



# MAPLETON

## 2021 DRINKING WATER SOURCE PROTECTION PLAN UPDATE

### CARNESECCA WELL, WESTWOOD WELL, SEAL WELL, CROWD CANYON WELL, WELL #1, AND MAPLE CANYON SPRINGS

(HAL Project No.: 437.07.100)  
System No. 25018

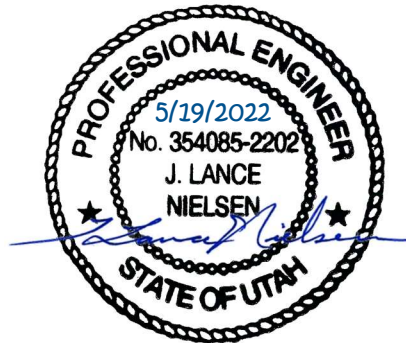
Revised  
May 2022

# CITY OF MAPLETON

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CANYON WELL, WELL #1, AND MAPLE CANYON SPRINGS

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System No. 25018



**HANSEN  
ALLEN  
& LUCE**<sub>INC</sub>  
ENGINEERS

Revised  
May 2022

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# EXECUTIVE SUMMARY

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This report is the 2021 Drinking Water Source Protection (DWSP) plan update for the City of Mapleton's Carnesecca Well, Westwood Well, Seal Well, Crowd Canyon Well, Well #1, and Maple Canyon Springs. Well #1 is not currently providing drinking water, and it is not expected to provide drinking water in the near future. It is used in the pressurized irrigation system. The City requested that it be part of the DWSP plan in case it is ever used for drinking water again. The other wells serve as a source of drinking water for residences in the City of Mapleton. Source protection areas for the wells have been delineated as defined in R309-600-9.

This report has been prepared to the Standard Report Format for Existing Wells and Springs, as published by the Division of Drinking Water (DDW, 2007).

This report describes well locations, pertinent geologic and structural data, hydrogeology of the contributing aquifer(s), and the methodology and derivation of descriptive aquifer parameters used in the delineation of Drinking Water Source Protection zones. Aquifer parameters were developed based on information found in Technical Publication No. 111, entitled "Hydrology and Simulation of Ground-Water Flow in Southern Utah and Goshen Valleys, Utah" (Brooks and Stolp, 1995), well drillers' logs for Carnesecca Well, Westwood Well, Seal Well, Crowd Canyon Well, and Well #1, and constant-rate pump tests. The parameters were input into a WhAEM model which was used to delineate source protection Zones 2, 3 and 4 for the wells. Hydrogeologic mapping was used to delineate source protection areas within the bedrock aquifers of the Wasatch Mountains East of Mapleton City. Source protection zones were overlain onto a map of the area, showing the relationship of these protection zones to surface features.

A Potential Contamination Source (PCS) inventory was conducted by Hansen, Allen & Luce, Inc. (HAL). PCSs include agricultural, residential, commercial, transportation routes, and use and storage of hazardous materials. The PCSs have been prioritized, the hazards have been assessed, and land management strategies have been planned for all inadequately controlled PCSs. Management strategies for future PCSs will be implemented as the City of Mapleton becomes aware of the planned location of PCSs within the DWSP zones. The following additional sections are included in this DWSP: Implementation Schedule, Resource Evaluation, Record Keeping, Contingency Plan, Public Notification, and Waivers.

# CHAPTER 1 – INTRODUCTION

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Hansen, Allen & Luce, Inc. (HAL) was retained by the City of Mapleton to prepare the 2021 Drinking Water Source Protection (DWSP) plan update for Carnesecca Well, Westwood Well, Seal Well, Crowd Canyon Well, Well #1, and Maple Canyon Springs. The wells and springs provide drinking water for residents of the City of Mapleton. This report has been prepared in accordance with R309-600 (Utah Administrative Code, 2017).

This introduction addresses the water system information, source information, and designated person information. Subsequent chapters of this report address the Delineation Report, Inventory of PCSs, Management Program for Existing and Future PCSs, Implementation Schedule, Resource Evaluation, Record Keeping, Contingency Plan, Public Notification, and Waivers.

## SYSTEM INFORMATION

City of Mapleton  
1405 W. 1600 N.  
Mapleton, Utah 84664  
System Number: 25018

## SOURCE INFORMATION

The well and spring locations are shown in Table 1-1.

**Table 1-1  
Well and Spring Locations**

Source	Location
Carnesecca Well	North 450 feet and East 1133 feet from South ¼ Corner of Section 2, Township 8 South, Range 3 East, SLB&M
Westwood Well	South 975 feet and East 1305 feet from West ¼ Corner of Section 22, Township 8 South, Range 3 East, SLB&M
Seal Well	North 426 feet and East 1313 feet from South ¼ Corner of Section 3, Township 8 South, Range 3 East, SLB&M
Crowd Canyon Well	South 2475 feet and East 1530 feet from Northwest Corner of Section 26, Township 8 South, Range 3 East, SLB&M
Well #1	North 100 feet and East 100 feet from Southwest Corner of Section 11, Township 8 South, Range 3 East, SLB&M
Service Berry, Mapleton City, and Unnamed Springs	N 1860 E 1050 ft and N 2300 E 3600 ft from SW Corner N 2560 W 300 ft from SE Corner S 2200 W 400 ft from NE Corner All in Section 7, Township 8 South, Range 4 East, SLB&M
Dunham Springs 1, 2, and 3	N 1900 E 2400 ft from SW Corner N 2200 E 2160 ft from SW Corner N 2400 E 2400 ft from SW Corner All in Section 8, Township 8 South, Range 4 East, SLB&M

**DESIGNATED PERSON**

Steven Lord, P.E.  
Public Works Director / City Engineer  
1405 W. 1600 N.  
Mapleton, Utah 84664

## CHAPTER 2 – DELINEATION REPORT

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### GEOLOGIC DATA

The general geologic and ground water conditions in the southern half of Utah Valley have been described by the USGS and by the Utah Department of Natural Resources in Technical Publication No. 111, entitled "Hydrology and Simulation of Ground-Water Flow in Southern Utah and Goshen Valleys, Utah" (Brooks and Stolp, 1995). The water yielding aquifers are generally described by Brooks and Stolp (1995) as follows:

*The main ground-water system in southern Utah and Goshen Valleys is in the unconsolidated basin-fill deposits.... The unconsolidated basin-fill deposits consist of interbedded and lenticular deposits of gravel, sand, silt, and clay.... Along the mountain fronts, colluvial processes resulted in deposition of poorly sorted clay, sand, and gravel deposits. Away from the mountain fronts, on benches and alluvial fans, lacustrine processes resulted in deposition of well-sorted sand and gravel deposits and some well-sorted clay layers. In the center of the valleys and near Utah Lake, the basin-fill deposits are composed mainly of silt and clay. In the stream channels of Spanish Fork and Hobble Creek, alluvial processes resulted in deposition of more sand and gravel than in the surrounding basin-fill deposits.*

A confined, artesian aquifer exists at depth in the center portions of the valley with an unconfined aquifer between the artesian aquifer and the mountains. The unconfined aquifer correlates laterally with the water-bearing units that compose the confined aquifer farther from the mountains. Near the mountains, unconfined conditions exist because the sediments are coarse, and the confining layers are thin or absent. Some shallow unconfined groundwater also exists locally in flood-plain deposits along stream channels, in perched aquifers along the benches, and in lowland areas of the valley. Although these aquifers are not considered part of the primary ground-water reservoir, they may be areas of discharge from or recharge to the primary ground-water reservoir.

The primary aquifer in southern Utah Valley receives a large portion of recharge from the bedrock formations of the Wasatch Mountains through the Wasatch Fault. Brooks and Stolp (1995) made the following observation:

*Most subsurface inflow [to the primary aquifer] occurs as movement of water from consolidated rock to basin-fill deposits through rock, fractures, bedding planes, and solution channels. The Wasatch Range contains limestone that is deformed and fractured. Caverns in limestone are indications of the conduit system.*

Brooks and Stolp (1995) also indicate that the volume of this subsurface inflow could be comparatively large.

Geologic mapping obtained for the Provo 30' x 60' Quadrangle, Utah, Wasatch, and Salt Lake Counties, Utah (Constenius, et al. 2011) indicates that much of the valley in which the wells were drilled consists primarily of Lacustrine silt and clay deposits, and Lake Bonneville alluvial-fan and delta deposits, depending on which area within the City. The bedrock formations from which the springs discharge primarily consist quartzitic sandstones of the upper member of the Oquirrh Formation. Several north-south trending faults cut through the region resulting in significant fracturing throughout the formation.

## Structure

A review of available literature and mapping for the Southern Utah Valley indicates that localized faults have been identified in the immediate vicinity of the wells. The Utah Geological Survey (UGS) shows the closest fault is the Wasatch Fault Zone, which runs north-south along the base of the Wasatch Mountains. North-South trending normal faults are also present throughout the mountains east of Mapleton City. Some of these faults could channel groundwater to springs.

## Local Geology

Well logs for the wells indicate that sands and gravel should be encountered as well as clay layers (see Appendix B). Well logs for Crowd Canyon Well indicate highly fractured limestone and quartzite.

## WELL CONSTRUCTION DATA

A summary of well construction data for the wells are included in Table 2-1. The driller's logs for the wells are included in Appendix A.

**Table 2-1**  
**Well Completion Data Summary**

Well	Well Completion Date	Elevation of Wellhead	Well Casing Diameter	Well Perforations
Carnesecca Well	1954	~4,829 ft	16-in 0 to 366 ft 10-in 0 to 533 ft	238 to 243 ft 246 to 533 ft (292 ft total)
Westwood Well	January 8, 1962	~4,760 ft	16-in 0 to 541 ft	485 to 535 ft (50 ft total)
Seal Well	June 27, 1961	~4,742 ft	16-in 0 to 387 ft	215 to 385 ft (170 ft total)
Crowd Canyon Well	September 15, 2006	~5,000 ft	16-in 0 to 301 ft 10-in 292 to 542 ft	201 to 301 ft 292 to 532 ft (340 ft total)
Well #1	June 17, 1961	~4,729 ft	16-in 0 to 381 ft 12-in 365 to 500 ft	383 to 405 ft 409 to 494 ft (107 ft total)

## PUMP DATA

The maximum pumping rates for Carnesecca Well, Westwood Well, Seal Well, Crowd Canyon Well, and Well #1 are shown in Table 2-2.

**Table 2-2**

### Pumping Rates

Well	Maximum Pumping Rate (gpm)
Carnesecca Well	1,100
Westwood Well	2,000
Seal Well	1,100
Crowd Canyon Well	1,700
Well #1	950

### AQUIFER CHARACTERISTICS

Aquifer characteristics were derived based on Technical Publication No. 111, entitled "Hydrology and Simulation of Ground-Water Flow in Southern Utah and Goshen Valleys, Utah" (Brooks and Stolp, 1995), well logs, constant-rate pumping test data, and previous DWSP Plans.

The aquifer transmissivity for the wells was derived based on Technical Publication No. 111 (Brooks and Stolp, 1995) and constant rate pumping tests. Hydraulic conductivity was calculated by dividing transmissivity by aquifer thickness.

The aquifer thickness for the wells was calculated using the screened interval from the well logs.

Effective porosity was estimated based on the driller's logs for the wells which indicated the primary production of the aquifer. The well log for the Carnesecca Well indicates that the contributing aquifers consist mostly of gravels with some sand. Based on typical effective porosities reported in *Ground-Water Hydrology and Hydraulics* (McWhorter and Sunada, 1977) for gravels (0.24) and medium sands (0.32) an average value of 0.28 was used. Westwood Well consists of mostly fine sand, with clay and gravel. Based on McWhorter and Sunada (1977), a value of 0.30 was assumed. Seal well consists of mostly sand with gravel. Based on McWhorter and Sunada (1977), a value of 0.25 was assumed. Crowd Canyon Well is made up of mostly fractured limestone and quartzite. McWhorter and Sunada (1977) report a range of effective porosity for limestone from 0.0 to 0.36. Due to the highly fractured state of the aquifer, effective porosity is estimated to be between 0.14 and 0.21. Therefore, an estimated effective porosity was assumed to be 0.18. Contributing aquifers for Well #1 consist mostly of gravels with some sand. McWhorter and Sunada (1977) report an average effective porosity of 32% for medium sands and 24% for medium gravels. Therefore, an estimated effective porosity was assumed to be 30% for Well #1.

The hydraulic gradient and groundwater flow direction were obtained from Technical Publication 111 (Brooks and Stolp, 1995) and previous DWSP plans. The calculations for the hydraulic gradient and flow direction can be seen in Appendix A.

Table 2-3 presents a summary of the aquifer characteristics summary.

**Table 2-3  
Aquifer Characteristics Summary**

Description	Carnesecca	Westwood	Seal	Crowd Canyon	Well #1
Transmissivity	65,000 ft <sup>2</sup> /day	18,000 ft <sup>2</sup> /day	71,000 ft <sup>2</sup> /day	39,630 ft <sup>2</sup> /day	65,000 ft <sup>2</sup> /day
Aquifer Thickness	295 ft	60 ft	175 ft	280 ft	133 ft

Description	Carnesecca	Westwood	Seal	Crowd Canyon	Well #1
Hydraulic Conductivity	220 ft/day	300 ft/day	406 ft/day	142 ft/day	489 ft/day
Effective Porosity	0.28	0.30	0.25	0.18	0.30
Hydraulic Gradient	0.0065 ft/ft	0.0085 ft/ft	0.004 ft/ft	0.01 ft/ft	0.0055 ft/ft
Direction of Groundwater Flow	E,SE to W,NW	N 60 W	E,SE to W,NW	N 60 W	SE to NW
Maximum Pumping Rate	1,100 gpm	2,000 gpm	1,100 gpm	1,700 gpm	950 gpm

## HYDROGEOLOGIC METHODS, PROCEDURES AND CALCULATIONS

### Theory

Delineation of the DWSP zones within the primary aquifer was performed using the WhAEM 2000 software. WhAEM is a two-dimensional groundwater computer model and was used to compute and display groundwater pathlines or flowlines for this analysis. WhAEM was developed by the EPA (Haitjema, 2005). The WhAEM assumption of homogeneous aquifers with steady flow fields is applicable to the unconsolidated aquifer that is found throughout the Salt Lake Valley.

In general terms, WhAEM code is based upon the following methodology. The amount of water passing through the aquifer is a function of the permeability of the aquifer materials, and the difference in pressure head. This relationship is known as Darcy's Law. The governing equation and definition of parameters are defined as follows:

$$v = k i$$

Where:

v = velocity (L/T)  
k = permeability (L/T)  
i = hydraulic gradient (L/L)

This equation is further modified because flow can only occur through that portion of the cross-sectional area occupied by voids. As a result, the average linear velocity of flow within the aquifer becomes:

$$\bar{v} = v / n$$

Where:

$\bar{v}$  = average linear velocity (L/T)  
v = velocity (L/T)  
n = effective porosity (dimensionless)

Based on the above equation, the average linear velocity ( $\bar{v}$ ) is inversely proportional to the effective porosity (n). The distance that a particle of water will move over a given increment of time is simply the average linear velocity multiplied by time. As a particle of water approaches the drawdown cone induced by a pumping well, the travel velocity of that particle will increase in direct proportion to the gradient of the resultant potentiometric surface as shown in the above equations. Therefore, the travel time (t) between any two points on the potentiometric surface is the sum of the time required for the particle to move over discretized spatial steps ( $x_i$ ) as follows:

$$t = \sum t_i x_i$$

Input parameters required by WhAEM include the aquifer thickness, hydraulic conductivity of the aquifer, the direction and magnitude of the regional hydraulic gradient, aquifer effective porosity, boundary conditions, the location and discharge rate of the pumped wells under analysis, and the location and discharge rate of other pumping wells or recharge wells in the study area. Calculations for the development of input parameters to WhAEM are presented in Appendix A.

### **Well Interference**

For all the wells, each well was modeled pumping at its maximum pumping rate while the other wells pumped at their average pumping rate determined from data reported to the Division of Water Rights. The maximum pumping rate was provided by the City. The pathlines used to delineate the DWSP zones account for interference among the wells.

### **DELINEATION OF DRINKING WATER SOURCE PROTECTION ZONES**

Delineation of the DWSP zones for the wells were updated and are shown on Figure 2-1. Descriptions of the source protection zones are given below.

No changes were made to the delineation of the springs, as shown on Figure 2-2.

### **Modeling**

WhAEM tracks particles representing groundwater as they travel through the modeled aquifer. These particles were tracked for 250 days, 3 years, and 15 years corresponding to DWSP zones 2, 3, and 4, respectively. The pathlines were then exported as shapefiles and displayed graphically in ArcGIS. The endpoints of the pathlines were digitized to delineate the respective DWSP zones within ArcGIS.

### **Hydrogeologic Mapping**

Hydrogeologic mapping in conjunction with WhAEM modeling was used to delineate the zones for the wells. Geologic mapping was used to capture the extent of the zones where the zones extended into the bedrock aquifer. The zones shown on Figure 2-1 that reached into the bedrock aquifer have higher recharge near the topographical divide, which contributes to groundwater and flows toward the wells.

Hydrogeologic mapping was also used to delineate the DWSP zones for the springs. The zones were defined based on higher recharge at higher elevations resulting in a capture area to the springs based primarily upon the surface topography. However, there is a north-south trending fault north of Service Berry Springs that could potentially bring groundwater to the springs from the hills north of Maple Creek. As a result, the capture area of the springs was extended to the north topographical divide of Maple Canyon. Since groundwater flow to the springs is primarily through fracture flow within the Oquirrh Formation, the capture area identified on Figure 2-1 represents DWSP Zone 2 for the springs.

The DWSP zones shown on Figure 2-1 reflect the calculated up-gradient, down-gradient and lateral extent of the DWSP zones using the methodology discussed above. The DWSP zones are defined as follows.



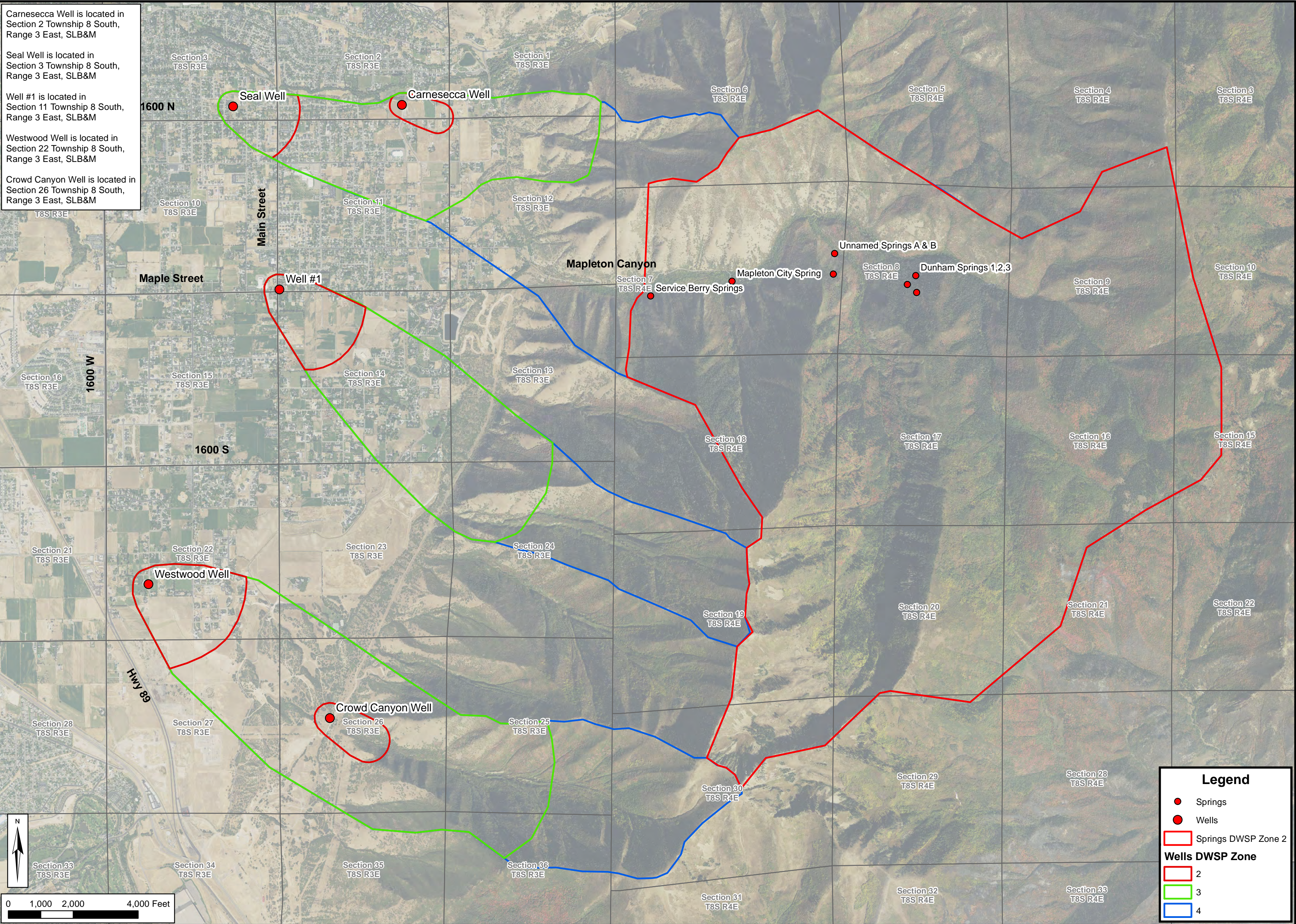
Carnesecca Well is located in Section 2 Township 8 South, Range 3 East, SLB&M

Seal Well is located in Section 3 Township 8 South, Range 3 East, SLB&M

Well #1 is located in Section 11 Township 8 South, Range 3 East, SLB&M

Westwood Well is located in Section 22 Township 8 South, Range 3 East, SLB&M

Crowd Canyon Well is located in Section 26 Township 8 South, Range 3 East, SLB&M



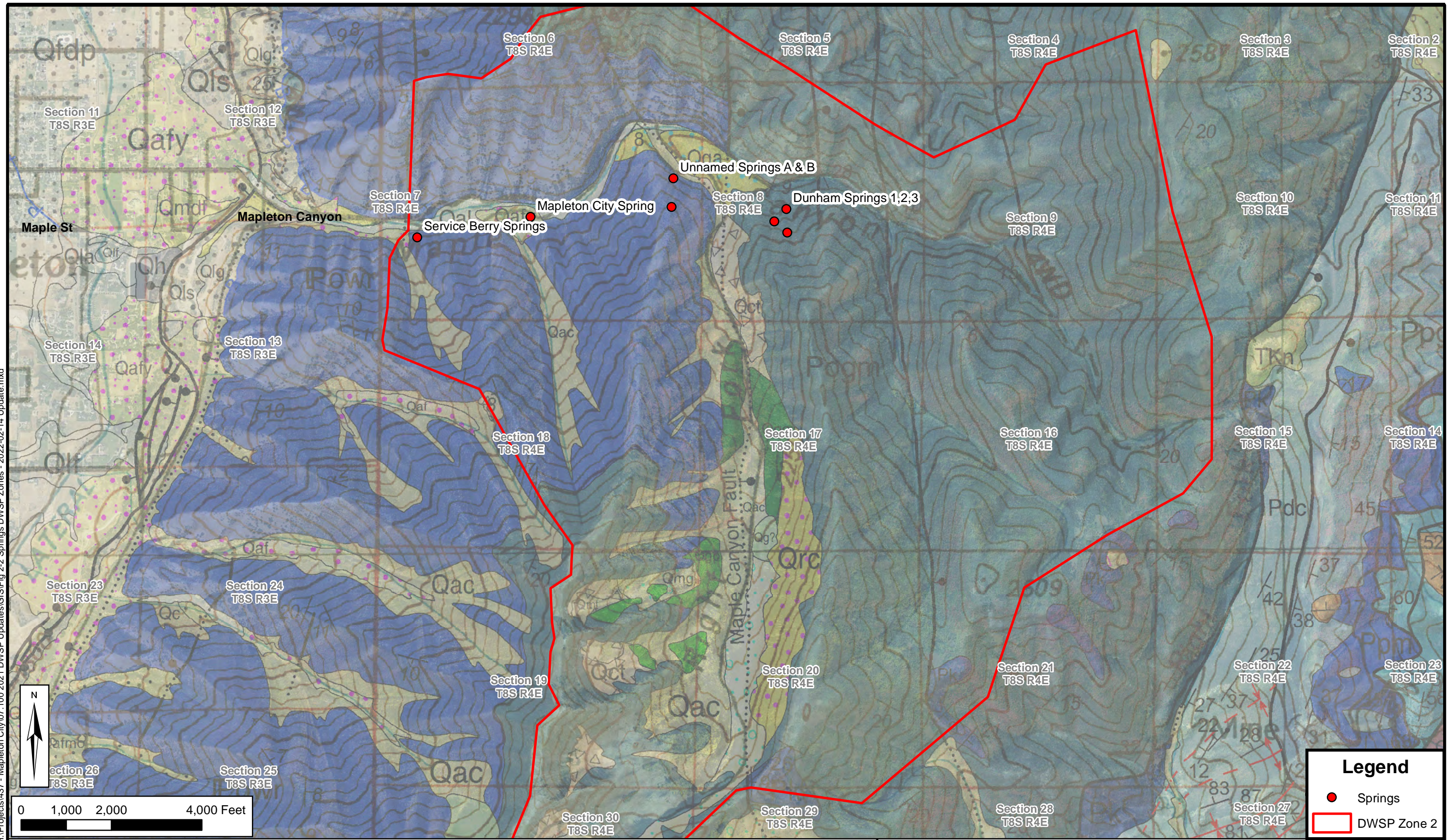
**Legend**

- Springs
- Wells
- ▭ Springs DWSP Zone 2
- Wells DWSP Zone**
- ▭ 2
- ▭ 3
- ▭ 4

Date: 1/10/2023  
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Date: 5/19/2022  
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**Legend**

- Springs
- DWSP Zone 2



## DWSP Zone 1

Due to map scale, the 100-foot radii around the wells or springs are not shown on Figure 2-1.

## DWSP Zones 2, 3, and 4

DWSP zones 2, 3, and 4 shown on Figure 2-1 include the extent of the capture area within 250-day, 3-year, and 15-year groundwater travel time periods for the wells and springs assuming the parameters discussed previously. The maximum calculated extent of DWSP zones 2, 3, and 4 are shown in Table 2-4.

**Table 2-4**  
**Limits of Zones 2, 3, and 4**

DWSP Zone	Maximum Overall Zone Dimension	Carnesecca Well	Seal Well	Westwood Well	Crowd Canyon Well	Well #1	Springs
2	Width (ft)	920 (S-N)	1,800 (S-N)	3,630 (S-N)	1,300 (S-N)	2,680 (SW-NE)	19,500 (NW-SE)
	Length (ft)	2,020 (E-W)	2,530 (E-W)	3,400 (E-W)	2,500 (E-W)	3,310 (SE-NW)	23,500 (NE-SW)
3	Width (ft)	4,000 (S-N)		4,500 (S-N)		3,900 (SW-NE)	
	Length (ft)	11,720 (E-W)		14,500 (E-W)		10,810 (SE-NW)	
4	Width (ft)	23,700 (S-N)		4,500 (S-N)		3,900 (SW-NE)	
	Length (ft)	32,750 (E-W)		19,000 (E-W)		18,410 (SE-NW)	

## PROTECTED AQUIFER CLASSIFICATION

The DWSP rule provides for classification as a “Protected Aquifer”, as part of established criteria for the granting of a susceptibility waiver, provided the following three criteria are substantiated and supported with sufficient data. The three criteria for establishing a protected aquifer are:

- A minimum of 30 feet of a confining, clay layer which overlies the production aquifer. The thickness, depth and lithology must be clearly identified.
- Data must indicate the lateral continuity of the clay layer throughout the extent of Zone 2.
- The well or wells must be grouted from the ground surface down to at least 100 feet in depth and through the protective clay layer.

Carnesecca, Westwood, Seal, Crowd Canyon, and Well #1 do not qualify for protected aquifer classification.

## CHAPTER 3 – PCS INVENTORY

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This chapter addresses the process of inventorying the Potential Contamination Sources (PCSs) within each of the four delineated protection zones around the sources, hazard identification at each PCS, prioritization of the inventory, and a map showing the locations of PCSs.

The requirements for development of the PCS inventory state that:

*Each PWS shall list all potential contamination sources within each DWSP zone or management area in priority order and state the basis for this order. This priority ranking shall be according to relative risk to the drinking water source. The name and address of each commercial and industrial potential contamination source is required. Additional information should include the name and phone number of a contact person and a list of the chemical, biological, and/or radiological hazards associated with each potential contamination source. Additionally, each PWS shall identify each potential contamination source as to its location in zone one, two, three, four or in a management area and plot it on the map required in R309-600-9(6)(a)(viii) or R309-600-9(6)(b)(i).*

### IDENTIFICATION OF PCSs

The Potential Contamination Source (PCS) inventory includes identified sources of contaminants which have the potential to adversely impact the quality of groundwater tributary to a drinking water source. In a general sense, PCSs may include any business, group or individual involved in the manufacture, disposal, transport, storage or use of contaminants which could potentially degrade the quality of the groundwater resources. Although there is a tendency to associate groundwater contamination with large business or industry, significant PCSs are often associated with smaller entities (which may include gas stations, farm storage tanks, septic tanks, and agricultural areas).

Areas of the DWSP zones are located in and near Mapleton City and Utah County. A survey was performed by HAL personnel to identify potential contamination sources. The basis for determining whether an activity constituted a PCS was based primarily upon guidelines provided by the Utah Department of Environmental Quality, Division of Drinking Water (DDW) entitled "Ground Water Source Protection User's Guide" (DDW, 2013). Judgment was also applied in determining what would qualify as a PCS.

### IDENTIFICATION OF HAZARDS AT EACH PCS

A survey was performed by Hansen, Allen & Luce, Inc. (HAL) personnel to identify PCSs and quantify potential hazards at each PCS. Chemical, biological, or radiological hazards are identified at each PCS in order to plan effective management strategies for reducing the risks to groundwater. A summary of information gathered for each PCS is included in Appendix B.

### PCS INVENTORY

Potential Contamination Sources identified during the survey are summarized in Table 3-1. This table includes an assigned PCS number, contact information, potential hazards, and estimated contaminant quantities for each PCS.

**Table 3-1  
PCS Inventory**

<b>PCS #</b>	<b>Name of Facility</b>	<b>Contact Information</b>	<b>Hazards</b>	<b>Quantities</b>
<b>DWSP Zone 1 (No PCSs)</b>				
<b>DWSP Zone 2</b>				
2-1	Residential and Commercial Areas	NA Zones 2, 3, and 4 NA	residential and commercial use of chemicals, herbicides, fertilizers, and pesticides; street runoff; and sewers	Unknown
2-2	Mortensen Property	Owner ~ 400 E 400 S Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
2-3	Mapleton Elementary School	Nebo School District 120 W Maple St Mapleton, UT 84664 801-354-7463	application of pesticides, herbicides, and fertilizers	unknown
2-4	Mapleton City Park	Mapleton City Parks & Rec Director W Maple St & N Main St Mapleton, UT 84664 801-806-9114	application of pesticides, herbicides, and fertilizers	unknown
2-5	Septic Systems	Various-See Appendix F	home sewage	1000 gal / home sewage
<b>DWSP Zone 3</b>				
3-1	Residential and Commercial Areas	See 2-1		
3-2	Septic Systems	See 2-5		
3-3	Hobble Creek Elementary School	Nebo School District 362 E 1200 N Mapleton, UT 84664 801-354-7463	application of pesticides, herbicides, and fertilizers	unknown
3-4	Mapleton Junior High School	Nebo School District 120 W Maple St Mapleton, UT 84664 801-354-7463	application of pesticides, herbicides, and fertilizers	unknown
3-5	Cow Pasture	Mapleton Pond 1250 S 1250 E Mapleton, UT 84664 Unknown	animal waste	> 20 cows
3-6	Ensign-Bickford	Owner 8305 S. US Highway 6 Spanish Fork, UT 84660 801-794-4500	nitrate, CEM (constituents of energetic materials), explosives	unknown
3-7	MJK Farms LLC Property	Owner 1150 E 1200 N Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
3-8	Warren Property	Owner ~ 1600 E 1200 N Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown

PCS #	Name of Facility	Contact Information	Hazards	Quantities
3-9	Snyder Property	Owner ~ 1600 E 1000 N Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
3-10	DLH Properties LLC	Owner 1346 E 1200 N Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
3-11	Hatfield Property	Owner 1057 N 1600 E Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
3-12	BKG Investments II LLC Property	Owner ~ 1600 E 900 N Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
3-13	Rogers Property	Owner ~ 1000 E 900 N Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
3-14	Sheranian Property	Owner 1805 E 1200 N Mapleton, UT 84664 Unknown	application of pesticides, herbicides, and fertilizers	unknown
<b>DWSP Zone 4</b>				
4-1	Residential and Commercial Areas	See 2-1		
4-2	Septic Systems	See 2-5		
4-3	Whiting Campground	Uinta National Forest Spanish Fork Ranger District 44 West 400 North Spanish Fork, UT 84660 801-798-3571	sewage	unknown

## PRIORITIZATION OF POTENTIAL CONTAMINATION SOURCES

Prioritization of PCSs is accomplished through a priority setting scheme similar to that used by the EPA, as set forth in "Managing Groundwater Contamination Sources in Wellhead Protection Areas: A Priority Setting Approach" (USEPA 570/9-91-023). This approach is recommended in the "Ground Water Source Protection User's Guide" by the State Division of Drinking Water (2013).

Using the EPA approach in its entirety was determined to be excessive for the scope and circumstances of this DWSP plan. However, the general theory of risk assessment used in the EPA approach is applicable for PCS prioritization.

The **prioritization approach** described in this chapter consists of a strategy where PCSs are prioritized by assessing the risk potential of each source. Risk potential is a function of the likelihood of contamination and the severity of the resulting contamination. These two factors are each divided into two sub-categories and are defined as follows:

## 1. LIKELIHOOD OF CONTAMINATION

- a. **Source Containment** – This includes factors or conditions at the PCS that affect the likelihood of contaminants being released into the groundwater. This represents approximately 25% of the total risk.
- b. **Time of Travel** – Time of travel is the time it takes for released contaminants to reach the drinking water source. This is primarily a function of distance from the source and represents approximately 25% of the total risk.

## 2. SEVERITY OF CONTAMINATION

- a. **Quantity of Contaminants** – Larger quantities of contaminants increase the risk to the drinking water source. This represents 25% of the total risk.
- b. **Health Risk of Contaminants** – Contaminants that present more severe health risks upon reaching the drinking water source pose a greater risk. This represents 25% of the total risk.

Each of the above factors are further broken down into sub-categories and assigned points as shown and defined in Table 3-2. Each PCS is evaluated and assigned a score for each subcategory. The total risk to the drinking water source from each PCS equals the sum of all the sub-category scores. PCSs are then prioritized from greater risk (higher risk score) to lesser risk (lower risk score).

