

Chapter 1. Purpose of and Need for Action

1.2 Introduction

Record drought in the southwestern United States continues to threaten municipal water supplies with severe shortages. The City of Carlsbad, New Mexico, is dependent on a groundwater well field for its municipal water. Approximately 98 percent of Carlsbad's water is supplied by groundwater pumped from 9 wells located about 7 miles southwest of the City in an area called Sheep's Draw (Figure 1). These wells range in depth from 590 to 1,000 feet and pull water from the Capitan Aquifer. Long, prolonged periods of drought such as the current event have a negative impact on groundwater levels, often requiring the need for deeper and more expensive wells. The drought is forecast to continue and may be very long, based on the historic record. Support for drought emergency well drilling was authorized by the U.S. Congress in Title 1 of the Reclamation States Emergency Drought Relief Act of 1991.

1.2 Background

The City of Carlsbad drilled its Well Number 10 as part of an expansion of the municipal water system in the mid 1950's. However, Well Number 10 has never been equipped for pumping. Although water from this well has been shown to be suitable for municipal use, the borehole deviated significantly during drilling operations, thus restricting the installation of a turbine pump at the recommended well depth (Geohydrology Associates 2005). A water well borehole must be relatively straight and plumb in order to accommodate casing and pumping equipment. As such, Well Number 10 is not usable. In addition, none of the current water wells within the Sheep's Draw well field are equipped with a back-up power source.

1.3 Proposed Action

The Federal action addressed in this Environmental Assessment (EA) would be the funding and development of a municipal groundwater well for the City of Carlsbad. The proposed drought emergency water well would be drilled by a private contractor, licensed to drill water wells in the State of New Mexico, for the U.S. Department of the Interior Bureau of Reclamation (Reclamation). The City of Carlsbad has obtained the necessary permit to drill a supplemental water well from the New Mexico Office of the State Engineer (NMOSE). The proposed project is located on city-owned land near the intersection of Hidalgo Road and Dark Canyon Road, Eddy County, New Mexico. The legal description of the well site is: SE 1/4 of SW 1/4 of NE 1/4 of Section 24, Township 23 South, Range 25 East, N.M.P.M. The project site is located on the Cueva Escarpment above Sheep Draw. The project elevation is about 3550 feet above sea level. The proposed well would tie into the existing municipal water system with a short pipeline (see Figure 1).

1.4 Purpose of and Need for Proposed Action

The purpose of the proposed action is to provide a supplemental source of municipal water for the City of Carlsbad to fully utilize their existing water rights by providing additional capacity and operational flexibility within the Sheep's Draw well field during a drought emergency. The project is needed due to the severe drought now gripping the southwest U. S. and the potential for the drought to continue for the indeterminate future. In addition, the proposed well would be outfitted with a secondary power source (e.g., natural gas or diesel powered generator) that can be used during a power outage to maintain the City's municipal water supply during an emergency.

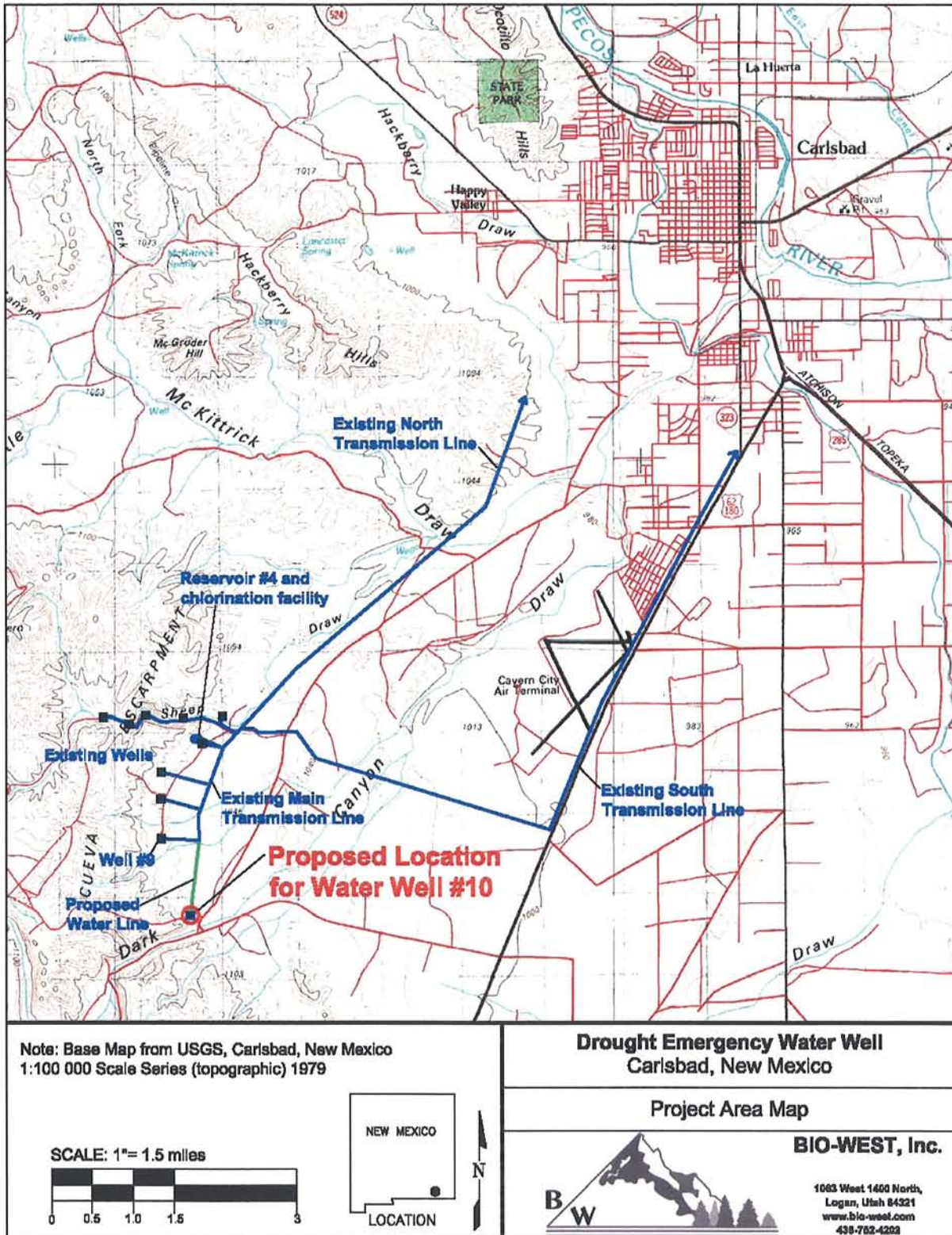


Figure 1. Carlsbad Drought Emergency Water Well Project Area Location Map.