

# 1.0 INTRODUCTION

This report describes the baseline geologic and hydrologic data compilation and analysis efforts conducted by the Southern Nevada Water Authority (SNWA) in support of the Clark, Lincoln, and White Pine Counties Groundwater Development Project. This report includes descriptions of the geology, streams and springs, wells, water chemistry, and water rights for selected basins of eastern Nevada and western Utah.

## 1.1 Project Background

The Clark, Lincoln, and White Pine Counties Groundwater Development Project (hereafter referred to as the Project) proposes to develop unused groundwater resources within selected basins of eastern Nevada where SNWA holds groundwater rights and applications. These basins include Coyote Spring, Delamar, Dry Lake, Cave, Spring, and Snake valleys (hereafter referred to as the Project Basins) and are depicted in [Figure 1-1](#).

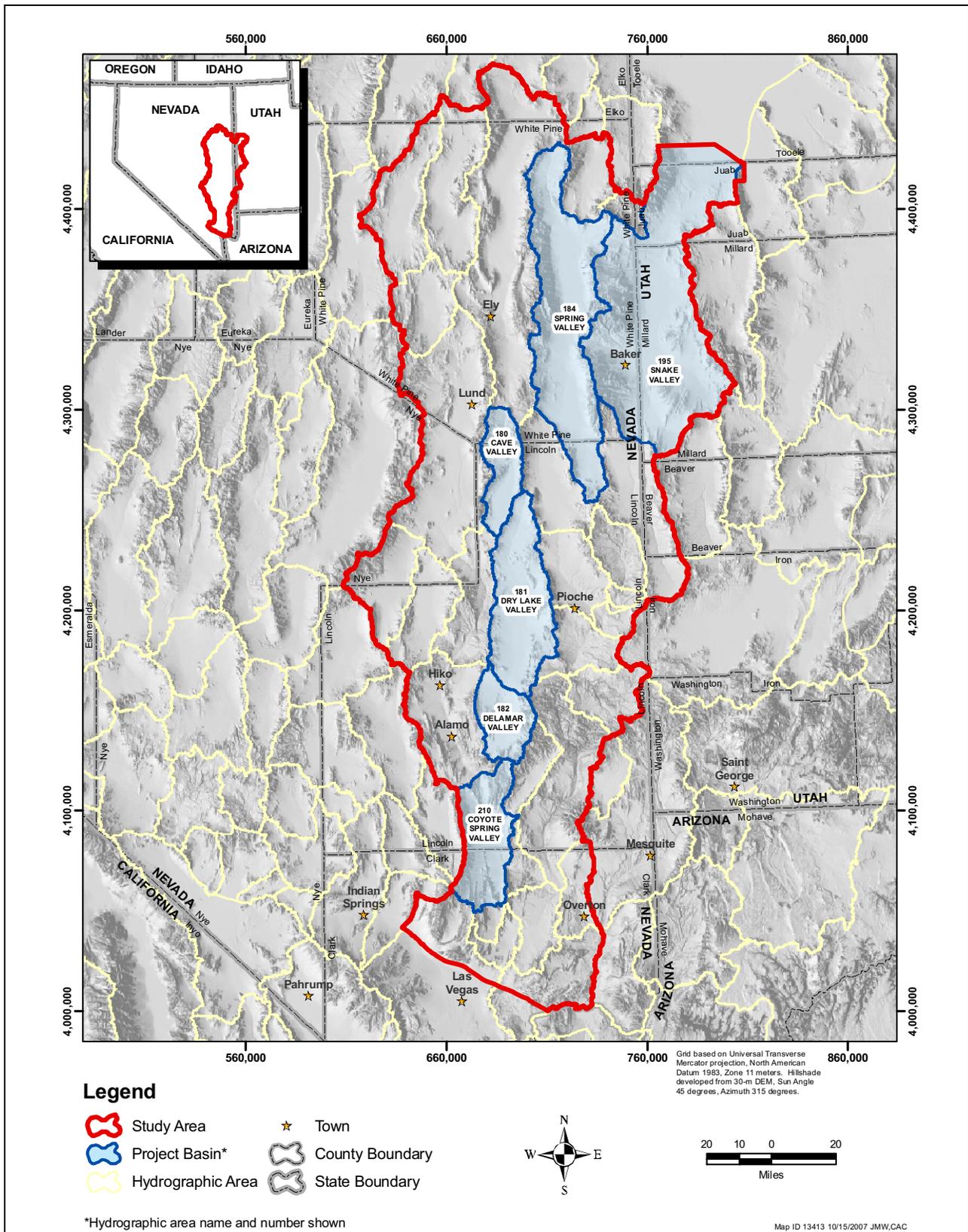
In 2004, SNWA applied to the Bureau of Land Management (BLM) for issuance of rights-of-way to construct project facilities, most of which will be located on public lands administered by the BLM. These facilities include groundwater production wells, water conveyance facilities, water storage and regulating reservoirs, and power facilities. BLM issuance of these rights-of-way to construct, maintain, and operate these facilities requires a federal action for which the National Environmental Policy and Endangered Species Acts must be considered. BLM has determined that preparation of an environmental impact statement is required to assess the potential environmental effects that may result from permitting the rights of way, including the potential indirect effects of the proposed groundwater development.