**Table 3-2  
Contaminant Risk Evaluation**

<b>Likelihood of Contamination</b>		
Source Containment	Located Indoors =	0
	Outdoors, Above Ground =	5
	Outdoors, Below Ground =	10
	Inadequate Storage =	15
	If PCS is adequately controlled, subtract 5 from the Source Containment Score	
Time of Travel	15-year Zone, far =	3
	15-year Zone, near =	5
	3-year Zone, far =	7
	3-year Zone, near =	9
	250-day Zone, far =	11
	250-day Zone, near =	13
	Within Zone 1 =	15
<b>Severity of Potential Contamination</b>		
Quantity	<55 gallons =	1
	56-100 gallons =	3
	101-500 gallons =	6
	501-1,000 gallons =	9
	1,001-10,000 gallons =	12
	>10,000 gallons =	15
Health Risk	Low =	5
	Medium =	10
	High =	15

This procedure may not be applicable to all types of PCSs. In cases where one or more sub-categories are not applicable to a PCS, the risk score is assigned using the best judgment of the individual performing the prioritization.

**PRIORITIZATION RESULTS**

The contaminant risk evaluation was applied to each PCS identified in Table 3-1. The numerical summation of all the risk factors was completed and the resulting sum sorted according to decreasing numerical risk ranking. PCSs that are located in multiple zones were prioritized based on the closest proximity to the drinking water source. PCSs that include multiple hazards were prioritized based on the hazard posing the greatest risk. The results of the contaminant risk evaluation are summarized in Table 3-3. The complete prioritization procedure is included in Appendix B.

**Table 3-3  
PCS Priority Ranking**

<b>Priority</b>	<b>PCS #</b>	<b>PCS Name</b>	<b>Risk Score</b>
1	3-6	Ensign-Bickford	39
2	2-5, 3-2, 4-2	Septic Systems	35
3	2-1, 3-1, 4-1	Residential and Commercial Areas	24



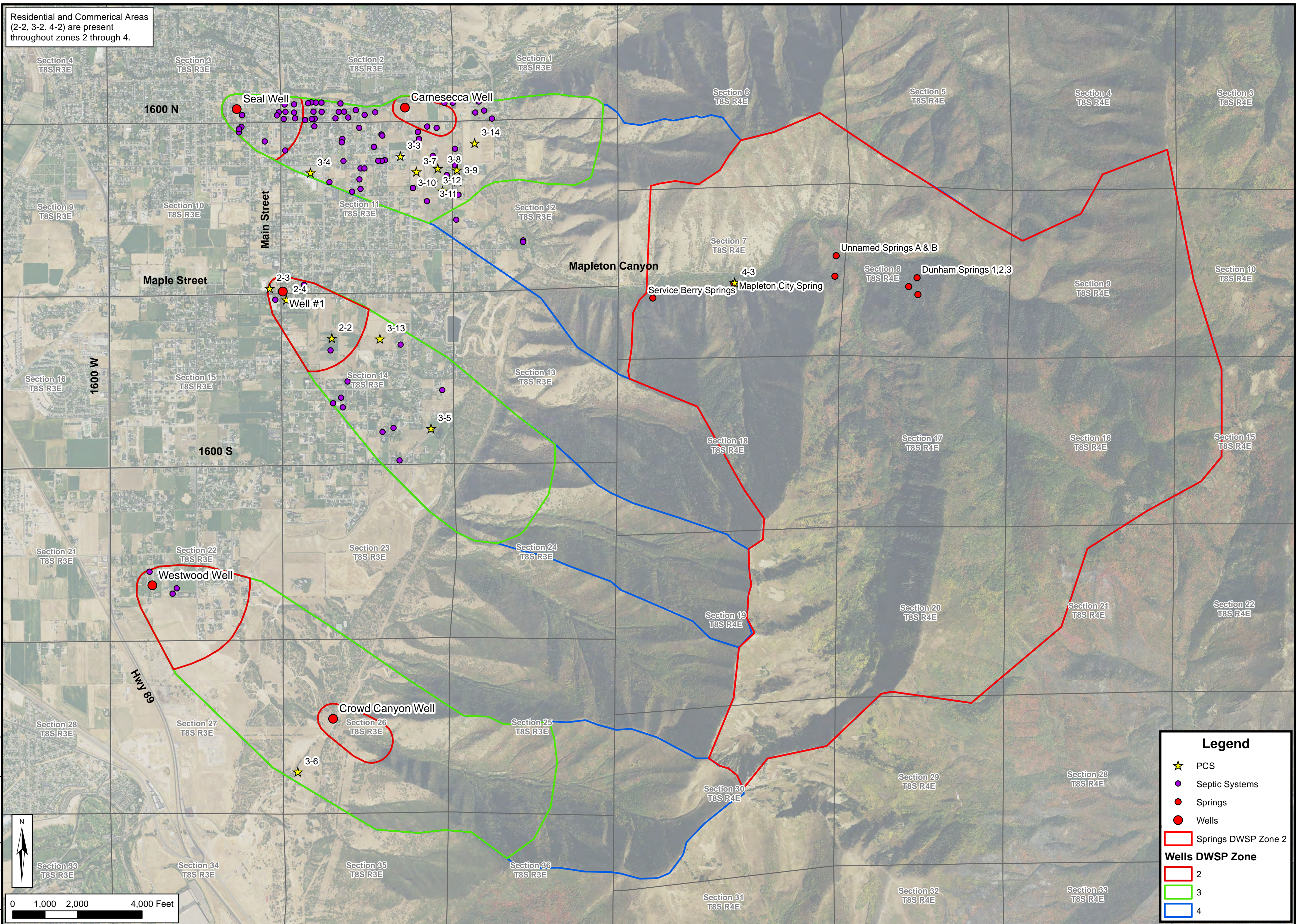
<b>Priority</b>	<b>PCS #</b>	<b>PCS Name</b>	<b>Risk Score</b>
4	2-2	Mortensen Property	24
5	2-4	Mapleton City Park	24
6	2-3	Mapleton Elementary School	22
7	3-13	Rogers Property	22
8	3-4	Mapleton Junior High School	20
9	3-7	MJK Farms LLC Property	20
10	3-8	Warren Property	20
11	3-9	Snyder Property	20
12	3-10	DLH Properties LLC	20
13	3-11	Hatfield Property	20
14	3-12	BKG Investments II LLC Property	20
15	3-14	Sheranian Property	20
16	4-3	Whiting Campground	20
17	3-3	Hobble Creek Elementary School	18
18	3-5	Cow Pasture	18

#### **POTENTIAL CONTAMINATION SOURCE LOCATION MAP**

The well locations, delineated protection zones, and the locations of the identified PCSs within the source protection zones are shown on Figure 3-1. The numerical designation of the PCSs on Figure 3-1 corresponds with the assigned PCS number as shown in Table 3-1.



Residential and Commercial Areas (2-2, 3-2, 4-2) are present throughout zones 2 through 4.



Date: 1/10/2023  
 Document Path: H:\Projects\437 - Mapleton City\07-100-2021 DWSP Updates\GIS\Fig 3-1 PCS Inventory - revised 2022-05-19 Update.mxd



## CHAPTER 4 – ASSESSMENT OF PCS HAZARDS

The hazards identified in Table 3-1 are each assessed as adequately controlled or inadequately controlled based on one of the four types of hazard controls identified by the Division of Drinking Water (R309-600-10(2)(a) through (d)). These controls are described in Table 4-1.

**Table 4-1  
Hazard Control Descriptions and Assessment Procedure**

<b>Control Type</b>	<b>Description</b>	<b>Procedure</b>
Regulatory Controls	Regulatory Controls are codes, ordinances, rules, and regulations which regulate a PCS hazard.	<ol style="list-style-type: none"> <li>1. Identify the enforcement agency.</li> <li>2. Cite and/or quote applicable references in the regulation, rule or ordinance which pertain to controlling the hazard.</li> <li>3. Explain how the regulatory controls affect the potential for ground water contamination.</li> <li>4. Verify that the hazard is being regulated by the enforcement agency.</li> <li>5. Assess the hazard as "Adequately Controlled" or "Not Adequately Controlled" and set a date to reassess the hazard if "Adequately Controlled."</li> </ol>
Best Management Practices (BMPs)	BMPs include practices and procedures currently being used by the PCS to control a PCS hazard.	<ol style="list-style-type: none"> <li>1. List the specific BMPs which have been implemented by the PCS management to control the hazard.</li> <li>2. Indicate that the PCS is willing to continue the use of these BMPs.</li> <li>3. Explain how these BMPs affect the potential for ground water contamination.</li> <li>4. Assess the hazard as "Adequately Controlled" or "Not Adequately Controlled" and set a date to reassess the hazard if Adequately Controlled.</li> </ol>
Physical Controls	Physical Controls are man-made structures and impoundments which prevent a hazard from entering the drinking water source.	<ol style="list-style-type: none"> <li>1. Describe the physical control(s) which have been constructed to control the hazard.</li> <li>2. Explain how these controls affect the potential for contamination.</li> <li>3. Assess the hazard as "Adequately Controlled" or "Not Adequately Controlled" and set a date to reassess the hazard if Adequately Controlled.</li> </ol>
Negligible Quantity Controls	Negligible Quantity Controls relate to the amount or toxicity of a hazard that is used by a PCS. The control deals with the risk of contamination and determining whether that risk is negligible or not significant enough to warrant further management.	<ol style="list-style-type: none"> <li>1. Identify the quantity of the hazard that is being used, disposed, stored, manufactured, and/or transported.</li> <li>2. Explain why this amount is a negligible quantity.</li> <li>3. Assess the hazard as "Adequately Controlled" or "Not Adequately Controlled" and set a date to reassess the hazard if Adequately Controlled.</li> </ol>

### HAZARD ASSESSMENT

Table 4-2 includes the hazard assessment for each PCS and its hazards. Reassessment dates are only listed for those PCSs where an applied control is assessed as adequately controlling the PCS.

**Table 4-2  
Assessment of PCS Hazards**

<b>Priority Rank</b>	<b>PCS Name &amp; No.</b>	<b>Applied Control</b>	<b>Description of Control*</b>	<b>Assessment Status Reassessment Date</b>
1	Ensign-Bickford (3-6)	Best Management Practices (Explosives manufacturing plant)	<ol style="list-style-type: none"> <li>1. Ensign-Bickford is pumping the aquifer through removal via City Well #1 and treating it. Physical cleanup through heat treatment, excavation, and removal of contaminated soils has been completed.</li> <li>2. Pumping and treating of the aquifer will continue.</li> <li>3. The pumping and treating program appear to be reasonable and a good cleanup solution.</li> </ol>	Adequately Controlled 2027
2	Septic Systems (2-5, 3-2, 4-2)	Best Management Practices (Home sewage)	<ol style="list-style-type: none"> <li>1. Discharge of wastewater directly to the groundwater system. Unknown if BMPs are implemented.</li> </ol>	Inadequately Controlled NA
3	Residential and Commercial Areas (2-1, 3-1, 4-1)	Best Management Practices (Municipal Sewer systems)	<ol style="list-style-type: none"> <li>1. Unknown if BMPs are implemented for sewer systems.</li> </ol>	Inadequately Controlled NA
		Physical Controls (Road runoff)	<ol style="list-style-type: none"> <li>1. Street runoff generally flows over impervious surfaces.</li> <li>2. Storm drainage system is not in all residential and light industrial areas and street/parking runoff may enter the groundwater system.</li> </ol>	Inadequately Controlled NA
		Negligible Quantities (Household chemicals, yard chemicals)	<ol style="list-style-type: none"> <li>1. &lt; 15 gallons of chemicals per building; &lt; 25 lbs of fertilizers, pesticides, herbicides per residence.</li> <li>2. Combined quantity from many buildings may not be negligible.</li> </ol>	Inadequately Controlled NA
4	Mortensen Property (2-2)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
5	Mapleton City Park (2-4)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027

<b>Priority Rank</b>	<b>PCS Name &amp; No.</b>	<b>Applied Control</b>	<b>Description of Control*</b>	<b>Assessment Status Reassessment Date</b>
6	Mapleton Elementary School (2-3)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
7	Rogers Property (3-13)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
8	Mapleton Junior High School (3-4)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
9	MJK Farms LLC Property (3-7)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
10	Warren Property (3-8)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
11	Snyder Property (3-9)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
12	DLH Properties LLC (3-10)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027

Priority Rank	PCS Name & No.	Applied Control	Description of Control*	Assessment Status Reassessment Date
13	Hatfield Property (3-11)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
14	BKG Investments II LLC Property (3-12)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
15	Sheranian Property (3-14)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
16	Whiting Campground (4-4)	Best Management Practices (Sewage)	<ol style="list-style-type: none"> <li>1. Caretaker on site that observes and maintains facilities. Holding tanks used to contain sewage waste. Forest Service pumps out tanks as needed. Septic tanks maintained by Forest Service.</li> <li>2. Will continue.</li> <li>3. The continual observance and maintenance of these facilities reduces the risk of spills or leaks into the groundwater.</li> </ol>	Adequately Controlled 2027
17	Hobble Creek Elementary School (3-3)	Best Management Practices (Application of pesticides, herbicides, and fertilizers)	<ol style="list-style-type: none"> <li>1. Pesticides, herbicides, and fertilizers are applied according to manufacturer's specifications.</li> <li>2. Will continue.</li> <li>3. Manufacturer's application rates are such that most of the herbicides or fertilizers are used up on the surface.</li> </ol>	Adequately Controlled 2027
18	Cow Pasture (3-5)	Best Management Practices (Animal waste)	<ol style="list-style-type: none"> <li>1. Unknown if BMPs are used for animal waste.</li> </ol>	Inadequately Controlled NA

\*Numbered items in the Description of Control column correspond to the respective requirements for assessing a PCS as adequately controlled using Regulatory, Best Management Practice, Physical, and Negligible Quantity Controls as shown in Table 4-1 and as outlined in R309-600-10(2)(a) through (d).  
NA = not applicable.

# **CHAPTER 5 – MANAGEMENT PROGRAM FOR EXISTING PCSS**

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Groundwater is a source of drinking water for the City of Mapleton. As such it is important that this vital resource be protected from contamination. Preventing contamination is the easiest and most cost-effective way to keep this water supply safe. Following sound management controls can serve as an important component of a source protection program to control groundwater contamination. Therefore, it is the City's objective to protect its water supply through preventative measures by developing management strategies to help potential contamination sources minimize the risk of contamination.

This section of the DWSP report describes the strategies for managing existing potential contamination sources within the delineated protection zones that have been assessed as inadequately controlled. The intent of these strategies, which are mostly educationally focused, is to provide the City with ways to encourage best management practices of existing potential contamination sources.

## **BASIS OF MANAGEMENT PROGRAM**

A successful DWSP program requires management strategies that the Public Water Supplier (PWS) can legally and effectively implement. The effectiveness of the program depends upon several factors such as the resources needed, cost, manpower, and cooperation of the PCSs within the DWSP zones. The City of Mapleton understands that source protection is a community objective. Many of the management strategies are developed to inform and educate the community about source protection and how to be actively involved in achieving it.

Management strategies are generally categorized as either regulatory or non-regulatory. Regulatory controls involve legislation or other means of control exercised according to the water supplier's jurisdiction. These controls vary in their ability to manage land uses and activities. Some examples of regulatory management strategies are zoning and subdivision ordinances, site plan reviews, design and operating standards, and source prohibitions (DDW, 2013).

Non-regulatory management strategies are intended to reach as broad a spectrum of the community as possible. Some examples of non-regulatory land management strategies are public education programs, purchase of property or development rights, household hazardous waste collection programs, groundwater monitoring, water conservation programs, memoranda of understanding, and written contracts or agreements (DDW, 2013).

## **MANAGEMENT STRATEGIES FOR EXISTING PCSs**

The City of Mapleton intends to pursue a public education program for managing existing potential contamination sources. A list of land management strategies that the City will implement for existing PCSs is presented in Table 5-1.

**Table 5-1  
Listing of Management Strategies**

<b>Strategy Code</b>	<b>Management Strategies</b>
A	Request that the PCS use pesticides, herbicides, and fertilizers in accordance with manufacturer's directions and follow best management practices with regards to each as shown in Appendix C.
B	Request home and business owners to implement Best Management Practices for pollution prevention and for household hazardous waste (See Appendix C) and to not dispose of chemicals into the storm drain system or onto the ground.
C	Request PCS to store contaminants indoors over an impervious surface or to provide secondary spill containment for each container outdoors.
D	Request the PCS to notify the PWS in the event of a leak or spill.
E	Request the City to regularly inspect sewers and fix leaks as needed.
F	Request PCS to implement BMPs for animal feedlots as outlined in Appendix C.
G	Request PCSs to implement Best Management Practices for septic systems (see Appendix F).

One or more of the management strategies identified in Table 5-1 will be implemented for each inadequately controlled PCS within the source protection zones. Table 5-2 identifies which management strategies will be applied to each inadequately controlled PCS. The strategies chosen for each PCS were based on the hazards present at the PCS.

**Table 5-2  
Management Strategies to be Implemented for Existing PCSs**

<b>Priority Ranking</b>	<b>PCS Name and No.</b>	<b>Contaminant Source</b>	<b>Management Strategies to be Implemented*</b>							
1	Septic Systems (2-5, 3-2, 4-2)	Home sewage								G
2	Residential and Commercial Areas (2-1, 3-1, 4-1)	Residential use of chemicals, herbicides, fertilizers, and pesticides; street runoff; and sewers	A	B	C	D	E			
8	Cow Pasture (3-5)	Animal waste							F	

\*Letters in the "Management Strategies to be Implemented" column correspond to the Strategy Code in Table 5-1.



## **CHAPTER 6 – MANAGEMENT PROGRAM FOR FUTURE PCSs**

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Management strategies to control future potential contamination sources involve a management plan to protect groundwater resources by controlling future PCSs that could be established within each of the DWSP zones.

Future potential contamination sources are property owners, businesses, and other activities that do not yet exist within the DWSP zones but have a potential of locating within this area under existing social, economic, and zoning conditions. Some of these future sources may perform the same type of functions as existing PCSs, or they may be activities that were not previously located in the DWSP zones. It is impossible for the City of Mapleton to predict the amount, size, or severity of risk that may be encountered with future potential contamination hazards. Therefore, a management program is included as part of the DWSP plan to effectively plan for these future hazards to groundwater.

### **ADOPT A DWSP ORDINANCE**

Utah County has adopted a Drinking Water Source Protection Ordinance as of June 1, 2010, and Mapleton City as of May 20, 2004 (see Appendix D).

### **MANAGEMENT STRATEGIES FOR FUTURE PCSs**

In addition to use of the Mapleton City and Utah County DWSP ordinances, the management plan for future PCSs shall include the following procedure.

1. Update the PCS inventory periodically with new PCSs that have moved into the DWSP zones.
2. Identify the hazards of new PCSs and include them in the prioritized inventory.
3. Assess hazard controls at new PCSs.
4. Plan land management strategies for new PCSs as necessary.

## CHAPTER 7 – IMPLEMENTATION SCHEDULE

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The Implementation Schedule included in Table 7-1 outlines the time frame in which the City of Mapleton will implement the land management strategies addressed in Chapters 5 and 6.

**Table 7-1  
Land Management Strategies Implementation Schedule**

Land Management Strategy	Code *	Implementation Date
Request that the PCS use pesticides, herbicides, and fertilizers in accordance with manufacturer's directions and follow best management practices with regards to each as shown in Appendix C.	A	2022
Request home and business owners to implement Best Management Practices for pollution prevention and for household hazardous waste (See Appendix C) and to not dispose of chemicals into the storm drain system or onto the ground.	B	2022
Request PCS to store contaminants indoors over an impervious surface or to provide secondary spill containment for each container outdoors.	C	2022
Request the PCS to notify the PWS in the event of a leak or spill.	D	2022
Request the City to regularly inspect sewers and fix leaks as needed.	E	2022
Request PCS to implement BMPs for animal feedlots as outlined in Appendix C.	F	2022
Request PCSs to implement Best Management Practices for septic systems (see Appendix F).	G	2022
DWSP Management Plan for future PCSs.	NA	Ongoing update of PCS inventory

## **CHAPTER 8 – RESOURCE EVALUATION**

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According to the DWSP Rule, each public water system must assess the financial and other resources which may be required to implement a DWSP plan and determine how these resources may be acquired.

### **FINANCIAL RESOURCES**

Mapleton City provides water to residents and businesses within the City service area and administers all water system improvement programs. The City collects fees from the connections within the service area which cover the cost of providing culinary water. These resources have been adequate to meet the expenses of the water system. It is believed that this DWSP Plan can be implemented without significant cost to the City, and that available financial resources will be adequate.

### **HUMAN RESOURCES**

The DWSP plan will be administered by the City of Mapleton. Implementation of the DWSP plan will not require extensive human resources. Staff currently exists to handle billings to the City's customers and is expected to adequately manage the implementation of the DWSP plan.

## CHAPTER 9 – RECORD KEEPING SECTION

The Record Keeping portion of the DWSP plan will be updated by the City of Mapleton as steps are taken to implement the items covered in this DWSP plan. Examples to changes could include:

- The identification of new potential sources of groundwater contamination that were either not identified earlier or are new to the area;
- Changes in management practices at existing potential contamination sources;
- The acquisition of new information which significantly affects the assessment of controls of a potential source of groundwater contamination.
- Implementation of public education programs, letter, and other correspondence about preventing groundwater contamination.

### DOCUMENTATION OF PLAN IMPLEMENTATION

Table 9-1 is included for the City to document implementation of this DWSP plan.

**Table 9-1  
Documentation of DWSP Plan Implementation**

<b>Date</b>	<b>Description of Completed Task</b>
1997	The DWSP plan for Westwood Well was submitted to the Division of Drinking Water.
1998	The DWSP plan for Well #1 was submitted to the Division of Drinking Water.
2001	The DWSP plan for Well #1 was submitted to the Division of Drinking Water.
2001	The DWSP plan for Westwood Well was submitted to the Division of Drinking Water.
2001	The DWSP plan for Carnesecca Well was submitted to the Division of Drinking Water.
2001	The DWSP plan for the Mapleton City Spring Collection System was submitted to the Division of Drinking Water.
2004	Mapleton City adopted a Drinking Water Source Protection Ordinance.
2004	The PER for Seal Well was submitted to the Division of Drinking Water.
2005	The DWSP plan for Westwood Well was submitted to the Division of Drinking Water.
2005	The DWSP plan for Well #1 was submitted to the Division of Drinking Water.
2005	The DWSP plan for Carnesecca Well was submitted to the Division of Drinking Water.
2005	The DWSP plan for the Mapleton City Spring Collection System was submitted to the Division of Drinking Water.
2006	The PER for Crowd Canyon Well was submitted to the Division of Drinking Water.
2006	The DWSP plan for Crowd Canyon Well was submitted to the Division of Drinking Water.
2009	The DWSP plan for Seal Well was submitted to the Division of Drinking Water.
2010	Utah County adopted a Drinking Water Source Protection Ordinance.
2013	The DWSP plan for Carnesecca Well was submitted to the Division of Drinking Water.
2013	The DWSP plan for Westwood Well was submitted to the Division of Drinking Water.
2016	The DWSP plan for Westwood Well was submitted to the Division of Drinking Water.
2016	The DWSP plan for Carnesecca Well was submitted to the Division of Drinking Water.
2017	The DWSP plan for the Mapleton City Spring Collection System was submitted to the Division of Drinking Water.
2019	The DWSP plan for Crowd Canyon Well was submitted to the Division of Drinking Water.
2021	The DWSP plan for Seal Well was submitted to the Division of Drinking Water.

Date	Description of Completed Task
2021	Combined the DWSP Plans for Carnesecca Well, Westwood Well, Seal Well, Crowd Canyon Well, Well #1, and Maple Canyon Springs into one report. DWSP zones for the wells were updated and the DWSP Plan update was submitted to the Division of Drinking Water.
Ongoing	Wherever a septic system is identified during development, the homeowner is notified by the City that they must decommission the tank per health department guidelines. See Appendix E.
Ongoing	The City reviews development plans with every development and all development in Zone 2 is required to have pre-treatment storm inlets and oil-absorbent pillows.
Ongoing	The City regularly supplies educational material on how to keep the City's drinking water clean through monthly newsletters. See Appendix E.
Annually	Mapleton City requests the use of best management practices at residential homes through the annual Water Quality Report (CCR) which is accessible on the City's website. See Appendix E.

## **CHAPTER 10 – CONTINGENCY PLAN**

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There are no changes to the Contingency Plan already submitted for the City of Mapleton. The Contingency Plan consists of an Emergency Response Plan, a Rationing Plan, a Water Decontamination Plan, and Source Development Plan, as required in the State of Utah Administrative Code R309-600-14.

## CHAPTER 11 – PUBLIC NOTIFICATION

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Public water systems must notify the public that their DWSP plans are available for review in accordance with R309-600-15. The City of Mapleton will notify its customers of the general conclusions of the DWSP plan. Generally, this information may be included in an annual Water Quality Report published and distributed by the City. An example of the required information required in the notification is included below:

*The Drinking Water Source Protection Plan for Mapleton is available for your review. It contains information about source protection zones, potential contamination sources, and management strategies to protect our drinking water. Our sources are located in the City and have a medium level of susceptibility to potential contamination sources. General potential contamination sources within the source protection zones include agricultural, residential, and light industrial areas. We have also developed management strategies to further protect our sources from contamination. Please contact us if you have questions or concerns about our source protection plan.*

## CHAPTER 12 – WAIVERS

---

Monitoring waivers have been established by the Division of Drinking Water to potentially save PWSs from significant water quality analysis costs, where risks to contamination of groundwater sources by certain chemical parameter groups are deemed to be low, and for PWSs which meet the established waiver guidelines. The three types of monitoring waivers available to PWSs are:

- Reliably and Consistently
- Use
- Susceptibility

The criteria for establishing a Reliably and Consistently Waiver is not affiliated with Drinking Water Source Protection plans, and therefore will not be addressed in this plan. However, the Use and Susceptibility Waivers are required to be addressed in the DWSP plan for consideration by the Division of Drinking Water.

### USE WAIVER

If the chemicals within the VOC and/or pesticide parameter groups have not been used within the past five years within zones one, two, and three, the source may be eligible for a Use Waiver. The requirements for a Use Waiver, as established by DDW are:

1. List the chemicals which are used, disposed, stored, transported, and manufactured at each potential contamination source within zones 1, 2, and 3 where the use of the chemicals within the VOC and pesticide parameter groups are likely; and
2. Submit a dated statement which is signed by the system's designated person that none of the VOCs and pesticides within these respective parameter groups have been used, disposed, stored, transported, or manufactured within the past five years within zones 1, 2, and 3.

The City's Wells do NOT meet the criteria for a Use Waiver, because VOCs and pesticides have been used and transported through zones 2 and 3 within the past five years.

### SUSCEPTIBILITY WAIVER

A source which does not qualify for a Use Waiver may be eligible for a Susceptibility Waiver. A Susceptibility Waiver is based upon the evidence that a groundwater source is not susceptible to contamination from chemicals which exist in zones 1, 2, and 3. The requirements for a Susceptibility Waiver, as established by DDW are:

1. Submit the monitoring results of at least one applicable sample from the VOC and/or pesticide parameter group(s) that has been taken within the past five years. A non-detectable analysis for each chemical within the parameter group(s) is required;
2. Submit a dated statement which is signed by the system's designated person verifying that the PWS is confident that a susceptibility waiver for the VOC and/or pesticide parameter groups will not threaten public health; and
3. Verify that the source is developed in a protected aquifer, as defined in R309-600-6(1)(x), and have a public education program which addresses proper use and disposal practices for pesticides and VOCs in the management sections of the DWSP plan.



The City of Mapleton wells do not meet the requirements for a Susceptibility Waiver because the wells do not qualify for protected aquifer classification.

## REFERENCES

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- Constenius, Kurt N. and Clark, Donald L. and King, Jon K., and Ehler, J. Buck, 2011. *Interim Geologic Map of the Provo 30' X 60' Quadrangle, Utah, Wasatch, and Salt Lake Counties, Utah*. (Downloaded from Utah Geological Survey website). State of Utah.
- Environmental Protection Agency (EPA). 1991. *Managing Ground Water Contamination Sources in Wellhead Protection Areas: A Priority Setting Approach*. EPA 570/9-91-023. U.S. Environmental Protection Agency, Office of Water. Washington D.C.
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- Division of Drinking Water (DDW). 1993. *Drinking Water Source Protection Program*. State of Utah, Department of Environmental Quality. Salt Lake City, Utah.
- Utah Geologic Survey (UGS), 2021. *Quaternary Fault Database*. (Downloaded from Utah AGRC website). State of Utah, SGID.
- Utah Division of Drinking Water (DDW). 2013. *Ground Water Source Protection User's Guide*. State of Utah Department of Environmental Quality. Salt Lake City, Utah.
- Utah Division of Administrative Rules. 2014. *Utah Administrative Code, R309*. The Department of Administrative Services. Salt Lake City, Utah.

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# **APPENDIX A**

## **Delineation Calculations**

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Client: Mapleton City  
Project: Mapleton City 2021 DWSP Plan Update  
Project #: 437.07.100  
Completed by: JCB  
Date: 12/10/2021

Problem:

Calculate hydraulic gradient, flow direction, and aquifer thickness to delineate the DWSP zones for Carnesecca Well, Westwood Well, Seal Well, Crowd Canyon Well, and Well #1.

Data:

Geologic Maps See Sheets 42-43  
Figure A-1 Flow Direction Calculation See Sheet 44  
Well Logs See Sheets 45-65

Calculations:

**Calculate Hydraulic Gradient**

**Carnesecca Well Hyd. Gradient = 0.0065 ft/ft**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995) and ground surface elevations.  
See previous DWSP Plan.*

**Westwood Well Hyd. Gradient = 0.0085 ft/ft**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995) and ground surface elevations.  
See previous DWSP Plan.*

**Seal Well Hyd. Gradient = 0.0040 ft/ft**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995) and ground surface elevations.  
See previous DWSP Plan.*

**Crowd Canyon Well Hyd. Gradient = 0.0100 ft/ft**

*See previous DWSP Plan.*

**Well #1 Hyd. Gradient = 0.0055 ft/ft**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995) and ground surface elevations.  
See previous DWSP Plan.*

**Calculate Flow Direction**

**Carnesecca Well Flow Direction = E,SE to W,NW**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).  
See Figure A-1.*

**Westwood Well Flow Direction = N 60 W**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).  
See Figure A-1.*

**Seal Well Flow Direction = E,SE to W,NW**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).  
See Figure A-1.*

**Crowd Canyon Flow Direction = N 60 W**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).  
See Figure A-1.*

**Well #1 Flow Direction = SE to NW**

*\*Based on groundwater contours found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).  
See Figure A-1.*

## Calculate Aquifer Parameters (K, n, B, T)

---

**Carnesecca Well Transmissivity, T (ft<sup>2</sup>/day) = 65,000**

*\*Based on nearby wells found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995). The transmissivity values of the two closest wells are 42,000 and 71,000 ft<sup>2</sup>/day.*

**Westwood Well Transmissivity, T (ft<sup>2</sup>/day) = 18,000**

*\*Based on Constant-Rate Pump Test results and nearby wells found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).*

**Seal Well Transmissivity, T (ft<sup>2</sup>/day) = 71,000**

*\*Based on nearby wells found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).*

**Crowd Canyon Transmissivity, T (ft<sup>2</sup>/day) = 36,120**

*\*Based on Constant-Rate Pump Test results (Cooper-Jacob Confined Solution).*

**Well #1 Transmissivity, T (ft<sup>2</sup>/day) = 65,000**

*\*Based on nearby wells found in Technical Publication No. III, Plate 1 by Brooks & Stolp (1995).*

## Effective Porosity (n)

---

**Carnesecca Well Porosity (n) = 0.28**

*\*Estimates of porosity were obtained from Ground-Water Hydrology and Hydraulics (McWhorter and Sunada, 1977). Well logs for these wells indicate that the contributing aquifers consist mostly of gravels with some sands. McWhorter and Sunada (1977) report an average effective porosity of 32% for medium sands and 24% for medium gravels. Therefore, an average effective porosity was assumed to be 28% for Carnesecca Well. See previous DWSP Plan.*

**Westwood Well Porosity (n) = 0.32**

*\*Estimates of porosity were obtained from Ground-Water Hydrology and Hydraulics (McWhorter and Sunada, 1977). Well logs for these wells indicate that the contributing aquifers consist mostly of fine sands with clay and gravel. McWhorter and Sunada (1977) report an average effective porosity of 33% for fine sands and 28% for fine gravels. Therefore, an average effective porosity was assumed to be 32% for Westwood Well. See previous DWSP Plan.*

**Seal Well Porosity (n) = 0.25**

*\*Estimates of porosity were obtained from Ground-Water Hydrology and Hydraulics (McWhorter and Sunada, 1977). Well logs for these wells indicate that the contributing aquifers consist mostly of sand with gravel. McWhorter and Sunada (1977) report an average effective porosity of 32% for medium sands and 24% for medium gravels. Therefore, an estimated effective porosity was assumed to be 25% for Seal Well. See previous DWSP Plan.*

**Crowd Canyon Well Porosity (n) = 0.18**

*\*Estimates of porosity were obtained from Ground-Water Hydrology and Hydraulics (McWhorter and Sunada, 1977). Well logs for these wells indicate that the contributing aquifers consist mostly of fractured limestone and quartzite. McWhorter and Sunada (1977) report a range of effective porosity for limestone from 0.0 to 0.36. Due to the highly fractured state of the aquifer, effective porosity is estimated to be between 0.14 and 0.21. Therefore, an estimated effective porosity was assumed to be 0.18.*

**Well #1 Porosity (n) = 0.30**

*\*Estimates of porosity were obtained from Ground-Water Hydrology and Hydraulics (McWhorter and Sunada, 1977). Well logs for these wells indicate that the contributing aquifers consist mostly of gravels with some sands. McWhorter and Sunada (1977) report an average effective porosity of 32% for medium sands and 24% for medium gravels. Therefore, an estimated effective porosity was assumed to be 30% for Well #1. See previous DWSP Plan.*

### Calculating Aquifer Thickness (B)

Carnesecca Well Screens/Perforations			Westwood Well Screens/Perforations			Seal Well Screens/Perforations		
From	To	Total (ft)	From	To	Total (ft)	From	To	Total (ft)
238	243	5	485	535	50	215	385	170
246	533	287						
<b>Total</b>		292	<b>Total</b>		50	<b>Total</b>		170
<b>Used</b>		295	<b>Used</b>		60	<b>Used</b>		175

Crowd Canyon Well Screens/Perforations			Well #1 Screens/Perforations		
From	To	Total (ft)	From	To	Total (ft)
201	301	100	383	405	22
292	532	240	409	494	85
<b>Total</b>		340	<b>Total</b>		107
<b>Used</b>		340	<b>Used</b>		133

\*See Appendix A for well logs.

