

9000 South Redwood Road to I-15

State Environmental Study

Utah Department of Transportation



UDOT Project No. S-0209(35)10, PIN 14412

July 2019

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Approval

The Utah Department of Transportation (UDOT) has completed a State Environmental Study (SES) for proposed transportation improvements on Utah State Route 209 (9000 South) from Redwood Road (1700 West) to 700 West in Salt Lake County, Utah.

The build alternative would widen about 1.5 miles of 9000 South between Redwood Road and 700 West from five to seven lanes. The new right-of-way for 9000 South would vary between 100 and 113 feet wide, depending on the location. The build alternative would add an additional 11-foot-wide travel lane in each direction, for a total of three travel lanes in each direction plus a 14-foot-wide, center, two-way, left-turn turning lane. A 4-foot-wide, curb-height median would run down the middle of 9000 South from about 1075 West to 700 West. With three travel lanes in each direction, 9000 South in the project study area would match the lane configuration on 9000 South east of the project study area.

The build alternative includes upgraded and continuous sidewalks on both sides of the road from Redwood Road to 700 West. In addition, the current single diagonal (apex) pedestrian ramps at all intersections between Redwood Road and 700 West would be upgraded to two diagonal pedestrian ramps to meet current UDOT and Americans with Disabilities Act (ADA) standards on both sides of the road. Consistent 10-foot-wide shoulders would be incorporated on both sides of the road for safety.

The build alternative includes a 5-to-6-foot-wide conventional, nonprotected bicycle lane from Redwood Road to 700 West on the shoulders of 9000 South on both sides of the road. The bicycle lane would be designated by a sharrow (a painted bicycle and arrow on the pavement) at the right-turn lanes for all intersections. The bicycle lanes would terminate at 700 West, and cyclists would be directed to take 700 West or the Jordan River Parkway Trail as a bicycle route.

As part of the build alternative, the existing bridge over the Jordan River would be widened and the bridge profile would be raised to meet current floodplain elevation requirements. To meet current UDOT standards, the new bridge would be 127 feet wide on the inside of the parapets and would include 12-foot-wide vehicle travel lanes, a 14-foot-wide median, and 10.5-foot-wide park strips and sidewalks on both sides.

During the environmental study process, the build alternative was evaluated and adjusted to minimize harm. The alignment and design were selected to reduce impacts where possible while still meeting the purpose of and need for the project. All practical measures to minimize environmental harm have been considered and incorporated into the project.

1 As a result of this SES, UDOT has evaluated the effectiveness, benefits, costs, and likely effects of the
2 build alternative and comments provided by the public and stakeholders on the build alternative, and has
3 selected it as the Selected Alternative. Based on the information summarized in this SES, UDOT has
4 determined that the Selected Alternative would best meet the purpose of and need for the project while
5 minimizing environmental impacts.

6 **Reviewed by**

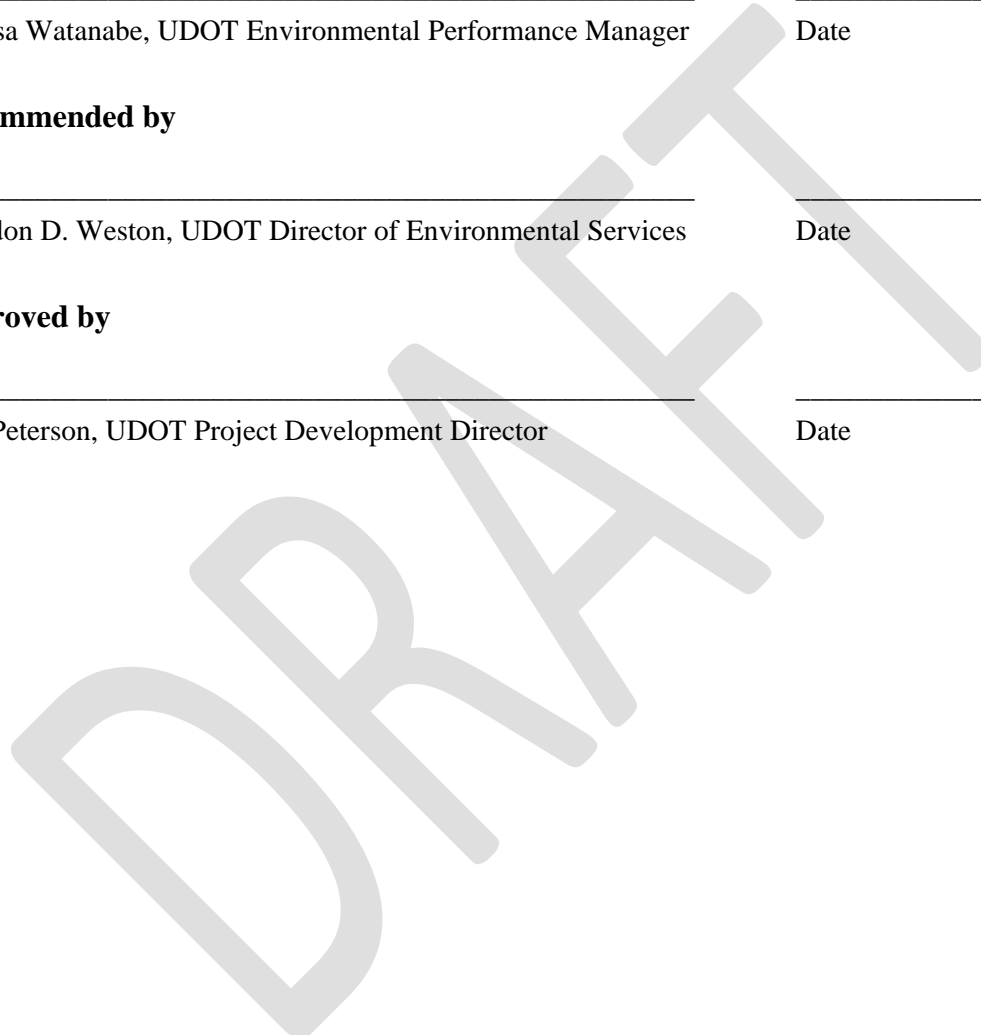
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Acronyms and Abbreviations

1		
2	AADT	annual average daily traffic
3	ADA	Americans with Disabilities Act
4	AM	morning
5	APE	area of potential effects
6	BMP	best management practice
7	CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
8	CFR	Code of Federal Regulations
9	dba	A-weighted decibels
10	DERR	Utah Division of Environmental Response and Remediation
11	ESA	Endangered Species Act
12	FEMA	Federal Emergency Management Agency
13	FHWA	Federal Highway Administration
14	GIS	geographic information systems
15	GPS	global positioning system
16	I-15	Interstate 15
17	LOS	level of service
18	LQG	Large-Quantity Generator
19	LUST	leaking underground storage tank
20	MS4	municipal separate storm sewer system
21	No.	number
22	NRHP	National Register of Historic Places
23	PGP 10	Programmatic General Permit 10 (issued by the United States Army Corps of Engineers)
24	PM	afternoon
25	R	Rule within the Utah Administrative Code
26	RCRA	Resource Conservation and Recovery Act
27	RTP	<i>Wasatch Front Regional Transportation Plan</i>
28	S.R.	state route
29	SES	State Environmental Study
30	SHPO	State Historic Preservation Officer
31	SQG	Small-Quantity Generator
32	SWPPP	<i>Stormwater Pollution Prevention Plan</i>
33	TDS	total dissolved solids
34	TL	Test Level
35	TMDL	Total Maximum Daily Load
36	TNW	traditional navigable waters
37	TSS	total suspended solids
38	U.S.	United States
39	UAC	Utah Administrative Code
40	UCATS	Utah Collaborative Active Transportation Study
41	UDEQ	Utah Department of Environmental Quality
42	UDOT	Utah Department of Transportation
43	UPDES	Utah Pollutant Discharge Elimination System
44	USACE	United States Army Corps of Engineers
45	USC	United States Code
46	USDOT	United States Department of Transportation
47	USFWS	United States Fish and Wildlife Service
48	UST	underground storage tank
49	WFRC	Wasatch Front Regional Council

1. INTRODUCTION

The Utah Department of Transportation (UDOT) proposes to construct about 1.5 miles of transportation capacity improvements on Utah State Route (S.R.) 209 (9000 South) from Redwood Road (1700 West) to 700 West in Salt Lake County, Utah. The improvements would be made in the cities of West Jordan and Sandy. In this State Environmental Study (SES) for these improvements, UDOT considered the need for a safe and efficient transportation system while considering the social, economic, and environmental impacts of the proposed improvements.

1.1. Project Study Area

The project study area for this 9000 South SES is located in the cities of West Jordan and Sandy in southwestern Salt Lake County, Utah. 9000 South serves as an urban principal arterial connecting the east and west parts of the Salt Lake Valley. 9000 South is an important road for both West Jordan and Sandy, serving current and planned development between Interstate 15 (I-15) and the Mountain View Corridor and points west. In addition to 9000 South being an important commuter route, existing uses immediately adjacent to 9000 South include primarily commercial and retail, parks and open space, and residential and public facility uses.

According to West Jordan City's *Transportation Master Plan* (West Jordan City, no date), because 9000 South provides a connection to the Mountain View Corridor and runs directly through West Jordan to the east and ultimately to I-15, 9000 South benefits commuters on both ends of the city regardless of whether their ultimate destination is north, south, east, or west. Consequently, the road has become a major route into and out of West Jordan in the east-west direction. Moreover, because of growth in western Salt Lake County, east-west roadway connectivity is limited, therefore placing even greater strain on arterials like 9000 South.

As shown in Figure 1-1, the project study area is the segment of 9000 South that is bounded on the west by Redwood Road and on the east by Sandy Parkway, a frontage road west of I-15 at about 500 West.

Why is 9000 South being evaluated?

9000 South is a major east-west road that connects the growing communities in the western Salt Lake Valley with the eastern parts of the valley. This connection is leading to heavy congestion on 9000 South, and this congestion will continue to worsen if no improvements are made to the transportation system. In addition, the existing 9000 South roadway has insufficient shoulders and sidewalks and lacks bicycle facilities.

1 **Figure 1-1. 9000 South SES Project Study Area**



2

1.2. Project Background and Transportation Planning

This section provides an overview of the regional and local land use and transportation plans that address the current and future conditions of 9000 South. Transportation planning is an important, ongoing process to identify projects to maintain an adequate transportation system. The Wasatch Front Regional Council (WFRC), UDOT, and the surrounding municipalities are responsible for transportation planning in the project study area. The planning documents consist of WFRC’s *Wasatch Front Regional Transportation Plan (RTP)* for 2019 to 2050 (WFRC 2019), UDOT’s *Statewide Transportation Improvement Program* for 2019 to 2024 (UDOT 2018a), and land use and transportation plans prepared by West Jordan and Sandy Cities.

1.2.1. Wasatch Front Regional Council Plans

WFRC is the designated metropolitan planning organization that works in partnership with UDOT, the Utah Transit Authority, local governments, and other stakeholders to develop the regional transportation plan for the counties in its jurisdiction (Box Elder, Davis, Morgan, Salt Lake, Tooele, and Weber).

The major transportation needs in the 9000 South project study area are a result of several roadway and bridge design elements no longer meeting current UDOT design standards and intersections that are approaching failing operating conditions, leading to overall congested traffic conditions during the peak traffic periods. The transportation needs are documented in several regional and local plans, most notably in WFRC’s previously adopted 2015–2040 RTP (WFRC 2015), which shows 9000 South being widened from four lanes to six lanes in Phase 1 of that RTP (2015 to 2024, Project S-198), and in WFRC’s 2019–2050 RTP (WFRC 2019), which shows 9000 South being widened to seven lanes in Phase 1 of that RTP (2019 to 2030, Project R-S-49).

The *Wasatch Choice 2050 Vision* (WFRC, no date), which informs WFRC’s 2019–2050 RTP, also shows roadway, transit, and active transportation projects on 9000 South, and such projects are supported in the interactive map for the RTP.

1.2.2. UDOT and Other Regional Bicycle and Pedestrian Plans

The Utah Collaborative Active Transportation Study (UCATS) was a regional bicycle network study that established a plan for bicycle infrastructure for state and local roads. The UCATS plan shows a planned regional bicycle network route on 9000 South between Redwood Road and Sandy Parkway (which is about 500 West) (UDOT and others 2013). The UDOT Region Two Bike Plan, which was based mainly on the UCATS, also calls for a planned bicycle

What is the Wasatch Front Regional Council (WFRC)?

WFRC is the designated metropolitan planning organization that works in partnership with UDOT, city and county governments, and other stakeholders to develop the Regional Transportation Plan for the Wasatch Front Urban Area. This plan is the region’s plan for highway, transit, and other transportation-related improvements to meet the area’s growing transportation needs over the next 30 years.

What are failing operating conditions?

Failing operating conditions for intersections occur when the level of service (LOS) is LOS D or worse. LOS D is described as approaching unstable flow (tolerable delay with vehicles occasionally needing to wait through more than one cycle of the traffic signal before proceeding). LOS E is unstable flow with intolerable delay, and LOS F is forced flow with congestion and vehicle queues that do not clear during one cycle of the traffic signal.

What is active transportation?

Active transportation is a means of transportation that is powered by human energy (primarily walking and cycling.)

1 network route on 9000 South between Redwood Road and Sandy Parkway, identical to that shown in the
 2 UCATS (UDOT, no date).

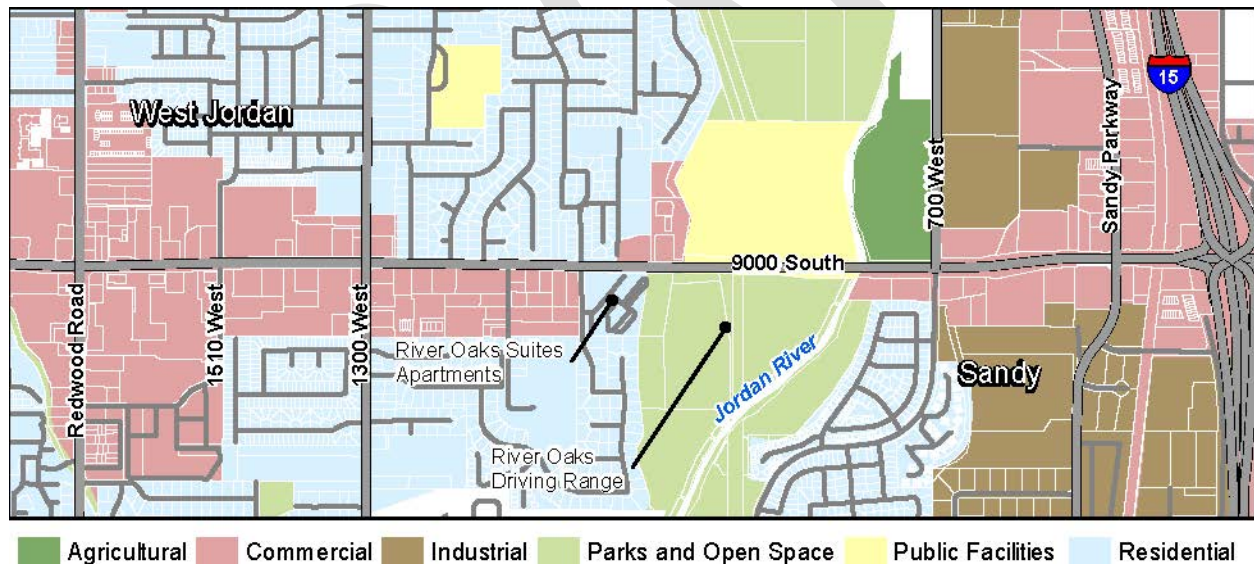
3 West Jordan City representatives prefer an off-street bicycle trail but understand the right-of-way
 4 constraints in the area. They would defer to Salt Lake County’s *Active Transportation Implementation*
 5 *Plan*. The city representatives said that, if the bicycle lane is in the roadway shoulder, they would prefer a
 6 protected-style lane. They added that both 2700 West and 1300 West are heavily used bicycle routes, so a
 7 connection on 9000 South was important. The representatives stressed how important it was to keep
 8 pedestrians as far away from travel lanes as possible (HDR 2018a).

9 Sandy City representatives prefer that this bicycle route not be a primary bicycle route because of the
 10 amount of traffic at the 9000 South and I-15 interchange and because there are no bicycle routes to
 11 connect with east of I-15. The city representatives recommend ending the bicycle route at the Jordan
 12 River Parkway Trail (just west of 700 West) (HDR 2018b). The High Comfort Bicycle Network map in
 13 Salt Lake County’s *Active Transportation Implementation Plan* shows the bicycle route turning at
 14 Riverside Drive (700 West) and continuing to Creekside Park, which is located at about Riverside Drive
 15 and 9400 South (the exact address is 9384 South 805 West in Sandy) (Salt Lake County, no date).

1.2.3. Local Land Use and Transportation Plans

16 Land uses along 9000 South are primarily commercial with pockets of residential, industrial, and
 17 institutional development (Figure 1-2).
 18

19 **Figure 1-2. Existing Land Use in the Project Study Area**



21 The city government of each city along 9000 South between Redwood Road and I-15 has developed land
 22 use and/or transportation plans that identify the need for transportation improvements within its city,
 23 including alternative modes of transportation, as well as the future zoning and land use desires of the
 24 community. The West Jordan *Transportation Master Plan* (West Jordan City, no date) acknowledges the
 25 high number of commuters who use 9000 South and its popularity as an east-west connector. The plan
 26 calls for 9000 South to be improved to seven lanes to accommodate development and population growth
 27 and subsequent growth in traffic.

1 Interviews conducted in October and November 2018 with representatives from West Jordan and Sandy
2 Cities demonstrated that the Cities are planning for new development and redevelopment along
3 9000 South. The representatives said that they intend to rezone the remaining single-family residential
4 parcels to commercial. Representatives from both Cities agree that mobility is already an issue on
5 9000 South and that, as further development and redevelopment occur along 9000 South, the congestion
6 will worsen (HDR 2018a, 2018b).

7 According to West Jordan City representatives, redevelopment is currently occurring in the project study
8 area and is predicted to continue. The representatives noted that the old Kmart store at 1442 West
9 9000 South is an example of a large redevelopment parcel (HDR 2018a). West Jordan City
10 representatives stated that it would be helpful if the 9000 South project could improve access to some
11 locations, especially the neighborhoods to the north and south that are accessed by 9000 South.

12 Similarly, Sandy City representatives said that their planning commission recently approved plans for a
13 7-Eleven convenience store at the southwest corner of the 700 West and 9000 South intersection. City
14 representatives further noted that the Canyons School District property at 9150 South 500 West will be
15 developed into an industrial complex, thereby creating 200 to 300 jobs and generating tax revenue
16 (HDR 2018b). A large development is being built outside the project study area (on the south side of
17 7720 South in Midvale). This development will have access to 700 West about 0.75 mile north of
18 9000 South. This development is predicted to add thousands of homes and jobs in the development
19 vicinity and could put additional strain on the 9000 South and 700 West intersection in the future.

20 **1.3. Summary of the Project's Purpose**

21 9000 South is a major east-west route and is heavily congested,
22 especially during the PM peak traffic period (4 PM to 6 PM). The
23 9000 South Redwood Road to I-15 project is intended to improve
24 local east-west traffic performance by reducing intersection
25 congestion and average vehicle delay while improving travel mode
26 choices and safety on 9000 South between Redwood Road and
27 700 West. UDOT intends the 9000 South project to fulfill the
28 following three primary purposes:

- 29 1. Improve east-west traffic performance and decrease crash
30 rates in the project study area.
- 31 2. Improve travel mode choices and safety for active
32 transportation users.
- 33 3. Upgrade roadway elements to meet current UDOT design
34 standards.

35 When developing the build alternative to meet these purpose
36 elements, UDOT also considered the following project objectives:

- 37 • Minimize impacts to utilities.
- 38 • Minimize impacts to existing homes and businesses.

39 The primary project purposes were used to develop the build
40 alternative. The project objectives were used to further refine the
41 build alternative, primarily through minor shifts of the alignment. For

What are peak traffic periods and peak traffic hours?

Peak periods are the morning and afternoon periods when there is the greatest number of vehicles on a road or at an intersection. For this analysis, the AM (morning) peak period is from 7 to 9 AM, and the PM (afternoon) peak period is from 4 to 6 PM.

Peak-period traffic counts helped UDOT determine hourly traffic volumes by direction for the day (for this analysis, between 7 AM and 6 PM) in order to determine the single AM and PM *peak hours* of traffic.

How is traffic performance measured?

Traffic performance has several measures of effectiveness including travel time, delay, and vehicle queue length.

1 more details regarding the build alternative, see Chapter 2, Description of the No Build and Build
2 Alternatives, of this SES.

3 **1.4. Need for the Project**

4 The three primary purposes of the project are a result of the following needs:

- 5 • Unmet travel demand, long vehicle queues at intersections leading to delay, and a higher-than-
6 average number of front-to-rear crashes
- 7 • Lack of safe active transportation facilities
- 8 • Several roadway and bridge design elements that no longer meet current UDOT design standards

9 **1.4.1. Unmet Travel Demand, Long Vehicle Queues at Intersections Leading to** 10 **Delay, and a Higher-than-Average Number of Front-to-Rear Crashes**

11 Continued development and population growth in and west of the
12 project study area has resulted in increased travel on 9000 South that
13 will exceed the road's capacity by 2050, resulting in heavy
14 congestion and long vehicle queues at intersections.

15 9000 South between Redwood Road and 700 West currently
16 experiences undesirable levels of congestion and delay at
17 intersections during the PM peak period, and the existing traffic
18 volumes are nearing the road's capacity. Congestion not only results
19 in delay and long commutes but also contributes to front-to-rear
20 (that is, rear-end) crashes because drivers are stopping more frequently while in long vehicle queues.

21 The majority of the project study area is in West Jordan. According to the U.S. Census Bureau's
22 American Community Survey, in 2017, West Jordan was Utah's fourth-largest city, with a population of
23 113,905 residents. By 2050, the city's population is projected to be over 165,000 residents
24 (GOMB 2012).

25 Similarly, according to the *Sandy Journal* (Sandy's community newspaper), Sandy is Utah's fifth-largest
26 city, with a population of nearly 94,000 residents. That number is expected to increase to over 106,000
27 residents by 2050 (GOMB 2012).

28 Given this past and projected growth, 9000 South in its current configuration through the project study
29 area will be unable to serve the resulting increase in traffic demand. The resulting increased congestion
30 along 9000 South will reduce the overall function of the road as an arterial that accommodates through
31 traffic and will decrease the overall east-west mobility for residents of West Jordan and Sandy.
32 Furthermore, increased congestion on 9000 South would increase the number of front-to-rear crashes.

33 UDOT evaluated traffic patterns in the project study area to quantify the future need for transportation
34 improvements on 9000 South (Avenue Consultants 2019a, 2019b). UDOT evaluated the current (2018)
35 and future (2050) performance of the 9000 South mainline and intersections with and without the
36 proposed improvements. Three key measures of effectiveness were used to analyze traffic performance in
37 the project study area: travel time, intersection and turning movement delay (which was then used to
38 determine level of service), and the 95th-percentile vehicle queue length for each turning movement at
39 intersections in the study area.

What is travel demand?

Travel demand is the expected number of transportation trips in an area. Travel demand can be met by various modes of travel such as automobile, bus, light rail, carpooling, and bicycling.

1.4.1.1. Existing (2018) Conditions

UDOT analyzed the existing (2018) conditions on 9000 South in the project study area by evaluating key intersections and associated vehicle queue lengths during the AM peak hour and the PM peak hour (Avenue Consultants 2019a, 2019b).

In part, the analysis looks at level of service (LOS), which is a measure of the operating conditions on a road or at an intersection. Level of service is represented by a letter “grade” ranging from A (free-flowing traffic and little delay) to F (extremely congested, stop-and-go traffic and excessive delay). LOS B through LOS E represent progressively worse operating conditions. For this project, UDOT considers LOS D and better to be acceptable operating conditions.

Intersection Delay and Level of Service Analysis

Under the existing conditions, during the AM peak hour, all intersections along 9000 South in the project study area currently operate at LOS D or better except for the Redwood Road intersection, which operates at LOS E. During the PM peak hour, because of congestion and high travel demand from all directions, the intersections at 1300 West and 450 West operate at LOS E, and the intersection at Redwood Road operates at LOS F (Table 1-1).

Table 1-1. Existing (2018) Operating Conditions at Intersections on 9000 South

Intersection	Level of Service (LOS) and Delay (seconds per vehicle)			
	AM Peak Hour		PM Peak Hour	
Redwood Road	E	69	F	84
1510 West	A	7	C	23
1300 West	C	32	E	79
700 West	B	17	C	24
450 West	D	47	E	64

Travel Time Analysis

To analyze travel time, UDOT divided 9000 South into roadway segments between intersections and measured how long it would take a vehicle to travel from one intersection through the next. During the AM peak hour, more vehicles are traveling eastbound than westbound. A traffic time analysis found that eastbound traffic has a travel time of 5.1 minutes per vehicle between Redwood Road and I-15. During the PM peak hour, more vehicles are traveling westbound than eastbound. During this hour, westbound traffic has a travel time of 7.9 minutes per vehicle between I-15 and Redwood Road. The worst-performing segment is westbound between 700 West and 1300 West during the PM peak hour, which has a travel time of 3.9 minutes for that segment.

UDOT used travel time to calculate travel speed and then converted travel speed to level of service for segments of 9000 South, as shown in Table 1-2. Overall, 9000 South in the project study area operates at LOS D or better, with the exception of a few areas where intersections are operating at LOS E or F. These areas with delay include the segments near I-15, the segments near Redwood Road, and the westbound approach at 1300 West during the PM peak hour.

Table 1-2. Existing (2018) Level of Service on Segments of 9000 South

Segment	Level of Service (LOS)	
	AM Peak Hour	PM Peak Hour
Eastbound		
Redwood Road to 1510 West	B	D
1510 West to 1300 West	D	C
1300 West to 700 West	A	A
700 West to 450 West	E	E
450 West to I-15	D	F
Westbound		
I-15 to 450 West	F	F
450 West to 700 West	B	C
700 West to speed change ^a	A	D
Speed change ^a to 1300 West	A	F
1300 West to 1510 West	C	D
1510 West to Redwood Road	A	F

^a The speed change is about 200 feet east of 1075 West.

Safety Analysis

Crash data for the period from July 2013 to July 2018 show that the crash rate on 9000 South in the project study area is higher than that of roads in Utah with similar characteristics. The crash data further show that more crashes occur during the AM and PM peak periods (that is, between 7 and 9 AM and between 4 and 6 PM) and that over half of the crashes are front-to-rear crashes, which is consistent with congested peak-period traffic in which vehicles are stopping more frequently while in long queues.

What is a travel demand model?

A travel demand model is a computer model that predicts the number of transportation trips (travel demand) in an area at a given time. The travel demand model used for the 9000 South project is owned and maintained by WFRC.

1.4.1.2. Future (2050) No-build Conditions

In order to determine the need for the proposed improvements to 9000 South, UDOT modeled the future no-build conditions, which are the traffic conditions that are expected to occur in the project study area in 2050 if improvements are not made to 9000 South. To forecast the no-build conditions, UDOT used WFRC’s travel demand model. This model was calibrated to the year 2015 and assumes that all of the projects in WFRC’s 2019–2050 RTP, except for the proposed improvements to 9000 South, have been implemented.

What is annual average daily traffic (AADT)?

AADT is the total number of vehicles that travel on a highway or road for a year divided by 365 days. AADT is a useful measurement of how busy a road is.

According to the travel demand model, the amount of daily traffic on 9000 South is projected to increase by 2050, but the increase would be fairly modest given that 9000 South is already near capacity. By 2050, the annual average daily traffic (AADT) on 9000 South

1 between Redwood Road and I-15 is projected to be about 50,000 vehicles per day (an increase of about
 2 8% over the existing conditions).

3 UDOT found that the amount of traffic at all study intersections on 9000 South in the project study area is
 4 projected to increase by 2050. In the AM peak hour, the intersection volumes are expected to increase by
 5 an average of 10%, while the PM peak hour intersection volumes are expected to increase by an average
 6 of 15%.

7 *Intersection Delay and Level of Service Analysis*

8 As shown in Table 1-3, during the AM peak hour, all intersections in the project study area are projected
 9 to operate at LOS D or better except for Redwood Road and 450 West. During the PM peak hour, all
 10 intersections are projected to operate at LOS E or worse except for 1510 West. The worst-operating
 11 intersections during the PM peak hour are Redwood Road and 1300 West, each of which would have
 12 delays of over 150 seconds per vehicle. These two intersections are also the poorest-operating
 13 intersections under the existing conditions, as shown above in Table 1-1, Existing (2018) Operating
 14 Conditions at Intersections on 9000 South.

15 Table 1-3 also shows the percent of vehicles that were served in the
 16 traffic analysis models, which is an important measure for
 17 understanding how well the roadway network can handle the travel
 18 demand. Percentages less than 100% indicate congested intersections
 19 where the travel demand exceeds the capacity of the intersection. The
 20 table shows that the percent of vehicles served during the PM peak
 21 hour is projected to be at 95% or below, with the intersections from
 22 1300 West to Redwood Road at 90%. Percentages of 90% indicate
 23 locations where travel demand is projected to exceed the available
 24 capacity of the intersection by about 10% during the PM peak hour, resulting in long vehicle queue
 25 lengths at the intersection as vehicles wait through multiple green phases of the traffic signal.

What is percent of vehicles served?

The percent of vehicles served at an intersection is the percentage of the hourly vehicle demand that can get through the intersection within that same hour.

Table 1-3. Future (2050) No-build Operating Conditions at Intersections on 9000 South

Intersection	AM Peak Hour		PM Peak Hour	
	LOS and Delay ^a	Percent of Vehicles Served	LOS and Delay ^a	Percent of Vehicles Served
Redwood Road	F 94	98%	F 208	90%
1510 West	C 21	96%	B 18	90%
1300 West	D 53	97%	F 153	90%
700 West	C 20	97%	E 65	93%
450 West	E 73	97%	E 70	95%

^a Delay is shown in seconds of delay per vehicle.

Travel Time Analysis

Compared to the existing conditions in 2018, the largest increase in travel times in 2050 is projected to occur during the PM peak hour. On 9000 South, the westbound travel time is projected to increase by more than 3.5 minutes (from 7.9 minutes to 11.5 minutes, an increase of about 45%).

Table 1-4 shows the existing (2018) and projected future (2050) no-build level of service on segments of 9000 South. Due to increasing traffic volumes, the level of service is projected to get worse by 2050 if no modifications are made to 9000 South. Eighteen of the 20 arterial analysis segments (2 time periods × 2 directions × 5 segments = 20 analysis segments) are projected to have a level of service that gets worse or remains the same. As shown in Table 1-4, during the PM peak hour, 6 of the 10 segments are projected to operate at LOS E or F in 2050, which indicates a substantial lack of traffic capacity on 9000 South in the project study area.

Table 1-4. Existing (2018) and Future (2050) No-build Level of Service on Segments of 9000 South

Segment	AM Peak Hour		PM Peak Hour	
	Existing (2018)	No-build (2050)	Existing (2018)	No-build (2050)
Eastbound				
Redwood Road to 1510 West	A	D	D	C
1510 West to 1300 West	D	E	C	C
1300 West to 700 West	B	B	B	B
700 West to 450 West	E	D	E	E
450 West to I-15	D	F	F	F
Westbound				
I-15 to 450 West	E	E	F	F
450 West to 700 West	B	C	C	F
700 West to 1300 West	B	C	E	F
1300 West to 1510 West	A	A	C	C
1510 West to Redwood Road	F	F	F	F

Red = segment is projected to operate at LOS E or F in 2050

Safety Analysis

UDOT conducted an analysis to predict the frequency of crashes on 9000 South in the project study area for the existing and projected future traffic volumes. UDOT’s analysis found that crash rates are predicted to increase by 16% along 9000 South by 2050, which would be due to increased travel demand and congestion on 9000 South. Vehicles would be closer to one another while in the vehicle queues, which increases the likelihood of more rear-end crashes.

1.4.2. Lack of Safe Active Transportation Facilities

In addition to improving mobility and reducing congestion for vehicles, the 9000 South project would also improve travel mode choices and safety for active transportation users. 9000 South is currently not signed or striped to accommodate bicycles, and there are no bicycle lanes on 9000 South. The roadway has little room for cyclists because the shoulder is either missing or very narrow in several locations.

As described in Section 1.2.2, UDOT and Other Regional Bicycle and Pedestrian Plans, the High Comfort Bicycle Network map for Salt Lake County in the *Salt Lake County Active Transportation Implementation Plan* shows a buffered and/or protected bicycle lane on 9000 South between Redwood Road and 700 West. WFRC’s previously adopted 2015–2040 RTP shows 9000 South as a priority bicycle route between 1300 West and 500 West, while the UDOT Region Two Bike Plan, which consists of the UCATS Regional Bicycle Network on state routes, calls for incorporating active transportation facilities on 9000 South. In October 2018, representatives with West Jordan and Sandy Cities also stated their desire for additional pedestrian and bicycle facilities along 9000 South (HDR 2018a, 2018b).

In addition, the sidewalks in the project study area are discontinuous between 1075 West and 700 West and need to be replaced along the south side of 9000 South. The existing sidewalks through these areas do not safely or comfortably accommodate pedestrians, nor do they meet current UDOT design standards. Furthermore, the existing pedestrian facilities along most of 9000 South lack pedestrian ramps and push buttons at traffic signals per the current Americans with Disabilities Act (ADA) standards.

1.4.3. Several Roadway and Bridge Design Elements That No Longer Meet Current UDOT Design Standards

Parts of 9000 South were built over 25 years ago and do not meet current UDOT design standards. These design elements, which are described in more detail below, include narrow or missing shoulders, discontinuous and substandard sidewalks and pedestrian ramps, and other insufficient active pedestrian facilities (as described in Section 1.4.2, Lack of Safe Active Transportation Facilities). In addition, the bridge over the Jordan River, located just west of 700 West, is almost 50 years old and is also substandard. The proposed improvements to 9000 South would enhance safety for all users by meeting current UDOT design standards for several roadway and bridge design elements.

Narrow or Missing Shoulders. Parts of the existing 9000 South roadway have narrow or no shoulders. There is no shoulder near the Redwood Road intersection in the eastbound direction. Additionally, the shoulder is only 6 feet wide across the bridge over the Jordan River in both directions, and the shoulder is only 2 feet wide in the westbound direction near 700 West. The standard shoulder width is 8 feet plus an additional 2 feet where a barrier is adjacent to the shoulder (as on the Jordan River bridge).

West Jordan City representatives also said that new, full-width shoulders would benefit the Utah Transit Authority’s 9000 South Flex Route (Route F590), which currently makes stops along 9000 South, by giving the buses more room to pull out of traffic (HDR 2018a).

Discontinuous and Substandard Sidewalks and Pedestrian Ramps. The sidewalk is discontinuous on both sides of 9000 South between 1075 West and 700 West. The sidewalk on both sides of the road throughout the project study area is currently 4 feet wide, but it does not meet minimum standards because passing spaces are not provided. The pedestrian ramps at the intersection crossings are currently single diagonal (apex) ramps, which are substandard, and the push buttons at the crosswalks also do not meet current standards. Other substandard active transportation facilities are described in Section 1.2.2, UDOT and Other Regional Bicycle and Pedestrian Plans.

1 **Substandard Bridge.** The bridge over the Jordan River, located just west of 700 West, was built in
2 1971 and is functionally obsolete, meaning that it does not meet current roadway design standards due to
3 its deficient lane configuration, overall narrow width due to substandard shoulders, and lack of sidewalks.
4 Furthermore, the bridge does not meet the current seismic code. Other deficiencies include the following:

- 5 • The bridge does not meet the current loading requirements set by the American Association of
6 State Highway and Transportation Officials (AASHTO).
- 7 • The bridge deck and pier cap are deteriorating.
- 8 • The bridge parapets (safety barriers installed on the edge of the bridge) are deteriorating, do not
9 meet current design standards, and do not meet the requirements of the ADA or of the
10 Occupational Safety and Health Administration (OSHA) for the height of pedestrian safety rails.
- 11 • The bridge girder elevation is not at least 2 feet above the river’s high water mark and does not
12 meet current design standards.

13 **2. DESCRIPTION OF THE NO BUILD AND BUILD** 14 **ALTERNATIVES**

15 **2.1. No Build Alternative**

16 In the project study area, 9000 South is classified as an urban principal arterial. Between Redwood Road
17 and 700 West, 9000 South is a five-lane road with two travel lanes in each direction and a 14-foot-wide,
18 center, two-way, left-turn lane for most of its length. Both the north and south shoulders are paved to
19 varying widths that decrease toward the intersections. A low, curb-style median barrier runs from the
20 bridge over the Jordan River to 700 West, while a 500-foot-long landscaped median is in place at the
21 Jordan River Parkway Trail underpass (in front of the River Oaks Golf Course). The bridge over the
22 Jordan River (located just west of 700 West) is a four-lane structure with two 12-foot-wide travel lanes in
23 each direction and 6 foot-wide shoulders but no sidewalk. The existing right-of-way for 9000 South is
24 about 106 feet wide.

25 **2.2. Build Alternative**

26 The 9000 South project would make roadway improvements in West Jordan and Sandy in Salt Lake
27 County, Utah, to improve east-west traffic performance and decrease crash rates in the project study area,
28 especially by 2050 when the forecasted increased travel on 9000 South would exceed the road’s capacity.
29 The 9000 South project consists of improvements to 9000 South between Redwood Road and 700 West
30 in the cities of West Jordan and Sandy. The project would enhance safety by improving substandard
31 roadway components to meet current UDOT design standards.

2.2.1. Roadway Components

The build alternative would widen about 1.5 miles of 9000 South between Redwood Road and 700 West from five to seven lanes (see Figure 2-1 on page 15 and Appendix A, Build Alternative Typical Sections). The build alternative would add an additional 11-foot-wide travel lane in each direction, for a total of three travel lanes in each direction plus a 14-foot-wide, center, two-way, left-turn turning lane. A 4-foot-wide, curb-height median would run down the middle of 9000 South from about 1075 West to 700 West. With three travel lanes in each direction, 9000 South in the project study area would match the lane configuration on 9000 South east of the project study area.

9000 South would be widened mostly to the south to minimize impacts to utilities, right-of-way, the existing storm drain system, and signal infrastructure. Therefore, the existing curb, gutter, and sidewalk on the north side of the road would be retained to the extent possible. Consistent 10-foot-wide shoulders would be incorporated on both sides of the road for safety. The new right-of-way for 9000 South would vary between 100 and 113 feet wide, depending on the location.

New detention basins would be included as part of the build alternative roadway components. One detention basin would be located near 1300 West in an existing parking lot on the south side of 9000 South. This basin would collect stormwater from 9000 South between the west side of the water resources evaluation area (defined on page 53) near Redwood Road and 1300 West. Another detention basin would be sited near the Jordan River. There are three optional locations for this detention basin near the Jordan River. Basin option A1 would be located on the north side of 9000 South at about 792 West 9000 South. Basin option A2 would be located on the north side of 9000 South at about 900 West 9000 South, just south of the Rocky Mountain Power substation and adjacent to 9000 South. Basin option B would be located on the south side of 9000 South at about 859 West 9000 South on the River Oaks Golf Course property. For detention basin locations, see Figure 3-10, Options for a Potential Detention Basin, on page 60.

2.2.2. Active Transportation Components

The active transportation components of the build alternative include continuous sidewalks on both sides of the road from Redwood Road to 700 West. The sidewalk is currently discontinuous on both sides of the road between the North Jordan Canal (located east of 1075 West) and 700 West.

The sidewalk on the north side of 9000 South would remain 4 feet wide, but passing spaces would be provided every 200 feet. A 3.5-foot-wide park strip would run adjacent to the sidewalk. The sidewalk on the south side of the road would be upgraded to 5 feet wide with an adjacent 4-foot-wide park strip. In some locations, the park strip would be removed, and the sidewalk would be 6 feet wide (see Figure 2-1 on page 15).

1 In addition, the current single diagonal (apex) pedestrian ramps at all intersections between Redwood
2 Road and 700 West would be upgraded to two diagonal pedestrian ramps to meet current UDOT and
3 ADA standards on both sides of the road. Push buttons at the intersections would also be upgraded to
4 meet current UDOT and ADA standards.

5 The build alternative would include a conventional, nonprotected
6 bicycle lane from Redwood Road to 700 West on the shoulders of
7 9000 South on both sides of the road. The bicycle lanes would
8 generally be 6 feet wide and would narrow to 5 feet wide at right-turn
9 lanes on both sides of the road. The bicycle lanes would not be
10 buffered or protected by a barrier from the vehicle travel lanes,
11 though they would be striped as designated cycling lanes.

12 The bicycle lane would be designated by a sharrow at the right-turn
13 lanes for all intersections. The bicycle lanes would terminate at
14 700 West, and cyclists would be directed to take 700 West or the
15 Jordan River Parkway Trail as a bicycle route.

16 **2.2.3. Bridge Components**

17 The build alternative would widen the existing bridge over the Jordan
18 River, raise the bridge profile to meet current floodplain elevation
19 requirements, and add sidewalks to the bridge on both sides of the
20 road. To meet current UDOT standards, the new bridge would be
21 127 feet wide on the inside of the parapets and would have 12-foot-
22 wide vehicle travel lanes, a 14-foot-wide median, and a 10.5-foot-wide park strip and sidewalks on both
23 sides (Figure 2-1).

24 To further meet current UDOT standards, the bridge parapet would be reconstructed to be 42-inch Test
25 Level (TL) 4 with a constant slope shape. Currently, it is 32-inch TL-3 with a Jersey shape. TL-3 parapet
26 is used for high-speed arterial highways with low percentages of heavy vehicles and with favorable site
27 conditions. TL-4 is used for high-speed highways, freeways, expressways, and interstates with a higher
28 percentage of trucks and heavy vehicles. 9000 South currently meets the criteria for TL-4.

29 Typical cross-sections are shown in Appendix A, Build Alternative Typical Sections. These typical
30 sections could change during the final design of the build alternative.

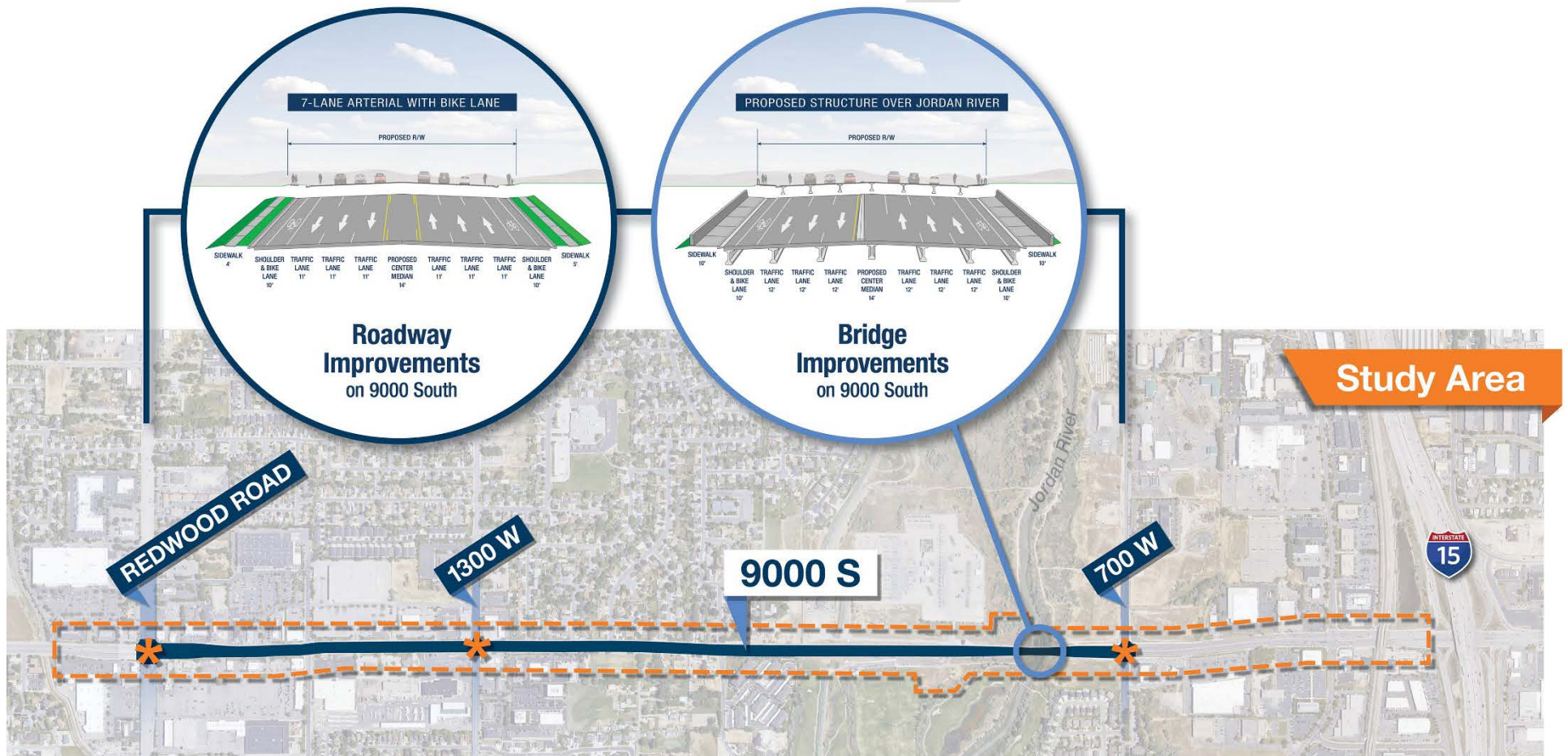
What is a sharrow?

Sharrow is a combination of the words *share* and *arrow*. Sharrows are intended to be a visual reminder (typically via a painted bicycle and arrow on the pavement) that the given space in the road is meant to be shared by



bicycles and cars. Because cars can still use a lane with sharrows in it, sharrows do not provide dedicated space on the street for cyclists. Rather, they indicate a general area on the road in which it should be safe for people to bicycle.

1 **Figure 2-1. Build Alternative Overview**



2.3. Future (2050) Build Conditions

A single build alternative was considered for the analysis: widening 9000 South from two to three through lanes in each direction from Redwood Road to 700 West as described in Section 2.2.1, Roadway Components. The intersections at both Redwood Road and 700 West currently have three through lanes in each direction, so the build alternative would not modify either intersection.

In order to determine the need for the proposed improvements to 9000 South, UDOT modeled the future build conditions (Avenue Consultants 2019a, 2019b), which are the traffic conditions that are expected to occur in the project study area in 2050 if the improvements to 9000 South are made. The analysis of the build alternative in 2050 considered several traffic performance measures of effectiveness including travel time, intersection delay, and 95th-percentile vehicle queue length. UDOT used the analysis of the 2050 no-build conditions (see page 8) as a baseline against which to compare the effects of the build alternative.

2.3.1. Traffic Volumes

UDOT used WFRC's travel demand model to predict future traffic volumes for the build alternative based on the increased roadway width. The analysis determined the estimated daily traffic volume on 9000 South for the no-build and build conditions in 2050. With the build alternative, the traffic volume is projected to be about 57,300 per day, which would be an increase of more than 7,000 vehicles per day (about 15%) over the no-build conditions (about 49,900 vehicles per day). This increase is attributable mostly to the increased vehicle capacity of the wider road leading to higher travel speeds as a result of less congestion.

Similarly, with the build alternative in 2050, the traffic volumes are also projected to increase by an average of about 10% at each intersection in the project study area during both the AM and PM peak hours.

2.3.2. Intersection Delay and Level of Service Analysis

Table 2-1 and Table 2-2 show the intersection delay, level of service, and percent of vehicles served with the build alternative during the AM and PM peak hours in 2050. As described on page 9, a percent of vehicles served that is less than 100% indicates a congested intersection where the travel demand exceeds the capacity of the intersection. With the build alternative, traffic volumes in 2050 are projected to increase at each intersection. However, as shown in the tables below, the percent of vehicles served would also increase, which indicates improved operating conditions.

During the AM peak hour in 2050 (Table 2-1), the 1510 West and 1300 West intersections are projected to operate with considerably less delay and at a better level of service due to increased traffic capacity from the build alternative. In addition, the build alternative would continue the third eastbound travel lane east of the Redwood Road intersection, so this intersection would have better lane utilization because the eastbound lanes would no longer narrow from three to two just east of the intersection. In contrast, the 700 West and 450 West intersections are projected to have slightly higher delay because the traffic volume would increase without a corresponding increase in capacity.

What is lane utilization?

Lane utilization analysis is an essential task in the planning and design stage for signalized intersections. Lane utilization is the balancing of traffic in each lane at an intersection. Better lane utilization occurs when traffic in each lane is basically equal.

Table 2-1. Future (2050) No-build and Build Operating Conditions at Intersections on 9000 South during the AM Peak Hour

Intersection	No-build		Build	
	LOS and Delay ^a	Percent of Vehicles Served	LOS and Delay ^a	Percent of Vehicles Served
Redwood Road	F 94	98%	E 75	99%
1510 West	C 21	96%	A 5	99%
1300 West	D 53	97%	C 27	99%
700 West	C 20	97%	C 31	99%
450 West	E 73	97%	F 81	98%

^a Delay is shown in seconds of delay per vehicle.

1 During the PM peak hour in 2050, three of the five study area intersections are projected to have less
 2 delay and a better level of service, and the percent of vehicles served at all five intersections is projected
 3 to increase (Table 2-2). During the PM peak hour, the 1300 West intersection would remain at LOS F, but
 4 the traffic conditions at the intersection would nonetheless improve substantially. The delay per vehicle
 5 would be reduced by 63 seconds per vehicle compared to the no-build conditions, and the percent of
 6 vehicles served would increase from 90% to 94%. These would be substantial improvements given that
 7 the number of vehicles at the intersection is projected to increase by 780 during the PM peak hour.

8 The projected increase in delay at the 1510 West intersection and the still-failing performance (LOS F) at
 9 the 1300 West intersection in 2050 during the PM peak hour would be due to congestion at the Redwood
 10 Road intersection. Nevertheless, the construction of a third travel lane through the project study area
 11 would improve the overall traffic performance and capacity in the project study area.

Table 2-2. Future (2050) No-build and Build Operating Conditions at Intersections on 9000 South during the PM Peak Hour

Intersection	No-build		Build	
	LOS and Delay ^a	Percent of Vehicles Served	LOS and Delay ^a	Percent of Vehicles Served
Redwood Road	F 208	90%	F 188	92%
1510 West	B 18	90%	C 28	93%
1300 West	F 153	90%	F 90	94%
700 West	E 65	93%	C 29	98%
450 West	E 70	95%	F 81	97%

^a Delay is shown in seconds of delay per vehicle.

12 2.3.3. Travel Time Analysis

13 In 2050, the largest difference in travel times between the no-build and build conditions is projected to be
 14 in the westbound direction on 9000 South during the PM peak hour, during which the travel time from
 15 I-15 to Redwood Road would decrease by nearly 3 minutes (from 11.5 minutes to 8.8 minutes). This
 16 benefit would be due primarily to improved conditions at the 1300 West intersection. Otherwise, travel

1 times are not projected to change substantially in 2050. Traffic volumes are projected to increase, but the
 2 build alternative would add an additional travel lane to accommodate the additional volumes, thereby
 3 keeping travel times substantially the same as they are during the existing conditions.

4 The lack of substantial changes in travel time elsewhere and at other times on 9000 South is likely due to
 5 the increase in projected traffic volumes at intersections during the AM peak hour, which negates the
 6 benefit of improved traffic capacity as additional drivers are attracted to 9000 South. However, travel
 7 times are not projected to increase despite increased traffic demand, and this indicates improved
 8 performance and capacity on 9000 South.

9 With the build alternative in 2050, 15 of the 20 segments analyzed on 9000 South are projected to operate
 10 at a level of service that is as good as or better than under the no-build conditions (green-shaded cells in
 11 Table 2-3). The other five segments—two westbound segments and three eastbound segments—are
 12 projected to operate at a worse level of service (red-shaded cells in Table 2-3).

13 The two westbound segments (from 700 West to 1300 West during the AM peak hour and from
 14 1300 West to 1510 West during the PM peak hour) are projected to worsen from LOS A to LOS B and
 15 from LOS C to LOS D, respectively, due to the increased traffic capacity at the 700 West and 1300 West
 16 intersections that allows more traffic to make it through to these segments of road. The other three
 17 segments that are projected to have a worse level of service in 2050 are in the eastbound direction near
 18 I-15 where traffic volumes are projected to increase but intersection capacity would not.

Table 2-3. Future (2050) No-build and Build Level of Service on Segments of 9000 South

Segment	AM Peak Hour		PM Peak Hour	
	No-build	Build	No-build	Build
Eastbound				
Redwood Road to 1510 West	D	A	C	C
1510 West to 1300 West	E	C	C	B
1300 West to 700 West	B	C	B	B
700 West to 450 West	D	F	E	F
450 West to I-15	F	F	F	F
Westbound				
I-15 to 450 West	E	E	F	F
450 West to 700 West	C	C	F	D
700 West to 1300 West	A	B	F	E
1300 West to 1510 West	A	A	C	D
1510 West to Redwood Road	F	F	F	F

Green = LOS as good as or better than under the no-build conditions

Red = LOS worse than under the no-build conditions

1 **2.3.4. Safety Analysis**

2 UDOT conducted a safety analysis for the build alternative mainline using the Hi-Safe software program,
3 which is based on the *Highway Safety Manual* published by the American Association of State Highway
4 and Transportation Officials (AASHTO). The *Highway Safety Manual* provides a crash modification
5 factor for the design improvement (in this case, additional travel lanes) that is then applied to the
6 predicted crash rate. Because the *Highway Safety Manual* does not have a crash modification factor for
7 additional through lanes at an intersection, UDOT did not perform an intersection crash analysis for the
8 build alternative.

9 According to the safety analysis, the crash rates on 9000 South between Redwood Road and 700 West
10 would decrease by 24% with the build alternative in 2050 compared to the no-build conditions. In fact,
11 the improved roadway is projected to reduce the crash rates to below the existing rate in 2018 for the
12 segments of 9000 South between Redwood Road and 1300 West and between 1300 West and 700 West.
13 Between 700 West and 450 West, where there are no planned improvements with this project, the crash
14 rate would not change.

15 **2.3.5. Conclusion**

16 By 2050, traffic along 9000 South will increase, and traffic conditions between Redwood Road and
17 700 West will deteriorate. As described in Section 1.4, Need for the Project, the analysis of traffic
18 operations in 2050 under the no-build conditions shows that traffic performance along 9000 South will be
19 poor without any improvements. The analysis of traffic operations in 2050 with the build alternative
20 shows that, with the 9000 South project, traffic performance would improve overall. Although some of
21 the intersections in the project study area would continue to perform at LOS F, the build alternative would
22 reduce the average vehicle delay and reduce the travel times on westbound 9000 South during the PM
23 peak hour by nearly 3 minutes while accommodating higher traffic volumes.

24 The safety analysis shows that the crash rates are expected to decrease by 24% with the build alternative
25 and that the crash rates are predicted to be even lower than the crash rates with the existing conditions
26 (2018), which would be a substantial benefit of the project.

3. ENVIRONMENTAL ANALYSIS

This chapter describes the existing environmental, community, and economic conditions in the project study area which serve as a baseline for evaluating the impacts of the build alternative. This chapter provides information about the following subjects:

- Land use
- Community
- Property Acquisitions
- Economics
- Pedestrian and cyclist considerations
- Noise
- Water resources
- Floodplains
- Biological resources
- Historic properties and paleontological resources
- Hazardous material sites
- Construction impacts and mitigation

For each resource analyzed, this chapter describes the evaluation area, regulatory environment, current conditions, expected impacts, and required mitigation.

This SES does not address farmland, air quality, visual quality, or aesthetics because the build alternative is not expected to affect or be affected by these resources. Because this project would not be federally funded, an air quality conformity determination was not required, though Appendix B, Air Quality Evaluation, was included for the purpose of public disclosure. Section 3.12.4, Air Quality, describes the expected short-term air quality impacts from constructing the build alternative and UDOT's proposed mitigation measures for such short-term impacts.

As described in Section 1.1, Project Study Area, the project study area is bounded on the west by Redwood Road and on the east by Sandy Parkway. Most resources were evaluated within these eastern and western boundaries within a 100-foot buffer on each side of existing edge of pavement of 9000 South, since this is the area in which any direct impacts would occur. Some resources are evaluated within an evaluation area that is different from this general study area in order to understand how the build alternative might affect those resources. The evaluation area for each resource is described in the associated resource section below.

3.1. Land Use

Section 3.1 describes the existing land use patterns and current land use plans for each jurisdiction in the land use evaluation area as well as applicable land use plans and policies. It also analyzes the expected impacts of the build alternative on land use patterns in this area.

Land Use Evaluation Area. The land use evaluation area is 83 acres and includes parts of West Jordan, Sandy, and Salt Lake County within a generally 100-foot buffer on each side of the existing edge of pavement of 9000 South between Redwood Road on the west and Sandy Parkway on the east. The buffer is wider than 100 feet in four locations. In two areas identified as potential detention basin sites, the evaluation area extends 250 feet from the edge of pavement. In a third area also identified as a potential detention basin site, the evaluation area extends 340 feet from the edge of pavement. Finally, in the area surrounding the Salt Lake County Flood Control structure, the evaluation area extends 150 feet from the edge of pavement.

3.1.1. Regulatory Environment and Compliance

The Utah legislature has delegated responsibility for land use planning and regulation to the state's Counties and Cities. These local governments develop general or comprehensive plans for land development within their jurisdictional boundaries. These plans provide the parameters for future land use as well as infrastructure needs. The public has the opportunity to participate in the land-planning process by reviewing and commenting on draft land use and zoning plans before they are approved by local officials.