## 1.2 Purpose

The purpose of this summary report is to document the current baseline conditions of geology, streams, springs, groundwater levels, water chemistry, and water rights for the Project Basins as well as a larger study area ([Figure 1-1](#)). This work will support the development of an Environmental Impact Statement for the Project as well as provide baseline information for incorporation into a groundwater flow model for the region.

## 1.3 Document Organization

This document consists of eight sections, one appendix, and a CD-ROM containing four electronic data volumes and associated data sets. A brief description of the contents of each is provided:



**Figure 1-1**  
**Location of Project Basins and Study Area**

- [Section 1.0](#) provides a description of the project background, the purpose of the investigations, and an overview of the contents of this report.
- [Section 2.0](#) describes the study area and provides a discussion on physiography, climate, vegetation, and regional flow systems.
- [Section 3.0](#) briefly describes the geology of the study area and references the *Geology of White Pine and Lincoln Counties and Adjacent Areas, Nevada and Utah: The Geologic Framework of Regional Groundwater Flow Systems* report that has been provided as Volume 1 on the CD-ROM accompanying this report.
- [Section 4.0](#) briefly describes the surface water resources of the study area and references the *Physical Settings of Selected Streams in Clark, Lincoln, and White Pine Counties Groundwater Development Project* report that has been provided as Volume 2 and *Physical Settings of Selected Springs in Clark, Lincoln, and White Pine Counties Groundwater Development Project* report that has been provided as Volume 3 on the CD-ROM accompanying this report.
- [Section 5.0](#) briefly describes the groundwater resources of the study area and references the *Water-Level Data Compilation and Evaluation for Clark, Lincoln, and White Pine Counties Groundwater Development Project* report that has been provided as Volume 4 on the CD-ROM accompanying this report.
- [Section 6.0](#) describes the water chemistry of the Project Basins.
- [Section 7.0](#) describes the water rights within the Project Basins.
- [Section 8.0](#) provides a list of references used in this report.
- [Appendix A](#) provides a description of the contents of the CD-ROM.
  - Volume 1 is a data volume titled *Geology of White Pine and Lincoln Counties and Adjacent Areas, Nevada and Utah: The Geologic Framework of Regional Groundwater Flow Systems* (SNWA, 2007a) that is included on the CD-ROM.
  - Volume 2 is a data volume titled *Physical Settings of Selected Streams in Clark, Lincoln, and White Pine Counties Groundwater Development Project* (SNWA, 2007b) that is included on the CD-ROM.
  - Volume 3 is a data volume titled *Physical Settings of Selected Springs in Clark, Lincoln, and White Pine Counties Groundwater Development Project* (SNWA, 2007c) that is included on the CD-ROM.
  - Volume 4 is a data volume titled *Water-Level Data Compilation and Evaluation for Clark, Lincoln, and White Pine Counties Groundwater Development Project* (SNWA, 2007d) that is included on the CD-ROM.

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