**Carnesecca Well Hydraulic Cond. (K) (ft/day) = 220**

\*Hydraulic conductivity equals transmissivity divided by thickness.

**Westwood Well Hydraulic Cond. (K) (ft/day) = 300**

\*Hydraulic conductivity equals transmissivity divided by thickness.

**Seal Well Hydraulic Cond. (K) (ft/day) = 406**

\*Hydraulic conductivity equals transmissivity divided by thickness.

**Crowd Canyon Well Hydraulic Cond. (K) (ft/day) = 106**

\*Hydraulic conductivity equals transmissivity divided by thickness.

**Well #1 Hydraulic Cond. (K) (ft/day) = 489**

\*Hydraulic conductivity equals transmissivity divided by thickness.

### Well Pumping Rates

Well	Maximum Pumping Rate (gpm)
Carnesecca	1100
Westwood	2000
Seal	1100
Crowd Canyon	1700
#1	950

### WhAEM Input Information

#### Carnesecca Well

Well inputs	Mapleton City Well X-coordinate (ft) =	1622210.80
	Mapleton City Well Y-coordinate (ft) =	7221989.81
	Pumping rate (gpm) =	1100.00
	Pumping rate (ft <sup>3</sup> /day) =	211750.00
	Radius (ft) =	0.42
Uniform flow inputs	Reference Head (ft) =	4611.00
	Regional Hydraulic Gradient (ft/ft) =	0.0065
	Orientation (degrees) =	160.00
Aquifer inputs	Base Elevation (ft) =	4296.00
	Thickness (ft) =	295.00
	Hydraulic Conductivity (ft/day) =	220.34
	Porosity =	0.28

**Westwood Well**

Well inputs	Mapleton City Well X-coordinate (ft) =	1614405.15
	Mapleton City Well Y-coordinate (ft) =	7207219.87
	Pumping rate (gpm) =	2000.00
	Pumping rate (ft3/day) =	385000.00
	Radius (ft) =	0.67

Uniform flow inputs	Reference Head (ft) =	4580.00
	Regional Hydraulic Gradient (ft/ft) =	0.0085
	Orientation (degrees) =	150.00

Aquifer inputs	Base Elevation (ft) =	4219.00
	Thickness (ft) =	60.00
	Hydraulic Conductivity (ft/day) =	300.00
	Porosity =	0.32

**Seal Well**

Well inputs	Mapleton City Well X-coordinate (ft) =	1617016.11
	Mapleton City Well Y-coordinate (ft) =	7221943.85
	Pumping rate (gpm) =	1100.00
	Pumping rate (ft3/day) =	211750.00
	Radius (ft) =	0.67

Uniform flow inputs	Reference Head (ft) =	4584.00
	Regional Hydraulic Gradient (ft/ft) =	0.0040
	Orientation (degrees) =	160.00

Aquifer inputs	Base Elevation (ft) =	4354.00
	Thickness (ft) =	175.00
	Hydraulic Conductivity (ft/day) =	405.71
	Porosity =	0.25

**Crowd Canyon Well**

Well inputs	Mapleton City Well X-coordinate (ft) =	1619991.78
	Mapleton City Well Y-coordinate (ft) =	7203096.46
	Pumping rate (gpm) =	1700.00
	Pumping rate (ft3/day) =	327250.00
	Radius (ft) =	0.42

Uniform flow inputs	Reference Head (ft) =	4978.00
	Regional Hydraulic Gradient (ft/ft) =	0.0100
	Orientation (degrees) =	150.00

Aquifer inputs	Base Elevation (ft) =	4458.00
	Thickness (ft) =	340.00
	Hydraulic Conductivity (ft/day) =	106.24
	Porosity =	0.18

**Well #1**

Well inputs	Mapleton City Well X-coordinate (ft) =	1618438.45
	Mapleton City Well Y-coordinate (ft) =	7216301.60
	Pumping rate (gpm) =	950.00
	Pumping rate (ft3/day) =	182875.00
	Radius (ft) =	0.50

Uniform flow inputs	Reference Head (ft) =	4589.00
	Regional Hydraulic Gradient (ft/ft) =	0.0055
	Orientation (degrees) =	135.00

Aquifer inputs	Base Elevation (ft) =	4229.00
	Thickness (ft) =	133.00
	Hydraulic Conductivity (ft/day) =	488.72
	Porosity =	0.30

Average Pumping Rates (from the DDW)

**Carnesecca Well**

2020	2019	2018
424.79	636.23	816.09 acft
138418246.3	207316182	265923743 gal
263.4	394.4	505.9 gpm
		388 gpm (Average)
		74673 cf/day (Average)

**Westwood Well**

2020	2019	2018
758.36	27.57	37.26 acft
247112364.4	8983712.07	12141208.3 gal
470.2	17.1	23.1 gpm
		170 gpm (Average)
		32747 cf/day (Average)

**Seal Well**

2020	2019	2018
593.46	317.44	393.69 acft
193379534.5	103438141	128284280 gal
367.9	196.8	244.1 gpm
		270 gpm (Average)
		51898 cf/day (Average)

**Crowd Canyon Well**

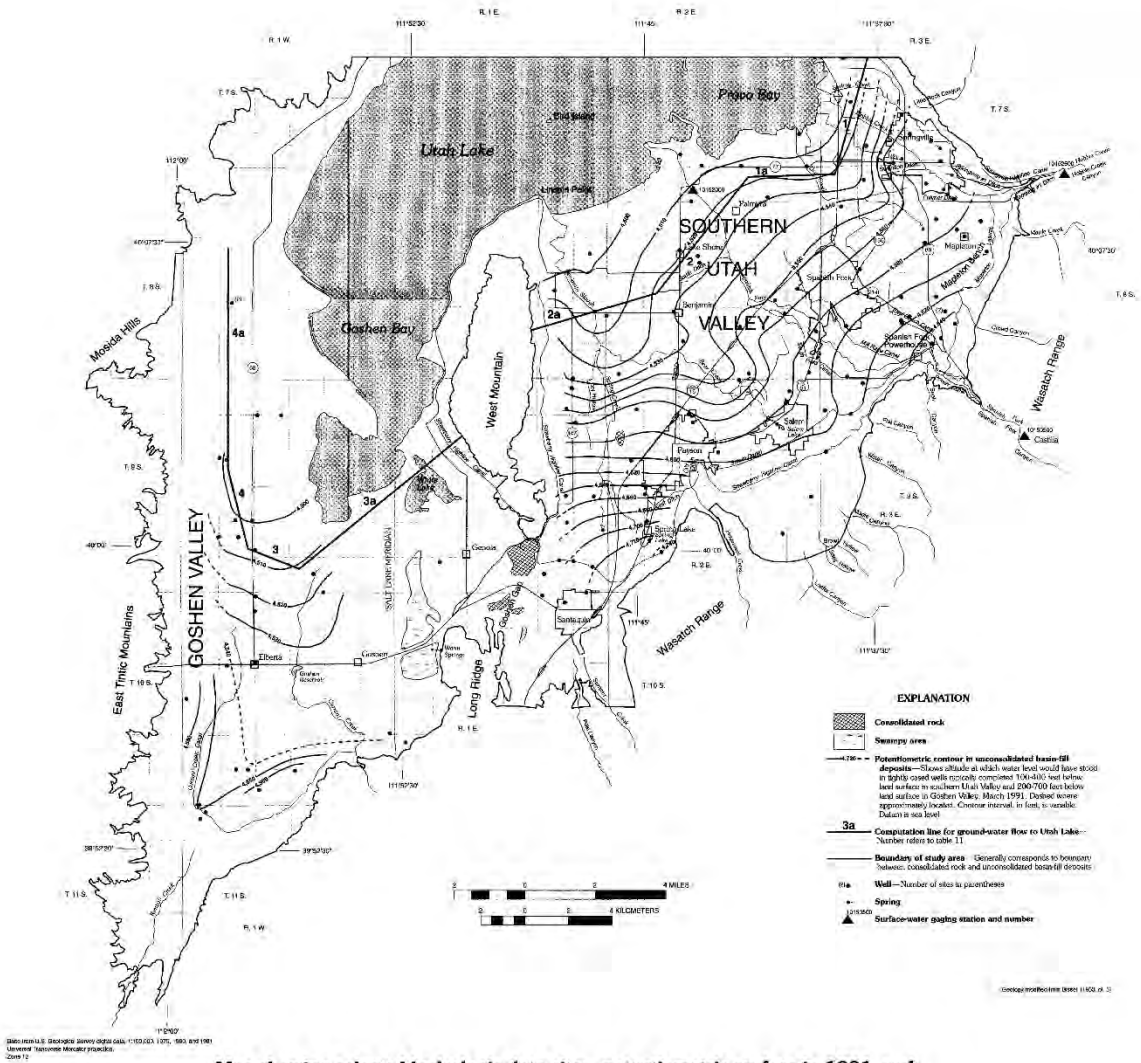
2020	2019	2018
405.81	200.2	532.91 acft
132233594.3	65235370.2	173649256 gal
251.6	124.1	330.4 gpm
		235 gpm (Average)
		45307 cf/day (Average)

**Well #1 (No information on DDW)**

Using max pumping rate for model

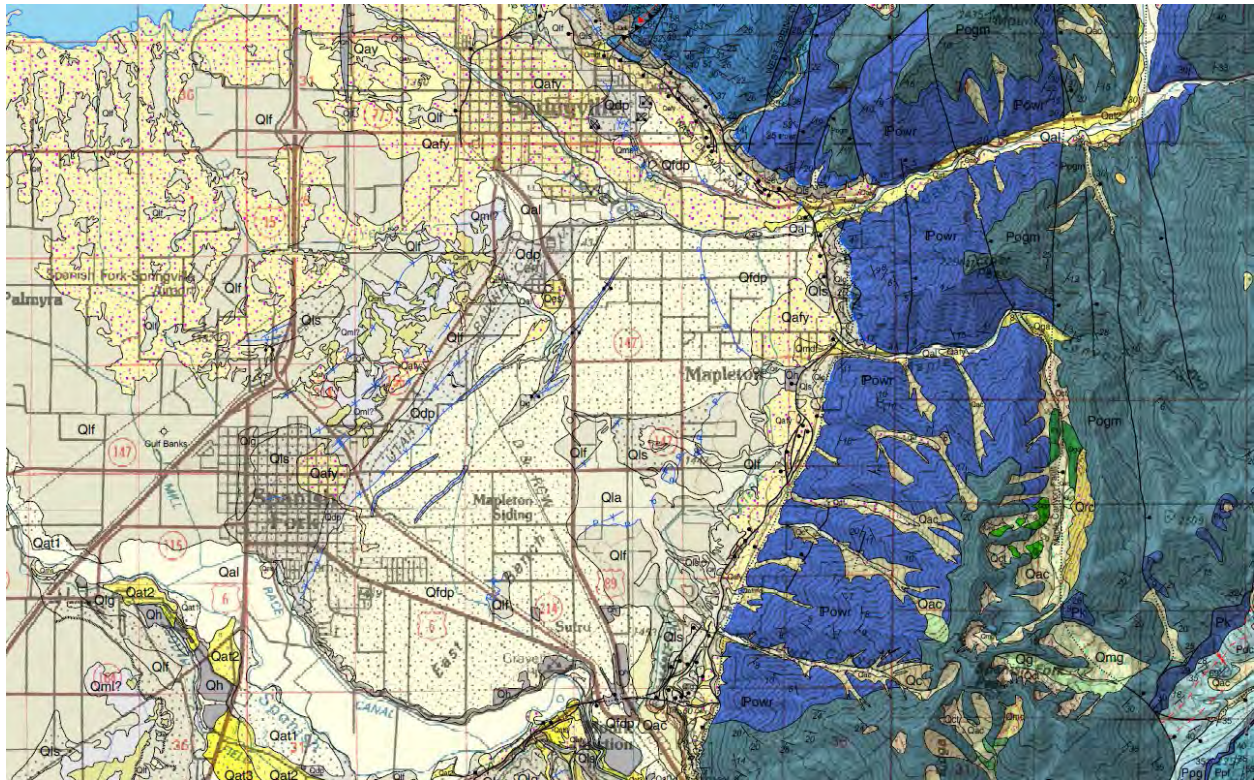
950 gpm  
182875 cf/day





Map showing selected hydrologic-data sites, potentiometric surface in 1991, and computation lines for seepage to Utah Lake, southern Utah and Goshen Valleys, Utah

By  
 L.E. Brooks and B.J. Stolp  
 1995



# INTERIM GEOLOGIC MAP OF THE PROVO 30' X 60' QUADRANGLE, UTAH, WASATCH, AND SALT LAKE COUNTIES, UTAH

by

Kurt N. Constenius<sup>1</sup>, Donald L. Clark<sup>2</sup>, Jon K. King<sup>3</sup>, and J. Buck Ehler<sup>3</sup>

<sup>1</sup> Snowlip Corporation, 8790 N. Shadow Mountain Dr., Tucson, AZ 85704

<sup>2</sup> Utah Geological Survey, P.O. Box 146100, Salt Lake City, UT 84114-6100



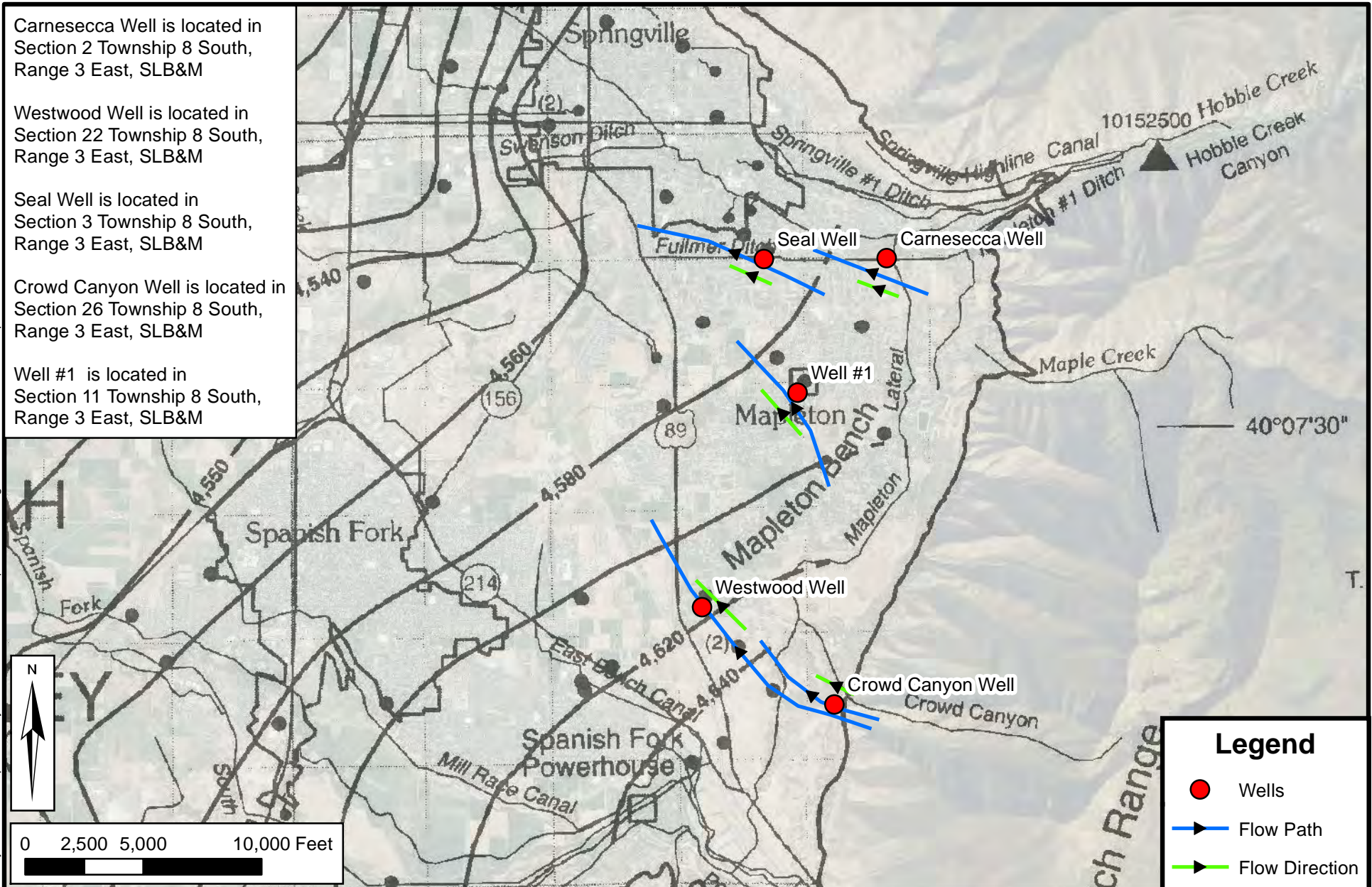
Carnesecca Well is located in Section 2 Township 8 South, Range 3 East, SLB&M

Westwood Well is located in Section 22 Township 8 South, Range 3 East, SLB&M

Seal Well is located in Section 3 Township 8 South, Range 3 East, SLB&M

Crowd Canyon Well is located in Section 26 Township 8 South, Range 3 East, SLB&M

Well #1 is located in Section 11 Township 8 South, Range 3 East, SLB&M



**Mapleton City  
2021 DWSP Plan Update**

**Flow Direction Calculation**

**FIGURE  
A-1**

Copied AB 9-8-55  
Exam. & Recorded MV 1-25-55  
Exam. for filing MV 1-25-55  
Final Copy checked MV 2-4-55  
Indexed MV 2-4-55  
Well No. (D-8-3) 2 dcd-1

(51-1316)

Carnesecca Well

PAGE (Leave Blank)

Report No. 11313  
Filed Jan. 18, 1955  
Rec. By MV  
Ret'd

# Report of Well and Tunnel Driller STATE OF UTAH

(Separate report shall be filed for each well or tunnel)

## GENERAL INFORMATION:

Report of well or tunnel driller is hereby made and filed with the State Engineer, in accordance with the laws of Utah. (This report shall be filed with the State Engineer within 30 days after the completion or abandonment of well or tunnel. Failure to file such reports constitutes a misdemeanor.)

- Name and address of ~~person~~ company of ~~corporation~~ ~~borings~~ or drilling well or tunnel.  
(Strike words not needed)  
J. S. Lee & Sons 4091 South State Street, Salt Lake City, Utah.
- Name and address of owner of well ~~or tunnel~~.  
(Strike words not needed)  
Egidio C. Carnesecca  
RFD, Springville, Utah
- Source of supply is in Utah \_\_\_\_\_ County;  
(Leave blank) drainage area: \_\_\_\_\_  
(Leave blank) artesian basin
- The number of approved application to appropriate water is A26193
- Location of well or ~~mouth of tunnel~~ is situated at a point  
N. 450 ft. and E. 1133 ft. from S1 Cor. Sec. 2, T8S, R3E, S1B4M.  
(Describe by rectangular co-ordinates or by one corner and distance with reference to U. S. Government Survey  
Corner - Copy description from well owner's approved application)
- Date on which work on well ~~or tunnel~~ was begun 8/31/54  
(Strike words not needed)
- Date on which work on well ~~or tunnel~~ was completed or ~~abandoned~~ December 29, 1954  
(Strike words not needed)
- Maximum quantity of water measured as ~~flowing~~ pumped or 1125 G. P. M. on completion of  
(Strike words not needed)  
well or ~~tunnel~~ ~~or shaft~~; or in gals. per minute \_\_\_\_\_ Date \_\_\_\_\_

## DETAIL OF COLLECTING WORKS:

- WELL: It is drilled, ~~or bored~~ or pump well. Temperature of water \_\_\_\_\_ °F.  
(Strike words not needed)
  - Total depth of well is 533 ft. below ground surface.
  - If flowing well, give water pressure (hydrostatic head) above ground surface \_\_\_\_\_ ft.
  - If pump well, give depth from ground surface to water surface before pumping 218 \_\_\_\_\_  
; during pumping 252 \_\_\_\_\_
  - Size and kind of casing 16" to 377' and 10" from 372 to 533  
(If only partially cased, give details)
  - Depth to water-bearing stratum 238' \_\_\_\_\_  
(If more than one stratum, give depth to each)
  - If casing is perforated, give depth from ground surface to perforations 238' to 243'  
246'-533'
  - Log of well 0'-35' clay and boulders 35'-41' clay, 41'-58' sand, 58'-60' boulders,  
60'-120' sandy clay, 120'-130' Gravel, 130'-160' sand, 160'-238' Conglomerate  
238'-243' water gravel, 244'-246' clay, 246'-293' boulders, 293'-300'  
water gravel, 300'-305' sand, 305'-345' boulders and water gravel, 345'-435'  
boulders, 435'-440' water gravel, 440'-497' boulders and clay, 497'-507' water gravel,  
507'-520' boulders 520'-529' water gravel, 529'-533' boulders.
  - Well was equipped with cap, valve, or \_\_\_\_\_ to control flow.  
(Strike words not needed)

(Over)

10. TUNNEL: It is timbered, tiled, piped, open, bulkheaded, covered or.....  
(Strike words not needed)

(a) Dimensions.....; total length.....; temperature of water.....°F.

(b) Position of water bearing stratum or strata with reference to mouth of tunnel.....

(c) Log of tunnel.....

11. GENERAL REMARKS: (Note any general or detailed information not covered above).

STATE OF UTAH, }  
COUNTY OF Salt Lake } ss.

I, J. G. Lee, being first duly sworn, do hereby certify that I am the driller of the aforesaid well or tunnel who furnished the foregoing statement of facts; that I have read said statement and each and all of the items therein contained are true to the best of my knowledge and belief.

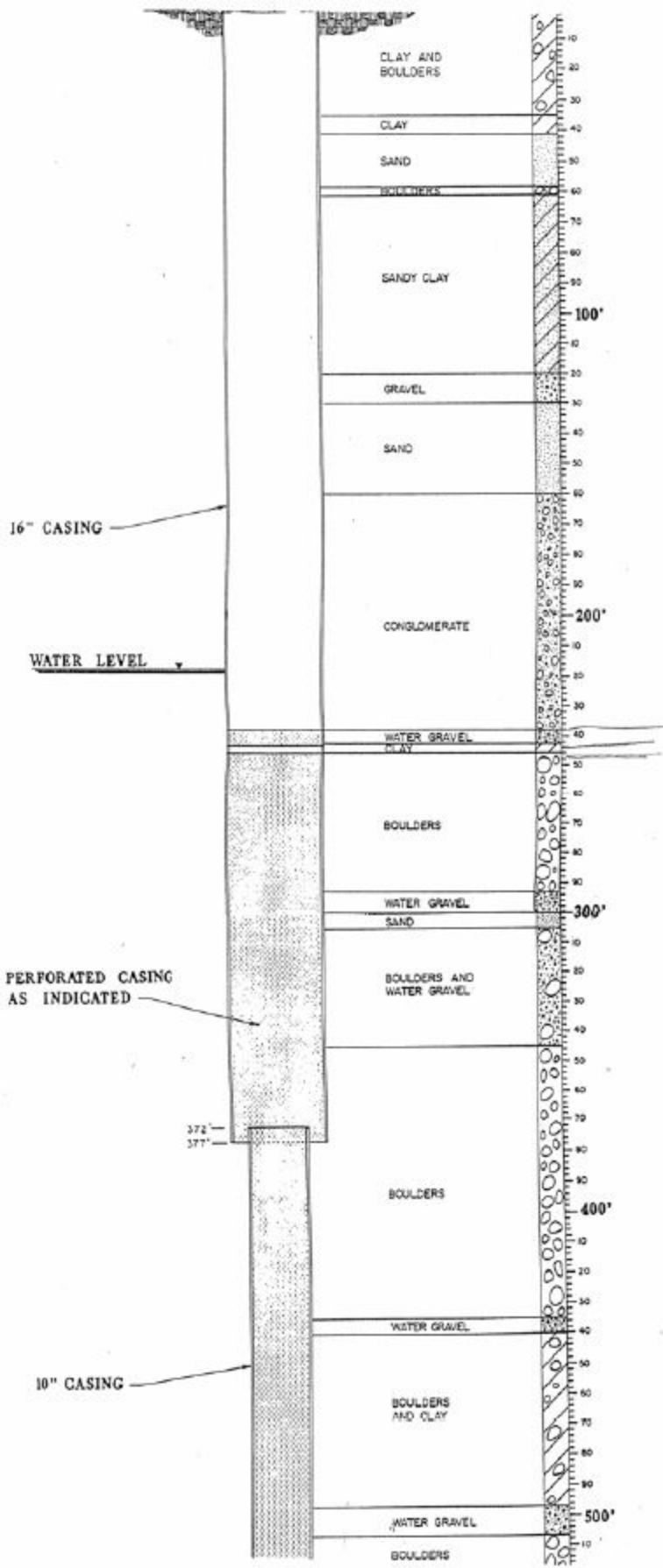
/s/ J. S. Lee & Sons by J. G. Lee  
Driller

Subscribed and sworn to before me this 18 day of January, 19 55

(SEAL) SEAL /s/ L. C. Hanson  
Notary Public

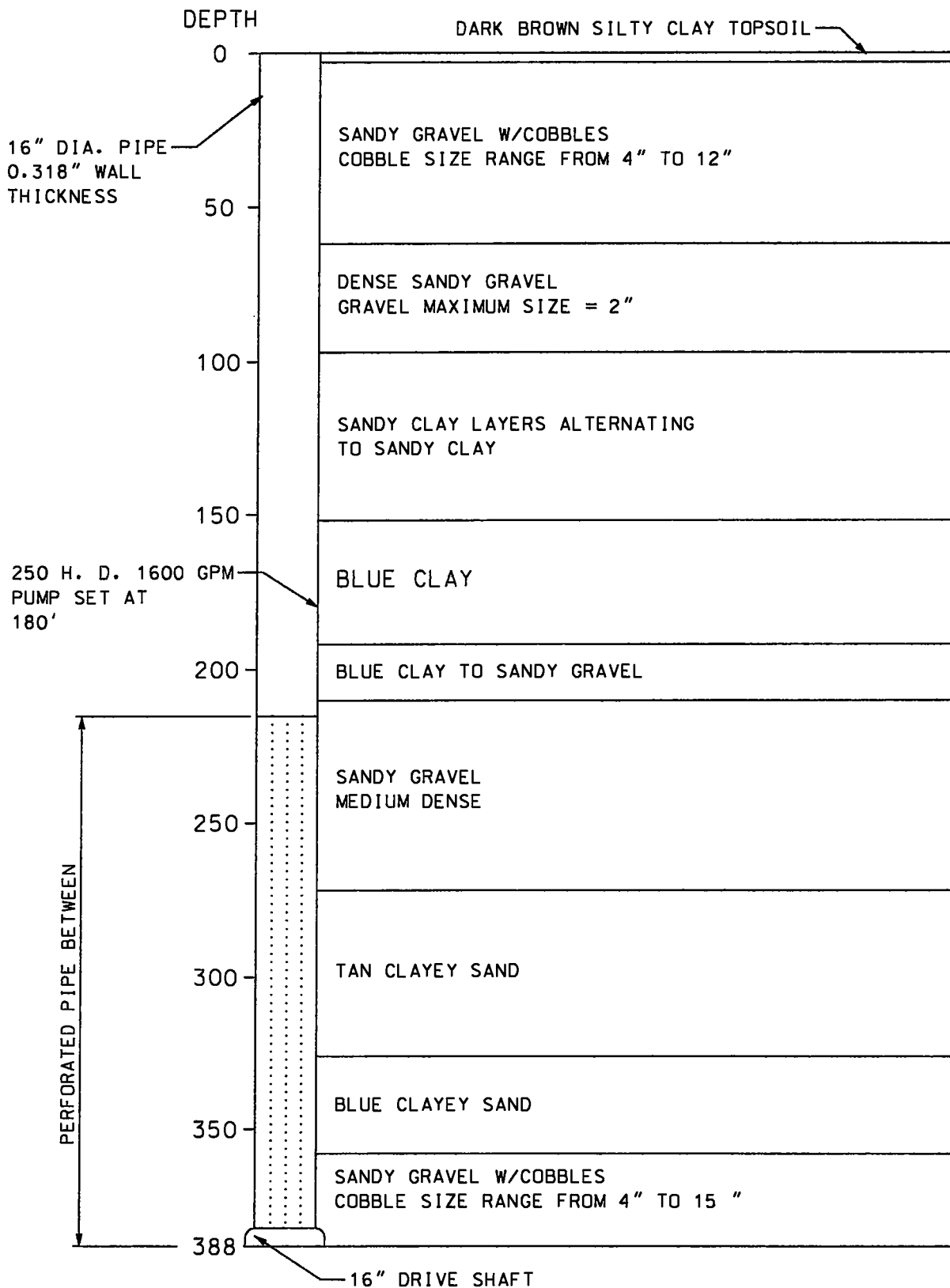
My Commission Expires:

July 18, 1956













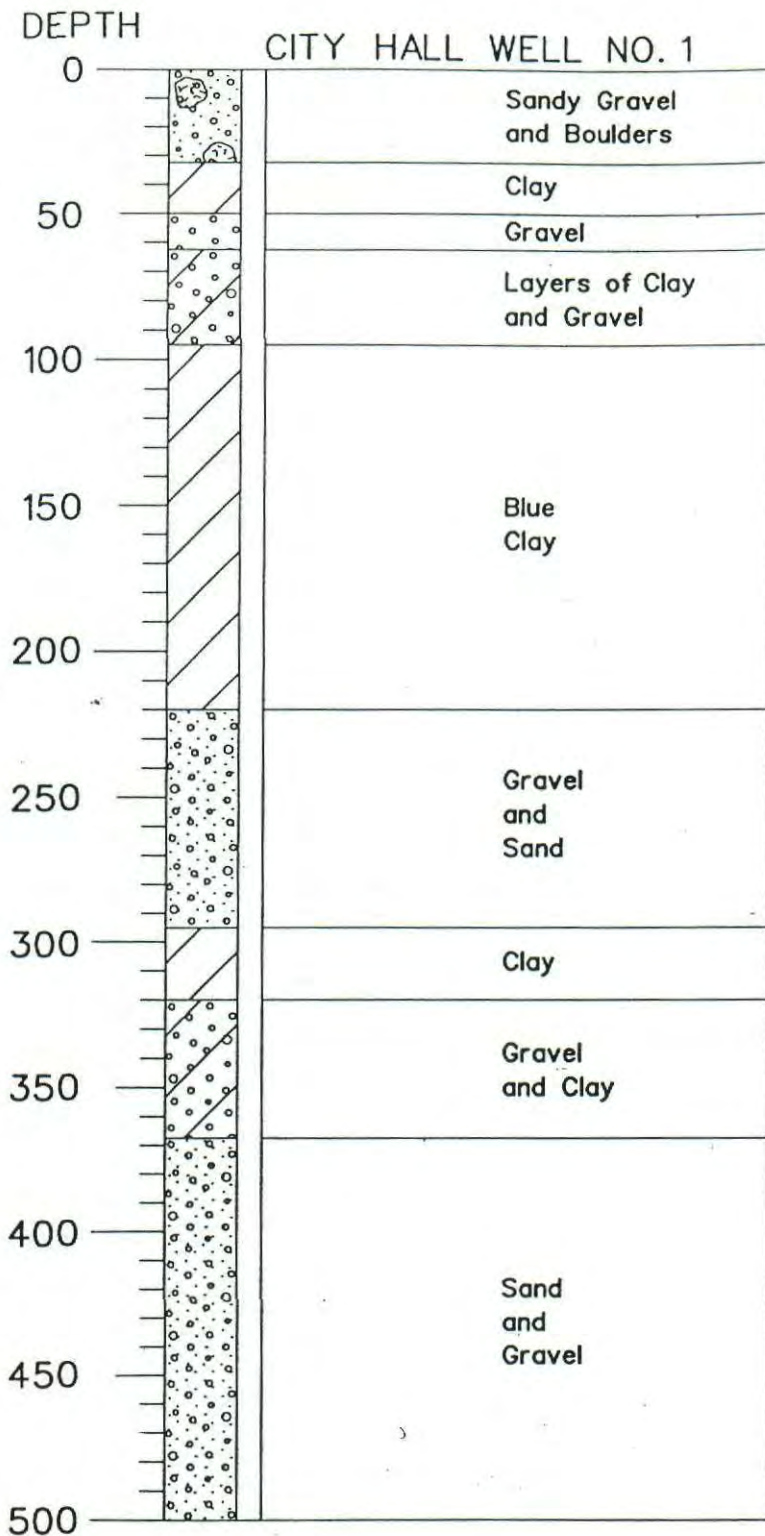


FIGURE 6



Form 113-5M-12-60

Examined February 16, 1962  
Recorded: B. C. 2/12/62  
Inspection Sheet 42 FEB 7 1962  
County UTAH

REPORT OF WELL DRILLER  
STATE OF UTAH

Application No. 32737  
Claim No. \_\_\_\_\_  
Coordinate No. (23) 22664

GENERAL STATEMENT: Report of well driller is hereby made and filed with the State Engineer, in accordance with the laws of Utah. (This report shall be filed with the State Engineer within 30 days after the completion or abandonment of the well. Failure to file such reports constitutes a misdemeanor.)

(1) WELL OWNER:  
Name JOHN H WESTWOOD  
Address MAPLETON UTAH  
(2) LOCATION OF WELL:  
County UTAH Ground Water Basin \_\_\_\_\_  
(leave blank)  
Block 975 East 1305 feet from W 1/4 Corner  
South \_\_\_\_\_  
of Section 22 T 8 S R. 3 E SLEB (strike out words not needed)

(3) NATURE OF WORK (check):  
New Well   
Replacement Well  Deepening  Repair  Abandon   
If abandonment, describe material and procedure: \_\_\_\_\_

(4) NATURE OF USE (check):  
Domestic  Industrial  Municipal  Stockwater   
Irrigation  Mining  Other  Test Well

(5) TYPE OF CONSTRUCTION (check):  
Rotary  Dug  Jetted   
Cable  Driven  Bored

(6) CASING SCHEDULE: Threaded  Welded   
1 1/2" Diam. from 0 feet to 541 feet Gage 312  
" Diam. from \_\_\_\_\_ feet to \_\_\_\_\_ feet Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ feet to \_\_\_\_\_ feet Gage \_\_\_\_\_  
New  Rejected  Used

(7) PERFORATIONS: Perforated? Yes  No   
Type of perforator used HILLS KNIFE  
Size of perforations 3/8 inches by 2 1/2 inches  
PK1000 perforations from 485 feet to 535 feet  
\_\_\_\_\_ perforations from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
\_\_\_\_\_ perforations from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
\_\_\_\_\_ perforations from \_\_\_\_\_ feet to \_\_\_\_\_ feet

(8) SCREENS: Well screen installed? Yes  No   
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_

(9) CONSTRUCTION:  
Was well gravel packed? Yes  No  Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
Was a surface seal provided? Yes  No   
To what depth? \_\_\_\_\_ feet  
Material used in seal: \_\_\_\_\_  
Did any strata contain unusable water? Yes  No   
Type of water: \_\_\_\_\_ Depth of strata \_\_\_\_\_  
Method of sealing strata off: \_\_\_\_\_

Was surface casing used? Yes  No   
Was it cemented in place? Yes  No

(10) WATER LEVELS:  
Static level 180 feet below land surface Date JAN 8 1962  
Artesian pressure \_\_\_\_\_ feet above land surface Date \_\_\_\_\_

(11) FLOWING WELL:  
Controlled by (check): Valve   
 Plug  No Control   
Does well leak around casing? Yes   
No

(12) WELL TESTS: Drawdown is the distance in feet the water level is lowered below static level.  
Was a pump test made? Yes  No  If so, by whom? \_\_\_\_\_  
Yield: 1200 gal./min. with 17 feet drawdown after 2 hours  
" 1700 " " 29 " " 2 "  
" 2300 " " 54 " " 2 "  
Ballor test \_\_\_\_\_ gal./min. with \_\_\_\_\_ feet drawdown after \_\_\_\_\_ hours  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water \_\_\_\_\_ Was a chemical analysis made? No  Yes

(13) WELL LOG: Diameter of well 16 inches  
Depth drilled 541 feet. Depth of completed well 541 feet.  
NOTE: Place an "X" in the space or combination of spaces needed to designate the material or combination of materials encountered in each depth interval. Under REMARKS make any desirable notes as to occurrence of water and the color, size, nature, etc., of material encountered in each depth interval. Use additional sheet if needed.

