WEBER BASIN

WATER CONSERVANCY DISTRICT

UPDATE TO SURFACE WATER DRINKING WATER SOURCE PROTECTION PLAN

July 2014

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EXECUTIVE SUMMARY

This report is a brief summary of the updated Drinking Water Source Protection (DWSP) Plan for Weber Basin Water Conservancy District's surface drinking water sources. The sources include the Stoddard and Gateway Diversions on the Weber River, and the Burch Creek, Shepard Creek, Farmington Creek, Steed Creek, Ricks Creek, and Stone Creek inlets. This DWSP Plan has been prepared in accordance with the DWSP Rule for Surface Water Sources (R309-605) as revised in August 2001 and the "Standard Report Format for Updated Surface Water Source Protection Plans," prepared by the Utah Division of Drinking Water in January 2007.

In the 2001 report, the Division of Drinking Water delineated the DWSP Zones for the above referenced sources of drinking water. Hansen, Allen and Luce, Inc. conducted the Potential Contamination (PCS) Inventory of Zones 1 and 2 by means of a windshield survey. The Division of Drinking Water (DDW) provided a list of PCSs in Zone 4 from their databases. Weber Basin Water Conservancy District relied on the list provided by the DDW for Zone 4 in accordance with R309-605-7(4)(a)(iii)(A)(I). Identified PCSs within the DWSP Zones included transportation of hazardous materials along roadways and railroads, gravel pit and mining operations, agricultural activities, wastewater disposal and treatment, residential activities, and other commercial activities.

There were no significant changes made in the watersheds. There are a couple of subdivisions under construction in the Mountain Green area, which is below the Weber River Intake location, as well as some further planned development in the Snyderville Basin area. The Weber River Watershed was determined to be highly sensitive to contamination and have a high susceptibility to contamination primarily due to the large impact from human activities within the watershed. Farmington Creek Canyon was determined to have a medium sensitivity and a medium susceptibility to contamination due to the presence of some human activities in the canyon. The remaining Canyons were determined to have a medium sensitivity and a low susceptibility to contamination due to the lack of human activities in these canyons.

Land management strategies have been implemented to control the three highest ranking inadequately controlled PCSs for each canyon or watershed. These strategies included implementing the AFO/CAFO regulations, public education, direct mailings to agencies, etc. Land management strategies to control future PCSs will be planned as Weber Basin Water Conservancy District becomes aware of the new PCS.

CHAPTER I

INTRODUCTION

In August 2001, Hansen, Allen & Luce, Inc. (HAL) was retained by Weber Basin Water Conservancy District (WBWCD or District) to prepare the Drinking Water Source Protection (DWSP) Plan for its surface water sources. This DWSP Plan has been prepared in accordance with the DWSP Rule for Surface Water Sources (R309-605) as revised in August 2001 and the "Standard Report Format for Updated Surface Water Source Protection Plans," prepared by the Utah Division of Drinking Water in January 2007. Remaining chapters of this edition of the DWSP Plan address updates and changes to the Delineation of Protection Zones, Susceptibility Analysis and Determination, Management Plan to Control Existing Potential Contamination Sources (PCSs), Management Plan to Control Future PCSs, Implementation Schedule, Resource Evaluation, Record Keeping, Public Notification, and Contingency Plan.

The Weber Basin Project was constructed by the Bureau of Reclamation during the 1950's and 1960's to develop the waters of the Weber River Basin for beneficial use. The Project covers more than 2,500 square miles in five counties: Davis, Weber, Morgan, Summit, and part of Box Elder. The overall Project includes storage reservoirs, canals, pipelines, hydro power facilities, pumping stations, wells and related facilities. The Weber Basin Water Conservancy District was created in 1950 to manage, operate and maintain the Weber Basin Project. The District delivers approximately 220,000 acre-feet of water annually: 60,000 acre-feet for municipal and industrial use and 160,000 acre-feet for irrigation and secondary use.

Weber Basin operates seven large storage reservoirs on the Ogden and Weber Rivers with a combined storage capacity of approximately 400,000 acre-feet. The District also operates and maintains more than 79 miles of raw water canals, tunnels, and pipelines and an additional 85 miles of culinary water pipelines. The District operates three large culinary water treatment plants that treat surface water obtained from the Weber River Basin. Also included in the system are 16 deep, large capacity wells that serve as backups to the surface water treatment plants and also add source capacity to the culinary system. Currently, Weber Basin provides culinary water to approximately 500,000 people in the five-county service area.

SYSTEM INFORMATION

WBWCD is an existing, public, community water system that provides culinary water to portions of Davis and Weber Counties. The water system number, address, and phone number follow:

Weber Basin Water Conservancy District
2837 East Highway 193
Layton, Utah 84040
(801) 771-1677

Water System Numbers:
Weber Basin South: UTAH 06013
Weber Basin Central: UTAH 29023
Weber Basin North: UTAH 29109

SOURCE INFORMATION

WBWCD diverts surface water from the Weber River and from several creeks along the Wasatch Front. WBWCD points of diversion are listed in Table I-1. Each of the points of diversion in Table I-1 are existing, previously constructed points of diversion.

TABLE I-1
SURFACE WATER POINTS OF DIVERSION

Source Name	Diversion Name	Latitude/ Longitude
Weber River	Stoddard Diversion	41°04’12” N 111°43’42” W
	Gateway Diversion	41°08’12” N 111°49’52” W
Burch Creek	Burch Creek Inlet	41°10’20” N 111°55’29” W
Shepard Creek	Shepard Creek Inlet	41°00’53” N 111°53’34” W
Farmington Creek	Farmington Creek Inlet	41°00’04” N 111°52’35” W
Steed Creek	Steed Creek Inlet	40°58’27” N 111°52’17” W
Ricks Creek	Ricks Creek Inlet	40°56’22” N 111°52’04” W
Stone Creek	Stone Creek Inlet	40°53’48” N 111°50’16” W

DESIGNATED PERSON

The designated person for WBWCD follows:

Scott W. Paxman, P.E.
2837 East Highway 193
Layton, Utah 84040
(801) 771-1677

CHAPTER II

DELINEATION REPORT

GENERAL

Drinking Water Source Protection Zones for the District's surface water sources were delineated by the State of Utah Department of Environmental Quality, Division of Drinking Water (DDW) in accordance with R309-605-7(3). The DWSP Zones are defined as follows:

- DWSP Zone 1 – Zone 1 encompasses the area on both sides of the source, ½ mile on each side measured laterally from the high water mark of the source (bank full), and from 100 feet downstream of the point of diversion to 15 miles upstream, or to the limits of the watershed or to the state line, whichever comes first.
- DWSP Zone 2 – Zone 2 is defined as the area from the end of Zone 1, and an additional 50 miles upstream (or to the limits of the watershed or to the state line, whichever comes first), and 1000 feet on each side measured from the high water mark of the source.
- DWSP Zone 3 – Zone 3 is defined as the area from the end of Zone 2 to the limits of the watershed or to the state line, whichever comes first, and 500 feet on each side measured from the high water mark of the source.
- DWSP Zone 4 – Zone 4 is defined as the remainder of the area of the watershed (up to the state line, if applicable) contributing to the source that does not fall within the boundaries of Zones 1 through 3.

Based on the limited upstream length of the Weber River from the Stoddard Diversion, only Zones 1, 2 and 4 were delineated for this source. The upstream length of Farmington Creek from the Farmington Creek Inlet only allowed the delineation of Zones 1 and 4. The watersheds contributing to the District's remaining surface water sources are of such a small size that Zone 1 encompassed the entire watershed. Therefore, the entire watershed is considered Zone 1 for these sources.

DRINKING WATER SOURCE PROTECTION ZONES

There were no changes to the 2001 Drinking Water Source Protection (DWSP) Zones for the Weber River, Burch Creek, Shepard Creek, Farmington Creek, Steed Creek, Ricks Creek, and Stone Creek.

CHAPTER III

SUSCEPTIBILITY ANALYSIS AND DETERMINATION

This chapter of the DWSP Plan for Weber Basin Water Conservancy District's surface water sources addresses the susceptibility of these sources to contamination. The susceptibility of each source is evaluated based on the structural integrity of the intake, the sensitivity of the natural setting, and the type, location, and number of potential contamination sources (PCSs) located within the DWSP Zones. PCSs are placed in priority order from greatest to least potential to contaminate the drinking water source.

SUSCEPTIBILITY ANALYSIS

The susceptibility analysis must take into consideration the "Structural Integrity of the Intake," the "Sensitivity of the Natural Setting," and the "Evaluation of Hazards at Potential Contamination Sources." These are discussed below.

Structural Integrity of Intake

Evaluation of the structural integrity of surface water intakes includes determining whether the intake complies with the minimum DDW requirements for diversion structures (R309-204-5(5)) and determining the intake structure's adequacy to prevent inadvertent or accidental contamination. The integrity evaluation for any diversion structure includes conveyance facilities between the diversion and the distribution system that are open to the atmosphere. The following criteria were used to evaluate the structural integrity of the District's surface water points of diversion.

1. Does the intake allow for water withdrawal from more than one level if water quality varies with depth? (R309-204-5(5)(a))
2. Is the lowest intake withdrawal elevation located at a sufficient depth to be submerged at the low elevation of the reservoir? (R309-204-5(5)(b))
3. Does the intake have a separate facility for the release of less desirable water held in storage? (R309-204-5(5)(c))
4. Does the intake allow for occasional cleaning of the inlet line? (R309-204-5(5)(d))
5. Is the diversion device capable of keeping fish and/or debris from entering the intake? (R309-204-5(5)(e))
6. If pumps are used to transfer diverted water, do the pumps have suitable protection? (R309-204-5(5)(f))
7. If there is an impoundment reservoir, have brush and trees been removed to the high water level and are adequate precautions provided to limit nutrient loads?
8. Can the intake be closed to allow contamination to pass by?

Table III-1 below contains a matrix addressing each of the questions posed above for each of the District's surface water sources. Also indicated in this table on a pass/fail basis is whether the intakes meet minimum requirements for diversion structures and whether the condition of each intake is adequate to protect against contamination events.

TABLE III-1
STRUCTURAL INTEGRITY OF INTAKES EVALUATION

Criteria Number*	Stoddard Diversion	Gateway Diversion	Burch Creek Inlet	Shepard Creek Inlet	Farmington Creek Inlet	Steed Creek Inlet	Ricks Creek Inlet	Stone Creek Inlet
1	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pass/Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

*Criteria Number corresponds to question number listed on Page III-1.

Table III-1 indicates that all of the District's surface water points of diversion passed the Structural Integrity of Intakes Evaluation. **There were no changes in the evaluation or analysis of these diversions.**

Sensitivity of Natural Setting

The sensitivity of surface water drinking water sources is evaluated based on physiographic and hydrogeologic factors and can be influenced by both natural and man-made features (R309-605-7(4)(a)(ii)). Features that allow contaminants to move toward the surface water source more freely tend to increase the sensitivity of the source to contamination while features that impede the movement of contaminants toward the surface water source tend to decrease the sensitivity. **The sensitivity of the surface water drinking water sources have not changed since the 2007 update**.

A surface water drinking water source may have a high sensitivity, medium sensitivity, or low sensitivity to contamination. Weber Basin Water Conservancy District's surface water sources were classified accordingly based on a combination of several factors as shown in Table III-2. Each surface water source was first assigned a score for each of the listed factors based on whether features of the watershed increased or decreased the source's sensitivity to contamination. For instance, watersheds with steeper slopes would have a greater sensitivity than watersheds with flatter slopes because of the greater runoff potential associated with steeper slopes. Likewise, lower permeability, less vegetative cover, more human development, lack of wetlands, greater precipitation, larger watersheds, and gaining streams would receive higher scores than higher permeability, more vegetative cover, less human development, presence of wetlands, lower precipitation, smaller watersheds, and losing streams. After assigning a score to each watershed for each of the features identified in Table III-2, a total score for the watershed is determined by summing the scores for each of the features. The sum of the scores for each surface water source determines whether the source has a high, medium, or low sensitivity to contamination as shown in Table III-3. Watersheds scoring less than 14 points are considered to have a low sensitivity; watersheds scoring 14 points through 17 points are considered to have a medium sensitivity; and watersheds scoring 18 points or more are considered to have a high sensitivity.

TABLE III-2
SENSITIVITY ANALYSIS PROCEDURE

Factors Affecting Sensitivity	Possible Score	Explanatory
1 – Slope	3	3 pts – high slope 2 pts – med slope 1 pts – low slope
2 – Permeability	2	2 pts – low permeability 1 pts – high permeability
3 – Vegetative Cover	3	3 pts – poor cover (open) 2 pts – moderate cover 1 pts – good cover (dense)
4 – Human Development	6	6 pts – large cities/heavy industry 5 pts – towns/commercial areas 4 pts – Rural communities/ residential 2 pts – limited human impact/development 1 pts – no human impact/development +1 pt if major highways are near streams
5 – Wetlands	1	1 pts – wetlands not present in watershed 0 pts – wetlands present in watershed
6 – Climate	5	5 pts – >34 in/yr average precipitation 4 pts – 28-34 in/yr average precipitation 3 pts – 22-28 in/yr average precipitation 2 pts – 16-22 in/yr average precipitation 1 pts – <16 in/yr average precipitation
7 – Size of Watershed	3	3 pts – Large Watershed 2 pts – Medium Watershed 1 pts – Small Watershed
8 – Gaining/Losing Stream	2	2 pts – Significant gaining reaches 1 pts – Mostly losing reaches
Total Watershed Sensitivity	26	≥18 pts – High Watershed Sensitivity ≥14 and <18 pts – Medium Watershed Sensitivity <14 pts – Low Watershed Sensitivity

TABLE III-3
SENSITIVITY OF NATURAL SETTING

Sensitivity Factor Number*	Weber River Watershed	Burch Creek Canyon	Shepard Creek Canyon	Farmington Creek Canyon	Steed Creek Canyon	Ricks Creek Canyon	Stone Creek Canyon
1	1	3	3	2	3	3	3
2	1	2	2	2	2	2	2
3	3	1	1	2	1	1	1
4	6	1	1	2	1	1	1
5	0	1	1	1	1	1	1
6	3	4	4	4	4	4	4
7	3	1	1	1	1	1	1
8	2	1	1	1	1	1	1
Total	**19**	**14**	**14**	**15**	**14**	**14**	**14**
Sensitivity	**High**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**

*Sensitivity Factor Number corresponds to Factors Affecting Sensitivity in Table III-2.