All plans discussed in Section 3.1 have been developed in accordance with this general approach and, therefore, represent the type of land use and community that each local government desires.

3.1.2. Methodology

UDOT inventoried current land uses by reviewing aerial images from Google Imagery (2018). Current land use categories were assigned to be consistent with those used in city zoning and general plans. A copy of the Salt Lake County parcel dataset was used to calculate acreages.

Zoning data and general plans were collected in geographic information systems (GIS) format from West Jordan City and Sandy City in November 2018. These datasets were merged and categories generalized in order to calculate impacts. All calculations are based on spatial analysis using GIS software.

3.1.3. Current Conditions

This section describes the existing land use in the land use evaluation area as well as the applicable local and regional land use plans and policies. Table 3-1 lists the current land use categories and associated acreage in the evaluation area, and Figure 3-1 shows the locations of these current land uses. The 9000 South corridor in the evaluation area is almost entirely developed, with most land that is beyond the existing edge of pavement being areas paved with asphalt or concrete, landscaped residential and recreation areas, agricultural land, or vegetated natural ground.

Currently, the most prevalent land use (about 65% of the land use in the evaluation area) along 9000 South is commercial, followed by public facilities (about 16%), which includes utilities, and residential (11%). There are a few unoccupied parcels in the eastern half of the evaluation area. According to West Jordan City and Sandy City officials, these remaining open parcels are either already planned for or developed for commercial uses. In addition, city officials have stated that their Cities intend to eventually rezone the remaining single-family residential parcels along 9000 South to commercial (HDR 2018a, 2018b).

Table 3-1. Current Land Use in the Land Use Evaluation Area

Land Use Category	Acres in Evaluation Area	Percentage of Evaluation Area	Land Use Category Description
Agricultural ^a	2.1	2.6%	Land that is vacant and shows evidence of grazing or plowing
Commercial/Office	54.3	65.4%	Land that is used for commercial, retail, or office space
Open Space/ Parks/Recreation	4.7	5.6%	Land that is set aside as open space in residential developments, has evidence of walking paths, or is set aside for a specific recreation activity, such as golf courses or playgrounds
Public Facilities (including utilities)	12.9	15.5%	Includes land owned by utility companies and City-owned buildings or parcels
Residential	9.1	11.0%	Predominantly single-family homes and high-density housing
Total	83.0	100.1%	

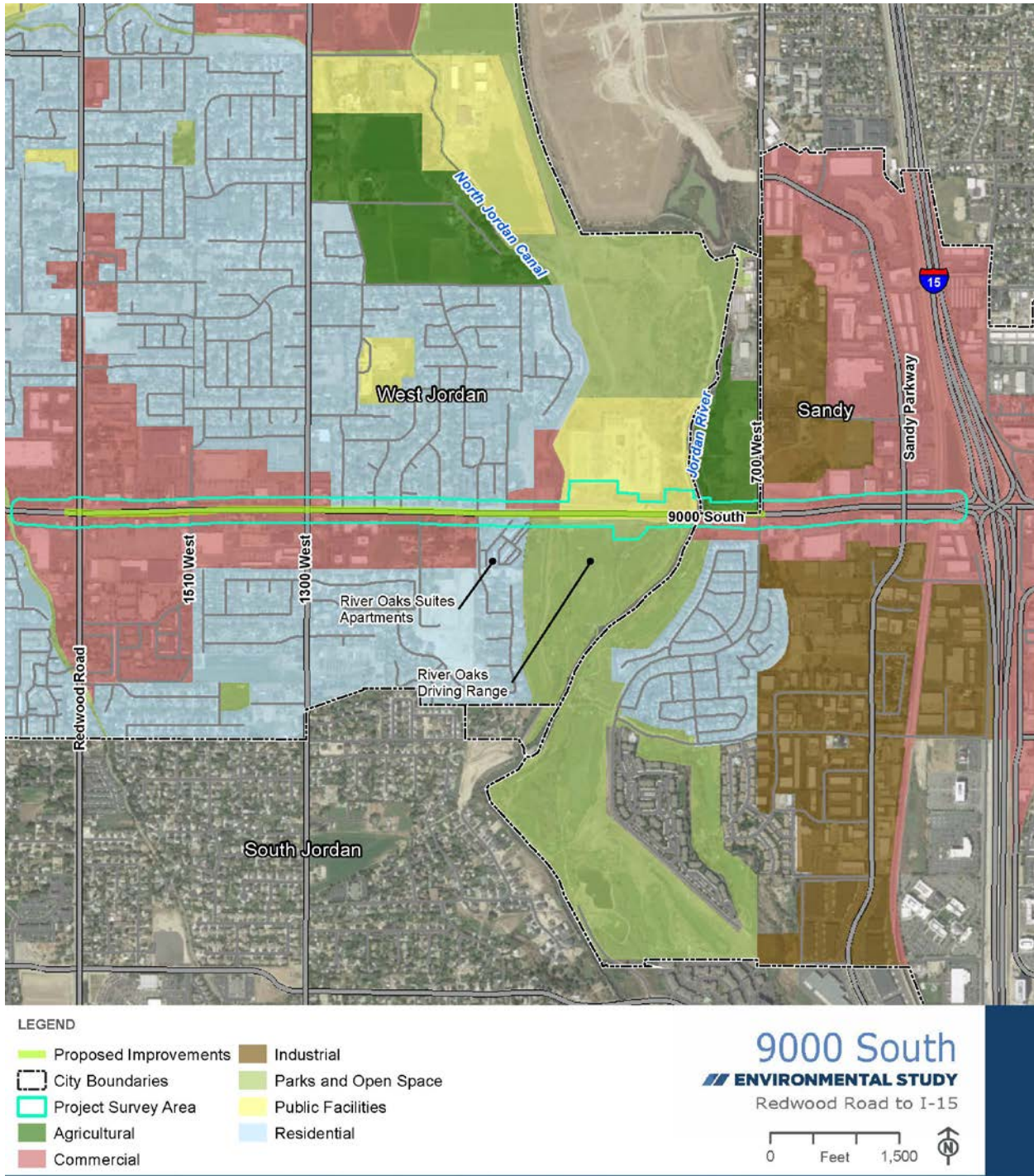
^a This empty parcel on the north side of 9000 South between the Jordan River and 700 West is currently owned by Fur Breeders Cooperative and is zoned as agricultural. Fur Breeders Cooperative is located at 8700 South 700 West and supplies feed for fur farms. The empty parcel is not used for farming, and there is no actively farmed land in the evaluation area.

3.1.4. Expected Impacts

Table 3-2 on page 25 lists the planned land use categories and the acreage of each land use that would be converted to a transportation use (highway right-of-way) by the build alternative. The build alternative would require about 25.5 acres of new right-of-way in total.

This right-of-way, which would be needed at various points along the alignment, includes a detention basin in one of two locations: either on the north side of 9000 South or on the south side of 9000 South. Basin option A1 would be located on the north side of 9000 South at about 792 West. Basin option A2 would be also be located on the north side of 9000 South but at about 900 West. Basin option B would be located on the south side of 9000 South at about 859 West on the River Oaks Golf Course property (see Figure 3-10, Options for a Potential Detention Basin, on page 60).

1 **Figure 3-1. Current Land Use in West Jordan and Sandy**



2

1 The additional right-of-way would widen the existing right-of-way so that it accommodates a 100- to
2 113-foot-wide roadway and accessory features, depending on the location. UDOT has designed this
3 widening mainly to the south to minimize impacts to commercial and residential properties and utilities.

4 Converting these areas to a transportation use would not change the current patterns of residential,
5 commercial, or utility land use in the land use evaluation area. However, acquiring the right-of-way
6 needed for the build alternative would affect individual landowners and businesses through partial or total
7 acquisitions of property. Two homes along the south side of 9000 South would be directly impacted by
8 the build alternative (that is, UDOT would acquire these properties in total). One of the homes is currently
9 empty and is listed as a commercial property. Therefore, it's reasonable to assume that acquiring these
10 properties would meet the Cities' planning and redevelopment objectives. For a detailed discussion of
11 relocation impacts, see Section 3.3, Property Acquisitions.

12 All three locations for the detention basin options are currently undeveloped land. Constructing any one
13 of the three detention basins would convert just under 1 acre of undeveloped land to roadway use (for
14 detaining stormwater runoff). Basin options A1 and A2, on the north side, would convert about 1 acre
15 more of undeveloped land categorized as "public facility" compared to basin option B on the south.
16 Although the potential locations of basin options A1 and A2 are undeveloped, the overall parcel contains
17 a Rocky Mountain Power main grid transmission/regional distribution substation and is owned by Utah
18 Power and Light.

19 Basin option B, on the south side, would convert about 1 acre more of undeveloped land categorized as
20 "parks and open space" than would basin options A1 and A2 since the south option would be located on
21 the River Oaks Driving Range (North Range Teaching Academy) property (owned by Sandy City).
22 Neither the Rocky Mountain Power main grid transmission/regional distribution substation nor the River
23 Oaks driving range facilities would be affected by the detention basins.

24 UDOT met with Rocky Mountain Power personnel during preparation of this SES, and the personnel
25 stated a preference for basin option A2 if the detention basin is sited on their property. UDOT will
26 determine the final basin location during the final design of the build alternative. If the north side is
27 selected UDOT, will closely coordinate with Rocky Mountain Power.

28 The build alternative would be consistent with West Jordan City's and Sandy City's general land use and
29 transportation plans, which show 9000 South widened to seven lanes. Currently, the majority of land
30 adjacent to 9000 South between Redwood Road and Sandy Parkway is already developed. Most of the
31 few undeveloped parcels of land along 9000 South are planned for commercial development, and the
32 Cities intend to rezone the remaining single-family residential parcels to commercial. The Cities expect
33 that these properties will be developed with or without improvements to 9000 South.

34 Given these trends, the build alternative would not cause further development along 9000 South or in the
35 region. In addition, because the proposed improvements would be made to an existing road, the build
36 alternative is not expected to cause regional growth and development in the land use evaluation area
37 beyond what is already planned by the Cities.

38 **3.1.5. Mitigation**

39 No mitigation is required.

Table 3-2. Impacts from the Build Alternative to Land Use in the Land Use Evaluation Area

Land Use Category	Basin Option A1 (North)		Basin Option A2 (North)		Basin Option B (South)		Land Use Category Description
	Acres Converted to 9000 South Right-of-way	Percentage of Project Right-of-way	Acres Converted to 9000 South Right-of-way	Percentage of Project Right-of-way	Acres Converted to 9000 South Right-of-way	Percentage of Project Right-of-way	
Agricultural	1.0	4.0	1.0	3.4	1.0	3.9	Land that is vacant and shows evidence of grazing or plowing
Commercial/Office	14.8	58.5	14.8	50.3	14.8	58.3	Land that is used for commercial, retail, or office space
Open Space/Parks/Recreation	0.1	0.4	0.1	0.3	1.1	4.3	Land that is set aside as open space in residential developments, has evidence of walking paths, or is set aside for a specific recreation activity, such as golf courses or playgrounds
Public Facilities (including utilities)	5.8	22.9	9.9 ^a	33.7	4.8	19.0	Includes land owned by utility companies and City-owned buildings or parcels
Residential	3.6	14.2	3.6	12.2	3.6	14.2	Predominantly single-family homes and high-density housing
Total	25.3	100.0	29.4	99.9	25.3	99.7	

^a A larger area than what would be required for the detention basin was considered for environmental impacts for siting basin option A2. If option A2 is selected, only about half of this acreage would be used for this option.

3.2. Community

Section 3.2 describes the social environment in the community evaluation area and the impacts to the social environment from the build alternative. The community evaluation focuses on the overall community setting, community cohesion and quality of life, community facilities, recreation resources, public health and safety, and public services and utilities.

Community Evaluation Area. The community evaluation area is 83 acres and includes parts of West Jordan, Sandy, and Salt Lake County within a generally 100-foot buffer on each side of the existing edge of pavement of 9000 South between Redwood Road on the west and Sandy Parkway on the east. The buffer is wider than 100 feet in four locations. In two areas identified as potential detention basin sites, the evaluation area extends 250 feet from the edge of pavement. In a third area also identified as a potential detention basin site, the evaluation area extends 340 feet from the edge of pavement. Finally, in the area surrounding the Salt Lake County Flood Control structure, the evaluation area extends 150 feet from the edge of pavement.

3.2.1. Regulatory Environment and Compliance

Transportation projects frequently produce social and economic effects and can influence the character and nature of communities and their quality of life. The Federal Highway Administration's (FHWA) guidelines for evaluating community impacts consider several types of impacts including impacts to community cohesion, the availability of public facilities and services, impacts to taxes and property values, and displacements of people, businesses, and farms. Among the community impacts analyzed in this SES, one type is subject to specific legal requirements and obligations: the acquisition of property by UDOT as necessary to improve 9000 South. For more information about property acquisitions, see Section 3.3, Property Acquisitions.

In addition, the U.S. Department of Transportation (USDOT) issued the *United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations* on March 11, 2010, to reflect USDOT's support for developing fully integrated active transportation networks. The policy states that "every transportation agency has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into [its] transportation systems" (FHWA 2010).

3.2.2. Methodology

Neighborhood and community cohesion, quality of life, recreation resources, and community facilities (that is, places where residents typically interact) are important factors in determining how residents develop a sense of belonging to their neighborhoods. UDOT obtained information about the existing social environment by reviewing aerial images; reviewing general plans and other publications from West Jordan City, Sandy City, and Salt Lake County; communicating with local officials; and conducting field surveys. UDOT also reviewed publicly available demographic and community information such as U.S. Census Bureau data and data from the State of Utah.

To analyze community facilities, UDOT used ArcView, a professional GIS software package. GIS software is commonly used to analyze data that are linked to geographic areas. All community facilities in the general project area were first identified, and then the locations of the community facilities were added to a single data layer in an ArcView map file. Finally, the boundary of the community evaluation area was overlaid onto the data layer to identify which facilities were within the evaluation area.

UDOT contacted utility companies and municipalities in order to learn more about belowground and overhead utilities in the evaluation area because the presence of these utilities could affect the build alternative's alignment. UDOT also contacted representatives from the local jurisdictions that operate water, sewer, and storm drainage infrastructure.

3.2.3. Current Conditions

Communities in the community evaluation area include the communities in West Jordan and Sandy. Of the two cities, West Jordan has a slightly larger population. Both cities have experienced rapid growth over the past 10 years, resulting in just under 9% population growth between 2010 and 2016, giving them the eighth-largest (West Jordan) and ninth-largest (Sandy) population growth of all cities in Utah during this period (Riddle 2017).

3.2.3.1. Community Cohesion and Quality of Life

Community cohesion is the degree to which residents have a sense of belonging to their neighborhood or community, while quality of life can be characterized as a person's well-being and happiness. The quality of life considerations in Section 3.2 focus on those elements that the public generally associates with a high quality of life: education, safety, recreation opportunities, convenient shopping and services, access to transportation facilities, and a positive general living environment.

Community Cohesion. The majority of the community evaluation area, as well as the majority of the existing commercial and residential development in the evaluation area, is located in West Jordan, though there is commercial development in Sandy between I-15 and 700 West. As described in Section 1.2.3, Local Land Use and Transportation Plans, Sandy City officials said that a 7-Eleven convenience store was recently approved by their planning commission and is slated to be built at the southwest corner of the 700 West and 9000 South intersection. City representatives further said that the Canyons School District property at 9150 South 500 West will be developed by Synergy Development. Synergy intends to develop this parcel into an industrial complex, thereby creating 200 to 300 jobs and generating tax revenue (HDR 2018b).

In Sandy, there is a residential development south of 9000 South between the Jordan River and 700 West/Riverside Drive that consists of single-family and condominium homes. West of the river, several neighborhoods and apartment complexes are on both sides of 9000 South in West Jordan.

9000 South is an urban corridor that currently divides neighborhoods to the north and south as a result of the current roadway width and the amount of traffic that travels 9000 South. Therefore, it's reasonable to assume that the neighborhoods on the same side of 9000 South will remain cohesive and connected to each other by local surface streets and subdivision streets.

Quality of Life. 9000 South operates as a primary east-west arterial connecting the western Salt Lake Valley to I-15 and points east. Both West Jordan and Sandy are known for their quality of life because of available transportation access, access to trails and parks, and access to nearby commercial districts. The quality of life for residents in the evaluation area is similar to the quality of life for residents in West Jordan and Sandy overall.

West Jordan residents enjoy quiet, safe neighborhoods with plenty of open space where families can play and spend time together. According to the *Utah History Encyclopedia*, the community has developed a degree of economic diversity with segments of industrial and commercial development along with its population growth. In the process, over a dozen community parks have been acquired and developed. This

1 push to strengthen quality of life for citizens is also reflected in the Jordan campus of Salt Lake
 2 Community College, which straddles the West Jordan–South Jordan border (UEN, no date).

3 According to Sandy City’s website, Sandy is ranked among the safest cities in the nation for the 11th
 4 straight year. Sandy also has public and private schools; charity organizations; medical services; fire,
 5 police, and public safety facilities; and houses of worship representing numerous faiths, all of which
 6 contribute to Sandy’s quality of life (Sandy City, no date).

7 **3.2.3.2. Community Facilities**

8 Community facilities generally include (but are not limited to) schools, churches, libraries, community
 9 centers, senior centers, cemeteries, healthcare centers, and city facilities (such as city halls). There are no
 10 community facilities in the community evaluation area.

11 **3.2.3.3. Recreation Resources**

12 Recreation resources include community parks, nature and wildlife preserves, county fair parks, golf
 13 courses, and trail systems. 9000 South currently lacks bicycle facilities, and its pedestrian facilities are
 14 discontinuous and substandard in some places. Expanded trail facilities are included in the city master
 15 plans and are intended to improve the availability of pedestrian and bicycle facilities as an alternative to
 16 travel by automobile. Trail systems and specific considerations related to pedestrians and bicyclists
 17 (including trails) are discussed in Section 3.5, Pedestrian and Cyclist Considerations. Table 3-3 lists the
 18 recreation facilities in the community evaluation area.

Table 3-3. Recreation Facilities in the Community Evaluation Area

Facility Type	Name	Address	City(ies)
Golf course	River Oaks Golf Course	9300 Riverside Drive	Sandy
Golf course	River Oaks Driving Range (North Range Teaching Academy)	891 West 9000 South	West Jordan
Trail	Jordan River Parkway Trail	The trail runs near the River Oaks Golf Course and connects from Sandy to West Jordan with a tunnel under 9000 South. A trailhead is next to the River Oaks Golf Course clubhouse	West Jordan and Sandy

19 **3.2.3.4. Public Health and Safety**

20 Fire and ambulance services for Sandy are provided by the Sandy City Fire Department, while the West
 21 Jordan Fire Department provides fire and ambulance services for West Jordan. The Unified Fire
 22 Authority has jurisdiction over the unincorporated areas of Salt Lake County in the community evaluation
 23 area. No public health or safety provider facilities (police departments, fire stations, or hospital services)
 24 were identified in the evaluation area. A number of private medical or medical-related businesses are
 25 located along 9000 South, but, because they are not public health facilities, they are not listed here.

3.2.3.5. Public Services and Utilities

UDOT contacted West Jordan and Sandy Cities, Salt Lake County, and privately owned companies that own utility infrastructure along 9000 South between Redwood Road and I-15. Table 3-4 shows the 12 utility providers that UDOT identified as providing utility services in the community evaluation area. Appendix C, Utilities Technical Report, provides more information regarding utility providers and the types and locations of utilities along 9000 South.

Table 3-4. Utilities in the Community Evaluation Area

Provider	Utility Type(s)
CenturyLink	Fiber/cable/telecommunications
Comcast	Fiber/cable/telecommunications
Dominion Energy	Gas infrastructure
Jordan Valley Water Conservancy District	Water infrastructure
Rocky Mountain Power	Main grid transmission with regional distribution substation; power lines (buried and pole)
Sandy City	Lighting infrastructure; stormwater facilities
Sandy Suburban Improvement District	Water lines; sewer lines; stormwater facilities
South Valley Sewer District	Sewer lines
Syringa	Buried fiber
West Jordan City	Water and sewer infrastructure
XO Communications	Fiber/cable/telecommunications
Zayo Fiber Solutions	Fiber/cable/telecommunications

3.2.4. Expected Impacts

3.2.4.1. Community Cohesion and Quality of Life

Community Cohesion. Because the residential neighborhoods in the community evaluation area are already divided by 9000 South, the build alternative would not further separate these communities. The build alternative would require the acquisition of two homes that are located on the south side of 9000 South. These two homes do not appear to be part of a cohesive residential neighborhood, unlike the homes in the subdivisions that are accessed off of 9000 South. However, these two homes are older, and it is likely that this block was once a cohesive residential neighborhood. One of the two homes slated for acquisition is currently empty and for sale. It is reasonable to assume that, as the 9000 South roadway environment has changed and become busier and more commercial, these roadside homes had less cohesion with one another. For more information about right-of-way acquisitions, see Section 3.3, Property Acquisitions.

Quality of Life. The build alternative would provide transportation improvements that complement locally established land use and transportation plans, specifically those for West Jordan and Sandy Cities, and would improve the commute for residents leaving these communities for work in other parts of the Wasatch Front. The build alternative would also provide continuous east-west pedestrian and bicycle facilities in the community evaluation area (for more information about these facilities, see Section 3.5, Pedestrian and Cyclist Considerations). Both the improved vehicle transportation and the addition of pedestrian and bicycle facilities would increase the overall quality of life in the evaluation area.

1 **3.2.4.2. Community Facilities**

2 There are no community facilities in the community evaluation area, so the build alternative would not
3 affect any community facilities.

4 **3.2.4.3. Recreation Resources**

5 The build alternative would include a 4-foot-wide, curb-height raised median that would run down the
6 center of 9000 South from about 1075 West to 700 West. This raised median would eliminate the existing
7 westbound left-turn access to the River Oaks Golf Course’s North Range Teaching Academy and driving
8 range (the entrance for which is located at 891 West 9000 South). The raised median would also eliminate
9 the existing left-turn access from the North Range Teaching Academy to westbound 9000 South.

10 In addition, detention basin option B would be located at about 859 West 9000 South on the River Oaks
11 Golf Course’s North Range Teaching Academy and driving range property. The specific part of the
12 property on which this detention basin would be sited is adjacent to the Jordan River Parkway Trail and is
13 not manicured or used as part of the golf course or driving range. No impacts to either the Jordan River
14 Parkway Trail or golf course operations are expected from adding the detention basin at this location.

15 A future recreation area, known as the Big Bend Habitat Restoration Area, would be located in West
16 Jordan just north of 9000 South adjacent to the Jordan River Parkway Trail. A goal of this restoration-area
17 project is to restore 70 acres of habitat for migratory birds and other wildlife by constructing a new
18 meandering channel and wetlands that will connect the floodplain with the river. This project will
19 increase recreation opportunities for the public and will include amenities such as interpretive signs and
20 boardwalks on the Jordan River Parkway Trail.

21 An access (driveway) to the Big Bend Habitat Restoration Area is planned on 9000 South at about
22 890 West. The median described above in this section would limit entering and exiting the Big Bend
23 Restoration Area to right-in and right-out movements only. The current plans for the restoration-area
24 project include only six parking spaces. It is reasonable to assume that most people will access the Big
25 Bend Habitat Restoration Area from points north or south of 9000 South along the Jordan River Parkway
26 Trail. Therefore, UDOT expects that the right-in, right-out movements to and from the access road would
27 not substantially affect visitors to the restoration area itself. According to the *Big Bend of the Jordan*
28 *River Habitat Restoration and Federal Land Transfer: Final Environmental Assessment (URMCC 2018)*:

29 The project area could be accessed on foot or bicycle from the Jordan River Parkway Trail or from
30 the pedestrian access trail located off Millrace Bend Road, located at approximately 8600 South
31 and 940 West in the residential area west of the project. In addition, a connector trail linking the
32 project area to a TRAX station at Gardner Village, about one mile north of the northern boundary
33 of the project area, has been funded and is planned for construction.

34 No other impacts to recreation resources are expected from the build alternative.

35 **3.2.4.4. Public Health and Safety**

36 There are no public health and safety service providers in the community evaluation area, so no providers
37 would be affected. UDOT did not contact emergency service providers in either city, but UDOT believes
38 that increased traffic congestion in the future could reduce emergency response times along 9000 South.
39 The addition of through-traffic lanes and dedicated turn lanes would improve emergency service
40 providers’ access and response times in the evaluation area. Increased shoulder widths could also help to

1 accommodate emergency response vehicles. The wider roadway would allow emergency service
2 providers to better respond to incidents along 9000 South.

3 **3.2.4.5. Public Services and Utilities**

4 The build alternative could affect utilities along the proposed alignment. UDOT would determine the
5 effects on these utilities and appropriate utility treatments by working with local jurisdictions during the
6 final design of the build alternative. All utility relocations would be coordinated with the utility owner
7 during the final design of the build alternative to ensure the safety and continuity of utility service during
8 construction.

9 The build alternative would affect many of the utilities shown above in Table 3-4, Utilities in the
10 Community Evaluation Area, and utility accommodations would be reflected in the final design of the
11 build alternative. In general, the roadway is planned to be widened to the south to minimize impacts to the
12 Rocky Mountain Power utility poles and corridor and to minimize the associated costs to relocate the
13 utilities, though some distribution power lines and poles on the north side of 9000 South would need to be
14 relocated. The build alternative has been designed to avoid the Rocky Mountain Power main grid
15 transmission/regional distribution substation just west of 700 West between the Jordan River and the
16 Jordan River Parkway Trail. Detention basin option A1 would be sited just southeast of the substation at
17 about 792 West 9000 South, while detention basin option A2 would be sited south of the substation in a
18 parcel that is adjacent to both 9000 South and the Jordan River Parkway at about 900 West. Neither
19 detention basin option would affect the substation.

20 UDOT will continue to work closely with all utility providers, including Rocky Mountain Power and
21 West Jordan and Sandy Cities, to verify the utility impacts from the build alternative and to perform all
22 utility relocations that would be required by the build alternative. If the north side of the road is selected
23 for the detention basin, UDOT will work closely with Rocky Mountain Power during the final design of
24 the build alternative to decide the best location for the basin. Additional utilities could be identified
25 during the final design of the build alternative, and any utility relocations would be coordinated with
26 utility providers before construction.

27 **3.2.5. Mitigation**

28 See Section 3.12.1, Community, for the community impacts resulting from construction of the build
29 alternative and the proposed mitigation for those impacts. No additional mitigation for community
30 impacts is anticipated.

31 **3.3. Property Acquisitions**

32 Section 3.3 describes the impacts to properties from the build alternative.

33 **Property Acquisitions Evaluation Area.** The property acquisitions evaluation area includes portions
34 of West Jordan, Sandy, and Salt Lake County bordering 9000 South between Redwood Road on the west
35 and 700 West on the east. The existing 9000 South right-of-way, including the existing pavement, is
36 about 106 feet wide.

3.3.1. Regulatory Environment and Compliance

The acquisition of property by UDOT as necessary to improve 9000 South is subject to specific legal requirements and obligations. When such acquisitions are necessary, UDOT's guidelines and policies are consistent with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 United States Code [USC] Section 4601 and subsequent sections, amended 1989) and the State of Utah Relocation Program (part of the Utah Relocation Assistance Act, Utah Administrative Code, Section 57-12). These laws provide for uniform and equitable treatment of all persons displaced from their homes, businesses, and farms without discrimination on any basis.

The guidelines used by UDOT for carrying out the provisions of these acts are contained in its 2013 *Relocation Assistance Brochure*. Relocation resources are available to all residents (including renters) and businesses whose properties need to be acquired, and the process for acquiring replacement housing and other sites must be fair and open. The 2013 *Relocation Assistance Brochure* is available at <https://www.udot.utah.gov/main/uconowner.gf?n=200602240821161>.

3.3.2. Methodology

UDOT identified property to be acquired based on the most recent Salt Lake County records of property data as of April 15, 2019. The information identified property boundaries, size, ownership, and encumbrances such as easements and structures within the footprint of the build alternative. Property impacts are generally defined based on whether an existing structure is within the right-of-way of a proposed alternative or within a certain distance of the proposed right-of way.

The property acquisitions and impacts, in the form of relocations, potential relocations, and partial acquisitions (strip takes), described in this section are based on preliminary engineering. The actual property impacts could change and would be determined during the final design of the build alternative project and during the property-acquisition process. Property impacts are defined as follows:

- **Direct Impacts (Relocations).** For the purpose of this analysis, a direct impact to a home or business occurs when an existing structure is within the right-of-way of a proposed alternative. This type of impact is referred to as a relocation because the entire property would need to be acquired and the residents or business would need to relocate.
- **Proximity Impacts (Potential Relocations).** For the purpose of this analysis, a proximity impact to a home or business occurs when an existing structure (excluding porches and garages) is within 15 feet of the proposed right-of-way. This type of impact is referred to as a potential relocation because it is not clear whether the entire property would need to be acquired. UDOT would make a final determination about the property during the right-of-way acquisition phase of the project, which would occur shortly before construction.
- **Land-Only Impacts (Partial Acquisitions).** For the purpose of this analysis, a land-only impact occurs when a property is located within the proposed right-of-way but the right-of-way is more than 15 feet from an existing structure. This type of impact is referred to as a strip take because only a strip of land on the edge of the parcel would need to be acquired.

1 **3.3.3. Expected Impacts**

2 As shown in Figure 3-2 through Figure 3-7 beginning on page 37, about 57 individual property parcels
3 would be affected by the additional right-of-way required for the build alternative. Because property
4 impacts are based on preliminary engineering, the acquisitions could change and would be verified during
5 the final design of the build alternative and during the property-acquisition process. For this analysis, the
6 numbers of relocations, potential relocations, and partial acquisitions were calculated from Salt Lake
7 County records of property data as of June 25, 2019.

8 **3.3.3.1. Direct and Proximity Impacts (Relocations and Potential Relocations)**

9 **Residential.** The build alternative would directly impact two homes on the south side of 9000 South.
10 The homes, located at 1085 West 9000 South and 1109 West 9000 South, would be acquired and
11 demolished in order to construct the build alternative, and the residents would be relocated. In addition,
12 the new edge of pavement would be within about 10 to 11 feet of the edge of one of the River Oaks Suites
13 and Apartments building (it is currently about 20 feet from the edge of pavement). However, the road
14 widening has been designed to minimize impacts to the apartments, and UDOT does not currently intend
15 to acquire the River Oaks Suites and Apartments building.

16 **Businesses.** There would be no direct impacts to businesses (business relocations). However, because
17 the VCA Jordan River Animal Hospital (located at 1519 West 9000 South; see Figure 3-2 on page 37) is
18 already located close to the intersection of 9000 South and 1510 West, the widened road and associated
19 traffic signals would come within 15 feet of the building. The road widening has been designed to
20 minimize impacts to the VCA Jordan River Animal Hospital, and UDOT does not currently intend to
21 relocate this business. Similarly, the Exxon gas station at the intersection of 9000 South and 1300 West is
22 also located close to the intersection. The access to the gas station at 9000 South and 1300 West would be
23 reconstructed, but access would remain in the same location. Once the access is reconstructed, the gas
24 station should operate as it currently does.

25 As described in Section 3.3.2, Methodology, these impacts are considered proximity impacts. Although
26 UDOT does not anticipate that these impacts would affect the buildings themselves or operation of these
27 businesses, UDOT would make a final determination about the viability of the businesses during the final
28 design of the build alternative.

1 **3.3.3.2. Land-Only Impacts (Partial Acquisitions)**

2 As shown in Figure 3-2 through Figure 3-7 beginning on page 37, in addition to the direct and proximity
3 impacts discussed above, there would be partial acquisitions of right-of-way from several other additional
4 properties that are a mix of public facility, recreation/open space, residential, and commercial/business
5 properties.

6 **Public Facility.** As shown in Figure 3-12, Aquatic Resources in the Biological Resources Evaluation
7 Area, on page 69, detention basin options A1 and A2 are located on the north side of 9000 South at about
8 792 West and 900 West, respectively. This parcel is owned by Utah Power and Light, and a Rocky
9 Mountain Power main grid transmission/regional distribution substation is located on this parcel. If either
10 of these locations is selected for the proposed detention basin, the basin would be either southeast of or
11 directly south of the substation, and just under 1 acre of undeveloped land in either location on this parcel
12 would be acquired for constructing the basin.

13 **Recreation.** As shown in Figure 3-12 on page 69, detention basin option B is located on the south side of
14 9000 South at about 859 West. This parcel is owned by Sandy City and is the site of the River Oaks Golf
15 Course's North Range Teaching Academy and driving range. The specific part of the property on which
16 the detention basin would be sited is adjacent to the Jordan River Parkway Trail and is not manicured or
17 used as part of the golf course or driving range. No impacts to either the Jordan River Parkway trail or
18 golf course operations are expected from the adding the detention basin at this location. However, if this
19 location is selected for the proposed detention basin, just under 1 acre of undeveloped land on this parcel
20 would be acquired for constructing the basin.

21 **Residential.** As shown in Figure 3-2 through Figure 3-7 beginning on page 37, the majority of the land-
22 only impacts to homes and apartments would occur in the form of strip takes east of 1240 West and on the
23 south side of 9000 South, since the majority of road widening would be done to the south. Some
24 additional land-only impacts would occur on the north side of 9000 South just west of 1075 West, where
25 the park strip slope is steep and therefore requires additional right-of-way to fix. In addition, noise walls
26 are proposed in three locations: west of 1240 West on the north side of 9000 South, between 1240 West
27 and Galilee Way on the north side of 9000 South, and between 1075 West and 1030 West on the north
28 side of 9000 South. If the noise walls are installed, some land-only impacts would occur at these
29 locations. See Section 3.6, Noise, for more information regarding the proposed noise walls.

30 **Businesses.** Some of the partial acquisitions of business property would include general strip takes to
31 accommodate the road widening, reconstructing accesses, removing and relocating signs, and eliminating
32 parking spaces.

33 The drive-through driveway at Cypress Credit Union (1381 West 9000 South) would need to be
34 reconstructed. This reconstruction would prevent the credit union from providing drive-through banking
35 services during construction, but UDOT does not anticipate any long-term effects to the credit union.

36 As described in Section 3.2.4, Expected Impacts, the build alternative would include a 4-foot-wide, curb-
37 height median that would run down the middle of 9000 South from about 1075 West to 700 West. This
38 raised median would remove the existing westbound left-turn access to the River Oaks Golf Course's
39 North Range Teaching Academy (the entrance for which is located at 891 West 9000 South) from
40 9000 South and the existing left-turn access from the North Range Teaching Academy to westbound
41 9000 South. Consequently, the entrance driveway to the River Oaks Driving Range would be
42 reconstructed. However, the golf course itself would not be affected, and UDOT does not expect the
43 reconstructed driveway to affect the operation or viability of the driving range or the golf course.

1 Seventeen business signs would need to be relocated (for more information regarding these impacts, see
2 Section 3.4, Economics). Some of the signs are ground-mounted, and others are overhead signs. UDOT
3 anticipates that the impacted signs can be moved and mitigated through the right-of-way acquisition
4 process.

5 Several businesses would lose some parking spaces as a result of the build alternative. The build
6 alternative would remove about 33 parking spaces on the northern strip of the Forest Product Sales/
7 U.S. Vinyl Fence property on the southwest corner of 9000 South and 1300 West, primarily as a result of
8 siting a stormwater detention basin in this location. The parking lot for this business is large. Based on a
9 preliminary discussion with the property owners, UDOT does not anticipate that removing these parking
10 spaces would affect the viability of the Forest Product Sales or U.S. Vinyl Fence businesses. Other
11 businesses would lose fewer parking spaces, and UDOT does not anticipate that the viability of any of the
12 businesses would be reduced from removal of the parking spaces. In fact, the improved mobility created
13 by the build alternative should improve business accessibility throughout the project study area.

14 **Construction Easements.** Some properties outside the right-of-way might be affected by cuts or fills
15 required during construction of the roadway and accessory features. UDOT would acquire temporary
16 construction easements for these properties. These properties might be affected but are not considered
17 relocations or partial relocations because the property would not be permanently used. Construction
18 easements are not included in the relocation impacts discussed in Section 3.3.3, Expected Impacts. UDOT
19 would compensate the property owners for the temporary use of the property, and the restored property
20 would be returned to the owner when the use of the property is no longer needed. These properties are not
21 included in this analysis, nor are these properties discussed in this section.

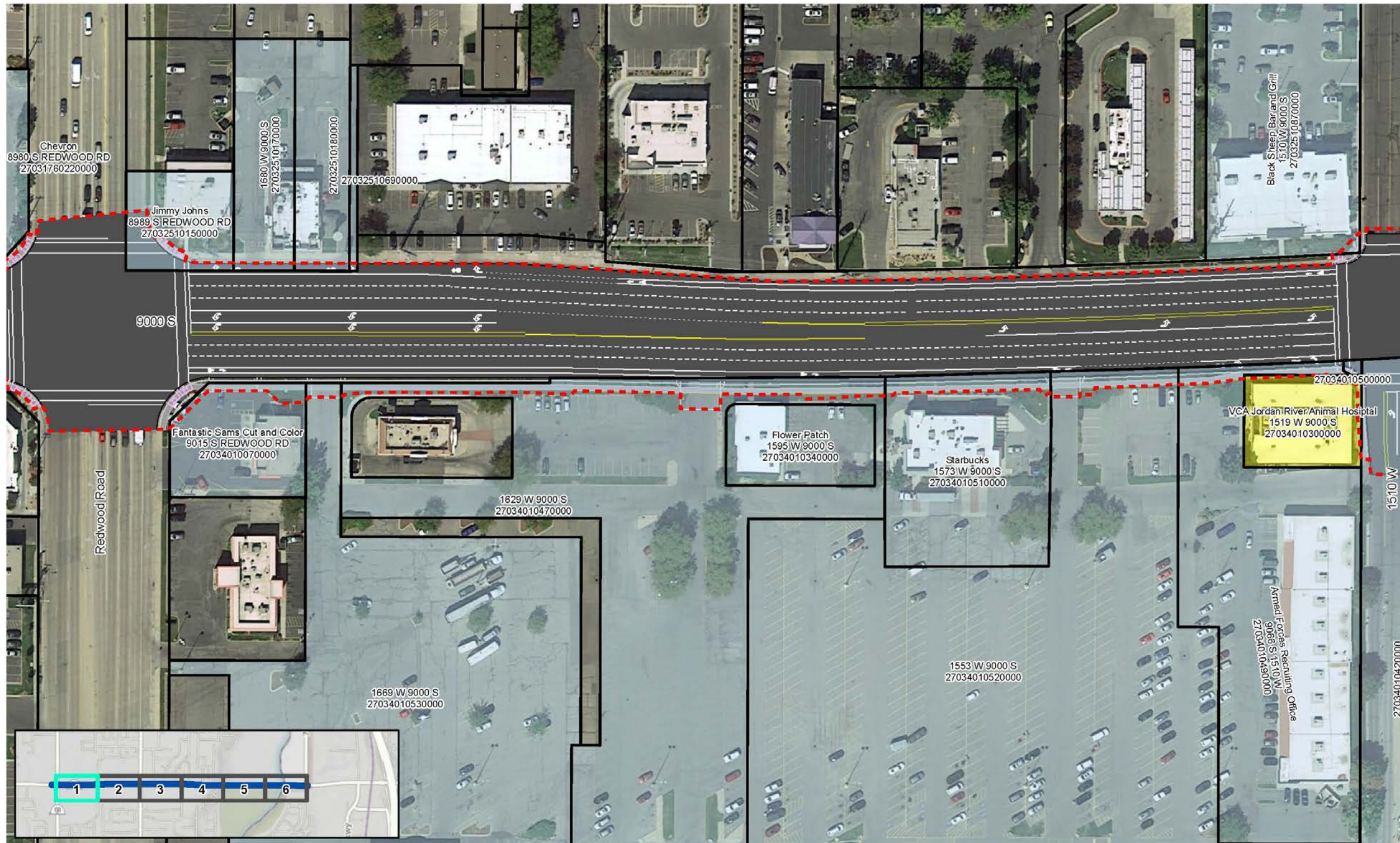
22 **3.3.4. Mitigation**

23 Property acquisitions will be completed according to the provisions of the federal Uniform Relocation
24 Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the Utah Relocation
25 Assistance Act, Utah Administrative Code, Section 57-12.

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DRAFT

1 **Figure 3-2. Right-of-way Parcel Impacts from the Build Alternative (1 of 6)**



9000 South ENVIRONMENTAL STUDY
 Redwood Road to I-15

Legend

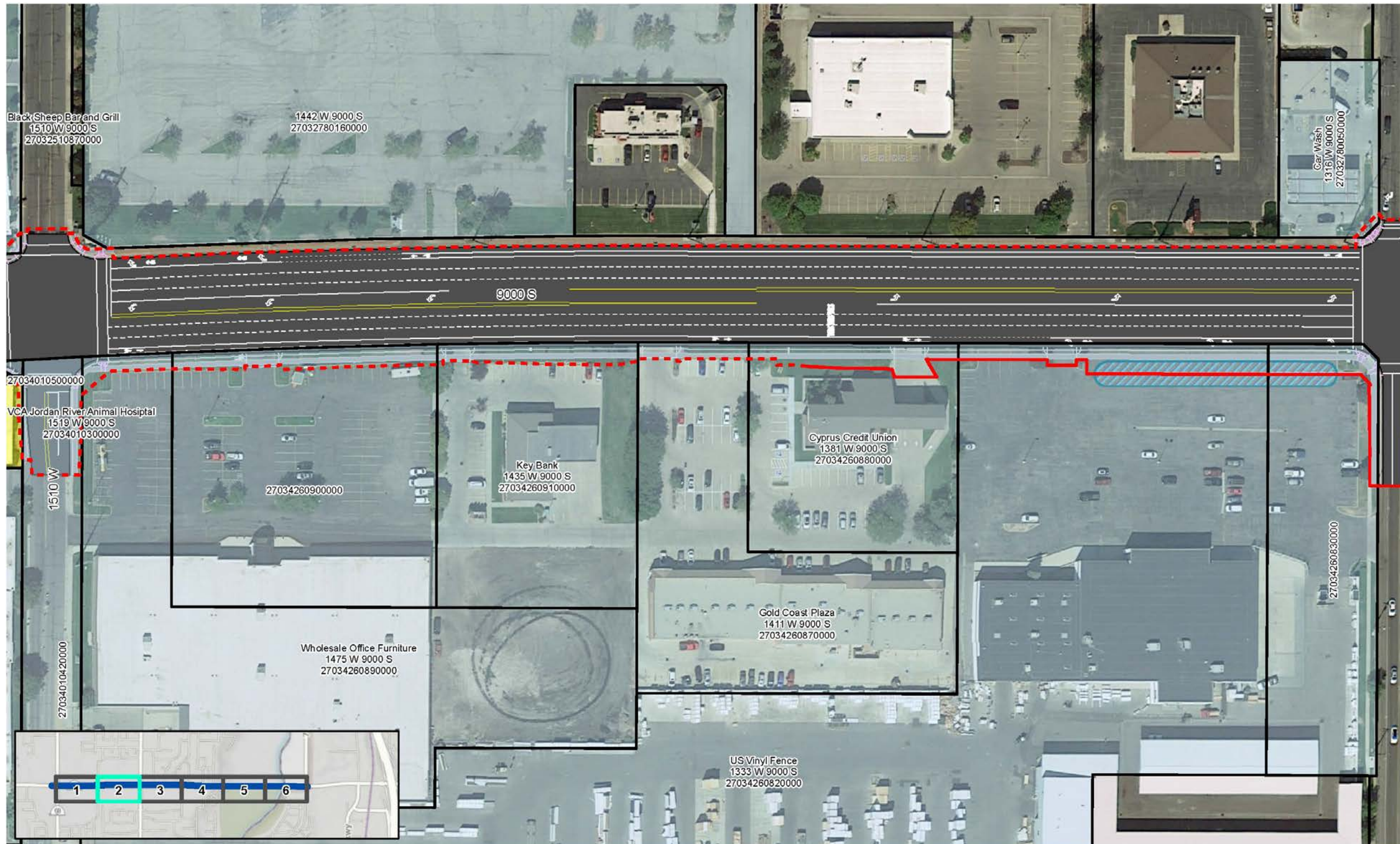
City Boundaries	9000 S Construction Impact	9000 S Pavement	Potential Relocation
Potential Basin Locations	9000 S Sidewalk	Land Only Impact	Relocation

1 inch = 88 feet
 0 Feet 120

9000 SOUTH ENVIRONMENTAL STUDY
RIGHT-OF-WAY PARCEL IMPACTS
 Figure 1 of 6

2

1 **Figure 3-3. Right-of-way Parcel Impacts from the Build Alternative (2 of 6)**

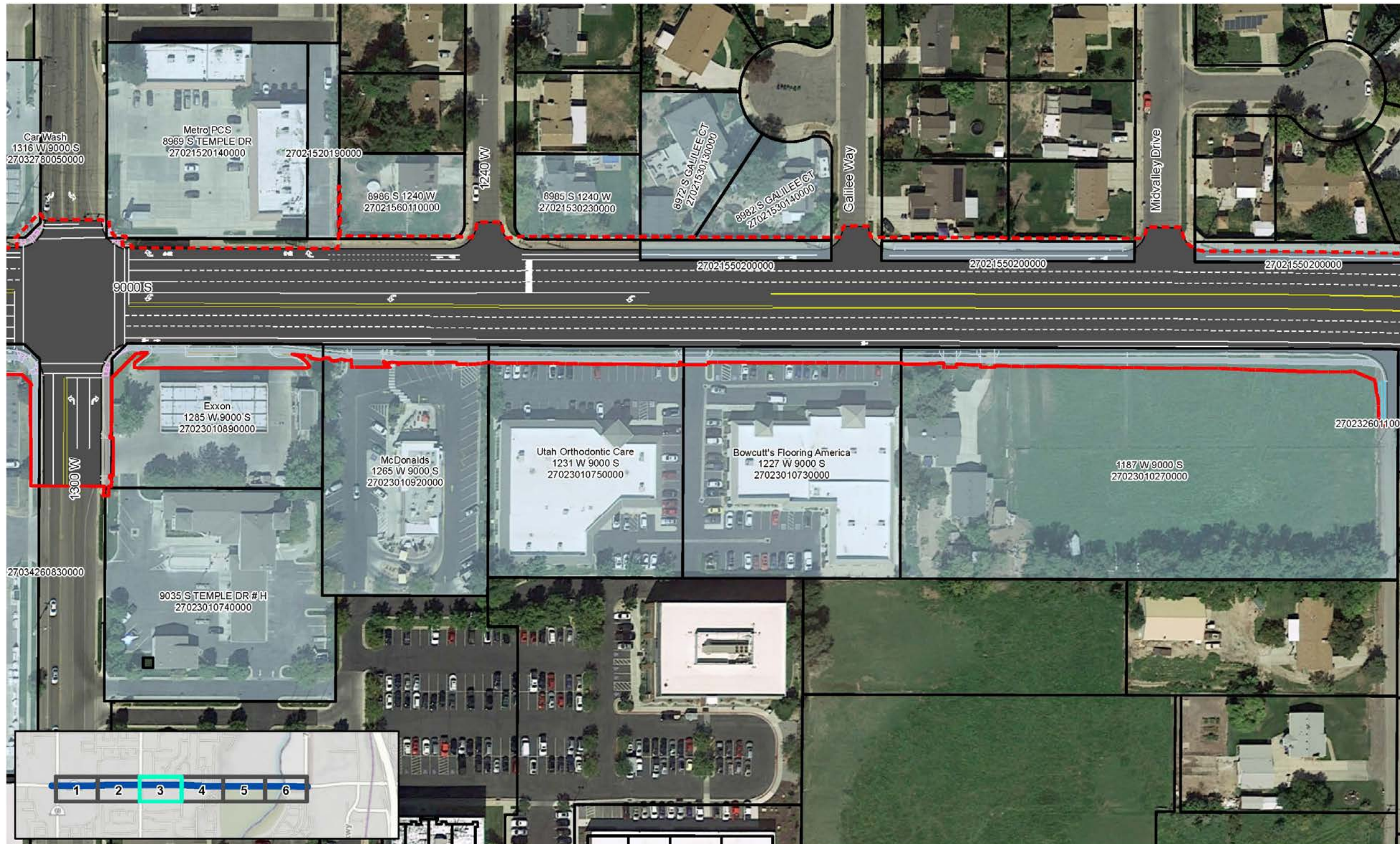


Legend

- City Boundaries
- 9000 S Construction Impact
- 9000 S Pavement
- Potential Relocation
- Potential Basin Locations
- 9000 S Sidewalk
- Land Only Impact
- Relocation

1 inch = 88 feet
 0 Feet 120

1 **Figure 3-4. Right-of-way Parcel Impacts from the Build Alternative (3 of 6)**



9000 South ENVIRONMENTAL STUDY
 Redwood Road to I-15

Legend

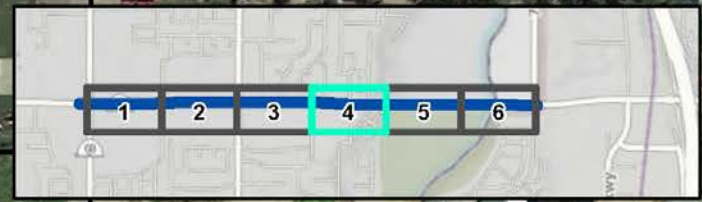
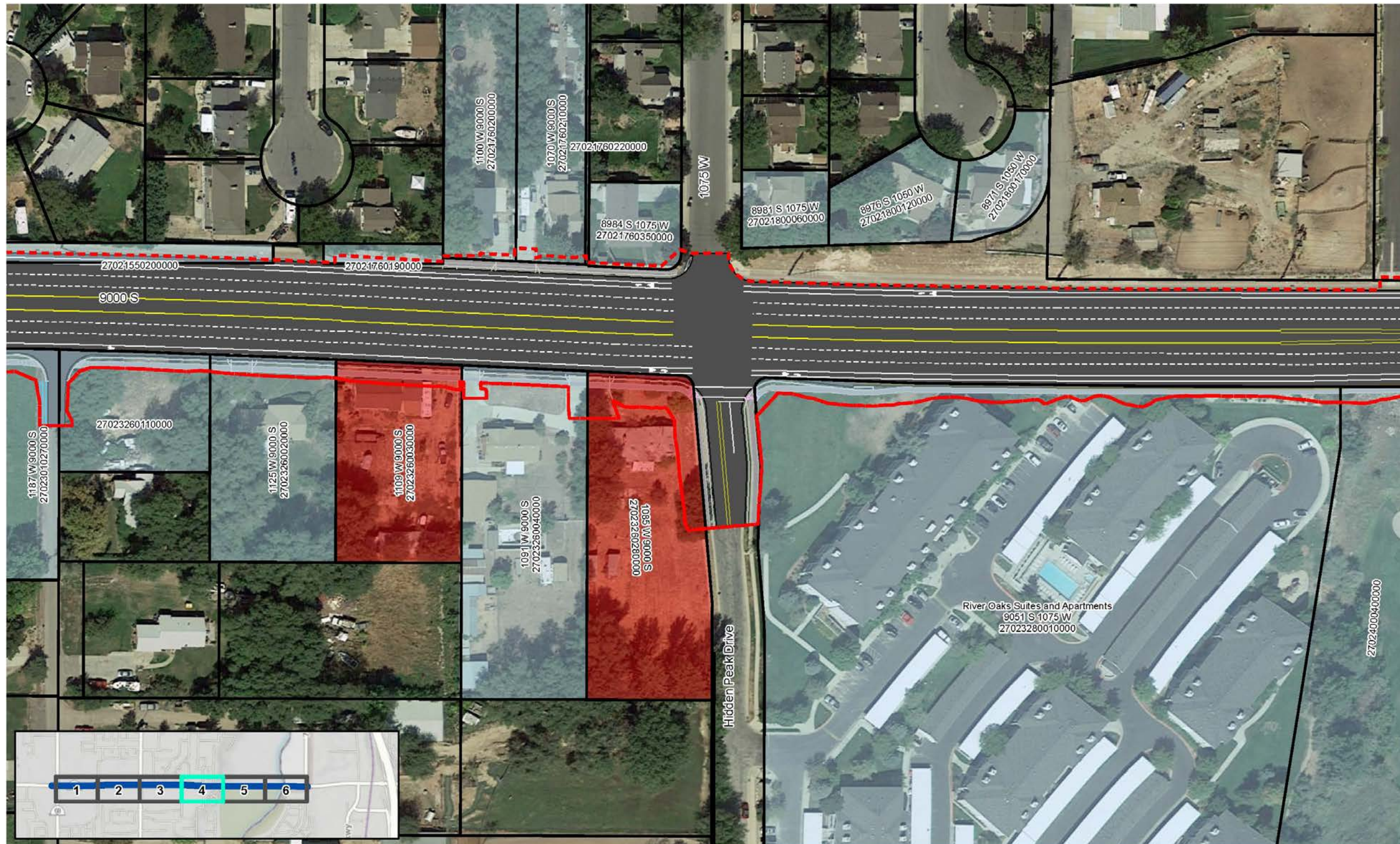
- City Boundaries
- Potential Basin Locations
- 9000 S Construction Impact
- 9000 S Pavement
- 9000 S Sidewalk
- Land Only Impact
- Potential Relocation
- Relocation

1 inch = 88 feet
 0 Feet 120

9000 SOUTH ENVIRONMENTAL STUDY
RIGHT-OF-WAY PARCEL IMPACTS
 Figure 3 of 6

2

1 **Figure 3-5. Right-of-way Parcel Impacts from the Build Alternative (4 of 6)**



9000 South ENVIRONMENTAL STUDY
 Redwood Road to I-15

Legend

- City Boundaries
- Potential Basin Locations
- 9000 S Construction Impact
- 9000 S Sidewalk
- 9000 S Pavement
- Land Only Impact
- Potential Relocation
- Relocation

1 inch = 88 feet
 0 Feet 120

9000 SOUTH ENVIRONMENTAL STUDY
RIGHT-OF-WAY PARCEL IMPACTS
 Figure 4 of 6

1 **Figure 3-6. Right-of-way Parcel Impacts from the Build Alternative (5 of 6)**



9000 South ENVIRONMENTAL STUDY
 Redwood Road to I-15

Legend

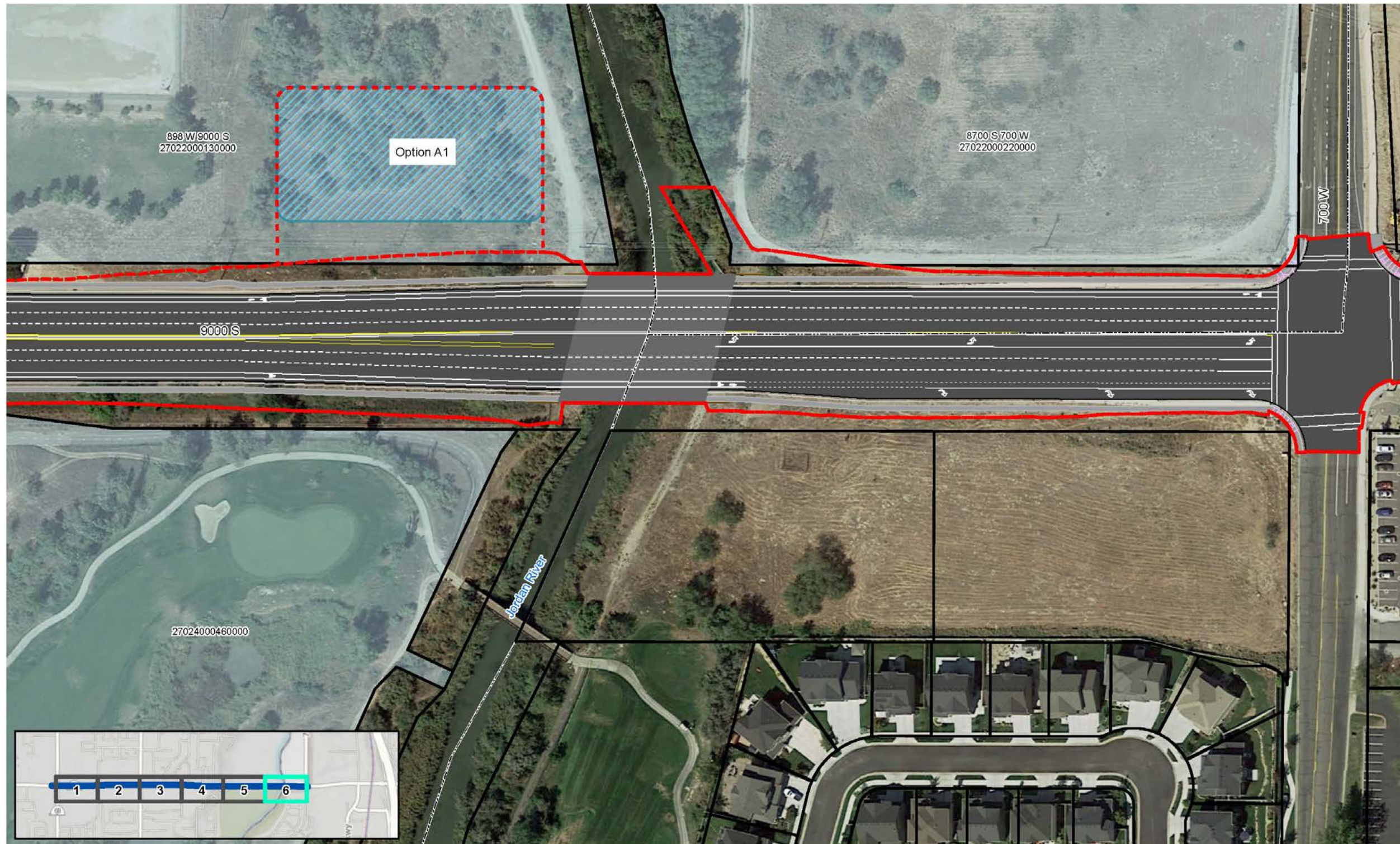
- City Boundaries
- Potential Basin Locations
- 9000 S Construction Impact
- 9000 S Sidewalk
- 9000 S Pavement
- Land Only Impact
- Potential Relocation
- Relocation

1 inch = 88 feet
 0 Feet 120

9000 SOUTH ENVIRONMENTAL STUDY
RIGHT-OF-WAY PARCEL IMPACTS
 Figure 5 of 6

2

1 **Figure 3-7. Right-of-way Parcel Impacts from the Build Alternative (6 of 6)**



2

9000 South ENVIRONMENTAL STUDY
 Redwood Road to I-15

Legend

City Boundaries	9000 S Construction Impact	9000 S Pavement	Potential Relocation
Potential Basin Locations	9000 S Sidewalk	Land Only Impact	Relocation

1 inch = 88 feet
 0 Feet 120

9000 SOUTH ENVIRONMENTAL STUDY
RIGHT-OF-WAY PARCEL IMPACTS
 Figure 6 of 6

3.4. Economics

Section 3.4 examines the economic characteristics in the economic evaluation area and evaluates how these characteristics would be affected by the build alternative. The economic analysis considers the economic conditions along 9000 South in West Jordan, Sandy, and Salt Lake County.

