

CHAPTER SIX
WATER SOURCES

A. Introduction

Providence City has four existing water sources: Broad Hollow Spring, 1st East Well, 4th South Well and Alder Well. Broad Hollow Spring is located in Providence Canyon. The 1st East Well is located near the northeast corner of 200 South 100 East. The 4th South Well is located near the northeast corner of 400 South and Main. The Alder Well is located in an undeveloped area approximately 950 feet West and 400 feet North of Miller Lane (300 South) The locations of these sources are shown in Exhibit 6-1.

FLOW RATES OF EXISTING WATER SOURCES

	Water Right	Source Capacity
Broad Hollow Spring	1024 gpm	2300 gpm
1 st East Well	2002 gpm	2200 gpm
4 th South Well	1423 gpm	2200 gpm
Alder Well	550 gpm	750 gpm

B. Existing Sources

Broad Hollow Spring

Broad Hollow Spring is Providence City's main water source, as it requires only chlorination and can serve all pressure zones of the City's system without pumping. Available spring water to Providence City's system is approximately 2.28 cfs (1024 gpm) for the summer and 3.0 cfs (1346.4 gpm) in the winter.

1st East Well

1st East Well, drilled in 1920, is used as a supplement to the Broad Hollow Spring Source in the summer. The well is 16-inch diameter and drilled to an approximate depth of 370 feet. The current flow rate is 2,000 gpm. According to the well driller's log, the well has a grouted well seal from the surface to a depth of 137 feet.

4th South Well

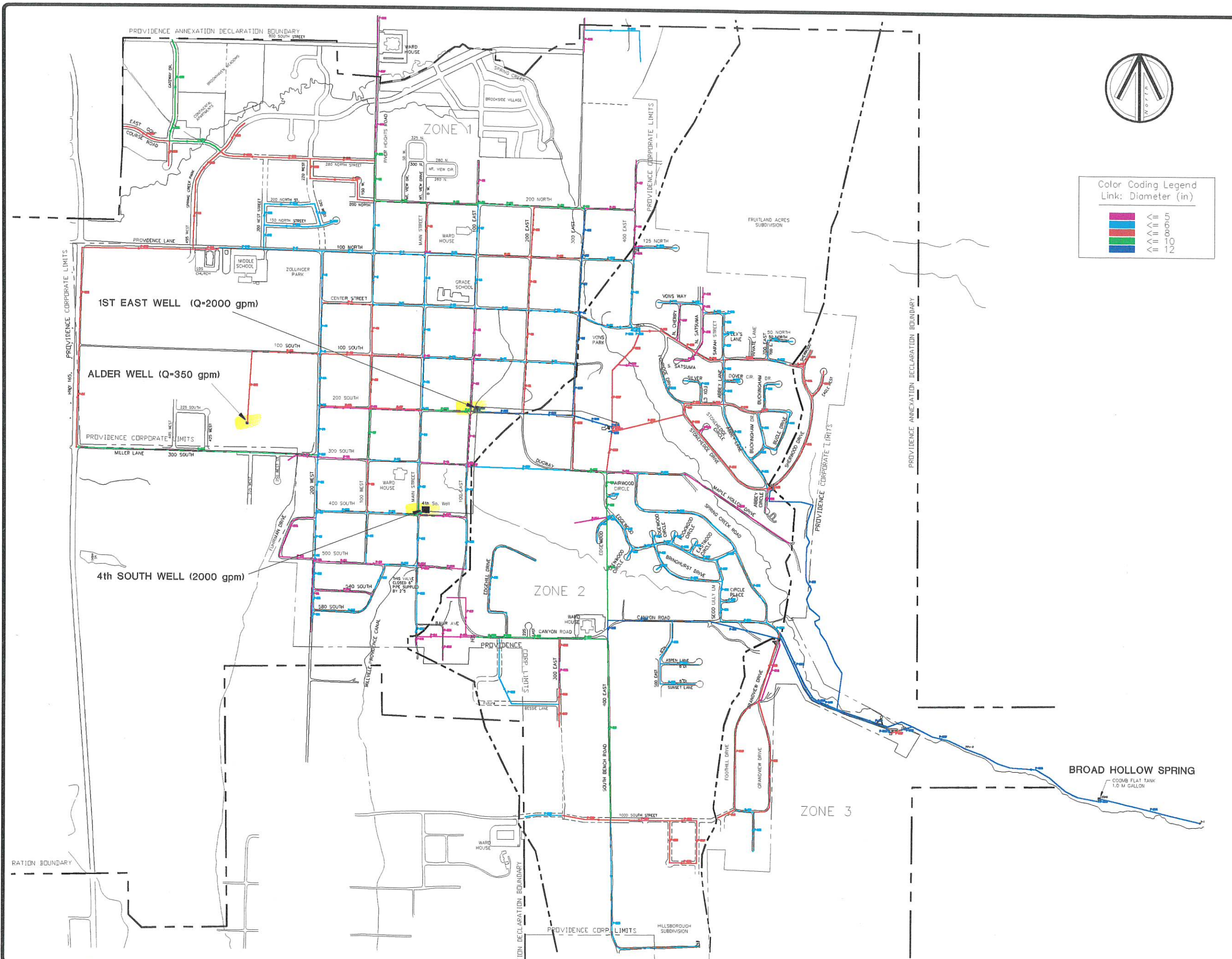
The 4th South Well, drilled in 1999, is expected to be online in the summer of 2000 and will also be used to supplement the Broad Hollow Spring Source in the summer. The well is 16-inch in diameter and drilled to an approximate depth of 423 feet. The well was flow tested to a rate 1,800 gpm. According to the well driller's log, the well has a grouted well seal from the surface to a depth of 100 feet. It is anticipated that the well can be pumped to 2200 gpm without effecting the quality of water.

Alder Well

The Alder Well was drilled in 1978 and brought on line by Providence City in 1989. This well has an 8-inch diameter casing and is drilled to a depth of 220 feet. The well adds 550 gpm to the existing water supply system. However, the existing pump is only able to pump about 450 gpm.

Weston Well

Near the Cemetery, will be used for Cemetery outside watering only. approx 110 gpm capacity.



Color Coding Legend
Link: Diameter (in)

	8"
	10"
	12"

No.	REVISION	DATE

This document and the ideas incorporated herein, as an instrument of professional service, are the property of KNIGHTON AND CROW, P.C., and are not to be used in whole or in part, for any other project without the written authorization of an authorized representative of KNIGHTON AND CROW, P.C. Unauthorized use will be prosecuted to the fullest extent of the law.

Copyright © 1999 KNIGHTON AND CROW, P.C.

Professional Seal

Project Title:
PROVIDENCE CITY WATER SYSTEM MASTER PLAN

Sheet Title:
EXISTING SYSTEM SOURCES

Knighton and Crow · P. C.
CIVIL AND STRUCTURAL ENGINEERING - ARCHITECTURE
PLANNING - LAND SURVEYING - TESTING
85 West Golf Course Road Suite 101, Logan, Utah 84301 Ph. (435)752-8501 Fax. (435)752-8507

Drawn By: M. PIERCE	Project Number: 97-306	Sheet No.:
Designed By:	Date: JANUARY, 2000	6-1
Reviewed By: G. KNIGHTON	Sheet Scale: NO SCALE	
File Name: /97-306/COMM.DWG		of