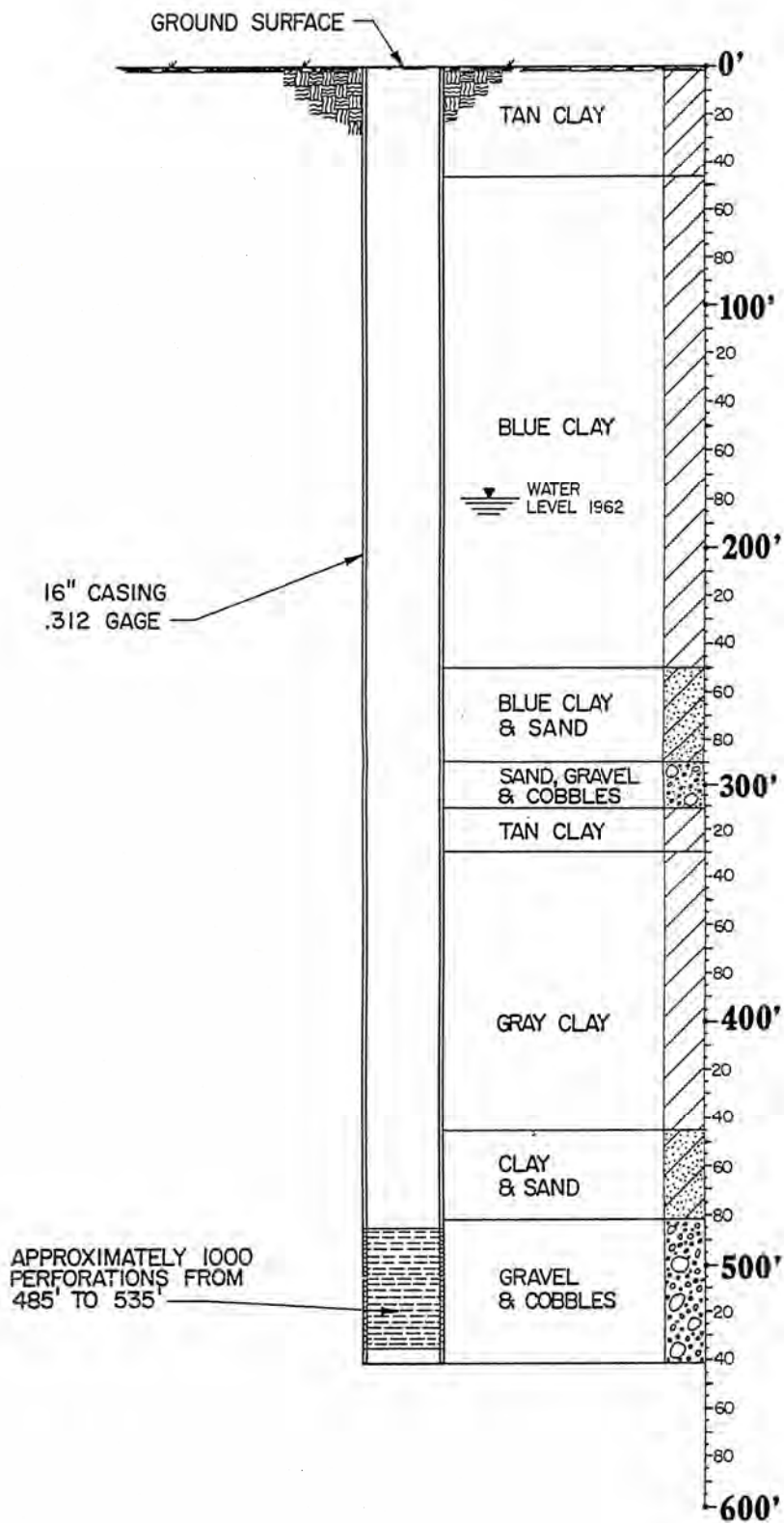
DEPTH		MATERIAL										REMARKS
From	To	Clay	Silt	Sand	Gravel	Cobbles	Boulders	Hardpan	Conglomerate	Bedrock	Other	
0	47	X										TAN
47	250	X										BLUE
250	290	X			X							BLUE
290	311	X			X	X						
311	330	X										TAN
330	445	X										GREY
445	482	X			X							
482	541	X			X							

Work started NOV 15, 1961 Completed JAN 8, 1962

(14) PUMP:  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ H. P. \_\_\_\_\_  
Depth to pump or bowles \_\_\_\_\_ feet

Well Driller's Statement:  
This well was drilled under my supervision, and this report is true to the best of my knowledge and belief.  
Name ELDON CAMER (Type or print)  
(Person, firm, or corporation)  
Address LEHI UTAH  
(Signed) Eldon Camer (Well Driller)  
License No. 5 Date 3/5, 1962





# WELL DRILLER'S REPORT

State of Utah  
Division of Water Rights

For additional space, use "Additional Well Data Form" and attach

Crowd Canyon  
Well

**Well Identification**

Change Application: a22755 (51-7246)

WIN: 123515

**Owner** Note any changes

Mesquite Presidio L.L.C.  
4452 Haven Lane  
Cedar Hills, Utah 84062

## RECEIVED

APR 16 2007

Contact Person/Engineer: John Files

**Well Location** Note any changes

S 2530 E 1750 from the NW corner of section 26, Township 8S, Range 3E, SL B&M

WATER RIGHTS  
SALT LAKE

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #)

**Drillers Activity**

Start Date: 7-11-06 Completion Date: 9-15-06

Check all that apply:  New  Repair  Deepen  Clean  Replace  Public Nature of Use: \_\_\_\_\_  
If a replacement well, provide location of new well. \_\_\_\_\_ feet north/south and \_\_\_\_\_ feet east/west of the existing well.

DEPTH (feet) FROM	TO	BOREHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
50	300	22"	Reverse Circulation	Bentonite, polymer
300	560	14.75"	R.C.	Bentonite, polymer NSF Approved

**Well Log**

DEPTH (feet) FROM	TO	WATER	P	INCONSOLIDATED						CONSOLIDATED		DESCRIPTION AND REMARKS (e.g., relative %, grain size, sorting, angularity, bedding, grain composition density, plasticity, shape, cementation, consistency, water bearing, odor, fracturing, mineralogy, texture, degree of weathering, hardness, water quality, etc.)							
				CS	SL	LA	YT	S	AND	G	RA		BL	VE	RO	CK	CO	LO	OR
0	40																		Brown
40	165																		Blk/BRN
165	300																		Black
300	545																		Black
545	560																		Black

**Static Water Level**

Date 9-15-06 Water Level 22' feet Flowing?  Yes  No  
 Method of Water Level Measurement Sounder If Flowing, Capped Pressure \_\_\_\_\_ PSI  
 Point to Which Water Level Measurement was Referenced G.L. Elevation \_\_\_\_\_  
 Height of Water Level reference point above ground surface 2' feet Temperature \_\_\_\_\_ degrees  C  F

**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		<input checked="" type="checkbox"/> SCREEN	<input type="checkbox"/> PERFORATIONS	<input type="checkbox"/> OPEN BOTTOM
FROM	TO	CASING TYPE AND MATERIAL GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SCREEN SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM. OR PERF LENGTH (in)	SCREEN TYPE OR NUMBER PERF (per sound/interval)
42	300	16" x .375 x LCS	.375	16"	280	300	.080	16"	w.w.
300	560	LCS	.375	10"	300	560	.080	10"	64

Well Head Configuration: Welded cap Access Port Provided?  Yes  No  
 Casing Joint Type: Collars Perforator Used: N/A  
 Was a Surface Seal Installed?  Yes  No Depth of Surface Seal: 100' feet Drive Shoe?  Yes  No  
 Surface Seal Material Placement Method: Pumped through tremie  
 Was a temporary surface casing used?  Yes  No If yes, depth of casing: \_\_\_\_\_ feet diameter: \_\_\_\_\_ inches

DEPTH (feet)		SURFACE SEAL / INTERVAL SEAL / FILTER PACK / PACKER INFORMATION		
FROM	TO	SEAL MATERIAL, FILTER PACK and PACKER TYPE and DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
0	100	Neat cement		15#/gal 21 sack mix
100		Bentonite seal		
110	560	3/8" washed pea gravel		

**RECEIVED**  
 APR 16 2007  
 WATER RIGHTS  
 SALT LAKE

**Well Development and Well-Yield Test Information**

DATE	METHOD	YIELD	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		
	Pump test	4000	/		22'	24

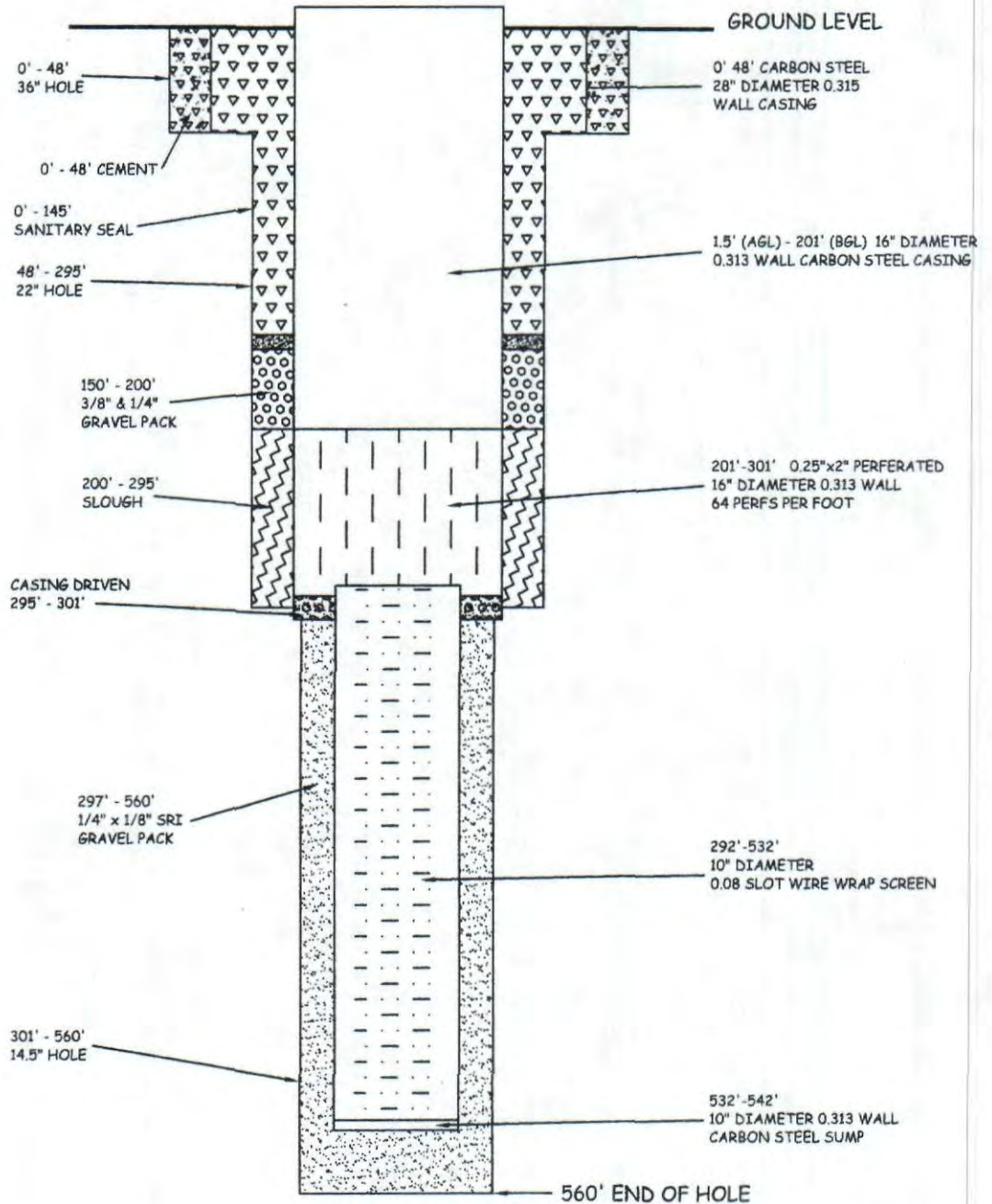
**Pump (Permanent)**  
 Pump Description: \_\_\_\_\_ Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet  
 Approximate Maximum Pumping Rate: \_\_\_\_\_ Well Disinfected upon Completion?  Yes  No

**Comments** Description of construction activity, additional materials used, problems encountered, extraordinary Circumstances, abandonment procedures. Use additional well data form for more space.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Well Driller Statement** This well was drilled and constructed under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.  
 Name WDC EXPLORATION & WELLS License No. 779  
 Signature [Signature] Date 9-29-06



# CROWD CANYON WELL AS BUILT



**BOREHOLE LOG**

Client: Presidio-Capital



Location Description: Maple Canyon Village

Well ID: Crowl Canyon DC1

Grid: Northing: Easting:

Elevations: Natural Ground: Top of Steel Casing: Top of PVC Casing: A) B) C)

Drilling Methods: 0-50 36" Auger Hole For Surface Casing

50.

Depth Drilled: Start Date: 6-29-06 Completion Date: Drilling Company: longyear Driller: Kevin Jones

Protective Surface Casing: Type: Steel Diameter: 23" Depth: From: 0" To:

**Casing and Screen Intervals:**

Well ID:	Total Depth:	Well ID:	Total Depth:	Well ID:	Total Depth:
Casing:	Type: Diameter:	Casing:	Type: Diameter:	Casing:	Type: Diameter:
Casing Interval:	From: To:	Casing Interval:	From: To:	Casing Interval:	From: To:
Screen Type:	Diameter: Slot Size:	Screen Type:	Diameter: Slot Size:	Screen Type:	Diameter: Slot Size:
Screen Interval:	From: To:	Screen Interval:	From: To:	Screen Interval:	From: To:
Static Water Level:	Date:	Static Water Level:	Date:	Static Water Level:	Date:

Logged By: John Files

Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments
0-2				0-2" Fill: Fill material in during pad construction.
2-50				2-50 COBBLES & SILTY. Cobble of quartzitic and calcareous sandstone with ~30-50% Brown clay matrix. All dry no water coming in. < 5% of return is particulate fines!
0-48"			0-48" Cement	
0-50"			0-50" 36" hole changed to 48" before putting in casing	
0-48"			0-48 28" Low Carbon Steel casing	
50-78				50-78 SILTY COBBLES: Cobble of quartzitic & calcareous sandstone. Cobble produced calcareous sandstone. ~30-50% fines!
			Drill Time 50-6:50 70% Log 5/10/06	STARTED MILLING 3:26



Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments
60				SLTY COBBLES as above 2' thick.
65			Drill Time 64-84" 2 hrs 55 min	
70				- at 72', predominantly limestone and calcareous sandstones, 2' thick.
75				- at 78', predominantly limestone, calcareous sandstone
80				- 79' individual cobbles tan 2' gray, BEDROCK
85			Drill Time 84-109 (LS Ind) DRILL BIT STUCK, VERY FRACTURED, PULLED BACK 2'	78' - Interbedded limestone & calcareous sandstone, limestone is gray, medium grain. Some calcite veining sandstone
90			5' DRILLED TO 95' STOPPED @ 97' F.N. 2'	80' - moderately fractured
95			CATCH UP LOST CIRCULATION, CONCRETE MIXED-TREME PIPED INTO HOLE ~240 BAGS	90-95' YEL. TO RED FINE GRAINED SS 10% GRAY LS, 95-100 LOST RECOVERY
100				100-105 COBBLES, GRAVELS, SAND 20% SS YELLOW TO RED, 20% GRAY LS, & CALC. LS.
105				105-110 15% YELLOW FINE GR. SS, 60% LT GRAY LS, 15% DK GRAY LS, 10% VERY LT GRAY SILTY LS.
110				110-115 45% YELLOW-LT GRAY FINE GRAINED SS, 40% BLACK-DK GRAY LS WITH CALCITE VEINING, 15% SILTY SS LT GRAY
115				115-119 30% GRAVELS, 15% FINE SAND, 25% RED SS, FINE LAMINATED, 90% FINE GR. YELLOW SS, 15% SILTY LS, GRAY
120			119'-144' DRILL TIME LOST MUD DUE TO AIR	119-124 45% DK GRAY SILTY LS, 55% YELLOW SILTY STONE, 5% RED FINE GR SS, 20% GRAVELS
125			LOST CIRC. @ 129'	

40% GRAVEL 124-129 5% RED FINE GR SS 5% BLACK LIMY SH. 50% YELLOW...



Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments
130			LOST CIRC, @ 130.5'	132 - similar to above
135			MAG FIBER + PAPER ADDED	136 - no change
140			144 - 169 <sup>2 hrs. 38 min</sup>	142 - no change, noted some calcite veins
145	Red		146 - ending spud point	148 - very sandy (80%+) calc pieces
150				152 → Similar to 132-148, but sandier, fractured calcite limestone, Sa = 1000
155				157 - same
160				157-181 - fairly competent limestone @ 159 - 85%+ limestone, calcite pieces, generally, w/ some claylike matter
165			169 -	162 - as usual, calcite limestone dark grey, calcite Sa = 1000, clay matter
170	Red			167 - same
175				172 - same
180				177 - same w/ larger pieces of calcite bitlike matter (cement)
185				181-191 weak fracture zone
190				186 - 70% limestone (dark grey) & 30% calcite limestone (Sa = 1000) E189-191 fracture zone - a 400' zone, 1000' zone Signature of 2000' +/- grad. Fault 1000' +/- Dated very faint
195	Red		Drill Time 194-219 116 min	E195 under Breccia zone No more days of chuck E197-205 went to massive fracture zone



BOREHOLE LOG  
 Logged by: \_\_\_\_\_

Page 4 of 29  
 Well ID \_\_\_\_\_

Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments	
200				1.1 meters as above through	
205				2203-206 Moderate Fracture zone up string clastic matrix	
210				TRIMMED OUT 5 RODS TO WELL FROM 210 1.25'	2206-220 Strongly Fractured zone. Hole coming in 2' area very tough drilling
215				2217 Low part in Fractures	
220				Drill Time 219-244 143 minutes	
225					2223-224 (F.M) calcareous sandstone bed 2225-233 Intense Fracture zone local Brecciated
230					2230-236 weak to moderate Fracturing 2236-245 Strong Fracture zone
235					
240					
245				Drill Time 244-269 143 minutes	2245-245-251 moderate to strong 2245 Trace of pyrite as fracture coating. 2251 Strong Fracture zone.
250				2260 ± 50% of Sample thin interbedded quartzite.	
255					
260				HOLE COLLAPSE ZONE IN HOLE	2265-270 SANDY LG. FINE GR. BLACK-DK GR.
265					
End of Rod					



Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments
270				LIMEY QUARTZITE FINE GR. BLICK TO DK GRAY FRACTURED ZONE
275				SAME AS ABOVE
290				SAME AS ABOVE
295				290-295 TIGHTEN & VILLAGE FRACTURED LITHOLOGY
290				REACHED OUT TO 22" FROM 0-294'
295				DRILLED WITH 1" AMER BIT FROM 294' ON 22"
300				20:36 ADDING MIN
305				STARTED DRILLING @ 301' at 23:15
310				301-305 GRAY CALCINIC LS.
315				305-310 DK GRAY DD. LS. MINOR LT. BEDDING WALLS CAVING
320				310-315 DK GRAY DD. LS. MINOR LT. BEDDING WALLS CAVING
325				315-320 Transition to shale zone. Very base formation. Brecciated base layer of limestone.
330				320-330 15-10% Tan quartz. Possibly Brecciated zone
335				330-335 Hard limestone

BOREHOLE LOG  
 Logged by: \_\_\_\_\_

Well ID Central Canyon Well 1

Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments
340				Limestone at base through
345				
350				350-357 Weak Fracture zone.
355				353- Local strong fracture zone out on 3 to 6" thick
360				Basal bed of fine to med Small but intense Fractures
365				
370				
375				
380				
385				
390				
395				
400				
405				



BOREHOLE LOG  
Logged by:

Page 7 of 29

Well ID

Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments
410				limestone. As above through.
415				@ 415-417 Mod. size Fracture zone.
420				FRACTURE ZONES MINOR SS BEDS.
425				
430				431-433 FRACTURE ZONE
435				@ 435- DK GRAY LS ~ 15% TAN FINE GR. SS.
440			SLOW DRILLING ADJUST MP 21:35-22:35	DK. GR. LS. CALCITE VEINING 3% FINE GR. SS. FINE-GR. FRAC.
445				440-441 DK. GR. LS. HARD SLOW DRILLING FRACTURE @ 445
450			SPINDLE 0:00	DK. GR. LS. FINE GR. SS. @ 445-450 DK GR SS
455				DK-GR LS
460			SLOW DRILLING 20 MIN/FT.	5% TAN VERY FINE GR. SS DK. GR. TO LT. GR. LS. 5% TAN TO RED VERY FINE GR. SS
465				@ 262 DRILLED INTO ARTESIAN AQUIFER. LOST MUD WALL, CAUSING TRIPPING MAT ASAP TRIP OUT TO CASING 6-RODS @ 4:25
470				
475				





BOREHOLE LOG  
Logged by: \_\_\_\_\_

Well ID \_\_\_\_\_

Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments
480				Limestone. As above through 494
485				
490				
495				494-525 Moderate Fracture zone 494-525 Quartzite. Fine grained, hard strongly Fractured.
500				
505				
510				
515				
520				
525				525-534 Breccia zone, Limestone/Quartzite & sandstone Strongly Fractured.
530				
535				534 Quartzite Gray Fine grained. 534-538 mod- Strong Fractured.
540				
545				545-548 ~40% Thin limestone Bed.

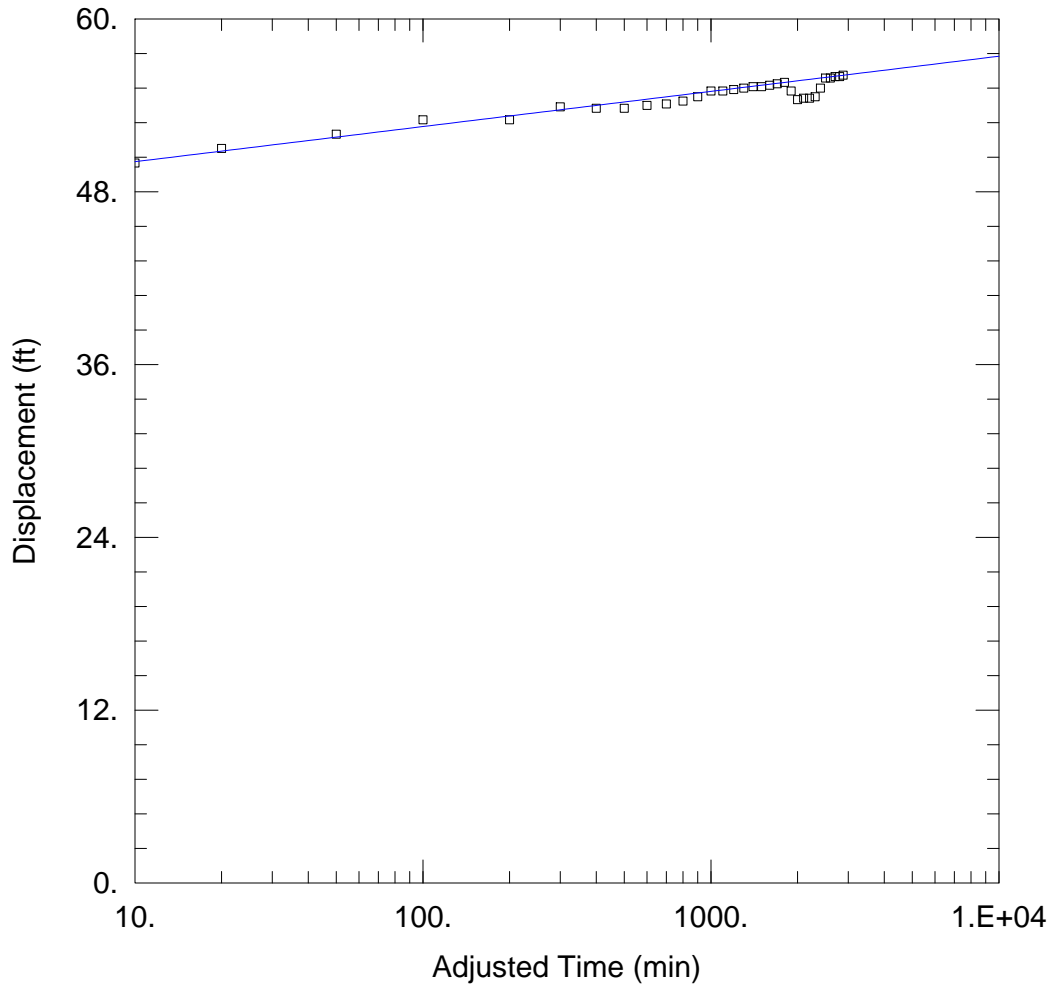
BOREHOLE LOG  
Logged by: \_\_\_\_\_

Page 9 of 20  
Well ID Grand Canyon 11

Depth (feet)	Graphic Log	Well Construction	Drilling and Well Construction Comments	Descriptions/Comments	
550				<p>550-555 - sandstone</p>	
555				<p>555-560 - sandstone</p>	
560					<p>560-565 - sandstone</p>
565					<p>565-570 - sandstone</p>
570				<p>570-575 - sandstone</p>	
575				<p>575-580 - sandstone</p>	
580				<p>580-585 - sandstone</p>	
585				<p>585-590 - sandstone</p>	
590				<p>590-595 - sandstone</p>	
595				<p>595-600 - sandstone</p>	
600				<p>600-605 - sandstone</p>	
605				<p>605-610 - sandstone</p>	
610				<p>610-615 - sandstone</p>	
615				<p>615-620 - sandstone</p>	

555-560 - sandstone  
560-565 - sandstone  
565-570 - sandstone  
570-575 - sandstone  
575-580 - sandstone  
580-585 - sandstone  
585-590 - sandstone  
590-595 - sandstone  
595-600 - sandstone  
600-605 - sandstone  
605-610 - sandstone  
610-615 - sandstone  
615-620 - sandstone

555-560 - sandstone  
TD 560



CROWD CANYON

Data Set:

Date: 11/05/21

Time: 10:55:49

PROJECT INFORMATION

Company: Hansen, Allen & Luce

Client: Mapleton City

Project: 437.07.100

Location: Mapleton

Test Well: Crowd Canyon

Test Date: October 2006

AQUIFER DATA

Saturated Thickness: 340. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Observation Wells

Well Name	X (ft)	Y (ft)
Crowd Canyon	0	0

Well Name	X (ft)	Y (ft)
□ Crowd Canyon	0	0

SOLUTION

Aquifer Model: Confined

Solution Method: Cooper-Jacob

T = 3.612E+04 ft<sup>2</sup>/day

S = 1.73E-18



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# **APPENDIX B**

## **PCS Summary and Prioritization**

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Mapleton City Carnesecca, Westwood, Seal, Crowd Canyon, and Well #1			PCS Information Summary						
Ranking	PCS #	PCS Name	Description	Contact Info	Address	Phone	Contaminants	Quantity	notes
3	2-1, 3-1, 4-1	Residential and Commercial Areas	Residential and commercial use and storage of chemicals	NA	Zones 2, 3, and 4	NA	residential and commercial use of chemicals, herbicides, fertilizers, and pesticides; street runoff; and sewers	unknown	
4	2-2	Mortensen Property	Agricultural Areas	Owner	~ 400 E 400 S, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
6	2-3	Mapleton Elementary School	School Grounds	Nebo School District (Maintenance Services)	120 W Maple St, Mapleton, UT 84664	801-354-7463	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
5	2-4	Mapleton City Park	Park	Mapleton City Parks & Rec Director	W Maple St & N Main St, Mapleton, UT 84664	801-806-9114	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
2	2-5, 3-2, 4-2	Septic Systems	Home sewage	Various	Various	Various	home sewage	1000 gal / home sewage	Unknown if BMPs exist
17	3-3	Hobblecreek Elementary School	School Grounds	Nebo School District (Maintenance Services)	362 E 1200 N, Mapleton, UT 84664	801-354-7463	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
8	3-4	Mapleton Junior High School	School Grounds	Nebo School District (Maintenance Services)	120 W Maple St, Mapleton, UT 84664	801-354-7463	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
18	3-5	Cow Pasture	About 20 cows	Mapleton Pond	1250 S 1250 EAST, MAPLETON, UT 84664	Unknown	animal waste	> 20 cows	Unknown if BMPs exist
1	3-6	Ensign-Bickford	Explosives manufacturing plant	Owner	8305 S US Highway 6 Spanish Fork, UT 84660	801-794-4500	Nitrate, CEM (Constituents of energetic materials), explosives	unknown	State Board of Health, Mapleton city, and Ensign-Bickford are working together on this pollution problem.
9	3-7	MJK Farms LLC Property	Agricultural Areas	Owner	1150 E 1200 N, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
10	3-8	Warren Property	Agricultural Areas	Owner	~1600 E 1200 N, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
11	3-9	Snyder Property	Agricultural Areas	Owner	~1600 E 1000 N, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
12	3-10	DLH Properties LLC	Agricultural Areas	Owner	1346 E 1200 N, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
13	3-11	Hatfield Property	Agricultural Areas	Owner	1057 N 1600 E, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
14	3-12	BKG Investments II LLC Property	Agricultural Areas	Owner	~1600 E 900 N, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations

Mapleton City			PCS Information Summary						
Carnesecca, Westwood, Seal, Crowd Canyon, and Well #1									
Ranking	PCS #	PCS Name	Description	Contact Info	Address	Phone	Contaminants	Quantity	notes
7	3-13	Rogers Property	Agricultural Areas	Owner	~1000 E 400 S, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
15	3-14	Sheranian Property	Agricultural Areas	Owner	1805 E 1200 N, Mapleton, UT 84664	Unknown	application of pesticides, herbicides, and fertilizers	unknown	Applied according to manufacturer's specificiations
16	4-3	Whiting Campground	Campground site and sewage facilities	Uinta National Forest Spanish Fork Ranger District	44 West 400 North Spanish Fork, UT 84660	801-798-3571	Sewage	unknown	25 individual family campsites, two large pavilions, and 6 toilet facilities.



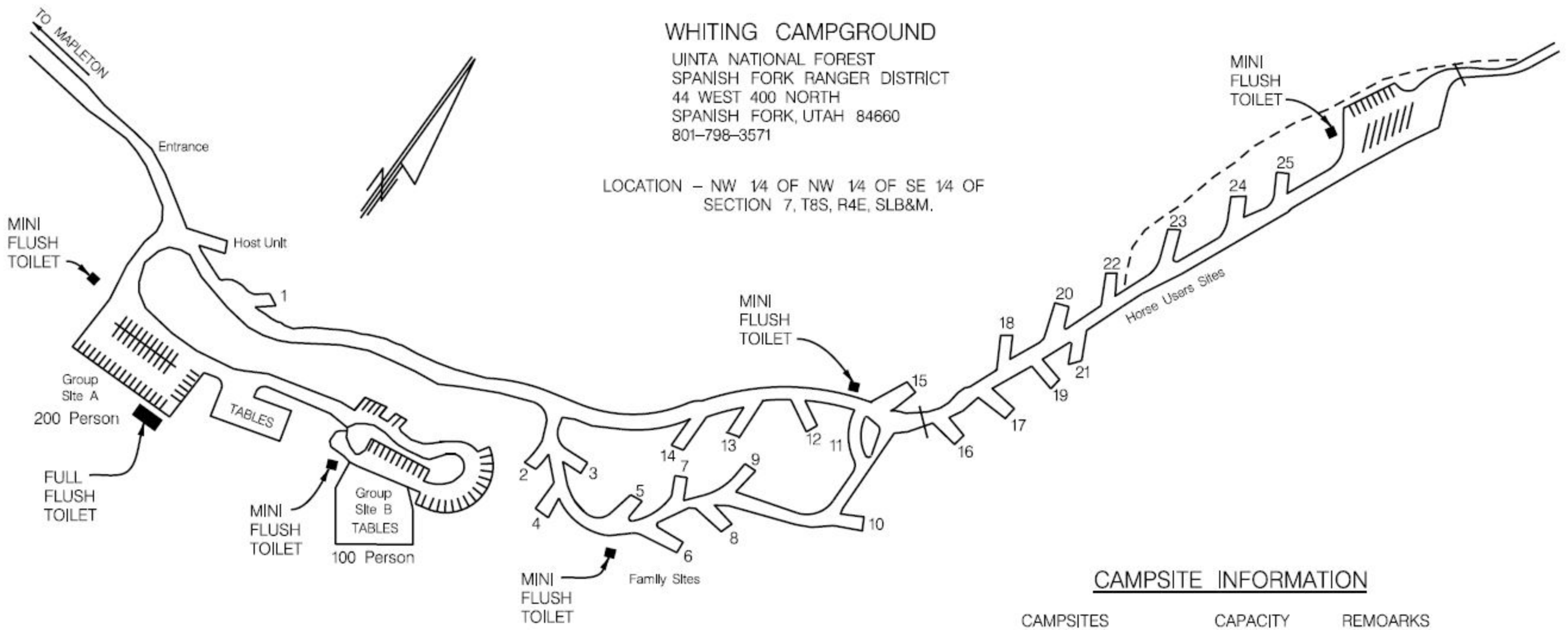
Mapleton City			PCS Contaminant Risk Evaluation										
Carnesecca, Westwood, Seal, Crowd Canyon, and Well #1			Source Containment		Time of Travel	Quantity gal	Health Risk (h/m/l)	Scores					
			Location	Adequately Controlled	Distance			SOURCE CONTAINMENT		DIST	QUANTITY	HEALTH RISK	RISK SCORE Total
Ranking	PCS #	PCS Name	(I/OA/OB/IS)	(y/n)	(zone n/f)	Location	Adeq. Cont.						
3	2-1, 3-1, 4-1	Residential and Commercial Areas	OA	n	2n	50	l	5	0	13	1	5	24
4	2-2	Mortensen Property	OA	y	2f	100	m	5	-5	11	3	10	24
6	2-3	Mapleton Elementary School	OA	y	2f	50	m	5	-5	11	1	10	22
5	2-4	Mapleton City Park	OA	y	2n	50	m	5	-5	13	1	10	24
2	2-5, 3-2, 4-2	Septic Systems	OB	n	2f	1000	l	10	0	11	9	5	35
17	3-3	Hobblecreek Elementary School	OA	y	3f	50	m	5	-5	7	1	10	18
8	3-4	Mapleton Junior High School	OA	y	3n	50	m	5	-5	9	1	10	20
18	3-5	Cow Pasture	OA	n	3f	50	l	5	0	7	1	5	18
1	3-6	Ensign-Bickford	OB	y	3f	10000	h	10	-5	7	12	15	39
9	3-7	MJK Farms LLC Property	OA	y	3f	100	m	5	-5	7	3	10	20
10	3-8	Warren Property	OA	y	3f	100	m	5	-5	7	3	10	20
11	3-9	Snyder Property	OA	y	3f	100	m	5	-5	7	3	10	20

Mapleton City			PCS Contaminant Risk Evaluation										
Carnesecca, Westwood, Seal, Crowd Canyon, and Well #1			Source Containment		Time of Travel	Quantity gal	Health Risk (h/m/l)	Scores					
			Location	Adequately Controlled	Distance			SOURCE CONTAINMENT		DIST	QUANTITY	HEALTH RISK	RISK SCORE Total
Ranking	PCS #	PCS Name	(I/OA/OB/IS)	(y/n)	(zone n/f)	Location	Adeq. Cont.						
12	3-10	DLH Properties LLC	OA	y	3f	100	m	5	-5	7	3	10	20
13	3-11	Hatfield Property	OA	y	3f	100	m	5	-5	7	3	10	20
14	3-12	BKG Investments II LLC Property	OA	y	3f	100	m	5	-5	7	3	10	20
7	3-13	Rogers Property	OA	y	3n	100	m	5	-5	9	3	10	22
15	3-14	Sheranian Property	OA	y	3f	100	m	5	-5	7	3	10	20
16	4-3	Whiting Campground	OA	y	4f	5000	l	5	-5	3	12	5	20

# WHITING CAMPGROUND

UINTA NATIONAL FOREST  
SPANISH FORK RANGER DISTRICT  
44 WEST 400 NORTH  
SPANISH FORK, UTAH 84660  
801-798-3571

LOCATION - NW 1/4 OF NW 1/4 OF SE 1/4 OF  
SECTION 7, T8S, R4E, SLB&M.