Economic Evaluation Area. The economic evaluation area includes Salt Lake County, the cities along 9000 South, and the businesses adjacent to 9000 South that could experience adverse or beneficial impacts from construction and operation of an improved 9000 South.

3.4.1. Regulatory Environment and Compliance

No federal, state, or local regulations require an economic evaluation for the 9000 South project.

3.4.2. Methodology

UDOT evaluated changes in traffic circulation and access and direct right-of-way impacts from the build alternative to determine whether the alternative would have adverse and/or beneficial economic impacts to businesses, general commerce and employment, local government property and sales tax revenues. The economic impacts from constructing the build alternative were also evaluated.

3.4.3. Current Conditions

9000 South is an economically valuable transportation corridor of regional and local importance. It provides a local connection between the cities along the roadway and a regional connection to communities in Salt Lake and Utah Counties. As a local connection, 9000 South provides access for a number of retail and restaurant chains, gas stations, several medical offices, and a variety of locally owned retail businesses. Representatives from West Jordan and Sandy Cities stated that safe and efficient access to commercial areas will be crucial to maintaining and promoting economic growth in the cities along 9000 South (HDR 2018a, 2018b). As a regional connection, 9000 South serves as a major link to employment destinations and to the larger regional transportation network.

3.4.3.1. Regional Economic Conditions

Employment Data and Unemployment Rate. Nonfarm employment in Salt Lake County increased from 561,818 employees in January 2010 to 734,129 employees in December 2018 (an increase of 31%). The unemployment rates in Salt Lake County have paralleled the state unemployment rate during the last 10 years. The unemployment rates for both Salt Lake County and for the state have been decreasing since 2010. The December 2018 unemployment rate was 3.1% in Salt Lake County, which was slightly lower than the 3.2% unemployment rate for the state overall (Utah Department of Workforce Services 2019).

Employment in the Salt Lake City metropolitan area, which includes West Jordan and Sandy, is expected to increase by about 107,860 jobs (or 2.7%) annually between 2016 and 2026 (Utah Department of Workforce Services 2019).

Employment Sectors. The top five employment sectors in Salt Lake County in 2018 were trade, transportation, and utilities; professional and business services; government (federal, state, and local); educational and health services; and financial activities (Utah Department of Workforce Services 2019).

Major Employers. The largest employers in Salt Lake County are the University of Utah, Intermountain Healthcare, the State of Utah, Granite School District, Jordan School District, Salt Lake County, Walmart,

1 Canyons School District, Smith’s (grocery stores), and Delta Air Lines (Utah Department of Workforce
2 Services 2019).

3 **Tax Revenues.** The revenues for all local governments in Utah come from a combination of tax
4 revenues, intergovernmental transfers, and fees. Collectively, property and sales tax revenues were 43%
5 of Salt Lake County’s revenue in 2017, 49% of West Jordan City’s revenue in 2018, and 34% of Sandy
6 City’s revenue in 2018 (Utah Office of the State Auditor 2019).

7 **Tax Rates.** In 2018, average property tax rates in West Jordan and Sandy were between 1.2% and 1.5%
8 (Utah State Tax Commission 2018). The 2019 sales tax rate in West Jordan and Sandy is 7.10% (Utah
9 State Tax Commission 2019).

10 **3.4.3.2. Local Economic Conditions**

11 **West Jordan.** Between Redwood Road and 1200 West, the commercial areas that are adjacent to
12 9000 South or have their primary access from 9000 South are in West Jordan. These commercial areas,
13 which are zoned as Community Shopping Centers by West Jordan City, have retail, restaurant, banking,
14 service, medical, and professional services businesses that serve primarily the nearby areas. This section
15 of 9000 South is dotted with various chain fast-food restaurants. 9000 South is the primary access to or
16 from I-15 for most of the businesses and surrounding residential areas and is a critical transportation link
17 for the businesses adjacent to 9000 South itself.

18 **Sandy.** Between 700 West and I-15, the commercial and industrial areas that are adjacent to 9000 South
19 or have their primary access from 9000 South are in Sandy. The businesses in this area include
20 manufacturing, distribution, retail, office, restaurant, and gas station businesses. These commercial and
21 industrial areas are part of Sandy’s largest commercial district, which also includes the areas between I-15
22 and State Street and between 9000 South and 11400 South. In this commercial district, 9000 South is the
23 primary access to or from I-15 for most of the businesses. It is also a critical transportation link for the
24 businesses adjacent to 9000 South and the businesses in Sandy’s largest commercial district east of I-15.

25 **Summary.** Both West Jordan and Sandy Cities rely heavily on sales and property taxes as part of their
26 revenues. All of the businesses located along 9000 South contribute to the local sales tax and property tax
27 revenues.

3.4.4. Expected Impacts

3.4.4.1. Business Impacts

The build alternative would not require any business relocations. The following paragraphs describe the other business impacts expected from the build alternative.

VCA Jordan River Animal Hospital (Potential Relocation). One business, the VCA Jordan River Animal Hospital (on the southwest corner of 1510 West and 9000 South) is considered a potential relocation because the structure would be located within 15 feet of the 9000 South right-of-way. However, access to the animal hospital would be maintained. UDOT, in coordination with the property owner, would make a final determination about the viability of this business during the final design of the build alternative.

Forest Product Sales/U.S. Vinyl Fence (Partial Acquisition). The build alternative would remove about 33 parking spaces on the northern strip of the Forest Product Sales/U.S. Vinyl Fence shared parking lot (southwest corner of 9000 South and 1300 West), primarily as a result of siting a proposed stormwater detention basin sited in this location. Based on a preliminary discussion with the property owners, UDOT does not anticipate that removing these parking spaces would affect the viability of the Forest Product Sales or U.S. Vinyl Fence businesses.

Subway (Partial Acquisition). The build alternative would remove one parking space at the Subway restaurant property on the southeast corner of 9000 South and Redwood Road. UDOT does not anticipate that removing this parking space would affect the viability of the Subway business.

North Range Teaching Academy (Partial Acquisition). The North Range Teaching Academy (891 West 9000 South) would have a partial acquisition of property. Additionally, the business's sign would need to be relocated. In addition, the build alternative would include a median barrier on 9000 South that would remove the existing westbound left-turn movement to the North Range Teaching Academy from 9000 South and the existing left-turn movement from the North Range Teaching Academy to westbound 9000 South

Various Commercial Properties (Partial Acquisitions). For all of the commercial properties located on the south side of 9000 South between Redwood Road and 1200 West, the build alternative would require minor partial acquisitions (acquisition of strips of property along the edges of parcels) as well as modifying or reconstructing the existing accesses. These minor partial acquisitions would affect the landscaping, sidewalk, and signs in the park strip of 9000 South.

As shown in Table 3-5, 17 business signs would be relocated as a result of the build alternative. UDOT anticipates that the affected signs can be moved and mitigated through the right-of-way acquisition process.

No existing business accesses would be removed by the build alternative. The build alternative's partial acquisitions and modifications to existing accesses would not affect the viability of any businesses.

The additional parcels and businesses that would experience right-of-way impacts from the build alternative are shown above in Figure 3-2 through Figure 3-7, Right-of-way Parcel Impacts from the Build Alternative.

Table 3-5. Business Signs That Would Be Relocated as a Result of the Build Alternative

Name of Business(es)	Approximate Address (All on South Side of 9000 South)
Subway and Fantastic Sam's	Southeast corner of Redwood Road and 9000 South
Taco Bell	1650 West 9000 South
River Pointe Plaza (Shopko and Asian City)	1600 West 9000 South
AT&T, Starbucks, and Hot Oven Pizza	1575 West 9000 South
VCA Jordan River Animal Hospital	Southwest corner of 1510 West and 9000 South
Granite Furniture Company	1475 West 9000 South
Key Bank	1435 West 9000 South
Gold Coast Plaza (12 businesses on the sign)	1410 West 9000 South
Cyprus Credit Union	1400 West 9000 South
Forest Product Sales and U.S. Vinyl Fence	Southwest corner of 1300 West and 9000 South
Exxon gas station	Southeast corner of 1300 West and 9000 South
Shopping center (9 businesses on the sign)	Northeast corner of 1300 West and 9000 South
McDonald's	1265 West 9000 South
AlphaGraphics and other businesses	1231 West 9000 South
Summit View Health Care, Apex Plus, Mountain Land Physical Therapy, Bowcutt's Flooring America, and other businesses	1227 West 9000 South
River Oaks Suites and Apartments	1075 West 9000 South
North Range Teaching Academy	891 West 9000 South

3.4.4.2. General Impacts to Local Government Revenues

The build alternative would require that UDOT purchase private property for right-of-way. The State's removal of private properties from the tax base for use as a roadway facility would reduce local government revenues and prevent development on this land. Because the build alternative's impacts to private property would be relatively small and because the build alternative would not relocate any businesses, UDOT does not anticipate any large changes to the property or sales tax collected in the economic evaluation area. Roadway improvements could facilitate a higher use of the land (that is, a change from vacant or residential uses to commercial land uses on parcels that front on 9000 South).

3.4.5. Mitigation

Where property acquisition is necessary and state funds are used, UDOT compensates land owners under the provisions of the Utah Relocation Assistance Act (Utah Code Section 57-12-1 and subsequent sections). Impacts to parking spaces, signs, and landscaping will also be compensated under the provisions of the Utah Relocation Assistance Act. For businesses that experience short-term access and visibility problems during construction, a traffic access management plan will be developed and implemented by the construction contractor that maintains the public's access to the business during normal business hours.

3.5. Pedestrian and Cyclist Considerations

Section 3.5 describes the current and proposed pedestrian and bicyclist facilities in the pedestrian and cyclist considerations evaluation area and the expected impacts to these facilities from the build alternative.

Pedestrian and Cyclist Considerations Evaluation Area. The pedestrian and cyclist considerations evaluation area includes the existing and proposed trails that are on or connect to 9000 South between Redwood Road on the west and Sandy Parkway on the east.

3.5.1. Regulatory Environment and Compliance

When UDOT develops a project, the economic, social, and environmental effects, including disruption and impacts to facilities and services, are considered. If a proposed project would sever an existing major route for nonmotorized traffic, a reasonable alternate route must be provided or UDOT must show that a reasonable alternate route already exists.

3.5.2. Methodology

UDOT identified existing and proposed bicyclist and pedestrian facilities using several sources including WFRC's previously adopted 2015–2040 RTP as well as WFRC's 2019–2050 RTP, the *Salt Lake County Active Transportation Implementation Plan*, the UCATS plan, the UDOT Region Two Bike plan, and West Jordan City, Sandy City, and Salt Lake County transportation master plans. The bicyclist and pedestrian sections of these plans give a comprehensive view of the regional pedestrian and bicyclist system for southwestern Salt Lake County. These plans have been compiled with input from the Cities and County and identify which pedestrian and bicyclist accommodations should be included in the regional system.

3.5.3. Current Conditions

Currently, there are no established bicycle routes or bicycle lanes along 9000 South in the pedestrian and cyclist considerations evaluation area. The roadway is not currently signed or striped to accommodate bicycles. The roadway has little room for cyclists because the shoulder is either missing or very narrow in several locations. In addition, the sidewalks in the evaluation area are discontinuous between 1075 West and 700 West and need to be replaced along the south side of the roadway. The existing sidewalks through these areas do not safely or comfortably accommodate pedestrians, nor do they meet current UDOT design standards. Furthermore, the existing pedestrian facilities along most of 9000 South are lacking pedestrian ramps and push buttons at signals per current ADA standards.

There are no continuous east-west pedestrian or bicycle facilities in the evaluation area. The Jordan River Parkway Trail, a regional, 10-foot-wide, multiuse trail, passes north-south through the evaluation area in Sandy at the River Oaks Golf Course. The south end of the trail at this location is in Sandy and connects to South Jordan's portion of the trail, and the north end of the trail connects to West Jordan via a tunnel under 9000 South. The River Oaks trailhead, located next to the River Oaks Golf Course clubhouse, provides access to the Jordan River Parkway Trail at this location. Salt Lake County and the golf course owner have a shared-use agreement that allows both trail users and golfers to park in the adjacent parking lot (Sandy City 2013).

As described in Section 1.4.2, Lack of Safe Active Transportation Facilities, the High Comfort Bicycle Network map for Salt Lake County in the *Salt Lake County Active Transportation Implementation Plan*

1 shows a buffered and/or protected bicycle lane on 9000 South between Redwood Road and 700 West.
2 WFRC’s previously adopted 2015–2040 RTP shows 9000 South as a priority bicycle route between
3 1300 West and 500 West, while the UDOT Region Two Bike Plan, which consists of the UCATS
4 Regional Bicycle Network on state routes, calls for incorporating active transportation facilities on
5 9000 South. In October and November 2018, representatives from West Jordan and Sandy Cities also
6 stated their desire for additional pedestrian and bicycle facilities along 9000 South (HDR 2018a, 2018b).

7 **3.5.4. Expected Impacts**

8 Overall, the build alternative would have a beneficial impact to existing pedestrian and bicyclist facilities
9 by providing a new bicycle lane on both sides of 9000 South and continuous sidewalk that connect to the
10 Jordan River Parkway Trail on the east end of the pedestrian and cyclist considerations evaluation area. In
11 addition, the build alternative would ensure that pedestrian facilities are ADA-compliant.

12 The sidewalk on the north side of 9000 South would remain 4 feet wide, but passing spaces would be
13 provided every 200 feet. A 3.5-foot-wide park strip would run adjacent to the sidewalk. The sidewalk on
14 the south side of the road would be upgraded to 5 feet wide with an adjacent 4-foot-wide park strip. In
15 some locations, the park strip would be removed, and the sidewalk would be 6 feet wide.

16 In addition, the current single diagonal (apex) pedestrian ramps at all intersections between Redwood
17 Road and 700 West would be upgraded to two diagonal pedestrian ramps to meet current UDOT and
18 ADA standards on both sides of the road. Push buttons at the intersections would also be upgraded to
19 meet current UDOT and ADA standards.

20 The build alternative would include a conventional, nonprotected bicycle lane from Redwood Road to
21 700 West on the shoulders of 9000 South on both sides of the road. The bicycle lanes would generally be
22 6 feet wide and would narrow to 5 feet wide at right-turn lanes on both sides of the road. The bicycle
23 lanes would not be buffered or protected by a barrier from the vehicle travel lanes, though they would be
24 striped as designated cycling lanes.

25 The bicycle lane would be designated by a sharrow (a painted bicycle and arrow on the pavement) at the
26 right-turn lanes for all intersections. The bicycle lanes would terminate at 700 West, and cyclists would be
27 directed to use 700 West or the Jordan River Parkway Trail as a bicycle route.

28 **3.5.5. Mitigation**

29 No mitigation is required.

30 **3.6. Noise**

31 Section 3.6 discusses the current noise levels in the noise evaluation area and the expected impacts to
32 noise levels from the build alternative.

33 **Noise Evaluation Area.** The noise evaluation area includes noise receptors within a 500-foot buffer on
34 either side of the 9000 South roadway beginning at the Redwood Road intersection and continuing east
35 about 2 miles to 700 West. From 700 West to the eastern project limits at Sandy Parkway, the land uses
36 consist of commercial and retail facilities that do not have exterior noise-sensitive areas, so a noise
37 evaluation was not performed for this area.

3.6.1. Regulatory Environment and Compliance

Utah Administrative Code Rule 930-3 and UDOT's Noise Abatement Policy 08A2-01 (UDOT 2017; Noise Policy) establish UDOT's noise impact and abatement policies and procedures that are compliant with FHWA regulation 23 CFR Part 772. UDOT's Noise Policy describes procedures for conducting traffic noise studies, procedures that include identifying existing and predicted future traffic noise levels associated with a proposed project and evaluating noise-abatement measures for feasibility and reasonableness if impacts from a project did occur.

3.6.1.1. Noise Policy Applicability

UDOT's Noise Policy states that potential noise impacts must be evaluated for all Type I federal-aid and state-funded highway projects, as defined by 23 CFR Section 772.5. Type I projects include those projects that involve (1) constructing new highways or (2) reconstructing existing highways by significantly changing either the horizontal or vertical alignment, adding through travel lanes or auxiliary lanes, or other alterations such as relocating interchange lanes or restriping. The 9000 South project qualifies as a Type I project because it would add new through travel lanes; therefore, a traffic noise analysis is required. UDOT prepared a *Noise Analysis Technical Report* for this project that describes the existing noise levels, the future noise levels with the build alternative, anticipated impacts, and recommended noise-abatement measures (see Appendix D, Noise Analysis Technical Report).

3.6.2. Methodology

Methodology for Monitoring Current Conditions. UDOT monitored existing noise levels in the noise evaluation area at five locations in October 2018 to provide information about existing noise levels and to validate the noise model used for the project. The noise-monitoring locations were selected to represent existing residential developments, recreation areas, and other noise-sensitive areas.

Methodology for Modeling Future Impacts. To determine the future noise impacts with the build alternative, UDOT estimated the future worst-case traffic noise levels and impacts in the evaluation area using FHWA's Traffic Noise Model version 2.5. The modeled roadway included all proposed improvements on 9000 South. The traffic volumes used in the model were based on LOS C volumes at the posted speed limit.

Methodology for Considering Noise-abatement Measures. Where the noise modeling predicts traffic noise impacts at sensitive receptors, UDOT will consider noise-abatement measures if they are reasonable and feasible according to UDOT's Noise Policy.

3.6.3. Current Conditions

The primary source of existing noise in the noise evaluation area is vehicle traffic. The majority of the 9000 South corridor consists of two eastbound and two westbound travel lanes with a center turn lane.

An existing noise wall is located on the north side of 9000 South between about Midvalley Drive and 1120 West. This wall ranges from 6 feet 8 inches to 7 feet 8 inches high and was constructed as part of a previous project. A masonry privacy wall is also located on the north side of 9000 South between Galilee Way and 1075 West that ranges from 6 feet 2 inches to 6 feet 8 inches high. These existing noise and privacy walls were included in the noise model for the project and are expected to remain in place with the build alternative.

1 In October 2018, the monitored noise levels in the evaluation area ranged from about 53 to 75 A-weighted
2 decibels (dBA) depending on the proximity to 9000 South. As a comparison, typical noise levels range
3 from 35 to 50 dBA in rural areas, 50 to 65 dBA in suburban to urban areas, and 65 to 75 dBA in
4 downtown urban areas.

5 **3.6.4. Expected Impacts**

6 The build alternative would generally result in a 2-dBA increase in noise levels throughout the noise
7 evaluation area. Of the 139 receptors that were modeled (representing 239 individual dwelling units,
8 3 restaurants, and 8 recreational locations), 36 are predicted to have noise levels that equal or exceed
9 UDOT's noise-abatement criteria. Of the 36 impacted receptors, 34 are homes, 1 is a restaurant, and 1 is a
10 recreational area. No receptors are predicted to experience noise levels of 10 dBA or more over the
11 existing noise levels.

12 **3.6.5. Mitigation**

13 UDOT evaluated noise walls for nine locations along 9000 South where noise impacts would occur with
14 the build alternative. The two primary criteria to consider when evaluating noise-abatement measures are
15 feasibility and reasonableness. Noise-abatement measures are recommended only if UDOT's criteria for
16 feasibility and reasonableness are met.

17 The following noise walls meet UDOT's feasibility and reasonableness criteria (Figure 3-8).

18 **3.6.5.1. Wall 2 – West of 1240 West, North Side of 9000 South**

19 This wall is 7 feet high and about 140 feet in total length and would extend westward from the southwest
20 corner of 1240 West. This wall includes a 25-foot-long segment that extends north at the west property
21 line of the residential property on the northwest corner of 9000 South and 1240 West.

22 **3.6.5.2. Wall 3 – Between 1240 West and Galilee Way, North Side of 9000 South**

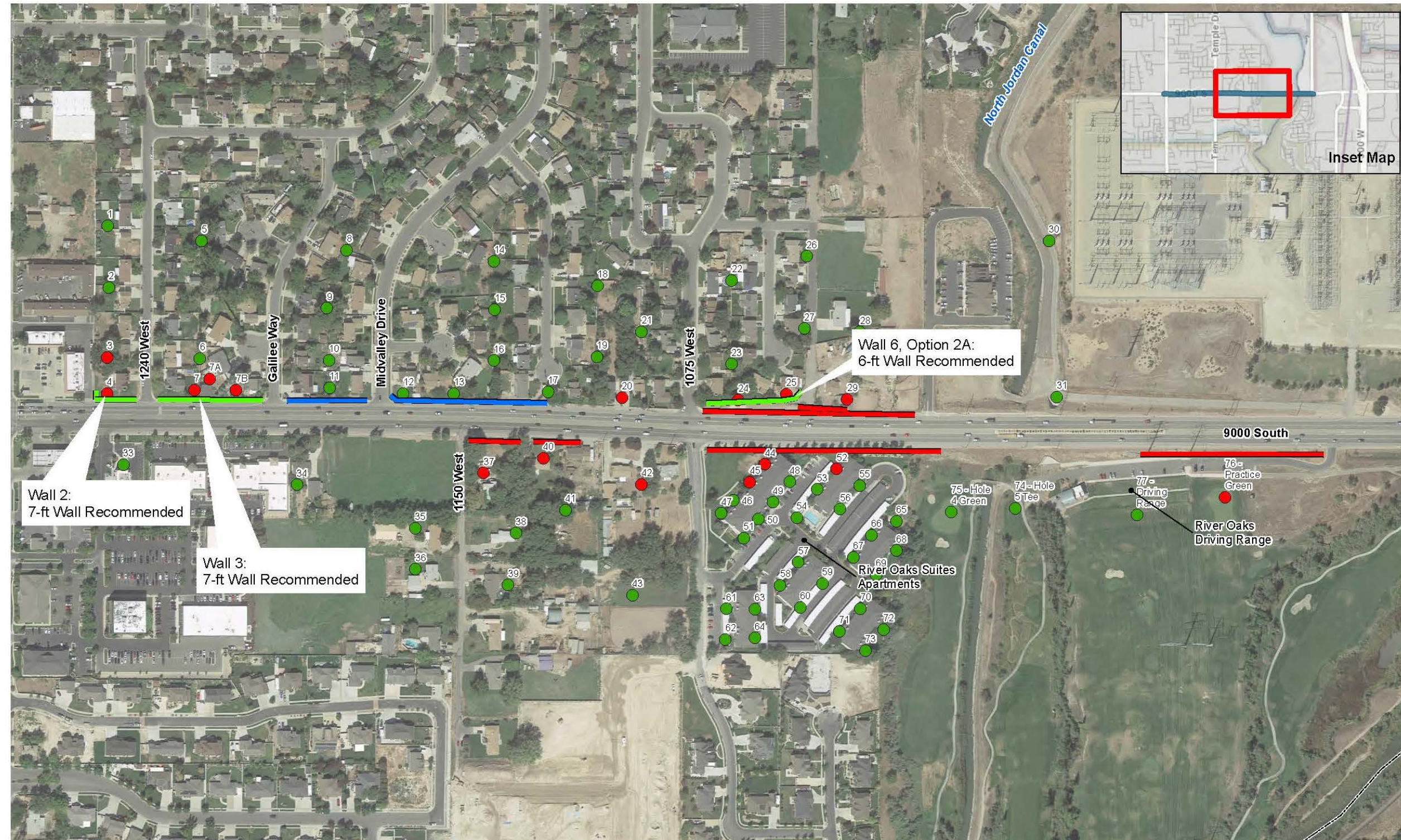
23 This wall is 7 feet high and about 300 feet long and would extend westward from the southwest corner of
24 1240 West to Galilee Way.

25 **3.6.5.3. Wall 6, Option 2A – Between 1075 West and 1030 West, North Side of** 26 **9000 South**

27 This wall is 6 feet high and about 327 feet long and would extend eastward from 1075 West at the top of
28 the existing embankment slope.

29 The final decision to construct the noise walls will not be made until the design of the build alternative is
30 completed.

Figure 3-8. Noise Walls Recommended for the Build Alternative



9000 South ENVIRONMENTAL STUDY
 Redwood Road to I-15

Legend

- Feasible and Reasonable
- Remain in Place
- Impacted
- City Boundaries
- Not Impacted

1 inch = 250 feet
 0 Feet 250

9000 SOUTH ENVIRONMENTAL STUDY
NOISE WALL RECOMMENDATIONS
 Figure 1 of 1

DRAFT

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3.7. Water Resources

Section 3.7 describes the water resources and groundwater in the water resources evaluation area and the expected impacts from the build alternative. Construction impacts are addressed in Section 3.12, Construction Impacts and Mitigation.

Water Resources Evaluation Area. The water resources evaluation area is 83 acres and includes parts of West Jordan, Sandy, and Salt Lake County within a generally 100-foot buffer on each side of the existing edge of pavement of 9000 South between Redwood Road on the west and Sandy Parkway on the east. The buffer is wider than 100 feet in four locations. In two areas identified as potential detention basin sites, the evaluation area extends 250 feet from the edge of pavement. In a third area also identified as a potential detention basin site, the evaluation area extends 340 feet from the edge of pavement. Finally, in the area surrounding the Salt Lake County Flood Control structure, the evaluation area extends 150 feet from the edge of pavement.

3.7.1. Regulatory Environment and Compliance

Water quality is regulated by the Utah Divisions of Water Quality and Drinking Water within the Utah Department of Environmental Quality (UDEQ). These agencies act pursuant to delegated authority to enforce the federal Clean Water Act and the Safe Drinking Water Act.

Under the Clean Water Act, every State must establish and maintain water quality standards designed to protect, restore, and preserve the quality of waters in the state. UDEQ oversees these water quality standards in Utah. Utah's water quality regulations consist of three types of standards: an antidegradation policy, beneficial-use designations and their associated water quality criteria (Utah Administrative Code [UAC] Rule [R] 317-2-6), and narrative standards that apply to all waters within the state.

Utah's antidegradation policy states that waters whose existing quality is better than the established standards for the designated uses should be maintained at high quality (UAC R317-2-3.1). UDEQ also designates all surface water bodies in the state according to how the water is used, and each designation has associated standards. When a lake, river, or stream fails to meet the water quality standards for its beneficial uses, the State places the water body on a list of "impaired" waters, also known as a *303(d) list* after Section 303(d) of the Clean Water Act. The State then prepares an analysis called a Total Maximum Daily Load (TMDL), which evaluates water quality standards, designated uses, and numeric criteria, and assigns maximum pollutant load allocations to dischargers. TMDLs help to restore water quality and beneficial uses for the impaired water bodies.

Surface Water Discharges. The State of Utah administers the Utah Pollutant Discharge Elimination System (UPDES) under the Utah Water Quality Act (UAC R317-8). UDOT has been issued a statewide municipal separate storm sewer system (MS4) permit (UTS 000003) that allows UDOT to discharge stormwater runoff from transportation facilities to waters of the state. UDOT must address postconstruction stormwater runoff for the build alternative in accordance with its permit requirements. For the proposed improvements to 9000 South, UDOT must evaluate permanent stormwater best management practices (BMPs) to minimize impacts to water quality and receiving waters. UDOT's *Stormwater Quality Design Manual* (UDOT 2018b) requires UDOT to use a BMP selection process to address pollutants of concern for receiving water bodies.

Groundwater Discharges. The Utah Water Quality Board classifies aquifers according to their quality and use (such as pristine, ecologically important, sole source, irreplaceable, drinking water quality, limited use, and saline). The Utah Division of Water Quality publishes numeric standards for each class

1 of aquifer (UAC R317-6-3). In addition, the Division requires groundwater permits for activities that
2 discharge pollutants into groundwater.

3 **Drinking Water Source Protection Plans and Zones.** Owners of public water systems are
4 responsible for protecting sources of drinking water and for submitting a Drinking Water Source
5 Protection Plan to the Utah Division of Drinking Water. Such plans must identify drinking water source
6 protection zones around each drinking water source (such as a lake, river, spring, or groundwater well),
7 identify existing and potential sources of contamination, and propose methods to control sources of
8 pollution within each zone.

- 9 • **Zone 1** is the area within a 100-foot radius of the wellhead.
- 10 • **Zone 2** is the area within a 250-day groundwater time of travel to the wellhead.
- 11 • **Zone 3** is the area within a 3-year groundwater time of travel to the wellhead.
- 12 • **Zone 4** is the area within a 15-year groundwater time of travel to the wellhead.

13 Land managers, usually Cities, are responsible for protecting drinking water sources from contamination
14 in coordination with the public water system well owner. Municipalities, through zoning and land use,
15 control whether roads are an allowable form of development within each of the various drinking water
16 protection zones. In general, if transportation development within source protection Zone 1 is determined
17 by the municipality to be a negative impact to the well, methods to reduce and/or eliminate the negative
18 impact may be proposed.

19 **3.7.2. Methodology**

20 Roadway improvements can add additional impervious area by widening the roadway pavement for
21 additional travel lanes, turn lanes, and shoulders. The increased amount of stormwater runoff from the
22 additional impervious area can increase the amount of stormwater runoff and pollutants discharged to
23 receiving waters. The water quality impact analysis for the build alternative is based on UDOT's
24 *Stormwater Quality Design Manual* (UDOT 2018b), which provides guidance on selecting and designing
25 long-term stormwater quality BMPs including low-impact development BMPs.

26 **Low-impact Development BMPs.** The build alternative would disturb about 13.4 acres of ground
27 surface. In accordance with UDOT's MS4 permit, all projects that disturb more than 1 acre of ground
28 surface must include measures to reduce the volume of stormwater using low-impact development BMPs
29 where reasonable and feasible. These BMPs include measures that filter, infiltrate, store, or detain
30 stormwater and are located as close to the source as possible.

3.7.3. Current Conditions

3.7.3.1. Surface Waters

The Jordan River in the water resources evaluation area has designated beneficial uses 3A and 4. As shown in Table 3-6, the river is included on the 2016 Utah 303(d) list as being impaired for OE (observed species versus expected species) bioassessment, selenium, temperature, and total dissolved solids. Therefore, TMDLs must be developed by the Utah Division of Water Quality to determine the sources of pollution, define the maximum amount of each pollutant that the river can receive while maintaining its beneficial uses, and allocate the amount of pollutant discharges to each source.

Table 3-6. Beneficial Uses and Impairments for the Jordan River in the Water Resources Evaluation Area

Beneficial Use	Definition	Impaired Parameter(s)
3A	Protected for cold-water species of game fish and other cold-water aquatic life, including the necessary aquatic organisms in their food chain.	OE bioassessment ^a , selenium, and temperature
4	Protected for agriculture uses including irrigation of crops and stock watering.	Total dissolved solids

^a An OE (observed species versus expected species) bioassessment is a comparison of the observed species versus the expected species at a given site based on a reference site. This assessment can be used to evaluate the overall health of a water body.

Storm Drain Outlet Structure

Near the northeast corner of the Jordan River bridge, a 72-inch-diameter storm drain pipe outlet discharges into the river. The pipe outlet includes a reinforced concrete energy-dissipation structure. The purpose of the energy-dissipation structure is to reduce the velocity of stormwater flow at the outlet, thereby reducing erosion along the bed and banks of the river.

3.7.3.2. Groundwater

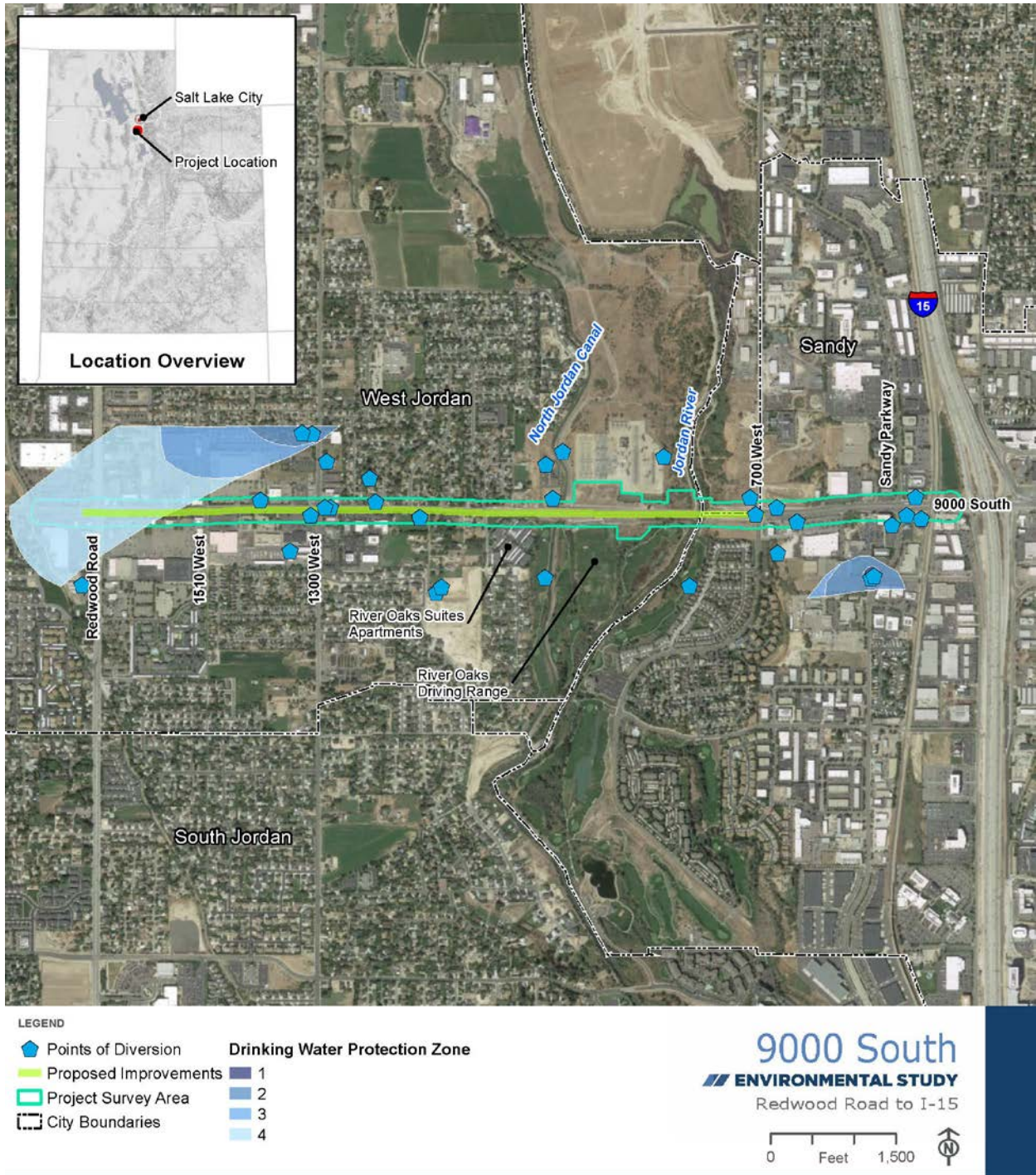
Groundwater Quality and Classification

According to the Utah Geological Survey (2009, 82), part of a Class IA (Pristine) groundwater zone within the limits of the build alternative extending from the easterly project limits, westerly to about 850 West. From this point to the western project limits, the groundwater zone is Class II (Drinking Water Quality). Class IA groundwater is protected to the maximum extent feasible from degradation from facilities that discharge or would probably discharge to groundwater (UAC R317-6-4). Class II groundwater is protected for use as drinking water or similar beneficial use with conventional treatment prior to use. Class II groundwater is also referred to as drinking water-quality groundwater (UAC R317-6-3).

Groundwater Wells and Domestic Water Sources

The Utah Division of Water Rights classifies groundwater wells according to their use: domestic (drinking water), irrigation, stock watering, municipal, or recreational. A Zone 4 drinking water source protection zone for a well owned by Jordan Valley Water Conservation District is currently located within the right-of-way of the build alternative. The Zone 4 source protection zone is located between the western limits of the build alternative’s right-of-way to about 1550 West. Also, existing wells and points of diversion are adjacent to 9000 South (Figure 3-9).

1 **Figure 3-9. Points of Diversion and Drinking Water Protection Zones in the Water**
 2 **Resources Evaluation Area**



3

3.7.4. Expected Impacts

3.7.4.1. Surface Water Impacts

The build alternative would add about 13.4 acres of new impervious surface in the water resources evaluation area. Therefore, UDOT investigated including long-term stormwater volume reduction measures and treatment measures, including low-impact development BMPs, in the build alternative. The additional impervious surface could reduce water quality by increasing the volume and velocity of stormwater runoff and increasing the amount of pollutants from stormwater runoff.

Common pollutants found in highway stormwater runoff include metals, nutrients, and suspended and dissolved solids.

- **Metals.** Sources of metals in highway runoff include the wearing of brake pads (dissolved copper and cadmium), galvanized materials (zinc), corrosion of metals in vehicle components, and paints.
- **Nutrients.** Nutrients such as phosphorus and nitrogen can overstimulate the growth of aquatic plants to the detriment of other aquatic life and the beneficial uses of the receiving waters. Sources of phosphorus in highway runoff include upstream agricultural and residential land uses.
- **Solids.** Solids can be present in stormwater as total dissolved solids (TDS) or total suspended solids (TSS). Sources of TSS from highways include erosion, sediment-laden runoff from construction sites, and particulate matter from abrasion of the road surface.

Storm Drain Outlet Structure

The build alternative would impact the existing storm drain pipe and energy-dissipation structure. To accommodate the build alternative, the energy-dissipation structure would be reconstructed about 60 feet north of its current location, and the existing drainage trunk line would be reconstructed and realigned to connect to the new outlet structure.

3.7.4.2. Groundwater Impacts

Impacts to Existing Wells. Stormwater runoff would be conveyed to either an existing drainage system at 1300 West or a new detention basin near the Jordan River, similar to current conditions. The additional widening required on 9000 South as part of the build alternative would not adversely affect the existing Zone 4 drinking water source protection zone. Transportation is a compatible land use in this zone.

Several existing wells are located on adjacent properties north of 9000 South at about 1000 West and 1220 West. UDOT will coordinate with the property owners and water right holders during construction to minimize construction impacts.

Impacts to Points of Diversion. UDOT assessed the impacts to points of diversion by determining the locations of known points of diversion relative to the build alternative's right-of-way.

- **Direct Impacts.** For all diversions, a direct impact would occur if an alternative's pavement surface or embankment fill material would result in the owner abandoning or relocating the point of diversion. The build alternative would not directly affect existing points of diversion.
- **Indirect Impacts.** For all diversions, a potential indirect impact would occur if an alternative's construction easement would go over the diversion, if the point of diversion was within the UDOT right-of-way, or if no access would be provided to the point of diversion. Construction easements would not affect points of diversion, and current access would be maintained.

3.7.5. Mitigation

3.7.5.1. Detention Basins

The long-term BMP that is most feasible for this project is stormwater detention. Stormwater detention facilities store and slowly release stormwater runoff, and they improve water quality by allowing sediment and other pollutants to settle out of the water.

Detention basins, which are considered to be low-impact development BMPs, are vegetated to allow stormwater to be treated through filtration. Filtration occurs as stormwater flows through vegetation, thereby reducing the water velocity, allowing sediment to settle out of the water, and reducing the amount of metals discharged to receiving waters. Table 3-7 shows the expected efficiency of a typical detention basin at removing pollutants in highway runoff. UDOT is proposing to construct two new detention basins, one near 1300 West and one near the Jordan River.

Table 3-7. Average Efficiency of Detention Basins at Removing Pollutants in Highway Runoff

Pollutant		Average Removal Efficiency ^a
Pathogens	<i>E. coli</i>	High
	Fecal coliform	Medium
Metals	Total copper (Cu)	Medium
	Total lead (Pb)	High
	Total zinc (Zn)	Medium
Nutrients	Nitrate (NO ₃)	Low
	Total Kjeldahl nitrogen	Low
	Total nitrogen (N)	Low
	Dissolved phosphorus (P)	Low
	Total phosphorus (P)	Medium
Sediment	Total suspended solids (TSS)	High

^a High = 67–100%; medium = 33–66%; low = 0–32% (NCHRP 2014, Table 9-12).

1 **1300 West Detention Basin**

2 The detention basin near 1300 West would be located in an existing parking lot on the south side of
3 9000 South. This basin would collect stormwater from 9000 South between the west side of the water
4 resources evaluation area near Redwood Road and 1300 West.

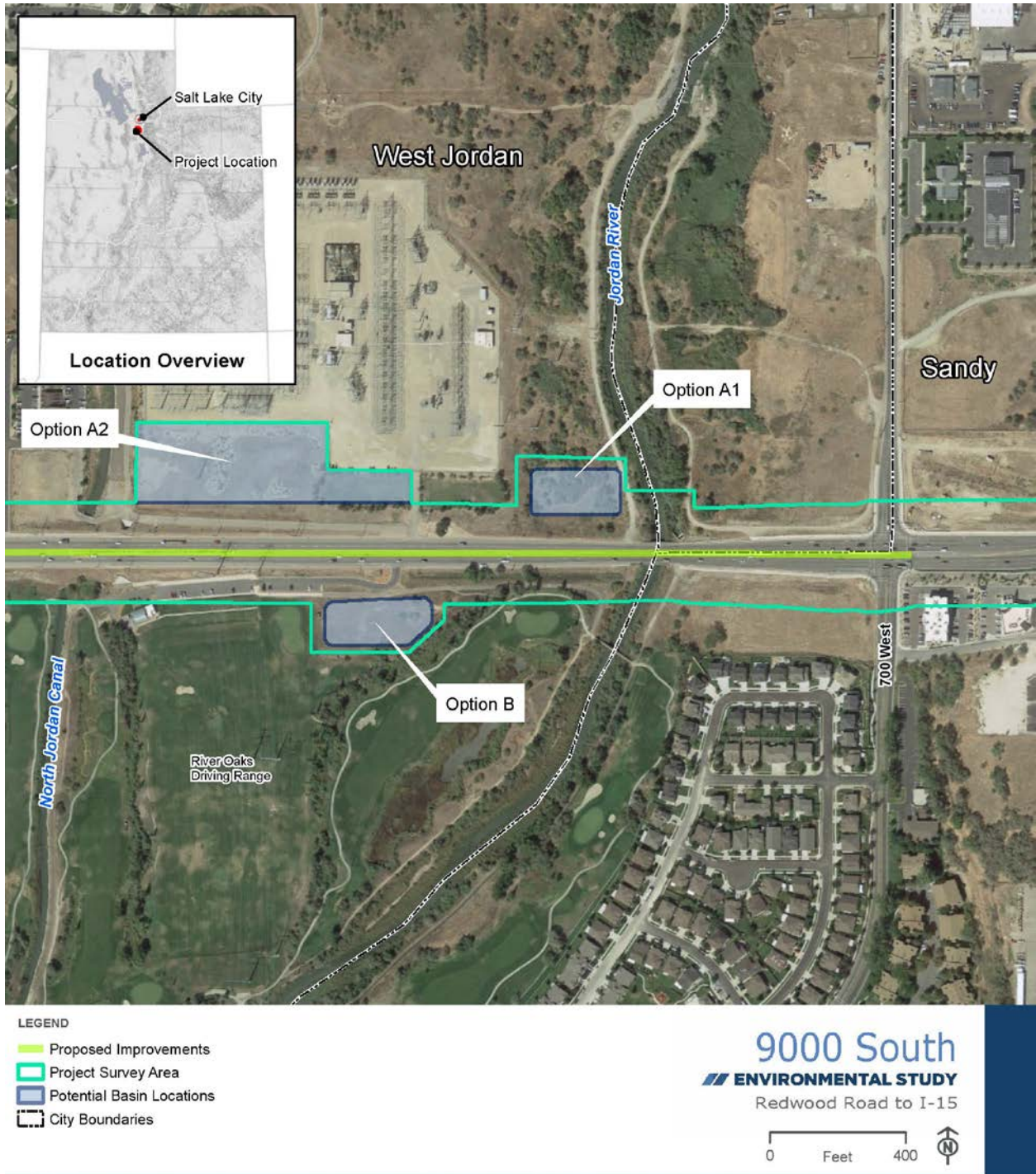
5 Constructing this detention basin would convert about 0.2 acre of developed land to roadway use (for
6 detaining stormwater runoff). This basin would be sized to control the 100-year storm event and would be
7 designed to treat stormwater in accordance with UDOT's MS4 permit. Some stormwater in this detention
8 basin could infiltrate into the groundwater, but, because of the variable water table depth at this location,
9 infiltration cannot be assumed.

10 **Jordan River Detention Basin**

11 There are three optional locations for the new detention basin near the Jordan River (Figure 3-10). Basin
12 option A1 would be located on the north side of 9000 South at about 792 West 9000 South. Basin
13 option A2 would be located on the north side of 9000 South at about 900 West 9000 South, just south of
14 the Rocky Mountain Power substation and adjacent to 9000 South. Basin option B would be located on
15 the south side of 9000 South at about 859 West 9000 South on the River Oaks Golf Course property.

16 Constructing any of the three Jordan River detention basins would convert just under 1 acre of
17 undeveloped land to roadway use (for detaining stormwater runoff) at any of the proposed locations. In
18 addition, any of the three Jordan River detention basin options would be sized to control the 100-year
19 storm event and would be designed to treat stormwater in accordance with UDOT's MS4 permit. Some
20 stormwater in this detention basin could infiltrate into the groundwater, but, because of the variable water
21 table depth at these locations, infiltration cannot be assumed.

1 **Figure 3-10. Options for a Potential Detention Basin**



2

3.8. Floodplains

Section 3.8 describes the floodplains in the floodplains evaluation area and evaluates how floodplains could be affected by the build alternative. Floodplains are defined as normally dry areas that are occasionally inundated by snowmelt or stormwater runoff or high lake water. Development in floodplains can reduce their flood-carrying capacity and extend the flooding hazard beyond the developed areas.

Floodplains Evaluation Area. The floodplains evaluation area is 83 acres and includes parts of West Jordan, Sandy, and Salt Lake County within a generally 100-foot buffer on each side of the existing edge of pavement of 9000 South between Redwood Road on the west and Sandy Parkway on the east. The buffer is wider than 100 feet in four locations. In two areas identified as potential detention basin sites, the evaluation area extends 250 feet from the edge of pavement. In a third area also identified as a potential detention basin site, the evaluation area extends 340 feet from the edge of pavement. Finally, in the area surrounding the Salt Lake County Flood Control structure, the evaluation area extends 150 feet from the edge of pavement.

3.8.1. Regulatory Environment and Compliance

In 1968, Congress established the National Flood Insurance Program, which is administered by the Federal Emergency Management Agency (FEMA). Under this program, the federal government makes flood insurance available in those communities that practice sound floodplain management. FEMA establishes regulatory floodplain boundaries and requirements for identifying and mapping special flood hazard areas (44 CFR Parts 60 and 65).

Floods are usually described in terms of their statistical frequency. A 100-year floodplain is the area that would be flooded by a water course, such as the Jordan River, during a 100-year flood. The 100-year flood (base flood) is a level of flood water that has a 1% chance of occurring in any given year. The boundary of the 100-year flood is referred to as the regulatory floodplain, which identifies areas where development is restricted in accordance with FEMA requirements.

3.8.2. Methodology

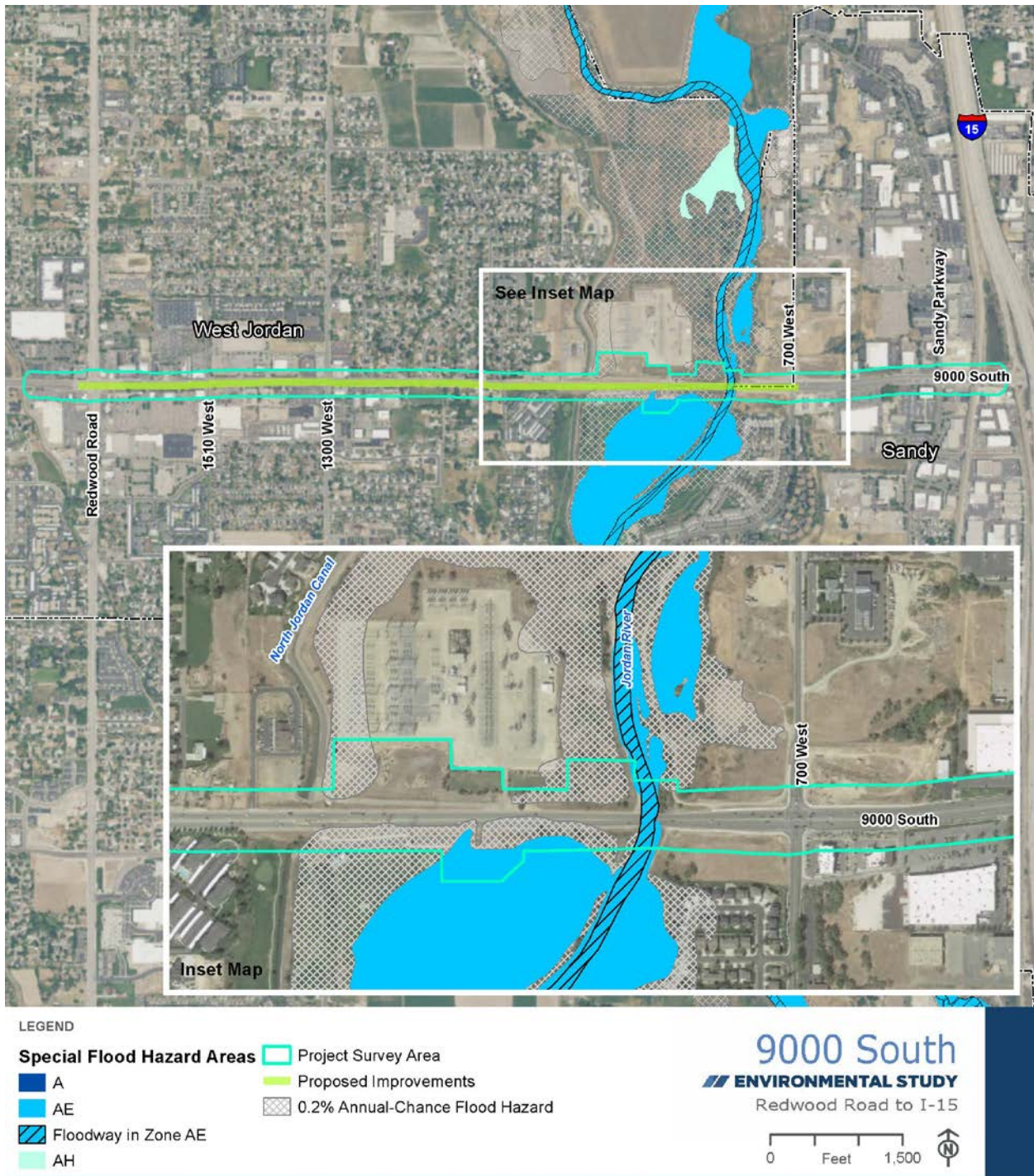
UDOT determined the floodplain impacts from the build alternative by comparing FEMA floodplain mapping data to the alternative's proposed footprint (that is, the extent of all proposed roadway improvements). The floodplain analysis focuses on areas that would be affected by a 100-year flood. The build alternative could affect the Jordan River floodplain by constructing a new 9000 South bridge over the Jordan River. To satisfy FEMA requirements, new crossings of water bodies in special flood hazard areas must be designed to pass the 100-year flood with zero rise in the floodway and less than a 1-foot rise in the floodplain.

3.8.3. Current Conditions

According to the effective FEMA map, 9000 South crosses the Jordan River's 100-year Zone AE floodplain. This designation means that the floodplain boundary was determined through detailed hydrologic and hydraulic analyses. This floodplain is located in West Jordan and Sandy, and the Jordan River is the boundary between the two cities. Both Cities participate in FEMA's National Flood Insurance Program, which requires communities to enact ordinances to protect natural floodplains, prevent damage to property, and protect the safety of the public.

The Jordan River floodplain boundaries are shown in Figure 3-11.

1 **Figure 3-11. Jordan River Floodplain Boundaries in the Floodplains Evaluation Area**



2

3 **3.8.4. Expected Impacts**

4 The build alternative includes a new bridge that would span the Jordan River. The existing bridge has a
 5 center pier in the river. The new bridge would be about 14 feet longer than the existing bridge and would
 6 span the river with no center pier. UDOT conducted hydraulic modeling and determined that the new

1 bridge would not increase the upstream water surface elevation during a 100-year flood or change the
2 regulatory floodplain or floodway boundaries.

3 **3.8.5. Mitigation**

4 During preparation of the SES, UDOT met with the local floodplain administrators for West Jordan and
5 Sandy Cities. Based on the preliminary design of the proposed bridge at 9000 South over the Jordan
6 River, the city administrators anticipate that the 9000 South project will be eligible for a No-rise/
7 No-Impact Certification. In addition, UDOT will obtain the necessary floodplain development permits
8 from municipalities for the new bridge and for any other location where an element of the build
9 alternative would encroach on a FEMA special flood hazard.

10 **3.9. Biological Resources**

11 Section 3.9 describes the current conditions of and expected impacts to the biological resources in the
12 biological resources evaluation area. For this SES, biological resources include federally threatened,
13 endangered, or candidate species; bald and golden eagles; migratory birds, and State of Utah conservation
14 agreement species. Additionally, Section 3.9 evaluates wetlands and other waters of the United States.

15 **Biological Resources Evaluation Area.** The biological resources evaluation area is 83 acres and
16 includes parts of West Jordan, Sandy, and Salt Lake County within a generally 100-foot buffer on each
17 side of the existing edge of pavement of 9000 South between Redwood Road on the west and Sandy
18 Parkway on the east. The buffer is wider than 100 feet in four locations. In two areas identified as
19 potential detention basin sites, the evaluation area extends 250 feet from the edge of pavement. In a third
20 area also identified as a potential detention basin site, the evaluation area extends 340 feet from the edge
21 of pavement. Finally, in the area surrounding the Salt Lake County Flood Control structure, the
22 evaluation area extends 150 feet from the edge of pavement.

23 Biological resources in the evaluation area could be affected directly or indirectly by the build alternative.
24 Indirect effects, such as those from noise and water pollutants, can sometimes affect biological resources
25 at greater distances. However, in consideration of existing development and BMPs that would be
26 implemented, UDOT does not expect any potential indirect effects on biological resources from the build
27 alternative to extend beyond the evaluation area.

28 **3.9.1. Regulatory Environment and Compliance**

29 **3.9.1.1. Federally Threatened, Endangered, or Candidate Species**

30 The Endangered Species Act of 1973 (ESA) serves as the vehicle for protecting federally listed
31 threatened, endangered, and candidate species and designated critical habitat for such species. The ESA is
32 administered by the U.S. Fish and Wildlife Service (USFWS). Section 10 of the ESA requires that state
33 and local governments, tribes, and private landowners consult with USFWS regarding the development of
34 private or public property that is inhabited by species listed under the ESA.

35 Section 7 of the ESA requires federal agencies to consult with USFWS before taking any action that
36 could affect a federally listed threatened or endangered species or designated critical habitat for an
37 endangered species. In addition, federal agencies must ensure that their actions are not likely to jeopardize
38 the continued existence of any listed species or to destroy or adversely modify any designated critical

1 habitat. Although this is a UDOT-led SES, Section 7 of the ESA would apply to any permit that would be
2 requested under Clean Water Act Section 404.

3 **3.9.1.2. Wildlife**

4 UDOT assessed the build alternative for impacts that that might affect species protected by the Migratory
5 Bird Treaty Act of 1918, species protected by the Bald and Golden Eagle Protection Act of 1940, and
6 conservation species identified as those receiving special management under a State of Utah conservation
7 agreement.

8 **3.9.1.3. Waters of the United States**

9 As described in 33 CFR Section 328.4, the objective of the Clean Water Act is to maintain and restore the
10 chemical, physical, and biological integrity of the waters of the United States. Any person, firm, or
11 agency planning to alter or work in waters of the United States, including the discharge of dredged or fill
12 material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under
13 Section 404 of the Clean Water Act and, if applicable, Section 10 of the Rivers and Harbors Act of 1899
14 (33 USC Section 403) for work within navigable waters of the United States.

15 Under current regulatory guidance, including guidance issued December 2, 2008, on implementing the
16 U.S. Supreme Court opinions resulting from the *Rapanos v. United States* and *Carabell v. United States*
17 cases (June 19, 2006), USACE asserts jurisdiction over traditional navigable waters, wetlands that are
18 adjacent to traditional navigable waters (TNW), relatively permanent non-navigable tributaries of TNW,
19 and wetlands that directly abut relatively permanent non-navigable tributaries of TNW. A fact-specific
20 analysis is used to determine whether wetlands that are adjacent to but not abutting non-navigable
21 tributaries have a significant nexus with TNW. Wetlands adjacent to non-navigable tributaries that lack a
22 significant nexus and any wetlands determined to be isolated would not be subject to Clean Water Act
23 Section 404 jurisdiction if they do not have an identifiable connection to interstate or foreign commerce
24 and they do not include interstate waters.

