

Chapter 2. Description of Proposed Action and Alternatives

2.1 Introduction

This chapter describes the two alternatives analyzed in this EA. Alternative A is the No Action Alternative. Alternative B is the Proposed Action Alternative. Following the alternative descriptions section, the decision making process for advancing or eliminating alternatives is described.

2.2 No Action Alternative

The No Action Alternative includes not drilling a supplemental well and continued reliance on existing water sources for municipal water supply for the City of Carlsbad. Water supplies will likely continue to decline through the drought period. Municipal water supply may fall below projected water demand, resulting in potential water shortages. Water shortages may affect public health and safety, including water for sanitation and fire-fighting. The lack of adequate water could affect the City of Carlsbad's primary industry: tourism, and may result in economic decline for the City.

2.3 Proposed Action Alternative

Reclamation contractors would drill an approximately 750-foot deep water well into the Capitan Limestone geologic formation to tap into the Capitan subsurface aquifer. A supplemental water supply source would provide additional capacity and operational flexibility for the City of Carlsbad and would help maintain a municipal water supply during drought. The city has obtained a permit for a supplemental water well from the NMOSE.

Water produced by the proposed well would be pumped into the existing city water system pipeline and transported to the existing water treatment facility. The primary collection and distribution lines are already established, although a short segment of pipeline to connect the existing water system to the proposed well would be required (see Figure 1). This related action includes the construction of approximately 1 mile of 30-inch collector line within an existing pipeline easement to connect the proposed well to the existing infrastructure.

The well site is located on City-owned land outside of its municipal boundaries in Eddy County. The well site has been previously disturbed by construction of Well Number 10 in the mid 1950's. Because the well site is not within 5 miles of an incorporated area, no County zoning ordinance applies. A secondary power source in the form of a natural gas or diesel-powered generator would be provided as an emergency back-up in case of any future power outages.

The well would be placed on an existing well pad prepared by the City of Carlsbad. The well pad would be approximately 1 to 2 acres in size and would be accessed by an existing 12-foot wide native surface road. All drilling fluids and pumped test waters would be contained on the site. No water or drilling fluids would be allowed to flow into Sheep Draw. A storm water pollution prevention plan would be prepared and implemented by the drilling contractor. Any temporary retention structures would be built on previously disturbed land.

The proposed well would be 16 inches in diameter. The well would be carefully cased and sealed in the near-surface geology (e.g., the top 150-250 feet) with a 24-inch diameter casing to prevent any alteration of the near-surface water table.

2.4 Alternatives Considered But Eliminated from Detailed Analysis

Congressional authorization and funding for the Proposed Action Alternative is specifically for drought emergency municipal water wells. Therefore, no other alternatives are considered.