Evaluation of Hazards at Potential Contamination Sources

Potential Contamination Sources (PCSs) include agricultural, industrial, commercial, or residential entities, sites, or areas where a potential exists for contamination of the drinking water source. The hazards presented by each PCS are identified and assessed as either adequately controlled or not adequately controlled based on controls currently in place at each PCS.

PCS Inventory

Identification of PCSs located within the DWSP Zones for Weber Basin Water Conservancy District's surface water sources was performed by Hansen, Allen & Luce, Inc.. and Weber Basin Water Conservancy District staff, in conjunction with the Division of Drinking Water (DDW). The DDW provided a list of potential contamination sources from its existing database for the entire watershed tributary to the surface water intake. Hansen, Allen and Luce personnel conducted a "windshield survey" of Zones 1-3 to verify the existence and location of PCSs provided by the DDW and to identify all other PCSs to the extent possible within these Zones. R309-605-7(4)(a)(iii)(A)(I) states that Weber Basin Water Conservancy District "may rely on the inventory provided by the Division [of Drinking Water] for Zone 4."

There was a very large number of PCSs identified in the 2001 report. Due to these large numbers, the PCSs were identified mostly by groupings of PCSs, not by each individual PCS. There were some changed to the inventory of PCSs in the Weber River watershed, due to some localized developments here and there, but these did not change the 2001 report because the grouping cover these changes.

Hazard Assessment and Controls

Due to the residential and private nature of the majority of the PCSs identified in the PCS inventory, it was not possible to contact each PCS individually to compile information about the specific hazards that exist at each site. Therefore, the potential hazards at PCSs were determined using engineering judgment based on the windshield survey. A Potential Contamination Source Inventory Form (PCSIF) was completed for PCSs identified in the windshield survey. The PCSIF provides a guide for identification of hazards at each PCS. **The hazard assessment and controls section of the 2001 report is unchanged.**

SUSCEPTIBILITY DETERMINATION AND PRIORITIZATION

In order to determine the relative susceptibility of the source from each PCS, a logical method was needed to objectively evaluate how one PCS may have a greater potential to contaminate the source than another. The approach used by Weber Basin Water Conservancy District to determine relative susceptibility consists of a strategy wherein risk potential is assigned to each PCS as described below.

Since the inventory of PCSs remain unchanged for each of the surface water sources, this section on susceptibility determination and prioritization also remains unchanged.

CHAPTER IV

MANAGEMENT PLAN TO CONTROL EXISTING PCSs

GENERAL

Management strategies are required by R309-605-7(5) to be planned for at least the three highest ranking Potential Contamination Sources (PCSs) that are not adequately controlled. The Public Water Supplier may, at its discretion, plan management programs for additional PCSs to assure adequate protection of the drinking water source. Land management strategies must be designed to control, or reduce the risk of, potential contamination and may be regulatory or non-regulatory.

A successful DWSP program requires management strategies that Weber Basin Water Conservancy District can legally and effectively implement. Management strategies are generally categorized as regulatory or non-regulatory. Regulatory controls involve legislation or other means of control exercised according to the water supplier's jurisdiction. The District is not able to directly pursue regulatory controls because it is a water conservancy district and is not directly associated with a local legislative body. To pursue regulatory controls, the District must persuade the local city councils and county commissions to enact ordinances that protect drinking water sources. The strategies presented in this report are developed according to the authority and jurisdictional control of the District.

Weber Basin Water Conservancy District has adopted strategies that are primarily educational in nature. The intent of these strategies is to provide Weber Basin Water Conservancy District with a method in which to encourage best management practices at existing PCSs.

MANAGEMENT STRATEGIES FOR EXISTING PCSs

The three highest ranking PCSs (those with the greatest potential to contaminate the drinking water source) for Farmington Creek Canyon include the snow removal/road maintenance facility, Skyline Drive, and the Farmington Creek Research Center. The three highest ranking PCSs for the Weber River Basin include major roads, railroads, and a gravel pit operation. Land management strategies have been planned for these PCSs as outlined below. In addition to these PCSs, Weber Basin Water Conservancy District has planned land management strategies for road maintenance facilities and wastewater treatment facilities. Road maintenance facilities are included because they are operated by the same entities that operate the major roads. The District also has planned to implement a public education program targeted at private residences.

The hazards at wastewater treatment facilities were assessed as adequately controlled due to the regulation of these facilities by the Division of Water Quality. Although these facilities are adequately controlled, Weber Basin Water Conservancy District has decided that in addition to the regulatory controls, it will include a management strategy that will request that the owners of wastewater treatment facilities notify the District in the event that an emergency bypass occurs or any other condition that would cause the facility to not be in compliance with its UPDES permit.

Table IV-1 includes the management strategies that Weber Basin Water Conservancy District will implement to control existing PCSs.

TABLE IV-1
MANAGEMENT STRATEGIES FOR EXISTING PCSs

PCS (ID #)	LAND MANAGEMENT STRATEGIES
Farmington Creek Canyon	
Snow Removal/Road Maintenance Facility (1-4)	1. Inform the owner that the snow removal/road maintenance facility is located within the DWSP Zones for the District's surface water sources. 2. Request the owner to provide secondary containment for all storage of fuels, waste fluids, or other hazardous materials. 3. Request the owner to perform all vehicle and equipment maintenance indoors or within areas that confine all waste fluids. 4. Request the owner to use a state approved business for disposal of used oil or other hazardous waste. 5. Periodically send an information packet or mailer to the owner.
Skyline Drive (1-7)	1. Inform the US Forest Service that Skyline Drive is located within the DWSP Zones for the District's surface water sources. 2. Request the Forest Service to notify the District in the event of a leak or spill along this roadway. 3. Request the Forest Service to provide the District with a copy of their emergency response plan for hazardous material spills along this roadway. 4. Periodically send an information packet or mailer to the Forest Service.
Farmington Creek Research Center (1-2)	1. Inform the owner that the research center is located within the DWSP Zones for the District's surface water sources. 2. Request the owner to use and store chemicals indoors and to not discharge chemicals on the ground. 3. Request the owner to not discharge chemicals into the septic system and to pump out the septic system periodically. 4. Periodically send an information packet or mailer to the owner.
Weber River Basin	

PCS (ID #)	LAND MANAGEMENT STRATEGIES
Major Roads and Road Maintenance Facilities (1-54, 230, 251, & 355; 2-211, 239, 269, & 347; and 4-199, 200, 201, 212, 213, 260, 261, 262, 273, & 274)	1. Inform UDOT, Morgan County, and Summit County that the roadways and maintenance facilities they maintain and operate are within the DWSP Zones for the District's surface water sources. 2. Request the Utah Highway Patrol, Morgan County Sheriff's Department, and Summit County Sheriff's Department to notify the District in the event of a leak or spill along any of these roadways. 3. Request the Utah Highway Patrol, Morgan County Sheriff's Department, and Summit County Sheriff's Department to provide the District with a copy of their emergency response plan for hazardous material spills along their roadways. 4. Request UDOT, Morgan County, and Summit County to keep salt piles covered and/or prevent runoff from the salt piles from entering the river systems. 5. Request UDOT, Morgan County, and Summit County to provide secondary containment for all storage of fuels, waste fluids, or other hazardous materials. 6. Request UDOT, Morgan County, and Summit County to perform all vehicle and equipment maintenance indoors or within areas that confine all waste fluids. 7. Request UDOT, Morgan County, and Summit County to use a state approved business for disposal of used oil or other hazardous waste. 8. Periodically send an information packet or mailer to UDOT, Morgan County, Summit County, the Utah Highway Patrol, and the Morgan and Summit County Sheriff's Departments.
Railroads (1-356 and 2-348)	1. Inform the Union Pacific Railroad that their railroad right-of-way is within the DWSP Zones for the District's surface water sources. 2. Request the Union Pacific Railroad to notify the District in the event of a leak or spill along the railroad right-of-way. 3. Request the Union Pacific Railroad to provide the District with a copy of their emergency response plan for hazardous material spills. 4. Periodically send an information packet or mailer to the Union Pacific Railroad.
Gravel Pit Operation (1-147)	1. Inform the owner that the gravel pit is located within the DWSP Zones for the District's surface water sources. 2. Request the owner to provide secondary containment for all storage of fuels, waste fluids, or other hazardous materials. 3. Request owner to perform all vehicle and equipment maintenance indoors or within areas that confine all waste fluids. 4. Request owner to use a state approved business for disposal of used oil or other hazardous waste. 5. Request gravel pit owner to not allow hazardous materials to be spread or discharged on the ground or in the gravel pit. 6. Periodically send an information packet or mailer to the owner.
Residential PCSs (multiple PCSs)	1. Advertise periodically, as the District sees fit, in the local Morgan and Summit County newspapers encouraging best management practices for household hazardous wastes, septic systems, fuels, used oil, fertilizers, pesticides, and herbicides. 2. Encourage the local Morgan and Summit County water suppliers to include these best management practices in their annual Consumer Confidence Report.
Wastewater Treatment Facilities (1-3, 4, 6, 55, 76, 89, & 183; 2-7, 8, 10, 11, & 87; and 4-15, 17, & 18)	1. Inform the owners of the wastewater treatment facilities that the facilities are located within the DWSP Zones for the District's surface water sources. 2. Request that owners of wastewater treatment facilities immediately notify the District in the event of a bypass or any other condition that would cause them to not be in compliance with their UPDES permit. 3. Periodically send an information packet or mailer to the owners of wastewater treatment facilities.

Since the 2001 report and 2007 update, Weber Basin Water Conservancy District has successfully implemented all of the strategies they have outlined, as well as several additional strategies which were not in the report. The District has organized a watershed protection coalition with many interested stakeholders. This coalition meets quarterly to discuss activities in the watersheds, improvement projects, as well as government sponsored studies. The District has also participated with the Division of Water Quality and the Utah Farm Bureau in the volunteer effort to implement the AFO/CAFO regulations in the watersheds. This has been very effective and has resulted in much better animal feeding practices along the river. The District has also been involved with the Total Maximum Daily Load (TMDL) studies being performed on various streams and reservoirs throughout the watershed.

The District intends to continue with the strategies as outlined to continue to bring awareness to the PCSs in the watersheds.

CHAPTER V

MANAGEMENT PLAN TO CONTROL FUTURE PCSs

GENERAL

Management strategies to control future potential contamination sources (PCSs) involve a management plan to protect surface water resources by controlling future PCSs that could be established within each of the DWSP Zones. Future PCSs may be associated with 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.

The Drinking Water Source Protection Rule for surface water sources requires the Public Water Supplier (PWS) to plan land management strategies to control or prohibit future PCSs to the extent allowed under its authority and jurisdiction. Since Weber Basin Water Conservancy District has no zoning authority within the DWSP Zones for its surface water sources, the management program consists of periodically identifying new PCSs and addressing them in the DWSP Plan and petitioning local zoning authorities to enact zoning regulations that control PCSs.

A Drinking Water Source Protection (DWSP) Ordinance must include provisions for controlling the location of potential contamination sources within DWSP Zones unless design standards are implemented that prevent contamination of water resources. An example DWSP ordinance is included in the Appendix of the "Source Water Assessment Program User's Guide," prepared by the Utah Division of Drinking Water in March 2000.

MANAGEMENT STRATEGIES

Weber Basin Water Conservancy District will implement the following management strategies to prevent or reduce the risk of contamination of its surface water sources.

1. Update the PCS inventory periodically with any new PCSs that have moved into the DWSP Zones.
2. Identify the hazards at each of the new PCSs.
3. Assess controls in place at each of the new PCSs.
4. Perform a susceptibility determination for each new PCS and include each new PCS in the prioritized inventory.
5. Plan land management strategies for new PCSs as necessary.
6. Weber Basin Water Conservancy District will petition Davis, Morgan, Summit, and Weber Counties to adopt and implement a DWSP ordinance.

There are no changes to this section of the report.

CHAPTER VI

IMPLEMENTATION SCHEDULE

This Implementation Schedule outlines the time frame in which Weber Basin Water Conservancy District will implement the land management strategies that were addressed in Chapters IV and V. Table VI-1 outlines the schedule for implementing these strategies.