25 Additionally, as stated in regulatory preambles (53 Federal Register 20765 [June 6, 1988] and 51 Federal
26 Register 41217 [November 13, 1986]), USACE does not normally consider certain constructed features to
27 be waters of the United States if they are excavated wholly in uplands and drain only uplands. These
28 constructed features include:

- 29 • Non-tidal drainage and irrigation ditches excavated on dry land
- 30 • Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water
31 and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or
32 rice growing
- 33 • Artificial reflecting or swimming pools or other small ornamental bodies of water created by
34 excavating and/or diking dry land
- 35 • Water-filled depressions created in dry land incidental to construction activity and pits excavated
36 in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or
37 excavation operation is abandoned and the resulting body of water meets the definition of a
38 waters of the United States

39 Section 73-3-29 of the Utah Code requires any person, governmental agency, or other organization
40 wishing to alter the bed or banks of a natural stream to obtain written authorization from the State

1 Engineer before beginning work. Natural streams are considered any natural waterway that receives
2 enough water to develop an ecosystem that differs from the surrounding upland environment. Although it
3 cannot be applied to permit wetland impacts, USACE Programmatic General Permit 10 (PGP 10) allows
4 an applicant to obtain both state approval and authorization under Clean Water Act Section 404 through a
5 single application process.

6 Section 401 of the Clean Water Act requires state certification for any permit or license issued by a
7 federal agency for an activity that could result in a discharge into waters of the United States. This
8 requirement allows each State to have input into federally approved projects that could affect its waters
9 (rivers, streams, lakes, and wetlands) and to ensure that the projects will comply with state water quality
10 standards and any other water quality requirements of state law. The State of Utah has conditionally
11 certified all USACE nationwide permits and PGP 10, so individual certification is typically not required
12 for authorizations under USACE nationwide permits or PGP 10.

13 **3.9.2. Methodology**

14 UDOT used several methods to collect data regarding the elements of the ecosystem that could be
15 affected by the build alternative. These methods included conducting database and literature reviews,
16 performing a field survey, and interpreting aerial photographs and maps. UDOT consulted the
17 Environmental Conservation Online System (USFWS 2018), the Utah Conservation Data Center (Utah
18 Division of Wildlife Resources 2018), and the Utah Wildlife Action Plan (Utah Wildlife Action Plan
19 Joint Team 2015) for lists of federally threatened, endangered, or candidate species as well as
20 conservation species that might occur in Salt Lake County, Utah. NatureServe (www.natureserve.org)
21 was used to research the habitat characteristics for each species identified.

22 UDOT identified, mapped, and delineated wetlands and other waters in the evaluation area using the
23 following manuals and resources:

- 24 • *Corps of Engineers Wetlands Delineation Manual* (USACE 1987)
- 25 • *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*
26 *(Version 2.0)* (USACE 2008)
- 27 • *A Field Guide for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West*
28 *Region of the Western United States: A Delineation Manual* (Lichvar and McColley 2008)
- 29 • *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid*
30 *West Region of the Western United States* (Curtis and Lichvar 2010)

31 Fieldwork for the delineation of wetlands and aquatic resources was conducted on October 31, 2018. In
32 accordance with USACE delineation procedures, all wetlands and aquatic resources in the evaluation area
33 were delineated. Whether certain aquatic resources would be regulated as jurisdictional waters of the
34 United States is subject to determination by USACE. Aquatic resource boundaries in the evaluation area
35 were mapped through a combination of global positioning system (GPS)-based field mapping (using
36 ArcGIS Collector software and an iPad) and desktop digitization referencing high-resolution aerial
37 images obtained for the 9000 South project. To produce aquatic resources delineation maps for the
38 evaluation area, UDOT exported these data into GIS software (ArcMap). These data were also used to
39 calculate the area, lengths, and widths of aquatic resources in the evaluation area. Appendix E, Aquatic
40 Resources Delineation Report, includes the full *Aquatic Resources Delineation Report* for the 9000 South
41 project.

3.9.3. Current Conditions

The vegetation communities in the biological resources evaluation area consist mainly of urban areas. The general vegetation communities in the remaining undeveloped areas are mixed grassland, riparian, and emergent marsh. The evaluation area also contains open-water segments of the Jordan River and the North Jordan Canal.

Mixed Grassland. This community encompasses undeveloped uplands in the evaluation area. Mixed grassland areas have been subject to various past disturbances and land uses, allowing several weedy species to become established. Observed species include cereal rye (*Secale cereale*), cheatgrass (*Bromus tectorum*), annual ragweed (*Ambrosia artemisiifolia*), intermediate wheatgrass (*Thinopyrum intermedium*), whitetop (*Cardaria draba*), crested wheatgrass (*Agropyron cristatum*), clasping pepperweed (*Lepidium perfoliatum*), field bindweed (*Convolvulus arvensis*), and curlycup gumweed (*Grindelia squarrosa*).

Riparian. Riparian vegetation is are found along the banks of the Jordan River in the evaluation area. Dominant woody species include Russian olive (*Elaeagnus angustifolia*), tamarisk (*Tamarix ramosissima*), common reed (*Phragmites australis*), and upland species as found in mixed grassland.

Emergent Marsh. The dominant species in emergent marshes in the evaluation area consist of common reed and reed canarygrass (*Phalaris arundinacea*).

Table 3-8 lists the federally threatened, endangered, or candidate species and State of Utah conservation agreement species that might occur in Salt Lake County.

Table 3-8. Federal Threatened, Endangered, or Candidate Species and State of Utah Conservation Agreement Species That Potentially Occur in Salt Lake County, Utah

Common Name	Scientific Name	Federally Listed in Environmental Conservation Online System?	Potentially Suitable Habitat in Evaluation Area?
Amphibians			
Columbia spotted frog	<i>Rana luteiventris</i>	No	No
Birds			
Ferruginous hawk	<i>Buteo regalis</i>	No	Yes
Western yellow-billed cuckoo	<i>Coccyzus americanus</i>	Yes – threatened	No
Fish			
Bonneville cutthroat trout	<i>Oncorhynchus clarkii utah</i>	No	No
June sucker	<i>Chasmistes liorus</i>	Yes – endangered	No
Least chub	<i>lotichthys phlegethontis</i>	No	No
Mammals			
Canada lynx	<i>Lynx canadensis</i>	Yes – threatened	No
Plants			
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	Yes – threatened	No

3.9.3.1. Federally Threatened, Endangered, or Candidate Species

UDOT's database research indicates that four federally threatened, endangered, or candidate species might occur in Salt Lake County: Western yellow-billed cuckoo (*Coccyzus americanus*), June sucker (*Chasmistes liorus*), Canada lynx (*Lynx canadensis*), and Ute ladies'-tresses (*Spiranthes diluvialis*). However, there is no critical habitat or suitable habitat for any of these four species in the biological resources evaluation area.

June sucker is endemic to Utah Lake, and Canada lynx only occurs in mixed forests. The distinct western population segment of the yellow-billed cuckoo is listed as threatened, and members of this distinct population segment are known to occur in northern Utah. Suitable habitat for this species consists of large areas of multistory, woody riparian habitat. There is no suitable habitat for yellow-billed cuckoo within or adjacent to the evaluation area because existing riparian areas lack the vertical structure and width required to support this species.

Ute ladies'-tresses is a threatened orchid that typically occurs along riparian edges, gravel bars, old oxbows, high-flow channels, and moist to wet meadows along perennial streams. It has also been found in subirrigated or spring-fed abandoned stream channels; on lake shores; along irrigation canals, berms, and levees; and in irrigated meadows, excavated gravel pits, roadside barrow pits, reservoirs, and other human-modified wetlands. The evaluation area does not contain any suitable habitat for Ute ladies'-tresses because it does not include any mesic habitats that could support this species.

What is mesic habitat?

Mesic habitat is a type of habitat with a moderate or well-balanced supply of moisture.

3.9.3.2. Wildlife

Migratory Birds and Eagles. The biological resources evaluation area is highly urbanized, and no existing bird nests were observed during the field survey. The evaluation area and its immediate vicinity are unlikely to support nesting for any raptor species, including eagles, but trees and shrubs in the evaluation area might provide nesting habitat for migratory birds.

State of Utah Conservation Agreement Species. The Utah Conservation Data Center provided a list of State of Utah conservation agreement species. This list includes four conservation agreement species for Salt Lake County: Bonneville cutthroat trout (*Oncorhynchus clarkii utah*), Columbia spotted frog (*Rana luteiventris*), least chub (*lotichtys phelgethontis*), and ferruginous hawk (*Buteo regalis*). However, there is no suitable habitat for any of these four species in the biological resources evaluation area. Bonneville cutthroat trout require cold-water aquatic habitat that the Jordan River and the North Jordan Canal do not provide. Least chub populations are not present in the Jordan River or canals. The evaluation area does not provide aquatic habitats that are suitable for Columbia spotted frogs to meet their life-cycle requirements. Ferruginous hawks prefer open grasslands and shrub-steppe communities and will sometimes nest and forage in cropland, but they are known to avoid highly developed areas or those with a high degree of human disturbance.

3.9.3.3. Waters of the United States

The biological resources evaluation area contains a total of 0.64 acre of aquatic resources. These resources consist of two palustrine (emergent marsh) wetlands that total 0.07 acre, two open-water segments of the Jordan River that total 263 linear feet (0.43 acre), two open-water segments of the North Jordan Canal that total 81 linear feet (0.06 acre), and one stormwater detention basin that is 621 linear feet

1 (0.08 acre). Appendix E, Aquatic Resources Delineation Report, provides the full *Aquatic Resources*
 2 *Delineation Report* for the 9000 South project.

3 Table 3-9 summarizes all delineated aquatic resources in the evaluation area. Figure 3-12 shows the
 4 locations of these resources.

Table 3-9. Aquatic Resources in the Biological Resources Evaluation Area

Aquatic Resource Name	Aquatic Resource Type	Cowardin Classification ^a	Waters Type Code ^b	Size (acres)	Length (feet)
Wetland WET-1	Emergent marsh	PEM	ISOLATE	0.06	—
Wetland WET-3	Emergent marsh	PEM	RPWWN	0.01	—
Jordan River segments P-1a and P-1b	Perennial waterway	R3	RPW	0.43	263
North Jordan Canal segments C-1a and C-1b	Perennial waterway	—	RPW	0.06	81
Stormwater detention basin S-1	Stormwater basin	—	IMPNDMT	0.08	621

^a Codes from *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin and others 1979): PEM (palustrine emergent wetland) and R3 (upper perennial, riverine).

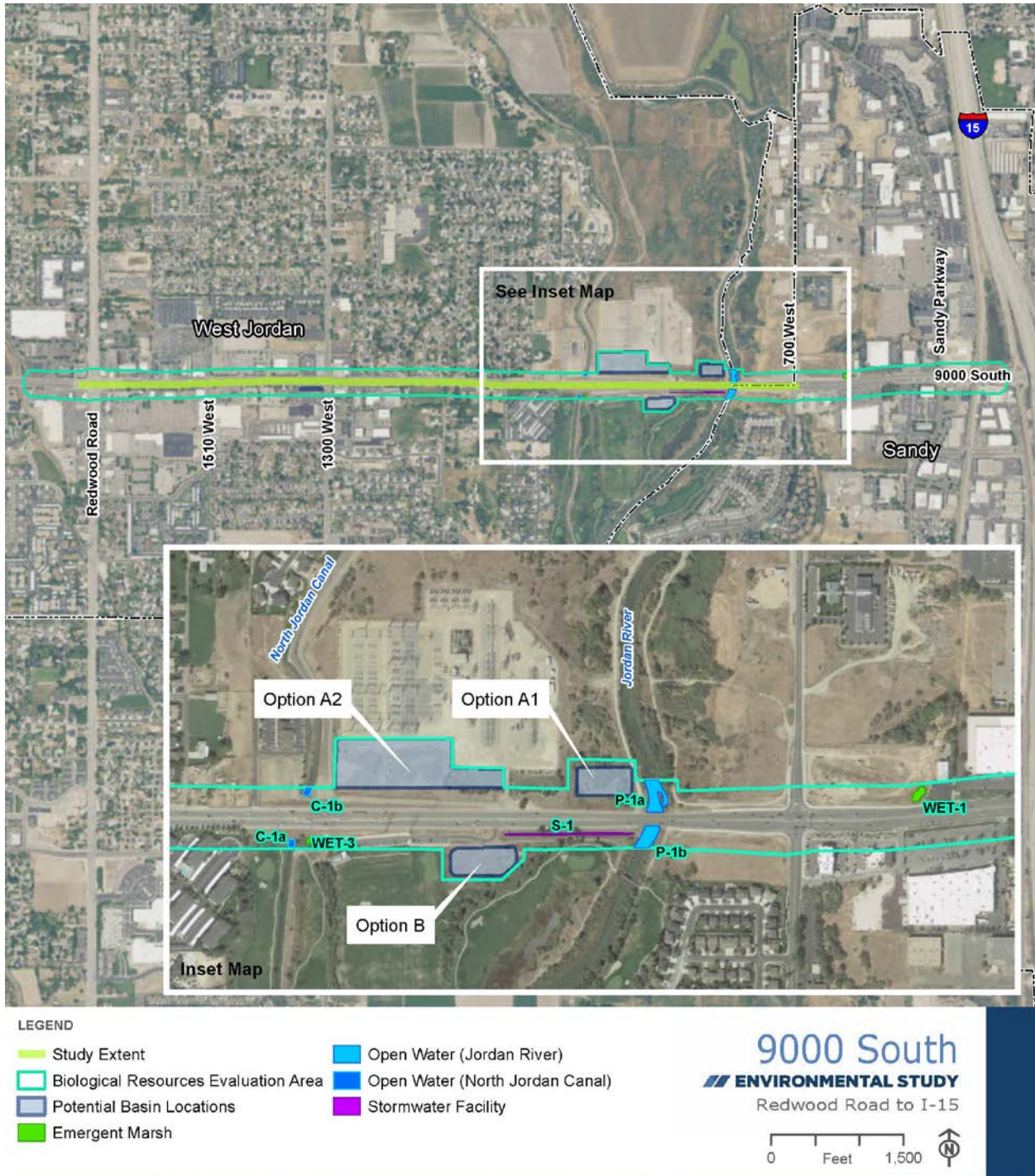
^b USACE Sacramento District, Aquatic Resources Spreadsheet “Waters Type” codes (USACE 2016): ISOLATE (nontidal, freshwater, inland, with no surface-water connection to traditional navigable waters), RPWWN (wetlands adjacent to but not directly abutting relatively permanent waters [RPWs] that flow directly or indirectly into traditional navigable waters [TNWs]), RPW (RPWs that flow directly or indirectly into TNWs), and IMPNDMT (impoundments).

5 Under current guidance, USACE would assert jurisdiction over the Jordan River and the North Jordan
 6 Canal because they are both relatively permanent tributaries that eventually drain to the Great Salt Lake, a
 7 traditional navigable water.

8 WET-1 and WET-3 are both potentially isolated wetlands that might not be subject to Clean Water Act
 9 Section 404 jurisdiction. WET-1 is not adjacent to any other aquatic resources and lacks a defined outlet.
 10 WET-3 is about 60 feet east of the North Jordan Canal; however, this small depressional wetland does not
 11 drain to the canal and is separated by upland.

12 S-1 is a stormwater detention basin constructed in upland, and its sole purpose is to provide stormwater
 13 functions. In accordance with guidance from regulatory preambles, USACE does not typically regulate
 14 stormwater facilities constructed in uplands.

1 **Figure 3-12. Aquatic Resources in the Biological Resources Evaluation Area**



2

1 **3.9.4. Expected Impacts**

2 **3.9.4.1. Federally Threatened, Endangered, or Candidate Species**

3 Since no federally threatened, endangered, or candidate species or habitat were identified in the biological
4 resources evaluation area, no impacts to threatened and endangered species would occur as a result of
5 constructing the build alternative. Consultation with USFWS under Section 10 of the ESA is not required
6 for this project. Section 7 of the ESA would apply to any permit that UDOT would request under Section
7 404 of the Clean Water Act. Under Section 7 of the ESA, the build alternative would have no effect on
8 threatened and endangered species and would not affect any critical habitat.

9 **3.9.4.2. Wildlife**

10 **Migratory Birds and Eagles.** Since the biological resources evaluation area does not include nesting
11 habitat for eagles and is unlikely to be used by foraging eagles, the build alternative would not affect
12 eagles. Migratory birds in the biological resources evaluation area are widespread species that are well-
13 adapted to urban to semi-urban environments. The impacts of the build alternative would include minor
14 impacts to individual migratory birds that nest or forage where vegetation would be removed. These
15 minor impacts would not have any measurable effects on migratory bird populations.

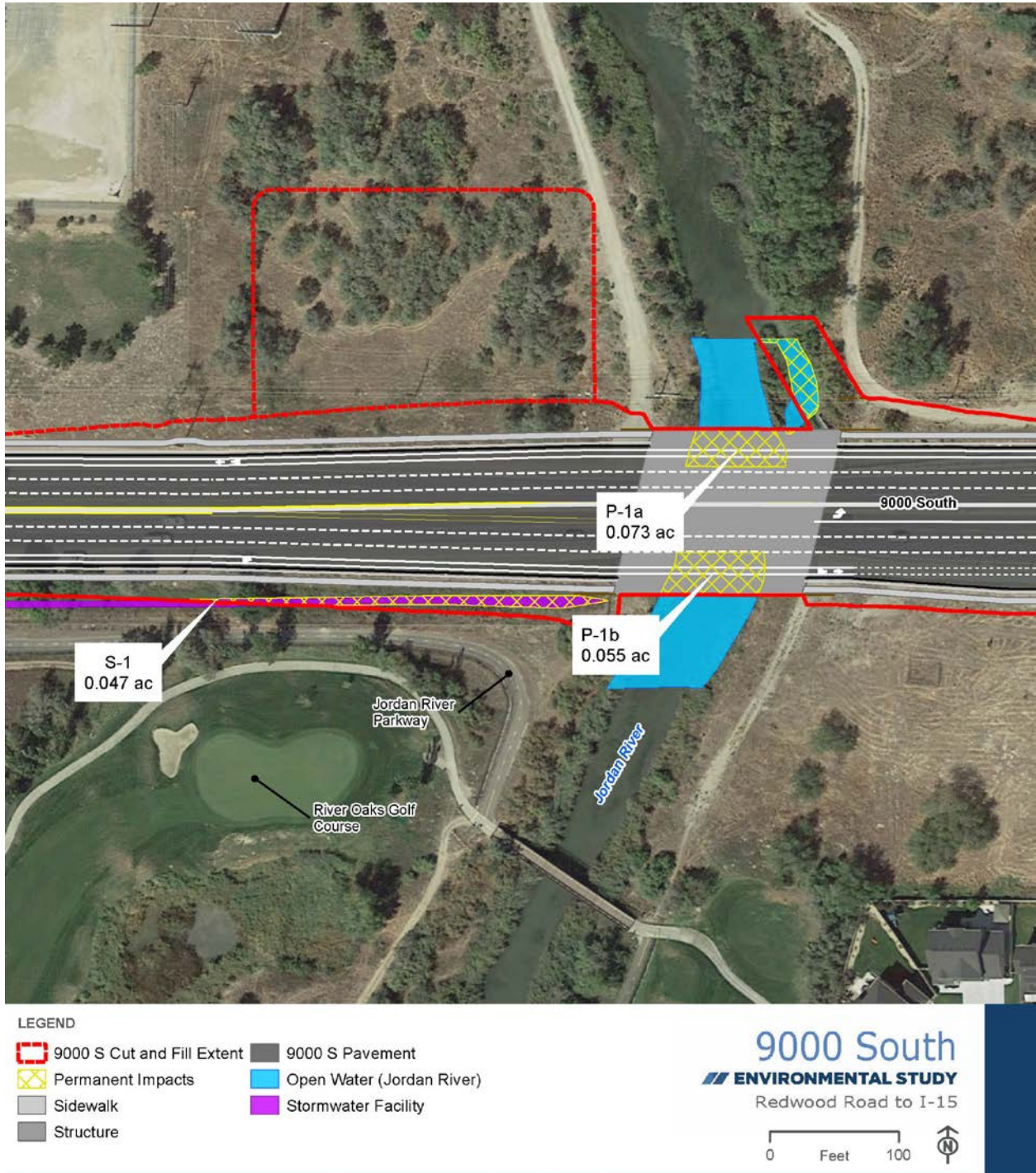
16 **State of Utah Conservation Agreement Species.** Since no State of Utah conservation agreement
17 species or habitat were identified in the biological resources evaluation area, no impacts to State of Utah
18 conservation agreement species would occur as a result of the build alternative.

19 **3.9.4.3. Waters of the United States**

20 Figure 3-13 shows the locations of impacts to aquatic resources from the build alternative. The build
21 alternative would alter 55 linear feet (about 0.13 acre) of the Jordan River (segments P-1a and P-1b) and
22 about 0.05 acre of a stormwater detention basin (S-1). The build alternative would not affect any
23 wetlands. USACE would assert jurisdiction over the Jordan River because it is a relatively permanent
24 tributary that drains to the Great Salt Lake, a TNW. The expected impacts to the Jordan River would
25 qualify as a minimal-impact activity under USACE PGP 10. Additionally, altering the Jordan River is
26 subject to Section 73-3-29 of the Utah Code.

27 USACE would not likely consider the existing stormwater detention basin to be a water of the United
28 States. As described in Section 3.7.5, Mitigation, the current stormwater treatment functions provided by
29 this detention basin for 9000 South would be replaced to accommodate the increased impervious surface
30 resulting from the build alternative.

1 **Figure 3-13. Expected Impacts to Aquatic Resources**



2

3.9.5. Mitigation

Through a joint application process, UDOT or its construction contractor will obtain a stream alteration permit from the Utah Division of Water Rights and will obtain USACE authorization under PGP 10. The stream alteration permit will include conditions to mitigate impacts to the Jordan River, including revegetation requirements. Additionally, UDOT or its construction contractor will obtain a sovereign lands permit from the Utah Division of Forestry, Fire and State Lands. To mitigate any potential impacts to migratory birds, any vegetation removal to occur between June 15 and August 15 would require a survey by a qualified biologist to ensure that any removal would not impact nesting birds.

3.10. Historic Properties and Paleontological Resources

Section 3.10 describes the known historic properties and paleontological resources in the historic properties and paleontological resources evaluation area and evaluates how these resources would be affected by the build alternative.

The term *historic property* is defined in the National Historic Preservation Act as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) (54 USC Section 300308). This includes artifacts, records, and remains that are related to such a district, site, building, structure, or object. To be considered historic, resources generally must be at least 50 years old.

Paleontological resources, often referred to as fossils, are the remains, traces, or imprints of ancient organisms preserved in or on the earth's crust that provide information about the history of life on earth.

Historic Properties and Paleontological Resources Evaluation Area (Area of Potential Effects, or APE). The APE for historic properties (including both historic structures and archaeological resources) comprises a linear corridor extending 50 feet from the edge of existing pavement along 9000 South between the west side of Redwood Road and the west side of I-15. In total, the APE contains just over 49 acres. For the historic structures survey, all properties intersected by the survey corridor were assessed for the presence of historic structures, regardless of whether the structures themselves were inside the APE boundary. The APE is described in greater detail in the technical reports for the historic property surveys (Certus Environmental Solutions 2019a, 2019b).

3.10.1. Regulatory Environment and Compliance

3.10.1.1. Historic Properties

In compliance with Section 9-8-404 of the Utah Code, each state agency must take into account the effects of an expenditure or undertaking on historic properties before funds are allocated for the undertaking's completion.

According to the Programmatic Agreement between UDOT and the Utah State Historic Preservation Officer (SHPO), which was signed into effect March 19, 2008, UDOT will be in compliance with Section 9-8-404 of the Utah Code for state projects by following the process in Section 106 of the National Historic Preservation Act for federal projects found in the Third Amended Programmatic Agreement between FHWA and UDOT.

What is the National Register of Historic Places (NRHP)?

The National Register of Historic Places, or NRHP, is the official federal list of districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

1 The National Historic Preservation Act requires that historic properties be identified within a proposed
2 APE and that the agency identify appropriate consulting parties and allow them an opportunity to
3 comment on the undertaking. The agency must also make eligibility and effects findings in consultation
4 with the SHPO.

5 Once historic properties are identified, the significance of the archaeological or architectural properties is
6 evaluated in order to determine whether the properties qualify for inclusion in the NRHP.

7 A resource may be considered eligible for inclusion in the NRHP if it:

- 8 A. Is associated with events that have made a significant contribution to the broad patterns of our
9 history; or
- 10 B. Is associated with the lives of persons significant in our past; or
- 11 C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents
12 the work of a master, or possesses high artistic values, or represents a significant and
13 distinguishable entity whose components may lack individual distinction; or
- 14 D. Has yielded, or may be likely to yield, information important in prehistory or history.

15 Historic properties considered potentially eligible under one of the above criteria are also to be evaluated
16 for integrity of location, design, setting, materials, workmanship, feeling, and association. To be eligible
17 for inclusion in the NRHP, a historic property must possess integrity of those elements directly related to
18 the criterion or criteria under which it would be determined eligible.

19 The agency must also determine effects findings in consultation with the SHPO. Possible effects are
20 defined as follows (36 CFR Part 800):

- 21 • **No historic properties affected.** A **no historic properties affected** determination is made
22 when it is determined that either there are no historic properties present or there are historic
23 properties present but the undertaking would have no effect on them as defined in
24 36 CFR Section 800.16(i).
- 25 • **No adverse effect.** A **no adverse effect** determination is made when the undertaking's effects
26 do not meet the criteria described in the item below for an adverse effect, or the undertaking is
27 modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by
28 the SHPO, to ensure consistency with the Secretary of the Interior's Standards for the Treatment
29 of Historic Properties (36 CFR Part 68) and applicable guidelines, to avoid adverse effects.
- 30 • **Adverse effect.** An **adverse effect** determination is made when an undertaking may alter,
31 directly or indirectly, any of the characteristics of a historic property that qualify the property for
32 inclusion in the NRHP in a manner that would diminish the integrity of the property's location,
33 design, setting, materials, workmanship, feeling, or association. Consideration is given to all
34 qualifying characteristics of a historic property, including those that might have been identified
35 after the original evaluation of the property's eligibility for inclusion in the NRHP. Adverse
36 effects can include reasonably foreseeable effects caused by the undertaking that may occur later
37 in time, be farther removed in distance, or be cumulative.

3.10.1.2. Paleontological Resources

The State of Utah has enacted legislation (Section 79-3-508 of the Utah Code) that requires state agencies to take into account the effect of an undertaking on a specimen that is included in or eligible for inclusion in the State Paleontological Register. As part of this state-level legislation, UDOT entered into a Memorandum of Understanding with the Utah Geological Survey for the purpose of consultation to identify known or potential paleontological localities of importance that could be affected by UDOT's projects and to consider measures to avoid or minimize those impacts.

3.10.2. Methodology

3.10.2.1. Historic Properties

UDOT used literature reviews and field inspections to determine what historic properties were present in the APE. Field inspections were conducted during the fall of 2018 and the winter of 2019 to identify historic properties that could be affected by the build alternative. The APE, literature review, and field inspection methods are described in greater detail in the technical reports for the historic property surveys (Certus Environmental Solutions 2019a, 2019b).

In accordance with UDOT guidelines, and to accommodate a time lag between the compilation of the survey data and any future construction associated with the undertaking, UDOT used a cutoff age of 45 years old to designate historic properties. Given the timing of the survey reported in this SES, this meant that a resource had to be created during or before 1974 to be considered historic.

As part of the effort to identify historic properties in the APE, UDOT consulted with federally recognized Native American tribes. The following eight Native American tribes with patrimonial claims over the general project area were contacted by UDOT on April 22, 2019, and invited to provide comments on known or potential properties or issues of concern to the tribes:

- Cedar Band of Paiutes
- Confederated Tribes of the Goshute Reservation
- Eastern Shoshone Tribe of the Wind River Reservation
- Northwestern Band of Shoshone Nation
- Shivwits Band of Paiute Indian Tribe of Utah
- Shoshone-Bannock Tribes of Fort Hall
- Skull Valley Band of Goshute Indians
- Ute Indian Tribe of the Uintah and Ouray Ute Indian Reservation

None of the Native American tribes contacted by UDOT requested to be consulting parties, to meet with UDOT, or to provide input on the undertaking. For a copy of the letters sent to these tribes, see Appendix F, Cultural Resources Correspondence.

3.10.2.2. Paleontological Resources

In accordance with UDOT guidelines, UDOT consulted with the Utah Geological Survey regarding the presence of and potential for encountering fossil resources in the APE. This consultation was undertaken via a file search request to the Utah Geological Survey (Certus Environmental Solutions 2019b).

1 **3.10.3. Current Conditions**

2 **3.10.3.1. Historic Structures**

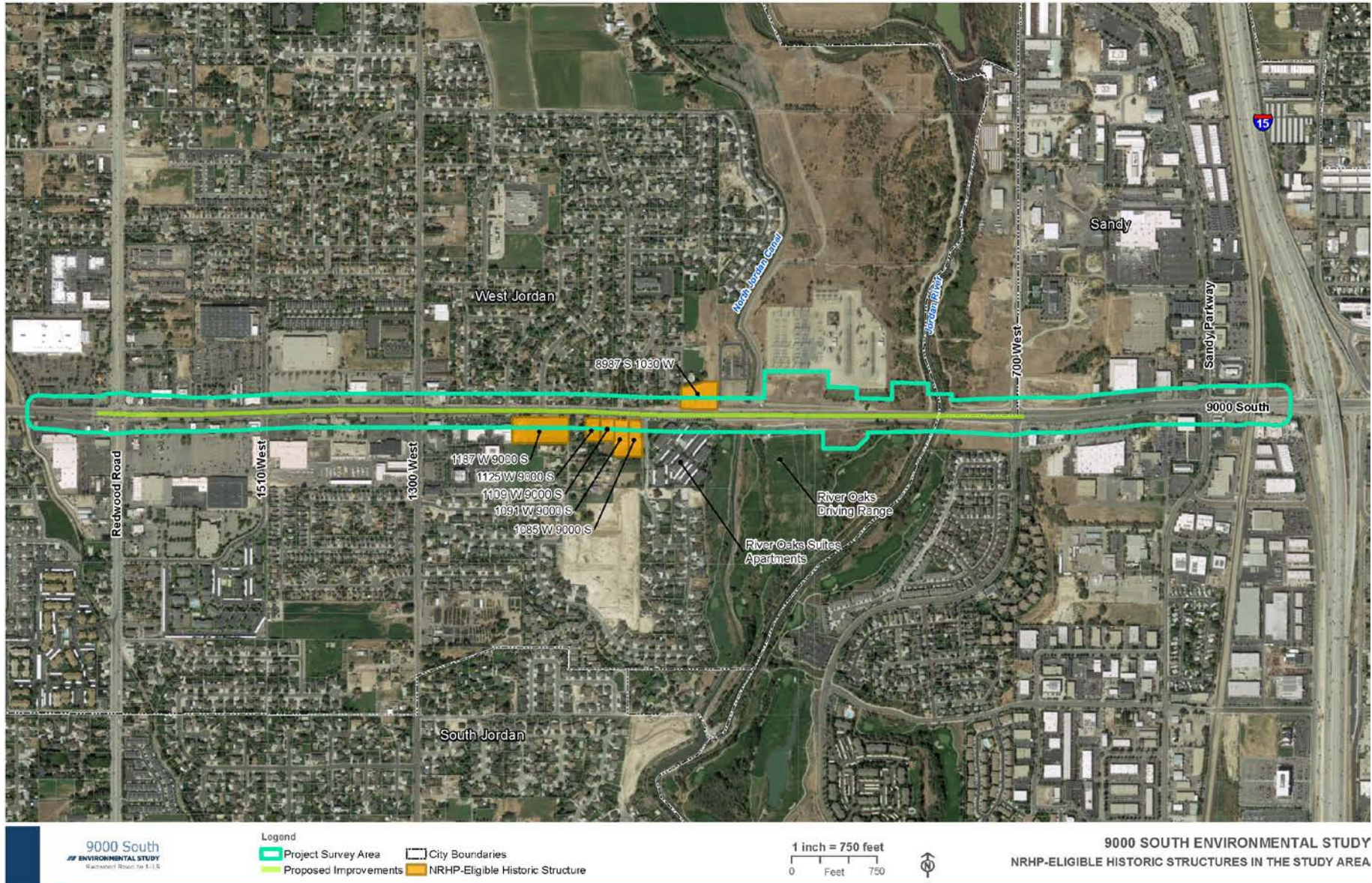
3 UDOT conducted a selective reconnaissance-level survey in the APE to identify historic structures.
 4 A total of 10 primary historic structures were identified as a result of the survey. Eight of the documented
 5 resources are historic homes, one is a historic commercial property, and the remaining property is a
 6 historic bridge that carries 9000 South over the Jordan River. Four of the documented structures are on
 7 the north side of 9000 South, and five are on the south side. Of the 10 documented historic structures, six
 8 are NRHP-eligible, as listed in Table 3-10 and shown in Figure 3-14.

Table 3-10. Determinations of NRHP Eligibility for Historic Structures in the 9000 South APE

Address	Description	Eligible for the NRHP?
460 West 9000 South	1-story other public/commercial building, late 20th century, other style	No
Structure OF 244	Jordan River bridge	No
1070 West 9000 South	1-story other residential type single-family dwelling, other and minimal traditional styles	No
1085 West 9000 South	1-story ranch with garage single-family dwelling, ranch/rambler style	Yes
1091 West 9000 South	1-story ranch single-family dwelling, ranch/rambler style	Yes
1100 West 9000 South	1-story bungalow single-family dwelling, bungalow and contemporary styles	No
1109 West 9000 South	1-story ranch with garage single family dwelling, ranch/rambler style	Yes
1125 West 9000 South	1-story ranch with carport single-family dwelling, ranch/rambler style	Yes
1187 West 9000 South	1-story ranch with garage single-family dwelling, ranch/rambler style	Yes
8987 South 1030 West	1-story other single-family dwelling, minimal traditional and other styles	Yes

9

Figure 3-14. NRHP-eligible Historic Structures in the APE



3.10.3.2. Archaeological Resources

UDOT conducted a standard intensive-level survey in the APE using transects spaced no more than 50 feet apart to identify archaeological resources. Archaeological resources include historic linear resource sites such as railroad alignments and canals, prehistoric sites, and historic artifact scatters. The survey identified three archaeological sites, all of which had been previously documented and determined to be eligible for inclusion in the NRHP (Certus Environmental Solutions 2019b) as listed in Table 3-11.

Table 3-11. Archaeological Sites Identified in the APE and Determinations of Eligibility

Site	Name or Description	NRHP Eligibility	New or Previously Documented?
42SL284	Galena Canal	Eligible	Previously documented
42SL293	Denver & Rio Grande Western Railroad	Eligible	Previously documented
42SL342	North Jordan Canal	Eligible	Previously documented

3.10.3.3. Paleontological Resources

The Utah Geological Survey stated that no paleontological localities are known to be present in the APE and that the potential for encountering such resources is low (Certus Environmental Solutions 2019b).

3.10.4. Expected Impacts

3.10.4.1. Historic Structures and Archaeological Resources

With regard to the 9000 South project, UDOT has made a finding of **no historic properties affected** for 8987 South 1030 West; **no adverse effect** for 1091 West 9000 South, 1125 West 9000 South, and 1187 West 9000 South; **adverse effect** for 1085 West 9000 South and 1109 West 9000 South; and **no historic properties affected** for the three linear archaeological resources. Therefore, the overall Finding of Effect for the proposed UDOT Project No. S-0209(35)10, S.R. 209; Redwood Road to I-15, Salt Lake County, Utah, is **adverse effect**.

Following the steps of the Utah Code Section 9-8-404 process, UDOT submitted a Determination of Eligibility and Finding of Effect (DOE/FOE) document and technical reports to the SHPO. These documents identified historic properties, Determinations of Eligibility for the NRHP for each historic property, and UDOT’s Findings of Effect for the historic properties in the APE. This letter was sent on May 28, 2019. The Utah SHPO concurred with the preliminary Determinations of Eligibility and Findings of Effect on May 30, 2019. See Appendix F, Cultural Resources Correspondence, for UDOT’s Determination of Eligibility and Finding of Effect and the SHPO’s concurrence letter.

1 Descriptions of effects on the individual eligible historic structures and archaeological resources are
 2 summarized in Table 3-12. Effects on the individual historic structures are also shown in Figure 3-15.

Table 3-12. Findings of Effect for Eligible Historic Properties in the APE

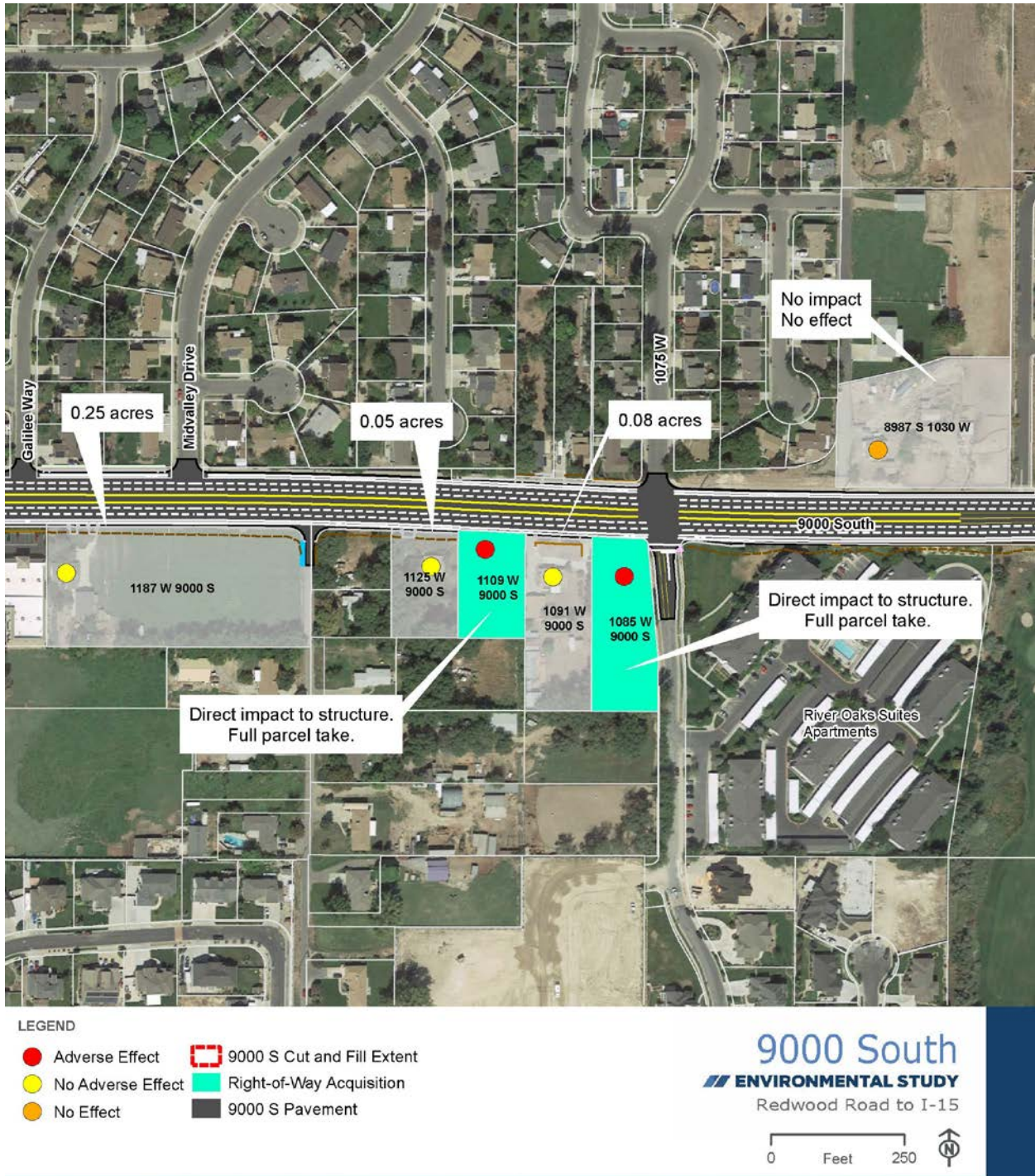
Site	Name or Description	NRHP Eligibility	Finding of Effect
Historic Structures			
1085 West 9000 South	1-story ranch with garage single-family dwelling, ranch/rambler style	Eligible	Adverse effect – cut and fill would directly impact structure
1091 West 9000 South	1-story ranch single-family dwelling, ranch/rambler style	Eligible	No adverse effect – minor ROW acquisition (0.08 acre) impact from cut and fill; no contributing features would be affected
1109 West 9000 South	1-story ranch with garage single family dwelling, ranch/rambler style	Eligible	Adverse effect – cut and fill would directly impact structure
1125 West 9000 South	1-story ranch with carport single-family dwelling, ranch/rambler style	Eligible	No adverse effect – minor ROW acquisition (0.05 acre) impact from cut and fill; no contributing features would be affected
1187 West 9000 South	1-story ranch with garage single-family dwelling, ranch/rambler style	Eligible	No adverse effect – minor ROW acquisition (0.25 acre) impact from cut and fill; no contributing features would be affected
8987 South 1030 West	1-story other single-family dwelling, minimal traditional and other styles	Eligible	No historic properties affected – avoided
Archaeological Resources			
42SL284	Galena Canal	Eligible	No historic properties affected – avoided
42SL293	Denver & Rio Grande Western Railroad	Eligible	No historic properties affected – avoided
42SL342	North Jordan Canal	Eligible	No historic properties affected – avoided

NRHP = National Register of Historic Places, ROW = right-of-way

3 **3.10.4.2. Paleontological Resources**

4 No impacts are expected.

1 **Figure 3-15. Impacts to NRHP-eligible Historic Structures from the Build Alternative**



2

1 **3.10.5. Mitigation**

2 **3.10.5.1. Historic Properties and Archaeological Resources**

3 Mitigation measures for adverse effects on historic buildings will be necessary with the build alternative.
4 The exact mitigation measures will be documented in a Memorandum of Agreement negotiated among
5 UDOT and the Utah SHPO. These measures will be determined by historic-protection experts to mitigate
6 to the greatest extent feasible the impacts to these resources. UDOT Standard Specifications Section
7 01355, Part 1.13, *Discovery of Historical, Archaeological, or Paleontological Objects, Features, Sites,*
8 *Human Remains, or Migratory Avian Species*, will be enforced during construction of this project. This
9 specification stipulates procedures to be followed if any archaeological, historic, or paleontological
10 resources and/or human remains are discovered during construction of the build alternative.

11 Because all archaeological resources would be avoided and therefore would not be affected, no mitigation
12 is necessary.

13 **3.10.5.2. Paleontological Resources**

14 No mitigation is required.

15 **3.11. Hazardous Material Sites**

16 Section 3.11 lists the sites in the hazardous material sites evaluation area alignment that could contain
17 hazardous material. This section analyzes the effects of the build alternative on these sites as well as the
18 effects of these sites on construction of the build alternative. Ground-disturbing activities during
19 construction could encounter contaminated soil or groundwater. If remedial actions are required, the
20 construction cost could increase and/or the construction schedule could be delayed. If the contamination
21 is not properly managed, it could spread. In addition, exposing contamination could affect the health and
22 safety of workers and people who live near the construction area.

23 **Hazardous Material Sites Evaluation Area.** The hazardous material sites evaluation area includes
24 parts of West Jordan, Sandy, and Salt Lake County within about 525 feet (about 0.1 mile) of the
25 centerline of the existing 9000 South roadway between Redwood Road on the west and I-15 on the east.
26 Sites within this area have a higher likelihood of affecting and being affected by construction if
27 contamination is present. In order to determine whether sites outside this area could affect or be affected
28 by the project (for example, if the project were to cause contamination to migrate in groundwater), UDOT
29 also looked for other sites within about 0.5 mile of 9000 South.

3.11.1. Regulatory Environment and Compliance

Hazardous material sites are regulated by the Resource Conservation and Recovery Act; by the Comprehensive Environmental Response, Compensation, and Liability Act; and by UAC R315-261, *General Requirements – Identification and Listing of Hazardous Waste*. The following concerns are raised when a transportation project affects sites that contain hazardous materials:

- The spread of existing soil or groundwater contamination through road-construction activities
- The potential for increased construction costs
- The potential for construction delays
- The health and safety of construction workers and people who live near the hazardous waste site
- The short-term and long-term liability associated with acquiring environmentally distressed properties

This section provides a preliminary identification of known hazardous material sites that are listed in environmental databases. During the final design of the build alternative and before any property is acquired, UDOT would conduct more-detailed assessments to determine the status and the presence of contamination and to establish the approximate nature and limits of the chemical hazard. For more information, see Section 3.11.5, Mitigation.

3.11.2. Methodology

To determine the potentially hazardous material sites in the evaluation area, UDOT queried the Utah Division of Environmental Response and Remediation's (DERR) Interactive Map (UDEQ 2018) and commissioned a report (see Appendix G, Environmental Data Resources Report) from EDR (2018), which together provided a broad review of several applicable environmental databases. The databases searched and the databases that listed a potentially hazardous site are as follows:

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) database, which is a database of Superfund sites that often represent significant environmental hazards that warrant detailed investigation and remediation.
- Resource Conservation and Recovery Act (RCRA) database, which is a list of sites and businesses that are registered because they qualify as Large-Quantity Generators (LQG) or Small-Quantity Generators (SQG) for hazardous chemicals regulated by RCRA.
- Underground storage tanks (UST), which is a database of locations in Utah that currently have or had underground storage tanks. Impacting these sites could uncover unidentified petroleum based contamination.
- Leaking underground storage tanks (LUST) is a database of sites in Utah with incidents of a leaking underground storage tanks whose status is either open (under investigation) or closed (no additional remedial actions are required or ever took place). Often, residual contamination is left in place if it does not pose a threat to human health or the environment.
- DERR's spill database, which contains records of chemical spills and tracks emergency clean-up efforts. A wide variety of incident types with a broad range of chemical contaminants could show up in this database.

3.11.3. Current Conditions

UDOT identified 26 sites in the study area: 15 LUST sites, 6 UST sites, 2 RCRA-SQG sites, 1 RCRA-LQG site, 1 DERR incident, and 1 CERCLA site. The hazardous material sites in and near the evaluation area are listed in Table 3-13 and shown in Figure 3-16.

Table 3-13. Hazardous Material Sites in the Hazardous Material Sites Evaluation Area and Potential Impacts from the Build Alternative

Map ID ^a	Name	Location	Type and Database ID	Notes and Potential Impacts
1	Smith's #495 – gas station	1820 West 9000 South	UST 4002377	Site is located on the north side of 9000 South and contains five USTs. No leak records were found on DERR's interactive map.
2	Sunmart #870 – gas station	8980 S. Redwood Road	LUST 4001435	On the northwest corner of 9000 South and Redwood Road is a property with a current gas station with USTs as well as a LUST incident from a previous owner. Earth-disturbing activities for construction on or near this site could encounter residual petroleum-based contamination.
3	Tesoro #62112	9022 S. Redwood Road	LUST 400761	On the southwest corner of 9000 South and Redwood Road is a cluster of current and former gas stations (including this LUST incident), tire shops, and oil and lubrication businesses. If residual, petroleum-based contamination is present, it could be encountered during construction.
4	Paul Schmidt	9120 S. Redwood Road	UST 4001566	Site is located south of 9000 South along Redwood Road. One tank was removed in 1991. No contamination was observed during removal.
5	Flower Patch/Don's Service	8989 S. Redwood Road	LUST 4000252	Property contains a LUST occurrence which was closed in 1996. A "no further action needed" letter provided by DERR in 1996 states that residual contamination remains but complies with state rules. Earth-disturbing activities for construction could encounter residual petroleum-based contamination on or near this site.
6	Glade James	9015 S. Redwood Road	LUST 4001012	Property contains a LUST occurrence. The "no further action needed" letter, which was provided by DERR in 1992, states the remediation work was completed and that, if residual contamination remains, it complies with state rules. Excavation for construction could encounter residual petroleum-based contamination around this site.
7	Jones Excavating	1650 West 9000 South	LUST 4001773	Property contains a previous LUST occurrence, which was closed in 2000. No corrective actions were mandated by DERR given that the level of detectable hydrocarbons at the time of UST removal complied with state rules. Excavation for construction near this site could encounter residual petroleum-based contamination.
8	Home Depot #4410	1538 West 9000 South	RCRA-SQG 1007571977	Business stores or disposes of small quantities of hazardous materials for home-use products and store cleaning. No violations were found in the database search.
9	Kmart #7618	1442 West 9000 South	RCRA-LQG 1014927860; LUST 4000483	Property contains a LUST occurrence, which was closed in 1994. The business previously stored or disposed of large quantities of hazardous materials consisting of consumer products or products used for in-store cleaning. No indication of chemical spills was found in the review of the databases. Excavation near this site could encounter residual petroleum-based contamination from the historic LUST incident.

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Table 3-13. Hazardous Material Sites in the Hazardous Material Sites Evaluation Area and Potential Impacts from the Build Alternative

Map ID ^a	Name	Location	Type and Database ID	Notes and Potential Impacts
10	Reclaimed Barrels	8487 South 1700 West	CERCLA 988079240	Site inspections in 1992 observed 5,000 used barrels, and about 500 of the barrels contained various types of hazardous chemicals. In 1997, groundwater wells were drilled, the contamination that was found was below action levels, and no further remedial action was planned by the U.S. Environmental Protection Agency. The current levels of contamination are not known. The direction of groundwater flow was not determined, but it is inferred to flow east toward the Jordan River. This site is located about 0.5 mile north of the evaluation area. This site should not affect construction.
11	Holiday Oil #16	1316 West 9000 South	LUST 4000391	Property had two LUST incidents, in 2009 and 2013. A “no further action needed” letter was provided by DERR in 2014 which stated that residual contamination remains but does not pose a threat to human health or the environment. Excavation for construction could encounter this residual petroleum-based contamination.
12	Circle K #1924	8995 South 1300 West	LUST 4001350	Property contains a LUST occurrence, which was closed in 1997. Excavation for construction could encounter residual petroleum-based contamination.
13	Camio Dry Cleaners	8977 South 1300 West	RCRA-SQG 2000922412	This dry cleaner (now Mr. Lee’s Cleaners) is listed for its use of solvents that, if not properly managed or disposed of, can create environmental contamination. No records of violations were found during the review of DERR’s interactive map.
14	Conoco/Tesoro #66602	1285 West 9000 South	LUST 4001508	Property contains a LUST occurrence, which was closed in 2015. In its “no further action needed” letter, DERR stated that contamination was below state clean-up levels. Excavation for construction could encounter residual petroleum-based contamination.
15	Environmental incident	9000 South 1000 West	DERR 12170	Location with a spill of 10 gallons of transformer oil presumably associated with the Rocky Mountain Power substation (parcel owned by Utah Power and Light) about 150 feet north of 9000 South.
16	Utah Power and Light	9000 South 1000 West	LUST 4001211	LUST incident at the substation was closed in 1996. DERR’s “no further action needed” letter stated that residual contamination remains on site but does not pose a threat to the environment. Earth-disturbing activities could encounter residual petroleum-based contamination.
17	Tanner Transmission	620 West 9000 South	LUST 4002501	Property contains a LUST occurrence, which was closed in 2014. In its “no further action needed” letter, DERR stated that contamination was below state clean-up levels. Earth-disturbing activities on or near this site could encounter residual petroleum-based contamination.
18	Utah Roses	567 West 9000 South	UST 4001127	Tank was removed in 1991. The location of the tank is not known. No records of leaks were found during the review of DERR’s interactive map. If any residual contamination is present, it could be encountered during construction.

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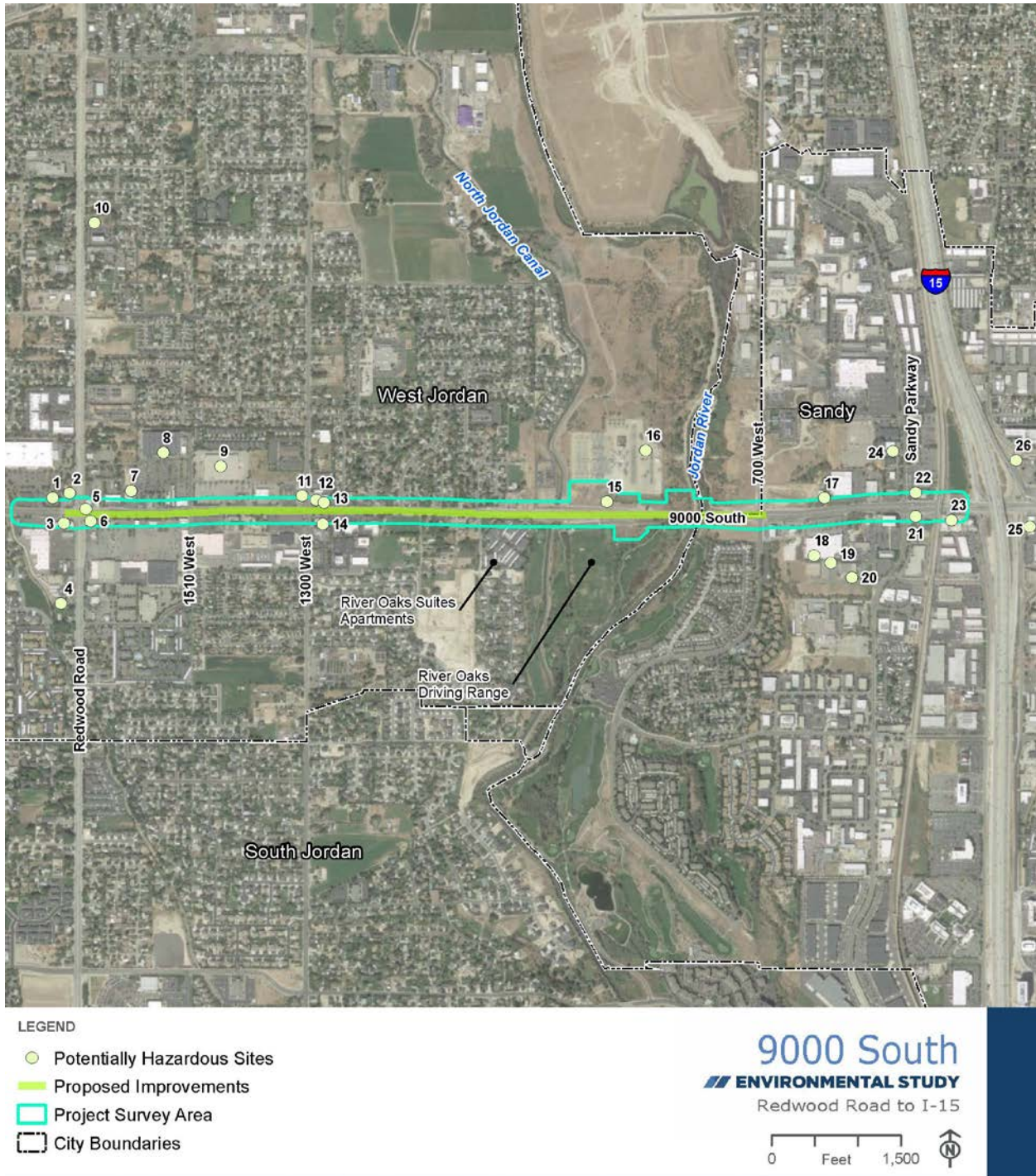
Table 3-13. Hazardous Material Sites in the Hazardous Material Sites Evaluation Area and Potential Impacts from the Build Alternative

Map ID ^a	Name	Location	Type and Database ID	Notes and Potential Impacts
19	Porter Lane Nursery	567 West 9000 South	LUST 4002313	This site, which is about 0.25 mile south of the evaluation area, contains a LUST occurrence, which was closed in 2002. Three diesel fuel tanks were removed in 2002. In its “no further action needed” letter, DERR stated that detectable petroleum contamination at the site is not a threat to human health or the environment. Earth-disturbing activities on or near this site could encounter residual petroleum-based contamination.
20	Jordan School District	9150 South 500 West	LUST 4000626	This property, which is about 0.25 mile south of the evaluation area, contains a LUST occurrence, which was closed in 1995. In its “no further action needed” letter, DERR stated that contamination was left in place but does not pose a threat to human health or the environment. Excavation for construction near this site could encounter residual petroleum-based contamination.
21	Maverik #254	425 West 9000 South	UST 4001999	Site is located on the south side of 9000 South and contains four underground storage tanks. No leak records were found on DERR’s interactive map.
22	Maverik #541	9000 S. Sandy Parkway	UST 4002523	Site is located on the north side of 9000 South and contains four underground storage tanks. No leak records were found on DERR’s interactive map.
23	Piro Texaco	365 West 9000 South	LUST 4000752	Property contains a LUST occurrence, which was closed in 2002. In a “no further action needed” letter, DERR stated that contamination was left in place but it does not pose a threat to human health or the environment. Excavation for construction could encounter residual petroleum-based contamination.
24	Salt Lake Jet Ski	8825 S. Sandy Parkway	LUST 4002114	This property, which is about 700 feet north of the evaluation area, contains a LUST incident for an abandoned heating oil tank. Contaminated soil was removed and the incident closed in 1996.
25	David Early #2	253 West 9000 South	LUST 4001904	This site is east of I-15. A 500-gallon used oil tank was removed in 1998 and, because limited contamination was observed, the case was closed. The site should not affect construction.
26	New Sandy Station	8925 South 255 West	UST 4001751	This site is east of I-15. One tank was removed in 1991. No contamination was noted. It is unlikely that the site would affect construction.

