

Source Water Assessment¹
Causey Estates
Springs # 1 to # 5

INTRODUCTION

Causey Estates (29047) is a transient non-community water system, serving primarily an itinerant population. The Safe Drinking Water Act Amendments of 1996 require Source Water Assessments for all public drinking water systems in every state, including such transient systems. This source water assessment report has been prepared by the Utah Department of Environmental Quality/ Division of Drinking Water (DDW). The report is provided to Causey Estates to alert the system personnel and the system's customers regarding potential contamination sources that could pose a risk to the system's drinking water sources.

This assessment covers the Springs # 1 to # 5.

Information about potential contamination sources comes from several sources. These include Sanitary Survey data available in the water system files² at the Division of Drinking Water, and also Geographic Information System (GIS) data available through the Division's GIS database. Land Use data were obtained from the EPA BASINS program. Land Ownership data was downloaded from the State of Utah Automated Geographic Reference center, and was originally compiled by the Bureau of Land Management. No accuracy or completeness is implied. Some of the data sources have not been updated for many years; some may not have been complete; some may contain inaccurate information. Please be prepared to verify PCS data, as needed. DDW provides no warranty nor accepts any responsibility or liability for any inaccurate or incomplete data associated with these GIS files or this report.

DELINEATION OF PROTECTION AREA

DDW has elected to establish protection areas with a 250 day and 10 year travel time. The delineation of the protection zones assumes average aquifer characteristics, and uses the local topography to estimate the groundwater flow direction. The delineation does not take into consideration local aquifer conditions and geology, since that data is rarely readily available and is expensive to collect. DDW considers the values used to be conservative.

The EPA groundwater modeling program WHPA was used to model the groundwater protection areas.

ASSUMED AQUIFER CHARACTERISTICS

Porosity	Hydrologic Conductivity	Aquifer Thickness	Gradient
0.15	70 ft/day	50 feet	.01

Flow/pump rates used in creating protection zones

Flow/Pumprate = 50 GPM
50 GPM = 9625 ft ³ /day

The attached map shows the ground water protection areas.

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Potential contamination sources (PCSs) are considered to be any facility, location, or area which employs an activity or procedure or stores materials which may potentially contaminate ground-water or surface water. The data available to DDW suggest that the following potential contamination sources exist above the source: light duty roads.

SUSCEPTIBILITY TO CONTAMINATION

The following table highlights the types of hazards associated with the PCSs listed above:

TABLE 1

PCS	Hazards	Level of Concern	Explanation
Light Duty Roads	Spills of fuel, hazardous wastes; herbicide applications	Low	A spill could contaminate the source, but the likelihood is low.

The Causey Estates source is believed to have a low susceptibility to potential contamination events, based on the low concentration of PCSs in proximity to the source. Spills along any of the roads in the vicinity would, in all likelihood, drain away from the springs. Springs are isolated.

RECOMMENDATIONS

DDW recommends that representatives of this system focus attention on the continuing proper maintenance and protection of the springs.

CONCLUSION

This report is intended to alert water systems to sources of potential contamination near their drinking water sources. Recommendations are provided to assist the systems in minimizing the risks of contamination. In addition, since this report is intended to advise the systems customers and the public in general regarding the susceptibility of their water supply to contamination events, the system is asked to post this report and the associated maps in a conspicuous and public location.