TABLE VI-1
IMPLEMENTATION SCHEDULE FOR MANAGEMENT STRATEGIES

PCS (ID #)	LAND MANAGEMENT STRATEGIES*	IMPLEMENTATION DATE	COMPLETED ?
STRATEGIES FOR EXISTING PCSs			
Farmington Creek Canyon			
Snow Removal/Road Maintenance Facility (1-4)	#1 through #5	July 1, 2002 – Periodically thereafter	Completed, continuing
Skyline Drive (1-7)	#1 through #4	July 1, 2002 – Periodically thereafter	Completed, continuing
Farmington Creek Research Center (1-2)	#1 through #4	July 1, 2002 – Periodically thereafter	Completed, continuing
Weber River Basin			
Major Roads and Road Maintenance Facilities (1-54, 230, 251, & 355; 2-211, 239, 269, & 347; and 4-199, 200, 201, 212, 213, 260, 261, 262, 273, & 274)	#1through #8	July 1, 2002 – Periodically thereafter	Completed, continuing
Railroads (1-356 and 2-348)	#1 through #4	July 1, 2002 – Periodically thereafter	Completed, continuing
Gravel Pit Operation (1-147)	#1 through #6	July 1, 2002 – Periodically thereafter	Completed, continuing
Wastewater Treatment Facilities (1-3, 4, 6, 55, 76, 89, & 183; 2-7, 8, 10, 11, & 87; and 4-15, 17, & 18)	#1 through #3	July 1, 2002 – Periodically thereafter	Completed, continuing
Residential PCSs (multiple PCSs)	#1 through #2	July 1, 2002 – Periodically thereafter	Completed, continuing
STRATEGIES FOR FUTURE PCSs			
Management Strategies #1 through #5 from Chapter V		Periodically	
Management Strategy #6 from Chapter V		July 1, 2002	

* Land Management Strategies for Existing PCSs as numbered in Table IV-1 for each PCS.

CHAPTER VII

RESOURCE EVALUATION

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

FINANCIAL RESOURCES

There are no changes to this section.

HUMAN RESOURCES

There are no changes to this section.

CHAPTER VIII

RECORD KEEPING

- Weber Basin Water Conservancy District will update the Record Keeping portion of this DWSP Plan as steps are taken to implement the items covered in the Plan

3/7/2002 thru present Letter was sent out to all stakeholders for the organization of the Weber River Watershed Coalition. First meeting was held on April 9th, 2002 with 26 people in attendance. Minutes of the meeting are attached. Newsletters will be written quarterly which highlight events and activities in the watershed. (see attached)

Annually The District's Water Quality Report, or Consumer Confidence Report, is mailed to all of our customer agencies that use our drinking water. These reports are to be pasted on to all residences within their service area. (see attached)

7/22/2002 thru 3/15/2005 Applied and received a grant of $80,500 for a Source Water Protection demonstration project on Rees Creek, a tributary to the Weber River. This project was for the purpose of reducing sediment loads in the rivers.

11/26/2002 Letters to each of the four Counties in the watershed, informing them of the new plan and setting up times to visit with them to deliver copies of the plan and discuss the major points in the plan.

12/12/2002 Visit with Summit County Engineer, Derek Radkie and County Planning staff, with copy of the plan.

12/16/2002 Visit with Davis County Commissioner, Dan McConkie, and planning staff, with copy of plan.

12/14/2002 Visit with Weber County, George Burbidge and County Commission with copy of the plan.

2/12/2003 Visit with Morgan County Engineer, Kent Wilkerson and presented him with copy of plan.

9/1/2003 MOU with Northern Arizona University, cooperative agreement for free lease of water for an experimental cottonwood restoration project. (see attached)

11/20/2003 Contract with Northern Arizona University for use of water in experimental cottonwood restoration project (see attached)

12/5/2003 Draft edition of the "Weber River Watershed Restoration Action Strategy" was compiled by members of the Weber River Watershed Coalition and was presented to the Technical Advisory Committee. (See summary attached)

6/7/2005 Send letters to both UDOT and UPRR notifying them of the source water protection plan and asking that BMPs be used when working in the area of the rivers and streams. (see attached)

8/11/2005 Hand delivered letters and BMP packets to residences and businesses within the zone 1 of the surface source protection zones as well as zones 1-3 of the groundwater protection zones. Over 10,000 delivered (see attached)

6/21/2006 Participated in an AWWA Research Foundation project No. 3020, entitled "Concentrated Animal Feeding Operations (CAFOs); Water Utility Issues and Regulatory Controls.(see attached

Semi-annually Organized and conducted meetings with Federal, State and Local agencies, along with private landowners, to discuss water quality issues in the watershed, promote restoration projects and educate stakeholders on proper land uses which minimize water quality concerns.

Annually Give day tours of the watershed to local and state leaders to educate and promote watershed protection.

CHAPTER IX

PUBLIC NOTIFICATION

The DWSP Rule for Surface Water Sources (R309-605) requires the preparation of Public Notification material informing the public water supplier's customers of the general results of the DWSP Plan. This rule also requires a schedule and method for notifying the public. The Public Notification material that will be provided to the District's customers is included in Exhibit E of the 2001 plan.

Weber Basin Water Conservancy District has included the public notification material in its annual Water Quality Report/Consumer Confidence Report and will encourage the water agencies that purchase water from the District to include this information in their Consumer Confidence Reports. The District has also posted the public notification information on its website as well as keeps copies of it in their office.

Below is the actual public notification that was sent out and made available:

Introduction

Weber Basin Water Conservancy District has completed a Drinking Water Source Protection Plan for all of its surface water public drinking water sources as required by the Safe Drinking Water Act and by R309-605 of the State of Utah Drinking Water Regulations. The Drinking Water Source Protection program includes identification of the area from which the drinking water source receives water, an assessment of the potential contamination threats to the source within this area, and management programs to help control both existing and future potential sources of contamination. This Public Summary has been prepared to inform Weber Basin Water Conservancy District's public drinking water customers regarding the District's efforts to protect their water supplies from contamination.

What is the Source of Your Drinking Water?

Weber Basin Water Conservancy District withdraws surface water from two locations on the Weber River and from several creeks along the Wasatch Front including Burch Creek, Shepard Creek, Farmington Creek, Steed Creek, Ricks Creek, and Stone Creek. The majority of the water withdrawn by the District is from the Weber River. The Weber River Watershed covers over 1,600 square miles which includes most of Morgan and Summit counties. Each of the Wasatch Front Canyons covers between 2 and 10 square miles and are located in Davis and Weber counties. Several communities are located within the Weber River Watershed including Park City, Snyderville, Jeremy Ranch, Kamas, Marion, Oakley, Peoa, Wanship, Hoytsville, Coalville, Upton, Echo, Henefer, Croydon, Morgan, Richville, Littleton, Milton, Stoddard, Peterson, and Mountain Green. Most of the land between and throughout these communities is used for various agricultural purposes.

Water Quality and Water Treatment Information

Water that is withdrawn from Weber Basin Water Conservancy District's surface water sources is filtered and disinfected prior to distribution to customers. Water quality sampling results indicate that the water in the distribution system is acceptable and meets or exceeds all state and federal regulations.

Assessment of Susceptibility to Contamination

Each of the District's surface water sources were evaluated for how sensitive the watershed or canyon is to contamination. Factors that influence the sensitivity of the watershed or canyon include how easily water flows over the ground surface, the average amount of precipitation, and the degree of human development. The Weber River Watershed was assigned a high sensitivity to contamination mostly due to the extensive human development throughout the watershed. Each of the Wasatch Front canyons were assigned a medium sensitivity to contamination, due in part to the large amount of precipitation.

This assessment evaluates sources that have the potential to enter and contaminate the water drawn directly from the Weber River or the Wasatch Front creeks before treatment. The contaminants addressed in this assessment include those that Weber Basin Water Conservancy District has determined may present a concern to health. Descriptions of the significant potential sources of contamination located within the area tributary to the District's surface water sources are included below. Each significant potential source of contamination has been analyzed and assigned a qualitative susceptibility rating according to its potential to impact the water supply. This rating includes such factors as the likelihood of a release of potential contaminants, the ability of the potential contaminant to travel to the river or stream, and the ability of the intake to bypass contamination. These factors are weighted approximately the same with a total possible risk score of 100. Potential contamination sources are summarized in the table below.

The susceptibility of the Weber River Watershed to contamination is considered to be high because of the presence of many potential sources of contamination. The susceptibility of Farmington Creek Canyon to contamination is considered to be moderate due to the presence of a few potential sources of contamination. The susceptibility of the remaining surface water sources to contamination is considered to be low because no potential sources of contamination were identified in these canyons.

Potential Sources of Contamination	Description of Contaminants	Potential Risk to Surface Water Score
Transportation of Hazardous Materials along Roadways and Railroads	Accidents along highways and other major roads and along railroads could lead to spills of hazardous materials, which could lead to contamination of surface water sources.	67 to 70
Industrial Manufacturers & Related Companies and Large Commercial Production and Maintenance Operations	Products and materials are used and stored in various quantities at these companies including acids, solvents, waste oils, other oils, gasoline, diesel fuel, and other chemicals. Spills of these products and materials could lead to contamination of surface water sources.	55 to 69
Rural Residential Areas	Household septic systems that are failing contain bacteria and viral pathogens that are discharged directly into the ground and may eventually enter the surface water source. Fuels, fertilizers, and pesticides that may be used and stored also have the potential to contaminate.	54 to 68
Agricultural Activities	Runoff containing fertilizers, herbicides, and pesticides applied to croplands could enter the surface water sources. Also, runoff containing bacteria and viruses from animal wastes from pastures or animal farms has the potential to enter the surface water sources.	30 to 64
Mineral Producers	Tunnels or stripped land from mining operations could lead to higher acidity or sediment loads in surface water sources.	42 to 55
Sewage Treatment Facilities	Untreated sewage could be discharged directly into the surface water source in extreme or emergency conditions.	22 to 35
Camping Areas and Other Recreational Activities	Camping wastes and fuels used for recreational vehicles have the potential to be spilled and enter the surface water sources.	25 to 27
Underground Fuel Storage	Fuel in underground storage tanks may enter groundwater and eventually reach the surface water sources if a leak occurs in the tank.	10 to 25

Management Strategies to Control Sources of Potential Contamination

Weber Basin Water Conservancy District has adopted a public education program that informs sources of potential contamination how to reduce the risk of contamination to the District's surface water sources through the implementation of best management practices. The District will periodically send an information packet to the potential sources of contamination that present the highest risk to the surface water sources.

CHAPTER X

CONTINGENCY PLAN

The 2001 Contingency Plan has been modified slightly and included here in its entirety:

Weber Basin Water Conservancy District has prepared a contingency plan which focuses on the identification and possible solution of problems which may arise in the event that protection and prevention of contamination to the drinking water source fails. This plan, in addition, addresses problems that need to be solved in the event of water shortages or contamination incidents that may impact the District's ability to supply safe drinking water to the public. This document includes emergency response, rationing, remediation, and new source development plans.

EMERGENCY RESPONSE PLANS

Basis of Plan

The following Emergency Response Plan was developed on the basis of the following references:

- Emergency Response Handbook, Utah Division of Drinking Water, Salt Lake City, Utah, March 1992.
- *Emergency Planning for Water Utility Management*, American Water Works Association, AA No. M19, New York, New York, 1973.

WBWCD's Emergency Response Plan focuses on short-term solutions to likely problems Weber Basin water supply may encounter because of accidents and natural disasters.

Lines of Authority

The following list identifies personnel responsible for coordinating activities during an emergency or disaster. The roles are further described in the Division of Drinking Water (DDW)'s Handbook.

Emergency Coordinator/General Manager:	Tage I. Flint
Office:	(801) 771-1677
Assessment Coordinator/ Assistant General Manager	Scott Paxman
Office:	(801) 771-1677
Home:	(801) 544-5976
Cell:	(801) 721-4736
Municipal and Industrial Water Manager	Brad Nelson
Office:	(801) 771-1677
Home:	(801) 771-4512
Cell:	(801) 682-5422
Maintenance Manager	Mark Clark
Office:	(801) 771-1677
Home:	(801) 547-9776
Cell:	(801) 682-5450
Utah Division of Drinking Water:	(801) 536-4200
Emergency (Day or Night):	(801) 536-4100

Classification of the Emergency or Disaster

The EMERGENCY COORDINATOR will classify the degree of the emergency or disaster. This will prioritize response, expedite activities and establish action levels of response.

LEVEL I - NORMAL (ROUTINE): Personnel and equipment presently on duty can handle system problems. The "Emergency Control Center" is not activated or manned.

LEVEL II - ALERT (MINOR EMERGENCY): Personnel and equipment presently on duty can handle system problems, but may require off duty or additional personnel to be put on alert, be re-routed to other than their normal working areas, or to work additional shifts. The "Emergency Control Center" may be activated and manned.

LEVEL III - MAJOR EMERGENCY: Problems somewhat beyond the capabilities of the drinking water system personnel and equipment, and may require a "Declaration of Emergency" to authorize shortcut procedures. Requires employees to work additional shifts and may need additional assistance of personnel and equipment, either by mutual aid or private contracts. The "Emergency Control Center" will be activated and manned.

LEVEL IV - DISASTER: Problems clearly and immediately beyond the capabilities of the drinking water system personnel and equipment. Recovery time will exceed one week, cost will be great, large amounts of assistance will be needed for at least one week. A "Declaration of Emergency" will be required and the "Emergency Control Center" will be activated and manned.

The EMERGENCY COORDINATOR will also inventory the organization and will perform the following tasks:

$ Appoint responsible personnel for plan development, training, and security.
$ Designate disaster organization staff and teams, including:
  1. Designating alternates,
  2. Preparing alerting list with phone numbers, and
  3. Defining responsibilities and channels of command.
$ Make contact with civil defense and military authorities
  1. To learn local plans,
  2. For possible help in planning,
  3. For information about the funding or other support, if any is available, and
  4. To establish liaison channels.

Preliminary Damage Assessment

The ASSESSMENT COORDINATOR will oversee or conduct the system assessment immediately after the emergency or disaster occurs. The assessment will address the following items:

$ Identify and describe separate components of entire system
  1. Sources (Names)
  2. Pump stations and supply lines
  3. Transmission lines (tank to distribution system)
  4. Storage tanks
  5. Distribution system
  6. Personnel
  7. Power supply
  8. Materials and supplies
  9. Communications
  10. Present emergency plans
  11. Mutual-aid agreements and/or interconnections

$ Develop characteristics of disaster
  1. Flood or mudslide
  2. Earthquake
  3. Windstorm
  4. Explosion
  5. Other (terrorist attack, etc.)