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; DERR = Utah Division of Environmental Response and Remediation; LQG = Large-Quantity Generator; LUST = leaking underground storage tank; RCRA = Resource Conservation and Recovery Act; SQG = Small-Quantity Generator; UST = underground storage tank

^a Map IDs refer to the site numbers in Figure 3-17 below.

Figure 3-16. Hazardous Waste Sites in and near the Hazardous Waste Sites Evaluation Area



3.11.4. Expected Impacts

UDOT screened hazardous material–related sites and facilities to identify those that have a higher probability of containing contaminated soil or groundwater and those that are located closer to the construction area for the build alternative. The sites that meet both of these criteria have the potential to affect or be affected by the build alternative. Because most of these sites are clustered, UDOT identified areas of the evaluation area that have a higher likelihood of could affecting or being affected by the build alternative.

- **Areas of greatest concern** are areas (or sites) with a higher probability of contamination whose property boundaries are within or near the proposed right-of-way for the build alternative. The criterion for determining the areas of greatest concern involved analyzing each site’s location relative to the right-of-way for the build alternative and the number of sites in a geographic area.
- **Areas of secondary concern** are areas (or sites) with a high-to-moderate probability of contamination whose property boundaries are outside but near (within about 1,000 feet of) the right-of-way for the build alternative. Areas of secondary concern also include sites with a lower probability of residual contamination but that are closer to the right-of-way for the build alternative (within 100 to 200 feet).

UDOT identified three areas of greatest concern and one area of secondary concern for encountering residual contamination during earth-disturbing activities. The areas of greatest and secondary concern are as follows:

- **Areas of greatest concern**
 - The first area of greatest concern is the intersection of 9000 South and Redwood Road, where three LUST sites and two UST sites are adjacent to the right-of-way for the build alternative.
 - The second area of greatest concern is the 9000 South and 1300 West intersection, where three LUST sites and one RCRA-SQG site are adjacent to the right-of-way for the build alternative.
 - The third area of greatest concern is the area along 9000 South between about 620 West and I-15, where a cluster of two LUST sites and two UST sites are close to the right-of-way for the build alternative.
- **Area of secondary concern**
 - The one area of secondary concern is near sites 15 (environmental incident) and 16 (Rocky Mountain Power substation), which both have a lower potential for contamination but are close to the right-of-way for the build alternative and within the right-of-way for basin option A2 for a detention basin.

Where excavation is needed to construct roadway fills, build stormwater infrastructure, or relocate utilities, workers should be aware of the potential to encounter contamination, should have excavated soil tested and, if contamination is detected, should dispose of it properly.

3.11.5. Mitigation

Previously unidentified sites or contamination could be encountered during construction. The construction contractor will implement measures to prevent the spread of contamination and to limit worker exposure. In such a case, all work will stop in the area of the contamination according to UDOT Standard

Specifications, and the contractor will consult with UDOT and DERR to determine the appropriate remedial measures. Hazardous materials will be handled according to UDOT Standard Specifications and the requirements and regulations of DERR.

During construction, coordination will take place among UDOT or DERR, the construction contractor, and the appropriate property owners. This coordination will involve determining the status of the sites of concern, identifying newly created sites, identifying the nature and extent of remaining contamination (if any), and minimizing the risk to all parties involved. Environmental site assessments might be conducted at the sites of concern to further evaluate the nature and extent of contamination and to better identify the potential risks of encountering hazardous materials.

As determined necessary by UDOT, engineering controls (such as dust mitigation, temporary soil covers, and groundwater extraction) and personal protective equipment for construction workers will be used to reduce the potential for the public or workers to be exposed to hazardous materials.

3.12. Construction Impacts and Mitigation

Constructing the build alternative would cause temporary construction-related impacts from ground disturbance and the operation of construction equipment. The nature and timing of these impacts would be related to the build alternative's construction methods. Most construction-related impacts to the public would be associated with travel delays on 9000 South itself.

Section 3.12 discusses construction impacts to the following resources:

- Community
- Relocations and right-of-way acquisition
- Economics
- Air quality
- Noise
- Water quality
- Biological resources
- Historic properties and paleontological resources
- Hazardous material sites

3.12.1. Community

3.12.1.1. Impacts

Utilities. Although utility service would be maintained throughout most construction activities, utility service could be temporarily disrupted during construction. The affected utilities could include electric, natural gas, water, sewer, telephone, cable, and storm drainage.

Traffic. Vehicle traffic could also be affected during construction of the build alternative:

- Traffic detours and some temporary road closures would change frequently throughout construction. Changes in roadway conditions could include rerouting of traffic onto other roads, temporary closure of lanes or sections, and temporary lane shifts. Detours and road closures would temporarily increase vehicle commute times, fuel use, and air pollutant emissions.
- Access to some residential, institutional, and commercial properties would be temporarily disrupted.

3.12.1.2. Mitigation

Utilities. Planning and coordination with local utility providers during the final design and construction of the build alternative will minimize or eliminate utility conflicts and reduce disruptions in service. This planning and coordination includes submitting a set of plans for the build alternative to the utility providers for their use in preparing their utility relocation plans. This close coordination will enable UDOT to identify any potential conflicts early on and will provide time for UDOT to formulate strategies to overcome them.

The project specifications will require the contractor to coordinate with the utility providers affected by construction to complete utility agreements before construction, and the construction contractor will coordinate with all utility providers to minimize utility service interruptions.

Before beginning work, the contractor is required to contact Blue Stakes to identify the locations of all utilities. The contractor will be required to use care when excavating to avoid unplanned utility disruptions. If utilities are unintentionally disrupted, UDOT will work with the contractor and the utility companies to restore service as quickly as possible.

Traffic. A thorough public information program will be implemented to inform the public about construction impacts, including identifying work hours and alternate routes. Construction signs will be used to notify drivers about work activities and changes in traffic patterns.

Impacts from lights used during nighttime construction will be reduced by aiming construction lights directly at the work area and/or shielding the lights.

The contractor will be required to develop a maintenance-of-traffic plan that defines measures to reduce construction impacts to traffic. A general requirement of this plan will be that, to the extent reasonably practical, safe access to businesses and homes must be maintained and existing roads must be kept open to traffic unless alternate routes are provided.

3.12.2. Relocations and Right-of-way Acquisition

3.12.2.1. Impacts

UDOT might need to obtain temporary easements for some properties in order to construct the build alternative. These properties are not included in the right-of-way analysis in this SES because the final locations of easements would be determined during the final design of the build alternative. Easements would be required for properties that are outside the right-of-way but would be affected by the cuts or fills required during roadway construction, would require utilities to be relocated, or would need to have the properties' access modified to fit within the proposed design.

UDOT would use these properties and would provide compensation to the landowner for the use. For some construction and utility easements, the property would be fully returned to the owner when the use of the property is no longer required, typically when construction is complete or the utility is buried. These properties might be temporarily affected, but no long-term impacts are expected.

For some utilities such as water canals and power poles, permanent easements might be required. The locations of these easements would be determined during the final design of the build alternative in coordination with the utility companies. For permanent easements, the appropriate environmental documentation would be prepared for any potential impacts.

Additionally, the contractor would establish staging areas for equipment during construction and would obtain fill material for improvements. Because a contractor has not yet been selected, the exact locations of staging areas and sources of fill material are not known.

3.12.2.2. Mitigation

No mitigation is required.

3.12.3. Economics

3.12.3.1. Impacts

Construction activities could temporarily affect access to businesses in the area of construction. Although UDOT would maintain access to properties to the extent practicable, temporary detours would limit some access or change the route to some businesses. The resulting traffic congestion and motorists' perceptions of inaccessibility could discourage some customers from patronizing businesses in the area of construction.

3.12.3.2. Mitigation

Access to businesses will be maintained during the construction and post-construction phases of this project. For each phase of the project, UDOT will coordinate with property owners and businesses to evaluate ways to maintain access while still allowing efficient construction operations. This coordination could entail sharing a temporary access or identifying acceptable timeframes when access is not needed. Adequate signs will be placed in construction areas to direct drivers to businesses.

3.12.4. Air Quality

3.12.4.1. Impacts

Although no long-term air quality impacts would occur as a result of the build alternative, short-term, construction-related air quality impacts are likely. Air quality impacts during construction would be limited to short-term increases in fugitive dust, particulates, and local pollutant emissions from construction equipment in the area of construction. Because construction would be local and short-term, any impacts to individual air quality receptors would also be short-term. The most common air pollutant created by construction would be PM₁₀ (particulate matter 10 microns in diameter or smaller).

Construction activity could also generate a temporary increase in emissions of mobile-source air toxics from construction-related emissions during the construction period.

To reduce construction-related air quality pollutants, an air quality approval order is required to build, own, or operate a facility that pollutes the air, including 9000 South with the proposed improvements. To obtain an air quality approval order, a notice of intent must be submitted to the Utah Division of Air Quality describing the construction activities and emissions that would be associated with operating construction equipment. The permit applicant must include provisions for controlling dust and emission sources, and the permit might require other construction approvals depending on the source and location of aggregate, asphalt, combustion, and/or fuel storage facilities. This permit would be obtained by the contractor before construction.

3.12.4.2. Mitigation

The contractor will be required to follow the appropriate BMPs included in UDOT's plans and specifications for construction. These BMPs include items such as fugitive-dust control and street sweeping.

3.12.5. Noise

3.12.5.1. Impacts

The operation of machinery and other construction activities would increase noise levels. Construction would temporarily increase noise levels, but the impacts would be short-term. Construction equipment could generate noise levels near homes of 80 dBA to 90 dBA or similar to that of a heavy truck at 50 feet.

3.12.5.2. Mitigation

To reduce temporary noise impacts associated with construction, the contractor will comply with all state and local regulations relating to construction noise. Land uses that are sensitive to traffic noise are also sensitive to construction noise. Methods of controlling construction noise include establishing the hours that construction equipment can be operated and permissible sound levels at those times. In view of this, UDOT has developed a specification that establishes construction noise control. This specification is in UDOT's *2017 Standard Specifications for Road and Bridge Construction*, Section 01355, *Environmental Protection*, Part 3.6, *Noise Control*. The contractor will be required to conform to this specification to reduce the impact of construction noise on the surrounding community.

3.12.6. Water Quality

3.12.6.1. Impacts

Excavating, grading, and other construction activities could reduce water quality during construction. These impacts could continue until the proposed improvements to 9000 South are completed, permanent protective measures are installed, and the site is stabilized.

3.12.6.2. Mitigation

The build alternative would disturb more than 1 acre of ground surface; therefore, a UPDES General Permit for Discharges from Construction Activities (UTRC00000) and a *Stormwater Pollution Prevention Plan* (SWPPP) are required. The SWPPP must be prepared during design and advertisement in accordance with UDOT's *2017 Standard Specifications for Road and Bridge Construction*, Section 01355, *Environmental Protection*, Part 3.3, *Water Resource Permits*. The SWPPP will be provided to the construction contractor prior to the notice to proceed. The SWPPP will identify temporary and long-term stormwater BMPs to reduce impacts to receiving waters from construction activities including site grading, materials handling and storage, fueling, and equipment maintenance. The construction contractor will be responsible for finalizing the SWPPP prior to beginning earth-disturbing activities as well as for implementing and maintaining the project SWPPP throughout project construction.

3.12.7. Biological Resources

3.12.7.1. Impacts

Wetlands and Wildlife. During construction, some erosion might occur outside the specific roadway construction zone.

Construction activities could disrupt the feeding, nesting, and reproductive activities of wildlife in or near the right-of-way because of higher noise levels, construction equipment activity, and lights. These temporary construction activities are of particular concern during nesting periods for migratory birds near the right-of-way because the activities could disrupt nesting or cause birds to flee the nest.

Invasive Species. Construction operations would remove the existing hard surfaces and established vegetation, which would expose the underlying soils to the risk of being infiltrated by invasive weeds. Materials and equipment delivered to the job site could introduce invasive weeds into the area if seeds are present in imported soil or on equipment that is not properly cleaned.

Visual Aesthetics. Construction of the build alternative would cause limited disturbance and would not have substantial visual impacts to the surrounding areas.

3.12.7.2. Mitigation

Wetlands and Wildlife. BMPs such as silt fences and other erosion-control and sediment-control features would be used in areas adjacent to wetlands. To mitigate any potential impacts to migratory birds, any vegetation removal to occur between June 15 and August 15 would require a survey by a qualified biologist to ensure that any removal would not impact nesting birds.

Invasive Species. To mitigate the possible introduction of invasive weeds due to construction activities, the invasive-weed BMPs in UDOT's Supplemental Specification 02924S, *Invasive Weed Contractor Control*, will be implemented, monitored, and included in the plans and specifications for the project to require that earth-moving construction equipment is to be properly cleaned before mobilizing onto the project site and to treat any noxious weeds within the project limits and schedule.

The construction contractor will comply with UDOT's invasive-weed BMP requirements by properly cleaning all earth-moving construction equipment before mobilizing onto the project site, treating any existing noxious weeds before earth-disturbing activities, and avoiding unnecessary earth disturbances.

Visual Aesthetics. The construction contractor will reclaim all disturbed areas per UDOT standard specifications.

3.12.8. Historic Properties and Paleontological Resources

3.12.8.1. Impacts

During construction, additional archaeological, paleontological, or historical resources might be discovered other than those identified during the historic properties surveys.

3.12.8.2. Mitigation

Ground-disturbing activities during construction could result in the discovery of previously unidentified subsurface cultural or paleontological resources. In the case of an inadvertent discovery during construction, activities in the area of discovery will be immediately stopped and the procedures in UDOT's *2017 Standard Specifications for Road and Bridge Construction*, Section 01355, *Environmental Protection*, Part 3.8, *Discovery of Historical, Archaeological, or Paleontological Objects, Features, Sites, or Human Remains*, will be followed.

The construction contractor will notify UDOT of the nature and exact location of the finding and will not damage or remove the resource. Work in the area of the discovery would be delayed until UDOT evaluates the extent and cultural significance of the site in consultation with the Utah SHPO. The course of action and the construction delay would vary depending on the nature and location of the discovery. Construction would not resume until the contractor receives written authorization from UDOT to continue.

3.12.9. Hazardous Material Sites

3.12.9.1. Impacts

As with any ground-disturbing activities, there is the potential to encounter previously unknown sites such as USTs, LUSTs, and other hazardous materials sites. Exposure to these sites could pose a health risk.

3.12.9.2. Mitigation

If contamination is discovered during construction, mitigation measures will be coordinated according to UDOT Standard Specification 01355, *Environmental Compliance*, which directs the construction contractor to stop work and notify the engineer of the possible contamination. Any hazardous materials will be disposed of according to applicable state and federal guidelines.

If previously unidentified sites or contamination are encountered during construction, work will stop in the area of the contamination according to UDOT Standard Specification 01355, Part 3.1, *Hazardous Waste*, and the contractor will consult with UDOT and DERR to determine the appropriate remedial measures. Hazardous waste spills by the construction contractor will be handled according to UDOT Standard Specification 01355, Part 3.2, *Spill of Petroleum-Based Product or Used Oil*, and the requirements and regulations of the Utah Department of Environmental Quality and the U.S. Environmental Protection Agency.

3.13. Summary of Impacts

Table 3-14 summarizes the expected impacts from the build alternative and proposed mitigation.

Table 3-14. Summary of Build Alternative Impacts and Mitigation

Resource	Impacts from Build Alternative	Mitigation
Land use	<ul style="list-style-type: none"> 25.5 acres converted to transportation use 	<ul style="list-style-type: none"> None
Community	<ul style="list-style-type: none"> Utility relocations likely Access to River Oaks Driving Range changed 	<ul style="list-style-type: none"> None
Property acquisitions	<ul style="list-style-type: none"> Direct impacts (full acquisitions): 2 homes Proximity impacts (potential relocations): 57 parcels affected Land-only impacts (partial acquisitions): various residential and commercial properties 	<ul style="list-style-type: none"> Property owners will be compensated according to the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended.
Economics	<ul style="list-style-type: none"> Land-only impacts (partial acquisitions) at various commercial properties 17 business signs relocated Some parking stalls removed 	<ul style="list-style-type: none"> Impacts to parking spaces, signs, and landscaping will be compensated under the provisions of the Utah Relocation Assistance Act.
Pedestrian and cyclist considerations	<ul style="list-style-type: none"> Pedestrian and cyclist facilities improved 	<ul style="list-style-type: none"> None
Noise	<ul style="list-style-type: none"> 2-dBA increase in noise levels throughout noise evaluation area 36 of 139 receptors impacted (noise levels would equal or exceed UDOT's noise-abatement criteria) 	<ul style="list-style-type: none"> Noise walls are proposed at 3 locations. Noise wall balloting will be conducted consistent with UDOT's Noise Abatement Policy.
Water resources and floodplains	<ul style="list-style-type: none"> 13.4 acres of new impervious surface added Several existing wells are located adjacent to the right-of-way for the build alternative 	<ul style="list-style-type: none"> Detention basins are included in the project action to mitigate stormwater runoff resulting from new impervious surface. UDOT will coordinate with the property owners and water right holders during construction. UDOT will obtain the necessary floodplain development permits from municipalities for the new bridge and for any other location where an element of the build alternative would encroach on a FEMA special flood hazard.
Biological resources	<ul style="list-style-type: none"> No impact to threatened or endangered species No impact to wetlands 55 linear feet of the Jordan River altered 	<ul style="list-style-type: none"> UDOT or its construction contractor will obtain a stream alteration permit from the Utah Division of Water Rights and will obtain USACE authorization. The stream alteration permit will include conditions to mitigate impacts to the Jordan River, including revegetation requirements. UDOT or its construction contractor will obtain a sovereign lands permit from the Utah Division of Forestry, Fire and State Lands.

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Table 3-14. Summary of Build Alternative Impacts and Mitigation

Resource	Impacts from Build Alternative	Mitigation
Historic properties	<ul style="list-style-type: none"> • Adverse effect on 2 historic properties • No adverse effect on 3 historic properties 	<ul style="list-style-type: none"> • A Memorandum of Agreement will be developed between UDOT and the Utah SHPO describing the specific mitigation measures to be implemented if the build alternative is selected for this project.
Construction impacts	<ul style="list-style-type: none"> • Potential to increase particulates during construction • Temporary traffic congestion and detours • Short-term increase in noise due to construction equipment • Potential to expose underlying soils to invasive weeds • Short-term visual impacts to surrounding areas • Several hazardous material sites are located adjacent to the right-of-way for the build alternative 	<ul style="list-style-type: none"> • The construction contractor will be required to follow the appropriate BMPs included in UDOT's plans and specifications for construction. • Access to businesses and residences will be maintained. • The construction contractor will comply with all state and local regulations relating to construction noise. • UDOT will implement Standard Specifications. • The construction contractor will reclaim all disturbed areas per UDOT Supplemental Specification 02924S, <i>Invasive Weed Contractor Control</i>.

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4. PUBLIC AND AGENCY INVOLVEMENT

The planning for the 9000 South SES involved extensive coordination and consultation with the affected community, local governments, agencies, and other stakeholders. The public outreach activities for this stage of the project will culminate with a 30-day public comment period on this draft SES (ending on August 16, 2019) and a public hearing on July 18, 2019, at Riverside Elementary School at 8737 South 1220 West in West Jordan, Utah. A formal summary of all public involvement activities will be prepared and included as part of the final SES.

UDOT will continue to work with the public to ensure that people who are interested in the project understand the next steps (design and construction) and how such steps might affect the community.

4.1. Local Governments and Agency Involvement

Throughout the environmental process, UDOT coordinated with local governments and state and federal agencies that might have an interest in the 9000 South project.

Local Governments. UDOT held several meetings with West Jordan and Sandy Cities and Salt Lake County to discuss the SES process and involve them in the development of the 9000 South project.

State and Federal Agencies. UDOT sent letters to the Utah Resource Development Coordinating Committee's project management system for state agency review to request information from agencies regarding the resources under their jurisdiction in the project study area (see Appendix H, Pertinent Agency Correspondence). The letters requested that the agencies identify resources that could be affected by the build alternative, identify issues that should be analyzed in the SES, and determine whether project construction would require any permits or approvals from the agency. To date, UDOT has received no responses from any state or federal agencies.

Consultation per Utah Code Section 9-8-404. As part of the effort to identify historic properties in the APE and assess the effects on those properties, consultation activities per Utah Code Section 9-8-404 were conducted among UDOT, the Utah State Historic Preservation Office (both the Preservation and Antiquities Departments), and federally recognized Native American tribes.

4.2. Public Outreach Activities and SES Comment Period

Throughout the environmental process, UDOT coordinated with stakeholders including residents, utility owners, and businesses located along 9000 South.

Stakeholder Meetings. Throughout the development of the build alternative, UDOT met with several property and utility owners whose properties or utilities might be directly or indirectly affected by the build alternative. The purpose of the meetings was to inform property owners of the potential impacts, inform them about how the UDOT right-of-way process works, and respond to any comments.

SES Comment Period. The SES was provided to the public and agencies for a 30-day comment period from July 18, 2019, to August 16, 2019. An email was sent to the public and agency email list notifying the recipients of the comment period and locations where copies of this SES were available. An electronic version of this SES was posted on the project website, and paper copies were placed at the West Jordan and Sandy public libraries and city offices. Copies were also made available for public review at the UDOT Region Two office in Salt Lake City, Utah, and the UDOT Central Complex in Taylorsville, Utah.

5. PERMITS AND CLEARANCES

Table 5-1 lists the permits, reviews, clearances, and approvals that would likely be required to construct the build alternative. The contractor would be responsible for obtaining all construction-related permits and other environmental clearances for activities occurring outside the right-of-way, such as activities in construction staging areas, borrow areas, and batch plant sites.

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Table 5-1. Permits, Reviews, Clearances, and Approvals Likely To Be Required for the 9000 South Project

Permit	Granting Agency(ies)	Applicant	Application Time	Granting Time	Applicable Portion of Project
Federal Permits, Reviews, and Approvals					
Programmatic General Permit 10 (PGP 10) under Section 404 of the Clean Water Act	U.S. Army Corps of Engineers	UDOT	After the Final SES	Before construction	Required for new or modified stream crossings proposed as part of the build alternative
State Permits, Reviews, and Clearances					
Compliance with Utah Code Section 9-8-404	Utah SHPO and Advisory Council on Historic Preservation	UDOT	Concurrent with the SES	Final SES	Impacts to historic properties; includes consultation between agencies and interested parties
Water quality certification under Section 401 of the Clean Water Act	Utah Division of Water Quality	UDOT	Construction phase	Concurrent with Section 404 individual permit	Required if the build alternative could discharge fill into waters of the United States
UPDES permit under Section 402 of the Clean Water Act	Utah Division of Water Quality	Contractor	Construction phase	Before construction	Stormwater quality during construction phase
Sovereign lands permit	Utah Division of Forestry, Fire and State Lands	UDOT	Final design phase	Before construction	Required for work impacting the Jordan River
Stream alteration permit	Utah Division of Water Rights	UDOT	Final design phase	Before construction	Required for new or modified stream crossings proposed as part of the build alternative
Air quality approval order	Utah Division of Air Quality	Contractor	Construction phase	Before construction	Air quality during construction phase (emissions from equipment)
Approval of Remediation Work Plan	Utah Department of Environmental Quality or U.S. Environmental Protection Agency	UDOT	Construction	Before or during construction	Required if hazardous waste is found during construction

(continued on next page)

Table 5-1. Permits, Reviews, Clearances, and Approvals Likely To Be Required for the 9000 South Project

Permit	Granting Agency(ies)	Applicant	Application Time	Granting Time	Applicable Portion of Project
Local Permits and Clearances					
Floodplain development permit	Local jurisdictions	UDOT	Final design phase	Final design phase	Portions of roadway or structure in a Federal Emergency Management Agency floodplain
Construction-related permits and clearances	Various agencies	Contractor	Construction phase	Before construction	For activities occurring outside of the right-of-way, such as construction staging and borrow areas and batch plant sites

SES = State Environmental Study, SHPO = State Historic Preservation Officer, UDOT = Utah Department of Transportation, UPDES = Utah Pollutant Discharge Elimination System

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APPENDICES

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Appendix B. Air Quality Evaluation

Appendix C. Utilities Technical Report

Appendix D. Noise Analysis Technical Report

Appendix E. Aquatic Resources Delineation Report

Appendix F. Cultural Resources Correspondence

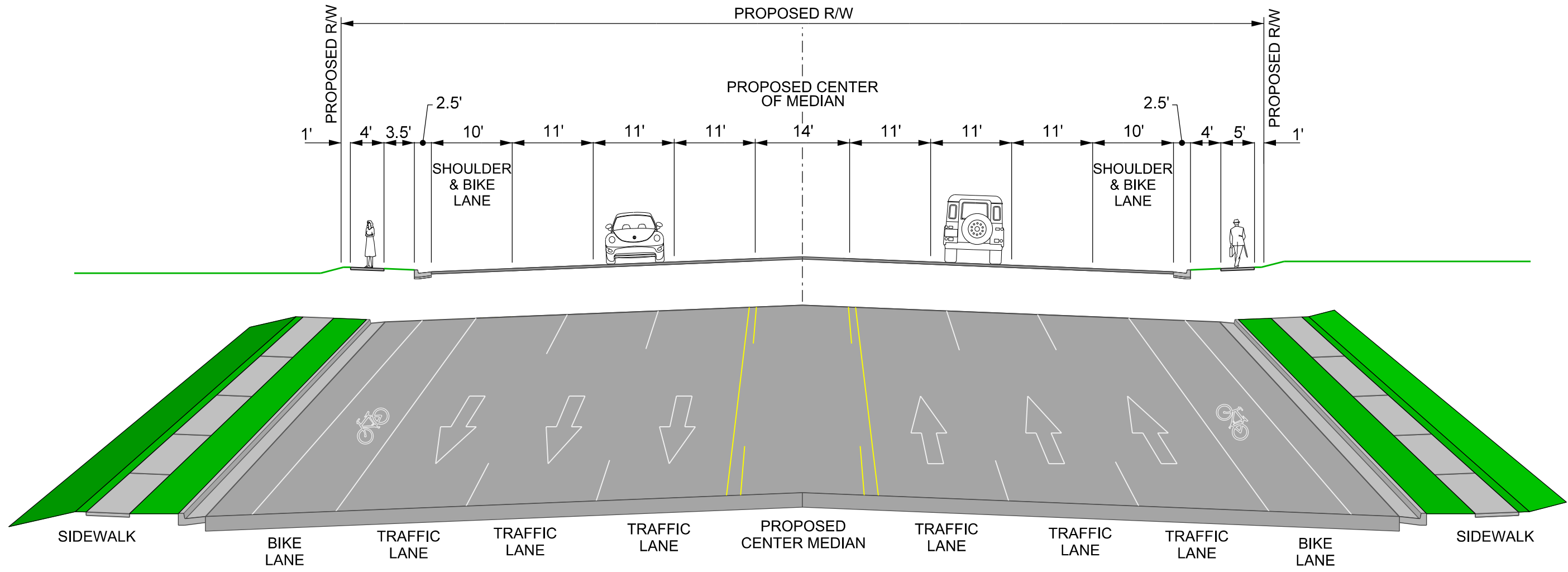
Appendix G. Environmental Data Resources Report

Appendix H. Pertinent Agency Correspondence

APPENDIX A

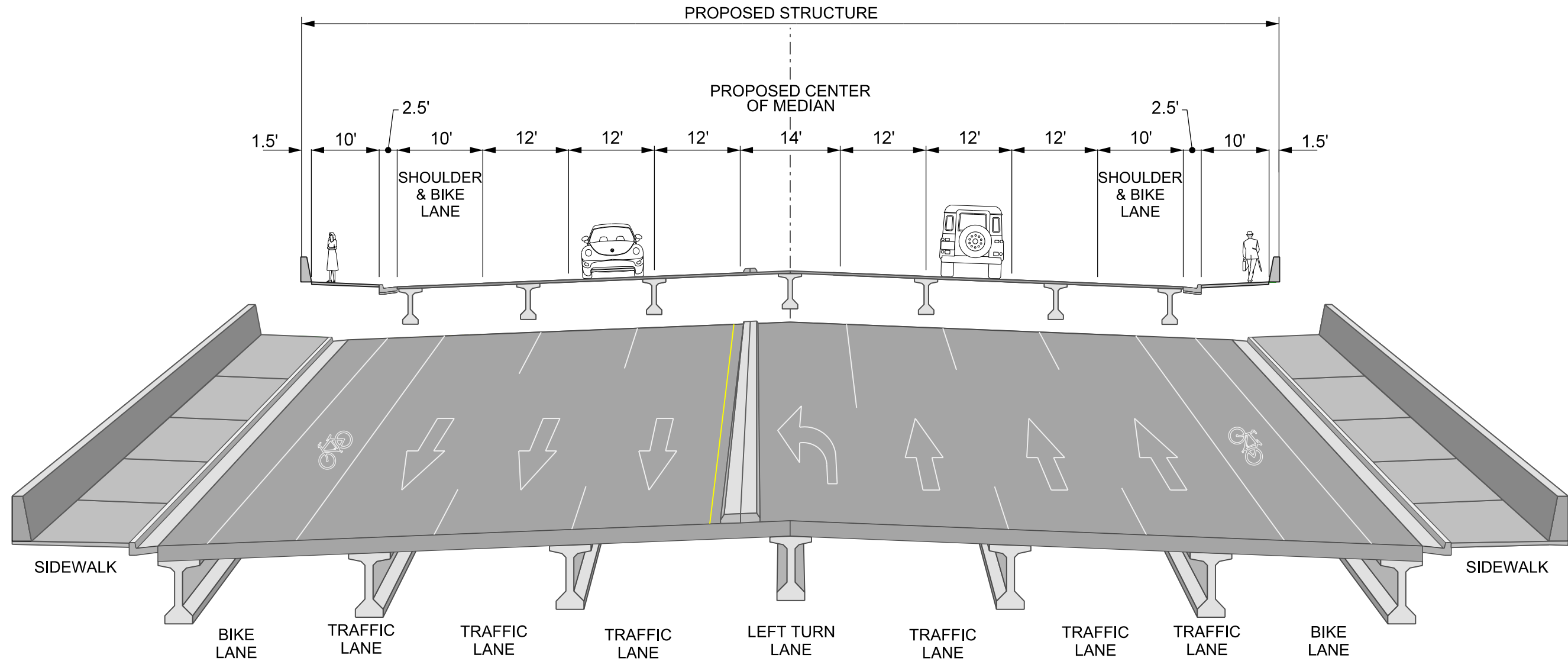
Build Alternative Typical Sections

SR-209 (9000 South)



7 LANE ARTERIAL W/BIKE LANE

SR-209 (9000 South)



PROPOSED STRUCTURE OVER THE JORDAN RIVER

APPENDIX B

Air Quality Evaluation

9000 SOUTH
ENVIRONMENTAL STUDY
Redwood Road to I-15

Air Quality Evaluation

S.R. 209 (9000 South); Redwood Road
to I-15

UDOT Project No. S-0209(35)10

July 15, 2019

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1.0 Introduction

Because the 9000 South project would not be federally funded, an air quality conformity determination was not required. However, for the purpose of public disclosure, UDOT conducted the following air quality evaluation.

2.0 Project Description

The 9000 South project would make roadway improvements in West Jordan and Sandy in Salt Lake County, Utah. The 9000 South project consists of improvements to 9000 South between Redwood Road and 700 West in the cities of West Jordan and Sandy. The project would enhance safety by improving substandard roadway components to meet current Utah Department of Transportation (UDOT) design standards.

In the project study area (Figure 1), 9000 South is classified as an urban principal arterial. Between Redwood Road and 700 West, 9000 South is a five-lane road with two travel lanes in each direction and a 14-foot-wide, center, two-way, left-turn lane for most of its length. Both the north and south shoulders are paved to varying widths that decrease toward the intersections. A low curb-style median barrier runs from the bridge over the Jordan River to 700 West, while a 500-foot-long landscaped median is in place at the Jordan River Parkway Trail underpass (in front of the River Oaks Golf Course). The bridge over the Jordan River (located just west of 700 West) is a four-lane structure with two 12-foot-wide travel lanes in each direction and 6 foot-wide shoulders but no sidewalk. The existing right-of-way for 9000 South is about 106 feet wide.

1.1 Roadway Components

The build alternative would widen about 1.5 miles of 9000 South between Redwood Road and 700 West from five to seven lanes (Figure 2). The build alternative would add an additional 11-foot-wide travel lane in each direction, for a total of three travel lanes in each direction plus a 14-foot-wide, center, two-way, left-turn turning lane. With three travel lanes in each direction, 9000 South in the project study area would match the lane configuration on 9000 South east of the project study area.

9000 South would be widened mostly to the south to minimize impacts to utilities, right-of-way, the existing storm drain system, and signal infrastructure. Therefore, the existing curb, gutter, and sidewalk on the north side of the road would be retained to the extent possible. Consistent 10-foot-wide shoulders would be incorporated on both sides of the road for safety. The new right-of-way for 9000 South would vary between 100 and 113 feet wide, depending on the location.

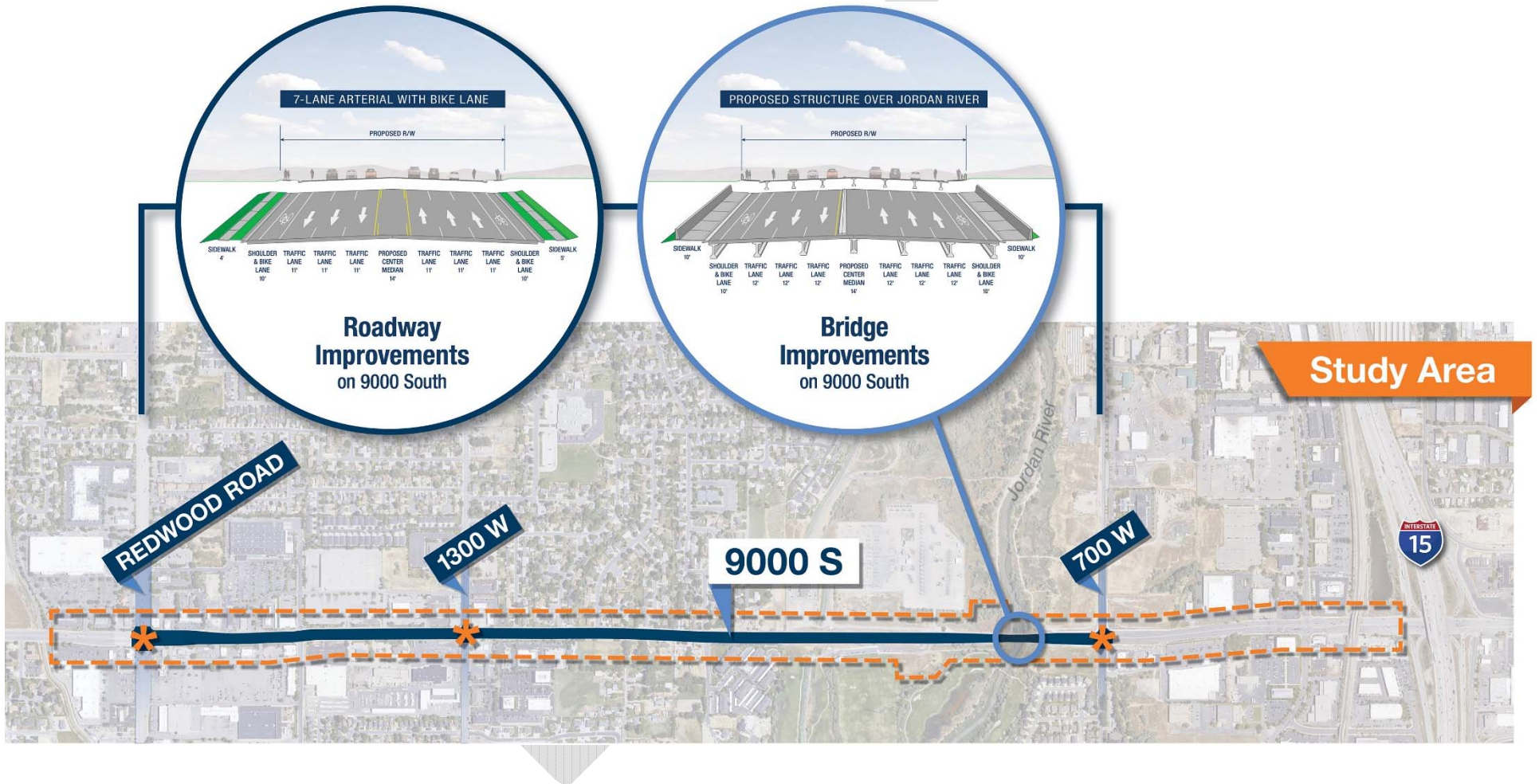
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Figure 1. Project Study Area



2

1 **Figure 2. Build Alternative Overview**



New detention basins would be included as part of the build alternative roadway components. One detention basin would be located near 1300 West in an existing parking lot on the south side of 9000 South. This basin would collect stormwater from 9000 South between the west side of the project study area near Redwood Road and 1300 West. Another detention basin would be sited near the Jordan River. There are three optional locations for this detention basin near the Jordan River. Basin option A1 would be located on the north side of 9000 South at about 792 West 9000 South. Basin option A2 would be located on the north side of 9000 South at about 900 West 9000 South, just south of the Rocky Mountain Power substation and adjacent to 9000 South. Basin option B would be located on the south side of 9000 South at about 859 West 9000 South on the River Oaks Golf Course property.

1.2 Active Transportation Components

The active transportation components of the build alternative include continuous sidewalks on both sides of the road from Redwood Road to 700 West. The sidewalk is currently discontinuous on both sides of the road between the North Jordan Canal (located east of 1075 West) and 700 West.

The sidewalk on the north side of 9000 South would remain 4 feet wide, but passing spaces would be provided every 200 feet. A 3.5-foot-wide park strip would run adjacent to the sidewalk. The sidewalk on the south side of the road would be upgraded to 5 feet wide with an adjacent 4-foot-wide park strip. In some locations, the park strip would be removed, and the sidewalk would be 6 feet wide.

In addition, the current single diagonal (apex) pedestrian ramps at all intersections between Redwood Road and 700 West would be upgraded to two diagonal pedestrian ramps to meet current UDOT and Americans with Disabilities Act (ADA) standards on both sides of the road. Push buttons at the intersections would also be upgraded to meet current UDOT and ADA standards.

The build alternative would include a conventional, nonprotected bicycle lane from Redwood Road to 700 West on the shoulders of 9000 South on both sides of the road. The bicycle lanes would generally be 6 feet wide and would narrow to 5 feet wide at right-turn lanes on both sides of the road. The bicycle lanes would not be buffered or protected by a barrier from the vehicle travel lanes, though they would be striped as designated cycling lanes.

The bicycle lane would be designated by a sharrow at the right-turn lanes for 1510 West and Redwood Road, while the 1300 West and 700 West intersections would have separate bicycle and turning lanes. The bicycle lanes would terminate at 700 West, and cyclists would be directed to take 700 West or the Jordan River Parkway Trail as a bicycle route.

What is a sharrow?

Sharrow is a combination of the words *share* and *arrow*, and as such sharrows are intended to be a visual reminder (typically via a painted bicycle and arrow on the pavement) that the given space in the road is meant to be shared by bicycles and cars. Because cars can still use a lane with sharrows in it, sharrows do not provide dedicated space on the street for cyclists; rather, they indicate a general area on the road in which it should be safe for people to bicycle.

1.3 Bridge Components

The build alternative would widen the existing bridge over the Jordan River, raise the bridge profile to meet current floodplain elevation requirements, and add sidewalks to the bridge on both sides of the road. To meet current UDOT standards, the new bridge would be 127 feet wide on the inside of the parapets and would have 12-foot-wide vehicle travel lanes, a 14-foot-wide median, and 10.5-foot-wide park strip and sidewalks on both sides.

To further meet current UDOT standards, the bridge parapet would be reconstructed to be 42-inch Test Level (TL) 4 with a constant slope shape. Currently, it is 32-inch TL-3 with a Jersey shape. TL-3 parapet is used for high-speed arterial highways with low percentages of heavy vehicles and with favorable site conditions. TL-4 is used for high-speed highways, freeways, expressways, and interstates with a higher percentage of trucks and heavy vehicles. 9000 South currently meets the criteria for TL-4.

3.0 Purpose of the Project

9000 South is a major east-west route and is heavily congested, especially during the PM peak traffic period (4 PM to 6 PM). The 9000 South Redwood Road to I-15 project is intended to improve local east-west traffic performance by reducing intersection congestion and average vehicle delay while improving travel mode choices and safety on 9000 South between Redwood Road and 700 West. UDOT intends the 9000 South project to fulfill the following three primary purposes:

1. Improve east-west traffic performance and decrease crash rates in the project study area.
2. Improve travel mode choices and safety for active transportation users.
3. Upgrade roadway elements to meet current UDOT design standards.

When developing the build alternative to meet these purpose elements, UDOT also considered the following project objectives:

- Minimize impacts to utilities.
- Minimize impacts to existing homes and businesses.

The primary project purposes were used to develop the build alternative. The project objectives were used to further refine the build alternative, primarily through minor shifts of the alignment.

What are peak traffic periods and peak traffic hours?

Peak periods are the morning and afternoon periods when there is the greatest number of vehicles on a road or at an intersection. For this analysis, the AM (morning) peak period is from 7 to 9 AM, and the PM (afternoon) peak period is from 4 to 6 PM.

Peak-period traffic counts helped UDOT determine hourly traffic volumes by direction for the day (for this analysis, between 7 AM and 6 PM) in order to determine the single AM and PM *peak hours* of traffic.

How is traffic performance measured?

Traffic performance has several measures of effectiveness including travel time, delay, and vehicle queue length.

4.0 Need for the Project

The three primary purposes of the project are a result of the following needs:

- Unmet travel demand, long vehicle queues at intersections leading to delay, and a higher-than-average number of front-to-rear crashes
- Lack of safe active transportation facilities
- Several roadway and bridge design elements that no longer meet current UDOT design standards

4.1 Unmet Travel Demand, Long Vehicle Queues at Intersections Leading to Delay, and a Higher-than-Average Number of Front-to-Rear Crashes

Continued development and population growth in and west of the project study area has resulted in increased travel on 9000 South that will exceed the road's capacity by 2050, resulting in heavy congestion and long vehicle queues at intersections.

9000 South between Redwood Road and 700 West currently experiences undesirable levels of congestion and delay at intersections during the PM peak period, and the existing traffic volumes are nearing the road's capacity. Congestion not only results in delay and long commutes but also contributes to front-to-rear (that is, rear-end) crashes because drivers are stopping more frequently while in long vehicle queues.

Given this past and projected growth, 9000 South in its current configuration through the project study area will be unable to serve the resulting increase in traffic demand. The resulting increased congestion along 9000 South will reduce the overall function of the road as an arterial that accommodates through traffic and will decrease the overall east-west mobility for residents of West Jordan and Sandy. Furthermore, increased congestion on 9000 South would increase the number of front-to-rear crashes.

By 2050, traffic along 9000 South will increase and traffic conditions between Redwood Road and 700 West will deteriorate. The analysis of traffic operations in 2050 under the no-build conditions shows that traffic performance along 9000 South will be poor without any improvements. The analysis of traffic operations in 2050 with the build alternative shows that, with the 9000 South project, traffic performance would improve overall. Although some of the intersections in the project study area would continue to perform at a level of service (LOS) of LOS F, the build alternative would reduce the average vehicle delay and reduce the travel times on westbound 9000 South during the PM peak hour by nearly 3 minutes while accommodating higher traffic volumes.

The safety analysis shows that the crash rates are expected to decrease by 24% with the build alternative and that the crash rates are predicted to be even lower than the crash rates with the existing conditions (2018), which would be a substantial benefit of the project.

What is travel demand?

Travel demand is the expected number of transportation trips in an area. Travel demand can be met by various modes of travel, such as automobile, bus, light rail, carpooling, and bicycling.

4.2 Lack of Safe Active Transportation Facilities

In addition to improving mobility and reducing congestion for vehicles, the 9000 South project would also improve travel mode choices and safety for active transportation users. 9000 South is currently not signed or striped to accommodate bicycles, and there are no bicycle lanes on 9000 South. The roadway has little room for cyclists because the shoulder is either missing or very narrow in several locations.

In addition, the sidewalks in the project study area are discontinuous between 1075 West and 700 West and need to be replaced along the south side of 9000 South. The existing sidewalks through these areas do not safely or comfortably accommodate pedestrians, nor do they meet current UDOT design standards. Furthermore, the existing pedestrian facilities along most of 9000 South lack pedestrian ramps and push buttons at traffic signals per the current ADA standards.

4.3 Several Roadway and Bridge Design Elements That No Longer Meet Current UDOT Design Standards

Parts of 9000 South were built over 25 years ago and do not meet current UDOT design standards. These design elements include narrow or missing shoulders, discontinuous and substandard sidewalks and pedestrian ramps, other insufficient active pedestrian facilities (as described in Section 4.2, Lack of Safe Active Transportation Facilities). In addition, the bridge over the Jordan River, located just west of 700 West, is almost 50 years old and is also substandard. The proposed improvements to 9000 South would enhance safety for all users by meeting current UDOT design standards for several roadway and bridge design elements.

5.0 Attainment Status of the Project Area

An *attainment area* is an area that meets (or “attains”) the National Ambient Air Quality Standards (NAAQS) for a given air pollutant. A *nonattainment area* is an area that does not meet the NAAQS for a given air pollutant. A *maintenance area* is an area previously designated as a nonattainment area that has been redesignated to attainment status and is required to have a maintenance plan.

The improvements associated with the 9000 South project would be made in West Jordan and Sandy in Salt Lake County, which is a maintenance area for carbon monoxide (CO) and a nonattainment area for ozone (O₃), particulate matter 2.5 microns in diameter or smaller (PM_{2.5}), particulate matter 10 microns in diameter or smaller (PM₁₀), and sulfur dioxide (SO₂) (EPA 2018; UDEQ 2018). Table 1 shows the NAAQS (which are also the Utah standards) for those pollutants.

SO₂ is not considered a transportation-related criteria pollutant and is not discussed further in this evaluation.

Table 1. National and Utah Ambient Air Quality Standards for CO, O₃, PM_{2.5}, PM₁₀, and SO₂ and Attainment Status for Salt Lake County

Pollutant	Primary/ Secondary	Averaging Time	Level	Form	Attainment Status
Carbon monoxide (CO)	Primary	8 hours	9 ppm	Not be exceeded more than once per year	Maintenance area
		1 hour	35 ppm	Not be exceeded more than once per year	
Ozone (O ₃)	Primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years	Nonattainment area
Particulate matter (PM _{2.5})	Primary	1 year	12.0 µg/m ³	Annual mean, averaged over 3 years	Nonattainment area
	Secondary	1 year	15.0 µg/m ³	Annual mean, averaged over 3 years	
	Primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years	
Particulate matter (PM ₁₀)	Primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years	Nonattainment area

Source: EPA, no date

µg/m³ = micrograms per cubic meter; ppm = parts per million;

PM_{2.5} = particulate matter 2.5 microns in diameter or smaller;

PM₁₀ = particulate matter 10 microns in diameter or smaller

6.0 Definitions and Examples of Projects of Air Quality Concern

Title 40, *Protection of Environment*, is the section of the Code of Federal Regulations (CFR) that pertains to the environmental regulations implemented by the U.S. Environmental Protection Agency (EPA).

Subchapter C of Title 40 covers air quality programs such as the Clean Air Act and the NAAQS. The 9000

South project is not an exempt project under either 40 CFR Section 93.126 or 40 CFR Section 93.128

because it would add travel lanes to improve the operation of and safety on 9000 South, and therefore requires further review to determine whether it qualifies as a project of air quality concern.

If a project is of air quality concern, it requires a quantitative hot-spot analysis for those transportation-related criteria pollutants for which the area has been designated as a nonattainment or maintenance area (for this project, that would mean hot-spot analyses for CO, PM_{2.5}, and PM₁₀).

Projects defined by 40 CFR Section 93.123(b)(1) as projects of air quality concern can include:

- (i) New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles
- (ii) Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project
- (iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location
- (iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location
- (v) Projects in or affecting locations, areas, or categories of sites that are identified in the PM₁₀ or PM_{2.5} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation

As stated in the list above, the primary considerations in determining whether a project is potentially one of air quality concern is the number of diesel-fueled vehicles operating in the project area or the number of diesel-fueled vehicles at poorly operating intersections.

What is a hot-spot analysis?

A hot-spot analysis is a project-level analysis that looks at local air quality impacts, such as at intersection crosswalks or residences near a roadway.

EPA's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas* (EPA 2015a) provides guidance for reviewing transportation projects in the context of Title 40 and clarification regarding the criteria for determining whether a project is a project of air quality concern. Appendix B of EPA's hot-spot guidance provides the following examples of projects of local air quality concern that would be covered by 40 CFR Sections 93.123(b)(1)(i) and (ii):

- A project on a new highway or expressway that serves a significant volume of diesel vehicle traffic, such as facilities with greater than 125,000 annual average daily traffic (AADT), and 8% or more of such AADT is diesel truck traffic
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal
- Expansion of an existing highway or other facility that affects a congested intersection (operating at LOS D, E, or F) that has a significant increase in the number of diesel trucks
- Similar highway projects that involve a significant increase in the number of diesel transit buses and/or diesel trucks

EPA's hot-spot guidance also provides the following examples of projects that are *not* projects of local air quality concern under 40 CFR Sections 93.123(b)(1)(i) and (ii):

- Any new or expanded highway project that primarily services gasoline vehicle traffic (that is, does not involve a significant number or increase in the number of diesel vehicles), including such projects involving congested intersections operating at LOS D, E, or F.
- An intersection channelization project or interchange-configuration project that involves either turn lanes or slots, or lanes or movements that are physically separated. These kinds of projects improve freeway operations by smoothing traffic flow and vehicle speeds by improving weave and merge operations, which would not be expected to create or worsen PM NAAQS violations.
- Intersection channelization projects, traffic circles or roundabouts, intersection signalization projects at individual intersections, and interchange-reconfiguration projects that are designed to improve traffic flow and vehicle speeds, and do not involve any increases in idling. Thus, they would be expected to have a neutral or positive influence on PM emissions.

EPA also has issued guidance for considering and evaluating O₃ and CO emissions in nonattainment and maintenance areas (EPA 2012, 2015b).

7.0 Project of Air Quality Concern Evaluation

This section reviews the characteristics of the 9000 South project according to Appendix B, *Examples of Projects of Local Air Quality Concern*, of EPA's transportation conformity guidance (EPA 2015a).

7.1 New Highway Capacity

Definition. Is this a new highway project that has a significant number of diesel vehicles?

Response. No. The 9000 South project would widen 1.5 miles of 9000 South, an existing arterial street, from five to seven lanes between Redwood Road and 700 West to improve east-west traffic performance and decrease crash rates in the project study area by reducing intersection congestion and average vehicle delay. The active transportation component of the project includes extending bicycle lanes from Redwood Road to 700 West. Safety would be further enhanced by improving substandard components to meet current UDOT design standards.

7.2 Expanded Highway Capacity

Definition. Is this an expanded highway project that has a significant increase in the number of diesel vehicles?

Response. No. The 9000 South project would add an additional 11-foot-wide travel lane in each direction, for a total of three travel lanes in each direction, plus a 14-foot-wide, center, two-way, left-turn lane. With three travel lanes in each direction, 9000 South in the project study area would match the lane configuration on 9000 South east of the project study area. The number of diesel vehicles would not increase due to the project because the volume of diesel truck traffic is a function of the overall truck volumes on 9000 South and is not expected to change due to the additional travel lanes. The same volume of trucks would access 9000 South regardless of the design changes that are intended to improve the operation of the mainline and intersections. In the project study area, 9000 South has an existing annual average daily traffic (AADT) of about 46,000 vehicles per day, of which about 14% is truck traffic (10% single-unit trucks and 4% combo trucks [that is, semi-trucks]) (Avenue Consultants 2019). As stated in Section 6.0, Definitions and Examples of Projects of Air Quality Concern, EPA guidance suggests that projects of potential air quality concern could be those with more than 125,000 vehicles per day on average, which is over two and a half times the amount of traffic on 9000 South.

7.3 Projects with Congested Intersections

Definition. Does this project affect intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or will this project change an intersection to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project?

Response. No. The volume of diesel trucks operating in the project study area with the 9000 South project would not be significant, and the project would not increase the number

of trucks or overall vehicles compared to the no-action conditions. With the build alternative, traffic volumes in 2050 are projected to increase at each intersection. However, the percent of vehicles served would also increase, which indicates improved operating conditions.

Although some of the intersections in the project study area would continue to perform at LOS F, the build alternative would reduce the average vehicle delay and reduce the travel times on westbound 9000 South during the PM peak hour while accommodating higher traffic volumes, which would reduce vehicle emissions.

7.4 New Bus and Rail Terminals

Definition. Does this project include new bus and rail terminals and transfer points that will have a significant number of diesel vehicles congregating at a single location?

Response. No. The 9000 South project does not involve constructing or connecting to new bus or rail terminals or transfer stations.

7.5 Expanded Bus and Rail Terminals

Definition. Does this project include expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location?

Response. No. The 9000 South project does not involve expanding bus or rail terminals or transfer stations.

7.6 Projects in or Affecting PM₁₀ or PM_{2.5} Sites of Violation or Possible Violation

Definition. Is this project in or affecting locations, areas, or categories of sites that are identified in the PM₁₀ or PM_{2.5} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation?

Response. No. Sections IX.A and IX.A.21 of Utah's State Implementation Plan (SIP) address PM₁₀ and PM_{2.5} in Salt Lake County. The 9000 South project is an expanded highway project that services primarily gasoline vehicle traffic (that is, it does not involve a significant number of or an increase in the number of diesel vehicles), including such projects involving congested intersections operating at LOS D, E, or F as defined in Section 6.0, Definitions and Examples of Projects of Air Quality Concern, which defines projects that generally are not considered projects of air quality concern. This project type is not identified in either Section IX.A or Section IX.A.21 of the SIP as a project of air quality concern or as a type of transportation project location having a potential to increase local emissions or worsen air quality and therefore requiring a hot-spot analysis (UDEQ 2015, 2018). The 9000 South project is intended to improve the operation of the mainline and intersections by improving east-west traffic performance by reducing intersection congestion and average vehicle delay, thereby reducing congestion and improving traffic flows, which would reduce vehicle emissions.

What is a State Implementation Plan (SIP)?

The Clean Air Act of 1970 requires each State to prepare and submit a SIP to attain, maintain, and enforce the NAAQS.

As a control strategy, Section IX.A.11 of the SIP (the PM₁₀ maintenance plan for Salt Lake County) recommends synchronizing traffic signals and maintaining continuous traffic flows on interstate highways. The State of Utah has submitted a maintenance plan to EPA demonstrating attainment of the PM₁₀ NAAQS through 2030 and is currently awaiting EPA's approval of that plan. EPA's approval of the maintenance plan would allow Salt Lake County to be redesignated as an attainment area for PM₁₀ (UDEQ 2015, Section IX.A.11). The 9000 South project would improve the operation of signalized intersections by reducing intersection delay and thereby reducing the overall average vehicle delay and travel times on westbound 9000 South during the PM peak hour while accommodating higher traffic volumes, which would help to reduce vehicle emissions.

7.7 Project of Air Quality Concern Determination

Standard. State whether the project is a project of air quality concern and summarize the support determination. Document the relevant agencies that require interagency consultation on any input for the determination from federal, state, and local transportation and air agencies as necessary for this project per 40 CFR Section 93.105. This information will be included in any subsequent air quality analysis and project-level conformity determination reports.

Response. The 9000 South project does not qualify as a project of air quality concern because it would not increase the number of diesel vehicles in the project area compared to the no-action conditions. The project is not expected to either influence the vehicle mix in the project area or attract new diesel vehicles to the area. The project is an expansion of a roadway that services primarily gasoline vehicle traffic (that is, it does not involve a significant number of or increase in the number of diesel vehicles), including such projects involving congested intersections operating at LOS D, E, or F. The project would improve delay, travel time, and safety, which would subsequently improve operations by smoothing traffic flow and vehicle speeds. EPA's hot-spot guidance states that such projects are *not* projects of local air quality concern under 40 CFR Sections 93.123(b)(1)(i) and (ii).

In summary, the 9000 South project is not a project of air quality concern, so no project-level (hot-spot) analysis is required for conformity purposes under 40 CFR Section 93.123(b).

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APPENDIX C

Utilities Technical Report

Appendix is in development

APPENDIX D

Noise Analysis Technical Report

From: Elisa Albury [REDACTED]
Date: July 10, 2019 at 4:15:20 PM MDT
To: "Spoor, Heidi K." [REDACTED]
Cc: Rebecka Stromness [REDACTED], Tyler Allen [REDACTED], "Chaney, Jerry" [REDACTED], "Simmons, Jeffrey" [REDACTED]
Subject: Re: FW: 9000 South Noise Technical Report

I am good with these revisions and the report can be considered final.
Thanks
Elisa

9000 SOUTH
ENVIRONMENTAL STUDY
Redwood Road to I-15

Noise Analysis Technical Report

9000 South, Redwood Road to I-15

May 17, 2019

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Acronyms and Abbreviations

CFR	Code of Federal Regulations
dBA	A-weighted decibels
FHWA	Federal Highway Administration
L _{eq}	equivalent sound level
ML	monitoring location
NA	not applicable
NAC	noise-abatement criteria
TNM	Traffic Noise Model
UDOT	Utah Department of Transportation

1.0 Introduction

This technical report discusses the current noise levels in the noise evaluation area for the 9000 South, Redwood Road to Interstate 15 Project and the expected impacts to noise levels from the Proposed Project.