## LEGEND

- FULL FLUSH TOILET
- MINI FLUSH TOILET
- - - HORSE TRAIL

FULL FLUSH TOILETS = SEPTIC TANK AND DRAIN FIELD.  
MINI FLUSH TOILETS = CONCRETE VAULT 1,000 GALLON CAPACITY  
PUMPED OUT BY FOREST SERVICE.

## CAMPSITE INFORMATION

CAMPSITES	CAPACITY	REMOARKS
1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14, 16, 17, 19, 20, 21,	10 PEOPLE	SINGLE FAMILY UNITS
7, 11, 18, 5, 15, 22	18 PEOPLE	DOUBLE FAMILY UNITS
23, 24, 25	10 PEOPLE	HORSE CAMPING UNITS
GROUP A	200 PEOPLE	
GROUP B	100 PEOPLE	



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# **APPENDIX C**

## **Best Management Practices for Managing PCSSs**





# Partnership for the Environment

*Utah Department of Environmental Quality*

## Pollution Prevention Fact Sheet

Pollution Prevention (P2) uses source reduction techniques and practices to reduce or eliminate the amount of hazardous substances, pollutants or contaminants entering any waste stream or being released into the environment. In short, P2 means not creating waste in the first place while reducing risks to public health, welfare, and the environment.

### **Pollution Prevention is Good Business**

While most pollution control strategies cost money, P2 has saved many businesses thousands of dollars in treatment and disposal costs. Other economic benefits include:

- Reduced operating costs.
- Savings from reduced need for pollution control equipment.
- Elimination of waste transportation, storage, disposal and liability costs.
- Reduced compliance costs from government regulations.
- Improved public image.
- Stimulating reinvestment and enhancing competitiveness.
- Reducing risk of spills, accidents and emergencies.
- Increasing environmental protection.

### **P2 Techniques**

Generating less waste is the best way businesses can practice pollution prevention. This can be achieved through:

- Inventory management: Tracking all raw materials and improving operations.
- Substitute non-hazardous materials for hazardous materials.
- Improving material receiving, storage, and handling practices.
- Modifying and redesigning equipment to enhance recovery and recycling.
- Improved operating efficiency of equipment.
- Establishing strict preventive maintenance programs.
- Segregating wastes for recovery.
- Separating hazardous and non-hazardous wastes to prevent cross-contamination.
- Eliminating sources of leaks and spills.
- Use of water soluble cleaning agents in place of organic solvents and degreasers.

## **Management Support**

The support of company management is essential for developing a lasting and successful P2 program. This commitment should be passed on to employees, especially those working in areas that generate hazardous waste. Management approaches may include the following:

- Make P2 a part of the company policy, a process of continuous improvement.
- Target goals for reducing the volume and toxicity of waste streams.
- Implement recommendations identified through waste assessments.
- Reward employees who identify cost-effective P2 opportunities.
- Train employees in P2 hazardous material waste handling and emergency response procedures.

## **Good Housekeeping**

Most successful P2 waste assessments identify sources of waste and calculate the true cost of waste generation and management. A little extra attention paid to “minor” sources of waste can result in major reductions. Improved housekeeping practices, system adjustments, process and product inspections, and the use of production unit control equipment and methods are often successful P2 practices. Others include:

- Inspect and repair equipment to reduce waste caused by equipment failure, leaks and spills.
- Contain leaks and spills by using drip trays and splash guards.
- Keep containers closed except when material is added or withdrawn.
- Utilize a “first-in first-out” inventory policy to avoid losses due to expirations.

## **Product Substitution**

Some companies are so motivated by pollution prevention practices they change the products they produce in order to employ nonhazardous production processes. For example, they may change the design, specifications or composition of an existing end product to reduce the need for toxic materials can help reduce pollution and associated costs.

## **Process Modification**

Inefficient or outdated production processes that could be sources of hazardous waste generation can be upgraded or replaced by a more efficient process.

- Changes in the placement order of equipment.
- Equipment modification.
- Changes in operation settings and schedules.
- Process automation.

## **For More Information, Contact:**

Division of Solid & Hazardous Waste - (801) 538-6170  
Division of Drinking Water, Source Protection Program - (801) 536-4200  
Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477  
Small Business Assistance Program - (801) 536-4479  
Environmental Hotline - 1-800-458-0145





# Partnership for the Environment

*Utah Department of Environmental Quality*

## Household Hazardous Waste Fact Sheet

### What is Household Hazardous Waste?

Many hazardous products and chemicals such as cleaners, oils and pesticides are used in the home every day. When discarded, these products are called household hazardous waste (HHW). HHWs are discarded materials and products that are ignitable, corrosive, reactive, toxic or otherwise listed as hazardous by the EPA. Products used and disposed of by a typical residence may contain more than 100 hazardous substances including:

- Batteries
- Cleaners
- Cosmetics
- Fluorescent light bulbs
- Glues
- Heating oil
- Insecticides and pesticides
- Ink
- Medicines
- Motor oil and automotive supplies
- Paints, thinners, stains and varnishes
- Polishes
- Swimming pool chemicals
- Smoke detectors
- Thermometers
- Fuel

### HHW is a Serious Threat

The U.S. Environmental Protection Agency estimates the average American household generates 20 pounds of HHW each year. As much as 100 pounds of HHW can accumulate in the home and remain there until the resident moves or undertakes a thorough "spring cleaning."

Since the chemicals found in HHW can cause soil and groundwater contamination, generate hazardous emissions at landfills and disrupt water treatment plants, it is important to dispose of HHW properly. Many solid waste treatment facilities are currently required to screen for HHW to avoid operating under restrictive hazardous waste laws. Furthermore, many communities may be required to establish a HHW collection program in order to qualify for permits to manage storm water.

### Safe Handling Tips

The best way to handle household hazardous materials is to completely use the product before disposing of the container. If this is not possible, then the next alternative is to return unused portions to your community household hazardous waste clean-up day. Keep products in their original package with all labels intact. If the container is leaking, place it in a thick plastic bag. Pack the products in a plastic-lined cardboard box to prevent leaks and breakage.

Household hazardous waste clean-up days are for household wastes only. No industrial or commercial wastes and no containers larger than five gallons are accepted. Explosives, radioactive

material and medical wastes are also unacceptable.

HHW can be dangerous to people and pets who come in contact with them. HHW can endanger water supplies, damage sewage treatment systems, and cause other environmental damage. Only use the products as directed. **DO NOT:**

- Flush HHWs down the toilet
- Pour HHWs down the sink
- Pour HHWs down a storm drain
- Pour HHWs on the ground

Contact your local health department or the Division of Solid and Hazardous Waste to determine whether your community has a household hazardous waste collection program.

## Identify HHW

Reduce the amount of potentially hazardous products in your home and eliminate what you throw away by following these easy steps:

### 1. Before you buy:

- Read the labels and be aware of what they mean.
- Look for these words on labels; they tell you what products may need special handling or disposal.

Caution	Flammable
Combustible	Poison
Corrosive	Toxic
Danger	Volatile
Explosive	Warning

- Select a product best suited for the job.
- Buy only what you can use entirely.

### 2. After you buy:

- Read label precautions and follow directions for safe use.
- Recycle/dispose of empty containers properly.
- Share what you can't use with friends or neighbors.
- Store properly.
- Use recommended amounts; more is not necessarily better.
- Use the child-resistant closures and keep them on tightly.

## For More Information, Contact:

Division of Solid & Hazardous Waste - (801) 538 - 6170

Division of Drinking Water, Source Protection Program - (801) 536-4200

Environmental Hotline - 1-800-458-0145

Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477



# Partnership for the Environment

*Utah Department of Environmental Quality*

## Fertilizer Fact Sheet

### What Are The Potential Hazards?

Fertilizer applied to plants during crop, lawn, and garden maintenance may leach into the ground water and cause contamination. The main constituent in fertilizer is usually nitrogen. If the nitrate level of drinking water is too high, infants, up to the age of six months, can develop a fatal disease called blue baby syndrome (methemoglobinemia). Drinking water that contains 10 milligrams of nitrate-nitrogen per liter of water exceeds the drinking water standard and should not be used, especially for infant formula. Proper storage, application, and watering procedures should be included in fertilizer best management practices to prevent contamination of ground water.

### Storing Fertilizers

The less fertilizer you buy, the less you will have to store. Therefore, only purchase the amount and kind of fertilizer that you need.

- Fertilizer should be stored in locked, dry cabinets.
- Keep fertilizer and pesticides on separate shelves.
- Don't store fertilizer with combustibles, such as gasoline or kerosine, because of explosion hazards.

### Application Precautions

The chemical in fertilizer that can most easily pollute ground water is a form of nitrogen called nitrate. Nitrate moves readily in soil to the ground water strata. The best way to prevent the movement of nitrate into the ground water is to apply no more nitrogen than the crops, grass, garden plants, shrubs, or trees can use during the time that the plants are growing.

- Calibrate your spreader and sprayer to keep from applying too much fertilizer.
- Load fertilizer spreaders on the driveway or other hard surfaces so any spills can easily be swept up. Fertilizer that spills should be swept up and applied to the lawn or garden at the right time and amount. This allows the fertilizer to grow plants instead of washing off into the storm drain system and ultimately contaminating nearby streams and lakes.
- If you are using liquid fertilizer on your turf, add fertilizer to the spray tank while on the lawn. This way, if you spill the fertilizer, it will be used by the plants and not run off into the storm drain system.
- Do not spray or apply fertilizer near irrigation wells. Wells are conduits to the ground water.

### Application Rates For Lawns

Utah State University's Extension Service recommends the following for Utah lawns: "It is important to fertilize on a regular basis every four to six weeks to maintain an attractive lawn. Begin



when lawns start to green in the spring, mid to late April. Earlier applications may cause a lawn to become greener faster, but may also increase spring disease problems. Summer applications of nitrogen fertilizer will not burn lawns, if you apply them to dry grass and water immediately. Fall applications are important for good winter cold tolerance, extended fall color, and fast spring green-up. A complete fertilizer containing nitrogen, phosphorus and potassium should be applied in the fall every three to four years. This will prepare the lawn for winter conditions and allow the phosphorus to penetrate into the root zone by the next growing season.

For a well-kept lawn in Utah, apply 1 pound of available nitrogen per 1,000 square feet each four to six weeks throughout the growing season. The following chart indicates how much of various fertilizer will supply one pound of nitrogen.”

%N on Label	Pounds of Fertilizer Per 1000 Square Feet
12-15	7-8
18-21	5-5 ½
24-28	3 ½-4
30-34	3-3½
45-46	2-2 ¼

## Types of Plants

One of the best ways to protect your ground water is to use plants that are drought-tolerant and that are adapted to your area. Drought-tolerant or low-water-use plants can continue to survive once they are established, even during times of little rainfall. Because you do not have to water these plants, there is less chance that nitrate and pesticides will be carried with the water through the soil and into the ground water.

If low-water-use plants are not practical, then try to use medium water use plants. Water these plants only when they begin to show drought stress. Some plants will wilt when they are drought-stressed, while other plants will show marginal leaf burn.

## Watering

Over-watering plants can cause excess water to move through the soil. This water can flush fertilizer away from the root zone of your plants and into the ground water. The best way to avoid over-watering is simply to measure how much you are adding. Contact your county Extension Service to determine the best way to calculate how much water your plants need and how to measure the amount you are applying.

## For More Information, Contact:

Division of Drinking Water, Source Protection Program - (801) 536-4200  
 Department of Agriculture - (801) 538-7100  
 Environmental Hotline - 1-800-458-0145  
 Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477



# Partnership for the Environment

*Utah Department of Environmental Quality*

## Pesticides Fact Sheet

### What Are The Potential Hazards?

Pesticides applied to plants during crop, lawn, and garden maintenance may leach into the ground water and cause contamination. Proper storage, mixing, application, spill cleanup, watering, and disposal procedures should be included in pesticide best management practices.

### Storing Pesticides

The fewer pesticides you buy, the fewer you will have to store. Therefore, only purchase the amount and kind of pesticide that is needed. Pesticides should always be stored in sound, properly labeled, original containers. ***Sound containers are the first defense against spills and leaks.***

- Ensure that there are no holes, tears, or weak seams in the containers and that the label is readable.
- Pesticides should be stored in locked, dry cabinets.
- Be sure to store dry products above liquids to prevent wetting from spills.
- Storage and mixing areas should not be located near floor drains of any kind.
- Storage facilities should have secondary containment, such as a berm or dike, which will hold spills or leaks at:
  1. 10% of the total volume of the containers, or
  2. 110% of the volume of the largest container, whichever is larger.

### Mixing Pesticides

- Mix pesticides on an impermeable surface, such as concrete, so any spills will be contained.
- Mix only the amount that you will use:
  1. Measure the total square feet you intend to treat.
  2. Read the label on the pesticide container and follow the instructions. (These are often given in terms of amount of pesticide to use per thousand square feet.)
  3. By properly measuring and calculating, there should be little or no pesticide left in the spray tank when the job is finished and it will be applied at the recommended rate.

### Applying Pesticides

Pesticides are used to kill or control weeds (herbicides), insects (insecticides) and fungi (fungicides) that attack plants. Some of these pesticides can move through the soil and into the ground water. Guidelines for the safe use of pesticides are listed below:

- Be willing to accept a low level of weed, insect, and plant disease infestation.

- Use pesticides only when absolutely necessary.
- Identify pests correctly. Use the proper pesticides.
- Read and follow the directions printed on the container labels. Remember, *the label is the law*.
- Calibrate your spreader and sprayer to keep from applying too much pesticide.
- Do not spray or apply pesticides near irrigation wells. Wells are conduits to the ground water.
- Do not spray or apply pesticides near your walks and driveway. This prevents them from washing off into the storm drain system.

## **Cleaning Up Spills**

- Dry formulated pesticide spills should be swept up and applied to crops, lawns, and gardens at the rate specified on the label.
- Liquid pesticide spills should be soaked up using absorbent material (such as, soil, sawdust, and cat litter). The contaminated absorbent material should then be put in a sealed container and taken to a household hazardous waste collection site.

## **Watering**

Over-watering your plants can cause excess water to move through the soil. This water can carry pesticides that can contaminate the ground water. The best way to avoid over-watering is simply to measure how much you are adding. Contact your county Extension Service to determine the best way to calculate how much water your plants need and how to measure the amount you are applying.

## **Disposing of Pesticides**

If the pesticide was properly measured and mixed, there should be little or no spray left in the tank. The little that may be left can be safely sprayed over the area that was treated until it is gone. Disposal of “empty” pesticide containers and unused pesticides should be handled as follows:

- If you are using liquid pesticides, rinse the container three times. Be sure to pour the rinsing into your sprayer and not down a drain or onto the ground. Containers which have been emptied and rinsed can be discarded in the trash.
- Unused pesticides in their original containers can be recycled at household hazardous waste collection sites.

## **For More Information, Contact:**

Division of Drinking Water, Source Protection Program - (801) 536-4200

Department of Agriculture - (801) 538-7100

Environmental Hotline - 1-800-458-0145

Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477

## FEEDLOTS, STABLES, KENNELS, PIGGERIES, AND MANURE PITS

**Potential Hazards:** Typically, feedlots are areas in which a large number of cattle, poultry, sheep, or hogs are confined in concentrated spaces. Wastes generated by feedlot operations include manure, chemicals, and debris.

Precipitation falling on the feedlot infiltrates the accumulated animal wastes and produces leachate containing various concentrations of bacteria, viruses, nitrate-nitrogen, phosphate, and sodium. Leachate or runoff from the feedlot may enter the ground water system by infiltrating the soil cover. Ground water contamination may also result from leachate produced when animal wastes are collected from the feedlot and applied directly to the land or disposed of in an unlined manure pit. Although usually generated in smaller quantities than feedlot wastes, animal wastes from kennels and stables are also potential ground water contaminants.

**Probable Overall Threat To The Public Water Supply:** Medium-high

**Controls:** A Utah Pollution Discharge Elimination System (UPDES) permit is required if polluted runoff leaves the owners property.

**Recommended Assessment:** Not adequately controlled

**Recommended Land Management Strategy:** Memorandum of agreement

**Best Management Practices:**

We recommend that the Soil Conservation Service and/or the USU Extension Service be contacted to recommend site-specific best management practices. Below are listed some generic best management practices and general considerations for feedlots, manure pits, and stables/kennels:

### Feedlots:

- ▶ Divert runoff from feedlot area
  - ▶ install upslope berms and/or diversion ditches
  - ▶ collect rainfall from roofs
- ▶ grade or reshape the area to minimize runoff
- ▶ Collect runoff from feedlot with ditches or a tile drainage network
- ▶ Treat runoff
  - ▶ land application
  - ▶ holding ponds
- ▶ Scrape paved feedlots periodically



- › Establish a vegetative buffer zone downslope to detain and absorb wastes

#### Manure Pits

- › Manure pits should be lined with clay or other impermeable material
- › Liquid effluent should be collected and treated

#### Stables/Kennels

- › Divert/minimize runoff from stable/kennel area



# Partnership for the Environment

*Utah Department of Environmental Quality*

## Septic Tank/Drainfield System Fact Sheet

### What Are The Potential Hazards?

Septic systems can contaminate ground water if they are misused, improperly maintained, or improperly constructed. The major contaminant discharged from septic systems is disease-causing germs. These germs (bacteria and viruses) - can cause many human diseases. Another contaminant discharged from septic systems is nitrogen in the form of nitrate. If the nitrate level of drinking water is too high, infants, up to the age of six months old, can develop a fatal disease called blue baby syndrome (methemoglobinemia). Additionally, if toxic chemicals are disposed in a septic system, they can percolate through the drainfield and into the ground water.

### How Does A Septic Tank/Drainfield System Work?

The basic septic system is composed of a septic tank followed by a drainfield. Wastewater flows out of the house and into the septic tank through the building sewer pipe. Once in the septic tank, most solids in the wastewater settle to the bottom of the tank to form a sludge layer. Other solids float and form a scum layer on top of the wastewater. Some decomposition of solid material takes place here, but the primary function of a septic tank is to trap solids and prevent them from entering the drainfield.

Wastewater treatment is restricted to a rather thin zone of unsaturated soil underlying the drainfield. Many of the harmful bacteria and microbes are filtered out as the wastewater passes through this soil. Some of the smaller microbes (viruses) and nutrients such as phosphorus and some forms of nitrogen are trapped and held (adsorbed) by soil particles. Once the effluent reaches the groundwater table, little treatment occurs. Soils can differ markedly in their pollutant removal efficiency. The ability to which soil can remove pollutants in the wastewater determines how many impurities will eventually reach the groundwater beneath the drainfield.

### Site Evaluation And Construction

Current rules require a comprehensive evaluation of the soil and ground water before a septic system can be permitted for construction in a given location. This evaluation must be reviewed and approved by the local health department. The rules require that the bottom of the drainfield trenches be placed at least 12 inches (preferably 24 inches) above the water table. Additionally, there must be adequate amounts of unsaturated soil beneath the trenches to allow sufficient treatment of the wastewater.

### Site Considerations

- Trees and deep-rooted shrubs should be as far away from the system as possible.
- Keep the water that runs off of foundation drains, gutters, driveways, and other paved areas away from the drainfield of your septic system.

- Keep the soil over the drainfield covered with grass to prevent soil erosion.
- Don't drive vehicles over the system.
- Don't cover the tank or drainfield with concrete or asphalt and don't build over these areas.

## **Proper Disposal Practices**

- Use only a moderate amount of cleaning products and do not pour solvents or other household hazardous waste down the drains.
- Garbage disposals should not be used because they tend to overload the system with solids. If you have one, you should severely limit its use.
- Do not pour grease or cooking oil down the sink.
- Do not put items down the drain that may clog the septic tank or other parts of the system. These items include cigarette butts, sanitary napkins, tampons, condoms, disposable diapers, paper towels, egg shells, and coffee grounds.

## **Water Conservation**

There are limits to the amount of wastewater a septic system can treat. If you overload the system, wastewater may backup into your home or surface over your drainfield. Problems caused by using too much water can occur periodically throughout the year or be seasonal. For example, the soil beneath your drainfield is wetter in the spring than it is in the summer and its capacity to percolate wastewater is somewhat diminished. If you wash all your laundry in one day, you may have a temporary problem caused by overloading the soil's capacity to percolate wastewater for that day. To reduce the risk of using too much water, try the following:

- Use 1.6 gallons (or less) per flush toilets.
- Fix leaking toilets and faucets immediately.
- Use faucet aerators at sinks and flow reducing nozzles at showers.
- Limit the length of your shower to 10 minutes or less.
- Do not fill the bathtub with more than 6 inches of water.
- Do not wash more than one or two loads of laundry per day.
- Do not use the dishwasher until it is full.

## **Septic Tank Cleaning**

It is recommended that the solids that collect in your septic tank be pumped out and disposed at an approved location every three to five years. If not removed, these solids will eventually be discharged from the septic tank into the drainfield and will clog the soil in the absorption trenches. If the absorption trenches are clogged, sewage will either back up into the house or surface over the drainfield. If this happens, pump the tank will not solve the problem and a new drainfield will probably need to be constructed on a different part of the lot.

### **For More Information, Contact:**

Division of Drinking Water, Source Protection Program - (801) 536-4200

Division of Water Quality - (801) 538-6146

Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477

Environmental Hotline - 1-800-458-0145

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# **APPENDIX D**

## **Drinking Water Source Protection Ordinances**

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unincorporated areas, unless superseded by a municipal ordinance in accordance with State law. (Ord. 2010-11, 6-1-10)

#### B. Definitions

When used in this Article the following words and phrases shall have the following meanings:

1. "Allowed Use" means a use, activity or practice allowed by this article which does not create a risk of pollution or contamination in the specified protection zone of such significance so as to require the implementation of regulatory requirements, best management practices or engineered controls.
2. "Best Management Practices" means a practice or combination of practices determined to be the most effective practicable means of conducting a land use activity to minimize the potential for becoming a pollution source (including technological, economic, and institutional considerations).
3. "Collection Area" means the area surrounding a ground-water source which is underlain by collection pipes, tile, tunnels, infiltration boxes, or other ground-water collection devices.
4. "Controlled" means that a physical, regulatory, negligible quantity, or best management/practice control, as defined in Utah UAC R309-600, exists to prevent the discharge of contaminated or hazardous substances from a pollution source or potential contamination source. If no such control exists, the pollution source or potential contamination source is ipso facto uncontrolled.
5. "Design Standard" means established State or National Standards for the design, construction, placement, or maintenance from a potential contamination source to prevent discharges to the ground water. An example of a Design Standard is "Secondary Containment".
6. "Division of Drinking Water" means the Utah Department of Environmental Quality, Division of Drinking Water.
7. "Drinking Water Source Protection Zone" means the specified surface and subsurface area surrounding a ground-water source of drinking water supplying a Public Water Supply, through which contaminants are reasonably likely to move toward and reach such ground-water source.
8. "Groundwater Source" means any well, spring, tunnel, adit, or other underground opening from or through which groundwater flows or is pumped from subsurface water-bearing formations.
9. "Hazardous Waste" means a waste with properties that make it dangerous or potentially harmful to human health or the environment.
10. "Pollution Source" means a point source discharge of contaminants to ground water or

### Article 10-8. Utah County Drinking Water Source Protection Provisions

#### A. Short Title and Purpose

1. This Article shall be known as the "Utah County Drinking Water Source Protection Ordinance."
2. The purpose of this Article is to ensure the provision of a safe and sanitary drinking water supply to the residents of Utah County (hereinafter "County"), by the establishment of drinking water source protection zones surrounding the wells and springs used by public water systems in the County and by the designation and regulation of property uses and conditions that may be maintained within such zones. Included under this Article are all source protection zones or portions thereof falling within the County, including incorporated and

potential discharges of the liquid forms of "extremely hazardous substances" which are stored in containers in excess of "applicable threshold planning quantities" as specified in SARA Title III. Examples of possible pollution sources include, but are not limited to: storage facilities that store the liquid forms of extremely hazardous substances, septic tanks, drain fields, Class V underground injection wells, landfills, open dumps, land filling of sludge and septage, manure piles, salt piles, pit privies, and animal feeding operations with more than ten animal units. The following definitions clarify the definition of "Pollution Source":

a. "Animal feeding operation" means a lot or facility where the following conditions are met: animals have been or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period, and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Two or more animal feeding operations under common ownership are considered to be a single feeding operation if they adjoin each other, if they use a common area, or if they use a common system for the disposal of wastes.

b. "Animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers: the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

c. "Extremely hazardous substances" means those substances that are identified in the Sec. 302(EHS) column of the "TITLE III LIST OF LISTS - Consolidated List of Chemicals Subject to Reporting Under SARA Title III," (EPA 560/4-91-011).

11. "Potential Contamination Source" means any facility, use or site that employs an activity or procedure which may potentially contaminate ground water, whether it currently does or not. A pollution source is also a potential contamination source.

12. "Protected Aquifer" means a producing aquifer in which the following conditions are met:

- a. A naturally protective layer of clay, at least 30 feet in thickness, is present above the aquifer;
- b. the clay layer is demonstrated to be laterally continuous to the extent of zone two; and
- c. the public-supply well is grouted with a grout seal that extends from the ground surface down to

at least 100 feet below the surface, and for a thickness of at least 30 feet through the protective clay layer. An aquifer not meeting these criteria is considered "unprotected".

13. "Prohibited Use" means a use, activity or practice which creates a substantial risk of pollution or contamination in the specified protection zone. A Prohibited Use is not permitted.

14. "Public Water System" means a system, either publicly or privately owned, providing water for human consumption and other domestic uses, which has at least 15 service connections, or serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes collection, treatment, storage and distribution facilities under control of the operator and used primarily in connection with the system. Additionally, the term includes collection, pretreatment or storage facilities used primarily in connection with the system but not under such control.

15. "Recharge Area" means an area in which water reaches the zone of saturation by surface infiltration.

16. "Regulatory Agency" means any governmental agency (local, state, and/or federal) with jurisdiction over drinking water, pollution sources, potential contamination sources and hazardous substances as defined herein.

17. "Sanitary Landfill" means a disposal site where solid wastes, including putrescible wastes, or hazardous wastes, are disposed of on land by placing earth cover thereon.

18. "SARA Title III" means the Superfund Amendment and Reauthorization Act Article found in 40 CFR 300-302, pertaining to emergency response and right-to-know.

19. "Secondary Containment" means a type of system or design standard that is used to provide release detection and prevention, such as trays under containers, floor curbing or other systems designed to hold materials or liquids that may discharge from containers holding a potential contaminant. Examples include a double-walled tank, a double-walled integral piping system, or a single-walled tank or integral piping system that is protected by an enclosed concrete vault, liner, or an impervious containment area.

20. "Septic Tank/Drain-Field Systems" means a wastewater system, which is comprised of a septic tank and a drain-field, which accepts wastewater from buildings or facilities for subsurface treatment and disposal. By their design, septic tank/drain-field system discharges cannot be controlled with design standards.

21. "Source Protection Zone" means the specified surface and subsurface area surrounding a ground-water source of drinking water supplying a Public Water Supply, through which contaminants are reasonably likely to move toward and reach such ground-water source. These zones shall have the approval of the State of Utah, Division of Drinking Water as described in R309-600 Source Protection: Drinking Water Source Protection for Ground-Water Sources and as stated herein.

22. "Time of Travel Distance" means the distance that groundwater will travel in a specified time. This distance is generally a function of the permeability and slope of the aquifer. Time of Travel is determined from Hydrological Quality, Division of Drinking Water.

23. "Underground Storage Tank" means a tank or combination of tanks and underground pipes and impact valves connected to tanks being used or having been used to contain regulated substances and which has at least ten per cent of the total volume of the tank and underground portions of pipes connected to the tank underground.

24. "Wellhead" means the upper terminal of a well, including adapters, ports, seals, valves and other attachments. (Ord. 2010-11, 6-1-10)

#### C. Establishment of Drinking Water Source Protection Zones

There are hereby established use districts to be known as zones one, two, three, and four, and management area of the drinking water source protection area. These zones shall have the approval of the State of Utah, Division of Drinking Water as described in R309-600 Source Protection: Drinking Water Source Protection for Ground-Water Sources and are identified and described as follows:

1. "Zone One" is the area within a 100-foot radius from the wellhead or margin of the collection area.
2. "Zone Two" is the area within a 250-day groundwater time of travel to the wellhead or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground-water source, or the groundwater divide, whichever is closer.
3. "Zone Three" is the area within a 3-year groundwater time of travel to the wellhead or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground-water source, or the groundwater divide, whichever is closer.
4. "Zone Four" is the area within a 15-year groundwater time of travel to the wellhead or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground-water

source, or the groundwater divide, whichever is closer.

5. "Management Area" is the area outside of zone one and within a two-mile radius where the optional Two-mile Radius Delineation Procedure has been used to identify a protection area, as described in the Utah, Division of Drinking Water R309-600 Source Protection: Drinking Water Source Protection for Ground-Water Sources. This area shall be treated as for Zone 2.

In some cases, such as bedrock areas, Zones 2, 3, and 4 are overlapping due to the inability to determine time of travel. These are sensitive areas. In these cases, the zone shall be protected as for Zone 2. (Ord. 2010-11, 6-1-10)

#### D. Identification of Public Water Systems and Drinking Water Source Protection Zones

1. Utah Administrative Code R309-600 requires public water systems to submit a drinking water source protection plan to the Division of Drinking Water, for each of its groundwater sources of drinking water.

a. Within thirty (30) days following the approval of a source protection plan or amendment, each public water system in Utah County shall, at its sole cost and expense, provide the Utah County Health Department, Division of Environmental Health, with a copy of its source protection plan as approved by the Division of Drinking Water together with a map and GIS data identifying each of its groundwater sources and designating the source protection zones assigned to each of its groundwater sources in the format required by the Utah County Health Department, Division of Environmental Health.

b. Pursuant to Section 10-8-15, Utah Code Annotated, 1953 as amended, municipalities have extra-territorial jurisdiction to prevent the pollution or contamination of domestic and culinary water, including groundwater sources. Each municipality claiming extra-territorial jurisdiction, pursuant to Section 10-8-15, shall notify the Utah County Health Department, Division of Environmental Health, and specifically identify each of the areas over which it claims jurisdiction in the unincorporated area of Utah County. Municipalities adopting a source protection ordinance in compliance with Section 19-4-113, Utah Code Annotated, 1953 as amended, shall notify the Utah County Health Department, Division of Environmental Health, and specifically identify each of the areas over which it claims jurisdiction in Utah County.

c. Based upon the source protection information supplied by public water systems and municipalities as provided for herein, the Utah County Health Department, Division of Environmental Health, shall compile the available information for all recharge areas, groundwater sources, protection zones, areas designated as extra-territorial jurisdiction, and areas subject to a municipal source protection ordinance.

## 2. Drinking Water Source Protection Map.

a. The Utah County Health Department, Division of Environmental Health, shall incorporate the source protection information on a Utah County map known as the "Utah County Drinking Water Source Protection Map" identifying each groundwater source for drinking water, the source protection zones for each source, recharge area, area designated as extra-territorial jurisdiction, and the areas subject to a municipal source protection ordinance. A copy of the current Utah County Drinking Water Source Protection Map is attached as Appendix "A" and is incorporated herein by this reference.

b. Each public water system having an approved source protection plan, each municipality claiming extra-territorial jurisdiction, and each municipality adopting a source protection ordinance, shall be responsible, at its sole cost and expense, for submitting updated information to the Utah County Health Department, Division of Environmental Health.

## 3. Overlapping Protection Zones.

a. Public water systems with overlapping protection zones shall cooperate in resolving conflicts in the land management strategies contained in the applicable source protection plans. If necessary, the Division of Drinking Water shall assist with the resolution of any conflicts between source protection plans approved for the public water systems.

b. No permits or land use approvals, including, but not limited to, a subdivision approval, conditional or permitted use approval, business license or building permit shall be issued pending the resolution of any challenges to the boundaries or conflict between overlapping protection zones. In the event the challenge or conflict in overlapping protection zones cannot be resolved in 180 days, the most restrictive provision shall apply. (Ord. 2010-11, 6-1-10)

## E. Allowed Uses

The following land uses shall be allowed within drinking water source protection zones:

1. In Zones One, Two, Three, and Four, each use legally established before the effective date of this Article, and uses incidental and accessory to such use, may be continued in the same manner thereafter, provided that such use is not determined by any court of competent jurisdiction to be a nuisance under the provisions of federal, state, and/or local laws or regulations.