$ Estimate water requirements
  1. Fire fighting
  2. Potable water
  3. Decontamination and sanitary

$ Estimate the capability of system to meet requirements. This point is the "balance point". If capabilities exceed requirements, there is an estimated margin of safety and it could be expected that priorities be relaxed. If requirements exceed capabilities, there is indicated urgency for improving or "upgrading" the system.

$ Identify critical system components. Critical system components are components that demand immediate evaluation to improve capability.

Prioritize Requirements and Specify Program

The EMERGENCY COORDINATOR, in association with the ASSESSMENT COORDINATOR, will evaluate data gathered during the damage assessment task and prioritize system components for repair and replacement. The following will be accomplished

$ Establish baselines on water-quality levels

$ Determine needs and priorities
1. Allocate water under assumed conditions for potable, sanitary decontamination.
2. Prepare guidelines for water allowances, priorities, rationing, and time-phasing of estimated water requirements.
3. Establish procedures for emergency treatment, pumping, and distribution of water, and for stations for service of emergency water.

Implementation

The EMERGENCY COORDINATOR will implement the necessary plan and notify the users of the system through the PUBLIC RELATIONS COORDINATOR. Information will be released to the public in accordance with the following guidelines:

$ Only the EMERGENCY COORDINATOR or designated representative will talk with the media or press.
$ The EMERGENCY COORDINATOR will set up public meetings to routinely inform the users of the status of system improvements, progress and details.

RATIONING PLANS

Weber Basin Water Conservancy District's Rationing Plan establishes a course of action to be implemented when water shortages occur. Shortages may be caused by drought, seasonal overuse, contamination, or accidents. This Plan is broad and encompassing, highlighting the different factors that need to be considered before implementing and enforcing a water rationing plan.

Personnel

Mr. Scott Paxman is responsible for assessing supply and demand requirements and implementing a water conservation program. Scott Paxman is the contact for both the supply/demand analysis and water conservation programs for the Districts drinking water sources.

Operator:	Scott Paxman
Office:	(801) 771-1677

Determination of Action Level

Based on the following factors, an "action level" will be determined to initiate the appropriate level of rationing. These environmental factors include:

$ Forecasted duration of shortage (short-term vs. long-term)
$ Reason for shortage (drought, mechanical malfunction, loss of storage capacity)
$ Time of the year which the shortage is forecasted (summer vs. winter)

Water system factors which need to be evaluated include:

$ Current supply
$ Current storage capacity
$ Current number of connections to the system
$ Current demand projections
$ Current system user conservation practices

Water resources available to alleviate short term shortages that will be investigated include:

- $ Emergency water supply
- $ Replacement mechanical equipment (spare parts)
- $ Spare pumps and motors in storage for rapid installation with a 48-hour period

Public Education

The release of information regarding rationing should be made through the Lines of Authority identified in the Emergency Response Plan. The type of information given will vary with the level of rationing implemented. With this in mind, the following list provides some key points which should be utilized for successful public notification/press releases.

1. Public notification and press releases are important phases of the rationing plan.

2. Centralize news releases and statements to avoid confusing the public.

3. When responding to inquiries, make only factual responses. Avoid speculation.

4. Notify public of availability of water and precautions to be taken, if applicable.

5. Inform public of restriction in water use.

6. Inform public of consequences of misuse of the water supply. (i.e. higher water rates, diminished water supply, potential for termination of services, etc.).

7. Arrange for escorting media representatives who have proper identification through work areas or facilities, if they make a request.

8. Continue public education on a periodic basis through the duration of the rationing effort. Public education efforts may consist of public announcement using radio, television and/or the newspaper, notices included with billing statements, and/or separate mailers.

WATER SUPPLY DECONTAMINATION PLAN

Surface Water Sources

Surface water inlets, diversions, canals, and drinking water treatment plants will be monitored for contamination. If contamination is identified, the contaminated water will be bypassed and will not be introduced into the culinary water system.

Ground Water Sources

Generalized information regarding decontamination of water was obtained from the following sources:

1. "*Ground Water Pollution Control*", by L.W. Carter and R.C. Knox, Lewis Publishers, Inc., Chelsea, Michigan. 1985.

2. *"Contaminant Hydrogeology"*, by C. W. Fetter, Macmillan Publishing Company, New York, New York. 1993.

The Safe Drinking Water Act defines a *contaminant* as any physical, chemical, biological or radiological substance or matter in water. Fetter (1993) indicates that different types of treatment are needed for water contaminated with heavy metals versus that contaminated by dissolved organic compounds. At the present time, there is not a single method of ground water decontamination which will effectively remove all of the potential contamination sources which have been identified within the Drinking Water Source Protection Zones for Weber Basin Water Conservancy District's drinking water sources. The type of treatment required for a particular drinking water source is dependent upon identification of the contaminants which are to be removed. Where a single contaminant is identified, the treatment system may consist of simple filtration and/or chlorination. On the other hand, cases involving multiple contaminants may require the use of multiple decontamination phases.

In the past, the accepted methods of water supply decontamination for public water suppliers were limited to chlorination, filtration, blending (dilution), and/or air and steam stripping. However, recent technological advances have provided additional decontamination methods. A partial listing of additional methods which are presently commercially

available include multi media filters, reverse osmosis, deionization, electrodialysis, softeners, pH adjustment (precipitation), dealkylizers, neutralization, ultraviolet, distillation, bioremediation, and ozone treatment.

Organic contaminants are generally classified as either volatile or non-volatile. Fetter (1993) indicates that most of the organic contaminants in ground water are volatile. A characteristic of volatile organics is their relatively high vapor pressure, which is a measure of the tendency of a substance to pass from a solid or liquid phase to a gas phase. The higher the vapor pressure, the more volatile the substance, and the more readily the contaminant would move from a solid to a liquid and gas phase. Volatile organics includes 1,1,2-Trichloroethylene, 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,2-Dichloropropane, Chloroform and Diisopropyl ether, etc. With present technology, one of the most effective means for the removal of volatile organics is through air stripping or steam stripping.

Organic contaminants with a low vapor pressure are not readily removed using air stripping or steam stripping, and may require carbon filtration. Using this technology, the contaminated ground water is passed through an activated carbon filter, wherein the organic contaminants may be sorbed onto the activated carbon. Fetter (1993) notes that some organics "such as 1,4-dioxane, are resistant to air stripping, carbon adsorption, or biological treatment and prove to be very difficult to remove from contaminated ground water." Carter and Knox (1985) discuss the relative effectiveness of removing various organics using either air stripping, carbon adsorption or biological treatment. A summary of their work is as shown on Table 3.3, as contained within Exhibit G.

A partial listing of treatment alternatives for inorganic contaminants, as prepared by Carter and Knox (1985) is as shown on Table 3.16 (See Exhibit G). As shown on Table 3.16, most inorganic metals can be removed by precipitation, followed by filtration where necessary. Fetter (1993) notes the following:

> *Ferrous iron can be removed by aeration to create ferric iron, which will precipitate at a slightly alkaline pH. Hexavalent chromium may be removed by reducing the contaminate to the trivalent state by reducing the pH to 3 and then adding a reducing agent such as sulfur dioxide. The trivalent chromium can be precipitated as a hydroxide by raising the pH above the neutral value. Arsenic can be coprecipitated with iron by adding dissolved iron at a pH of 5 to 6 and then raising the pH with lime to between 8 and 9.*

Nitrates cannot effectively be removed using precipitation, but may be handled using ion exchange (Fetter, 1993). Alternate decontamination methods for inorganics may also include reverse osmosis and electrodialysis.

Table 3.17, as contained in Exhibit G, summarizes the suitability of differing decontamination methods for given contaminant types. Due to the variation and number of potential contamination sources which exist within the DWSP Zones for the District's drinking water sources, and given the continued advances that are being made to water supply decontamination technology, it is not possible, nor practical to identify a specific decontamination plan for each potential contaminant source at this time. Effective treatment plans for ground water decontamination can be developed only after treatability studies have been conducted with representative samples to determine the appropriate treatment components.

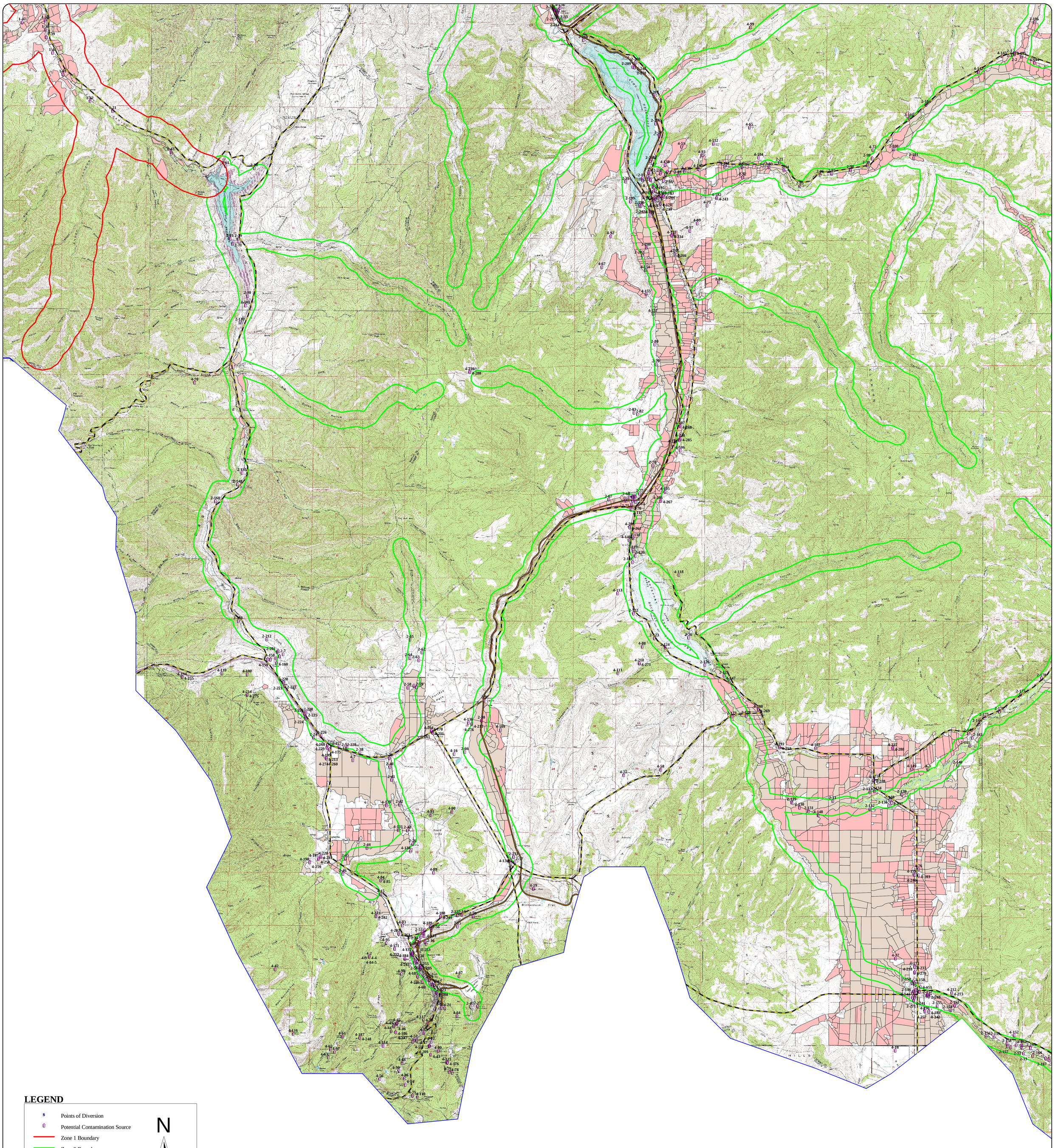
Implementation

The District will continue to monitor its drinking water sources in accordance with State regulations. If water quality samples demonstrate that the District is unable to meet the minimum adopted drinking water standards at a particular water source, the District will temporarily abandon use of the offending water supply. Weber Basin Water Conservancy District will then assess the practicality of water decontamination from an economic standpoint, and then if decontamination/reclamation is the chosen solution, perform treatability studies using representative samples of the contaminated ground water to determine appropriate treatment components. Factors which will be considered by the District in evaluating treatment options will include availability of appropriate decontamination technology, effectiveness, cost, etc. The District will evaluate the cost/benefits of installing the decontamination equipment versus the cost/benefits of replacing the supply with an alternate source (if available).

If an acceptable decontamination methodology is not available, or is not accepted by the District, the drinking water source will continue in an abandoned status until such time as an acceptable decontamination technology is identified, or the drinking water source is permanently abandoned by the District.

SOURCE DEVELOPMENT PLANS

Weber Basin Water Conservancy District owns and operates many wells in addition to several surface water sources of drinking water. If one drinking water source was to be deemed unfit, water from other existing Weber Basin Water Conservancy District drinking water sources could be utilized. The District will develop new sources of drinking water as necessary for increasing demands and/or loss of existing sources.



LEGEND

- Points of Diversion
- Potential Contamination Source
- Zone 1 Boundary
- Zone 2 Boundary
- Zone 4 Boundary
- Major Roads
- Railroads
- Active Crops
- Pasture

N

SCALE

4000 0 4000 8000 12000 Feet

HANSEN ALLEN & LUCE INC.

