), dated this 7th day of December, 2009, is made by Cave Valley Ranch, LLC a Nevada limited liability company whose address is 2216 Timber Rose Drive, Las Vegas, Nevada 89134-5915 (the "*Grantor*"), and the Southern Nevada Water Authority, a political subdivision of the State of Nevada whose address is 1001 South Valley View Blvd., Las Vegas, Nevada 89153 (the "*Grantee*", and together with Grantor, the "*Parties*");

RECITALS:

A. The Grantor is the sole owner in fee simple of certain real property in White Pine County and Lincoln County, Nevada, described in Exhibit "A" attached hereto and incorporated herein by this reference (the "*Property*"), which Property is approximately located on the map attached hereto as Exhibit "B" and incorporated herein by this reference, and owns the rights to identify, to conserve and protect in perpetuity, and to enhance by restoration the Property's significant, relatively natural habitat of fish, wildlife and plants and the Conservation Purposes identified in Section 170(h)(4)(A) of the Internal Revenue Code (the "*Code*").

B. Grantor is the sole owner in fee simple of the water rights described in Exhibit "C" attached hereto and incorporated herein by this reference ("*Water Rights*"), which Water Rights are currently used on, and appurtenant to, the Property.

C. The protection of the Property's Conservation Values (as such term is defined in Recital D below, retains or protects natural resources, assures the availability of the Property to perpetuate certain Grantor uses, maintains or enhances the quality of air or water, and is authorized by and recognized in the Nevada Uniform Conservation Easement Act, NRS 111.390 through 111.440, inclusive (the "*Act*"). Grantor intends to convey this Easement pursuant to the Act and other applicable provisions of Nevada Revised Statutes. Grantee is a governmental body empowered



Source: Modified from BLM (2008)

SNWA Exhibit 241

Figure 3-1
Nominated Lands to be Sold are Near Existing Population Centers and Outside the Basins of Origin

Table 4-1
Groundwater Rights Approved in the Basins of Origin (1960–2010)
 Within the Last 50 Years

	Dry Lake Valley (afa)	Delamar Valley (afa)	Cave Valley (afa)	Spring Valley (afa)
Domestic	0	0	0	0
Quasi-municipal	0	0	0	6
Municipal	0	0	0	0
Stockwater	10	7	34	103
Commercial	0	0	0	0
Industrial	0	0	0	0
Construction	0	0	0	0
Wildlife	0	0	0	58
Other	0	0	0	0
Total	10	7	34	167

See [Appendix A](#).