Project Description. The Proposed Project would widen about 1.5 miles of 9000 South between Redwood Road and 700 West from five to seven lanes. The Proposed Project would add an additional 11-foot-wide travel lane in each direction, for a total of three travel lanes in each direction plus a 14-foot-wide, center, two-way, left-turn turning lane.

Noise Evaluation Area. The majority of the noise evaluation area is within the city of West Jordan in Salt Lake County, Utah. East of the Jordan River, small portions of the evaluation area are within the city of Sandy and in unincorporated Salt Lake County. The evaluation area includes noise receptors within a 500-foot buffer on either side of the 9000 South roadway, beginning at the Redwood Road intersection and continuing east about 2 miles to 700 West. From 700 West to the eastern project limits at Sandy Parkway, the land uses consist of commercial and retail facilities that do not have exterior noise-sensitive areas, so noise was not evaluated for this area.

2.0 Regulatory Environment and Compliance

The federal regulation that the Federal Highway Administration (FHWA) uses to assess noise impacts is 23 Code of Federal Regulations (CFR) Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. This regulation was most recently updated on July 13, 2010.

In Utah, Utah Administrative Code Rule 930-3 and the Utah Department of Transportation's (UDOT) Noise Abatement Policy 08A2-01 (June 2017; Noise Policy) establish UDOT's noise impact and abatement policies and procedures that are compliant with 23 CFR Part 772. UDOT's Noise Policy describes procedures for conducting traffic noise studies including identifying existing and predicted future traffic noise levels associated with the project, determining whether impacts would occur as a result of project development, and evaluating abatement measures for feasibility and reasonableness if impacts would occur.

2.1 Noise Policy Applicability

UDOT's Noise Policy states that potential noise impacts must be evaluated for all Type I federal-aid and state-funded highway projects, as defined by 23 CFR Section 772.5. Type I projects include those projects that involve construction of new highways, or reconstruction of existing highways, by significantly changing either the horizontal or vertical alignment, adding through travel lanes or auxiliary lanes, or making other alterations such as relocating interchange lanes or restriping. This project qualifies as a Type I project because of the addition of new through travel lanes throughout the project length, so a traffic noise analysis is required.

Noise impact and abatement analyses are required for projects located in land use activity categories A, B, C, D, and E (see Table 2-1) only when development exists or has been

permitted (that is, a formal building permit has been issued before the final environmental decision document is approved). Activity Categories F and G include lands that are not sensitive to traffic noise, and noise analyses are not required.

2.2 Noise-Abatement Criteria

Noise-abatement criteria (NAC) define the noise levels (in hourly A-weighted sound-level decibels) that are considered an impact for each land use activity category. UDOT’s Noise Policy states that a traffic noise impact occurs when either (1) the future worst-case noise level is equal to or greater than the UDOT NAC for specified land use categories or (2) the future worst-case noise level is greater than or equal to an increase of 10 A-weighted decibels (dBA) over the existing noise level. The UDOT NAC are summarized in Table 2-1. UDOT gives primary consideration to noise levels modeled at exterior areas of frequent human use (that is, back yards, balconies, playgrounds, etc.).

Table 2-1. UDOT’s Noise-abatement Criteria

Activity Category	UDOT Criterion in dBA $L_{eq}(h)$	Evaluation Location	Activity Description
A	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	66	Exterior	Residential.
C	66	Exterior	Active sports areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios trails and trail crossings.
D	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in Categories A–D or F.
F	— ^a	— ^a	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	— ^a	— ^a	Undeveloped lands that are not permitted.

Source: UDOT 2017

dBA = A-weighted decibels; $L_{eq}(h)$ = 1-hour equivalent sound level

^a The F and G activity categories do not have specified noise-abatement criteria.

3.0 Methodology

UDOT measured the existing noise levels in the noise evaluation area at selected locations (ML-1 through ML-5; see Figure 3-1) for the purpose of validating the FHWA Traffic Noise Model (TNM, version 2.5). Noise-measurement locations were selected to represent existing residential developments, recreation areas, and other noise-sensitive areas. Noise measurements were taken over a 15-minute period at each location with a sound-level meter and then compared to results obtained from the TNM.

By comparing the measured noise values with the TNM results, UDOT can determine whether the noise model is a reasonably accurate representation of the project area. Measured noise levels observed in the field are compared with predicted noise levels using the observed traffic volumes, vehicle class distribution, and vehicle speeds. If the measured and modeled noise levels are within 3 dBA, UDOT considers the noise model to be accurate for conducting the noise impact analysis. As shown in Table 3-1, the measured noise levels were within 3 dBA of the modeled noise levels, so the TNM is considered valid.

The measured noise levels ranged from about 53 to 75 dBA depending on the proximity of the monitoring location to 9000 South. UDOT’s NAC were exceeded at ML-1 (the Sonic Drive-In restaurant) and ML-2 (Residential).

Table 3-1. Monitored and Modeled Noise Levels in the Noise Impact Analysis Area

Monitoring Location (ML) ^a	Address	Activity Category and UDOT NAC (dBA L _{eq}) ^b	Monitored (Measured) Noise Level (dBA)	Modeled Noise Level (dBA)	Difference (dBA)
ML-1	Sonic Drive-In 1572 West 9000 South	E 71	73.5	70.9	-2.6
ML-2	8983 Galilee Way	B 66	74.8	72.2	-2.6
ML-3	River Oaks Suites & Apartments 9035 South 1075 West	B 66	53.4	53.1	-0.3
ML-4	River Oaks Driving Range 891 West 9000 South	C 66	59.8	59.6	-0.2
ML-5	740 Jordan Oaks Drive	B 66	55.3	56.5	+1.2

dBA = A-weighted decibels; L_{eq} = equivalent sound level; ML = monitoring location

^a Noise-monitoring locations are shown in Figure 3-1, Noise-measurement Locations, below.

^b For descriptions of the activity categories, see Table 2-1, UDOT’s Noise-abatement Criteria, above.

Figure 3-1. Noise-measurement Locations



4.0 Existing Conditions

The primary source of existing noise along 9000 South is vehicle traffic. The majority of 9000 South in the noise evaluation area consists of two eastbound and two westbound lanes with a center turn lane. Dedicated turn lanes are present at signalized intersections with adjacent roads (that is, Redwood Road, 1510 West, 1300 West, 700 West, and Sandy Parkway).

UDOT identified the existing residential and recreational land uses (Activity Categories B, C, and E) in the noise evaluation area. Activity Category B land uses include all residences. Activity Category C land uses include the River Oaks Golf Course and the Jordan River Parkway Trail. Activity Category E land uses include restaurants.

Existing masonry and concrete walls can help to reduce traffic noise depending on their length and proximity to sensitive land uses. An existing noise wall is located on the north side of 9000 South between 1120 West and Midvalley Drive (see Figure 6-1, Noise Walls Recommended for the Proposed Project, on page 25). This wall ranges from 6 feet 8 inches to 7 feet 8 inches high and was constructed as part of a previous 9000 South project. A masonry privacy wall is also located on the north side of 9000 South between Galilee Way and 1075 West that ranges from 6 feet 2 inches to 6 feet 8 inches high. These two walls are included in the noise analysis for the current project. Wood fences are present at residential properties throughout the noise evaluation area but do not adequately reduce traffic noise and are not included in the analysis.

UDOT calculated the existing noise levels for each receiver with the TNM using the existing travel lane configurations, observed traffic counts, and observed vehicle speeds. The noise model includes 139 receptors (representing 239 individual dwelling units, 3 restaurants, and 8 recreational locations). Under the existing, 18 receptors exceed the NAC (representing 25 individual dwelling units and 1 restaurant). The locations of all receptors and those that exceed the NAC are shown in Figure 5-1 through Figure 5-3, Existing Noise Impacts, beginning on page 11.

5.0 Expected Impacts

UDOT estimated the traffic noise impacts from the 9000 South project using the TNM based on the proposed roadway design for the Proposed Project. The modeled roadway includes the proposed widening on 9000 South. Future worst-case noise levels were estimated using level of service (LOS) C traffic volumes for the eastbound and westbound through lanes. The predicted noise levels with the Proposed Project range from 48 to 73 dBA compared to the existing conditions of 46 to 72 dBA (see Table 3-3).

With the Proposed Project, 24 receptors (representing 34 residences, 1 restaurant, and 1 recreational area) are predicted to equal or exceed the UDOT NAC. No receptors are predicted to experience noise levels of 10 dBA or more over existing noise levels. The locations of receptors that would exceed the NAC are shown in Figure 5-4 through Figure 5-6, Noise Impacts with the Proposed Project, beginning on page 14. UDOT has considered noise-abatement measures at impacted receptors where reasonable and feasible in accordance with UDOT’s Noise Policy (see Section 6.0, Mitigation).

Table 5-1 summarizes the modeled existing and future noise levels from the Proposed Project at each receptor in the noise evaluation area. In the table, darker-shaded cells indicate existing or future noise impacts.

Table 5-1. Modeled Existing and Future Noise Levels in the Noise Evaluation Area with the Proposed Project

Receptor	Activity Category/ UDOT NAC in dBA $L_{eq}(h)$	Number of Dwelling Units Represented	Existing		With Proposed Project		
			Existing Noise Level (dBA)	Existing Impact?	Proposed Project Noise Level (dBA)	≥ UDOT NAC?	≥ 10 dBA Increase over Existing Noise Level?
1	B / 66	2	54.5	No	55.9	No	No
2	B / 66	2	58.9	No	59.6	No	No
3	B / 66	1	65.1	No	66.2	Yes	No
4	B / 66	1	71.6	Yes	72.0	Yes	No
5	B / 66	2	55.0	No	56.6	No	No
6	B / 66	2	65.1	No	65.8	No	No
7	B / 66	1	71.5	Yes	71.8	Yes	No
7A	B / 66	1	71.5	Yes	69.4	Yes	No
7B	B / 66	1	71.5	Yes	71.8	Yes	No
8	B / 66	2	54.0	No	56.2	No	No
9	B / 66	2	57.8	No	59.8	No	No
10	B / 66	2	61.5	No	65.5	No	No
11	B / 66	2	62.2	No	63.1	No	No
12	B / 66	1	60.7	No	62.0	No	No
13	B / 66	2	62.1	No	63.6	No	No
14	B / 66	2	53.4	No	55.5	No	No

(continued on next page)

Table 5-1. Modeled Existing and Future Noise Levels in the Noise Evaluation Area with the Proposed Project

Receptor	Activity Category/ UDOT NAC in dBA L _{eq} (h)	Number of Dwelling Units Represented	Existing		With Proposed Project		
			Existing Noise Level (dBA)	Existing Impact?	Proposed Project Noise Level (dBA)	≥ UDOT NAC?	≥ 10 dBA Increase over Existing Noise Level?
15	B / 66	2	55.6	No	57.7	No	No
16	B / 66	2	58.6	No	60.9	No	No
17	B / 66	3	62.4	No	64.3	No	No
18	B / 66	2	55.4	No	56.9	No	No
19	B / 66	2	61.5	No	62.7	No	No
20	B / 66	3	70.4	Yes	70.9	Yes	No
21	B / 66	2	59.5	No	60.6	No	No
22	B / 66	2	53.9	No	56.5	No	No
23	B / 66	2	60.1	No	62.7	No	No
24	B / 66	2	70.0	Yes	71.7	Yes	No
25	B / 66	1	66.4	Yes	68.8	Yes	No
26	B / 66	1	51.0	No	54.1	No	No
27	B / 66	2	54.7	No	57.8	No	No
28	B / 66	1	55.8	No	58.7	No	No
29	B / 66	1	64.4	No	67.9	Yes	No
30	C / 66	Bike/ped trail	52.7	No	55.6	No	No
31	C / 66	Bike/ped trail	60.1	No	63.5	No	No
ML-1	E / 71	Sonic Drive-In	72.4	Yes	72.5	Yes	No
32	E / 71	Starbucks	67.3	No	68.2	No	No
33	E / 71	McDonald's	67.0	No	68.4	No	No
34	B / 66	1	64.4	No	65.8	No	No
35	B / 66	1	60.6	No	61.4	No	No
36	B / 66	1	57.6	No	58.7	No	No
37	B / 66	1	66.2	Yes	67.7	Yes	No
38	B / 66	1	60.3	No	61.2	No	No
39	B / 66	1	56.5	No	58.0	No	No
40	B / 66	1	68.7	Yes	70.5	Yes	No
41	B / 66	1	62.1	No	63.6	No	No
42	B / 66	1	65.3	No	66.9	Yes	No
43	B / 66	1	55.5	No	57.2	No	No
44	B / 66	2 (1st floor)	68.3	Yes	69.3	Yes	No
44 B1	B / 66	2 (Balcony 1)	68.6	Yes	71.1	Yes	No
44 B2	B / 66	2 (Balcony 2)	69.3	Yes	72.4	Yes	No
44 B3	B / 66	2 (Balcony 3)	69.4	Yes	72.4	Yes	No

(continued on next page)

Table 5-1. Modeled Existing and Future Noise Levels in the Noise Evaluation Area with the Proposed Project

Receptor	Activity Category/ UDOT NAC in dBA L _{eq} (h)	Number of Dwelling Units Represented	Existing		With Proposed Project		
			Existing Noise Level (dBA)	Existing Impact?	Proposed Project Noise Level (dBA)	≥ UDOT NAC?	≥ 10 dBA Increase over Existing Noise Level?
45	B / 66	2 (1st floor)	62.7	No	65.1	No	No
45 B1	B / 66	2 (Balcony 1)	65.6	No	67.5	Yes	No
45 B2	B / 66	2 (Balcony 2)	65.9	No	68.4	Yes	No
45 B3	B / 66	2 (Balcony 3)	66.3	Yes	69.0	Yes	No
46	B / 66	2 (1st floor)	61.0	No	63.6	No	No
46 B1	B / 66	2 (Balcony 1)	62.7	No	64.8	No	No
46 B2	B / 66	2 (Balcony 2)	63.4	No	65.6	No	No
46 B3	B / 66	2 (Balcony 3)	63.7	No	66.3	Yes	No
47	B / 66	2 (1st floor)	59.4	No	62.5	No	No
47 B1	B / 66	2 (Balcony 1)	61.9	No	61.2	No	No
47 B2	B / 66	2 (Balcony 2)	62.2	No	64.3	No	No
47 B3	B / 66	2 (Balcony 3)	59.3	No	64.9	No	No
48	B / 66	2 (1st floor)	58.7	No	56.8	No	No
48 B1	B / 66	2 (Balcony 1)	59.3	No	61.2	No	No
48 B2	B / 66	2 (Balcony 2)	60.0	No	62.5	No	No
48 B3	B / 66	2 (Balcony 3)	61.2	No	63.7	No	No
49	B / 66	2 (1st floor)	54.9	No	53.9	No	No
49 B1	B / 66	2 (Balcony 1)	55.3	No	56.8	No	No
49 B2	B / 66	2 (Balcony 2)	56.5	No	59.4	No	No
49 B3	B / 66	2 (Balcony 3)	58.2	No	60.9	No	No
50	B / 66	2 (1st floor)	52.4	No	52.0	No	No
50 B1	B / 66	2 (Balcony 1)	53.3	No	54.5	No	No
50 B2	B / 66	2 (Balcony 2)	54.9	No	57.5	No	No
50 B3	B / 66	2 (Balcony 3)	56.4	No	59.1	No	No
51	B / 66	2 (1st floor)	52.0	No	52.5	No	No
51 B1	B / 66	2 (Balcony 1)	52.7	No	53.6	No	No
52 B2	B / 66	2 (Balcony 2)	53.6	No	55.7	No	No
51 B3	B / 66	2 (1st floor)	55.2	No	57.6	No	No
52	B / 66	2 (1st floor)	64.4	No	64.2	No	No
52 B1	B / 66	2 (Balcony 1)	66.7	Yes	64.8	No	No
52 B2	B / 66	2 (Balcony 2)	68.1	Yes	69.6	Yes	No
53	B / 66	2 (1st floor)	59.3	No	60.7	No	No
53 B1	B / 66	2 (Balcony 1)	59.0	No	60.5	No	No
53 B2	B / 66	2 (Balcony 2)	63.6	No	63.9	No	No
54	C / 66	Pool area	55.0	No	55.9	No	No

(continued on next page)

Table 5-1. Modeled Existing and Future Noise Levels in the Noise Evaluation Area with the Proposed Project

Receptor	Activity Category/ UDOT NAC in dBA L _{eq} (h)	Number of Dwelling Units Represented	Existing		With Proposed Project		
			Existing Noise Level (dBA)	Existing Impact?	Proposed Project Noise Level (dBA)	≥ UDOT NAC?	≥ 10 dBA Increase over Existing Noise Level?
55	B / 66	2 (1st floor)	52.1	No	57.5	No	No
55 B1	B / 66	2 (Balcony 1)	60.3	No	60.0	No	No
55 B2	B / 66	2 (Balcony 2)	60.7	No	62.5	No	No
56	B / 66	2 (1st floor)	48.6	No	52.8	No	No
56 B1	B / 66	2 (Balcony 1)	54.9	No	57.3	No	No
56 B2	B / 66	2 (Balcony 2)	58.4	No	59.4	No	No
57	B / 66	2 (1st floor)	48.8	No	52.6	No	No
57 B1	B / 66	2 (Balcony 1)	49.1	No	52.8	No	No
57 B2	B / 66	2 (Balcony 2)	53.8	No	53.7	No	No
58	B / 66	2 (1st floor)	49.3	No	52.9	No	No
58 B1	B / 66	2 (Balcony 1)	49.7	No	53.3	No	No
58 B2	B / 66	2 (Balcony 2)	52.5	No	54.0	No	No
59	B / 66	2 (1st floor)	43.7	No	47.5	No	No
59 B1	B / 66	2 (Balcony 1)	45.7	No	49.2	No	No
59 B2	B / 66	2 (Balcony 2)	51.1	No	52.7	No	No
60	B / 66	2 (1st floor)	45.8	No	48.7	No	No
60 B1	B / 66	2 (Balcony 1)	46.6	No	49.6	No	No
60 B2	B / 66	2 (Balcony 2)	48.8	No	50.8	No	No
61	B / 66	2 (1st floor)	51.4	No	54.6	No	No
62	B / 66	2 (1st floor)	50.2	No	53.3	No	No
63	B / 66	2 (1st floor)	44.6	No	47.7	No	No
64	B / 66	2 (1st floor)	45.3	No	47.7	No	No
65	B / 66	Playground	54.2	No	58.4	No	No
66	B / 66	2 (1st floor)	49.4	No	53.2	No	No
66 B1	B / 66	2 (Balcony 1)	49.7	No	53.5	No	No
66 B2	B / 66	2 (Balcony 2)	56.0	No	57.3	No	No
67	B / 66	2 (1st floor)	46.6	No	50.4	No	No
67 B1	B / 66	2 (Balcony 1)	46.7	No	50.6	No	No
67 B2	B / 66	2 (Balcony 2)	52.6	No	54.1	No	No
68	B / 66	2 (1st floor)	48.9	No	53.3	No	No
68 B1	C / 66	2 (Balcony 1)	50.1	No	55.1	No	No
68 B2	B / 66	2 (Balcony 2)	54.1	No	55.4	No	No
69	B / 66	2 (1st floor)	47.6	No	52.2	No	No
69 B1	B / 66	2 (Balcony 1)	48.5	No	53.3	No	No
69 B2	B / 66	2 (Balcony 2)	51.0	No	53.4	No	No
70	B / 66	2 (1st floor)	45.1	No	50.3	No	No

(continued on next page)

Table 5-1. Modeled Existing and Future Noise Levels in the Noise Evaluation Area with the Proposed Project

Receptor	Activity Category/ UDOT NAC in dBA L _{eq} (h)	Number of Dwelling Units Represented	Existing		With Proposed Project		
			Existing Noise Level (dBA)	Existing Impact?	Proposed Project Noise Level (dBA)	≥ UDOT NAC?	≥ 10 dBA Increase over Existing Noise Level?
71	B / 66	2 (1st floor)	43.6	No	48.1	No	No
72	B / 66	2 (1st floor)	45.8	No	50.6	No	No
73	B / 66	2 (1st floor)	44.4	No	49.0	No	No
74 – hole 5 tee	B / 66	NA	56.1	No	61.2	No	No
75 – hole 4 green	B / 66	NA	54.6	No	59.5	No	No
76 – practice green	B / 66	NA	61.5	No	66.3	Yes	No
77– driving range	B / 66	NA	58.1	No	63.9	No	No
78 – hole 8 tee	B / 66	NA	59.8	No	61.8	No	No
79 – hole 7 green	B / 66	NA	63.3	No	65.2	No	No
80	B / 66	2	55.3	No	55.0	No	No
81	B / 66	1	52.6	No	55.1	No	No
82	B / 66	2	53.7	No	56.8	No	No
83	B / 66	4	53.9	No	55.9	No	No
84	B / 66	2	56.5	No	58.9	No	No
85	B / 66	4	55.6	No	57.8	No	No
86	B / 66	1	55.6	No	57.8	No	No
87	B / 66	1	50.8	No	53.9	No	No

Darker-shaded cells indicate existing or future noise impacts.
 bike/ped = bicycle/pedestrian, NA = not applicable

Figure 5-1. Existing Noise Impacts (1 of 3)

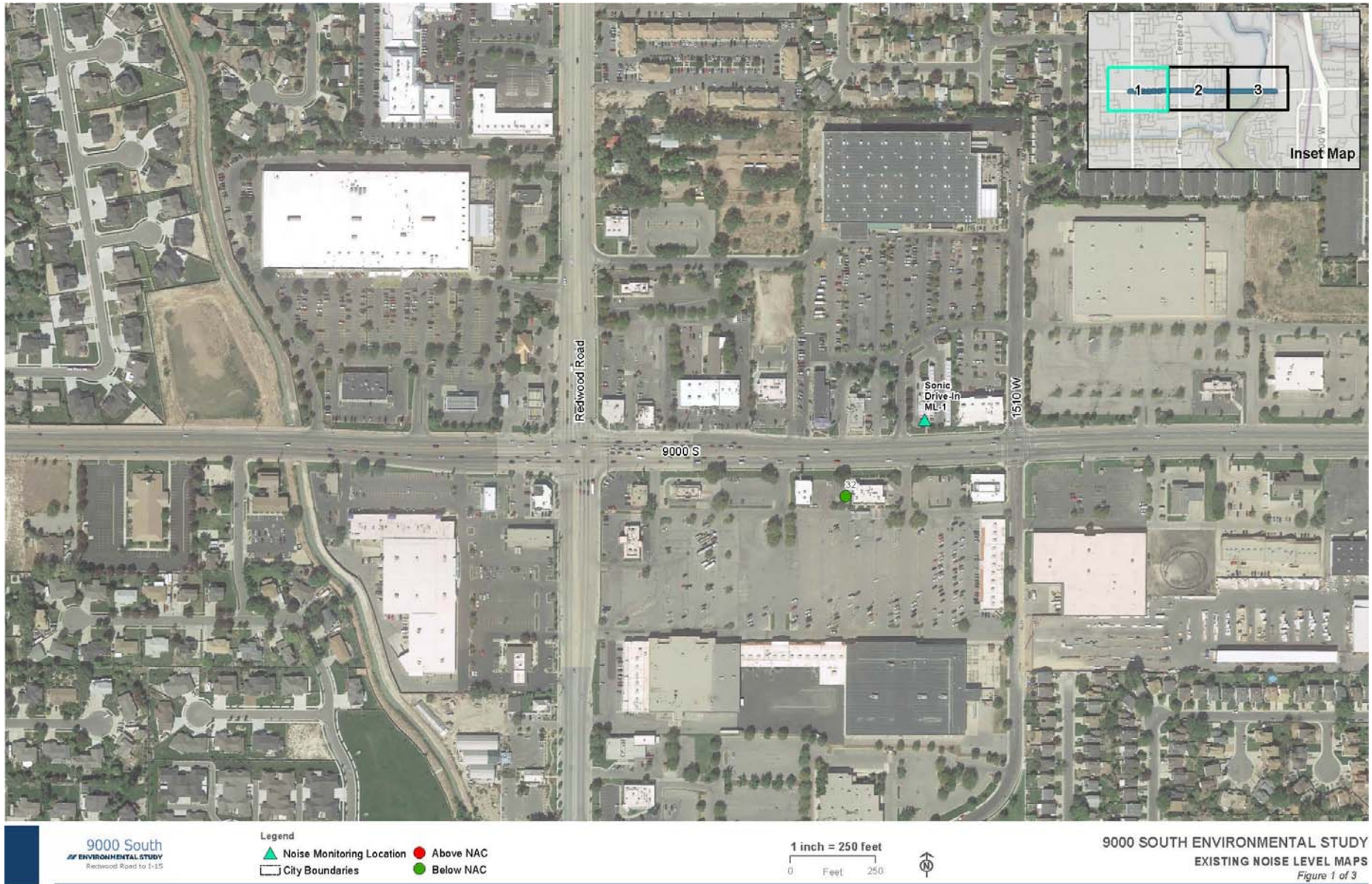


Figure 5-2. Existing Noise Impacts (2 of 3)

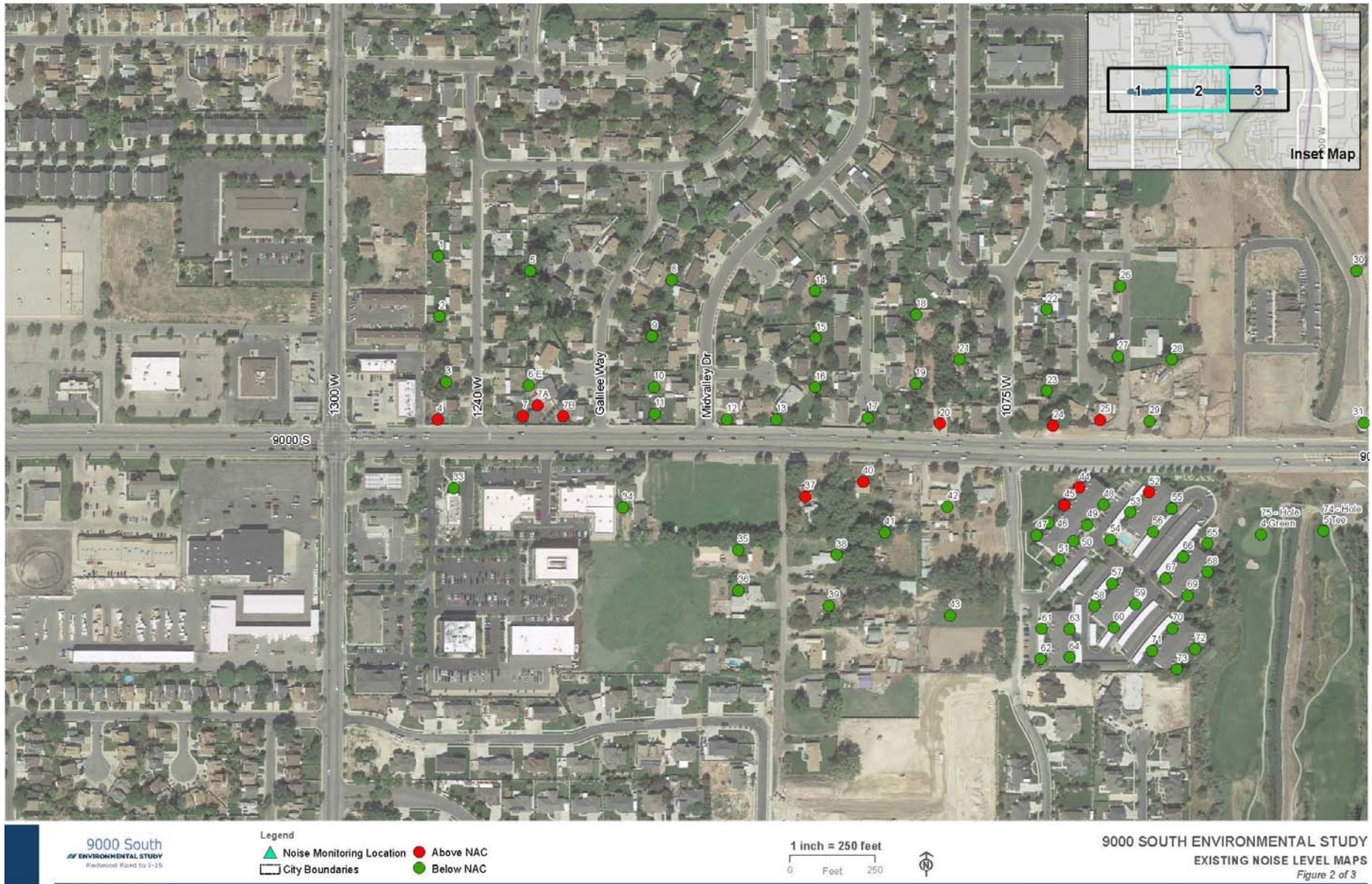


Figure 5-3. Existing Noise Impacts (3 of 3)



Figure 5-4. Noise Impacts with the Proposed Project (1 of 3)

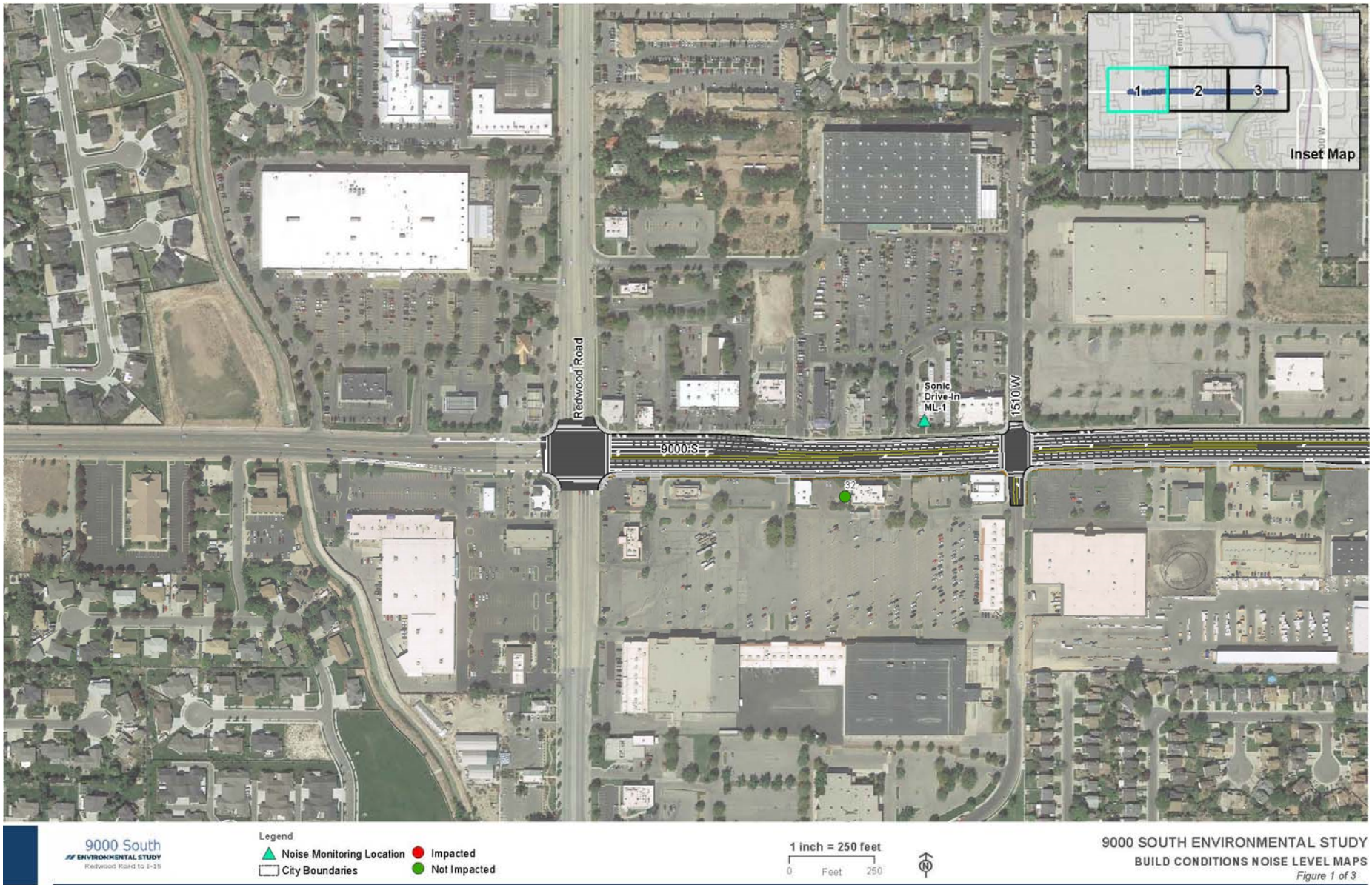


Figure 5-5. Noise Impacts with the Proposed Project (2 of 3)

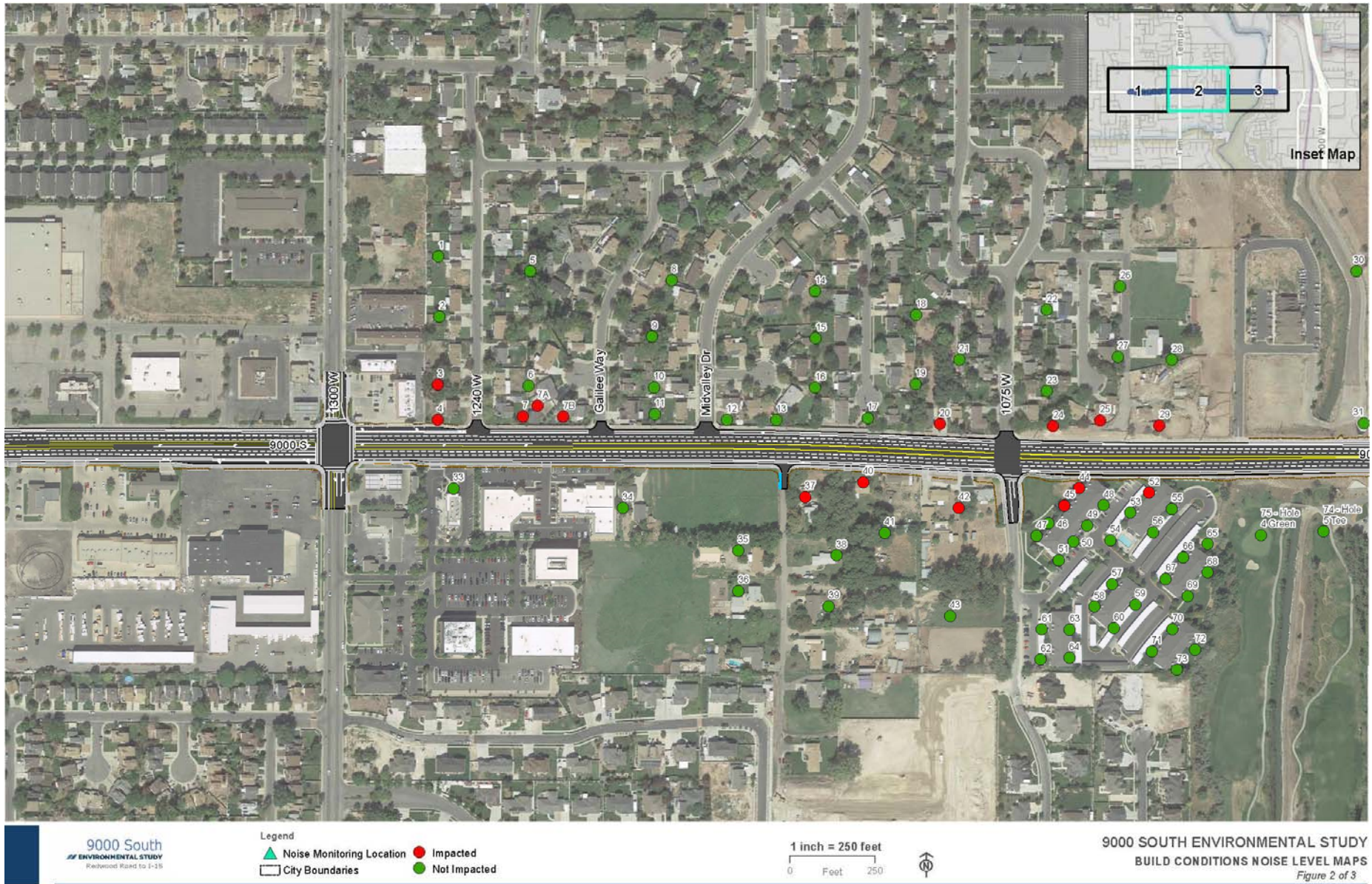


Figure 5-6. Noise Impacts with the Proposed Project (3 of 3)



6.0 Mitigation

This section discusses UDOT’s methodology for evaluating noise-abatement mitigation measures for the traffic noise impacts identified in Section 5.0, Expected Impacts.

For a noise wall to be effective, it must be high enough and long enough to block the view of the noise source (that is, traffic on the road) from the receptor’s line of sight. FHWA’s *Highway Traffic Noise: Analysis and Abatement Guidance* (FHWA 2011) states that, as a general rule of thumb, a noise barrier should extend 4 times as far in each direction as the distance from the receptor to the barrier. For example, if the receptor is 50 feet from the proposed noise barrier, the barrier needs to extend at least 200 feet on either side of the receptor in order to shield the receptor from noise traveling past the ends of the barrier.

Gaps in a noise wall cause “noise leaks,” which reduce the effectiveness of the wall at sensitive receptors near the gap. In addition, the effectiveness of noise walls decreases with increasing distance from the wall. For example, a residence that is 300 feet from a noise wall might experience noise levels that exceed the residential NAC. However, the noise wall might be ineffective in reducing noise levels by 7 dBA or more at that distance, and therefore a noise barrier might not be warranted according to UDOT’s Noise Policy.

The goal of noise abatement is to substantially reduce noise, which might or might not result in noise levels below the NAC levels. The two primary criteria to consider when evaluating noise-abatement measures are feasibility and reasonableness. Noise abatement would be provided by UDOT only if UDOT determines that noise-abatement measures are *both* feasible and reasonable.

6.1 Feasibility and Reasonableness

6.1.1 Feasibility Factors

The feasibility of noise-abatement measures deals with (1) engineering considerations such as safety, location of cross streets, sight distance, and access to adjacent properties, among other considerations, and (2) acoustic feasibility.

- **Safety on Urban Non-access-controlled Roads.** UDOT’s Noise Policy states that, “[t]o avoid a damaged wall from becoming a safety hazard, in the event of a failure, wall height shall be no greater than the distance from the back of curb to the face of [the] proposed wall.”
- **Acoustic feasibility.** Noise abatement must be considered acoustically feasible. This is defined as achieving at least a 5 dBA noise reduction for at least 50% of front-row receptors. If a noise-abatement measure is determined by UDOT to be acoustically feasible, then the abatement measure will be evaluated to determine whether its construction is reasonable. If a noise-abatement measure is determined by UDOT to be not feasible, it will not be considered any further.

6.1.2 Reasonableness Factors

Under UDOT’s Noise Policy, reasonableness factors must be collectively achieved in order for a noise-abatement measure to be considered “reasonable.” All three reasonableness factors described below must be met in order for a noise barrier to be considered reasonable.

- **Noise-abatement Design Goal.** Every reasonable effort should be made to achieve substantial reductions in noise. UDOT defines the minimum noise reduction (design goal) from proposed abatement measures to be 7 dBA or greater for at least 35% of front-row receptors. No abatement measure will be considered reasonable if the noise-abatement design goal cannot be achieved.
- **Cost-effectiveness.** The cost of a noise-abatement measure must be considered reasonable in order for it to be included in a project. Noise-abatement costs are determined by multiplying a fixed unit cost per square foot by the height and length of the barrier.

For residential receptors, cost-effectiveness is based on the cost of the abatement measure (for example, a noise wall) divided by the number of benefited receptors (the total number of dwelling units at which noise is reduced by a minimum of 5 dBA as a result of the abatement measure).

Currently, the maximum cost used to determine the reasonableness of a noise-abatement measure is \$30,000 per benefiting residence (Activity Category B) based on a unit cost of \$20 per square foot of barrier, and \$360 per lineal foot for Activity Categories A, C, D, or E.

- **Viewpoints of Property Owners and Residents.** If a noise-abatement measure meets the requirements of UDOT’s Policy, UDOT must consider the viewpoints of property owners and residents to determine whether the noise-abatement measure is desired. Balloting will be conducted for those noise-abatement measures that both meet the noise-abatement design goal and are cost-effective consistent with the procedures described in UDOT’s Noise Policy.

6.2 Noise Wall Evaluations

UDOT evaluated noise walls at eight locations along 9000 South in the noise evaluation area where noise impacts are predicted to occur with the Proposed Project. The existing walls and new noise walls that were evaluated are described in the following sections (see Figure 6-1, Noise Walls Recommended for the Proposed Project, on page 25).

Three noise walls—Wall at 1240 West, Wall between 1240 West and Galilee Way, and Wall at Top of Slope between 1075 West and 1030 West—were found to be both feasible and reasonable and are recommended for balloting.

6.2.1 Walls Evaluated along the North Side of 9000 South

Wall 1 – Sonic Drive-In

The Sonic Drive-In is located at 1572 West 9000 South and is predicted to be impacted by noise due to the Proposed Project. This noise impact would be at the outdoor seating area of the restaurant. A noise wall at this location would not be feasible because of the location of the access drive that serves this business and other nearby businesses and could not be effective, consistent with FHWA’s guidance. For a noise wall to be effective, it must be high enough and long enough to block the view of the noise source (that is, traffic on the road) from the receptor’s line of sight. FHWA’s *Highway Traffic Noise: Analysis and Abatement Guidance* (FHWA 2011) states that, as a general rule of thumb, a noise barrier should extend 4 times as far in each direction as the distance from the receptor to the barrier.

Wall 2 – Wall West of 1240 West

A noise wall was evaluated west of 1240 West along the north side of 9000 South to protect a single residential property. This wall would be about 115 feet long and would extend westward from the southwest corner of 1240 West. This wall includes an additional 25-foot-long segment that extends north at the west property line. The total wall length at this location would be about 140 feet.

As summarized in Table 6-1, UDOT evaluated noise walls ranging from 6 to 8 feet high.

Table 6-1. Noise-abatement Analysis for Wall 2 – Wall West of 1240 West

Wall Height (feet)	Feasibility			Reasonableness					Is Wall Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible? ^a	Safety Criteria Met?	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal? ^b	Anticipated Cost	Allowable Cost	Cost-effective? ^c	
6	100	Yes	Yes	0	No	NA ^d	NA	NA	No
7	100	Yes	Yes	100	Yes	\$19,600	\$30,000	Yes	Yes
8	100	Yes	No	NA	NA	NA	NA	NA	No

^a 5-dBA reduction for at least 50% of front-row receptors.

^b 7-dBA reduction for at least 35% of front-row receptors.

^c Anticipated cost is less than allowable cost.

^d If a previous criterion is not met, further consideration of feasibility and reasonableness is not necessary, so the subsequent criteria are flagged as not applicable (NA).

The distance from the back of the curb to the wall location is 7.5 feet (4-foot sidewalk and 3.5-foot park strip). As shown in Table 6-1, a 7-foot-high noise wall meets UDOT’s feasibility and reasonableness criteria. This wall is recommended for balloting.

Wall 3 – Wall between 1240 West and Galilee Way

A noise wall was evaluated between 1240 West and Galilee Way to mitigate for noise impacts to three residential properties. This wall would be about 300 feet long and would extend easterly from the southeast corner of 1240 West to Galilee Way.

As summarized in Table 6-2, UDOT evaluated noise walls ranging from 6 to 8 feet high.

Table 6-2. Noise-abatement Analysis for Wall 3 – Wall between 1240 West and Galilee Way

Wall Height (feet)	Feasibility			Reasonableness					Is Wall Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible? ^a	Safety Criteria Met?	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal? ^b	Anticipated Cost	Allowable Cost	Cost-effective? ^c	
6	67	Yes	Yes	0	No	NA ^d	NA	NA	No
7	100	Yes	Yes	67	Yes	\$42,000	\$90,000	Yes	Yes
8	100	Yes	No	NA	NA	NA	NA	NA	No

^a 5-dBA reduction for at least 50% of front-row receptors.

^b 7-dBA reduction for at least 35% of front-row receptors.

^c Anticipated cost is less than allowable cost.

^d If a previous criterion is not met, further consideration of feasibility and reasonableness is not necessary, so the subsequent criteria are flagged as not applicable (NA).

The distance from the back of the curb to the wall location is 7.5 feet (4-foot sidewalk and 3.5-foot park strip). As shown in Table 6-2, a 7-foot-high noise wall meets UDOT’s feasibility and reasonableness criteria. This wall is recommended for balloting.

Wall 4 – Existing Masonry Block Privacy Wall between Galilee Way and Midvalley Drive

Along the north side of 9000 South between Galilee Way and Midvalley Drive is a neighborhood that could be affected by noise from the Proposed Project. The neighborhood has an existing masonry block privacy wall that varies between 6 feet 2 inches and 6 feet 8 inches high. This wall was not installed by UDOT.

Based on the project design, the Proposed Project would not affect the existing masonry block wall. The noise modeling for this area assumed that the existing privacy wall would remain in its current location. Noise impacts due to the Proposed Project are not predicted for this area. Therefore, noise walls were not evaluated at this location.

Wall 5 – Existing Noise Wall between Midvalley Drive and 1100 West

Along the north side of 9000 South between Midvalley Drive and 1100 West is a neighborhood that could be affected by the noise from the Proposed Project. The neighborhood has an existing UDOT-constructed noise wall that varies between 6 feet 8 inches and 7 feet 9 inches high.

Based on the project design the Proposed Project would not affect the existing noise wall. The noise modeling for this area assumed that the existing noise wall would remain in its current location. Noise impacts due to the Proposed Project are not predicted for this area. Therefore, noise walls were not evaluated at this location.

Residential Properties near Receptor 20

On the north side of 9000 South are three residential properties that could be impacted by noise from the Proposed Project. These properties are west of 1075 West. The existing driveways that are required for accessing these properties prevent a noise wall from being effective, consistent with FHWA’s guidance. Therefore, a noise wall was not evaluated at this location.

Wall 6 – Wall Serving Residential Area East of 1075 West

Option 1: Wall behind the Sidewalk between 1075 West and 1000 West

A noise wall was evaluated on the north side of 9000 South between 1075 West and 1000 West to mitigate noise impacts to three residential properties. This wall would be about 682 feet long and would be located directly behind the existing sidewalk extending eastward from 1075 West.

As summarized in Table 6-3, UDOT evaluated walls ranging from 8 to 9 feet high.

Table 6-3. Noise-abatement Analysis for Wall 6, Option 1 – Wall between 1075 West and 1000 West

Wall Height (feet)	Feasibility			Reasonableness					Is Wall Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible? ^a	Safety Criteria Met?	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal? ^b	Anticipated Cost	Allowable Cost	Cost-effective? ^c	
8	0	No	NA ^d	NA	NA	NA	NA	NA	No
9	0	No	NA	NA	NA	NA	NA	NA	No

^a 5-dBA reduction for at least 50% of front-row receptors.

^b 7-dBA reduction for at least 35% of front-row receptors.

^c Anticipated cost is less than allowable cost.

^d If a previous criterion is not met, further consideration of feasibility and reasonableness is not necessary, so the subsequent criteria are flagged as not applicable (NA).

The distance from the back of the curb to a wall at this location is 9 feet (5-foot sidewalk and 4-foot park strip). A wall limited to this height behind the existing sidewalk is not considered feasible or reasonable. Therefore, a noise wall is not recommended at this location.

The neighborhood north of 9000 South in this area is at a higher elevation than the road. Noise walls placed at or near the top of the existing roadway embankment slope would provide greater shielding to adjacent properties. Options 2A and 2B, described below, include walls placed higher on the existing embankment to serve the residential properties north of 9000 South and east of 1075 West. Both walls evaluated are within UDOT’s right-of-way.

Option 2A: Wall between 1075 West and 1030 West

A noise wall was evaluated at the top of the existing embankment slope to mitigate noise impacts to three residential properties on the north side of 9000 South between 1075 West and 1030 West. This wall would be about 327 feet long and would extend eastward from 1075 West.

As summarized in Table 6-4, UDOT evaluated noise walls ranging from 6 to 10 feet high.

Table 6-4. Noise-abatement Analysis for Wall 6, Option 2A – Wall between 1075 West and 1030 West

Wall Height (feet)	Feasibility			Reasonableness					Is Wall Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible? ^a	Safety Criteria Met?	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal? ^b	Anticipated Cost	Allowable Cost	Cost-effective? ^c	
6	100	Yes	Yes	67	Yes	\$39,240	\$90,000	Yes	Yes
8	100	Yes	Yes	67	Yes	\$52,320	\$90,000	Yes	Yes
10	100	Yes	Yes	100	Yes	\$65,400	\$90,000	Yes	Yes

^a 5-dBA reduction for at least 50% of front-row receptors.

^b 7-dBA reduction for at least 35% of front-row receptors.

^c Anticipated cost is less than allowable cost.

Walls ranging from 6 feet to 10 feet high are considered both feasible and reasonable.

A 6-foot-high noise wall (Option 2A) is recommended for balloting because it is the least expensive wall that meets UDOT’s feasibility and reasonableness criteria.

Option 2B: Wall at 1030 West

A noise wall was evaluated at 1030 West along the existing side slope to serve a single residential property. This wall would be about 176 feet long and would be located near UDOT’s right-of-way line.

As summarized in Table 6-5, UDOT evaluated noise walls ranging from 10 to 18 feet high.

Table 6-5. Noise-abatement Analysis for Wall 6, Option 2B – Wall at 1030 West

Wall Height (feet)	Feasibility			Reasonableness					Is Wall Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible? ^a	Safety Criteria Met?	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal? ^b	Anticipated Cost	Allowable Cost	Cost-effective? ^c	
10	0	No	NA ^d	NA	NA	NA	NA	NA	No
14	0	No	NA	NA	NA	NA	NA	NA	No
18	0	No	NA	NA	NA	NA	NA	NA	No

^a 5-dBA reduction for at least 50% of front-row receptors.

^b 7-dBA reduction for at least 35% of front-row receptors.

^c Anticipated cost is less than allowable cost.

^d If a previous criterion is not met, further consideration of feasibility and reasonableness is not necessary, so the subsequent criteria are flagged as not applicable (NA).

As shown in Table 6-5, walls evaluated under this option are not considered feasible or reasonable. Therefore, noise wall Option 2B is not recommended at this location.

6.2.2 Walls Evaluated along the South Side of 9000 South

Walls 7A and 7B – Two Walls near 1150 West

Two noise walls in close proximity were evaluated on the south side of 9000 South near 1150 West. These walls would each be about 138 feet long and would serve two residential properties. As summarized in Table 6-6, UDOT evaluated walls ranging from 6 to 9 feet high.

Table 6-6. Noise-abatement Analysis for Walls 7A and 7B – Two Walls near 1150 West

Wall Height (feet)	Feasibility			Reasonableness					Is Wall Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible? ^a	Safety Criteria Met?	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal? ^b	Anticipated Cost	Allowable Cost	Cost-effective? ^c	
6	0	No	NA ^d	NA	NA	NA	NA	NA	No
7	0	No	NA	NA	NA	NA	NA	NA	No
8	0	No	NA	NA	NA	NA	NA	NA	No
9	0	No	NA	NA	NA	NA	NA	NA	No

^a 5-dBA reduction for at least 50% of front-row receptors.

^b 7-dBA reduction for at least 35% of front-row receptors.

^c Anticipated cost is less than allowable cost.

^d If a previous criterion is not met, further consideration of feasibility and reasonableness is not necessary, so the subsequent criteria are flagged as not applicable (NA).

The distance from the back of the curb to a wall at this location is 9 feet (5-foot sidewalk and 4-foot park strip). A wall limited to this height is not considered acoustically feasible or reasonable. Therefore, noise walls are not recommended at this location.

Wall 8 – Retaining/Noise Wall at River Oaks Suites & Apartments

A retaining/noise wall was evaluated at the edge of the roadway adjacent to the River Oaks Apartments to mitigate noise impacts to 20 apartments. The wall would be about 672 feet long and extend eastward from 1075 West. UDOT evaluated walls ranging from 12 to 18 feet high. However, noise walls at this location are not feasible because a wall at the edge of the roadway could become a safety hazard.

Wall 9 – Wall at River Oaks Golf Course

A noise wall was evaluated at the River Oaks Golf Course on the south side of 9000 South. This wall extends from the access drive westward about 652 feet. This wall would serve the practice green near the driving range. As summarized in Table 6-7, UDOT evaluated walls ranging from 6 to 9 feet high.

Table 6-7. Noise-abatement Analysis for Wall 9 – Wall at River Oaks Golf Course

Wall Height (feet)	Feasibility			Reasonableness					Is Wall Feasible and Reasonable?
	% Front-row with 5-dBA Reduction	Acoustically Feasible? ^a	Safety Criteria Met?	% Front-row with 7-dBA Reduction	Noise Abatement Design Goal? ^b	Anticipated Cost	Allowable Cost	Cost-effective? ^c	
6	0	No	NA ^d	NA	NA	NA	NA	NA	No
8	0	No	NA	NA	NA	NA	NA	NA	No
9	100	Yes	Yes	0	NA	NA	NA	NA	No

^a 5-dBA reduction for at least 50% of front-row receptors.

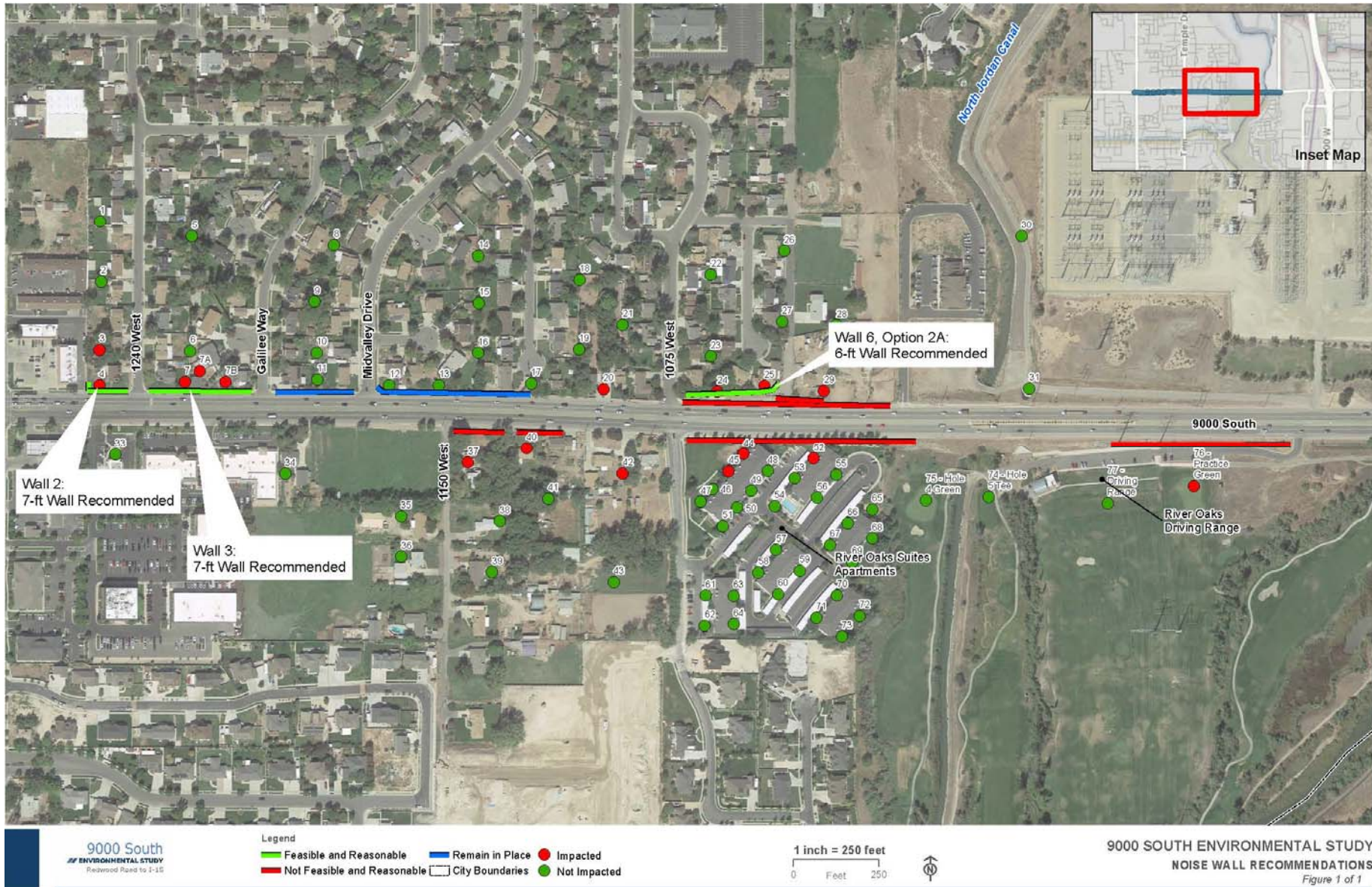
^b 7-dBA reduction for at least 35% of front-row receptors.

^c Anticipated cost is less than allowable cost.

^d If a previous criterion is not met, further consideration of feasibility and reasonableness is not necessary, so the subsequent criteria are flagged as not applicable (NA).

The distance from the back of the curb to the wall location is 9 feet (5-foot sidewalk and 4-foot park strip). A noise wall limited to this height is not considered feasible or reasonable. Therefore, a noise wall is not recommended at this location.