WEBER BASIN WATER CONSERVANCY DISTRICT
SURFACE WATER DRINKING WATER SOURCE PROTECTION

Figure 4

Summit County Ordinance No. 825A

An Ordinance Amending Title XIII of the Summit County Code relating to Hazardous Liquid or Material Pipelines

PREAMBLE

WHEREAS, the Natural Gas Pipeline Safety Act of 1968, as amended, (NGPSA) authorizes the United States Department of Transportation (DOT) to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases, as well as the transportation and storage of liquefied natural gas (LNG); and the Hazardous Liquid Pipeline Safety Act of 1979, as amended, (HLPSA) authorizes DOT to regulate pipeline transportation of hazardous liquids (crude oil, petroleum products, anhydrous ammonia, and carbon dioxide), both of which are re-codified at 49 United States Code (U.S.C.) Chapter 601 and implemented at 49 Code of Federal Regulations (CFR) Parts 190 – 199; and,

WHEREAS, 49 U.S.C. 601 provides that the federal government is primarily responsible for developing, promulgating, and enforcing minimum uniform pipeline safety standards throughout the United States; and,

WHEREAS, 49 U.S.C. 60104(c) allows for an exemption from federal preemption where states assume regulatory, inspection, and enforcement responsibilities for intrastate pipelines, so long as the state participates in and is certified under the Federal/State Cooperative Gas and Hazardous Liquid Pipeline Safety Program in accordance with 49 U.S.C. 60105(a) (Certified Program); and,

WHEREAS, federal and state courts have determined that DOT exercises exclusive jurisdiction over safety standards regulating interstate transmission pipelines (Colorado Interstate Gas Co. v. Wright, 707 F.Supp.2d 1169 (D. Kansas 2010); Sneddon v. Torch Energy Services, Inc., 102 CalApp.4th 181, 125 Cal Rptr.2d 365 (2nd Dist 2002)); and,

WHEREAS, the majority of pipeline inspections in the nation are carried out by state inspectors who work for state agencies in accordance with the Certified Program; and,

WHEREAS, in circumstances where a state has a Certified Program, a state agency is responsible for conducting inspections of intrastate pipelines that lie entirely within a state's borders; and,

WHEREAS, the state of Utah is a participant in and has certification under the Certified Program for intrastate natural gas pipelines; and,

WHEREAS, the Liquid Integrity Management Rule and 49 CFR, Parts 195.0 – 195.12, Transportation of Hazardous Liquids by Pipelines, specifies how pipeline operators must identify, prioritize, assess, evaluate, repair and validate the integrity of hazardous liquid pipelines

that could, in the event of a leak or failure, affect High Consequence Areas (HCAs) within the United States. HCAs include: population areas; areas containing drinking water and ecological resources that are unusually sensitive to environmental damage; and commercially navigable waterways; and,

WHEREAS, the Utah Public Service Commission's Division of Public Utilities inspects, regulates and enforces intrastate gas pipeline safety requirements in accordance with R746-409, while the Office of Pipeline Safety (OPS), within the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) inspects, regulates and enforces interstate gas and liquid pipeline safety requirements; and,

WHEREAS, 49 U.S.C. §60104(e) "does not authorize the Secretary of Transportation to prescribe the location or routing of a pipeline facility," instead leaving such subject to state and local regulation (See Washington Gas Light Company v. Prince George's County Council, 711 F.3d 412, 422 (4th Cir. 2013); and,

WHEREAS, the HLPSA does not define "safety standard" within the federal statute; and,

WHEREAS, the protection from potential hazards is the primary purpose of regulatory standards; and,

WHEREAS, safety hazards are distinguished from environmental hazards, in that the latter generally relate to environmental health and substances which cause disease (29 CFR 1910.1200(c)); and,

WHEREAS, "[t]he Supreme Court has cautioned . . . that the presence of an express pre-emption clause in a federal statute does not immediately end the inquiry because the question of the substance and scope of Congress' displacement of state law still remains. Indeed, when courts are called upon to address questions of express or implied pre-emption, the analysis always begins with the assumption that the historic police powers of the States [are] not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress (Island Park, LLC v. CSX Transportation and Consolidated Rail Corporation, 559 F.3d 96, 101 (2nd Cir. 2009) (citations omitted)); and,

WHEREAS, UCA §17-50-302(1)(a)(ii) expressly authorizes County's to "provide a service, exercise a power, or perform a function that is reasonably related to the safety, health, morals, and welfare of county inhabitants, except as limited or prohibited by statute;" and,

WHEREAS, since the Utah Public Service Commission has not promulgated rules concerning intrastate Hazardous Liquid Pipelines, the County is not pre-empted from enacting non-safety excavation, environmental and engineering-related regulations on intrastate pipelines by either state or federal law (Shell Oil Co. v. City of Santa Monica, 830 F.2d 1052 (9th Cir. 1987); ANR Pipeline Company v. Iowa State Commerce Commission, 828 F.2d 465 (8th Cir. 1987); Washington Gas Light Company v. Prince George's County Council, 711 F.3d 412 (4th Cir. 2013)); and,

WHEREAS, pursuant to that certain letter from Jeffry D. Wiese, Associate Administrator, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, to TransCanada Corporation, dated May 28, 2014, local governments are authorized to regulate excavation, adjacent land uses, setbacks, and emergency response plans for both inter and intrastate pipelines; and,

WHEREAS, conditions on permits issued pursuant to these regulations constitute "standard costs" within the meaning of UCA §54-14-103(c); and,

WHEREAS, it is in the best interests of Summit County to provide for standards and guidelines for intrastate Hazardous Liquid Pipelines located in the County so as to protect the public health and welfare of its residents;

NOW, THEREFORE, the County Council of the County of Summit, State of Utah, ordains as follows:

Section 1. **Adoption.** The Summit County Hazardous Liquid or Material Pipeline Regulation, Summit County Code, Title 13, is amended in accordance with Exhibit A herein.

Section 2. **Effective Date.** This Ordinance shall take effect fifteen (15) days after publication.

Enacted this _____ day of _____, 2015.

ATTEST:

_____
Kent Jones
Summit County Clerk

SUMMIT COUNTY COUNCIL

_____
Kim Carson, Chair

_____
Approved as to Form
David L. Thomas
Chief Civil Deputy

VOTING OF COUNTY COUNCIL:

Councilmember Carson _____
Councilmember Robinson _____
Councilmember Ure _____
Councilmember Armstrong _____
Councilmember McMullin _____

EXHIBIT A

Title 13~~XIII~~

HAZARDOUS LIQUID OR MATERIAL PIPELINE REGULATION

CHAPTER 1

13~~XIII~~ 1-1: STATEMENT OF PURPOSE

A. The purpose of this Title is to help prevent and minimize unnecessary risk to the public health and welfare due to Transmission Pipelines. Recognizing it is impossible to eliminate risk entirely, this Title is intended to:

(1) Protect the environmental ~~human life and~~ health of residents;
(2) Minimize the likelihood of accidental damage to Transmission Pipelines due to external forces, such as construction activity and equipment;
(3) Avoid drainage and erosion impacts, as well as damage to Essential Public Facilities, from the siting, installation, and maintenance of Transmission Pipelines~~exposing land uses with high risk on-site populations that are difficult to evacuate~~;
(4) Help reduce adverse environmental impacts and damage to Essential Public Facilities -in the event of a pipeline failure; and
(5) Ensure compliance with and supplement existing non-safety related federal and state regulations pertaining~~related~~ to Transmission Pipeline Corridor management, including regulations promulgated by the Federal Energy Regulatory Commission (FERC).

13~~XIII~~ 1-2: DEFINITIONS

~~*Adopt* means establish under State law by statute, regulation, license, certification, order, or any combination of these legal means.~~

Agricultural Land means property actively utilized in agriculture production consistent with the definition of agriculture set forth in Title 11, Appendix A (Eastern Summit County Planning District) or 10-11-1 (Snyderville Basin Planning District).,

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CFR means the Code of Federal Regulations.

Commission means the Public Service Commission of Utah.

County means Summit County, a political subdivision of the state of Utah.

Essential Public Facilities means those public facilities which are required in order to provide basic health and safety services to residents and visitors of Summit County,

including water treatment plants, sewer treatment plants, water storage facilities, telecommunication towers, police stations, fire stations, emergency operations centers, and critical water sources.

Excavation means an excavation activity defined in 49 CFR Part 195.442~~2.614~~, which includes excavation, grading, blasting, boring, tunneling, backfilling, the removal of aboveground structures by either explosive or mechanical means, and other earthmoving operations.

Excavator means any person intending to engage in an excavation activity.

~~*Gas* means natural gas, flammable gas, or toxic or corrosive gas.~~

~~*Gas Transmission Pipeline* means a "transmission line" as defined by 49 CFR, Part 192.3.~~

Haul Road means any County road, bridge, or other structure which is used for transporting items including, but not limited to products, equipment, materials, and/or supplies, and as a result incurs deterioration.

Haul Road Agreement means an agreement as to the use of Haul Roads by the Transmission Pipeline Operator, Owner or contractor.

Haul Route means the system of Haul Roads between a source site and the destination and/or the source site and the nearest major intersection as determined by the County.

Hazardous Liquids or Materials mean any hazardous or toxic waste, substance or material as presently defined by the Comprehensive Environmental Response, petroleum, petroleum products, anhydrous ammonia, and all other hazardous substances as defined by the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C.A. Section 9601, et seq.; the Hazardous Materials Transportation Act, 49 U.S.C.A. Section 5101, et seq.; the Resource Conservation and Recovery Act, 42 U.S.C.A. Section 6901, et seq.; the Toxic Substances Control Act, 15 U.S.C.A. Section 2601, et seq.; the Federal Water Pollution Control Act, 33 U.S.C.A. Section 1251, et seq.; the Hazardous Liquid Pipeline Safety Act, 49 U.S.C.A. Section 60101, et. seq.; the Utah Safe Drinking Water Act, Utah Code Ann. §19-4-101, et. seq.; the Utah Water Quality Act, Utah Code Ann. §19-5-101, et. seq.; the Utah Solid & Hazardous Waste Act, Utah Code Ann. §19-6-101, et. seq., 49 CFR 195.2, and any successor State or Federal environmental laws which define hazardous substances, but shall not include natural gas, including liquefied natural gas.

Hazardous Liquid Pipeline Company means a person or entity constructing, owning, or operating a hazardous liquid pipeline. "Hazardous Liquid Pipeline Company" does not include excavation contractors or other contractors that contract with a Hazardous Liquid Pipeline Company.

Hazardous Liquid Pipeline means a pipeline designed for the transmission of a "hazardous liquid", as defined by 49 CFR Part 195.2.

Hazardous Materials Transmission Pipeline or Transmission Pipeline means ~~(a)~~ a Hazardous Liquid Pipeline, whether above or below ground, which transports or is designed to transport Hazardous Liquids or Materials~~, and (b) all Gas Transmission Pipelines larger than 6 inches in diameter that operate at over 500 psi~~. As used herein, a Transmission Pipeline includes all parts of those physical facilities through which ~~gas or~~ hazardous liquid moves in transportation, including pipe, valves, and other appurtenances attached to pipe, compressor units, pumping stations, metering stations, regulator stations, delivery stations, holders, breakout tanks, fabricated assemblies, and other surface pipeline appurtenances.

One-call Notification System means a communication system that qualifies under this Title and the one-call damage prevention program of the State in which an operational center receives notices from Excavators of intended Excavation activities and transmits the notices to operators of Underground Pipeline Facilities and other underground facilities that participate in the system. The State of Utah uses Blue Stakes of Utah (811 or 1-800-662-4111).

Person means any individual, firm, joint venture, partnership, corporation, association, state, municipality, cooperative association, or joint stock association, and includes any trustee, receiver, assignee, or personal representative thereof.

PHMSA means the U. S. Department of Transportation Pipeline and Hazardous Materials Safety Administration.

Pipeline means a tube, usually cylindrical, through which a hazardous liquid ~~or gas~~ is transported from one point to another.

Pipeline Company, without further qualification, means a Hazardous Liquid Pipeline Company ~~or a Gas Pipeline Company~~.

Pipeline Permit means an official action of the County Engineer under this Title having the effect of permitting the installation of a Transmission Pipeline in the County.

Transmission Pipeline Corridor or Hazardous Materials Transmission Pipeline Corridor means the pipeline pathway defined by rights-of-way and easements in which the pipelines and facilities of a Transmission Pipeline Operator are located, including rights-of-way and easements over and through public or private property.

Transmission Pipeline Operator means the company or person responsible for the operation, maintenance and management of the Transmission Pipeline.

Transmission Pipeline Owner means the company or person which owns the Transmission Pipeline.

~~*The County* means Summit County, Utah.~~

Underground Pipeline Facilities means buried pipeline facilities used in the transportation of ~~gas or~~ hazardous liquid subject to the pipeline safety laws (49 U.S.C. 60101 *et seq.*).

13~~XIII~~-1-3: STATE AND FEDERAL REGULATIONS

A. State. The provisions of R746-409, Pipeline Safety, are hereby incorporated in their entireties by reference.

B. Federal. The provisions of 49 CFR Parts 190, 194 - 199, as amended, (October 1, 2010) are hereby incorporated in their entireties by reference.

C. To the extent any regulations within this section conflict with state or federal regulations or laws regulating Hazardous Liquids or Materials Transmission Pipelines, those state or federal regulations and laws shall take precedence over these regulations.