2. All new land uses, changes of land use, or expansions of land use, shall comply with the requirements of this Article. (Ord. 2010-11, 6-1-10)

## F. Prohibited Uses

Subject to the allowed uses, as described above, the following uses are prohibited within the following drinking water source protection zones, as shown on the Utah County Drinking Water Source Protection Zone Map:

### 1. Zone One.

All uses that fall within the definition in this Article of "pollution source" or "potential contamination source."

### 2. Zone Two.

All uses that fall within the definition in this Article of "pollution source" or "potential contamination source," unless their contaminated discharges are controlled with design standards approved by the Division of Drinking Water for Zone Two.

### 3. Zone Three.

All uses that fall within the definition in this Article of "pollution source" or "potential contamination source," unless their contaminated discharges are controlled with design standards approved by the Division of Drinking Water for Zone Three.

### 4. Zone Four.

All uses that fall within the definition in this Article of "pollution source" or "potential contamination source," unless their contaminated discharges are controlled with design standards approved by the Division of Drinking Water for Zone Four. (Ord. 2010-11, 6-1-10)

## G. Drinking Water Source Protection Requirements

Following the effective date of this Article, no building permit or other form of approval from the County to develop or use real property within the County shall be issued until the applicant establishes that the applicant's proposed development or use of real property complies with the requirements of this Article. Each such applicant shall provide to the Utah County Community Development Department a letter from the Utah County Health Department, Division of Environmental Health, certifying that the proposed use complies with the requirements of this Article.



In addition, following the effective date of this Article, no building permit or other form of approval shall be issued by any municipality to develop or use real property within the boundaries of Utah County until the applicant establishes to the issuing municipality that its proposed development or use of real property complies with the requirements of this Article. Each such applicant shall provide to the issuing municipality a letter from the Utah County Health Department, Division of Environmental Health, certifying that the proposed use complies with the requirements of this Article. (Ord. 2010-11, 6-1-10)

#### H. Alleged Overly Protective Zones

If an applicant for a permit or approval to develop or use property disagrees with the boundaries of a drinking water source protection zone, such boundaries may be disputed according to the following procedure:

1. The applicant shall submit written comments to the public drinking water system stating the reasons that the protection zone boundaries are being disputed and requesting that the public drinking water system authorize a new hydrogeologic study.
2. The public drinking water system may authorize a new hydrogeologic study at the expense of the applicant or elect to conduct a new hydrogeologic study at its own expense.
3. If the public drinking water system declines to authorize a new hydrogeologic study, the applicant may appeal this determination to the Utah County Board of Health. In the event that the Board of Health authorizes a new study, the study shall be conducted at the expense of the applicant.
4. Upon completion, the new hydrogeologic study shall be submitted to the Utah Division of Drinking Water for review.
5. If the Division of Drinking Water adopts the new hydrogeologic study and modifies the boundaries of the applicable drinking water source protection zones, the application shall be processed in accordance with the modified source protection zones. (Ord. 2010-11, 6-1-10)

#### I. Administration

This Article shall be administered by the Utah County Health Department, provided that, in addition to any other remedies, a public water system, retail water supplier, or wholesale water supplier may seek enforcement of this Article in a district court located in Utah County if the County (i) notifies the public water system, retail water supplier or wholesale water supplier within 10 days

of receiving notice of a violation of this Article that the County will not seek enforcement of this Article; or (ii) does not seek enforcement within two days of a notice of violation of this Article when the violation may cause irreparable harm to the groundwater source. (Ord. 2010-11, 6-1-10)

## CHAPTER 13.28

### DRINKING WATER SOURCE PROTECTION

SECTION:

**13.28.010: Purpose**

**13.28.020: Definitions**

**13.28.030: Establishment Of Drinking Water Source Protection Zones**

**13.28.040: Permitted Uses**

**13.28.050: Prohibited Uses**

**13.28.060: Administration**

**13.28.010: PURPOSE:**

The purpose of this chapter is to ensure the provision of a safe and sanitary drinking water supply for the city by the establishment of drinking water source protection zones surrounding wellheads for all wells and springs which are the supply source for the city water system and by the designation and regulation of property uses and conditions which may be maintained within such zones. (Ord. 2004-04, 5-19-2004, eff. 5-20-2004)

**13.28.020: DEFINITIONS:**

**DESIGN STANDARD:** A control which is implemented by a potential contamination source to prevent discharges to the ground water. Spill protection is an example of a design standard.

**LAND MANAGEMENT STRATEGIES:** Zoning and nonzoning controls which include, but are not limited to, the following: zoning and subdivision ordinances, site plan reviews, design and operating standards, source prohibitions, purchase of property and development rights, public education programs, ground water monitoring, household hazardous waste collection programs, water conservation programs, memoranda of understanding, written contract and agreements, and so forth.

**POLLUTION SOURCE:** Point source discharges of contaminants to ground water of potential discharges of all forms of "hazardous substances" which are stored in containers in excess of "applicable threshold planning quantities" as specified in SARA title III. Examples of possible pollution sources include, but are not limited to, the following: storage facilities that store the liquid forms of hazardous substances, septic tanks, drain fields, class V underground injection wells, landfills, open dumps, landfilling of sludge and septage, manure piles, salt piles, pit privies, and animal feeding operations with more than ten (10) animal units. The following clarify the definition of pollution source:

**Animal Feeding Operation:** A lot or facility where the following conditions are met: animals have been or will be stabled or confined and fed or maintained for a total of forty five (45) days or more in any twelve (12) month period, and crops, vegetation forage growth, or postharvest residues are not sustained in the normal growing season over any portion of the lot or facility. Two (2) or more animal feeding operations under common ownership are considered to be a single feeding operation if they adjoin each other, if they use a common area, or if they use a common system for the disposal of wastes.

**Animal Unit:** A unit of measurement for any animal feeding operation calculated by adding the following numbers: the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over fifty five (55) pounds multiplied by 0.1, plus the number of horses multiplied by 2.0.

**Extremely Hazardous Substances:** Those substances which are identified in section 302 (EHS) column of the "Title III Lists-Consolidated List Of Chemicals Subject To Reporting Under SARA Title III", (EPA 560/4-91-011).

**POTENTIAL CONTAMINATION SOURCE:** Any facility or site which employs an activity or procedure which may potentially contaminate ground water. A pollution source is also a PCS.

**REGULATORY AGENCY:** Any governmental agency with jurisdiction over hazardous waste as defined herein.

**SANITARY LANDFILL:** A disposal site where solid wastes, including putrescible wastes, or hazardous wastes, are disposed of on land by placing earth cover thereon.

**SEPTIC TANK/DRAIN FIELD SYSTEMS:** A system which is comprised of a septic tank and a drain field which accepts domestic wastewater from buildings or facilities for a subsurface treatment and disposal. By their design, septic tank/drain field system discharges cannot be controlled with design standards.

**WELLHEAD:** The upper terminal of a well, including adapters, ports, seals, valves and other attachments. (Ord. 2004-04, 5-19-2004, eff. 5-20-2004)

**13.28.030: ESTABLISHMENT OF DRINKING WATER SOURCE PROTECTION ZONES:**

There are hereby established use districts to be known as zones one, two, three, and four of the drinking water source protection area; identified and described in the city's drinking water source protection plans and as follows:

A. Zone one is the area within a one hundred foot (100') radius from the wellhead.

B. Zone two is the area within a two hundred fifty (250) day ground water time travel to the wellhead, the boundary of the aquifer(s) which supplies water to the ground water source, or the ground water divide, whichever is closer.

C. Zone three (waver criteria zone) is the area within a three (3) year ground water time of travel to the wellhead or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground water source, or the ground water divide, whichever is closer.

D. Zone four is the area within a fifteen (15) year ground water time of travel to the wellhead, the boundary of the aquifer(s) which supplies water to the ground water source, or the ground water divide, whichever is closer. (Ord. 2004-04, 5-19-2004, eff. 5-20-2004)

**13.28.040: PERMITTED USES:**

The following uses shall be permitted within drinking water source protection zones:

Any other open land use where any building located on the property is incidental and accessory to the primary open land use.

Any use permitted within existing agricultural, single-family residential, multi-family residential, and commercial districts so long as the use conforms to the rules and regulations of the regulatory agencies. (Ord. 2004-04, 5-19-2004, eff. 5-20-2004)

**13.28.050: PROHIBITED USES:**

The following uses or conditions shall be and are hereby prohibited within drinking water source protection zones, whether or not such use or condition may otherwise be ordinarily included as a part of a use permitted under section 13.28.040 of this chapter:

A. Zone one: The location of any uncontrolled PCS as defined herein.

B. Zone two: The location of a pollution source unless its contaminated discharges can be controlled with design standards.

C. Zones three and four: The location of a PCS unless it can be controlled through land management strategies. (Ord. 2004-04, 5-19-2004, eff. 5-20-2004)

**13.28.060: ADMINISTRATION:**

The policies and procedures for administration of any source protection zone established under this chapter, including, without limitation, those applicable to nonconforming uses, exceptions, enforcement and penalties, shall be the same as provided in the existing zoning ordinance as the same may be from time to time amended. (Ord. 2004-04, 5-19-2004, eff. 5-20-2004)

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# **APPENDIX E**

## **Implementation of Management Strategies**

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# Mapleton City Newsletter

August 2021



## Mayor's Message

Thank you to our Pioneer Days committee, City Council, sponsors, volunteers, staff, and many others who helped contribute to such a successful Pioneer Days Celebration. We enjoyed seeing many of you at our long-time traditions like the ping pong drop and firework

show, and we also appreciated the strong turnout for our tournament events and the ribbon cuttings for the pickleball courts and Old Towne Square. As we celebrated "Home, Heritage, Happiness," it was a special week filled with reminders of how supportive our community is.

Though this celebration is over, we still have some great community events taking place over the next couple months. Visit [mapleton.org](http://mapleton.org) and our social media channels (@mapletoncity on Twitter, Instagram, and Facebook) for updates about our Concerts in the Park, Farmer's Market, Moonlight Half, Scarecrow Festival, and more.

- *Mayor Dallas Hakes*

## Wastewater Treatment Plant

### Update Monthly Rate Increase

As discussed in previous newsletters, sewer rates have been planned to increase this year as part of the Spanish Fork/Mapleton Sewer Treatment Plant replacement project. This project will improve compliance with environmental regulations, increase technology and efficiency, and support planned growth for the next 20 years. This year's increase for Mapleton residents, with connected homes raised from \$32.14 to \$39.14 and non-connected homes from \$24.34 to \$31.34.



# MAPLETON

*Home, Heritage, Happiness*

## Mapleton City

125 West 400 North  
Mapleton, Utah 84664  
801.489.5655  
[info@mapleton.org](mailto:info@mapleton.org)  
[mapleton.org](http://mapleton.org)  
[@mapletoncity](https://twitter.com/mapletoncity)

## Departments

Administration	801.489.5655
Community Development	801.489.6138
Finance or Utilities	801.489.5655
Library	801.489.4833
Parks & Recreation	801.806.9114
Public Safety	801.489.9668*
Public Works	801.489.6253

\*Call 911 for emergencies.

## Mayor & City Council

**Dallas Hakes**  
*Mayor*

**City Council**  
Reid Carlson  
Jessica Egbert  
Therin Garrett  
Leslie Jones  
Jim Lundberg

## August Events Calendar

4	City Council Meeting
12	Planning Commission Meeting
18	City Council Meeting
26	Planning Commission Meeting

# Mapleton City Network Update

Over the past year and a half, creating a self-sustaining broadband/internet service in Mapleton has been one of our top projects. As you have followed the updates in the monthly newsletters and Mayor's Messages last year, the mayor and City Council have invested great time and attention to the city fiber network project. They hear your concerns and have taken them seriously. We appreciate the public comments, open participation, and positive feedback we have received about the city fiber network project.

We continue our commitment to ensure comparable rates, higher speeds, and better customer service and are pleased to share an exciting milestone update for the Mapleton City Network. The financing has been secured for the project, and we are currently working to finalize construction designs.



Keep an eye out for a new Mapleton City Network page on the city website. This will be the hub for the most up-to-date information, project updates, and answers to FAQs. If you have current questions about the project, please submit them by scanning the attached QR code or by clicking on this link: <https://bit.ly/3BvTDvw>



## Library

It's crazy to think the summer is ending and a new school year is fast approaching! With that being said, we have a couple of things to look forward to this month. First, it's time to wrap up our Summer Reading Program

event. To do so, please hand in your reading logs **no later than** Friday, August 13th. Soon thereafter, we will get the prizes ready to go and contact you to come pick them up. Remember, the top 3 readers per age group (ages 0-4, 5-8, 9-12, & 13-19) will receive a **grand prize!**

Second, our last Author Walk will be held August 9-13. You are welcome to participate any time Monday - Thursday between the hours of 9:00-1:00 and 2:00-6:00 and on Friday from 10:00-5:00. The location of each station will be posted on the windows that wrap around the city building, starting on the west side.

Thank you for taking the time to read this summer. We hope you enjoyed many wonderful books! And we wish you the best in your pursuits this upcoming school year!

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### Book Quote of the Month

*"Education is the most powerful weapon which you can use to change the world."  
-Nelson Mandela*

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**Mondays from 6PM-8:30PM  
July 26-September 27  
Mapleton City Park**

Join us to purchase or sell fresh local produce, baked goods & crafts. The Market also shares the City Park with Concerts in the Park – a great evening for everyone!

For details, find us on Facebook @MapletonFarmersMarket and at [www.mapletonfarmersmarket.com](http://www.mapletonfarmersmarket.com)



## Mapleton Seniors

### Humanitarian Fund Raiser and Dance

We sincerely thank all our Mapleton community for

coming out to support our humanitarian fundraiser and dance. It was so much fun and a great success. Our humanitarian funds are used to help support Sub for Santa, Shop with a Cop, Elementary and Secondary Schools and many worthwhile humanitarian projects within our city.

### Luncheon

There will be no luncheon in August, but we look forward to being together in September.

### Senior Gym

Are you 50+? Do you want to meet great people and improve your health? Then, come to the senior gym! Look for information on an upcoming gym open house.

The gym is open Monday-Wednesday from 8AM-11AM and 3PM-5:30PM, Thursday 8AM-11AM and 4PM- 5:30PM and Friday from 8:30AM-11AM and 3PM-5PM. Closed holidays. If you can volunteer from 3PM-4PM on Thursdays, please call Peggy Burt at 385.685.8331.

### Facebook Page

Please join our Facebook Page for all your up-to-date information on senior events, gym times and activities. Mapleton Senior Citizens Facebook Group at <https://bit.ly/31K1OnB>.

### Senior Committee

The Senior Committee is always looking for volunteers to help plan monthly activities and staff the Senior Gym. If you are interested in getting involved, join us every first Thursday of the month at 9:30AM in the Community Center's Multipurpose Room.

## Recreation

### August Events Calendar

- 1 Soccer & Flag Football Late Registration CLOSES for most leagues. \*E-mail name, gender & grade to be placed on a waiting list
- 2 Concerts in the Park & Farmers Market
- 9 Concerts in the Park & Farmers Market
- 16 Concerts in the Park & Farmers Market
- 21 MYCC Movie Night in the Park for teens
- 23 Concerts in the Park & Farmers Market
- 30 Concerts in the Park & Farmers Market

### Fall Sports

August 9<sup>th</sup> Flag Football previews at Ira Allan Sports Park. You will receive an email with times and age groups.

Watch for upcoming Information about a Fall pickleball tournament.

### Community Events

- 9.10 Moonlight Half Marathon – Join us for Mapleton’s Moonlight Half Marathon the best social distancing race around!!!

COME RUN IN THE LIGHT OF THE MOON- we will supply glow in the dark items for extra fun!!! To win, you must cross the finish line closest to midnight without crossing it too early. No timing

devices allowed. You start when you think your pace will get you to the finish line at midnight. All the proceeds go to the Mapleton Parkway Trail! There will be grab & go prizes, drinks, & food, etc...and a prize for the BEST costume!

Register at <https://www.raceentry.com/moonlight-half-marathon/race-information>



- 10.9 Scarecrow Festival – Start planning your scarecrow entry NOW! Food trucks & Family fun.
- 11.29 Tree Lighting & Wreath Festival – Lighting of the Park, Santa’s Visit, Face Painting, S’mores, & More. Buy or make a wreath NOW to donate to the Sub for Santa!





## Historical Society Neighbors and Friends

On behalf of the Mapleton Historical Society and Mapleton City, I want to say thanks to all the hard work that went into our

Pioneer Days activities. So many hours of planning and executing those activities have gone into the events and it would not have been any fun if no one had come! Thank you all for your support.

I speak for the entire Historical Society and our contractors, thanking you for coming to the Ribbon Cutting Ceremony and touring the new buildings and allowing your children to participate in the Pioneer games and contests. We had a wonderful time at the Pioneer Celebration meeting and watching all the fun the children and grown-up children were having. Our sincere thanks to the many who joined us. We were proud to show the city our beautiful Towne Square.

We are so happy to have our buildings at the Historic Town Square nearly finished and open for you all to see. It has been a great effort, yet a very fulfilling one to see each building taking on its very own personality. Without your individual donations, we would not have been able to put together such a varied view of the past and are so proud to share it with all of you. I am sure our ancestors are happy to see where their things have gone.

In case you missed the 24<sup>th</sup> weekend, we will be open for tours by reservations for the rest of the summer and fall and look forward to sharing with you all the amazing things there are to see. Please contact, Emily McLean 760-902-1278 or Mary Fojtek 801-589-0929 for times and date.

Once again, thanks to you all for your support.

## Youth City Council

July was a great month in Mapleton for the Mapleton Youth City Council (MYCC). Members and leaders of the Mapleton Youth City Council went to Springville Walmart and made birthday bags for the Community Action Services in Provo. Each bag consisted of a cake mix, frosting, a small decoration, candles, and a gift. These bags are for families who are struggling so they can still celebrate birthdays without much stress. MYCC enjoyed this activity and was happy to serve the community.

## Utah County Stormwater Coalition Reminder

For additional information  
Call 801-851-PURE (7873)



As stormwater flows over driveways, lawns, and sidewalks it picks up debris, chemicals, dirt and other pollutants. Stormwater can flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged and untreated into the waterbodies we use for swimming, fishing, and providing drinking water. Polluted runoff is the nation's greatest threat to clean water.

By practicing healthy household habits, homeowners can keep common pollutants like pesticides, pet waste grass clippings, and automotive fluids off the ground and out of the stormwater. Adopt these healthy household habits and help protect lakes, streams, rivers, wetlands and coastal waters. Remember to share the baits with your neighbors!

### Home Repair and Improvement

- Before beginning an outdoor project, locate the nearest storm drain and protect them from debris and other materials.
- Sweep up and properly dispose of construction debris such as concrete and mortar.
- Use hazardous substances like paints, solvents, and cleaners in the smallest amounts possible and follow the directions on the label. Clean up spills immediately and dispose of the waste safely. Store substances properly to avoid leaks and spills.
- Purchase and use nontoxic, biodegradable, recycled and recyclable products whenever possible.
- Clean paint brushes in a sink, not outdoors. Filter any reused paint thinner when using oil-based paints. Properly dispose of excess paints through a household hazardous waste collection program or donate unused paint to local organizations.
- Reduce the amount of paved area and increase the amount of vegetated area in your yard. Use native plants in your landscaping to reduce the need for watering during the dry periods. Consider directing downspouts away from paved surfaces onto lawns and other measures to increase infiltration and reduce polluted runoff.

### Vehicle and Garage

- Use a commercial car wash or wash your car on a lawn or other unpaved surface to minimize the amount of dirty, soapy water flowing into the storm drain and eventually into your local waterbody.
- Check your car, boat, motorcycle, and other machinery and equipment for leaks and spills. Make repairs as soon as possible. Clean up spilled fluids with an absorbent material like kitty litter or sand, and don't rinse the spills into a nearby storm drain. Remember to properly dispose of the absorbent material.
- Recycle used oil and other automotive fluids at participating service stations. Don't dump these chemicals down the storm drain or dispose of them in your trash.



<PCS Contact Name>  
<Street Address>  
Mapleton, Utah 84664

December 2, 2021

RE: Protecting Groundwater

Dear <Name>:

Mapleton City has a well located near your home or business that provides clean, high quality drinking water to the businesses and residences within our service area. Water that is pumped from the well flows through a groundwater aquifer that is located beneath this area before reaching the well. Because the soils between the ground surface and the aquifer are porous, any contaminants that are discharged on the ground or into your septic tank have the potential to seep into the groundwater aquifer and eventually contaminate the water in the well. This could in turn compromise the health of the people drinking the water.

Fortunately, there is something that we all can do to protect groundwater quality. Careful and proper handling and disposal of chemicals, fuels, oils, or other contaminants will prevent the discharge of these contaminants into the ground. Here are some easy ideas for how you can help us protect public health by protecting groundwater:

- Keep the water that runs off foundation drains, gutters, driveways, and other paved areas away from the drain field of your septic system.
- Use only a moderate amount of cleaning products and do not pour solvents or other household hazardous waste down the drains.
- Minimize your use of fertilizers, pesticides, and herbicides. Do not dispose of these items into the septic tank or down the drains.
- Garbage disposals should not be used because they tend to overload the system with solids. If you have one, you should severely limit its use.
- Don't cover the tank or drain field with concrete or asphalt and don't build over these areas.
- It is recommended that the solids that collect in your septic tank be pumped out and disposed at an approved location every three to five years.

For your reference, we have also attached an information bulletin that provides other ideas on how you can protect groundwater.

Thank you for your cooperation and support as we all work together to keep our groundwater safe and clean!

Sincerely,

Mapleton City

# Mapleton City Newsletter

April 2021



## Mayor's Message

A special thanks to each of you for your support in my recent State of the City Address. We have worked hard to prioritize our spending on infrastructure, public safety, and quality of life and provide more services and opportunities for our residents. Significant investments in critical infrastructure for 2020 included the following:

- We completed the initial phases of the Mapleton/Spanish Fork sewer treatment plant replacement, funded by an incremental increase of the sewer rate over the next several years.
- We have upgraded our pressurized irrigation pumping system, added a 16" culinary waterline on the foothill bench, and improved undersized water lines to improve culinary water pressure.
- One of my priorities as Mayor has been to work with the Mapleton Irrigation District and prominent water attorneys to find a way to keep Strawberry water in Mapleton as properties continue to develop. In June of 2018, I signed an agreement with the Irrigation Company to allow Strawberry water to be delivered to Mapleton City's irrigation pond as farmland is developed, rather than going unused. This will help ensure that Mapleton City has sufficient water to meet our future needs. I was pleased to report that, since the execution of the Agreement with the Irrigation District, the City has acquired through new development over 270 acre-feet of water that would have gone unused in past years.
- We completed a historic investment in road improvements. In 2018, we invested over \$1M in street maintenance projects; in 2020, we invested over \$1.4M. Over the past year, we also finished the Citywide comprehensive pavement maintenance program. The plan identified our road maintenance needs for the next 40 years. In 2020, we applied a treatment to over 40% of the City streets and, in 2021, we plan to treat another 30%. This fall on the City's website, each resident will see when and what treatment will be applied to each street in the City. This plan will help us stretch our maintenance dollars and ensure that the *right road* gets the *right treatment* at the *right time*.



# MAPLETON

*Home, Heritage, Happiness*

## Mapleton City

125 West 400 North  
Mapleton, Utah 84664  
801.489.5655  
info@mapleton.org  
mapleton.org  
@mapletoncity

## Departments

Administration	801.489.5655
Community Development	801.489.6138
Finance or Utilities	801.489.5655
Library	801.489.4833
Parks or Recreation	801.806.9114
Public Safety	801.489.9668*
Public Works	801.489.6253

\*Call 911 for emergencies.

## Mayor & City Council

**Dallas Hakes**  
*Mayor*

**City Council**  
Reid Carlson  
Jessica Egbert  
Therin Garrett  
Leslie Jones  
Jim Lundberg

## April Events Calendar

16-25	Spring Clean-Up
21	City Council Meeting
22	Planning Commission Meeting
23	Arbor Day Celebration

- Our public safety investments have also been significant and resulted in faster emergency response times, better protection for students and residents, and better equipment. Through the tragedy of the Ether fire last fall, we saw firsthand how quickly our public safety teams and community could mobilize in the event of a disaster.
- We ensured that our Fire & Rescue teams have the most current training and equipment. Our ambulance fleet received a much-needed upgrade last year with the CARES act purchase of a brand new 2020 Dodge ambulance. Our 1997 reserve ambulance was replaced by the donation of a 2008 Ford ambulance. We conducted two in-house volunteer fire academies and an apparatus driver operator course and partnered with the Utah Fire Rescue Academy to conduct two live fire training burns. We secured donated cars and practiced auto extrication. We sponsored eight volunteers to EMT/AEMT certification school.
- We secured funding to provide a school resource officer at our schools for the next ten years.

I also talked about Mapleton's Citizen of the Year, for which the community solicited nominations to the Springville-Mapleton Chamber of Commerce to reflect candidates that best represent the qualities that have long drawn people to our City.

We were overwhelmed with the many people who responded by highlighting the many acts of unselfish service and other positive contributions to our community by their neighbors. We are honored to recognize Peggy Burt as Mapleton's Citizen of the Year.

Peggy's friends and neighbors describe her as always helping people and checking in on them. She is recognized for the many hours she has spent, year after year, working with the seniors in our community at the senior's gym. One person noted that Peggy "feels a responsibility for her neighbors and isn't afraid to ask others to join her." Peggy is an excellent example of what our forebears knew was essential to their survival and success as a community. They needed each other. They needed to be unified. Peggy's continued acts of service to others and her desire to contribute for the community's benefit is an example to us all.

For those of you who did not have the opportunity to watch my City Address, I encourage you to visit our website at [mapleton.org](http://mapleton.org) to do so.

Mapleton is a great place to live. I thank the City Council, City Staff, the many volunteers, and each of you for the pride you take in our wonderful City. It has been an honor to serve you. We have each grown together, and we all share in our City's success!

- *Mayor Dallas Hakes*

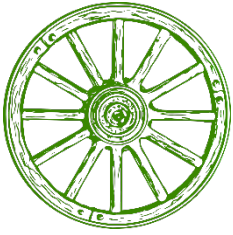


## Nebo School District Registration Opens Early

While in previous years student registration started in July, for the 2020-2021 school year, registration has already opened for current Nebo students!

As of March 22, current Nebo students be registered online through [www.nebo.edu](http://www.nebo.edu) or at each school's individual website. New-to-Nebo students may register beginning Monday, April 12.

Nebo School District registration is for students entering grades K-12. ***Please register your students for the upcoming school year right away and contact the individual school with questions.***



## Historical Society

March 20 was a cold, cloudy day, but spirits were high as 20 volunteers gathered to work on the new Historic Towne Square buildings. The saws were buzzing as the roof was being put on the Blacksmith Shop, and the trim work was installed in the Relief Society Hall. Holes were dug for sleeves, and wires pulled through them to install the wiring for the electricity and the communication system. Then in the museum, the voices of the historical committee volunteers could be heard as they selected and

completed hanging the over 100 photos that are now on display in the newly remodeled building.

It was a great time to see things coming together after a long winter of covid and waiting. Thanks to all who came to help and especially our contractors (Matt and Angie Workman, Tony Dawe, Chris Connors) and their families for all they have done and continue to do to finish this project for the whole community to enjoy! We will be forever grateful for all your time and efforts.

The photo shows the building as they are located on the park grounds, and, although you cannot see the Kendall Cabin, it is still standing next to the barn. The Relief Society Hall is the little red brick building in the front, the Barn in the back, and the Blacksmith Shop sits in the center.



Sidewalks are being installed and the landscaper is working on the grounds to get them ready for planting. Progress is going on everywhere! We have planned our open house and ribbon-cutting ceremony for the evening of July 23, which will be 120 years after the city of Mapleton was organized. What a great Pioneer Weekend we will have to celebrate this beautiful town we all call home! Please mark your calendars and invite your friends and family to join us. More details will follow in the coming months.



## Library

For those who have been participating in our Easter activity and have been collecting eggs, the last day to hand in those eggs is April 9. In exchange for the eggs, we have some fun

prizes to share with the kids!

It is also time to think about our upcoming summer events. Firstly, we are happy to announce that we will be bringing back our *Author Walk*. Beginning the week of June 1 (and every other week after that), there will be little stations set up outside where the whole family can walk to each station, learn about an author, and hand in a little questionnaire for a fun prize. More details will be forthcoming.

Secondly, this year we will hold another *Summer Reading Program...At a Distance*. Starting in May,

reading logs will be available from our outdoor brochure box (next to our dropbox). The goal is to READ, READ, READ as much as you can from May 31 - August 6. We encourage you to read as many minutes and genres as possible! All participants will receive a prize just for participating. The top three readers from each age group (0-4, 5-8, 9-12, 13+) will be awarded a grand prize. Watch for more information!

As a reminder, we are open for in-person visits! To schedule an appointment, call us at 801.489.4833 or go to [mapleton.org](http://mapleton.org) and click on the *Library Services* link.

### Book Quote of the Month

"One's mind, once stretched by a new idea, never regains its original dimensions."

-Oliver Wendell Holmes





## Mapleton Seniors

### Senior Committee

The Senior Committee is always looking for volunteers

to help plan monthly activities and staff the Senior Gym. If you are interested in getting involved, join us every first Thursday of the month at 9AM in the Community Center's Multipurpose Room. We welcome new faces and ideas!

### Luncheon

We will hold a drive-through luncheon on Thursday, April 8, at 11:30AM at the Community Center west parking lot. The menu, provided in a take-home container, will include chicken salad croissant sandwiches, chips, fruit cups, and cheesecake. Reservations are required and can be made by calling the Parks & Recreation Department at 801.806.9114 or posting on the Seniors Facebook page under the April Luncheon post. A big thank you to Wanda Whilemson for heading up our luncheon committee and enabling our drive-through pickups!

### Senior Gym

Appointments are no longer necessary to use the Senior Gym, but there is a limit on the number of machines that can be used (only the machines with a green sign may be used, enabling physical distancing to be maintained). If all the machines are in use, participants are invited to wait or come back later. Masks are still required to enter the gym, but may be removed when using the exercise equipment. The computer and reading rooms are open and the puzzle table is up again! The gym is open Monday-Thursday from 8AM-11AM and 3PM-5:30PM and Friday from 8:30AM-11AM and 3PM-5PM. We welcome Jeff Wilkins, who is the new Senior Gym Assistant to Peggy Burt. Congratulations to our Senior Gym Director, Peggy Burt, for being chosen Mapleton Citizen of the Year! Peggy devotes many hours a week to the upkeep and staffing of our Senior Gym.

### Facebook Page

For gym times and activities, please join/visit the Mapleton Senior Citizens Facebook Group at <https://bit.ly/31K1OnB>.



## Recreation

Information on community sports, events, venues, and other essential details are found online at [parksandrec.mapleton.org](http://parksandrec.mapleton.org).

### Sports Rainout Information

Rain delays will be decided at 4PM on the day of the game, and game status will be posted on the website listed above. Please check the website for game status.

### Mapleton Track and Field Day

- April 27 – 6<sup>th</sup> Grade Track Meet
- April 28 – 5<sup>th</sup> Grade Track Meet
- May 4 – 4<sup>th</sup> Grade Track Meet
- May 5 – 3<sup>rd</sup> Grade Track Meet

Rain-out dates: May 11-12. We will follow guidelines being set by the Nebo School District. This is a FREE event for all 3<sup>rd</sup>-6<sup>th</sup> graders at our Elementary Schools. Teachers will distribute and

collect registration sheets. **The DEADLINE to turn in registration to teachers is April 19.**

### Upcoming Summer Programs

- Archery
- Mapleton Youth City Day Camp
- (More to be announced!)

### Upcoming Community Events

- **April 1** – Come pick up your FREE packet of GIANT pumpkin seeds and instructions (available on the west side of the Mapleton City Building).
- **April 23** – Arbor Day Celebratio (12PM at Eagle Rock Park)
- **May 8** - Opening Day Parade
- **May 10** – Chalk the Walk
- **July 24** – Pioneer Day Celebration
- **September 10** – Moonlight Half Marathon
- **October 9** – Scarecrow Festival
- **November 29** – Wreath & Tree Lighting Festival



## Public Works

Do you treat your wastewater using a septic system? Do you know whether you treat your wastewater with a septic system? In 1995 Mapleton City began installing a public sewer system. In partnership with Spanish Fork City, we were then able to take the stress and worry out of each resident having to treat their own wastewater by providing that service. Homes constructed before 1995 were not necessarily connected at the time the public sewer system was built. Even some homes built after 1995 in certain areas of town may not be connected to the public sewer system.

New septic systems are no longer allowed in Mapleton, with very few exceptions. Homes that currently use septic systems are required by city ordinance to connect to the public sewer system when it becomes available, either through a city-sponsored expansion project or new development. Although septic systems do not present a high risk, certain public health concerns with septic systems and the maintenance and/or failure of these facilities can be a liability and headache for homeowners. We respect the right of those that chose to remain connected to their septic system when the original sewer system was constructed to continue to use their septic system. We also recognize that homes may have changed owners since then. Some residents may not even be aware that their home is connected to a septic system, or a resident may decide now is the right time to decommission their old septic system and connect to the public sewer.

If you think you may have a septic system, but you are not sure, or if you are interested in the possibility of connecting to the city sewer, please contact Public Works (801.489.6253), and we would be happy to help you! *And remember, if it is not toilet paper, human waste, or water, it is not safe to flush down your toilet!*

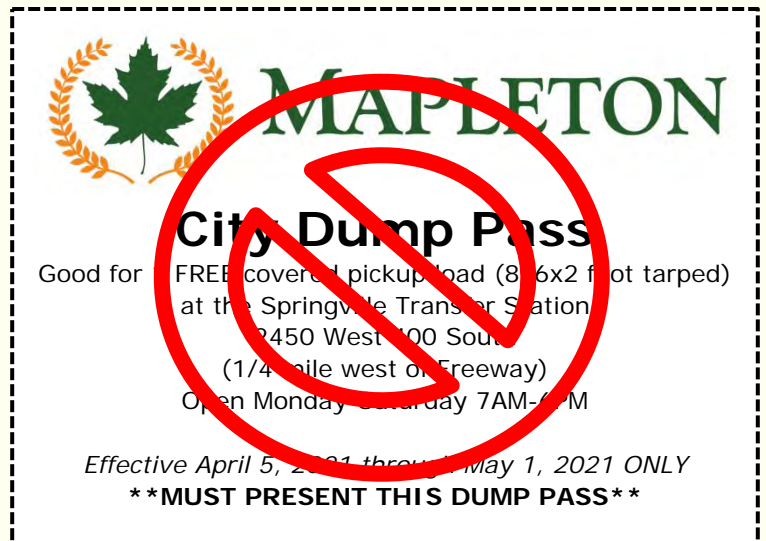
# 2021 Spring Clean-Up

## April 16-25

To help our residents with their spring clean-up, Mapleton City will provide dumpsters from April 16-25 at the southeast corner of 300 West and 400 North, west of City Hall. Please enter off 300 West. **No concrete or hazardous materials are permitted.**

The City is also providing households one free dump pass per to the Springville Transfer Station. This pass can be used anytime from April 5-May 1, 2021. If you have any questions about acceptable items, please contact Camille Brown at 801.806.9106.