Figure 6-1. Noise Walls Recommended for the Proposed Project



6.3 Construction Noise

6.3.1 Construction Noise Impacts

Table 6-8 shows typical noise levels produced by various types of construction equipment. Properly maintained equipment will produce noise levels near the middle of the indicated ranges. The types of construction equipment used for this project will typically generate noise levels of 80 dBA to 90 dBA at a distance of 50 feet while the equipment is operating (EPA 1971; Gharabegian and others 1985; Toth 1979).

Construction equipment operations can vary from intermittent to fairly continuous. Assuming that a bulldozer (85 dBA), backhoe (90 dBA), grader (90 dBA), and front-end loader (82 dBA) are operating concurrently in the same area, peak construction-period noise would generally be about 94 dBA at 50 feet from the construction site. Table 6-8 summarizes noise levels expected near an active construction site with the above equipment operating. Most construction activities associated with the Proposed Action would occur during daylight hours.

Table 6-8. Typical Noise Levels for Construction Equipment

Type of Equipment	Noise Level (dBA) at 50 feet
Bulldozer	85
Front loader	72 – 84
Jack hammer or rock drill	81 – 98
Crane with headache ball	75 – 87
Backhoe	72 – 93
Scraper and grader	80 – 93
Electrical generator	71 – 82
Concrete pump	81 – 83
Concrete vibrator	76
Concrete and dump trucks	83 – 90
Air compressor	74 – 87
Pile drivers (peaks)	95 – 106
Pneumatic tools	81 – 98
Roller (compactor)	73 – 75
Saws	73 – 82

Source: EPA 1971

6.3.2 Construction Noise Mitigation

To reduce temporary noise impacts associated with construction, contractors will comply with all state and local regulations relating to construction noise.

The contractor will be required to follow UDOT *Special Provision* Section 00555M, *Prosecution and Progress*. The contractor will be required to conform to this specification to reduce the impact of construction noise on the surrounding community.

6.4 Information for Local Officials

West of 700 West are two parcels of undeveloped land. One parcel is north of 9000 South, and one parcel is south of 9000 South near River Oaks Suites & Apartments. UDOT must provide to local governments estimates of future noise levels on undeveloped land. This estimate is intended to help local governments promote compatibility between land development and the 9000 South Proposed Project. Sandy City is the local government that has land use jurisdiction in the area of the undeveloped properties.

Table 6-9 shows the distances from the edge of the roadway pavement to the locations where the worst-hour $L_{eq}(h)$ levels of 66 dBA and 71 dBA would occur.

Table 6-9. Contour Distance to Future Noise Levels

Side of 9000 South	Approximate Distance from Edge of 9000 South to Noise-level Contours	
	66-dBA Noise-level Contour	71-dBA Noise-level Contour
North side	137 feet	37 feet
South side	133 feet	33 feet

6.5 Conclusions

The 9000 South Proposed Project would generally result in a 2-dBA increase in noise levels throughout the noise evaluation area. Of the 139 receptors that were modeled (representing 239 individual dwelling units, 3 restaurants, and 8 recreational locations), 36 are predicted to equal or exceed UDOT's NAC. Of the 36 impacted receptors, 34 are residences, 1 is a restaurant, and 1 is a recreational area. No receptors are predicted to experience noise levels of 10 dBA or more over existing noise levels. Section 6.5.1, Summary of Noise Walls Recommended for Balloting, discusses the recommended noise walls in the noise evaluation area that met the requirements of UDOT's Noise Policy. As part of the final design phase for the 9000 South project, UDOT will conduct balloting consistent with the procedures in the Noise Policy.

6.5.1 Summary of Noise Walls Recommended for Balloting

Wall 2 – West of 1240 West, North Side of 9000 South

This wall is 7 feet high and about 140 feet in total length and would extend westward from the southwest corner of 1240 West. This wall includes a 25-foot-long segment that extends north at the west property line of the residential property. See Figure 6-1 on page 25.

Wall 3 – Between 1240 West and Galilee Way, North Side of 9000 South

This wall is 7 feet high and about 300 feet long and would extend westward from the southwest corner of 1240 West to Galilee Way. See Figure 6-1 on page 25.

Wall 6, Option 2A – Between 1075 West and 1030 West, North Side of 9000 South

This wall is 6 feet high and about 327 feet long and would extend eastward from 1075 West at the top of the existing embankment slope. See Figure 6-1 on page 25.

6.5.2 Summary of Walls to Remain in Place

Wall 4 – Existing Masonry Block Privacy Wall between Galilee Way and Midvalley Drive

Based on the project design, the Proposed Project would not affect this existing privacy wall. The noise modeling for this area assumed that the existing privacy wall would remain in its current location. Noise impacts due to the Proposed Project are not predicted for this area. This existing privacy wall should remain in place.

Wall 5 – Existing Noise Wall between Midvalley Drive and 1100 West

Based on the project design, the Proposed Project would not affect this existing noise wall. The noise modeling for this area assumed that the existing noise wall would remain in its current location. Noise impacts due to the Proposed Project are not predicted for this area. This existing noise wall should remain in place.

7.0 References

[EPA] U.S. Environmental Protection Agency

- 1971 Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances. NTID300.1. Prepared by Bolt, Beranek, & Newman, Boston, Mass. U.S. Government Printing Office, Washington, DC.

[FHWA] Federal Highway Administration

- 2011 Highway Traffic Noise: Analysis and Abatement Guidance. FHWA-HEP-10-025. https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf. December.

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- 1985 Forest Fire Fighters' Noise Exposure. *Noise Control Engineering Journal* 25(3): 96–111.

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- 1979 Noise-Abatement Techniques for Construction Equipment. HS-803 293; DOT-TSC-NHTSA-79-45; PB-300 948. U.S. Department of Transportation, National Highway Traffic Safety Administration, Washington, DC.

[UDOT] Utah Department of Transportation

- 2017 Noise Abatement. UDOT 08A2-1. Effective November 6, 1987. Revised June 15, 2017. <https://www.udot.utah.gov/main/uconowner.gf?n=10496602977480171>.

Appendix A. Traffic Noise Measurement Data Sheets

Ambient Noise Monitoring Data Sheet

Date: 10-23-18	Client: UDOT
Time: 12:13	Project Title: 9000 S
Monitoring Period: 15 minutes x2	Project Number: S-0209(35) 10
Address: 1572 W 9000 S - Sonix	Site Number: ML-2
Observers: Kelly Johnston, Kevin Montgomery	Posted Speed: 40 mph (40 observed)

Weather Description	Temp (°F)	Wind (mph)	RH (%)
Sunny, clear	61°	10 mph	41

Data and Results		
Measurement #	1	2
Calibration Start	-0.02 (113.98)	-0.07 (113.93)
Calibration Stop	-0.11 (113.49)	-0.10 (113.9)
Start Time	12:30	12:54
Leq	73.5	73.8
Lmin	--	--
Lmax	--	--
Duration	15 min	15 min
File No. (if needed)	--	--

TNM Vehicle Class Counts						
Measurement #	EB	total	WB	EB	total	WB
Cars	358	683	325	343	687	344
Medium Trucks	15	23	8	14	32	18
Heavy Trucks	10	16	6	6	7	1
Buses	3	4	1	5	6	1
Motorcycles	0	1	1	1	2	1

Monitoring Location Sketch

Notes

MT HT B M
 C 325 + 358 = 683
 MT 15 + 10 = 25
 HT 6 + 3 = 9
 B 3 + 1 = 4
 M 0 + 1 = 1
 C 343 + 344 = 687
 MT 14 + 18 = 32
 HT 6 + 1 = 7
 B 5 + 1 = 6
 M 1 + 1 = 2

no business drive away while monitoring
 business access road vehicles counted as part of main counts. volume was low

Ambient Noise Monitoring Data Sheet

Date: 10/23/18	Client: WDOT
Time: 1:30	Project Title: 9000 S
Monitoring Period: 15 minutes x2	Project Number: S-0209(35)10
Address: 8983 Galileo Way	Site Number: ML-2
Observers: Kelly Johnston, Kevin Montgomery	Posted Speed: 45 mph (45 observed)

Weather Description	Temp (°F)	Wind (mph)	RH (%)
Sunny, clear	61	10 mph	40

Data and Results		
Measurement #	1 *	2
Calibration Start	-0.01 (113.79)	-0.03 (113.97)
Calibration Stop	-0.03 (113.97)	-0.04 (113.90)
Start Time	1:30	1:55
Leq	69.9	74.8
Lmin	-	-
Lmax	-	-
Duration	15 min	15 min
File No. (if needed)	-	-

TNM Vehicle Class Counts						
Measurement #	EB	total 1	WB	EB	total 2	WB
Cars	356	692	336	324	678	354
Medium Trucks	6	26	20	15	31	16
Heavy Trucks	5	9	4	14	18	4
Buses	0	2	2	0	2	2
Motorcycles	1	2	1	0	0	0

Monitoring Location Sketch

Notes

MT ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~
 HT ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~
 B
 M

	EB	WB
C	356 +	336
MT	6 +	20
HT	5 +	4
B	0 +	2
M	1 +	1

C	324 +	354
MT	15 +	16
HT	14 +	4
B	0 +	2
M	0 +	0

*Reading 3 may have a reading error. 2 is the correct Leq. for sure.

Ambient Noise Monitoring Data Sheet

Date: 10/23/18	Client: UDOT
Time: 2:55	Project Title: 9000S
Monitoring Period: 15 minutes x2	Project Number: S-02.09(35)10
Address: 9035S 1575 W - River Oaks Apts	Site Number: ML-3
Observers: Kevin Montgomery	Posted Speed: 40 mph (40 observed)

Weather Description	Temp (°F)	Wind (mph)	RH (%)
Sunny, clear	61°	10 mph	47

Data and Results		
Measurement #	1	2
Calibration Start	-0 (114)	-0.05 (113.95)
Calibration Stop	-0.05 (113.95)	-0.06 (113.94)
Start Time	3:00	3:20
Leq	53.4	53.6
Lmin	--	--
Lmax	--	--
Duration	15 min	15 min
File No. (if needed)	--	--

TNM Vehicle Class Counts		
Measurement #	1	2
Cars	760	738
Medium Trucks	30	29
Heavy Trucks	5	3
Buses	3	4
Motorcycles	1	3

Monitoring Location Sketch

Notes

1-5 cars apartment access
 2-3 cars

counted as both directions combined

Ambient Noise Monitoring Data Sheet

Date: 10/24/18	Client: UDOT
Time: 10:30	Project Title: 9000S
Monitoring Period: 15 minutes x2	Project Number: S-0209 (35)10
Address: 891 W 9000S - River Oaks Dining Room	Site Number: ML-4
Observers: Kelly Johnston, Keith Montgomery	Posted Speed: 45 mph (45 observed)

Weather Description	Temp (°F)	Wind (mph)	RH (%)
Sunny, clear	56	5 mph	45%

Data and Results		
Measurement #	1	2
Calibration Start	-0.05 (113.97)	0.07 (114.07)
Calibration Stop	0.07 (114.07)	0.04 (114.04)
Start Time	10:35	10:55
Leq	59.8	59
Lmin	-	-
Lmax	-	-
Duration	15 min	15 min
File No. (if needed)	-	-

TNM Vehicle Class Counts						
Measurement #	EB	Total 1	WB	EB	Total 2	WB
Cars	270	594	294	275	597	322
Medium Trucks	17	29	12	14	26	12
Heavy Trucks	15	22	7	15	28	13
Buses	2	2	0	2	5	3
Motorcycles	0	0	0	2	3	1

Monitoring Location Sketch

Notes

~~MT~~ ~~HT~~ ~~B~~ ~~M~~ ~~EB~~ ~~WB~~
 MT ~~HT~~ ~~B~~ ~~M~~ ~~EB~~ ~~WB~~
 HT ~~HT~~ ~~HT~~ ~~HT~~ ~~HT~~ ~~HT~~
 B III
 M I
 EB 1 WB
 270 + 274
 17 + 12
 15 + 7
 2 + 0
 0 + 0

 275 + 322
 14 + 12
 15 + 13
 2 + 3
 2 + 1

 No traffic on access road during monitoring

Ambient Noise Monitoring Data Sheet

Date: 10/24/18	Client: WDOT
Time: 9:40	Project Title: 9000 S
Monitoring Period: 15 minutes x2	Project Number: S-0209(35)10
Address: 740 Jordan Oaks Dr	Site Number: AL-5
Observers: Kelly Johnson, Kevin Montgomery	Posted Speed: 45mph (45 observed)

Weather Description	Temp (°F)	Wind (mph)	RH (%)
Sunny, clear	52	0-5 mph	40%

Data and Results		
Measurement #	1	2
Calibration Start	-0.03 (113.97)	-0.08 (113.92)
Calibration Stop	-0.08 (113.92)	-0.07 (113.93)
Start Time	9:45	10:00
Leq	55.3	55.2
Lmin	--	--
Lmax	--	--
Duration	15 min	15 min
File No. (if needed)	--	--

TNM Vehicle Class Counts						
Measurement #	EB	total 1	WB	EB	total 2	WB
Cars	305	667	279	305	591	286
Medium Trucks	13	27	14	15	31	16
Heavy Trucks	9	24	15	8	20	12
Buses	0	2	2	1	2	1
Motorcycles	0	0	0	0	0	0

Monitoring Location Sketch	Notes																																																
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	EB	WB	Total																																														
C	305	279	667																																														
MT	13	14	27																																														
HT	9	15	24																																														
B	0	2	2																																														
M	0	0	0																																														
	EB	WB	Total																																														
C	305	279	667																																														
MT	13	14	27																																														
HT	9	15	24																																														
B	0	2	2																																														
M	0	0	0																																														

Appendix B. Noise Wall Analyses

Noise Analysis Technical Report
9000 South, Redwood Road to I-15

Wall 2 - North Side of 90th, single home at 1240 West

Wall Length	115	ft	THH File: 40 Ddm Ap 6
Wall Cost per LF	\$30		
Cost of items critical to safety:			
# of First Row Receivers:	1		
TOC to Face of Wall Location =	7.5	feet	(TOC = Top Back of Curb)

Receiver Name	# of DU	Reduction	1st Row	Fading Table Level	Build Table Level - No Wall	Wall at Back of Fading Sidelobe 6 ft Noise Level	6 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	7 ft Noise Level	7 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	8 ft Noise Level	8 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	9 ft Noise Level	9 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	10 ft Noise Level	10 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	11 ft Noise Level	11 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth					
3	1	No	No	HS 1	70.2	54.8	1.4	0	0	0	54.7	1.5	0	0	0	54.7	1.5	0	0	0	54.6	1.5	0	0	0	54.5	1.7	0	0	0	54.5	1.7	0	0	0	54.4	1.7	0	0	0
4	1	No	Yes	TLG	72	57.8	4.7	0	0	0	56.8	5.7	1	0	1	55.5	6.5	1	0	1	55	7	1	1	1	54.7	7.8	1	1	1	54.7	7.8	1	1	1	54.7	7.8	1	1	1
Notes																																								
Feasibility Factors																																								
# of First Row 5 dBA Reduction:						0						1						1																						
% of First Row 5 dBA Reduction:						0%						100%						100%																						
Reasonability Factors																																								
# of First Row Design Goal:						0						0						1																						
% of First Row Design Goal:						0%						0%						100%																						
Noise Abatement Design Goal (7 dBA reduction for 50% of noise over):						No						Yes						Yes																						
# of Detached:						N/A						N/A						1																						
Cost of Noise Wall (length x height x \$20/lq ft):						N/A						\$10,000						\$20,700																						
Allowable Cost (\$30,000 per detached receptor):						N/A						\$10,000						\$30,000																						
Cost Effective (check/uncheck Cost < Allowable Cost):						N/A						Yes						Yes																						
5 dBA Reduction Goal Met:						No						Yes						Yes																						
7 dBA Reduction Goal Met:						No						Yes						No																						
Is distance from TOC to wall greater than wall height (if No, then wall is not feasible):						Yes						Yes						No																						

Wall Length = 140 ft
Option: Add 25' wall segment at residential property line

Receiver Name	# of DU	Reduction	1st Row	Fading Table Level	Build Table Level - No Wall	25' NS Wall Added 6 ft Noise Level	6 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	7 ft Noise Level	7 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	8 ft Noise Level	8 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	9 ft Noise Level	9 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth	10 ft Noise Level	10 ft Noise Reduction	Front Row Dils with 5 dBA Reduction	Front Row Dils with 7 dBA Reduction	Dils with 5 dBA Growth					
3	1	No	No	HS 1	66.2	54.6	1.6	0	0	0	54.6	1.7	0	0	0	54.5	1.7	0	0	0	54.5	1.7	0	0	0	54.4	1.7	0	0	0	54.4	1.7	0	0	0
4	1	No	Yes	TLG	72	56.2	5.7	1	0	1	54.6	7.1	1	1	1	53.5	8.2	1	1	1	52.5	9.2	1	1	1	52.5	9.2	1	1	1	52.5	9.2	1	1	1
Notes																																			
Feasibility Factors																																			
# of First Row 5 dBA Reduction:						1						1						1																	
% of First Row 5 dBA Reduction:						100%						100%						100%																	
Reasonability Factors																																			
# of First Row Design Goal:						0						1						1																	
% of First Row Design Goal:						0%						100%						100%																	
Noise Abatement Design Goal (7 dBA reduction for 50% of noise over):						No						Yes						Yes																	
# of Detached:						N/A						N/A						1																	
Cost of Noise Wall (length x height x \$20/lq ft):						N/A						\$10,000						\$20,700																	
Allowable Cost (\$30,000 per detached receptor):						N/A						\$10,000						\$30,000																	
Cost Effective (check/uncheck Cost < Allowable Cost):						N/A						Yes						Yes																	
5 dBA Reduction Goal Met:						Yes						Yes						Yes																	
7 dBA Reduction Goal Met:						No						Yes						Yes																	
Is distance from TOC to wall greater than wall height (if No, then wall is not feasible):						Yes						Yes						No																	

7 Foot Wall Recommended
Due to overhead power lines consider necessary to go wall behind of post and panel.

Wall 3 - North Side of 90th, Between Galilee Way and 1240 West

Wall Length:	300 ft.	Max Wall Height Allowed:	15 Feet (Distance from TBC to front of wall post)
Wall Cost per sq ft:	\$25		
Cost of Noise Critical to Safety:		TBC to Face of Wall Location =	75 Feet
# of Fleet Rows Recommended:	3		

Receiver Name	# of dB	Behavior	Sub Row	Existing Noise Level	Duke Noise Level, 1st 30ft	6 ft Noise Level	6 ft Noise Reduction	Front Row: DBs with 5dB Reduction	Front Row: DBs with 7 dB Reduction	DBs with 5dB Benefit	6.7 ft Noise Level	6.5 ft Noise Reduction	Front Row: DBs with 5dB Reduction	Front Row: DBs with 7 dB Reduction	DBs with 5dB Benefit	7 ft Noise Level	7 ft Noise Reduction	Front Row: DBs with 5dB Reduction	Front Row: DBs with 7 dB Reduction	DBs with 5dB Benefit	7.5 ft Noise Level	7.5 ft Noise Reduction	Front Row: DBs with 5dB Reduction	Front Row: DBs with 7 dB Reduction	DBs with 5dB Benefit	8 ft Noise Level	8 ft Noise Reduction	Front Row: DBs with 5dB Reduction	Front Row: DBs with 7 dB Reduction	DBs with 5dB Benefit	
7	1	No	Yes	71.5	73.8	66.4	6.4	1	0	1	64.6	7.2	1	1	1	63.8	8	1	1	1	63.3	8.5	1	1	1	62.9	8.6	1	1	1	
7A	1	No	Yes	71.5	65.4	64.7	4.7	0	0	0	64.5	4.9	0	0	0	64.1	5.3	1	0	1	63.8	5.8	1	0	1	63.6	5.8	1	0	1	
7B	1	No	Yes	71.5	71.8	65.8	6	1	0	1	65.2	5.6	1	0	1	64.6	7.2	1	1	1	63.9	7.9	1	1	1	63.4	8.4	1	1	1	
Feasibility Factors:				Took				2		0		2				2		1		2				3		2		0		3	
# of Fleet Rows @ 5 dB Reduction:								0								3								3						3	
% of Fleet Rows @ 5 dB Reduction:								0%								100%								100%						100%	
Overall Feasibility (5 dB reduction for 70% of fleet rows):								Yes								Yes								Yes						Yes	
Reasonableness Factors:																															
# of Fleet Rows @ 10 dB Reduction:								0								2								2						2	
% of Fleet Rows @ 10 dB Reduction:								0%								33%								67%						67%	
Took Achievable Design Goal (2 dB reduction for 70% of fleet rows):								No								Yes								Yes						Yes	
# of Benefits:								N/A								3								3						3	
Cost of Noise 15dB (heights > 15 ft) @ \$200/sq ft:								N/A										\$45,000						\$45,000						\$45,000	
Achievable Cost @ 20 dB @ 10 ft (heights > 10 ft) @ \$200/sq ft:								N/A										\$90,000						\$90,000						\$90,000	
Cost if the line (unshielded) @ 10 ft @ \$200/sq ft:								N/A										Yes						Yes						Yes	
5 dB Reduction Goal Met?								No										Yes						Yes						Yes	
7 dB Reduction Goal Met?								No										Yes						Yes						Yes	
Is distance from TBC to wall greater than wall height? (If no, then wall is not feasible):								No										No						No						No	

7 Foot Wall Recommended
Due to overhead power lines consider masonry type wall instead of post and panel.

Noise Analysis Technical Report
9000 South, Redwood Road to I-15

Wall 6, Option 3 - North Side Wall Foot of 102.5' W'		Wall Length = 227 feet	TNM File Name: 45 Build Ap 3
Wall ID	W6		
Cost of Noise Wall (\$/lineal foot)	\$50		
Cost of Noise Wall (\$/lineal foot)	\$50		
Wall Location	North Side		

Receiver Name	X (ft)	Y (ft)	Z (ft)	Type	Building Level (ft)	Building Area (sq ft)	8.0 dBA Reduction		10.0 dBA Reduction		12.0 dBA Reduction		15.0 dBA Reduction		18.0 dBA Reduction		20.0 dBA Reduction		25.0 dBA Reduction	
							dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
W6	0	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Wall 6, Option 2A - Noise Wall Top of Embankment Slope		Wall Length = 227 feet	TNM File Name: 45 Build Ap 3
Wall ID	W6A		
Cost of Noise Wall (\$/lineal foot)	\$50		
Wall Location	North Side		

Receiver Name	X (ft)	Y (ft)	Z (ft)	Type	Building Level (ft)	Building Area (sq ft)	8.0 dBA Reduction		10.0 dBA Reduction		12.0 dBA Reduction		15.0 dBA Reduction		18.0 dBA Reduction		20.0 dBA Reduction		25.0 dBA Reduction	
							dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
W6A	0	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6A	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6A	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Wall 6, Option 2B - Noise Wall Along Existing Embankment Slope for R29		Wall Length = 175 feet	TNM File Name: 45 Build Ap 3
Wall ID	W6B		
Cost of Noise Wall (\$/lineal foot)	\$50		
Wall Location	North Side		

Receiver Name	X (ft)	Y (ft)	Z (ft)	Type	Building Level (ft)	Building Area (sq ft)	8.0 dBA Reduction		10.0 dBA Reduction		12.0 dBA Reduction		15.0 dBA Reduction		18.0 dBA Reduction		20.0 dBA Reduction		25.0 dBA Reduction	
							dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
W6B	0	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6B	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6B	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Wall 6, Option 2C - Noise Wall Along Existing Embankment Slope for R29		Wall Length = 175 feet	TNM File Name: 45 Build Ap 3
Wall ID	W6C		
Cost of Noise Wall (\$/lineal foot)	\$50		
Wall Location	North Side		

Receiver Name	X (ft)	Y (ft)	Z (ft)	Type	Building Level (ft)	Building Area (sq ft)	8.0 dBA Reduction		10.0 dBA Reduction		12.0 dBA Reduction		15.0 dBA Reduction		18.0 dBA Reduction		20.0 dBA Reduction		25.0 dBA Reduction	
							dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
W6C	0	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6C	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W6C	1	0	0	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Walls 7A & 7B - Two Walls near R37 & R40 Near 1150 West

R37 Wall Length	228 ft	R40 Wall Length	138 ft
Wall Cost per sq ft	223		
Cost of Acoustic Insulation		TDC to Face of Wall Location	0 Feet
Building Side Revisions	0		

Receiver Name	BUILD	Revisions	Lat. Rev	Existing Noise Level	Wall Noise Level (No. 55)	With Back of Face of Subwall Noise Level	SA Noise Reduction	Front Row Distance with 70% Reduction	Distance to Subwall	SA Noise Level	SA Noise Reduction	Front Row Distance with 60% Reduction	Distance to Subwall	SA Noise Level	SA Noise Reduction	Front Row Distance with 50% Reduction	Distance to Subwall	SA Noise Level	SA Noise Reduction	Front Row Distance with 40% Reduction	Distance to Subwall	SA Noise Level	SA Noise Reduction	Front Row Distance with 30% Reduction	Distance to Subwall	SA Noise Level	SA Noise Reduction	Front Row Distance with 20% Reduction	Distance to Subwall	
R37	1	No	Yes	69.2	67.7	65.4	2.2	0	0	65.2	2.4	0	0	63.1	2.6	1	2	0	61.9	2.8	0	0	60.7	3	0	0	59.7	3	0	0
R40	1	No	Yes	69.7	68.2	65.9	2.6	0	0	65.7	2.8	0	0	63.7	3.0	1	2	0	62.5	3.2	0	0	61.5	3.4	0	0	60.5	3.4	0	0
Feasibility Factors:																														
Not Feasible due to Noise Reduction																														
Not Feasible due to Noise Reduction																														
Acoustic Feasibility (SPL reduction for 20% of frequency)																														
No																														
Reasonableness Factors:																														
Not Feasible due to Noise Reduction																														
Not Feasible due to Noise Reduction																														
Noise Abatement Disruptive (Cost/Noise reduction 20% of frequency)																														
No																														
Not Feasible																														
Cost of Noise Wall (Height = 8.02 ft)																														
No																														
Alternative Cost of Noise Abatement																														
No																														
Alternative Cost (\$30,000 per building receiver)																														
No																														
Cost of Noise Wall (Height = 8.02 ft)																														
No																														
Cost of Noise Wall (Height = 8.02 ft)																														
No																														
Cost of Noise Wall (Height = 8.02 ft)																														
No																														
Distance from edge of line to wall greater than wall height?																														
[] No, then wall height has to be																														

Wall 9 - Practice Putting Green at River Oaks Golf Course

Wall Length:	662 ft
Wall Cost per sq ft:	\$20
Cost of items critical to safety:	1/4 to face of Wall location = 9 feet
# of First Row Receivers:	1

Receiver Name	# of DR	Relocation	1st Row	Fading Noise Level	Build Noise Level - No Wall	6-ft Noise Level	6-ft Noise Reduction	Front Row DRs with 5 dBA Reduction	Front Row DRs with 7 dBA Reduction	DRs with 5 dBA Benefit	8-ft Noise Level	8-ft Noise Reduction	Front Row DRs with 5 dBA Reduction	Front Row DRs with 7 dBA Reduction	DRs with 5 dBA Benefit	9-ft Noise Level	9-ft Noise Reduction	Front Row DRs with 5 dBA Reduction	Front Row DRs with 7 dBA Reduction	DRs with 5 dBA Benefit	10-ft Noise Level	10-ft Noise Reduction	Front Row DRs with 5 dBA Reduction	Front Row DRs with 7 dBA Reduction	DRs with 5 dBA Benefit	12-ft Noise Level	12-ft Noise Reduction	Front Row DRs with 5 dBA Reduction	Front Row DRs with 7 dBA Reduction	DRs with 5 dBA Benefit				
75	1	N	Yes		66.1	4.2	0	0	0	0	61.6	4.7	0	0	0	61	5.3	1	0	1	63.5	5.9	1	0	1	65.6	6.7	1	0	1				
Totals							0	0	0	0			0	0	0			1	0	1			1	0	1			1	0	1				
Feasibility Factors:																																		
# of First Row 5 dBA Reduction:																																		
% of First Row 5 dBA Reduction:																																		
Acoustic Feasibility (5 dBA reduction for 50% of front row):																																		
Reasonableness Factors:																																		
# of First Row Design Goal:									N/A																									
% of First Row Design Goal:									N/A																									
Noise Abatement Design Goal (1/3 dBA reduction for 30% of front row):									N/A																									
# of benefited:									N/A																									
Cost of Noise Wall (Length x Height x \$20/sq ft):									N/A																									
Allowable Cost (\$30,000 per benefited receptor):									N/A																									
Cost Effective (Anticipated Cost < Allowable Cost):									N/A																									
5 dBA Reduction Goal Met?									No																									
7 dBA Reduction Goal Met?									No																									
Is distance from edge of lane to wall greater than wall height? (If No, then wall is not feasible)									No																									

APPENDIX E

Aquatic Resources Delineation Report



Memorandum

Environmental Services

DATE: July 9, 2019
TO: Heidi Spoor, HDR
FROM: Matt Howard, Natural Resources Manager
SUBJECT: S-0209(35)10; 9000 South, Redwood Road to I-15 PIN 14412

Dear Heidi,

I have reviewed the biological resources report for the proposed improvements on State Route 209 from Redwood Road to 700 West in Salt Lake County concerning potential impacts to threatened and endangered species and concur with its findings. Based on the report's findings, the proposed improvements would not negatively impact federally listed species due to lack of habitat in the area. If any vegetation removal is set to occur between June 15-August 15, a survey would be required by a qualified biologist to ensure that any removal would not impact nesting birds. If this measure is followed, the project would not result in direct or incidental take under the BGEPA and MBTA. I have evaluated the project for impacts to greater sage-grouse. The project does not take place within a SGMA, nor does it take place within mapped habitat for sage-grouse and would therefore have no impact on sage-grouse or its habitat.

Sincerely,

Matt Howard
Natural Resource Manager

MEMORANDUM

Date: Wednesday, July 10, 2019

To: Tyler Allen
UDOT Region 2 Environmental Manager

From: Dan Bolin
UDOT Landscape Architect

RE: ENVIRONMENTAL REVIEW FOR WATER RESOURCES AND WETLANDS, NOXIOUS WEED, AND VISUAL AESTHETICS

PROJECT PURPOSE, DESCRIPTION AND SCOPE OF WORK

UDOT proposes to make roadway improvements to SR-209 (9000 South) in West Jordan and Sandy in Salt Lake County, Utah, to improve east-west traffic performance and decrease crash rates in the project study area, especially by 2050 when the forecasted increased travel on 9000 South would exceed the road's capacity. The 9000 South project consists of improvements to 9000 South between Redwood Road and 700 West in the cities of West Jordan and Sandy. The project would enhance safety by improving substandard roadway components to meet current UDOT design standards.

The build alternative would widen about 1.5 miles of 9000 South between Redwood Road and 700 West from five to seven lanes. The build alternative would add an additional 11-foot-wide travel lane in each direction, for a total of three travel lanes in each direction plus a 14-foot-wide, center, two-way, left-turn turning lane. A 4-foot-wide, curb-height median would run down the middle of 9000 South from about 1075 West to 700 West. With three travel lanes in each direction, 9000 South in the project study area would match the lane configuration on 9000 South east of the project study area. 9000 South would be widened mostly to the south to minimize impacts to utilities, right-of-way, the existing storm drain system, and signal infrastructure. Therefore, the existing curb, gutter, and sidewalk on the north side of the road would be retained to the extent possible. Consistent 10-foot-wide shoulders would be incorporated on both sides of the road for safety. The new right-of-way for 9000 South would vary between 100 and 113 feet wide, depending on the location.

Water Resources and Wetlands:

HDR evaluated this project for waters of the U.S. (WoUS), including wetlands and streams regulated by US Army Corps of Engineers (Army Corps) and other waters under the jurisdiction of the State of Utah with a desktop analysis and subsequent Aquatic Resources Delineation. The aquatic resources evaluation area contains a total of 0.64 acre of aquatic resources. These resources consist of two palustrine (emergent marsh) wetlands that total 0.07 acre, two open-water segments of the Jordan River that total 263 linear feet (0.43 acre), two open-water segments of the North Jordan Canal that total 81 linear feet (0.06 acre), and one stormwater detention basin that is 621 linear feet (0.08 acre). Appendix D, Aquatic Resources Delineation Report, provides the full Aquatic Resources Delineation Report for the 9000 South project.

Under current guidance, USACE would likely assert jurisdiction over the Jordan River and the North Jordan Canal because they are both relatively permanent tributaries that eventually drain to the Great Salt Lake, a traditional navigable water. WET-1 and WET-3 (see delineation) are both potentially isolated wetlands that might not be subject to Clean Water Act Section 404 jurisdiction. WET-1 is not adjacent to any other aquatic resources and lacks a defined outlet. WET-3 is about 60 feet east of the North Jordan Canal; however, this small depressional wetland does not drain to the canal and is separated by upland. S-1 is a stormwater detention basin constructed in upland, and its sole purpose is to provide stormwater functions. In accordance with guidance from regulatory preambles, USACE does not typically regulate stormwater facilities constructed in uplands.

The project will alter 55 linear feet (about .13 acre) of the Jordan River (segments P-1a and P-1b) and about 0.05 acres of a stormwater detention basin. The project will not affect either wetland feature. A Utah Stream Alteration/PGP-10 permit will be required for the work impacting the Jordan River. Additionally, work impacting the Jordan River will require a Sovereign Lands Permit from the Utah Division of Forestry Fire and State Lands.

Mitigation Commitments:

1. A Utah Stream Alteration/PGP-10 permit must be obtained prior to construction.
2. A Sovereign Lands Permit must be obtained from the Utah Division of Forestry Fire and State Lands.

Utah Pollutant Discharge Elimination System (UPDES):

This project will disturb more than one (1) acre of earth and is therefore required to obtain a SWPPP to comply with the Utah Pollutant Discharge Elimination System (UPDES) Utah Construction General Permit (UCGP).

Mitigation Commitments:

1. Comply with UCGP, by preparing a SWPPP during design and advertisement; provide SWPPP to the project awarded contractor prior to Notice to Proceed. (Salt Lake County Responsible)
2. Comply with UCGP, by finalizing the SWPPP prior to beginning earth disturbing activities; implementing and maintaining the project SWPPP throughout project construction. (Awarded Contractor Responsible)

Federal Emergency Management Agency (FEMA) Floodplains:

Work will occur within a FEMA Special Flood Hazard area, so a Floodplain Development Permit must be obtained from the local floodplain administrators.

Mitigation Commitments:

1. A Floodplain Development Permit must be obtained from the local floodplain administrators (Sandy City and West Jordan City)

Noxious Weeds:

Noxious weed species, as defined by the Utah Noxious Weed Act (Utah Administrative Code, Rule R68-9), have been identified growing within the project limits. To reduce the introduction and spread of noxious weeds, the project is required to properly clean earthmoving construction equipment before mobilizing onto the project.

Mitigation Commitments:

1. Include UDOT Special Provision Section 02924S NOXIOUS WEED CONTROL in the contract documents to require that earthmoving construction equipment is to be properly cleaned before mobilizing onto the project site and to treat any noxious weeds within the project limits and schedule. (UDOT Responsible)
2. Comply with UDOT Special Provision Section 02924S NOXIOUS WEED CONTROL requirements by properly cleaning all earthmoving construction equipment before mobilizing onto the project site, treating any existing noxious weeds before earth disturbing activities and avoiding unnecessary earth disturbances. (Awarded Contractor Responsible)

Visual Aesthetics:

This proposed project has limited disturbance and will not have significant visual impacts to the surrounding areas.

Mitigation Commitments:

1. Visual: Reclaim all disturbed areas per UDOT standard specifications. (Awarded Contractor Responsible)

9000 SOUTH
ENVIRONMENTAL STUDY
Redwood Road to I-15

Aquatic Resources Delineation Report

9000 South, Redwood Road to I-15

Utah Department of Transportation
UDOT Project No. S-0209(35)10, PIN 14412

July 2, 2019

Prepared by:

HDR, Inc.
2825 East Cottonwood Parkway, Suite 200
Salt Lake City, Utah 84121

Executive Summary

On behalf of the Utah Department of Transportation, HDR, Inc., has prepared this aquatic resources delineation report for the 9000 South State Environmental Study. HDR conducted fieldwork for the delineation on October 31, 2018.

The delineation was conducted in accordance with the following delineation manuals and delineation reference guides:

- Corps of Engineers Wetlands Delineation Manual (USACE 1987)
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008)
- U.S. Army Corps of Engineers regulatory guidance letters and joint agency regulations, policies, references, and guidance

The entire delineation survey area is about 83.36 acres and contains a total of 0.64 acre of aquatic resources. These resources consist of two palustrine (emergent marsh) wetlands that total 0.07 acre, two open-water segments of the Jordan River that total 263 linear feet (0.43 acre), two open-water segments of the North Jordan Canal that total 81 linear feet (0.06 acre), and one stormwater detention basin that is 621 linear feet (0.08 acre).

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Acronyms and Abbreviations

CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	U.S. Environmental Protection Agency
FAC	facultative (plants that occur in wetlands and non-wetlands)
FACW	facultative wetland (plants that usually occur in wetlands but can occur in non-wetlands)
GIS	geographic information systems
HDR	HDR, Inc.
ID	identifier
No.	number
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
NWPL	National Wetland Plant List
OBL	obligate wetland (plants that almost always occur in wetlands)
OHWM	ordinary high water mark
PEM	palustrine emergent
PGP 10	USACE Programmatic General Permit 10
S.R. 209	Utah State Route 209 (9000 South)
SES	State Environmental Study
TNW	traditional navigable water
U.S.	United States
UDOT	Utah Department of Transportation
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WOUS	waters of the United States

1.0 Introduction

The Utah Department of Transportation (UDOT) proposes to construct about 2 miles of transportation capacity improvements on Utah State Route (S.R.) 209 (9000 South) from Redwood Road to 700 West in Salt Lake County, Utah. UDOT is conducting this State Environmental Study (SES) to evaluate the proposed course of action to meet the transportation needs on S.R. 209 in Salt Lake County. On behalf of UDOT, HDR, Inc. (HDR), has prepared this aquatic resources delineation report for the 9000 South SES.

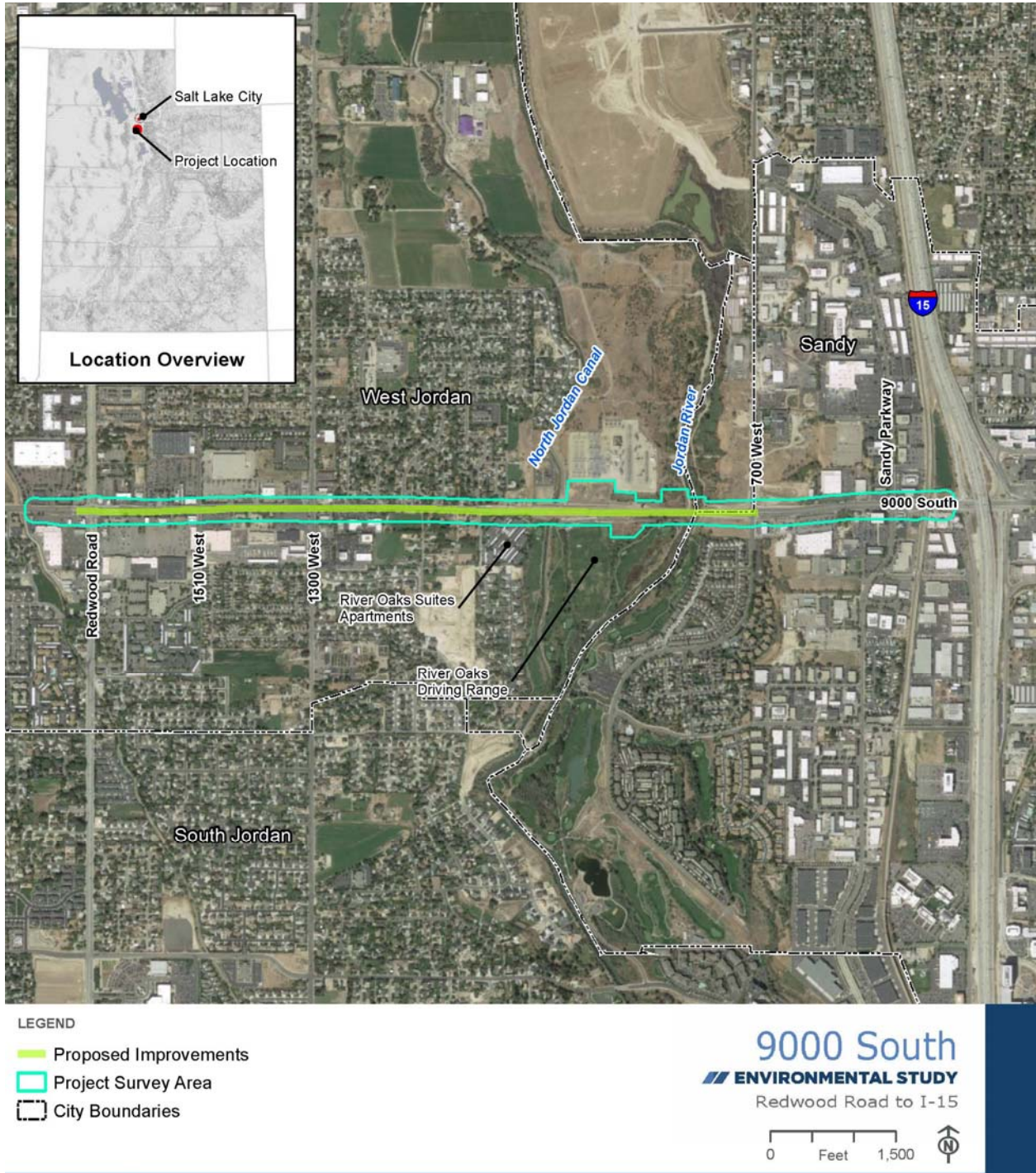
The purpose of this report is to identify and describe aquatic resources in the delineation survey area for the 9000 South SES (survey area). The results of the delineation are summarized in Table 3, Aquatic Resources Summary, on page 16. The jurisdictional status of the delineated aquatic resources is subject to determination by the U.S. Army Corps of Engineers (USACE).

1.1 Aquatic Resource Delineation Survey Area

The survey area covers about 83.36 acres and is located in the cities of Sandy and West Jordan in Salt Lake County, Utah. The survey area can be accessed from the Interstate 15 exit for 9000 South in Sandy, Utah. Figure 1 provides a vicinity map that shows extent of the 9000 South SES, and Appendix A, Project Location Index Map, shows the survey area with topography data.

As defined by the Public Land Survey System, the survey area is located in Township 3 South, Range 1 West, Sections 1, 2, and 3. Elevations in the survey area range from 4,300 to 4,411 feet above mean sea level.

Figure 1. Vicinity Map for the 9000 South SES Delineation Survey Area



1.2 Contact Information

1.2.1 Project Applicant

The applicant for the 9000 South SES is:

Utah Department of Transportation
2010 South 2760 West
Salt Lake City, Utah 84104

1.2.2 Land Ownership

Land in the survey area is publicly and privately owned and includes land within the existing UDOT right-of-way. Contact information and written permission to access private land can be provided on request as appropriate.

1.2.3 Contact Information for the Delineation Consultant

HDR, Inc.
2825 E. Cottonwood Parkway, Suite 200
Salt Lake City, Utah 84121

Michael Perkins
(801) 743-7864
michael.perkins@hdrinc.com

Amy Croft
(801) 743-7832
amy.croft@hdrinc.com

2.0 Regulatory Framework

As described in Part 328 of Title 33 in the Code of Federal Regulations (CFR), the objective of the Clean Water Act (CWA) is to maintain and restore the chemical, physical, and biological integrity of the waters of the United States (33 CFR Section 328.4). Any person, firm, or agency planning to alter or work in waters of the United States (WOUS), including the discharge of dredged or fill material, must first obtain authorization from USACE under CWA Section 404 and, if applicable, Section 10 of the Rivers and Harbors Act of 1899 (Title 33 United States Code Section 403) for work within navigable WOUS.

The project alternatives proposed for the 9000 South SES would not require a Section 10 permit because they would not entail work within navigable waters. UDOT anticipates that a CWA Section 404 permit authorization would be required for project activities within WOUS. Permits, licenses, variances, or similar authorization might also be required by other federal, state, and local statutes.

Section 2.0 discusses the regulatory framework that might apply to areas within the survey area that are potentially subject to federal jurisdiction.

2.1 Section 404 of the Clean Water Act

Waters of the United States is the encompassing term for areas that qualify for federal regulation under Section 404 of the CWA. Section 404 of the CWA gives the U.S. Environmental Protection Agency (EPA) and USACE regulatory and permitting authority regarding discharge of dredged or fill material into “navigable waters of the United States.” Section 502(7) of the CWA defines *navigable waters* as “waters of the United States, including territorial seas.”

The regulation at 33 CFR Section 328.3 defines the term *waters of the United States* as it applies to the jurisdictional limits of the authority of USACE under the CWA. A summary of this definition of WOUS in 33 CFR Section 328.3 includes (1) waters used for commerce and subject to tides; (2) interstate waters and wetlands; (3) “other waters” such as intrastate lakes, rivers, streams, and wetlands; (4) impoundments of waters; (5) tributaries of waters; (6) territorial seas; and (7) wetlands adjacent to waters. Therefore, for the purpose of determining USACE’s jurisdiction under the CWA, *navigable waters* as defined in the CWA are the same as WOUS defined in 33 CFR Section 328.3. WOUS include non-isolated “wetlands” and “other WOUS.”

The term *other WOUS* refers to unvegetated waterways and other water bodies with a defined bed and bank—water bodies such as drainages, creeks, rivers, and lakes. This definition approximately translates to the bank-to-bank portion of water bodies, up to the ordinary high water mark (OHWM). Other WOUS typically lack hydrophytic vegetation and might also lack hydric soils. Jurisdiction in non-tidal areas extends to the OHWM, which is defined as:

... that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
[33 CFR Section 328.3(e); 51 Federal Register 41250, November 13, 1986, as amended at 58 Federal Register 45036, August 25, 1993]

Wetlands are defined as:

... areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. [33 CFR Section 328.3(b); 40 CFR Section 230.3(t)]

The guidelines for implementing Section 404 of the CWA are referred to as the Section 404(b)(1) Guidelines. They were developed by EPA in conjunction with USACE (40 CFR Part 230). The Guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

On June 29, 2015, EPA and USACE jointly published the *Clean Water Rule: Definition of “Waters of the United States”* (2015 Clean Water Rule), which became effective August 28, 2015 (40 CFR Section 230.3). However, a nationwide stay was issued by the U.S. Court of Appeals for the Sixth Circuit on October 9, 2015, which blocked the implementation of the 2015 Clean Water Rule.

The agencies published an applicability date amendment to the Clean Water Rule in February 2018 that states it will not be applicable until February 6, 2020. In August 2018, the U.S. District Court for the District of South Carolina issued an injunction on the amendment, effectively reinstating the 2015 Clean Water Rule in 26 states. On December 11, 2018, EPA and USACE proposed a revised definition of “waters of the United States” (Docket ID No. EPA-HQ-OW-2018-0149). In states including Utah, USACE is not currently implementing the 2015 Clean Water Rule or the revised rule proposed on December 11, 2018, but is instead following regulations and guidance as implemented prior to the 2015 Clean Water Rule.

2.1.1 Significant Nexus of Tributaries

On December 2, 2008, USACE and EPA issued joint guidance implementing the June 19, 2006, U.S. Supreme Court opinions resulting from the *Rapanos v. United States* and *Carabell v. United States (Rapanos)* cases. This guidance states that the agencies will assert jurisdiction over (1) traditional navigable waters (TNW), (2) wetlands adjacent to TNW, (3) non-navigable tributaries of TNW that are relatively permanent where the tributaries typically flow year around or have continuous flow at least seasonally (for example, typically 3 months), and (4) wetlands that abut such tributaries. A “significant nexus” determination will be made for non-navigable tributaries that are not relatively permanent and their adjacent wetlands. Such features that are determined to have a “significant nexus” to a TNW will also be subject to CWA jurisdiction.

A significant nexus requires that there be “more than an insubstantial or speculative effect on the chemical, physical, and/or biological integrity of a TNW.” This guidance also states the following features will generally not be subject to CWA jurisdiction: swales or erosional features (for example, gullies or small washes characterized by low volume and infrequent or short-duration flow) and ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

2.1.2 Isolated Areas Excluded from Section 404 Jurisdiction

Some wetlands and waters might also be considered outside USACE’s jurisdiction as a result of the Supreme Court’s decision in *Solid Waste Agency of Northern Cook County (SWANCC) v. United States Army Corps of Engineers* (531 U.S. 159 [2001]). Isolated wetlands and waters are those areas that do not have a surface or groundwater connection to, and are not adjacent to, a navigable WOUS and do not otherwise exhibit an interstate commerce connection.

2.2 Utah Stream Alteration Program

Section 73-3-29 of the Utah Code requires any person, governmental agency, or other organization wishing to alter the bed or banks of a natural stream to obtain written authorization from the State Engineer before beginning work. Natural streams are considered any natural waterway that receives enough water to develop an ecosystem that differs from the surrounding upland environment. Although it cannot be applied to permit wetland impacts, USACE Programmatic General Permit (PGP) 10 allows an applicant to obtain both state approval and authorization under Section 404 of the CWA through a single application process if the proposed work qualifies as a minimal-impact activity.

2.3 Section 401 of the Clean Water Act

Section 401 of the CWA requires state water quality certification for any permit or license issued by a federal agency for an activity that could discharge fill into WOUS. This requirement allows each state to have input into federally approved projects that could affect its waters (rivers, streams, lakes, and wetlands) and to ensure that the projects will comply with state water quality standards and any other water quality requirements of state law. Each Section 401 water quality certification for a project in Utah also ensures that the project will comply with applicable state water quality improvement plans. The State of Utah has conditionally certified all nationwide permits and PGP 10, so individual certification is typically not required for authorizations under nationwide permits or PGP 10.

3.0 Delineation Methodology

3.1 Preliminary Data Gathering

Before conducting delineation fieldwork, HDR reviewed information from several sources, including the following:

- Aerial images of the survey area
- Topography and surface water maps from the U.S. Geological Survey
- National Hydric Soils List for Utah (USDA NRCS 2018a)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps in geographic information systems (GIS) format
- U.S. Department of Agriculture, Natural Resources Conservation Service's (USDA NRCS) Web Soil Survey (USDA NRCS 2018b)
- USACE delineation manuals and delineation reference guides (described in Section 3.3, Delineation Procedures)

3.2 Delineation Survey Area Boundaries

All areas within the approximately 72.31-acre survey area were included in the delineation.

3.3 Delineation Procedures

HDR conducted fieldwork for the delineation on October 31, 2018. The delineation was conducted in accordance with the following delineation manuals and delineation reference guides:

- *Corps of Engineers Wetlands Delineation Manual* (USACE 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (Arid West Regional Supplement, USACE 2008)*
- *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (Lichvar and McColley 2008)
- *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Curtis and Lichvar 2010)
- USACE regulatory guidance letters and joint agency (USACE and EPA) regulations, policies, references, and guidance

HDR assessed the entire survey area to determine the presence or absence of aquatic features. The routine method was applied by selecting sampling point locations in the field. These sampling points were identified at locations where landform, vegetative, or hydrologic characteristics indicated the potential for wetlands. A set of paired sampling points was established to help delineate each wetland—one within the wetland and one just outside the wetland boundaries.

HDR recorded detailed information about vegetation, soils, and hydrologic characteristics for each sampling point and used this information to determine whether an area qualifies as a wetland and to help identify the wetland boundaries. HDR delineated non-wetland aquatic features based on the presence of an OHWM (Lichvar and McColley 2008; USACE 2005). All datasheets are included in Appendix B, Wetland Determination Data Forms. Photographs of aquatic resources in the survey area and sample locations are included in Appendix C, On-site Representative Photographs.

Based on information gathered from sampling points and observable changes in elevation and plant communities, HDR mapped aquatic resource boundaries in the survey area through global positioning system (GPS)–based field mapping (using the ArcGIS Collector application and an iPad). To produce aquatic resources delineation maps for the survey area, data were exported into GIS software (ArcMap). Appendix D, Aquatic Resources Delineation Map Series, provides the aquatic

resources delineation maps. These data were also used to calculate the area of aquatic features in the survey area.

3.3.1 Wetlands

The occurrence of wetlands is determined based on the presence or absence of hydrophytic (wetland) vegetation, hydric (wetland) soils, and wetland hydrology. The presence of all three of these criteria is necessary for an area to be designated as a wetland, unless problematic conditions or significant disturbance is identified and evaluated in accordance with delineation procedures. Wetland boundaries are considered to be a line across which the vegetation, soils, and hydrologic characteristics begin or cease to meet the wetland criteria.

What are wetland delineation parameters?

There are three wetland delineation parameters: vegetation, soils, and hydrology (USACE 1987).

Vegetation

Hydrophytic vegetation consists mainly of plants that are adapted to grow in water, or in a substrate that is at least periodically deficient in oxygen as a result of excessive water contact. Hydrophytic vegetation indicators include the dominance test, prevalence index, and morphological adaptations. Table 1 lists the current indicator statuses assigned to plant species for the purpose of delineating wetlands (Lichvar et al. 2012). A list of observed plant species, including their indicator status, is provided in Appendix G, List of Plant Species Observed.

Table 1. Wetland Indicator Status System

Indicator Status	Indicator Symbol	Definition
Obligate wetland	OBL	Plants that almost always occur in wetlands.
Facultative wetland	FACW	Plants that usually occur in wetlands but could occur in non-wetlands.
Facultative	FAC	Plants that occur in wetlands and non-wetlands.
Facultative upland	FACU	Plants that usually occur in non-wetlands but could occur in wetlands.
Upland plants	UPL	Plants that almost never occur in wetlands.
Not listed	NL	Plants that are not listed on the National Wetland Plant List (NWPL) and therefore are assumed to be upland.

HDR documented vegetation within a sample plot surrounding each sampling point location. Each sample plot was visually inspected to identify plant species and estimate the percent cover of each species.

Vegetation was considered hydrophytic when over 50% of the dominant species had an indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL) (the dominance test). In cases where the dominance was less than or equal to 50%, vegetation was considered hydrophytic when the prevalence index was less than 3.0.

To identify the appropriate indicator status of each plant species recorded, HDR referenced the version of the Arid West Regional Wetland Plant List (a subset of the NWPL) that was available for delineation fieldwork and analysis (Lichvar et al. 2016).

What are the dominance test and prevalence index?

Dominance test and prevalence index are indicators of hydrophytic vegetation. The *dominance test* is satisfied when over 50% of the dominant species in a sample plot have an indicator status of FAC, FACW, or OBL. The *prevalence index* considers the percent cover and indicator status of all species in a sample plot. An index value of less than 3.0 indicates hydrophytic vegetation.

Soils

Hydric soils are soils that are saturated, flooded, or ponded for long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile. Anaerobic conditions favor the growth and regeneration of hydrophytic vegetation. Hydric soil indicators can include organic soils (histosols); mineral soils saturated and rich in organics (histic epipedons); sulfidic odor; low dissolved oxygen concentration (aquic moisture regime) and reducing conditions; gleyed and/or low-chroma soils; soils listed on national, state, or local hydric soils lists; and iron and manganese concentrations close to the soil surface. HDR used a standard Munsell soil color chart to determine the soil matrix and mottle colors (Munsell Color 2009). In accordance with USACE methodology, soil profiles were investigated at sampling points in the survey area and were examined for indicators of hydric conditions.

Hydrology

The term *wetland hydrology* encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on the characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively. Wetland hydrology indicators include obvious characteristics such as surface water, soil saturation, and shallow water table depth. Other indicators include soil cracking, a salt crust, drainage patterns, water-stained leaves, and the presence of oxidized rhizospheres. HDR evaluated the hydrology at each sampling point in the survey area.

3.3.2 Other Aquatic Resources

This delineation also evaluated the presence of aquatic resources other than wetlands potentially subject to USACE's jurisdiction. In non-tidal areas, USACE maintains jurisdiction over areas below the OHWM in water features such as navigable streams, rivers, and lakes; interstate waters; and tributaries to navigable waters.

HDR delineated non-wetland aquatic features based on the presence of an OHWM (Lichvar and McColley 2008; USACE 2005). Potentially jurisdictional non-wetland features were delineated along the OHWM. If a feature did not exhibit an OHWM and did not show distinct vegetation changes, it was not further evaluated as a potential aquatic resource or considered to be a potentially jurisdictional water.

3.3.3 Jurisdictional Status of Aquatic Resources

USACE considers an area to be a wetland if it is characterized by the three parameters of hydrophytic vegetation, hydric soils, and wetland hydrology. Other aquatic resources are identified based on evidence of an OHWM. However, as described in Section 2.1, Section 404 of the Clean Water Act, for these resources to be subject to regulation under the CWA, they also must meet jurisdictional criteria.

Under current guidance, USACE asserts jurisdiction over TNWs, wetlands that are adjacent to a TNW, relatively permanent non-navigable tributaries of TNW, and wetlands that directly abut relatively permanent non-navigable tributaries of TNW (USACE 2008). A fact-specific analysis is used to determine whether wetlands that are adjacent to but not abutting non-navigable tributaries have a significant nexus with a TNW (USACE 2008). Wetlands adjacent to non-navigable tributaries that lack a significant nexus and any wetlands determined to be isolated would not be subject to CWA jurisdiction if they do not have an identifiable connection to interstate or foreign commerce and they do not include interstate waters. Additionally, as indicated in regulatory preambles (53 Federal Register 20765 [June 6, 1988] and 51 Federal Register 41217 [Nov. 13, 1986]), USACE does not normally consider certain constructed features to be WOUS. These typically exempt features include:

- Non-tidal drainage and irrigation ditches excavated on dry land
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of a WOUS

4.0 Environmental Setting

The survey area is located in Salt Lake County, Utah, in the southern part of the Salt Lake Valley. The survey area is part of the Basin and Range physiographic region and the salt desert ecoregion of Utah. The survey area consists mainly of urban areas. The general vegetation communities in the remaining undeveloped areas are mixed grassland, riparian, and emergent marsh.