CHAPTER 2

13~~XIII~~-2-1: PIPELINE PERMITTING PROCEDURES AND REQUIREMENTS

A. Permit Required; Application

1. A Pipeline Permit issued by the County Engineer shall be required prior to the commencement of any work to install a Transmission Pipeline within the County,

2. An application for a Pipeline Permit shall be accompanied by three (3) sets of plans showing dimensions and locations of the pipelines, related items or facilities within the subject right-of-way and roadway improvements. Also required for submittal are:
    a. Detailed cross section drawings for all public street right-of-way and easement crossings;
    b. A flow diagram showing daily design capacity of the proposed Transmission Pipeline;
    c. Changes in flow in the Transmission Pipeline; and
    d. The proposed maximum operating pressure, expressed in pounds per square inch gauge (psig) at all points of change in elevation greater than 500 feet, or every 500 feet in length as a minimum;

B. Haul Road Agreement; Bonding

1. Haul Road Agreement

   Transmission Pipeline Owners, Operators and/or contractors must have an approved Haul Road Agreement for Haul Routes that will be used in the County. The County Engineer shall approve all cross-cuts, Haul Routes , and crossings within public rights-of-way. Each crossing of a public right-of-way shall be calculated in the Haul Road Agreement as equaling one (1) lineal mile of Haul Road, either gravel or asphalt, depending on the surface material at the crossing.

2. Bonding

   The Transmission Pipeline Owner, Operator, and/or contractor must post a cash bond or its equivalent, in an amount to be determined by the County Engineer consistent with the size and impact of the project on public roads and rights-of-way. The bond will warrant the County against any damage that may occur beyond the normal wear and tear to public roads and rights-of-way. The bond shall be in effect for the duration of construction of the Transmission Pipeline and for a period of one year thereafter in order to warranty the County against latent damages to roads and rights-of-way used for Haul Routes or crossings within the County. Transmission Pipelines that are directly regulated by the Utah Public Service Commission and that require statewide road/street bonding are exempt from the bonding requirements hereunder.

C. The Transmission Owner, Operator, and/or contractor has the burden to establish that the proposed Transmission Pipeline complies with all applicable local, state and federal laws and regulations in the construction and operation of the Transmission Pipeline.

13~~XIII~~-2-2: TEMPORARY HOUSING:

Information must be submitted to the County Engineer which sets forth the plan for temporary housing of workers during the construction of the Transmission Pipeline project, including the estimated number of workers and family, the location of proposed housing, water and sewer management, and a site map showing access lane widths for emergency vehicles and their ability to serve each housing unit.

13~~XIII~~-2-3: DRAINAGE

Any discharge of water into the public ~~Summit County~~ right-of-way from dewatering the pipeline trenches or pipeline must be approved by the County Engineer.

CHAPTER 3

13~~XIII~~-3-1: GENERAL PROVISIONS

A. Design~~General~~

~~1. Materials for pipe and other components of Transmission Pipelines shall be:~~

~~a. Able to maintain the structural integrity of the pipeline under temperature, pressure, and other conditions that may be anticipated.~~

~~b. Compatible with the substances to be transported.~~

~~c. Locatable by a tracer line or location device placed adjacent to or in the trench of all buried nonmetallic pipelines to facilitate the location of such pipelines.~~

~~2. Design~~

~~Each component of a Transmission Pipeline shall be designed and installed to prevent failure from corrosion and to withstand anticipated operating pressures and other loadings without impairment of its serviceability. The pipe shall have sufficient wall thickness or be installed with adequate protection to withstand anticipated external pressures and loads that will be imposed on the pipe after installation.~~

1. The Transmission Pipeline Operator or Owner shall design the pipeline alignment such that the pipeline will comply with all setback requirements of the Code.

2. The Transmission Pipeline Operator shall follow Utah State and County standards for weed control. A weed control plan shall be submitted to the Weed Division Supervisor for review and approval.

3. Seed and mulch shall be Certified Weed Free. The Weed Free Certificate shall be submitted to the County Engineer and the Weed Division Supervisor.

~~a. All valves must be automated. Valve placement must be reviewed and pre-approved by the County Engineer.~~

B. Cover

~~1.~~ All installed Transmission Pipelines shall have cover consistent with 49 CFR 195.248.~~sufficient to protect them from damage. On agricultural lands, all pipelines shall have a minimum cover of four (4) feet from natural grade to the top of the pipeline.~~

~~2. Where an underground structure, geologic, or other uncontrollable condition prevents pipelines from being installed with the minimum required cover, a variance must be requested and approved by the County Engineer.~~

C. Excavation, Backfill and Reclamation

1. The Transmission Pipeline Operator, Owner and/or contractor shall segregate topsoil while trenching. Absent approval by both the property owner and the County Engineer, all trenches within Agricultural Lands shall be backfilled, where practicable, to 92~~5~~% compaction so that ~~the~~ soils are returned to their original relative positions and grading, thus protecting the natural flow of water through the property while avoiding the creation of artificial pathways of water.

2. Pipeline trenches shall be maintained in order to correct subsidence and minimize erosion. Interim and final reclamation, including re-vegetation, shall be performed in accordance with Title 9, Chapter 3 of the Summit County Code.

D. Availability of Documents

1. An easement agreement and survey (and/or accurate drawing) shall be available to the affected landowner. Easement agreements and survey documents may be available from various sources, including the Transmission Pipeline Operator and the County Recorder's Office.

13~~XIII~~ 3-2: HAZARDOUS MATERIAL PIPELINES

A. Notification~~Maintenance~~

~~1. Each Transmission Pipeline Operator shall take reasonable precautions to prevent failures, leakage, and corrosion of pipelines.~~

~~1. Whenever a Transmission Pipeline Operator discovers any condition that could adversely affect the safe and proper operation of its pipeline, the operator shall correct it within a reasonable time. However, if the condition is of such a nature that it presents an immediate hazard to persons or property, the operator shall not operate the affected part of the system until it has corrected the unsafe condition.~~

~~2.~~ In the event that a leak or failure has occurred with the Transmission Pipeline, the Transmission Pipeline Operator shall ~~immediately~~ notify the Summit County

Emergency Manager and all –property owners within 1000-feet of the ~~failed~~ affected pipeline area within four (4) hours of discovery.

B. Repair

~~1. Each Transmission Pipeline Operator shall, in repairing its pipelines, ensure that the repairs are made in a safe manner and are made so as to prevent injury to persons and damage to property.~~

1~~2~~. No Transmission Pipeline Operator shall use any pipe, valve, or fitting in repairing pipeline facilities unless the components meet the installation requirements of all federal and state regulations.

2~~3~~. Pipeline trenches shall be maintained in order to correct subsidence and minimize erosion. Following any repairs, the area shall be re-vegetated in accordance with Title 9, Chapter 3 of the Summit County Code.

C. Marking

1. A marker shall be installed and maintained to identify the location of Transmission Pipelines.

2. Placement of Markers
   a. Locations and spacing for markers shall include, but are not limited to:
      i. Each crossing of a public or private road, utility easement, railroad, stream crossing, hilltop, major pipeline angle point, and section line (as necessary to mark pipeline location).
      ii. Spacing may vary upon conditions, but normally shall not be greater than line-of-sight distances, particularly in overgrown rights-of-way.
   b. Markers shall be placed so as to achieve the following:
      i. Markers shall not present a hazard to on-coming traffic.
      ii. Markers shall be placed directly over the pipeline whenever possible.
      iii. Markers shall face in the direction of expected activity or traffic. If travel of traffic is from more than one direction, signs shall be sited in each direction of on-coming traffic.
   c. Pipeline markers should be checked as a normal course of business as part of the Transmission Pipeline Operator's continuing surveillance program.

3. The following shall be written legibly on a background of sharply contrasting color on each line marker:

a. Warning, Caution or Danger followed by the words "oil~~gas~~ (or name of product transported) pipeline" in highly visible letters and the name of the operator and the telephone number where the operator can be reached at all times consistent with the Federal Code of Regulations. ~~letters at least one (1) inch high with one-quarter (1/4) inch stroke and the name of the operator and the telephone number where the operator can be reached at all times.~~

D. "One Call" Participation

1. All Transmission Pipeline Operators must call 811 and verify with local utilities, prior to any Excavation.

13~~XIII~~ 3-3 EMERGENCY PREPAREDNESS PLAN

A. Transmission Pipeline Owners, Operators, and contractors must meet and coordinate with the Summit County Emergency Manager and submit a copy of its Emergency Preparedness Plan for any and all emergencies that may result in an accidental or failure incident regarding the pipeline or any supplemental equipment. Transmission Pipeline Operators shall designate a responsible local emergency response official and a direct 24-hour emergency phone number. Transmission Pipeline Operators shall, after being notified of an emergency, cooperate with Summit County officials and make every effort to respond as soon as possible to protect the public's health, safety, and welfare.

B. The essential requirements stated in 49 CFR Parts ~~192.615~~195.402 and 195.403 shall be covered by the plan.

C. Emergency Response

1. Transmission Pipeline Owners and Operators shall follow Emergency Response requirements as required by 49 CFR Parts 195.402 and 195.403~~federal law and regulation~~.

2. The Transmission Pipeline Owner or Operator shall provide adequate funding to anticipated emergency responders for training and equipment unique to the circumstances associated with a Transmission Pipeline failure.

13~~XIII~~ 3-4 CONSTRUCTION AND TEMPORARY DISRUPTIONS

A. The Transmission Pipeline Owner, Operator and/or contractor shall give documented notice forty-eight (48) hours prior to the commencement of pipeline construction to the

effected residents, businesses (including agricultural businesses) and to the Summit County Sheriff Dispatch Center.

B. Private property owners and business owners shall have access to their property at all times. Property owners and business owners, including owners of agricultural operations, must be given forty-eight (48) hours advanced written and oral notice of any planned disruption in pipeline operations. Such disruptions shall be kept to a minimum.

C. The Transmission Pipeline Operator shall institute mitigation measures consistent with PHMSA regulations that are intended to reduce risk and minimize impact in the event of a pipeline failure. These mitigation measures shall include, but are not limited to:

1. Emergency procedures such as emergency plans and guides, employee training and drills, and education programs for occupants and employees concerning pipeline safety, such as what to be aware of and how to respond in the event of a problem.

2. Transmission Pipeline Operators shall consult with the local Fire District regarding the level of emergency planning and procedures appropriate for the proposed development;

3. The Fire District may also require submission of plans for review and approval where deemed appropriate.

CHAPTER 4

13~~XIII~~-4-1 PIPELINE COMPANY DUTIES AFTER NOTICE OF EXCAVATION

A. A Pipeline Company that has been notified by an Excavator that Excavation work will occur near a Hazardous Liquid Pipeline shall ensure that the Pipeline Company's representative consults with the Excavator on-site prior to the Excavation. The Pipeline Company has the discretion to require that the pipeline section in the vicinity of the Excavation be fully uncovered and examined for damage prior to being reburied.

13~~XIII~~-4-2 SUBMITTAL OF INFORMATION

A. Preliminary~~Updated~~ as-built information on the ~~upon completion of the~~ Transmission P~~p~~ipeline, including a copy of GIS shapefiles of the pipelines and all appurtenances within Summit County, will be filed within ninety (90) days before the pipeline is commissioned, with the County Engineer and the Department of Community Development.

B. Updated as-built information on the Transmission Pipeline, including a copy of GIS shapefiles of the pipelines and all appurtenances within Summit County, will be filed within sixty (60) days after the pipeline is commissioned, with the County Engineer and the Department of Community Development.

CHAPTER 5

13~~XIII~~-5-1 INDEMNIFICATION

A. The Transmission Pipeline Owner(s) and Operator(s) shall hold County, its officers, agents, employees, consultants, attorneys, special counsel and representatives harmless from liability: (1) for damages, just compensation, restitution, judicial or equitable relief arising out of claims for personal injury, including health, and claims for property damage which may arise from the direct or indirect operation, installation, maintenance, and/or repairs of the Transmission Pipeline, or the actions of the Transmission Pipeline Operator, Owner, contractors, subcontractors, agents, employees or other persons acting on their behalf which relates to the Transmission Pipeline; and (2) from any claim that damages, just compensation, restitution, judicial or equitable relief is due by reason of Transmission Pipeline Owners or Operator's uncured breach of the terms of their Pipeline Permit. Transmission Pipeline Owner and Operator shall pay all costs for the defense of the County and its officers, agents, employees, consultants, attorneys, special counsel and representatives regarding any third party action for damages, just compensation, restitution, judicial or equitable relief caused or alleged to have been caused by reason of the direct or indirect operation, installation, maintenance, and/or repairs of the Transmission Pipeline or an uncured breach of the Pipeline Permit. County shall make all reasonable decisions with respect to its representation in any legal proceeding.

CHAPTER 6

13~~XIII~~-6-1 FRANCHISE AGREEMENT

A. Where the Transmission Pipeline traverses the public right-of-way, a franchise agreement in accordance with Title 7, Chapter 1 may be required.

STAFF REPORT

To: Summit County Council
From: Jennifer Strader, County Planner
Date of Meeting: January 7, 2015
Type of Item: Development Code Amendments - Possible Action
Process: Legislative Review

On December 16, 2014 the Snyderville Basin Planning (SBPC) forwarded a positive recommendation to the Summit County Council (SCC) for the addition of regulations in the Development Code pertaining to Hazardous Liquids and Materials Transmission Pipelines by a vote of 6-1. Commissioner Harte voted nay because he had a concern over the setback distance from the drinking water sources, believing they should be increased from the proposed 1,000'.

On December 18, 2014 the Eastern Summit County Planning Commission (ESCPC) forwarded a negative recommendation on the same language. They had a variety of opinions and questions about the language and felt that it was "inadequate legislation". Understanding the time sensitivity related to the amendments, they decided to forward a negative recommendation to move the language forward and they advised the recently formed pipeline subcommittee to meet and further discuss the amendments. The subcommittee consists of 2 councilors, 2 members from each planning commission, and staff.

The Temporary Zoning Ordinance (TZO) expires on January 10, 2015. Minutes from both Commission meetings are not yet available. Additionally, at the time of this report, the subcommittee has not met so the results of that meeting will not be available until the SCC hearing.