Watch for additional information on city-wide clean-up projects!





# MAPLETON

## UTAH

### **Annual Drinking Water Quality Report Mapleton City 2020**

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water sources have been determined to be from ground water sources. Our water sources are Seal Well, Carnesecca Well, Westwood Well, Crowd Canyon Well, Dunham Springs, Right Hand Fork Spring and Serviceberry Springs.

The Drinking Water Source Protection Plan for Mapleton City is available for your review. It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. Our sources have been determined to have a low level of susceptibility from potential contamination. We have also developed management strategies to further protect our sources from contamination. Please contact us if you have questions or concerns about our source protection plan.

There are many connections to our water distribution system. When connections are properly installed and maintained, the concerns are very minimal. However, unapproved, and improper piping changes or connections can adversely affect not only the availability, but also the quality of the water. A cross connection may let polluted water or even chemicals mingle into the water supply system when not properly protected. This not only compromises the water quality but can also affect your health. So, what can you do? Do not make or allow improper connections at your homes. Even that unprotected garden hose lying in the puddle next to the driveway is a cross connection. The unprotected lawn sprinkler system after you have fertilized or sprayed is also a cross connection. When the cross connection is allowed to exist at your home, it will affect you and your family first. If you would like to learn more about helping to protect the quality of our water, call us for further information about ways you can help.

**We are pleased to report that our drinking water meets federal and state requirements.**

This report shows our water quality and what it means to you, our customer.

If you have any questions about this report or concerning your water utility, please contact Brad Roundy at 801-489-6253. We want our valued customers to be informed about their water utility.

If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first and third Wednesday of each month at 6:00 pm, at the Mapleton City Offices.

Mapleton City routinely monitors for constituents in our drinking water in accordance with the Federal and Utah State laws. The following table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2020. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It is important to remember that the presence of these constituents does not necessarily pose a health risk.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we have provided the following definitions:

***Non-Detects (ND)*** - laboratory analysis indicates that the constituent is not present.

***ND/Low - High*** - For water systems that have multiple sources of water, the Utah Division of Drinking Water has given water systems the option of listing the test results of the constituents in one table, instead of multiple tables. To accomplish this, the lowest and highest values detected in the multiple sources are recorded in the same space in the report table.

***Parts per million (ppm) or Milligrams per liter (mg/l)*** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

***Parts per billion (ppb) or Micrograms per liter (ug/l)*** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

***Picocuries per liter (pCi/L)*** - picocuries per liter is a measure of the radioactivity in water.

***Nephelometric Turbidity Unit (NTU)*** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

***Action Level (AL)*** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

***Treatment Technique (TT)*** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

***Maximum Contaminant Level (MCL)*** - The “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

***Maximum Contaminant Level Goal (MCLG)*** - The “Goal” (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.



**Maximum Residual Disinfectant Level (MRDL)** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Date**- Because of required sampling time frames i.e., yearly, 3 years, 4 years and 6 years, sampling dates may seem outdated.

**Waivers (W)**- Because some chemicals are not used or stored in areas around drinking water sources, some water systems have been given waivers that exempt them from having to take certain chemical samples, these waivers are also tied to Drinking Water Source Protection Plans.

<b>TEST RESULTS</b>							
Contaminant	Violation Y/N	Level Detected ND/Low- High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
<b>Microbiological Contaminants</b>							
Total Coliform Bacteria	N	0	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2020	Naturally present in the environment
E. coli	N	0	N/A	0	If a routine sample & repeat sample are total coliform positive, & one is also fecal coliform or E. coli positive	2020	Human and animal fecal waste
Turbidity	N	0.32-0.98	NTU	0	0.3	2019	Soil Runoff
<b>Inorganic Contaminants</b>							
Arsenic	N	ND-1.2	ppb	0	10	2019	Erosion of natural deposits, Runoff from orchards, Runoff from glass & electronics production wastes.
Barium	N	.034-.097	ppm	2	2	2019	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper a. 90% results b. # of sites that exceed the AL	N	a.0.101 b.0	ppm	1.3	AL=1.3	2018	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead a. 90% results b. # of sites that exceed the AL	N	a.1.4 b.0	ppb	0	AL=15	2018	Corrosion of household plumbing systems, erosion of natural deposits

Nitrate (as Nitrogen)	N	ND-3.6	ppm	10	10	2020	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	ND-6.4	ppb	50	50	2019	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	2.657-39.884	ppm	500	None	2019	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sulfate	N	6.892-101.366	ppm	1000	1000	2019	Erosion of natural deposits; discharge from refineries & factories; runoff from landfills, runoff from cropland
TDS (Total Dissolved solids)	N	172-456	ppm	2000	2000	2019	Erosion of natural deposits
<b>Radioactive Contaminants</b>							
Alpha emitters	N	ND-1.1	pCi/L	0	15	2019	Erosion of natural deposits
Combined	N	.3-.3	pCi/L	0	5	2016	Erosion of natural deposits
Radium 226	N	.27-.27	pCi/L	0	5	2016	Erosion of natural deposits
Radium 228	N	ND-.59	pCi/L	0	5	2019	Erosion of natural deposits

We constantly monitor for various constituents in the water supply to meet all regulatory requirements. In March 2020 we failed to test for coliform bacteria. Water quality may change without any visible indication due to unanticipated environmental factors. For this reason, we are required to sample for coliform bacteria monthly. This violation does not necessarily pose a health risk. We have reviewed why we failed to take the required number of samples for our routine coliform bacteria tests and have taken steps to ensure that it will not happen again.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man-made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We at Mapleton City work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

# March 2020 Newsletter

**MAYOR:**  
DALLAS HAKES

**COUNCIL MEMBERS:**  
REID CARLSON  
JESSICA EGBERT  
THERIN GARRETT  
LESLIE JONES  
JIM LUNDBERG



## Mayor's Message

### State of the City Address

In partnership with Mapleton's Senior Citizen Board please join me as I present the State of the City Address. I will review the 2019 municipal achievements and talk about current 2020 issues. This event will be held at the City's Reception Center on Thursday, March 12<sup>th</sup> starting at 12:15. Everyone is welcome. We will also be podcasting this live at the below link:

<https://www.facebook.com/Mapletoncity/>

### General Plan Update

On Thursday, February 20<sup>th</sup> the City held a public workshop to receive input and feedback on the future of our land use, parks, open spaces and recreation amenities. Those that attended received an update from the City's consultant, Landmark Design, on the data that has been collected to this point and Landmark's preliminary analysis. The group then participated in visioning and table top exercises that discussed a number of topics including the types and distribution of housing within the City, commercial zoning and uses that would be most appropriate adjacent to commercial, preferences for locations of new open space, parks and trails, and ideas for how the city may procure them. You can review the meeting presentation and notes on the project website: [www.ourmapleton.org](http://www.ourmapleton.org). Landmark Design will now begin to prepare draft plans that will be presented to the Steering Committee, Planning Commission and City Council in the coming months. We want to thank everyone that has participated to this point and look forward to providing more opportunities for community feedback as we work to finalize these vital plans.

## Community Spring Clean-Up

In efforts to help accommodate each of you with your spring clean-up, Mapleton City will provide dumpsters from April 17<sup>th</sup> through April 26<sup>th</sup>. The dumpsters will be located on the southeast corner of 300 West and 400 North (west of City Hall). Please enter off 300 West street. Do NOT drop off concrete or hazardous waste materials. There will be a dump pass in the April 2020 Newsletter that will be good from April 6<sup>th</sup> to May 2<sup>nd</sup> so be watching for that.

## Hazardous Waste Collection Day

**Saturday, April 11, 2020 from 9am-3pm**

Utah County residents with household hazardous waste items such as old gasoline, paint, fluorescent light bulbs, batteries and unused medications will be offered safe disposal of these items at a Household Hazardous waste Collection Day on Saturday, April 11<sup>th</sup>, 2020 from 9am to 3pm. The collection will take place in the west parking lot of the Provo Towne Centre Mall in Provo. For details, including a list of what will or will not be collected, please visit [www.health.utahcounty.gov/hhw/](http://www.health.utahcounty.gov/hhw/) or call 801-225-8538 (north county) or 801-489-3027 (south county).

## Fire and Rescue Blood Drive

Mapleton Fire and Rescue will host the City's first blood drive of the year on March 27<sup>th</sup> at the City Office Building from 3pm-8pm. You can register online, call 1-800-give-blood, or contact Lisa Hone at 801-369-7470 to set up your appointment. It takes less than an hour to help save lives. For those that like to do power red donations we will have a machine on sight as well. Please try and help us reach our goal.

## Recreation

For more information visit our website at

[www.mapleton.org/parksandrecreation.html](http://www.mapleton.org/parksandrecreation.html)

### Happening NOW

- Multi-Cultural Dance Class – Ages K-Adult. Class starts on Tuesday, March 3, 2020.
- New Spring Soccer LIL KIX – Ages 4-1<sup>st</sup> Grade. Season starts March 17<sup>th</sup>.
- Baseball, T-Ball and Softball – Online late registration is happening through March 15<sup>th</sup>. Ages 4-12<sup>th</sup> grade. Opening Day Parade will be May 9<sup>th</sup>.
- Women's Volleyball – Season starts March 20, 2020.

### Coming Soon

- Lacrosse – Online registration opens March 1<sup>st</sup> for 3<sup>rd</sup>-9<sup>th</sup> Grade leagues.
- Mapleton Track and Field Dates – 5<sup>th</sup> Grade is April 27<sup>th</sup>. 6<sup>th</sup> Grade is April 28<sup>th</sup>. 4<sup>th</sup> Grade is May 5<sup>th</sup> and 3<sup>rd</sup> Grade is May 6<sup>th</sup>.
- Mapleton Athletic Club – Everyone is invited to connect, learn and train. Check our website for more details to come.

### Upcoming Community Events

- March 28<sup>th</sup>: Senior Yard Sale: Community Center. More details to come.
- April 15<sup>th</sup>: How to grow a GIANT pumpkin class. Learn how to grow a GIANT pumpkin and then participate in our contest during the Scarecrow Festival in October.
- April 24<sup>th</sup>: Arbor Day Celebration. More details to come.
- May 9<sup>th</sup>: Opening Day Parade. Mapleton City Center to Ira Allan Sports Park. Opening day of T-ball, Baseball, & Softball.
- May 11<sup>th</sup>: Chalk the Walk at the Mapleton Lateral Canal. More details to come.
- July 24<sup>th</sup>: Pioneer Day Celebration. Parade, concert, fireworks and more. Further details to come.
- September 11<sup>th</sup>: Moonlight Half Marathon. Register online at [raceentry.com](http://raceentry.com) starting in February.
- Oct 10<sup>th</sup>: Scarecrow Festival. Scarecrow display, GIANT pumpkin growing contest, food trucks, games, face painting, prizes & FUN.
- November 30<sup>th</sup>: Wreath & Tree Lighting Festival at the Mapleton City Park. Lighting of the park, Santa, choir performances, food trucks. Wreath fundraiser for Sub for Santa & more!



## Senior Citizens

### Blood Pressure/Sugar Clinic

Thursday, March 12, 2020 at 10:30am at the Mapleton City Building

### Senior Luncheon

Thursday, March 12, 2020 at 11:30am. The menu will be roast beef, baked potatoes, green beans and rolls. Seniors who wish to help can bring a side or a desert to share. Variety adds to the enjoyment and fun. A \$3 donation is appreciated for those who cannot bring a dish to share. Mayor Dallas Hake will present his State of the City address at 12:15pm.

The Senior Citizens Board is always looking to add new members to our committee that plans and conducts the monthly luncheons and activities. Please call Pam Elkington for meeting time and date, or you can message us on the Mapleton Senior Citizens Group Facebook page listed below.

### Senior Gym Hours

Monday - Thursday 8am to 11am and 3pm to 5:30pm and Friday - 8:30am to 11am and 3pm to 5pm. All Mapleton city residents age 50 and up are welcome at the gym. If you have questions contact gym manager, Peggy Burt at 385-685-8331.

### Senior Yoga

Yoga class Tuesdays & Thursdays at 9:30am.

### Chuck-a-Rama

Meal tickets are available for \$1.00 each. When you dine at Chuck-a-Rama your ticket is punched and, when filled, you get a free meal. In addition, card holders get a 20% discount on each meal. Pick up your tickets either at the city front office or from committee Finance Clerk, Bob Lape.

### Senior Citizen Facebook Page

For Senior Citizen events and information visit:

<https://www.facebook.com/groups/293056947854161/>

## Library/Literacy Center

### Happy Birthday Dr. Seuss

To celebrate, come into the Library the week of March 2<sup>nd</sup>-6<sup>th</sup> for a special treat, and don't forget to check out some of his silly stories while you're at it.

### Annual Easter Party & Egg Hunt

We are hosting our annual Easter Party and Egg Hunt on Wednesday, April 1<sup>st</sup> from 4pm-5pm. With crafts, treats, games and an egg hunt to finish it all off, it's sure to be an "egg"-citing event! The deadline to sign up is Wednesday, March 25<sup>th</sup> - NO EXCEPTIONS, so be sure to "hop" in by then and sign up.

### Reading Tutor Program

Looking for a way to serve the community, or a way to help your child with his/her reading? Join Mapleton Library's Tutoring Program. We need both tutors (ages 16+) and tutees (ages 5-11). The program will be held at the Mapleton Library (125 West 400 North) on the following days and times:

- Mondays - 3pm-4pm
- Tuesdays - 3:30pm-4:30pm

You can sign up for either day, or both. If you are interested in becoming a tutor or would like to enroll your child in our program, please contact Terrilyn Simmons at 801-489-4833.

## Public Works

There are certain signs of spring we all welcome: tulips and daffodils, increased daylight, and birds returning from their winter vacation. Along with those happy signs, a less welcome sign may be flooding that can occur from winter snow melt and spring rains. Following are some tips to help minimize the potential flooding of homes and property:

- Clear snow away from the perimeter of your home's foundation.
- Clean out gutters and downspouts and ensure they are draining properly. Position or extend downspouts away from the foundation. The goal is to drain storm water at least three feet away from your home's foundation.
- Inspect the exterior foundation and your basement walls and floors. Use epoxy to fill any foundation cracks. For more serious problems, call a professional.
- If you haven't had your sewer inspected or your septic tank cleaned, spring is a good time to address these concerns. During periods of prolonged, heavy rainfall, clogged sewers and over-taxed septic tanks are disasters waiting to happen.
- If you have below-grade basement windows, install window well covers that will fasten securely to your home's foundation.
- Buy a battery-powered sump pump: Pumps are very effective at clearing water out of building basements before it reaches crisis levels. You can also rent a sump pump from a home improvement store.

## C.E.R.T.

Increase your emergency preparedness skills and volunteer to serve your community. Community Emergency Response Team (CERT) classes are starting March 10, 2020. Learn light search and rescue, first aid, teamwork and light fire suppression, among other skills. Take your emergency response skills to another level. Ages 15+, all skill levels welcome. Email [CERT@mapleton.org](mailto:CERT@mapleton.org) or text 801-380-3345 for more information.

## CPR Courses

The Mapleton Fire Department is offering Community CPR Classes at the Fire Station (305 North Main Street-West door) the third Saturday of every other month. The course is free for non-certifying students and \$45 for students who want a Basic Life Support (BLS) CPR Certification. To reserve a seat, call the Mapleton City Offices at 801-489-5655 to get on the student list.

## March 2020 City Calendar

Mar 4	6:00pm	City Council Meeting
Mar 12	6:00pm	Planning Commission Meeting
Mar 18	6:00pm	City Council Meeting
Mar 26	6:00pm	Planning Commission Meeting

Regularly scheduled City Meetings are held at the Community Center Building, 125 West 400 North.

# February 2020 Newsletter

**MAYOR:**  
DALLAS HAKES

**COUNCIL MEMBERS:**  
REID CARLSON  
JESSICA EGBERT  
THERIN GARRETT  
LESLIE JONES  
JIM LUNDBERG



## Mayor's Message

### General Plan Update

The City will be hosting a public workshop as part of our general plan update project on **Thursday, February 20<sup>th</sup> from 6pm–8pm** at City Hall. The City's consultant, Landmark Design will be presenting their draft plan alternatives, and providing opportunities for public input on the proposed alternatives. Please don't miss this opportunity to provide your feedback on the City's land use, parks and recreation vision for the future. Also, the results from the statistically valid survey are available to be viewed on the project website, [www.ourmapleton.org](http://www.ourmapleton.org). Finally, you can continue to provide feedback through our social pinpoint program, also available on the project website. We look forward to seeing you on the 20<sup>th</sup> and receiving your comments on social pinpoint.



### Broadband/High Speed Internet Survey

Would enough customers sign up for a super-fast broadband/internet service in Mapleton to make it self-sustaining? Mapleton City has hired a market research company to gauge public demand for a potential new broadband internet network. The phone survey – targeting 400 households – will be conducted by American Directions Research Group the week of the 17<sup>th</sup> of February to solicit citizen feedback on broadband/high speed internet interest within Mapleton. The survey should take only 10-12 minutes.

## Recreation

For more information visit our website at [www.mapleton.org/parksandrecreation.html](http://www.mapleton.org/parksandrecreation.html)

### Happening NOW

- VIP Adaptive Basketball – For any special needs' children, Kindergarten thru adult. Games will begin in January. The cost is \$15.00, which includes a jersey.
- Boys & Girls Basketball schedules are available on our website listed above.

### Coming Soon

- Multi-Cultural Dance Class: Online Registration opens February 1<sup>st</sup>-March 1<sup>st</sup>. Ages K – Adult. Class starts Tuesday March 3<sup>rd</sup>.
- NEW Spring Soccer: Online registration opens Feb 3<sup>rd</sup> – March 1<sup>st</sup>. Ages 4 - 1<sup>st</sup> grade.
- Women's Volleyball: Online registration opens Feb 10<sup>th</sup> - March 1<sup>st</sup>.
- Baseball, T-Ball, Softball: Online Registration opens Feb 10<sup>th</sup> - March 1<sup>st</sup>. Age 4<sup>th</sup>-12<sup>th</sup> grade. Opening Day parade May 9<sup>th</sup>.
- Lacrosse: Online registration opens March 1<sup>st</sup>. 3<sup>rd</sup>-9<sup>th</sup> grade leagues.
- Mapleton Track & Field Day Dates: 6<sup>th</sup> grade April 28<sup>th</sup>; 5<sup>th</sup> grade April 29<sup>th</sup>; 4<sup>th</sup> grade May 5<sup>th</sup>; 3<sup>rd</sup> grade May 6<sup>th</sup>.

### Upcoming Community Events

- March 28<sup>th</sup>: Senior Yard Sale: Community Center. More details to come.
- April 15<sup>th</sup>: How to grow a GIANT pumpkin class. Learn how to grow a GIANT pumpkin and then participate in our contest during the Scarecrow Festival in October.
- April 24<sup>th</sup>: Arbor Day Celebration. More details to come.
- May 9<sup>th</sup>: Opening Day Parade. Mapleton City Center to Ira Allan Sports Park. Opening day of T-ball, Baseball, & Softball.
- May 11<sup>th</sup>: Chalk the Walk at the Mapleton Lateral Canal. More details to come.
- July 24<sup>th</sup>: Pioneer Day Celebration. Parade, concert, fireworks and more. Further details to come.
- September 11<sup>th</sup>: Moonlight Half Marathon. Register online at [raceentry.com](http://raceentry.com) starting in February.
- Oct 10<sup>th</sup>: Scarecrow Festival. Scarecrow display, GIANT pumpkin growing contest, food trucks, games, face painting, prizes & FUN.
- November 30<sup>th</sup>: Wreath & Tree Lighting Festival at the Mapleton City Park. Lighting of the park, Santa, choir performances, food trucks. Wreath fundraiser for Sub for Santa & more!

## Senior Citizens

### Blood Pressure/Sugar Clinic

Thursday, February 13, 2020 at 10:30am at the Mapleton City Building

### Senior Luncheon

Thursday, February 13, 2020 at 11:30am at the Mapleton City Building. The menu will be pork tenderloin, baked potatoes and salad. Seniors who wish to help can bring a side or a desert to share. Variety adds to the enjoyment and fun. A \$3 donation is appreciated for those who cannot bring a dish to share. Watch the senior Facebook page or senior board for current information.

The Senior Citizens Board is always looking to add new members to our committee that plans and conducts the monthly luncheons and activities. You are invited to attend our committee meetings every first Wednesday of the month at 9:30am. held in the Multipurpose room of the Mapleton City Office Building.

### Senior Gym Hours

Monday - Thursday 8am to 11am and 3pm to 5:30pm and Friday - 8:30am to 11am and 3pm to 5pm. All Mapleton city residents age 50 and up are welcome at the gym. If you have questions contact gym manager, Peggy Burt at 385-685-8331.

### Senior Yoga

Yoga class Tuesdays & Thursdays at 9:30am.

### Chuck-a-Rama

Meal tickets are available for \$1.00 each. When you dine at Chuck-a-Rama your ticket is punched and, when filled, you get a free meal. In addition, card holders get a 20% discount on each meal. Pick up your tickets either at the city front office or from committee Finance Clerk, Bob Lape.

### Senior Citizen Facebook Page

For Senior Citizen events and information visit:  
<https://www.facebook.com/groups/293056947854161/>

## Pioneer Day Celebration

Mark your calendars now for the 2020 Pioneer Day Celebration which will be held on Friday, July 24, 2020. You will want to be sure to watch future Newsletters for more information about the day's events.



## Public Works

### Storm Water

Melting snow and rain are considered storm water runoff; it runs off roads, parking lots, driveways, roofs, and yards. As it flows across these surfaces, storm water picks up contaminants such as oils, salts, sediments, fertilizers, pesticides and household chemicals. Contaminated storm water flows into storm drains, ditches, and gutters, and eventually into streams, wetlands and lakes. Contaminants in storm water runoff impair water quality in streams and wetlands, and they can lead to fish kills, loss of wildlife habitat, and public health risks. Uncontrolled storm water runoff is one of the largest remaining sources of water quality impairment in the United States.

As our community grows, more land is covered with hard surfaces. This means more water reaches streams more quickly and is potentially more contaminated. Let's work together to lessen the degree of contamination and help protect local water resources.

You can also help us ease the flooding potential by keeping storm drain inlets near your property clean of debris or by reporting them to the Public Works Department at 801-489-6253.

## C.E.R.T.

Increase your emergency preparedness skills and volunteer to serve your community. Community Emergency Response Team (CERT) classes are starting March 10, 2020. Learn light search and rescue, first aid, teamwork and light fire suppression, among other skills. Take your emergency response skills to another level. Ages 15+, all skill levels welcome. Email [CERT@mapleton.org](mailto:CERT@mapleton.org) or text 801-380-3345 for more information.

## CPR Courses

The Mapleton Fire Department is offering Community CPR Classes at the Fire Station (305 North Main Street-West door) the third Saturday of every other month starting January 2020. The course is free for non-certifying students and \$45 for students who want a Basic Life Support (BLS) CPR Certification. All students will receive the same initial instruction and practice. Certifying students must stay for the entire class, which lasts approximately 3 hours. To reserve a seat, call the Mapleton City Offices at 801-489-5655 to get on the student list.

## February 2020 City Calendar

Feb 5	6:00pm	City Council Meeting
Feb 13	6:00pm	Planning Commission Meeting
Feb 17	City Offices Closed – Presidents' Day	
Feb 19	6:00pm	City Council Meeting
Feb 27	6:00pm	Planning Commission Meeting

Regularly scheduled City Meetings are held at the Community Center Building, 125 West 400 North.



**MAYOR:**  
DALLAS HAKES

**COUNCIL MEMBERS:**  
REID CARLSON  
SCOTT HANSEN  
JIM LUNDBERG  
MICHAEL NELSON  
JONATHAN REID

# June 2019 Newsletter



## Mayor's Message

For many of us, spring and summer is a busy time, but for many of our local volunteers, this is one of their busiest times of the year. I want to thank all of our great volunteers who work hard to make Mapleton a fabulous place.

During the next couple of months, we can all look forward to participating in a wide range of local summer and fall activities. Some of these activities include:

- July-August there will be the annual Concerts in the Park which are held each Monday night at 7pm at the main City Park. These events feature local bands from around the area and are free to everyone who wants to attend.
- Saturday, July 20<sup>th</sup> will be our annual Pioneer Day Celebration including our usual morning events (Parade and City Park Celebration) followed in the late afternoon with the Helicopter Ping Pong Ball Drop/bicycle give-a-way, entertainment by The Party Crashers, and of course concluding with our highly acclaimed Firework show.
- Friday, September 13<sup>th</sup> will be our annual Mapleton Moonlight Half Marathon.
- Saturday, October 12<sup>th</sup> will be our annual Scarecrow Festival.

Our goal is to provide a wide range of activities throughout the summer and fall to encourage as many residents to get involved in our unique community. Enjoy the summer and I look forward to seeing you at many of these events.

## Notice of Municipal Election

The Candidate Filing period will go through June 3, 2019 to June 7, 2019. Interested citizens may pick up a packet from the City Recorder between the hours of 8am and 5pm.

The primary election, if needed, will be held Tuesday, August 13, 2019. The general election will be held Tuesday, November 5, 2019. If you have further questions please contact Camille Brown, City Recorder, at 801-806-9106.

## Library

### Summer Reading Program

"A Universe of Stories" is ready for take-off! Come join us for our summer reading program. Please contact the library at 801-489-4833 if you haven't signed up yet.

### Annual Book Sale

Our book sale will be set up in the basement of the city office throughout the month of June. We have some great titles this year. Come early and get your favorites.

### Volunteer Reading Tutors Needed

The Mapleton Family Literacy Center needs a few volunteer reading tutors for the summer session. If you have two hours a week and would like to help a child, we'd love to have you come help out. Contact the library for more information. 801-489-4833.

## Recreation

For more information visit our website at [www.mapleton.org/parksandrecreation.html](http://www.mapleton.org/parksandrecreation.html)

### Happening Now

- Mapleton Youth City Council Summer Day Camp - June 10<sup>th</sup> – 14<sup>th</sup> from 10am-12pm
- Archery - T & TH – June 18<sup>th</sup> – July 11<sup>th</sup> (NO class July 4<sup>th</sup>)
- MMHS Dance Camp & Performance – June 24<sup>th</sup> – 26<sup>th</sup>
- Folk and Bluegrass Ensemble Camp – July 8<sup>th</sup> – 19<sup>th</sup>, M - F
- Tennis – June 4<sup>th</sup> -27<sup>th</sup>, T and Th for grades 1<sup>st</sup> -6<sup>th</sup>

### Ongoing Classes

- Yoga - SENIOR/BEGINNING YOGA - Jazzercise

### Coming Soon

- Open July 1st - Flag Football and Soccer online registration will begin.

### Trail Rangers

Volunteers Wanted to help with Maintenance & Security on the Mapleton Parkway Trail!!! Must be over 21 yrs. of age. Please contact the City Recorder for more information.

## Public Works

### *USEFUL TIPS TO REDUCE STORMWATER POLLUTION*

#### Gutters, Sidewalks and Curbs

Keep sidewalks, curbs, and gutters around your property clean by sweeping up debris and disposing of it in the trash prior to hosing with plain water.

#### Soil & Debris

Control soil erosion on your property by planting ground cover or mulching exposed areas. Cover piles of soil, sand or gravel to protect them from rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.

#### Yard & Lawn Trimmings

Sweep up grass clipping, fallen leaves, fruits and shrub trimming and keep them out of the storm drain system. Do not blow or hose yard waste onto the street or into storm drains. Use fallen leaves as mulch or for composting.

#### Pet Waste

Bring a bag, pick it up and dispose of it properly, in the toilet or trash. Do not rinse pet waste down the sidewalks or curbs into a storm drain.

#### Pesticides & Fertilizers

Read the product label and use only as directed. Store in a covered area in sealed, waterproof containers. Be careful when applying make sure no pesticides and fertilizers get in or around a storm drain.

#### Car Washing

Use a commercial car wash facility whenever possible. Their water is recycled or treated before discharged to the sanitary sewer system. If using a commercial facility is not possible, wash the car on gravel, grass, or other areas able to absorb the wash water.

*TO REPORT ILLEGAL DUMPING CALL 801-489-6253*



# Senior Citizens

## Blood Pressure/Sugar Clinic and Senior Luncheon

The Blood Pressure/Blood Sugar Clinic will be on Thursday, June 13th at 10:30am at Mapleton City Park, with the Senior Luncheon to follow at 11:30am. The Menu will be BBQ Hamburgers, corn on the cob, baked beans, green salad, watermelon and homemade ice cream. Seniors who wish to help can bring a side dish or dessert to share. Variety adds to the enjoyment and fun. A \$3 donation is appreciated for those who can't bring a dish to share. Our activity will be BINGO! Come join the fun and bring a senior friend.

## Senior Gym Hours

Monday - Thursday 8am to 11am and 3pm to 5:30pm and Friday - 8:30am to 11am and 3pm to 5pm. All Mapleton city residents age 50 and up are welcome at the gym. If you have questions contact gym manager, Peggy Burt at 385-685-8331.

## Senior Yoga

Yoga class Tuesdays & Thursdays at 9:30am.

## Chuck-a-Rama

Meal tickets are available for \$1.00 each. When you dine at Chuck-a-Rama your ticket is punched and, when filled, you get a free meal. In addition, card holders get a 15% discount on each meal. Pick up your tickets either at the city front office or from committee Finance Clerk, Bob Lape.

## Senior Citizen Facebook Page

There is a Mapleton Senior Citizens Group Facebook page that has the Gym hours, reminders about the Senior Luncheon and activities and pictures.

<https://www.facebook.com/groups/293056947854161/>

# Mapleton Youth City Council

This month the Mapleton Youth City Council helped *Chalk the Walk*, decorating the bike path with amazing chalk art. On Arbor Day we spoke to the first grades of Mapleton Elementary who had a special visit from a funny squirrel. We have also begun planning for future events. It's not too late to sign up for the Kid's Camp which will be held from 10am to 12pm June 10th through 14th. Your kids can travel back to the Jurassic era, become royalty in the medieval times, see cowboys in the west, rock it in the 60's and take a splash into the future. Sign up, for only \$45 a child, at [www.mapleton.org](http://www.mapleton.org) today and follow us on Instagram at @mapleton\_youth\_city\_council.

# Public Safety

With warmer weather and school letting out for the summer we are asking our residents to please slow down and obey the posted speed limits. You will see our speed trailer throughout the city to help residents see how fast they are going in relation to the posted speed limit. Officers will continue to enforce speeding violations in our community. Please be observance of joggers and bicyclist on the road, as well as children playing or riding bikes, scooters and skateboards. Slow down and be more cautious while driving. The Police Department has a UTV that we plan to use as we patrol the trail system and roadways in our community. Officers will be stopping dirt bikes being operated on our roadways in violation of law. Please make other arrangements to get to a legal place to ride. Also, no motorized vehicles are allowed on our Parkway Trail. Violations will be enforced.

## Contact Numbers

Mayor:	806-9106	Library:	489-4833
City Council:	806-9106	Public Works:	489-6253
City Administration:	806-9104	Emergency:	911
Community Development:	489-6138	Dispatch Police:	489-9421
Building Inspection:	489-6138	Fire & Ambulance:	489-9421
Court:	489-7445	Non-emergency:	489-9668
Recreation:	806-9114	Newsletter:	806-9109
Recreation Hotline:	367-5069	Senior Citizens:	806-9128
City Recorder:	806-9106	Main Line/Utilities:	489-5655

# Mapleton Historic Committee

Join the community for a fundraising event at the Mapleton Historic Town Square Celebration on Saturday, September 7th from 4pm-8pm at the Mapleton City Park.

# Mapleton Fire Department

The spring open burn period in Mapleton has ended. The next open burn period will be September 15th through November 15th. Visit [www.air.utah.gov](http://www.air.utah.gov) for more information.

The Mapleton City Fire Department is looking for citizens who want to serve their community and be part of our Fire Family! Applications are being accepted for Volunteer Fire fighter and Volunteer EMT, AEMT, and Paramedic positions. We have flexible shifts (days, nights, weekends, and even opportunities to respond from home). Mapleton offers free training, uniforms, and volunteers receive a nominal fee. If you have Fire experience and advanced Fire certifications we also have advanced Fire volunteer positions available. Contact Chief Nick Glasgow, at [nglasgow@mapleton.org](mailto:nglasgow@mapleton.org) to talk about how you can serve Mapleton.

Your Mapleton Fire Fighters have been training and gearing up for wildfires - is your home ready?

**HOME IGNITION ZONE CHECKLIST**

**SIMPLE STEPS FROM ROOF TO FOUNDATION TO MAKE A HOME SAFER FROM EMBERS AND RADIANT HEAT**

- Clean roofs and gutters of dead leaves, debris and pine needles that could catch embers
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration
- Reduce embers that could pass through vents in the eaves by installing 1/8 inch metal mesh screening
- Clean debris from exterior attic vents and install 1/8 inch metal mesh screening to reduce embers
- Repair or replace damaged or loose window screens and any broken windows
- Screen or box-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating
- Move any flammable material away from wall exteriors - mulch, flammable plants, leaves and needles, firewood piles - anything that can burn
- Remove anything stored underneath decks or porches

**VISIT FIREWISE.ORG FOR MORE DETAILS**

Image by NFPA, with funding from USDA Forest Service

# June 2019 City Calendar

June 5	7:00pm	City Council Meeting
June 13	6:00pm	Planning Commission Meeting
June 19	7:00pm	City Council Meeting
June 27	6:00pm	Planning Commission Meeting

Regularly scheduled City Meetings are held at the Community Center Building, 125 West 400 North.

# March 2019 Newsletter

**MAYOR:**  
DALLAS HAKES

**COUNCIL MEMBERS:**  
REID CARLSON  
SCOTT HANSEN  
JIM LUNDBERG  
MICHAEL NELSON  
JONATHAN REID



## Mayor's Message

### Public Open House

Mapleton City will be hosting a Public Open House at City Hall on Wednesday, March 20<sup>th</sup> from 4:30pm to 7pm. This event is an opportunity for our community to come together to say hello, meet members of our City staff, and learn more about our various projects. For those of you who are already familiar with our projects, it's a chance to get updates. For those who are unfamiliar, it's an opportunity to see what is happening within our community. It's important to us that each of you provide feedback so that future decisions reflect our communities interest.

Some of the main talking points will include future developments, our road maintenance program, our water and sewer master plans, current/future parks and recreation programs, etc. I look forward to seeing you there!