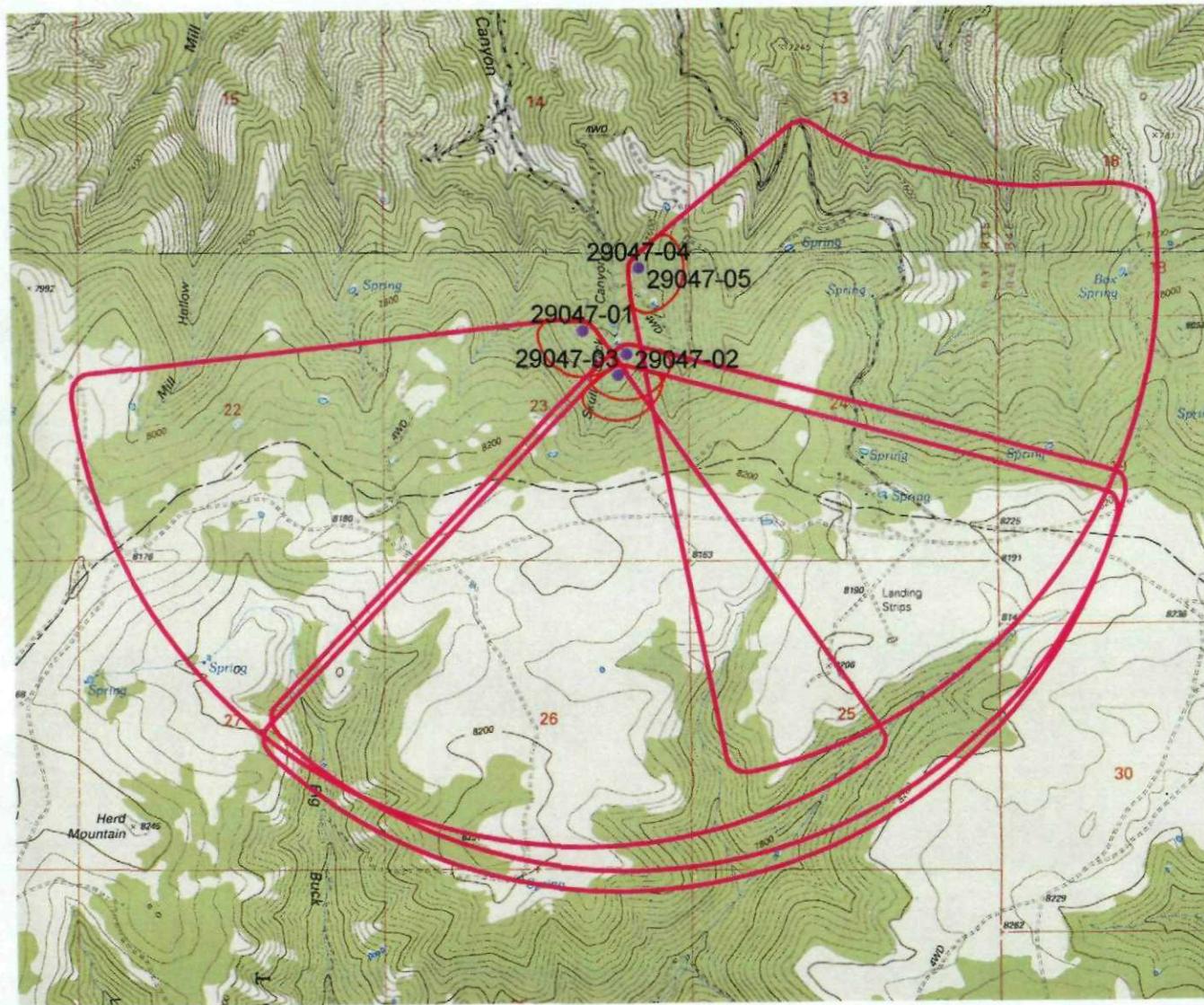
END NOTES/REFERENCES

See below

¹ This report is not considered a Drinking Water Source Protection (DWSP) Plan. DWSP Plans are governed by R309-600, and are subject to additional requirements described in R309-600. This is a simplified assessment.