The language presented to both Commissions is attached.

Background

Both the SBPC and ESCPC held two (2) public hearings on the amendments. The drafts presented at the first public hearings contained a setback of 2,500' from the drinking water sources. After the initial hearings, a subcommittee was formed to review and provide comment on the language. The subcommittee discussions included review of the Weber Basin Drinking Water Source Protection Plan and independent modeling that was done by an outside consultant. Additionally, a phone call was made to a representative from Weber Basin at the subcommittee meeting. As a result, the setback was amended to 1,000' for two (2) reasons:

1) The original setback was based on an area defined in the Weber Basin Water Conservancy District and Provo River Source Protection Zone Plans. After further review of the Plans and conversations with Weber Basin, it was found that the affected areas of the Weber River, Provo River, East Canyon Creek, and their tributaries are in a source protection zone of one thousand (1,000) feet.
2) An independent consultant was hired by Summit County to model a worst case scenario in case of a leak. They concluded that the distance is largely related to the grade of the land and an appropriate distance could be anywhere from seven hundred (700) to three thousand (3,000) feet. Taking the information in the Source Protection Plan combined with the results from the independent modeling, a one thousand (1,000) foot setback is being proposed; however, the language also allows the County Engineer to reduce the setback based upon acceptable mitigation measures presented by the applicant.

Public Notice, Meetings and Comments

This item was noticed as a public hearing with possible action by the SCC. Notice was published in *The Summit County News* and *The Park Record*. At the time of this report, Staff has not received any comment; however, public comment was received prior to the Planning Commission meetings from representatives of an oil pipeline company requesting that the following language be included in the Code:

> *"Resolution of Disputes: The developer of any Hazardous Liquids or Materials Transmission Pipeline may, at its expense, engage an independent Peer Review Engineer, who shall be approved by the County Engineer. If engaged, the Peer Review Engineer shall become familiar with the Hazardous Liquids or Materials Transmission Pipeline project being pursued by the developer through periodic review of design, engineering and construction work as the Peer Review Engineer and the County Engineer deem appropriate. In the event of a dispute between the developer and the County Engineer and/or the Director concerning any decision of the County Engineer and/or of the Director relative to any aspect of the project, said dispute shall first be submitted to the Peer Review Engineer for resolution. Either the developer or the County Engineer may appeal the decision of the Peer Review Engineer to the appellate process provided at 10-9-22 and 11-7-16."*

Staff has two (2) concerns with this provision:

1) Any Hazardous Liquids or Materials Transmission Pipeline requires approval of a Conditional Use Permit which is subject to the existing appeal process outlined in the Code. Why would this use be treated differently from any other type of application or use? Staff is of the opinion that the proposed language undermines the existing Code and should not be included in the language.
2) Standard #5 found below in Analysis and Findings states, *"The amendments will not grant special favors or circumstances solely for one property owner or*

developer." Staff cannot find in favor of the recommended language as it appears to benefit a particular oil pipeline company.

The ESCPC and SBPC **did not** vote to include the aforementioned language.

Analysis and Findings

The SCC may recommend approval, approval with conditions, or denial of an amendment to the Code based upon written findings of fact. Staff recommends that the SCC consider the following prior to making a decision:

1. The amendments are consistent with the goals of the General Plan. **COMPLIES**

   Analysis: Goal 5.1 of the Eastern Summit County General Plan states, "Develop codes and policies that promote proper stewardship of natural resources and address environmental issues of Eastern Summit County". It goes on to say, "Ensure development occurs in a manner and location that protects natural resources, including, but not limited to pollution prevention, erosion prevention, national forests, crucial wildlife habitat and corridors, agricultural lands, fisheries, water quality, wetlands, scenic view sheds, riparian areas, and clean air.

   One of the Objectives in the Snyderville Basin General Plan states, "Ensure that natural resources are protected so that they are readily available for current residents and future generations."

   The proposed amendments are intended to protect the public health and welfare of the residents and the environmentally sensitive nature of the land.

2. The amendment shall not permit the use of land that is not consistent with the uses of properties nearby. **COMPLIES**

   Analysis: The amendments will not permit the use of land that is not consistent with the uses of properties nearby based on specific requirements, such as setbacks.

3. The amendment will not permit suitability of the properties affected by the proposed amendment for the uses to which they have been restricted. **COMPLIES**

   Analysis: The amendments affect all properties located within the Snyderville Basin and Eastern Summit County and require approval of a Conditional Use Permit for any Hazardous Liquids or Materials Pipeline in every zone.

4. The amendment will not permit the removal of the then existing restrictions which will unduly affect nearby property. **COMPLIES**

   Analysis: There are no existing regulations for Hazardous Liquids or Materials Transmission Pipelines.

5. The amendment will not grant special favors or circumstances solely for one property owner or developer. **COMPLIES**

   Analysis: The amendments, as proposed, are applicable to all property located within the boundaries of the Snyderville Basin and Eastern Summit County and apply to all proposed Hazardous Liquids or Materials Transmission Pipelines.

6. The amendments will promote the public health and welfare better than the existing regulations that the amendments are intended to change. **COMPLIES**

   Analysis: In an effort to promote the public health and welfare and due to the nature of the materials that could be transported in a Hazardous Liquids or Materials Transmission Pipeline, Staff felt specific standards should have to be met prior to construction.

Recommendation

It is Staff's finding that the proposed amendments are necessary to protect the public health and welfare of the residents and the environmentally sensitive nature of the land.
Staff recommends that the SCC conduct a public hearing. Based upon the review outlined in this report, and unless members of the public bring to light new issues or concerns that may affect these findings, Staff also recommends that the SCC vote to approve the amendments through the adoption of an Ordinance, based on the following Findings of Fact and Conclusions of Law.

Findings of Fact:

1. The proposed amendments are intended to protect the public health and welfare of the residents and the environmentally sensitive nature of the land.
2. Utah Code Annotated §17-50-302(1)(a)(ii) expressly authorizes County's to "provide a service, exercise a power, or perform a function that is reasonably related to the safety, health, morals, and welfare of county inhabitants, except as limited or prohibited by statute."
3. Since the Utah Public Service Commission has not promulgated rules concerning intrastate Hazardous Liquid Pipelines, the County is not pre-empted from enacting zoning regulations which regulate land uses, setbacks, environmental hazards (such as, water quality, watershed protection, jurisdictional wetlands, ridgeline protection, re-vegetation of disturbed areas, wildlife habitat and fisheries).
4. On June 25, 2014, the SCC adopted a Temporary Zoning Ordinance (TZO) that put in place regulations for Hazardous Liquids or Materials Transmission Pipelines.
5. The TZO was adopted with a six (6) month timeframe in which a permanent ordinance was to be put in place.
6. The TZO expires on January 10, 2015.
7. If no permanent regulations or amendments have occurred in six (6) months, the ordinances that were in place when the TZO was enacted become effective again.

8. Over the past six (6) months, Staff has been researching best practices for regulating pipelines and is proposing amendments to the existing language adopted by the TZO.

Conclusions of Law:

1. The amendments are consistent with the goals of the General Plan.
2. The amendments are applicable to all property located within the boundaries of the Snyderville Basin and Eastern Summit County and apply to all proposed Hazardous Liquids or Materials Transmission Pipelines.
3. The amendments will promote the public health and welfare better than the existing regulations that the amendment is intended to change.

Attachments

Exhibit A: Snyderville Basin Draft Language
Exhibit B: Eastern Summit County Draft Language

TITLE 10

SNYDERVILLE BASIN DEVELOPMENT CODE

10-2-10

A.

Hazardous Liquids or Materials Transmission Pipelines	C	C	C	C	C	C	C	C	Section 10-8-3

10-8-13 : HAZARDOUS LIQUIDS OR MATERIALS TRANSMISSION PIPELINES:

A. Purpose: The purpose of this section is to mitigate the aesthetic and environmental impacts while minimizing potential damage to essential public facilities from Hazardous Liquids or Materials Transmission Pipelines by:

1. Minimizing the likelihood of inadvertent or accidental damage from and to Hazardous Liquids or Materials Transmission Pipelines due to external forces, such as construction activity, by ensuring early communication between those developing property and Hazardous Liquids or Materials Transmission Pipeline Operators.

2. Minimizing the risk of injury or damage to essential public facilities in the event of a Hazardous Liquids or Materials Transmission Pipeline failure.

3. Mitigating potential adverse aesthetic impacts from the siting, construction, operation, and maintenance of a Hazardous Liquids or Materials Transmission Pipeline.

4. Ensuring adequate protection of the environment in the event of a Hazardous Liquids or Materials Transmission Pipeline failure.

5. Ensuring there is adequate protection of existing Hazardous Liquids or Materials Transmission Pipelines from damage.

6. Limiting the exposure of land uses with on-site populations that are difficult to evacuate, as well as land uses that serve emergency functions from the effects of a pipeline failure.

7. Supplementing existing federal and state regulations related to

EXHIBIT A

Transmission Pipeline Corridor management.

B. Applicability: Regulations in this section apply to all proposed pipelines. Applications to install Hazardous Liquids or Materials Transmission Pipelines shall be processed as Conditional Uses in all zone districts. To the extent any regulations within this section conflict with state or federal regulations or laws regulating Hazardous Liquids or Materials Transmission Pipelines, those state or federal regulations and laws shall take precedence over these regulations. The County adopts by reference the definitions set forth in the Hazardous Liquid Pipeline Safety Act of 1979, as amended, and re-codified in 49 USC 601 and 49 CFR 190-199.

C. Definitions:

1. **Essential Public Facilities** means those public facilities which are required in order to provide basic health and safety services to residents and visitors of Summit County, including water treatment plants, sewer treatment plants, water storage facilities, telecommunication towers, police stations, fire stations, and emergency operations centers.

2. **Hazardous Liquids or Materials** means any hazardous or toxic waste, substance or material, including petroleum, petroleum products, and anhydrous ammonia as defined by the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C.A. Section 9601, et seq.; the Hazardous Materials Transportation Act, 49 U.S.C.A. Section 5101, et seq.; the Resource Conservation and Recovery Act, 42 U.S.C.A. Section 6901, et seq.; the Toxic Substances Control Act, 15 U.S.C.A. Section 2601, et seq.; the Federal Water Pollution Control Act, 33 U.S.C.A. Section 1251, et seq.; the Hazardous Liquid Pipeline Safety Act, 49 U.S.C.A. Section 60101, et. seq.; the Utah Safe Drinking Water Act, Utah Code Ann. §19-4-101, et. seq.; the Utah Water Quality Act, Utah Code Ann. §19-5-101, et. seq.; the Utah Solid & Hazardous Waste Act, Utah Code Ann. §19-6-101, et. seq., 49 CFR 195.2, and any successor State or Federal environmental laws which define hazardous substances. Hazardous Material shall include Hazardous Liquids as defined by 49 CFR Part 195.2, but shall not include natural gas, including liquefied natural gas.

3. **Hazardous Liquids or Materials Transmission Pipeline or Transmission Pipeline** means a pipeline, whether above or below ground, which transports or is designed to transport Hazardous Liquids or Materials. As used herein, a Transmission Pipeline includes all parts of those physical facilities through which hazardous material moves in transportation, including pipes, valves, and other appurtenances attached to pipes, compressor units, pumping stations, metering stations, regulator stations, delivery stations, holders, breakout tanks, fabricated assemblies, and

other surface pipeline appurtenances. A Hazardous Liquids or Materials Transmission Pipeline includes a Hazardous Liquid Pipeline as defined in 13-1-2.

4. **High Consequence Land Use** means a land use that if located in the vicinity of a Hazardous Materials Transmission Pipeline represents an unusually high risk to life in the event of a Transmission Pipeline failure due to the characteristics of the inhabitants or functions of the use. High Consequence Land Uses include:

   a. Commercial Child Care;

   b. Houses of Worship, including churches and other religious institutions;

   c. Hospitals;

   d. Residential Care Facilities;

   e. Institutional Uses including private schools and public or quasi-public buildings; and

   f. Essential Public Facilities.

5. **Hazardous Liquids or Materials Transmission Pipeline Corridor or Transmission Pipeline Corridor** means the pipeline pathway defined by rights-of-way and easements in which the pipelines and facilities of a Hazardous Liquids or Materials Transmission Pipeline are located, including rights-of-way and easements over and through public or private property.

6. **Source Protection Zone** means the water source protection zones as set forth in Title 4, Chapter 6.

7. **Transmission Pipeline Operator** means the company or person responsible for the operation, maintenance and management of the Transmission Pipeline.

8. **Quasi-Public Buildings** means buildings that are open to the general public.

9. **Jurisdictional Wetlands** means an area delineated and approved as a wetland by the United States Army Corps of Engineers consistent with UCA §17-27-a-520.

10. **Man-Made or Natural Reservoir** means a natural or artificial water body

where water is collected and stored for use.

D. Development Standards for the Construction of new Hazardous Liquids or Materials Transmission Pipelines:

1. Hazardous Liquids or Materials Transmission Pipeline Corridor: A fifty (50) foot easement or right-of-way (or such other widths as shall be approved and accepted by the Director and County Engineer for any given property along the course of the Transmission Pipeline, based upon individual topographical and/or site condition requirements) shall be recorded in the office of the Summit County Recorder for all new Hazardous Liquids or Materials Transmission Pipelines.