## Public Safety

### Everbridge Notification System

Mapleton City is using the Everbridge Notification System to notify citizens of upcoming special events or emergencies. If you would like to sign up to receive notification, please visit [Mapleton.org](http://Mapleton.org). On the home page you will find a "Citizen Alert" button. This is where you will add your information to the system so that you can start receiving notification. If you already have a login, you can add and update your information on this system as well.

### Crossing Guard

Mapleton Police Department is still taking applications for an On-Call Crossing Guard. If you are interested in this position, please fill out an application and take it to the Mapleton Police Department at 305 North Main Street. If you have any questions about the job, please contact the Police Department at 801-491-8048.

## Community Cleanup

### April 27, 2019 from 9am-12pm

The Mapleton Hands to Hearts will be sponsoring a Community Cleanup on Saturday, April 27<sup>th</sup> from 9am-12pm. Check-in will be at the Mapleton City Park West Pavilion at 9am. Visit [www.justserve.org](http://www.justserve.org) to sign up.



## Recreation

For more information visit our website at [www.mapleton.org/parksandrecreation.html](http://www.mapleton.org/parksandrecreation.html)

### Save the Date:

- April 13<sup>th</sup>: Senior Yard Sale
- April 26<sup>th</sup>: Arbor Day Celebration at Mapleton City Park
- April-May: Track & Field Days (watch for forms coming from your child's school)
- May 6<sup>th</sup>: Chalk the Walk along Mapleton Trail
- May 11<sup>th</sup>: Baseball/Softball Opening Day Parade
- July 20<sup>th</sup>: Pioneer Day Celebration
- September 13<sup>th</sup>: Moonlight Half Marathon
- October 12<sup>th</sup>: Scarecrow Festival and GIANT pumpkin growing contest
- December 2<sup>nd</sup>: Tree Lighting Festival, Santa, Lights, Wreaths and more!

### Happening Now

- Women's Volleyball – Registration through March 21<sup>st</sup>
- Baseball, T-Ball & Softball – Registration through March 21<sup>st</sup>
- Lacrosse – Registration opens March 1<sup>st</sup>
- Women's Volleyball – Season begins in March

## Fire Department

### Fire Safety for People with Disabilities

Millions of Americans live with physical and mental disabilities. It is important to know your risk and build your fire prevention plans around your abilities.

- Have smoke alarms on every level of your home, inside bedrooms and outside sleeping areas. Interconnect your alarms, so when one sounds, they all sound.
- If you are deaf or hard of hearing, use smoke alarms with a vibrating pad, flashing light or strobe light. These accessories start when your alarm sounds.
- Test your alarms every month.
- Plan your escape around your abilities:
- Know two ways out of every room.
- If possible, live near an exit.
- You'll be safest on the ground floor if you live in an apartment building.
- If you live in a multistory home, sleep on the first floor.
- Being on the ground floor and near an exit will make your escape easier.

For more information and free resources visit [www.usfa.fema.gov](http://www.usfa.fema.gov).



## Senior Citizens

### Blood Pressure/Sugar Clinic and Senior Luncheon

The Senior Citizen Blood Pressure/Blood Sugar Clinic will be on Thursday, March 14th at 10:30am with the Senior Luncheon to follow at 11:30am at the City Office Building. The menu will be Corned Beef and Cabbage with carrots and Pistachio pudding. Seniors who wish to help can bring a side dish or dessert to share. Variety adds to the enjoyment and fun. A \$3 donation is appreciated for those who can't bring a dish to share. Nick Glasgow, our new Fire Chief, will be discussing fire safety in and around our homes and demonstrate how to properly use a fire extinguisher. Invite a senior friend to the luncheon and presentation. Senior activities are for those 50 and older.

### Senior Yard Sale

The Senior Yard Sale will be Saturday, March 23, 2019 from 8am-2pm. A white trailer will be parked on the west side of the City Offices the week of March 18<sup>th</sup>-22<sup>nd</sup> to drop off your donations. Proceeds from the sale will go to Humanitarian Projects. Last year, the local Elementary Schools were recipients of money raised from this yard sale.

### Senior Gym

Monday - Thursday 8am to 11am and 3pm to 5:30pm.  
Friday - 8:30am to 11am and 3pm to 5pm. All Mapleton city residents age 50 and up are welcome at the gym. If you have questions contact gym manager, Peggy Burt at 385-685-8331.

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### Senior Citizen Facebook Page

There is a Mapleton Senior Citizens Group Facebook page that has the Gym hours, reminders about the Senior Luncheon and activities and pictures.

<https://www.facebook.com/groups/293056947854161/>

## Mapleton Chorale

The Mapleton Chorale, an auditioned choir of 70 voices based in Mapleton, is pleased to announce that it is returning home to the Community Center for its Thursday evening rehearsal location. Residents are welcome to come and enjoy uplifting, high quality music in a wonderful setting. The Chorale is recognized as one of the premier choral ensembles in the State.

## Contact Numbers

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City Council:	806-9106	Public Works:	489-6253
City Administration:	806-9104	Emergency:	911
Community Development:	489-6138	Dispatch Police:	489-9421
Building Inspection:	489-6138	Fire & Ambulance:	489-9421
Court:	489-7445	Non-emergency:	489-9668
Recreation:	806-9114	Newsletter:	806-9109
Recreation Hotline:	367-5069	Senior Citizens:	806-9128
City Recorder:	806-9106	Main Line/Utilities:	489-5655

## Public Works

### What is Storm Water Runoff & why should we care?

Melting snow and rain are considered storm water runoff; it runs off roads, parking lots, driveways, roofs, and yards. As it flows across these surfaces, storm water picks up contaminants such as oils, salts, sediments, fertilizers, pesticides and household chemicals. Contaminated storm water flows into storm drains, ditches, and gutters, and eventually into streams, wetlands and lakes. Contaminants in storm water runoff impair water quality in streams and wetlands, and they can lead to fish kills, loss of wildlife habitat, and public health risks. Uncontrolled storm water runoff is one of the largest remaining sources of water quality impairment in the United States.

As our community grows, more land is covered with hard surfaces. This means more water reaches streams more quickly and is potentially more contaminated. Let's work together to lessen the degree of contamination and help protect local water resources.

You can also help us ease the flooding potential by keeping storm drain inlets near your property clean of debris or by reporting them to the Public Works Department at 801-489-6253.

## Hazardous Waste Collection Day

### Saturday, April 13, 2019 from 9am-3pm

Utah County residents with household hazardous waste items such as old gasoline, paint, fluorescent light bulbs, batteries and unused medications will be offered safe disposal of these items at a Household Hazardous Waste Collection Day on Saturday, April 13<sup>th</sup> from 9am-3pm. The collection will take place in the west parking lot of the Provo Towne Centre Mall in Provo. For details, including a list of what will or will not be collected, please visit [www.utahcountyonline.org/dept/health/hhw/](http://www.utahcountyonline.org/dept/health/hhw/) or call 801-489-3027.



## March 2019 City Calendar

March 6	7:00pm	City Council Meeting
March 14	6:00pm	Planning Commission Meeting
March 20	4:30pm	Public Open House
March 20	7:00pm	City Council Meeting
March 28	6:00pm	Planning Commission Meeting
Regular scheduled City Meetings are held at the Community Center Building, 125 West 400 North.		

# October 2018 Newsletter

**MAYOR:**  
DALLAS HAKES

**COUNCIL MEMBERS:**  
REID CARLSON  
SCOTT HANSEN  
JIM LUNDBERG  
MICHAEL NELSON  
JONATHAN REID



## Utah County Vaccine Clinic

**Monday, October 8, 2018 from 1pm-4pm**

The Utah County Health Department will be at the Mapleton City Offices giving flu shots, and other vaccines, on Monday, October 8<sup>th</sup> from 1pm-4pm. You will not pay anything for the shot and your insurance will ONLY be billed for the cost of the vaccine and supplies. Make sure to bring your insurance card.

## Public Safety

- As new construction continues to grow, so does the opportunity for crimes of opportunity. Please contact the Police Department at 801-489-9421 when you see anything or anyone that appears suspicious or out of place. We are working 24/7 and any tips to help us stay proactive and keep the crime rate low is welcome.
- We often locate dogs running at large and take them to the South Utah Valley Animal Shelter after a short time if an owner is not located.
- We recently had a surplus auction where we sold many found bicycles and tools that are turned into the Police Department and no owners were located. October is the time to begin to prepare for winter parking, which begins on November 15<sup>th</sup>.

## Fire Department

### Halloween

We would like to remind everyone that we will be passing out candy at the fire station the night of Halloween. Please stop by and say hello. HAPPY HALLOWEEN from the Mapleton Fire Department.

### Utah County Open Burn

The Utah County Open burn is taking place now through October 30<sup>th</sup>. Remember you must apply for a burn permit prior to burning. You can do this by following the link on our website at [www.mapleton.org](http://www.mapleton.org).

### Thank You

We want to also thank everyone for their continued support donations given to not only the Mapleton Fire Department, but all the other firefighters battling both the Bald Mountain and Pole Creek Fires, THANK YOU!

## Community Fall Cleanup

**Saturday, October 27<sup>th</sup> from 9am-12pm**

Meet at the West Pavilion of Mapleton City Park to check in for community projects! Bring your leaf rakes and other yard tools! Community Lunch will be served in the park at 12pm. Mapleton Emergency Management is joining us to practice our city wide emergency response. All kinds of service opportunities! Sign up at [www.justserve.org](http://www.justserve.org). All community members are welcome. This is a *Mapleton Hands to Hearts* sponsored event. For questions contact Michelle Estes at 801-885-8223.



## Public Works

### Tips for Clean Water

1. Keep sidewalks, curbs, and gutters around your property clean by sweeping up debris and disposing of it in the trash prior to hosing with plain water.
2. Control soil erosion on your property by planting ground cover or mulching exposed areas. Cover piles of soil, sand or gravel to protect them from rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.
3. Sweep up grass clippings, fallen leaves, fruits and shrub trimming and keep them out of the storm drain system. Do not blow or hose yard waste onto the street or into storm drains. Use fallen leaves as mulch or for composting.

### Why Does It Matter?

Polluted water that enters your storm drain (the grate in the street curb that collects water runoff) does not get treated, and instead flows directly into local water bodies where it can harm aquatic life and habitats, contaminate drinking water supplies and recreational waterways, and lessen aesthetic value. To report illegal dumping call 801-489-6253.

### Water Efficiency

The Utah Division of Water Resources is engaged in a study to determine water efficiency potential by region. The result of this study will be new regional and statewide water efficiency goals. Our community input is an important part of this process. Please fill out the following survey to help us gain the regional context needed.

<https://www.surveymonkey.com/r/localgoals>

## Library & Literacy Center

**Halloween Bash – October 29<sup>th</sup> from 5:30pm-7pm**

Happy Halloween! Our super fun, creepy-cool HALLOWEEN BASH will be held on October 29<sup>th</sup> from 5:30pm-7pm. Reading calendars are available in the library. The more you read, the more tickets you will earn for the party!!! Please sign up by October 19<sup>th</sup> – NO EXCEPTIONS.

### Story Time

Story time meets every Tuesday morning at 10:30am in the basement of the library. Plan to come and have fun with some new friends.

### Volunteer Tutors Needed

The Mapleton Family Literacy Center needs volunteer tutors. Please contact Kallie Jackson at 801-489-4833, [kjackson@mapleton.org](mailto:kjackson@mapleton.org), or stop by the library for more information.



# Senior Citizens

## Blood Pressure/Sugar Clinic and Senior Luncheon

Thursday, October 11<sup>th</sup> at 10:30am will be the Blood Pressure/Sugar Clinic. The Senior luncheon will take place that day at 11:30am at the City Building. The menu will be spaghetti and breadsticks. Seniors who wish to contribute can bring a salad, side or a dessert to share. Variety adds to the enjoyment and fun. A \$3 donation is welcomed from those who cannot bring a side dish to share. Matt Stewart, from Timpanogos Financial Advisors, will talk about the key changes of the new Tax Act. There are changes and deductions that you need to be informed about to make the most of your tax decisions.

## Senior Gym

Monday - Thursday 8am to 11am and 3pm to 5:30pm. Friday - 8:30am to 11am and 3pm to 5pm. All Mapleton city residents age 50 and up are welcome at the gym. If you have questions contact gym manager, Peggy Burt at 385-685-8331.

## Senior Yoga

Yoga class Tuesdays & Thursdays at 9:30am.

## Zumba Class

Fridays at 10am in Mapleton City's Multipurpose room.

## Senior Art Painting Group

Monday 12:30pm to 3:30pm. Mapleton City provides the easels. Please bring your own supplies.

## Chuck-a-Rama

Meal tickets are available at \$1.00 each. When you dine at Chuck-a-Rama your ticket is punched and, when filled, you get a free meal. In addition, card holders get a 15% discount on each meal. Pick up your tickets either at the city front office or from committee Finance Clerk, Bob Lape.

## Senior Citizen Facebook Page

There is a Mapleton Senior Citizens Group Facebook page that has the Gym hours, reminders about the Senior Luncheon and activities and pictures.

<https://www.facebook.com/groups/293056947854161/>

# Senior Health & Wellness Fair

## Thursday, October 11, 2018 from 9am-1pm

Mountainland is offering a FREE Senior Health & Wellness Fair for all seniors in Utah County on Thursday, October 11<sup>th</sup> from 9am-1pm at the Provo Rec Center (320 W. 500 N. Provo).

Free health screenings, adult immunizations, shred truck, door prizes and more. Light breakfast and lunch will be served. For more information call 801-229-3804 or visit our website below:

[www.mountainland.org/health](http://www.mountainland.org/health).



## Contact Numbers

Mayor:	806-9106	Library:	489-4833
City Council:	806-9106	Public Works:	489-6253
City Administration:	806-9104	Emergency:	911
Community Development:	489-6138	Dispatch Police:	489-9421
Building Inspection:	489-6138	Fire & Ambulance:	489-9421
Court:	489-7445	Non-emergency:	489-9668
Recreation:	806-9114	Newsletter:	806-9109
Recreation Hotline:	367-5069	Senior Citizens:	806-9128
City Recorder:	806-9106	Main Line/Utilities:	489-5655

# Recreation

For more information, or to register for sports or programs available in our community, visit

[www.mapleton.org/parksandrecreation.html](http://www.mapleton.org/parksandrecreation.html).

Don't forget to follow us on our Facebook page

<https://www.facebook.com/mapletoncityparksandrecreation/>

Follow us on Instagram - @mapletonparksandrec

## Happening Now

- Volleyball Registration 3<sup>rd</sup> -9<sup>th</sup> grade - Register online BEFORE October 10<sup>th</sup>. Please see website for more information.

## Coming Soon

- Boys & Girls Basketball Grades 1<sup>st</sup>-12<sup>th</sup> registration opens Oct. 15<sup>th</sup> - after November 5<sup>th</sup> a late fee will be added.
- Mapleton City Wrestling Registration happening online.

## Community Events

- Monday, October 8<sup>th</sup>: Community Pumpkin Night. Bring your family and join us for at the Pumpkin Patch at 620 West Maple Street (behind the Mapleton Cemetery) - 2 pumpkins per family - additional pumpkins will be \$5 each.
- Saturday, October 13<sup>th</sup>: Scarecrow Spectacular – Scarecrows, food & fun. Decorate and enter your scarecrow to win prizes or advertise your business. Come vote for your favorite scarecrow starting at 3pm. Don't forget about the GIANT pumpkin growing contest and come guess the GREAT PUMPKIN's weight!
- Saturday, October 27<sup>th</sup>: Community Day of Service.
- Monday, December 3<sup>rd</sup>: Tree Lighting & Wreath Festival – Start planning your wreaths now to donate for Mapleton's Sub for Santa. Enjoy Santa, s'mores & more!

## Referees Needed

If you'd like to be a referee please send an e-mail to [parksandrec@mapleton.org](mailto:parksandrec@mapleton.org); include your age, any playing or previous refereeing experience, and a contact number.

# Mapleton Chorale

The Mapleton Chorale, an auditioned choir of 70 voices based in Mapleton, is pleased to announce that it is returning home to the Community Center for its Thursday evening rehearsal location. The choir is directed by Patrick Tatman, who has decided to open the rehearsals for residents and friends to quietly observe. Rehearsals are Thursday evenings from 7:30pm-9:30pm and can be accessed through the west doors of the Community Center. Residents are welcome to come and enjoy uplifting, high quality music in a wonderful setting. The Chorale is celebrating its 25<sup>th</sup> Anniversary Season and is recognized as one of the premier choral ensembles in the state.

# Mapleton History

## Mapleton Historical Books

The Mapleton Historical Committee has books for sale at the City Offices in the Community Development Department foyer.

# October 2018 City Calendar

Oct 3	7:00pm	City Council Meeting
Oct 11	6:30pm	Planning Commission Meeting
Oct 13	3:00pm	Scarecrow Spectacular
Oct 17	7:00pm	City Council Meeting
Oct 25	6:30pm	Planning Commission Meeting
Oct 29	5:30pm	Library Halloween Bash

Regular scheduled City Meetings are held at the Community Center Building, 125 West 400 North.

# March 2018 Newsletter

**MAYOR:**  
DALLAS HAKES

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REID CARLSON  
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## Flood Maps

The Federal Emergency Management Agency (FEMA) in cooperation with the State of Utah Division of Emergency Management has prepared preliminary Flood Insurance Rate Maps (FIRMs) for review and comment. A FIRM is an official community map on which FEMA delineates both special flood management hazard areas and risk premium zones for the applicable community. These maps are used to help mitigate the effects of potential flooding in the area. The FIRM is also used to determine eligibility for the National Flood Insurance Program (NFIP) which provides protection for property owners from potential losses due to flooding.

A Public Open House will be held on March 21, 2018 at the Springville Civic Center from 6:00pm – 8:00pm where the revisions to the FIRM will be presented and public comment solicited. Digital copies of the FIRM are available online at the below website:

[www.fema.gov/preliminaryfloodhazarddata/](http://www.fema.gov/preliminaryfloodhazarddata/).

More information about the NFIP program can be found at the below website:

[www.fema.gov/national-flood-insurance-program](http://www.fema.gov/national-flood-insurance-program).

## Library/Literacy Center

Happy spring! We are excited to announce our annual Easter Party at the library. It will be held on March 21<sup>st</sup> at 5pm. Come join us for an Easter egg hunt, prizes and fun activities. Please call or sign up at the library by March 16<sup>th</sup> if you plan to attend.

We love our story time kids. Come join them every Tuesday at 10:30am.

We are continuing to receive new items in our library. Come check out a new book.

## Utility Bill

### AutoPay

Not enrolled in AutoPay? Take the next step, and go AutoPay. You'll save even more time and enjoy greater:

- **Convenience:**
  - Your utility bill is paid automatically, securely, and on time.
- **Peace of mind:**
  - Never worry about finding the bill or forgetting to pay. Always pays on time.

Setup is fast, easy, and free. Do it now by calling 833-896-9595.

## Recreation

For more information, or to register for sports or programs available in our community, visit [www.mapleton.org/parksandrecreation.html](http://www.mapleton.org/parksandrecreation.html).

Don't forget to follow us on our Facebook page <https://www.facebook.com/mapletoncityparksandrecreation/>.

### Happening Now

- Register now for Polynesian Dance Classes. Classes start Tuesday, March 27<sup>th</sup> – May 12<sup>th</sup> with a performance on May 19<sup>th</sup>.
- Women's Volleyball
  - Registration opens Feb 1st – March 20<sup>th</sup>. League begins March 21<sup>st</sup>.
- T-ball, Baseball & Softball
  - Registration opens Feb 14<sup>th</sup> – March 14<sup>th</sup>.
  - After March 14<sup>th</sup> a \$10 late fee will be added.
- LACROSSE registration begins March 14<sup>th</sup>.

### Mapleton Track and Field Day

This is a FREE event for all 3<sup>rd</sup>-6<sup>th</sup> graders at Mapleton, Hobble Creek, Maple Ridge and Sierra Bonita Elementary schools. Registration sheets will be coming home this month with your students. CHECK THEIR BACKPACKS! This registration sheet MUST be turned into your child's teacher for them to participate.

### Summer Programs

Watch for upcoming Summer Programs. Registration will begin soon.

### Save the Date

- Friday, April 27<sup>th</sup>: Arbor Day – Mapleton City Park
- Saturday, July 21<sup>st</sup>: Pioneer Day Celebration – Welcome *THE SALAMANDERS* to the party.
- Friday, September 21<sup>st</sup> – Moonlight Half Marathon.
- Saturday, Oct 13<sup>th</sup>: Scarecrow Festival and GIANT pumpkin growing contest.
- Monday, December 3<sup>rd</sup> – Tree Lighting Festival – Santa, s'mores & more.

### Ongoing Classes

- Yoga and Senior Yoga, Jazzercise and a Raw Foods Class on the 2<sup>nd</sup> Saturday of the Month.

### Fundraising Opportunity

If your team or group is interested in doing a fundraising dinner at a concert in the park this summer please contact Sharee Killpack at 801-636-0396 or via email at [shareekillpack@gmail.com](mailto:shareekillpack@gmail.com). We hope to have a fundraising dinner provided for each concert on Monday evenings at 7pm, provided by local Mapleton groups and their school or sports or other groups. Unfortunately, we cannot allow individual fundraisers.



## Senior Citizens

### Blood Pressure/Blood Sugar Clinic

Thursday, March 8th at 10:30am.

### Senior Luncheon

Thursday, March 8th at 11:30am at the City Building. The menu will be Mexican Casserole with chips, salsa and guacamole. Seniors who wish to contribute can bring a salad, a side or dessert to share. Variety adds to the enjoyment and fun. A \$3 donation is welcomed from those who cannot bring a side dish to share. Mapleton Police will be doing a presentation on gun safety and how to protect your home.

### Senior Gym

Monday - Thursday 8am to 11am and 3pm to 5:30pm. Friday - 8:30am to 11am and 3 to 5pm. All Mapleton city residents age 50 and up are welcome at the gym. If you have questions contact gym manager, Peggy Burt at 385-685-8331.

### Senior Yoga

Yoga class Tuesdays & Thursdays at 9:30am.

### Zumba Class

Fridays at 10am in Mapleton City's Multipurpose room.

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Monday 12:30pm to 3:30pm. Mapleton City provides the easels. Please bring your own supplies.

### Chuck-a-Rama

Meal tickets are available at \$1.00 each. When you dine at Chuck-a-Rama your ticket is punched and, when filled, you get a free meal. In addition, card holders get a 15% discount on each meal. Pick up your tickets either at the city front office or from committee Finance Clerk, Bob Lape.

### Senior Yard & Bake Sale

Our annual senior yard and bake sale will be on Saturday, March 24<sup>th</sup> from 8am-1:30pm at the Mapleton City Building. Donations of baked goods, clothes and household items will be accepted all day on Friday, March 23<sup>rd</sup> in the Multipurpose Room on the west side of the building. Proceeds to benefit Humanitarian Projects. Last year the money raised was donated to the local elementary schools in Mapleton.

### Senior Citizen Facebook Page

There is a Mapleton Senior Citizens Group Facebook page that has the Gym hours, reminders about the Senior Luncheon and activities and pictures. Check it out at the below link and join the group:

<https://www.facebook.com/groups/202056047854161/>

## Household Hazardous Waste Collection Day

Utah County residents with household hazardous waste items such as old gasoline, paint, fluorescent light bulbs, batteries and unused medications will be offered safe disposal of these items at a Household Hazardous Waste Collection Day on Saturday, April 14th, 2018 from 9am to 3pm. The collection will take place in the west parking lot of the Provo Towne Centre Mall in Provo. For details, including a list of what will or will not be collected, please call 801-225-8538 (north county) or 801-489-3027 (south county), or visit our website below:

<http://www.utahcountyonline.org/dept/Health/HHW/>

## Contact Numbers

Mayor:	806-9106	Library:	489-4833
City Council:	806-9106	Public Works:	489-6253
City Administration:	806-9104	Emergency:	911
Community Development:	489-6138	Dispatch Police:	489-9421
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Court:	489-7445	Non-emergency:	489-9668
Recreation:	806-9114	Newsletter:	806-9109
Recreation Hotline:	367-5069	Senior Citizens:	806-9128
City Recorder:	806-9106	Main Line/Utilities:	489-5655

## Public Works

### What is storm water runoff, and why should we care?

Melting snow and rain are considered storm water runoff; it runs off roads, parking lots, driveways, roofs, and yards. As it flows across these surfaces, storm water picks up contaminants such as oils, salts, sediments, fertilizers, pesticides and household chemicals. Contaminated storm water flows into storm drains, ditches, and gutters, and eventually into streams, wetlands and lakes. Contaminants in storm water runoff impair water quality in streams and wetlands, and they can lead to fish kills, loss of wildlife habitat, and public health risks. Uncontrolled storm water runoff is one of the largest remaining sources of water quality impairment in the United States.

As our community grows, more land is covered with hard surfaces. This means more water reaches streams more quickly and is potentially more contaminated. Let's work together to lessen the degree of contamination and help protect local water resources.

You can also help us ease the flooding potential by keeping storm drain inlets near your property clean of debris or by reporting them to the Public Works Department at 801-489-6253.

## Mapleton City EMS/Ambulance

Recently a study in West Valley revealed that only 20 percent of the people in the area 'jump in' to help with a life-saving skill. Here in Mapleton, we would like to provide training at little to no cost to our citizens so that they will feel more comfortable in jumping in when there is an emergency. Our next class will be taught on March 24, 2018 starting at 9AM. Three levels of CPR can be taught during the class, Hands-only, Heartsaver, and Basic Life Support. Please consider taking a CPR course so that you will feel prepared and able to help in a future emergency. If you are interested, please contact the city offices at 801-489-5655 to sign up. More information can be found on our website at [www.mapleton.org](http://www.mapleton.org).



## History of Mapleton Books

The Mapleton Historical Committee has books for sale at the City Offices in the Community Development Department foyer.

## Mapleton Historical Society

The Mapleton Historical Society is looking for members. Duties would include helping to preserve historical artifacts and documents, along with general upkeep of the museum. Interested individuals can contact Mary Fojtek at 801-589-0929.

## March 2018 City Calendar

Mar 7	7:00pm	City Council Meeting
Mar 21	7:00pm	City Council Meeting
Mar 22	6:30pm	Planning Commission Meeting

Regularly scheduled City Meetings are held at the Community Center Building, 125 West 400 North.

Mapleton DWSP Plan Update 2021  
 Previous Plan Implementation

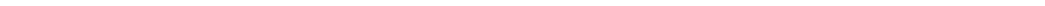
Previous Land Management Strategy	City's Implementation
Oversight by planning/zoning committees and personnel	DRC is held weekly and items related to source protection are included as needed.
Require compliance with Storm Water Management Program. Include source protection in all planning efforts.	Development plans are reviewed with every development, all development in zone 2 is required to have pre-treatment storm inlets and oil-absorbent pillows.
Reassess results of Ensign-Bickford related monitoring and cleanup	Keep in constant contact with the Ensign-Bickford engineer responsible for the monitoring and cleanup.
Refer property owners to the Utah County Health Department office for septic tank abandonment assistance	Wherever a septic system is identified during development, the homeowner is notified that they must decommission the tank per health department guidelines.
Notify homeowner to connect to sewer	The City said this happens infrequently but whenever it does, the homeowners are notified of their responsibility to connect to the sewer.
Check that septic tank has been abandoned properly and sewer connected within 60 days	The City has said that homeowners connecting to the sewer happens infrequently.
Notify owner to cap and seal abandoned wells.	The City said that this they haven't seen this needed to be done.
Public education through participation in City newsletters and mailers	This happens in annual newsletters and in some monthly newsletters as well. See attached in Appendix E.
Participate in Utah County Stormwater Coalition	JS Shepherd is extremely active in the coalition.
Inspect residential/agricultural properties if notified of a problem	The City stated that this is done as needed.
Monitor agricultural properties to ensure allowed number of animals is not exceeded	The City stated that this is done as needed.
Send letters to property owners with septic tanks educating them on importance and methods of property maintenance and use of septic systems	Template letter created and being sent out to septic tank owners.
Cap and seal abandoned wells	The City stated that this is done as needed.



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# **APPENDIX F**

## **Septic System List**



Mapleton 2021 DWSP Plan  
 Septic System List

<b>FID</b>	<b>Name</b>	<b>Address</b>
0	PRATT, LEWIS & MYRNA	868 EAST 1400 NORTH
1	GARLITZ, DON & LORA	910 NORTH 1600 EAST
2	LINTON, KENT & HELEN	465 EAST 1100 SOUTH
3	PESTANA, JOHN & HEIDI	573 EAST 1100 SOUTH
4	CHRISTENSEN, GORDON J.	675 EAST 900 SOUTH
5	HENDRIX, LEE & EVE	1005 WEST 2620 SOUTH
6	BAKER, KEVIN & CLAUDIA	375 WEST 1600 NORTH
7	BEAGLES, JAMES M.	1510 NORTH 440 WEST
8	WOODS, VINCE & LISA	235 EAST 1600 NORTH
9	JACKSON, JERRY	706 EAST 1700 NORTH
10	RIBBLE, JARROD & JESSICA	337 EAST 1700 NORTH
11	KING, BRENT & MARILEE	293 EAST 1700 NORTH
12	PORTER, KHEM	111 EAST 1700 NORTH
13	DEWYZE, JOHN	1430 NORTH 1250 EAST
14	PATTEN, CINDY	1442 EAST 1600 NORTH
15	WARREN, KIMBAL & GAYLE	1661 NORTH 2000 EAST
16	PEAY, PHILLIP O.	1417 EAST 1600 NORTH
17	MARTINEZ, MARK J. & KAREN	15 EAST 1600 NORTH
18	CHRISTIANSSEN, NEIL	770 EAST 1200 NORTH
19	JONES, DENNIS L. & SUANNE	786 EAST 1200 NORTH
20	EVANS, CARLIE & ROBERT	1074 NORTH 700 EAST
21	LAPE, ROBERT & SHARON	951 NORTH 700 EAST
22	GREENWOOD, AARON & BREANA	72 NORTH 210 EAST
23	CRANE, JAMES L.	1432 NORTH 200 WEST
24	COLTON, BLAINE	380 EAST 1600 NORTH
25	GILL, RICHARD & SHARMAN	124 EAST 1700 NORTH
26	MACK, JEFF & LIZ	1645 EAST 1200 NORTH
27	TAYLOR, ELDON R.	1650 EAST 1200 NORTH
28	CRANDALL, BRETT & KERRIE	1075 NORTH 1600 EAST
29	HATFIELD, JIM	1057 NORTH 1600 EAST
30	WATSON, JAMES & CATHERINE	570 EAST 1700 NORTH
31	TIDWELL, RANDY & LIZ	1305 EAST 1600 SOUTH
32	STUBBS, ALAN	676 NORTH 1600 EAST
33	JENSEN, CORILYNN	31 Carnesecca Court
34	MAPLETON LDS CHURCH	50 SOUTH MAIN STREET
35	LAWRENCE, EDELTRAUD	1756 NORTH 1600 EAST
36	SCHULZKE, MICHAEL & JENICE	1542 NORTH 440 WEST
37	PORTER, KHEM & JO	375 EAST 1600 NORTH
38	JENSEN, ROBERT W & ELLEN	655 EAST 1600 NORTH
39	PARKINSON, KIRK	381 EAST 1700 NORTH
40	HENDERSHOT, STEELE & SARAH	376 EAST 1700 NORTH
41	HOFFMAN, RON	1390 EAST 1600 NORTH
42	THORPE, PAUL S & VELDA	2301 EAST 400 NORTH

43	ANDERSON, SPENCER & MICHELLE	2301 EAST 400 NORTH
44	ROGERS, DON & SONYA	468 SOUTH 1200 EAST
45	MORTENSEN, WAYNE & KELLY	420 EAST MAPLE STREET
46	WEIGHT, MARGO	435 EAST 1000 NORTH
47	BRINGHURST, LARRY	405 EAST 1200 NORTH
48	DUNGAN, LISA	975 EAST 1200 NORTH
49	MAPLETON RANCH TRUST	1350 SOUTH 1000 EAST
50	HARMON, THAYNE & ANITA	1455 NORTH 600 EAST
51	YOUNGBERG, ERIC	34 EAST 1700 NORTH
52	ELLA EDMUNDS TRUST	908 EAST 1600 NORTH
53	WOODFIELD, S. N.	1660 NORTH 2000 EAST
54	FROST, CORBIN & MEGAN+	1860 NORTH MAIN STREET
55	SZALKOWSKI, TAUF A	1350 NORTH MAIN STREET
56	MURILLO, ALEX	590 EAST 900 SOUTH
57	CARD, DELL & ROBYN	1665 NORTH MAIN STREET
58	WICKES, BRANDON & MICHELLE	1224 WEST 2600 SOUTH
59	GRIFFIN, MICHAEL & CINDY	1351 NORTH 1700 EAST
60	SCOMA, TONY & JENNIFER+	1220 EAST 1200 NORTH
61	DAVIS, JEFFERSON A. & TERA	263 EAST 1600 NORTH
62	TIETJEN, ALLEN C	555 EAST 1700 NORTH
63	BADGER, FARRELL	1410 NORTH 1250 EAST
64	MITTANCK, MIKE	1664 NORTH 1770 EAST
65	BLEGGI, JOHN L. & DIANE	585 EAST 1200 NORTH
66	LAMBERT, BRIAN	1401 EAST 1200 NORTH
67	EVERETT, JESSE N & MANDY	123 EAST 1600 NORTH
68	TERPENNING, MELISSA & JAYSON	994 NORTH 700 EAST
69	MAINGOT, DENISE & RICK	1265 SOUTH 1000 EAST
70	ANDERSON, JOHN	1425 NORTH 600 EAST
71	NIELSEN, TODD & NICOLE	883 NORTH 1600 EAST
72	HILL, JAMES & DIANE	526 EAST 1700 NORTH
73	HARMS, HEATHER & TROY	750 EAST 1600 NORTH
74	SILVA, ANGELA	1682 NORTH 740 EAST
75	GRIFFIN, BRIGHAM	927 EAST 1200 NORTH
76	HASH, STEPHAN	897 EAST 1200 NORTH
77	BENCH, BROOKE & BROCK	1754 NORTH 1770 EAST
78	HOLLEY, MATT & ALEXIS+	1662 NORTH 400 WEST
79	WALKER, NICOLE & DALLAN	537 EAST 1600 NORTH
80	GRIGGS, MICHAEL JR & KERRI	951 WEST 2620 SOUTH
81	SMITH, KELLY & DOUGLAS	1520 NORTH 1250 EAST
82	LILJENQUIST, DUSTIN & JULIA	908 EAST 1600 NORTH
83	CENTURY 21 EVEREST REO DEPARTMENT	249 EAST 1700 NORTH
84	HARKNESS, GORDON	292 EAST 1700 NORTH
85	JOSEPHSON, KAREN & ELDER, ALLAN	903 SOUTH 1300 EAST
86	TAYLOR, BRET & LESA	31 EAST 1700 NORTH
87	LAKE, JESSICA & JACOB	877 EAST 1600 NORTH