² Sanitary Surveys dated 1981, 1994, 1999

Protection Areas Causey Estates



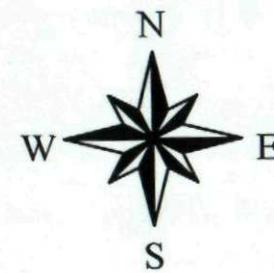
0.9

0

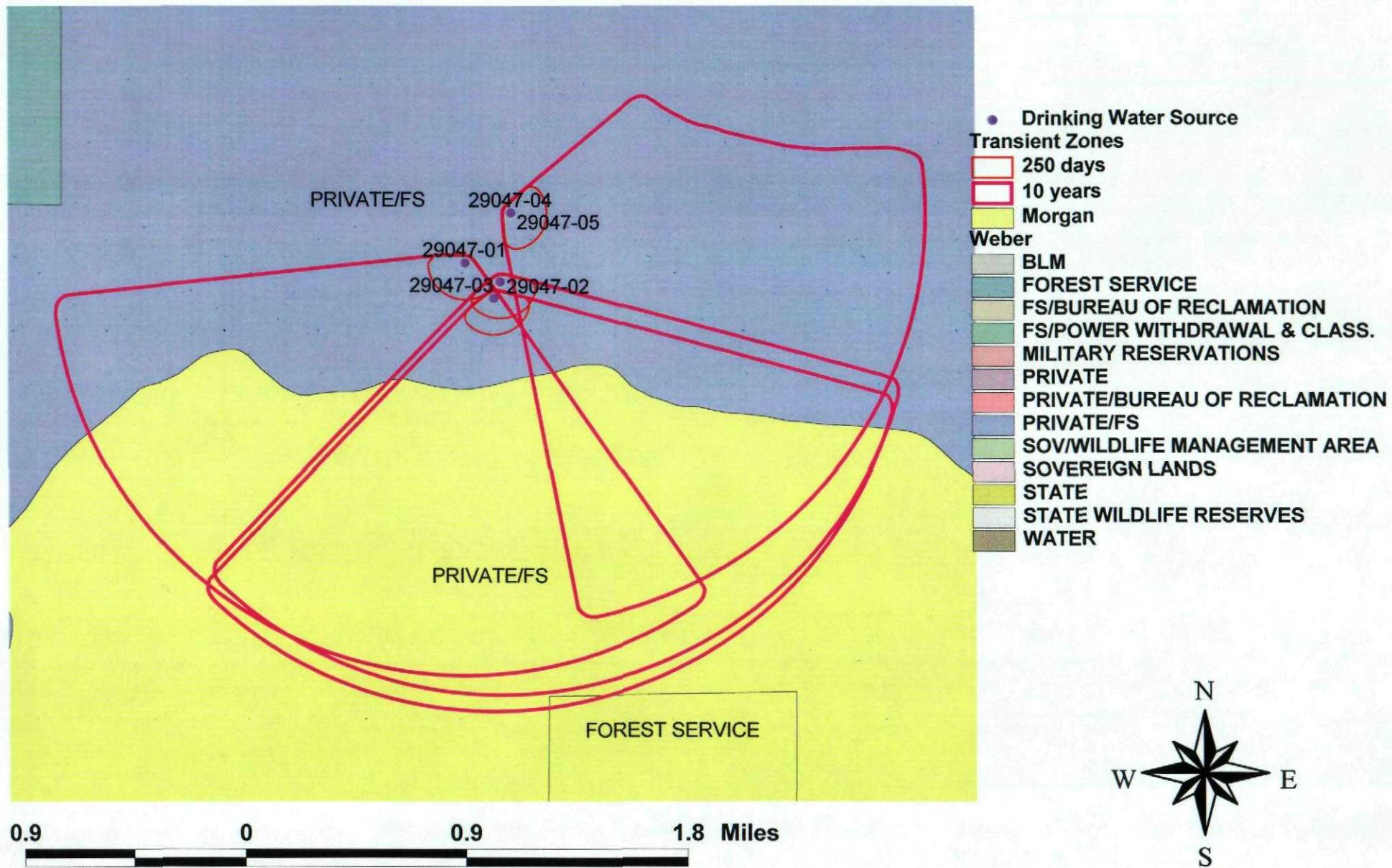
0.9

1.8 Miles

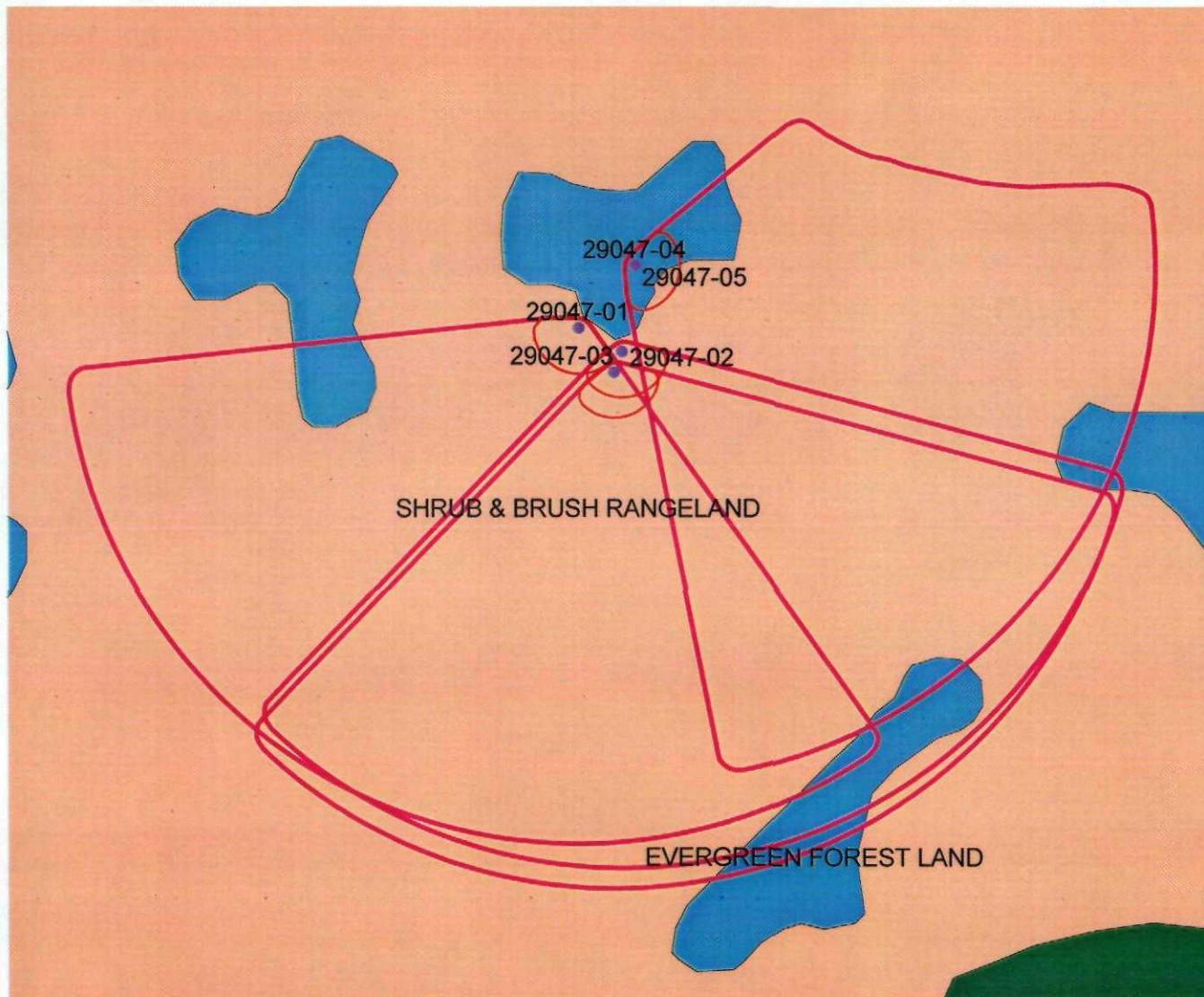
- Drinking Water Source
- Transient Zones
- 250 days
- 10 years



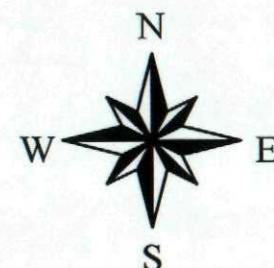
Land Ownership Causey Estates



Land Use Causey Estates



- Drinking Water Source
- Transient Zones
 - 250 days
 - 10 years
- Ogden.shp
- COMMERCIAL AND SERVICES
- CONFINED FEEDING OPS
- CROPLAND AND PASTURE
- DECIDUOUS FOREST LAND
- EVERGREEN FOREST LAND
- FORESTED WETLAND
- HERBACEOUS RANGELAND
- INDUSTRIAL
- LAKES
- MIXED FOREST LAND
- MIXED RANGELAND
- MXD URBAN OR BUILT-UP
- NONFORESTED WETLAND
- ORCH, GROV, VNYRD, NURS, ORN
- OTHER AGRICULTURAL LAND
- OTHER URBAN OR BUILT-UP
- RESERVOIRS
- RESIDENTIAL
- SHRUB & BRUSH RANGELAND
- STRIP MINES
- TRANS, COMM, UTIL
- TRANSITIONAL AREAS



0.9 0 0.9 1.8 Miles