2. In order to mitigate the aesthetic and environmental impacts of Hazardous Liquids or Materials Transmission Pipelines, while minimizing potential damage to Essential Public Facilities caused by Transmission Pipelines, the following setbacks shall be observed:

   a. Except as set forth in 10-8-13(D)(3) or unless approved by the County Engineer as part of the conditional use permit process, where adequate mitigation measures have been demonstrated by the applicant, Hazardous Liquids or Materials Transmission Pipeline Corridors shall not be located closer than one thousand (1,000) feet from (i) East Canyon Creek and any other water sources as set forth in the established Source Protection Zone, and/or (ii) any man-made or natural reservoir.

   b. Except as set forth in 10-8-13(D)(3), Hazardous Liquids or Materials Transmission Pipelines shall not be located closer than one hundred (100) feet from (i) any jurisdictional wetland and (ii) any year round naturally occurring creek, stream, river, private well, or pond unless approved by the County Engineer as part of the conditional use permit process where adequate mitigation measures have been demonstrated by the applicant.

   c. An above ground Hazardous Liquids or Materials Transmission Pipeline facility or appurtenance shall not be located closer than one thousand (1,000) feet from any High Consequence Land Use structure or Essential Public Facility structure, unless otherwise approved by the County Engineer based upon independent modeling.

3. Crossings of jurisdictional wetlands, year round naturally occurring creeks, streams, ponds, East Canyon Creek and any other water sources as set forth in the established Source Protection Zone, or man-made or

natural reservoirs may be allowed as part of the conditional use permit process, on the following basis:

a. Open cut trench excavation of jurisdictional wetlands, and year round naturally occurring creeks, streams, rivers or ponds (except for the East Canyon Creek, Weber River, the Provo River, and natural or man-made reservoirs along the Weber River) based upon the best engineering practices is permitted at the discretion of the County Engineer. However, if in the opinion of the County Engineer, circumstances warrant, horizontal directional drilling or jack and bore construction methods as set forth in 10-8-13(D)(3)(b) may be required.

b. Crossing of East Canyon Creek and any other water sources as set forth in the established Source Protection Zone or natural or man-made reservoirs along the Weber River, unless otherwise approved by the County Engineer, shall be by horizontal directional drilling or jack and bore construction methods. Jack and bore sending and receiving pits must be located outside of the ten (10) year frequency storm limits and/or the required clearance distances from the thalweg, whichever is greater, and must have the approval of the FEMA Floodplain Administrator if within the 1% chance annual floodplain (100-year storm). Directional drilling pits shall be constructed well beyond the top of the bank. A soils engineering report and/or engineering geology report may be required at the discretion of the County Engineer. Armoring of the pipeline may be required as determined by hydraulic modeling and approved by the County Engineer. The consultant designing the crossing shall assure proper depth of utility to prevent exposure from localized scouring caused by improvements in the stream corridor. Applicant shall coordinate with the local Floodplain Administrator to determine appropriate scour protection depths. Pipeline minimum depth is ten (10) feet under channel grade to the top of the pipeline.

c. County Engineer shall review the engineering spill analysis and associated hydraulic reports and may require additional isolation valves immediately adjacent to both sides of Jurisdictional Wetlands, year round naturally occurring creeks, streams, ponds, rivers, East Canyon Creek and any other water sources as set forth in the established Source Protection Zone, or man-made or natural reservoir crossings in order to minimize spills or leaks.

4. Every effort shall be made so that pipeline related equipment enclosures and other structures are appropriately designed to mitigate their visual impact on the natural environment. This may incude the incorporation of

stealth design techniques and/or other visual screening methods as approved by the Director.

5. Unless otherwise modified by this section, all criteria set forth in 10-4-2 (Environmental Criteria) and 10-4-3 (Critical Lands) shall apply to Hazardous Liquids or Materials Transmission Pipelines.

   a. In the event that it becomes necessary for a Hazardous Liquids or Materials Transmission Pipeline to traverse a hillside or natural grade slope of greater than thirty percent (30%), adequate mitigation shall be required to ensure the alignment is sensitively sited so as to encourage stabilization of the disturbed slopes, minimize excavation, and the conservation of the natural appearance and grade of the hillside. The Transmission Pipeline alignment shall be integrated into the site, using topography, vegetation and other reasonable techniques, in a manner that causes it to blend into the hillside.

E. Hazardous Liquids or Materials Transmission Pipeline Corridor Protection: No significant land disturbance or construction or expansion of structures is allowed within the Hazardous Liquids or Materials Transmission Pipeline Corridor without the express written consent of the Transmission Pipeline Operator.

TITLE 11

EASTERN SUMMIT COUNTY DEVELOPMENT CODE

11-3-14

A.

Permitted Uses	AP	AG-100	AG--160	CA	HC	C	LI	I	
Hazardous Liquids or Materials Transmission Pipelines	C	C	C	C	C	C	C	C	Section 11-6-19

Telecommunication Facilities - Stealth	A	A	A	A	A	A	A	A	Section 11-6-7
Underground transmission lines exceeding 6" inches in diameter that are not considered Hazardous Liquids or Materials Transmission Pipelines as defined in Section 11-6-19 of this Title	L	L	L	L	L	L	L	L	
Underground transmission lines 6" or less in diameter such as, but not limited to transmission lines for natural gas, water, sewer, telephone, power, etc.	A	A	A	A	A	A	A	A	
Utility structures and related facilities	C	L	L	C	C	C	L	L	Section 11-6-6

11-6-19: HAZARDOUS LIQUIDS OR MATERIALS TRANSMISSION PIPELINES:

A. Purpose: The purpose of this section is to mitigate the aesthetic and environmental impacts while minimizing potential damage to essential public

EXHIBIT B

facilities from Hazardous Liquids or Materials Transmission Pipelines by:

1. Minimizing the likelihood of inadvertent or accidental damage from and to Hazardous Liquids or Materials Transmission Pipelines due to external forces, such as construction activity, by ensuring early communication between those developing property and Hazardous Liquids or Materials Transmission Pipeline Operators.

2. Minimizing the risk of injury or damage to essential public facilities in the event of a Hazardous Liquids or Materials Transmission Pipeline failure.

3. Mitigating potential adverse aesthetic impacts from the siting, construction,operation, and maintenance of a Hazardous Liquids or Materials Transmission Pipeline.

4. Ensuring adequate protection of the environment in the event of a Hazardous Liquids or Materials Transmission Pipeline failure.

5. Ensuring there is adequate protection of existing Hazardous Liquids or Materials Transmission Pipelines from damage.

6. Limiting the exposure of land uses with on-site populations that are difficult to evacuate, as well as land uses that serve emergency functions from the effects of a pipeline failure.

7. Supplementing existing federal and state regulations related to Transmission Pipeline Corridor management.

B. Applicability: Regulations in this section apply to all proposed pipelines. Applications to install Hazardous Liquids or Materials Transmission Pipelines shall be processed as Conditional Uses in all zone districts. To the extent any regulations within this section conflict with state or federal regulations or laws regulating Hazardous Liquids or Materials Transmission Pipelines, those state or federal regulations and laws shall take precedence over these regulations. The County adopts by reference the definitions set forth in the Hazardous Liquid Pipeline Safety Act of 1979, as amended, and re-codified in 49 USC 601 and 49 CFR 190-199.

C. Definitions:

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3. **Hazardous Liquids or Materials Transmission Pipeline or Transmission Pipeline** means a pipeline, whether above or below ground, which transports or is designed to transport Hazardous Liquids or Materials. As used herein, a Transmission Pipeline includes all parts of those physical facilities through which hazardous material moves in transportation, including pipes, valves, and other appurtenances attached to pipes, compressor units, pumping stations, metering stations, regulator stations, delivery stations, holders, breakout tanks, fabricated assemblies, and other surface pipeline appurtenances. A Hazardous Liquids or Materials Transmission Pipeline includes a Hazardous Liquid Pipeline as defined in 13-1-2.

4. **High Consequence Land Use** means a land use that if located in the vicinity of a Hazardous Materials Transmission Pipeline represents an unusually high risk to life in the event of a Transmission Pipeline failure due to the characteristics of the inhabitants or functions of the use. High Consequence Land Uses include:

    a. Commercial Child Care;

    b. Houses of Worship, including churches and other religious institutions;

    c. Hospitals;

    d. Residential Care Facilities;

    e. Institutional Uses including private schools and public or quasi-public buildings; and

f. Essential Public Facilities.

5. **Hazardous Liquids or Materials Transmission Pipeline Corridor or Transmission Pipeline Corridor** means the pipeline pathway defined by rights-of-way and easements in which the pipelines and facilities of a Hazardous Liquids or Materials Transmission Pipeline are located, including rights-of-way and easements over and through public or private property.

6. **Source Protection Zone** means the water source protection zones as set forth in Title 4, Chapter 6.

7. **Transmission Pipeline Operator** means the company or person responsible for the operation, maintenance and management of the Transmission Pipeline.

8. **Quasi-Public Buildings** means buildings that are open to the general public.

9. **Jurisdictional Wetlands** means an area delineated and approved as a wetland by the United States Army Corps of Engineers consistent with UCA §17-27-a-520.

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D. Development Standards for the Construction of new Hazardous Liquids or Materials Transmission Pipelines:

1. Hazardous Liquids or Materials Transmission Pipeline Corridor: A fifty (50) foot easement or right-of-way (or such other widths as shall be approved and accepted by the Director and County Engineer for any given property along the course of the Transmission Pipeline, based upon individual topographical and/or site condition requirements) shall be recorded in the office of the County Recorder for all new Hazardous Liquids or Materials Transmission Pipelines.

2. In order to mitigate the aesthetic and environmental impacts of Hazardous Liquids or Materials Transmission Pipelines, while minimizing potential damage to Essential Public Facilities caused by Transmission Pipelines, the following setbacks shall be observed:

a. Except as set forth in 11-6-19(D)(3) or unless approved by the County Engineer as part of the conditional use permit process, where adequate mitigation measures have been demonstrated by the applicant, Hazardous Liquids or Materials Transmission

Pipeline Corridors shall not be located closer than one thousand (1,000) feet from (i) the Weber River and its tributaries, as set forth in the established Source Protection Zone, and/or (ii) the Provo River and its tributaries, as set forth in the established Source Protection Zone, and/or (iii) any man-made or natural reservoir along the Weber River.

b. Except as set forth in 11-6-19(D)(3), Hazardous Liquids or Materials Transmission Pipelines shall not be located closer than one hundred (100) feet from (i) any Jurisdictional Wetland and (ii) any year round naturally occurring creek, stream, river, private well, or pond, unless approved by the County Engineer as part of the Conditional Use Permit process where adequate mitigation measures have been demonstrated by the applicant.

c. An above ground Hazardous Liquids or Materials Transmission Pipeline facility or appurtenance shall not be located closer than one thousand (1,000) feet from any High Consequence Land Use structure or Essential Public Facility structure, unless otherwise approved by the County Engineer based upon independent modeling.

3. Crossings of jurisdictional wetlands, year round naturally occurring creeks, streams, ponds, the Weber River and its tributaries, the Provo River and its tributaries, or man-made or natural reservoirs along the Weber River may be allowed as part of the conditional use permit process, on the following basis:

a. Open cut trench excavation of jurisdictional wetlands, and year round naturally occurring creeks, streams, rivers or ponds (except for the Weber River, the Provo River, and natural or man-made reservoirs along the Weber River) based upon the best engineering practices is permitted at the discretion of the County Engineer. However, if in the opinion of the County Engineer, circumstances warrant, horizontal directional drilling or jack and bore construction methods as set forth in 11-6-19(D)(3)(b) may be required.

b. Crossing of the Weber River, the Provo River, or natural or man-made reservoirs along the Weber River, unless otherwise approved by the County Engineer, shall be by horizontal directional drilling or jack and bore construction methods. Jack and bore sending and receiving pits must be located outside of the ten (10) year frequency storm limits and/or the required clearance distances from the thalweg, whichever is greater, and must have the approval of the FEMA Floodplain Administrator if within the 1% chance annual

floodplain (100-year storm). Directional drilling pits shall be constructed well beyond the top of the bank. A soils engineering report and/or engineering geology report may be required at the discretion of the County Engineer. Armoring of the pipeline may be required as determined by hydraulic modeling and approved by the County Engineer. The consultant designing the crossing shall assure proper depth of utility to prevent exposure from localized scouring caused by improvements in the stream corridor. Applicant shall coordinate with the local Floodplain Administrator to determine appropriate scour protection depths. Pipeline minimum depth is ten (10) feet under channel grade to the top of the pipeline.

c. County Engineer shall review the engineering spill analysis and associated hydraulic reports and may require additional isolation valves immediately adjacent to both sides of Jurisdictional Wetlands, year round naturally occurring creeks, streams, rivers, ponds, the Weber River, the Provo River, or man-made or natural reservoir crossings in order to minimize spills or leaks.

4. Every effort shall be made so that pipeline related equipment enclosures and other structures shall be appropriately designed to mitigate their visual impact on the natural environment. This may include stealth design techniques and/orother visual screening methods as approved by the Director.

5. Unless otherwise modified by this section, all criteria set forth in 11-2-4 (Natural Resources) and 11-2-5 (County Infrastructure, Facilities, and Services) shall apply to Hazardous Liquids or Materials Transmission Pipelines.

a. In the event that it becomes necessary for a Hazardous Liquids or Materials Transmission Pipeline to traverse a hillside or natural grade slope of greater than thirty percent (30%), adequate mitigation shall be required to ensure the alignment is sensitively sited so as to encourage stabilization of the disturbed slopes, minimize excavation, and the conservation of the natural appearance and grade of the hillside. The Transmission Pipeline alignment shall be integrated into the site, using topography, vegetation and other reasonable techniques, in a manner that causes it to blend into the hillside.

E. Hazardous Liquids or Materials Transmission Pipeline Corridor Protection: No significant land disturbance or construction or expansion of structures is allowed within the Hazardous Liquids or Materials Transmission Pipeline Corridor without the express written consent of the Transmission Pipeline Operator.