Most of the topography in the survey area is relatively flat. Hill slopes descending to the historic Jordan River floodplain are the most pronounced topographic features. The survey area is located in the Jordan watershed, hydrologic unit code 16020204 (USGS 2018).

4.1 National Wetlands Inventory Wetland Maps

NWI maps provide data regarding wetlands and deep-water habitats such as lakes and streams, as categorized in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin Classification System; Cowardin et al. 1979). NWI data are based primarily on the interpretation of high-altitude images and do not represent regulatory boundaries.

Appendix E, National Wetlands Inventory Map Series, provides a map series that displays NWI data across the survey area. These maps identify riverine features and a few potential wetlands in the survey area.

4.2 Existing Field Conditions

The delineation field reconnaissance was conducted on October 31, 2018.

Weather data for the general survey area was obtained from historic records collected in Salt Lake City, Utah (U.S. Climate Data 2018). During the field surveys, temperatures ranged from 40 to 46 degrees Fahrenheit, with no measurable precipitation and mostly sunny skies. The average annual precipitation in Salt Lake City is 18.58 inches. Regional snowpack during the winter of 2017–2018 was below normal, and precipitation totals from the start of 2018 through the period of the delineation fieldwork trended below normal.

4.2.1 General Hydrology

The survey area includes open-water segments of the Jordan River and the North Jordan Canal. The North Jordan Canal begins at its diversion with the Jordan River about 0.5 mile south of the survey area. Snowmelt from the Wasatch Mountains into Utah Lake is the largest source of hydrology to the Jordan River.

4.2.2 General Soil Conditions

The survey area consists of the following soil types:

- Bramwell silty clay loam
- Chipman silty clay loam
- Hillfield-Taylorville complex
- Kidman very fine sandy loam
- Magna silty clay
- Mixed alluvial land
- Taylorville silty clay loam
- Welby silt loam

Of these soil map units, Magna silty clay and mixed alluvial land are rated as hydric and are included as minor components of other units. Soil map unit boundaries for the survey area are provided in Appendix F, USDA NRCS Custom Soil Resource Report (USDA NRCS 2018b).

4.2.3 General Plant Community Types

General vegetation communities in the survey area are mixed grassland, riparian, and emergent marsh. Appendix G, List of Plant Species Observed, lists the plant species that were observed in the survey area including the scientific name, common name, and Arid West Region wetland indicator status (Lichvar et al. 2016).

Mixed Grassland. This community encompasses undeveloped uplands in the survey area. Mixed grassland areas have been subject to various past disturbances and land uses, allowing several weedy species to become established. Observed species include cereal rye (*Secale cereale*), cheatgrass (*Bromus tectorum*), annual ragweed (*Ambrosia artemisiifolia*), intermediate wheatgrass (*Thinopyrum intermedium*), crested wheatgrass (*Agropyron cristatum*), clasping pepperweed (*Lepidium perfoliatum*), field bindweed (*Convolvulus arvensis*), whitetop (*Cardaria draba*), and curlycup gumweed (*Grindelia squarrosa*).

Riparian. Riparian vegetation is are found along the banks of the Jordan River in the survey area. Dominant woody species include Russian olive (*Elaeagnus angustifolia*), tamarisk (*Tamarix ramosissima*), common reed (*Phragmites australis*), and upland species as found in mixed grassland.

Emergent Marsh. Dominant species in emergent marshes in the survey area consist of common reed and reed canarygrass (*Phalaris arundinacea*).

5.0 Results

Section 5.0 describes the results of the aquatic resource delineation. The maps in Appendix D, Aquatic Resources Delineation Map Series, depict the extent of aquatic resource areas in the survey area and the locations of wetland delineation sampling points. To help delineate potential wetlands in the survey area, HDR completed five wetland determination data forms.

Wetland determination data forms are provided in Appendix B, Wetland Determination Data Forms. On-site photographs are provided in Appendix C, On-site Representative Photographs. A list of observed plant species is provided in

Appendix G, List of Plant Species Observed. Table 3, Aquatic Resources Summary, on page 16 summarizes all of the aquatic resource features that were delineated and mapped. The following subsections describe the delineated features by each aquatic resource type.

5.1 Wetlands

Two wetland features (WET-1 and WET-3) totaling 0.07 acre were delineated in the survey area. Based on observed wetland characteristics and on the Cowardin Classification System (Cowardin et al. 1979), both wetlands are palustrine emergent (PEM) semipermanently flooded. Table 2 summarizes the data that were collected on wetland determination data forms at the sampling points in the survey area.

Table 2. Summary of Data from Wetland Determination Data Forms

Sampling Point ^a	Hydrophytic Vegetation?	Hydric Soils?	Wetland Hydrology?	Sampled Area within a Wetland?	Map Sheet Number ^b
IN-1	Yes	Yes	Yes	Yes	1
OUT-1	No	No	No	No	1
OUT-2	Yes	No	No	No	1
IN-3	Yes	Yes	Yes	Yes	1
OUT-3	No	No	No	No	1

^a The abbreviation IN refers to a sampling point located within a wetland, and the abbreviation OUT refers to a sampling point located within an upland. Corresponding wetland determination data forms are provided in Appendix B, Wetland Determination Data Forms.

^b Map sheets are provided in Appendix D, Aquatic Resources Delineation Map Series.

WET-1. Wetland WET-1 is a 0.06-acre emergent marsh wetland located just north of 9000 South and west of a parking lot at the top of a slope that descends to the west into the historic Jordan River floodplain. WET-1 is located in an area that has been disturbed and potentially excavated as a stormwater facility. Its primary source of hydrology appears to be from a stormwater pipe outlet. Topographically, WET-1 is in a closed basin, and no outlet was identified. Vegetation consists of a thick stand of common reed. This wetland appears to provide stormwater retention, but it is unknown whether it was constructed as a formal stormwater facility. Other wetland functions, such as habitat support, are limited by its small size, by invasive plants in the wetland, and by its surroundings of weedy uplands and urban development.

WET-3. Wetland WET-3 is a 0.01-acre emergent marsh wetland located in a subtle depression at the base of fill slopes on the south side of 9000 South and abutting the River Oaks Golf Course. It appears to collect surface runoff from the fill slopes and golf course. WET-3 is in a closed basin with no outlet. Its wetland functions are limited by its small size and by invasive plants in the wetland.

5.2 Other (Non-wetland) Aquatic Resources

As described in Section 3.3, Delineation Procedures, other (non-wetland) aquatic resources were delineated based on the presence of an OHWM (Curtis and Lichvar 2010; Lichvar and McColley 2008; USACE 2005). These delineated features consist of two open-water segments of the Jordan River that total 263 linear feet (0.43 acre), two open-water segments of the North Jordan Canal that total 81 linear feet (0.05 acre), and one stormwater detention basin that is 621 linear feet (0.08 acre). Appendix D, Aquatic Resources Delineation Map Series, includes representative OHWM transects, and Appendix C, On-site Representative Photographs, includes cross-section photographs of at transect locations.

Jordan River (P-1). Two open-water segments of the Jordan River that total 263 linear feet (0.43 acre) were delineated in the survey area. At a representative transect (T-1), the Jordan River is 75.6 feet wide up to its OHWM. The lateral extent of the OHWM was indicated by a break in the bank and changes in vegetation species. A riparian fringe along the OHWM is dominated by Russian olive.

The Jordan River begins at the outlet of Utah Lake and flows about 51 miles into the Great Salt Lake. It is disconnected from its natural floodplain because it has been altered by multiple past actions including diversions, channelization, pollution, and dredging. The Jordan River is actively managed to provide irrigation water (Cederberg et al. 2009).

North Jordan Canal (C-1). Two open-water segments of the North Jordan Canal that total 81 linear feet (0.06 acre) were delineated in the survey area. At a representative transect (T-2), the North Jordan Canal is 32.3 feet wide up to its OHWM. The lateral extent of the OHWM was indicated by a break in the bank and changes in vegetation.

The North Jordan Canal begins at its diversion with the Jordan River about 0.5 mile south of the survey area. The North Jordan Irrigation Company operates and maintains this canal, which provides water to users from about 9000 South to 3100 South (NJIC 2018).

Stormwater Basin (S-1). One stormwater detention basin (S-1) that is 621 linear feet (0.08 acre) was delineated in the survey area. S-1 is located on the south side of 9000 South and detains stormwater runoff from 9000 South. It is a channel-shaped basin constructed in uplands that drains into the Jordan River.

6.0 Delineation Summary and Jurisdictional Evaluation

All areas in the delineation survey area were assessed to determine the presence or absence of aquatic resources including wetlands and other waters in accordance with the procedures and guidelines established by USACE. The survey area contains a total of 0.64 acre of aquatic resources. These resources consist of two palustrine (emergent marsh) wetlands that total 0.07 acre, two open-water segments of the Jordan River that total 263 linear feet (0.43 acre), two open-water segments of the North Jordan Canal that total 81 linear feet (0.06 acre), and one stormwater detention basin that is 621 linear feet (0.08 acre).

Table 3 summarizes all delineated aquatic resource features in the delineation survey area. The features are ordered by resource type and then by their locations on the map sheets in Appendix D, Aquatic Resources Delineation Map Series.

Table 3. Aquatic Resources Summary

Aquatic Resource Feature Name	Aquatic Resource Type	Cowardin Classification ^a	Waters Type Code ^b	Size (acres)	Length (feet)	Latitude	Longitude	Map Sheet Number ^c
WET-1	Emergent marsh	PEM	ISOLATE	0.06	—	40.588061	-111.908166	1
WET-3	Emergent marsh	PEM	RPWWN	0.01	—	40.587452	-111.918706	1
Jordan River (P-1a and P-1b)	Perennial waterway	R3	RPW	0.43	263	40.588032	-111.912717	1
North Jordan Canal (C-1a and C-1b)	Perennial waterway	—	RPW	0.06	81	40.587403	-111.918997	1
S-1	Stormwater basin	—	IMPNDMT	0.08	621	40.587565	-111.914920	1

^a Codes from *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979): PEM (palustrine emergent wetland) and R3 (upper perennial, riverine).

^b USACE Sacramento District, Aquatic Resources Spreadsheet “Waters_Type” codes (USACE 2016): RPWWD (wetlands directly abutting RPWs that flow directly or indirectly into TNWs), RPWWN (wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs), RPW (relatively permanent waters that flow directly or indirectly into TNWs), NRPW (non-RPWs that flow directly or indirectly into TNWs), and IMPNDMT (impoundments).

^c Map sheets are provided in Appendix D, Aquatic Resources Delineation Map Series.

6.1 Jurisdictional Status of Delineated Aquatic Resources

Although the jurisdictional status of aquatic resources is determined by USACE, based on the results of this delineation, the Proposed Project would likely include work in WOUS. Under current guidance, USACE would assert jurisdiction over the Jordan River and the North Jordan Canal because they are both relatively permanent tributaries that eventually drain to a TNW, the Great Salt Lake.

Aquatic resources in the survey area do not have an observed or documented connection to interstate or foreign commerce. WET-1 and WET-3 are both potentially isolated wetlands that might not be subject to CWA Section 404 jurisdiction. WET-1 is not adjacent to any other aquatic resources and lacks a defined outlet. WET-3 is located about 60 feet east of the North Jordan Canal (C-1a); however, this small depressional wetland does not drain to the canal and is separated by upland.

S-1 is a stormwater detention basin constructed in upland, and its sole purpose is to provide stormwater functions. In accordance with guidance from regulatory preambles, USACE does not typically regulate stormwater facilities constructed in uplands.

As a delineation report, this document does not provide information regarding project impacts. UDOT would coordinate with USACE before constructing the Proposed Project to determine permitting requirements under Section 404 of the CWA for construction.

6.2 Additional Information

The following appendices include supporting information for this delineation:

- Appendix A. Project Location Index Map
- Appendix B. Wetland Determination Data Forms
- Appendix C. On-site Representative Photographs
- Appendix D. Aquatic Resources Delineation Map Series
- Appendix E. National Wetlands Inventory Map Series
- Appendix F. USDA NRCS Custom Soil Resource Report
- Appendix G. List of Plant Species Observed

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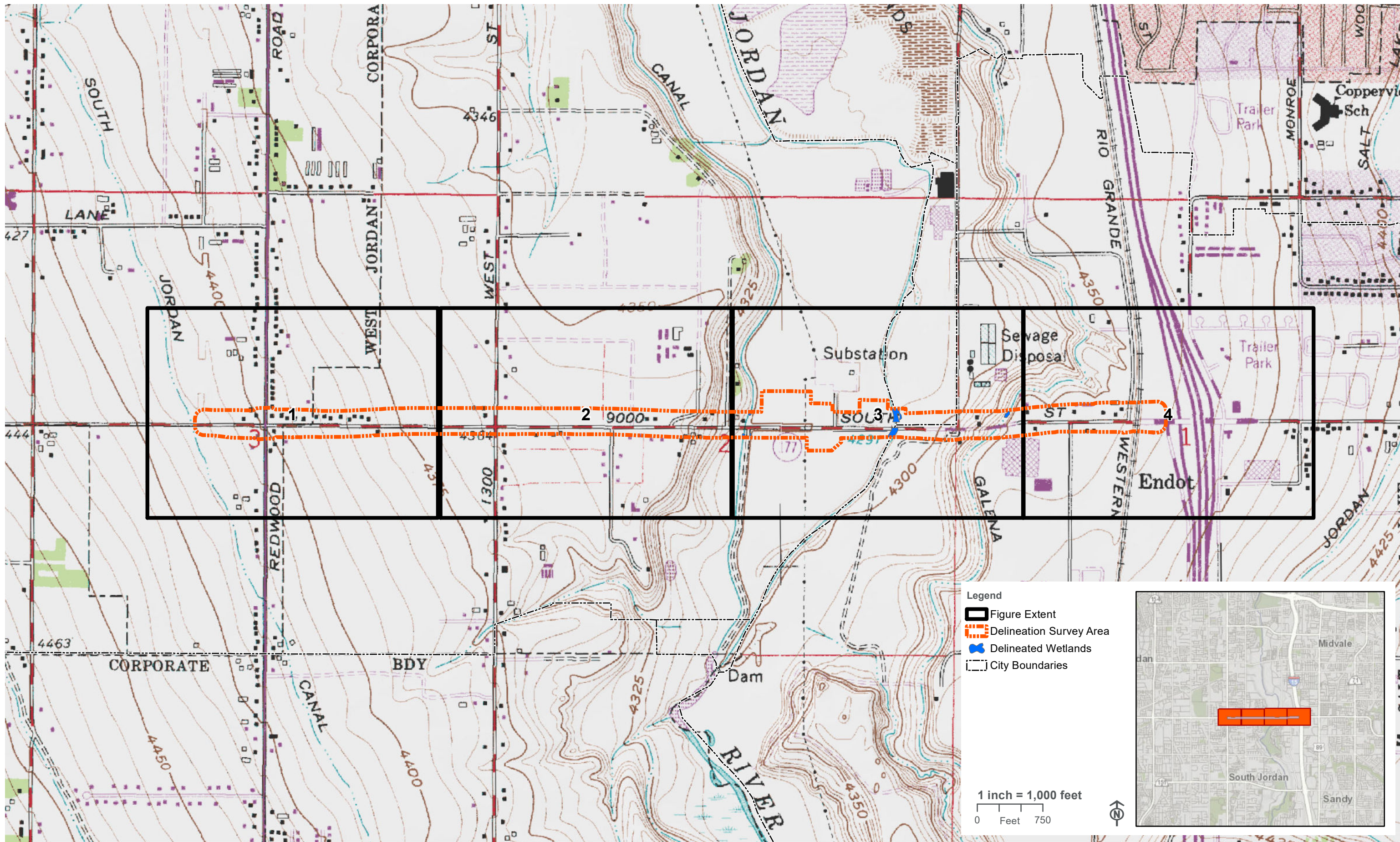
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Appendix A.
Project Location Index Map



Appendix B.
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 9000 South SES City/County: Sandy/Salt Lake Sampling Date: 10/31/2018
 Applicant/Owner: UDOT State: UT Sampling Point: IN-1
 Investigator(s): M. Perkins, A. Croft Section, Township, Range: SN1 T3S R1W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): D Lat: 40.58800 Long: -111.90800 Datum: NAD83
 Soil Map Unit Name: Hillfield-Taylorsville complex, 6 to 30 percent slopes NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: <u>Sampling point is a wetland (WET-1).</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	1 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5 ft)				Column Totals: _____ (A)	_____ (B)
1. <u>Phragmites australis</u>	100	yes	FACW	Prevalence Index = B/A = _____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
3. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
4. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. _____	_____	_____	_____		
50% = _____, 20% = _____	100	= Total Cover			
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>			
Remarks: <u>Vegetation is hydrophytic.</u>					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1	100	_____	_____	_____	_____	CL	rooty
2-20	10YR 5/2	50	10YR 4/6	10	C	M	CL	_____
2-20	10YR 3/1	40	_____	_____	_____	_____	CL	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (Inches): _____	Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	--

Remarks: Profile meets A11 and F3.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils saturated to surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 9000 South SES City/County: Sandy/Salt Lake Sampling Date: 10/31/2018
 Applicant/Owner: UDOT State: UT Sampling Point: OUT-1
 Investigator(s): M. Perkins, A. Croft Section, Township, Range: SN1 T3S R1W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR): D Lat: 40.58800 Long: -111.90800 Datum: NAD83
 Soil Map Unit Name: Hillfield-Taylorsville complex, 6 to 30 percent slopes NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Sampling point in upland adjacent to wetland WET-1.</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FACU species _____	x3 = _____
5. _____	_____	_____	_____	UPL species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		Column Totals: _____ (A)	_____ (B)
Herb Stratum (Plot size: 5 ft)				Prevalence Index = B/A = <u>≥3</u>	
1. <u>Agropyron cristatum</u>	<u>30</u>	<u>yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators:	
2. <u>Thinopyrum intermedium</u>	<u>25</u>	<u>yes</u>	<u>UPL</u>	<input type="checkbox"/> Dominance Test is >50%	
3. <u>Bromus tectorum</u>	<u>20</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
4. <u>Cadaria draba</u>	<u>20</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. <u>Onopordum acanthium</u>	<u>10</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
50% = _____, 20% = _____	<u>105</u>	= Total Cover			
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: <u>Upland vegetation.</u>					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100	_____	_____	_____	_____	CL	rooty
3-7	10YR 4/2	98	10YR 4/6	2	C	M	CL	_____
7-20	10YR 6/3	90	10YR 4/6	10	C	M	CL	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) **(LRR C)**
- 1 cm Muck (A9) **(LRR D)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) **(LRR C)**
- 2 cm Muck (A10) **(LRR B)**
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (Inches): _____

Hydric Soils Present? Yes No

Remarks: Profile doesn't quite meet F3.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) **(Nonriverine)**
- Sediment Deposits (B2) **(Nonriverine)**
- Drift Deposits (B3) **(Nonriverine)**
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) **(Riverine)**
- Sediment Deposits (B2) **(Riverine)**
- Drift Deposits (B3) **(Riverine)**
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): NA

Water Table Present? Yes No Depth (inches): NA

Saturation Present? (includes capillary fringe) Yes No Depth (inches): NA

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Dry soils.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 9000 South SES City/County: Sandy/Salt Lake Sampling Date: 10/31/2018
 Applicant/Owner: UDOT State: UT Sampling Point: OUT-2
 Investigator(s): M. Perkins, A. Croft Section, Township, Range: SN2 T3S R1W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): D Lat: 40.58800 Long: -111.91400 Datum: NAD83
 Soil Map Unit Name: Mixed alluvial land NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Sampling point in small stand of common reed is not a wetland.</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 5 ft)				Column Totals: _____ (A)	_____ (B)
1. <u><i>Phragmites australis</i></u>	<u>115</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = _____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
50% = _____, 20% = _____	<u>115</u>	= Total Cover			
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: <u>Vegetation is hydrophytic.</u>					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-11</u>	<u>10YR 2/1</u>	<u>100</u>	_____	_____	_____	_____	<u>CL</u>	_____
<u>11-18</u>	<u>10YR 3/1</u>	<u>70</u>	_____	_____	_____	_____	<u>CL</u>	_____
<u>11-18</u>	<u>10YR 5/2</u>	<u>30</u>	_____	_____	_____	_____	<u>CL</u>	_____
<u>18-20</u>	<u>10YR 5/1</u>	<u>80</u>	_____	_____	_____	_____	<u>CL</u>	_____
<u>18-20</u>	<u>10YR 4/1</u>	<u>20</u>	_____	_____	_____	_____	<u>CL</u>	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	
Type: _____	
Depth (Inches): _____	
	Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks: Profile doesn't fit any hydric indicators.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>NA</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>NA</u>
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>NA</u>
		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Dry soils.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 9000 South SES City/County: Sandy/Salt Lake Sampling Date: 10/31/2018
 Applicant/Owner: UDOT State: UT Sampling Point: IN-3
 Investigator(s): M. Perkins, A. Croft Section, Township, Range: SN2 T3S R1W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): D Lat: 40.5875 Long: -111.91900 Datum: NAD83
 Soil Map Unit Name: Chipman silty clay loam, saline sodic, 0 to 1 percent slopes NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: <u>Sampling point is a wetland (WET-3).</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	1 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)					
1. _____	_____	_____	_____	Prevalence Index worksheet:	
2. _____	_____	_____	_____	Total % Cover of:	Multiply by:
3. _____	_____	_____	_____	OBL species _____	x1 = _____
4. _____	_____	_____	_____	FACW species _____	x2 = _____
5. _____	_____	_____	_____	FACU species _____	x3 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x4 = _____
Herb Stratum (Plot size: 5 ft)					
1. <u>Phalaris arundinacea</u>	115	yes	FACW	Column Totals: _____ (A)	_____ (B)
2. <u>Phragmites australis</u>	1	yes	FACW	Prevalence Index = B/A = _____	
3. <u>thistle sp.</u>	1	no	_____	Hydrophytic Vegetation Indicators:	
4. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
5. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
6. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
8. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
50% = _____, 20% = _____	117	= Total Cover		Hydrophytic Vegetation Present?	
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: <u>Vegetation is hydrophytic.</u>					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	100	_____	_____	_____	_____	Loam	_____
3-14	10YR 3/2	90	10YR 4/6	5	C	M	CL	_____
3-14	_____	_____	10YR 7/1	5	D	M	CL	_____
14+	_____	_____	_____	_____	_____	_____	_____	rock
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if present):</p> <p>Type: _____</p> <p>Depth (Inches): _____</p> <p>Remarks: Profile fits F6.</p>	<p>Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
--	--

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u></p> <p>Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u></p> <p>Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u></p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils currently moist but not saturated during dry time of year. Given this site indicates both hydrophytic vegetation and hydric soils, and considering the site's landscape position (at toe of slope) and its basin morphology, seasonal wetland hydrology is assumed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: 9000 South SES City/County: Sandy/Salt Lake Sampling Date: 10/31/2018
 Applicant/Owner: UDOT State: UT Sampling Point: OUT-3
 Investigator(s): M. Perkins, A. Croft Section, Township, Range: SN2 T3S R1W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 3
 Subregion (LRR): D Lat: 40.5875 Long: -111.91900 Datum: NAD83
 Soil Map Unit Name: Chipman silty clay loam, saline sodic, 0 to 1 percent slopes NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: <u>Sampling point in upland just up slope from wetland WET-3 in embankment fill.</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)					
1. _____	_____	_____	_____	Prevalence Index worksheet:	
2. _____	_____	_____	_____	Total % Cover of :	Multiply by:
3. _____	_____	_____	_____	OBL species _____	x1 = _____
4. _____	_____	_____	_____	FACW species _____	x2 = _____
5. _____	_____	_____	_____	FAC species _____	x3 = _____
50% = _____, 20% = _____	_____	= Total Cover		FACU species _____	x4 = _____
Herb Stratum (Plot size: 5 ft)					
1. <u>Ambrosia artemisiifolia</u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	UPL species _____	x5 = _____
2. <u>Agropyron cristatum</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>	Column Totals: _____ (A)	_____ (B)
3. <u>Tragopogon dubious</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	Prevalence Index = B/A = <u>≥3</u>	
4. <u>Lepidium perfoliatum</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
6. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
7. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
50% = _____, 20% = _____	<u>56</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>45</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: <u>Upland vegetation.</u>					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	CL	_____
_____	_____	_____	_____	_____	_____	_____	CL	_____
_____	_____	_____	_____	_____	_____	_____	CL	_____
_____	_____	_____	_____	_____	_____	_____	CL	_____
_____	_____	_____	_____	_____	_____	_____	CL	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	
Type: _____	
Depth (Inches): _____	
	Hydric Soils Present? Yes <input type="checkbox"/> No <input type="checkbox"/>

Remarks: No soil pit - in embankment material.

HYDROLOGY

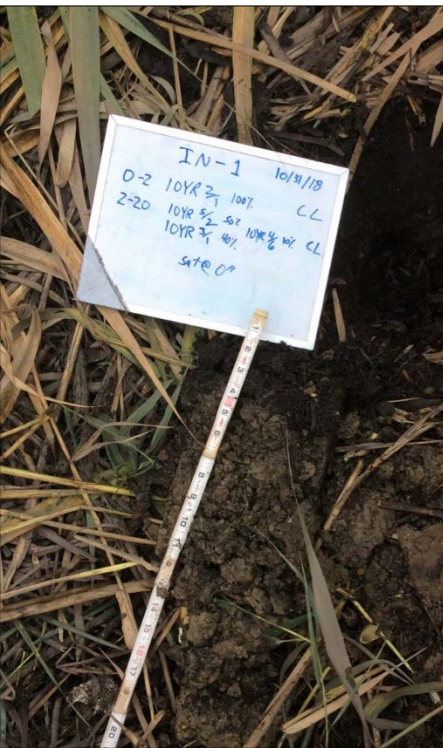
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>NA</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>NA</u>
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>NA</u>
		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Dry at surface.
US Army Corps of Engineers

Appendix C.
On-site Representative Photographs



Sampling Point IN-1



Sampling Point OUT-1



Sampling Point OUT-2



Sampling Point OUT-2



Sampling Point IN-3



Sampling Point OUT-3



T1 Downstream View (P-1 Jordan River)



T-2 Upstream View (C-1 North Jordan Canal)

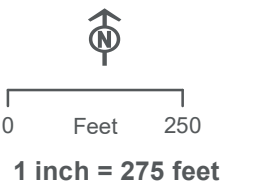


T-2 Downstream View (C-1 North Jordan Canal)

Appendix D.
Aquatic Resources Delineation Map Series



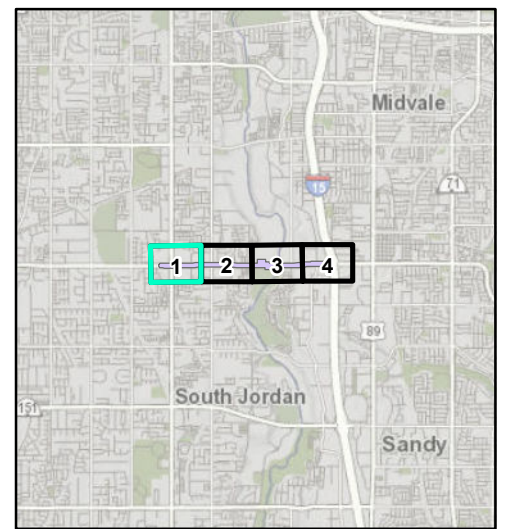
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- Geographic Control Points
 - Upland Sampling Point
 - Wetland Sampling Point
 - Ordinary High Water Mark Transect
 - Emergent Marsh
 - Open Water (Jordan River)
 - Open Water (North Jordan Canal)
 - Stormwater Facility
 - Delineation Survey Area
 - City Boundaries
 - Contours



Map Credits:
 Imagery:
 State of Utah Google Imagery Base
 Map 2017

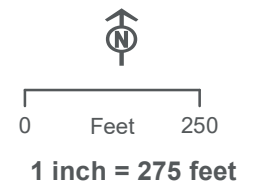
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Cartographer:
 Travis Tzioumis and Mike Perkins, HDR





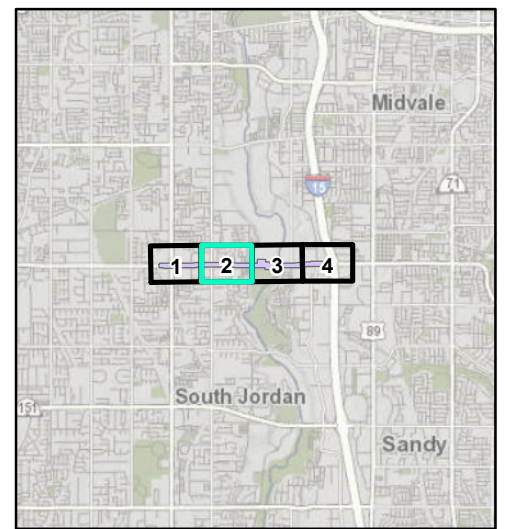
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 - Upland Sampling Point
 - Wetland Sampling Point
 - Ordinary High Water Mark Transect
 - Emergent Marsh
 - Open Water (Jordan River)
 - Open Water (North Jordan Canal)
 - Stormwater Facility
 - Delineation Survey Area
 - City Boundaries
 - Contours



Map Credits:
 Imagery:
 State of Utah Google Imagery Base
 Map 2017

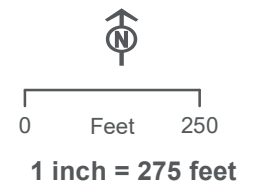
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Cartographer:
 Travis Tzioumis and Mike Perkins, HDR





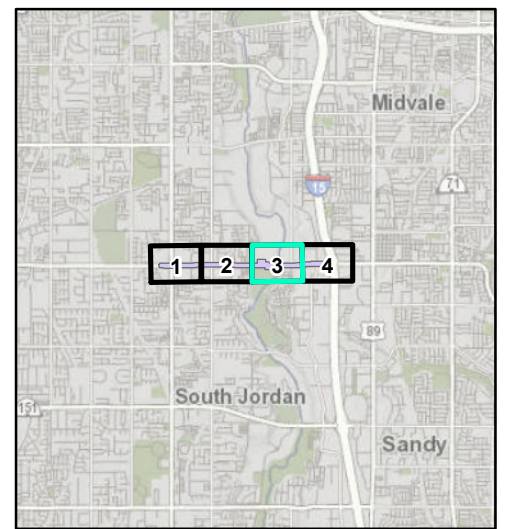
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- Geographic Control Points
 - Upland Sampling Point
 - Wetland Sampling Point
 - Ordinary High Water Mark Transect
 - Emergent Marsh
 - Open Water (Jordan River)
 - Open Water (North Jordan Canal)
 - Stormwater Facility
 - Delineation Survey Area
 - City Boundaries
 - Contours



Map Credits:
 Imagery:
 State of Utah Google Imagery Base
 Map 2017

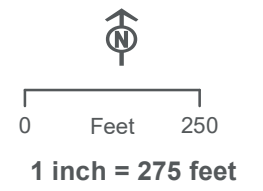
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Cartographer:
 Travis Tzioumis and Mike Perkins, HDR





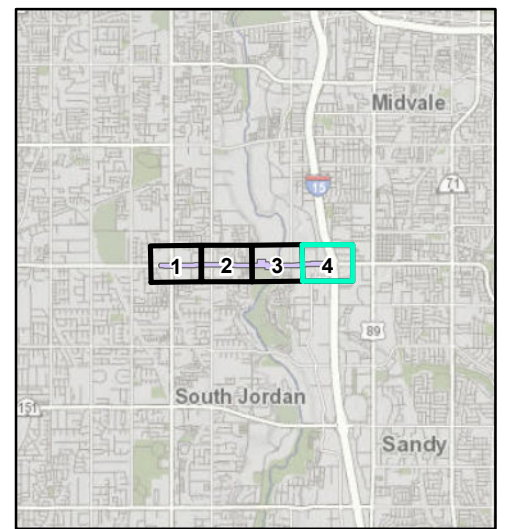
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 - Wetland Sampling Point
 - Ordinary High Water Mark Transect
 - Emergent Marsh
 - Open Water (Jordan River)
 - Open Water (North Jordan Canal)
 - Stormwater Facility
 - Delineation Survey Area
 - City Boundaries
 - Contours



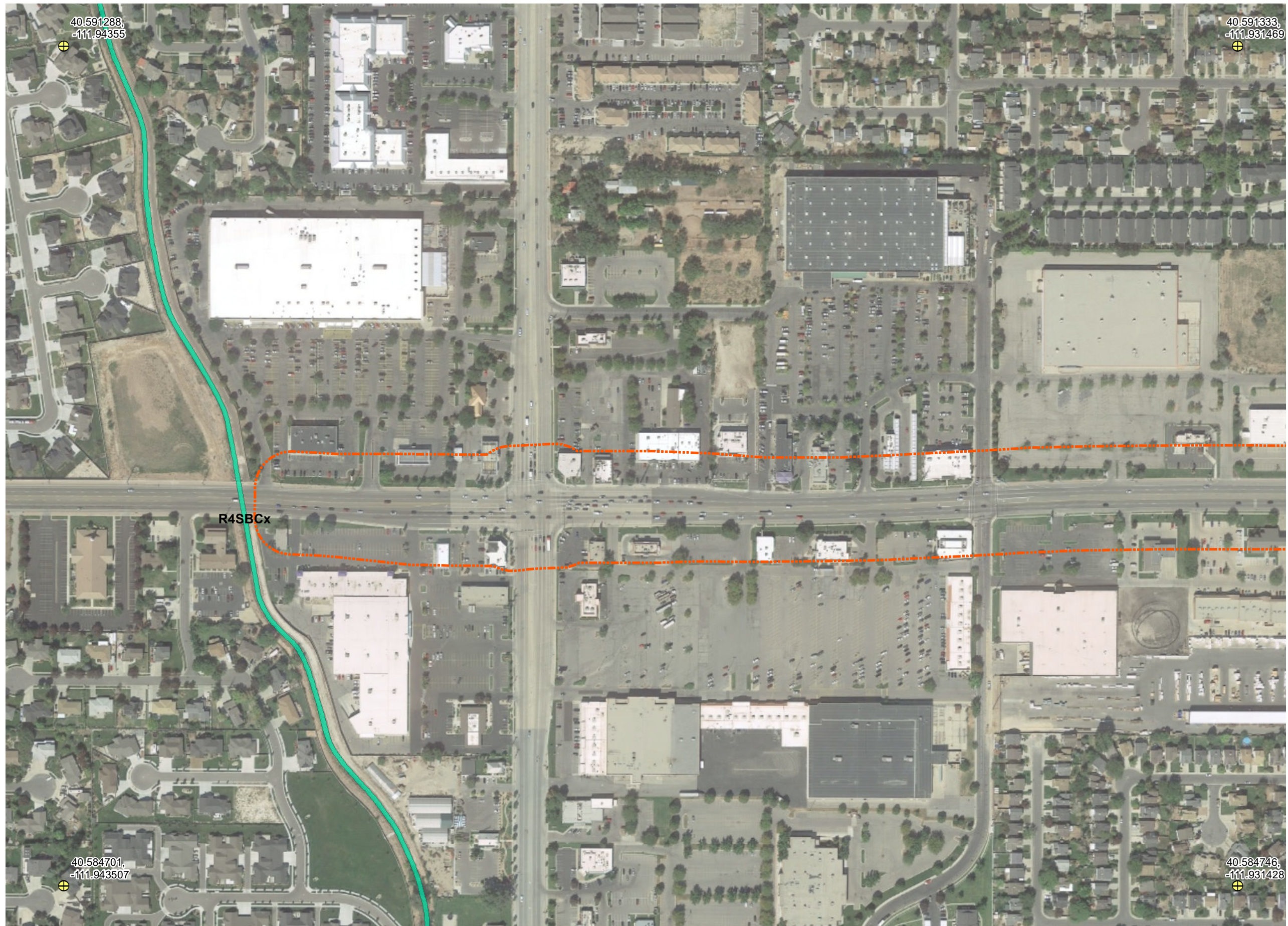
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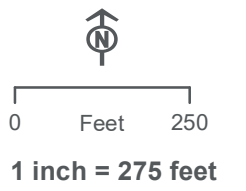
Cartographer:
 Travis Tzioumis and Mike Perkins, HDR



Appendix E.
National Wetlands Inventory Map Series



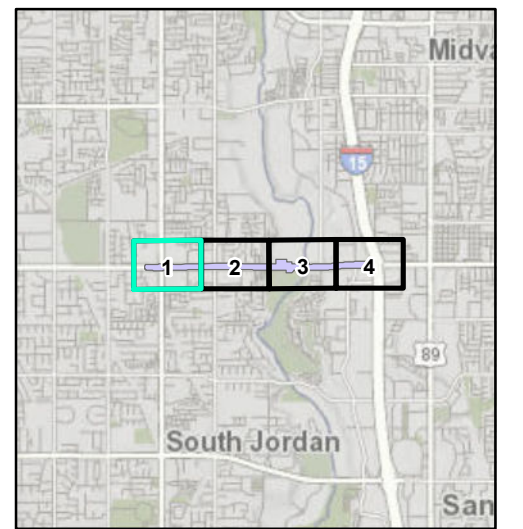
- Legend**
- Geographic Control Points
 - Delineation Survey Area
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Riverine
 - City Boundaries



Map Credits:
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Display Coordinate System:
 Utah Stateplane Central

Cartographer:
 Travis Tzioumis and Mike Perkins, HDR





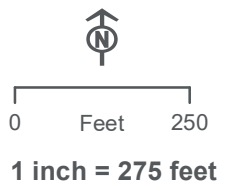
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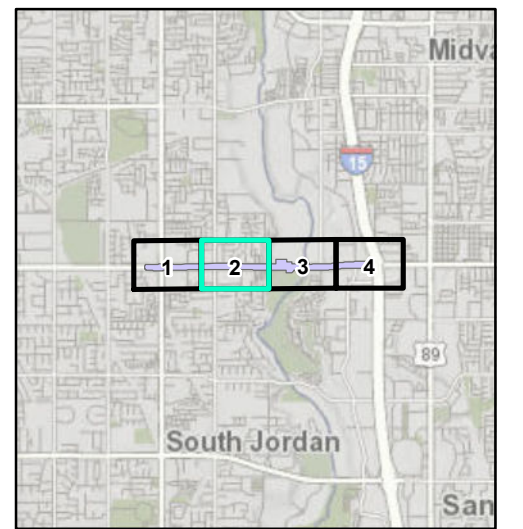
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 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Riverine
 - City Boundaries

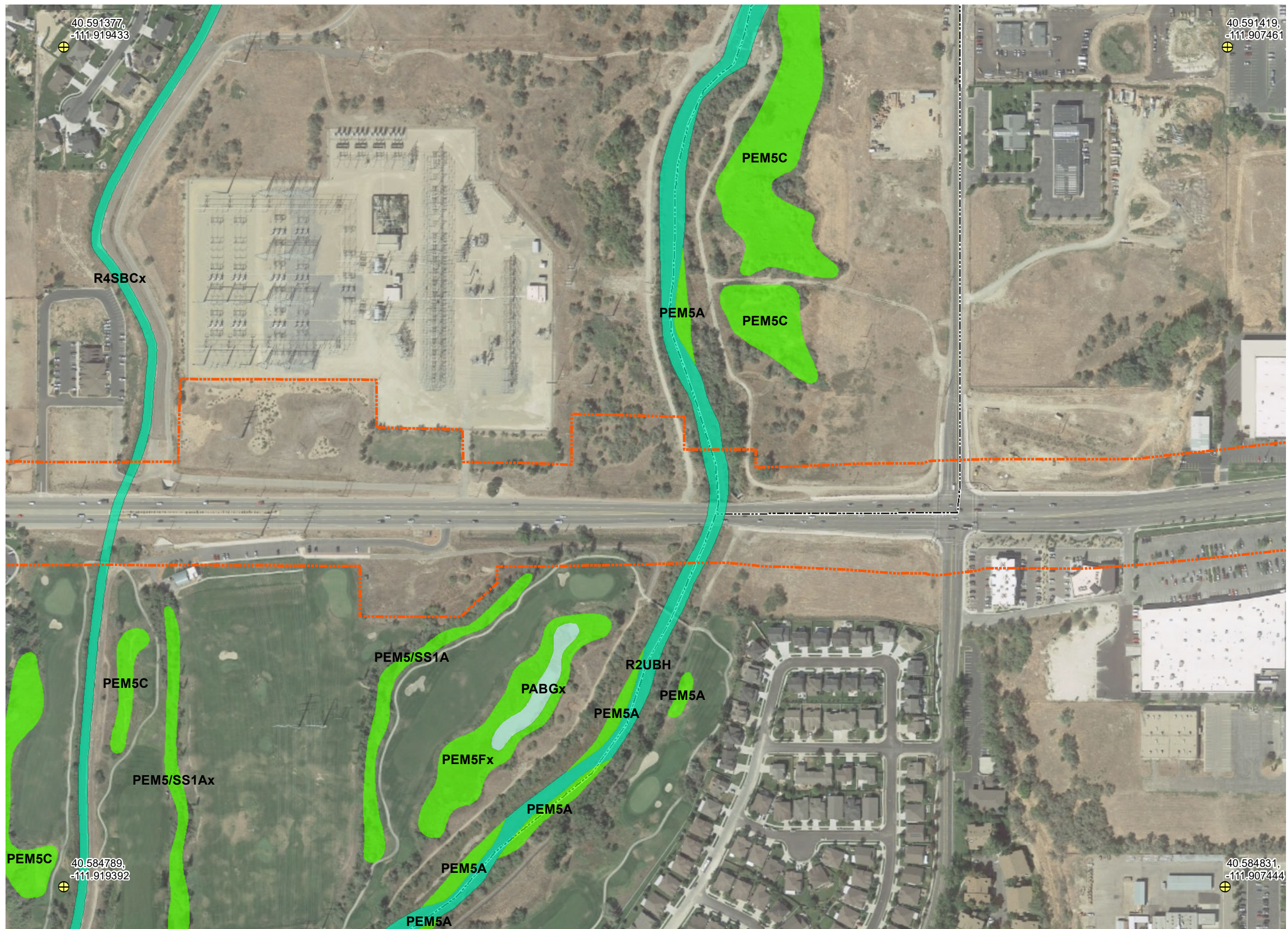


Map Credits:
 Imagery:
 State of Utah Google Imagery Base
 Map 2017

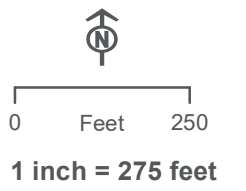
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Cartographer:
 Travis Tzioumis and Mike Perkins, HDR





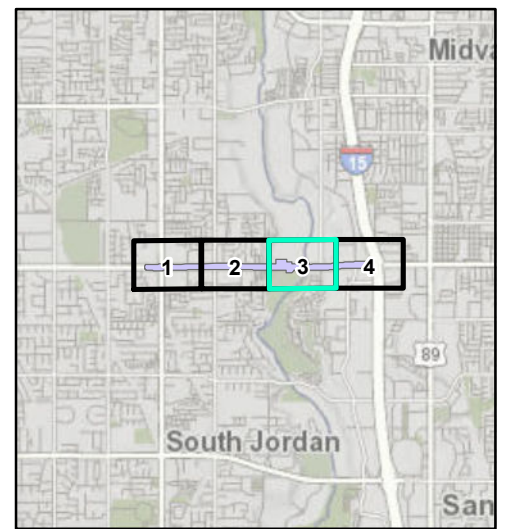
- Legend**
- Geographic Control Points
 - Delineation Survey Area
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Riverine
 - City Boundaries



Map Credits:
 Imagery:
 State of Utah Google Imagery Base
 Map 2017

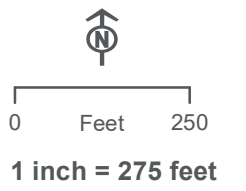
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Cartographer:
 Travis Tzioumis and Mike Perkins, HDR





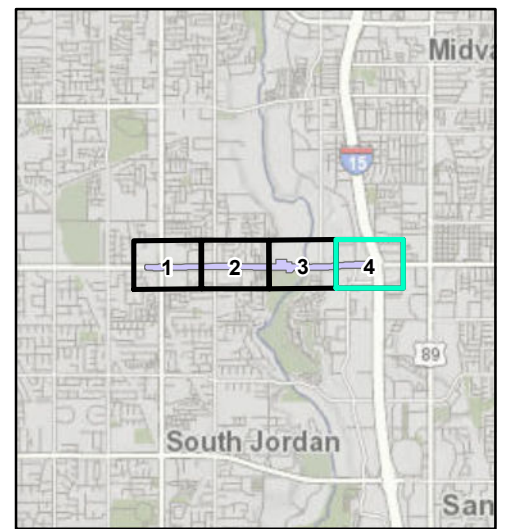
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- Geographic Control Points
 - Delineation Survey Area
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Riverine
 - City Boundaries



Map Credits:
 Imagery:
 State of Utah Google Imagery Base
 Map 2017

Display Coordinate System:
 Utah Stateplane Central

Cartographer:
 Travis Tzioumis and Mike Perkins, HDR



Appendix F.
USDA NRCS Custom Soil Resource Report



United States
Department of
Agriculture

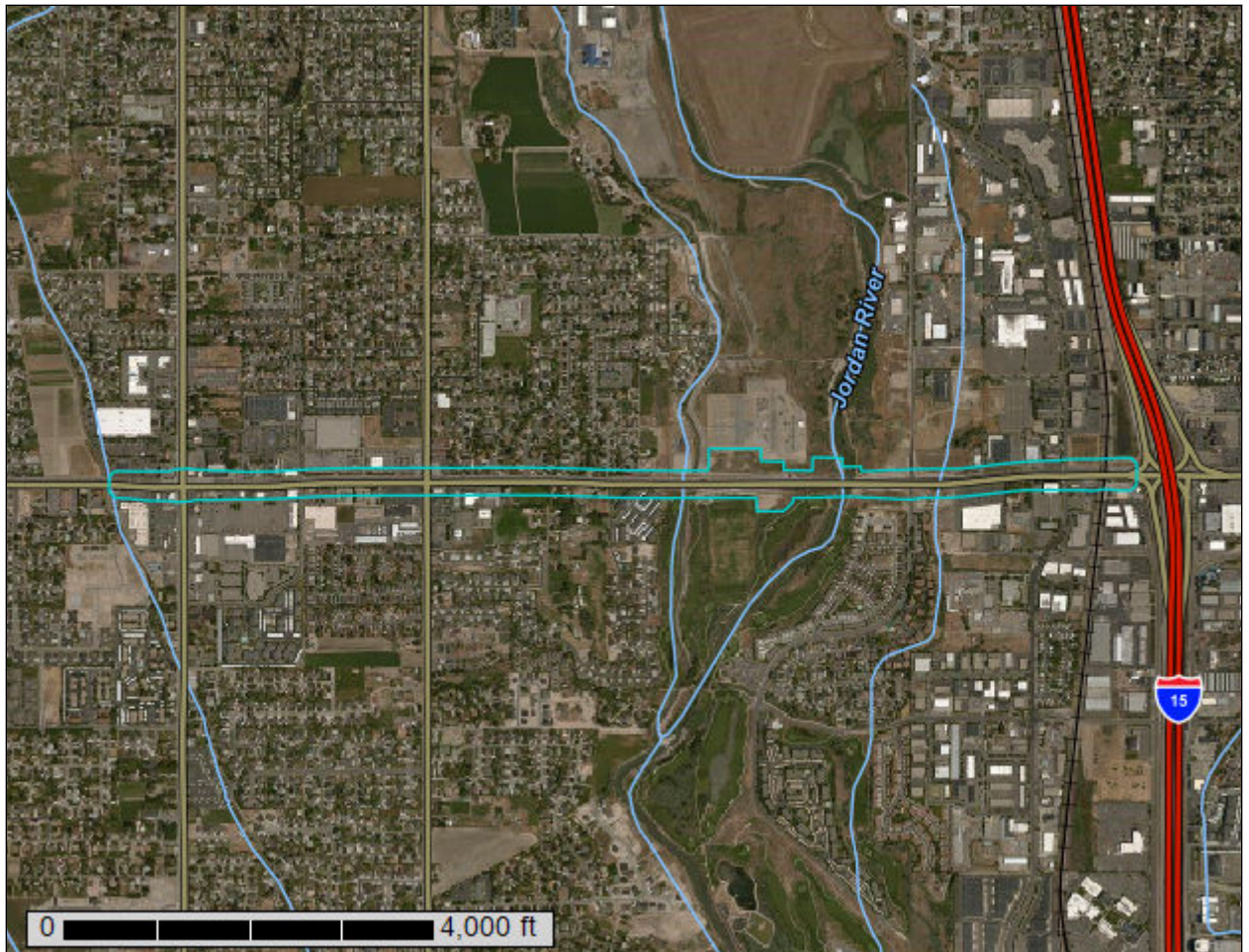
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Salt Lake Area, Utah

9000 South SES



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

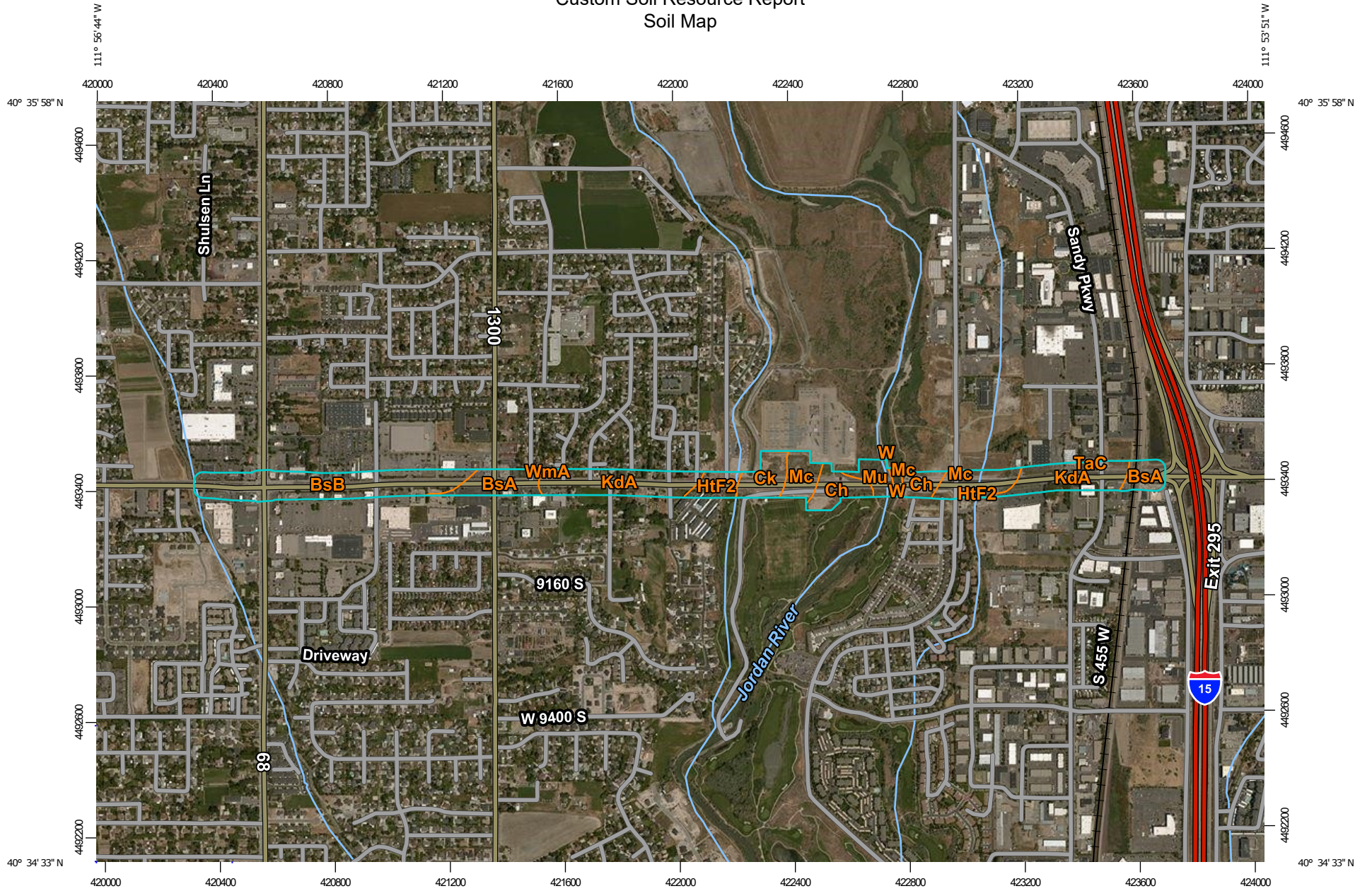
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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

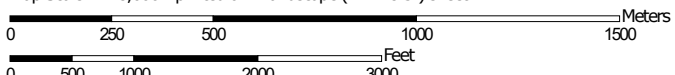
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Map Scale: 1:18,600 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Salt Lake Area, Utah
 Survey Area Data: Version 11, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 28, 2014—Jul 22, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BsA	Bramwell silty clay loam, 0 to 1 percent slopes	9.6	11.5%
BsB	Bramwell silty clay loam, 1 to 3 percent slopes	21.4	25.6%
Ch	Chipman silty clay loam, 0 to 1 percent slopes	7.9	9.5%
Ck	Chipman silty clay loam, saline, sodic, 0 to 1 percent slopes	5.2	6.2%
HtF2	Hillfield-Taylorville complex, 6 to 30 percent slopes	9.0	10.9%
KdA	Kidman very fine sandy loam, 0 to 1 percent slopes	21.3	25.6%
Mc	Magna silty clay, 0 to 1 percent slopes	4.7	5.6%
Mu	Mixed alluvial land	3.1	3.8%
TaC	Taylorville silty clay loam, 3 to 6 percent slopes	0.0	0.0%
W	Water	0.9	1.1%
WmA	Welby silt loam, 0 to 1 percent slopes	0.2	0.2%
Totals for Area of Interest		83.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties

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and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

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Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Salt Lake Area, Utah

BsA—Bramwell silty clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: j6gv

Elevation: 4,300 to 4,450 feet

Mean annual precipitation: 13 to 15 inches

Mean annual air temperature: 49 to 51 degrees F

Frost-free period: 130 to 150 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Bramwell and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bramwell

Setting

Landform: Lake plains

Landform position (three-dimensional): Talf, rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits

Typical profile

A11 - 0 to 2 inches: silty clay loam

A12 - 2 to 8 inches: silty clay loam

C1ca - 8 to 22 inches: silty clay loam

C2ca - 22 to 35 inches: silty clay loam

C3 - 35 to 47 inches: silty clay

C4 - 47 to 72 inches: clay

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 36 to 48 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 30 percent

Salinity, maximum in profile: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 13.0

Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): 3w

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: D

Ecological site: Alkali Bottom (Alkali Sacaton) (R028AY001UT)

Hydric soil rating: No

Minor Components

Welby

Percent of map unit: 5 percent

Bluffdale

Percent of map unit: 5 percent

Harrisville

Percent of map unit: 5 percent

BsB—Bramwell silty clay loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: j6gw

Elevation: 4,300 to 4,450 feet

Mean annual precipitation: 13 to 15 inches

Mean annual air temperature: 49 to 51 degrees F

Frost-free period: 130 to 150 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Bramwell and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bramwell

Setting

Landform: Lake plains

Landform position (three-dimensional): Talf, rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits

Typical profile

A11 - 0 to 7 inches: silty clay loam

A12 - 7 to 15 inches: silty clay loam

C1ca - 15 to 26 inches: silty clay loam

C2ca - 26 to 40 inches: silty clay loam

C3 - 40 to 54 inches: silty clay

C4 - 54 to 70 inches: clay

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 36 to 48 inches

Frequency of flooding: None

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Frequency of ponding: None

Calcium carbonate, maximum in profile: 30 percent

Salinity, maximum in profile: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 13.0

Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): 3w

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: C

Ecological site: Alkali Bottom (Alkali Sacaton) (R028AY001UT)

Hydric soil rating: No

Minor Components

Chipman, saline alkali

Percent of map unit: 3 percent

Bluffdale

Percent of map unit: 3 percent

Lasil, drained

Percent of map unit: 3 percent

Ecological site: Alkali Bottom (Alkali Sacaton) (R028AY001UT)

Welby, saline alkali

Percent of map unit: 2 percent

Magna

Percent of map unit: 2 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: Wet Saline Meadow (Saltgrass) (R028AY024UT)

Hydric soil rating: Yes

Hillfield

Percent of map unit: 2 percent

Ch—Chipman silty clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: j6h0

Elevation: 4,200 to 4,350 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Chipman and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chipman

Setting

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Alluvium

Typical profile

A11 - 0 to 6 inches: silty clay loam

A12 - 6 to 16 inches: silty clay loam

C1ca - 16 to 36 inches: silty clay loam

C2ca - 36 to 46 inches: silty clay loam

C3ca - 46 to 51 inches: silty clay loam

C4 - 51 to 59 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: Rare

Frequency of ponding: None

Calcium carbonate, maximum in profile: 60 percent

Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 13.0

Available water storage in profile: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): 2w

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Ecological site: Alkali Bottom (Alkali Sacaton) (R028AY001UT)

Hydric soil rating: No

Minor Components

Magna

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: Wet Saline Meadow (Saltgrass) (R028AY024UT)

Hydric soil rating: Yes

Welby

Percent of map unit: 2 percent

Ironton

Percent of map unit: 2 percent

Bramwell, hardpan variant

Percent of map unit: 2 percent

Chipman, saline-alkali, gravelly substratum

Percent of map unit: 2 percent

Magna, peaty surface

Percent of map unit: 2 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: Wet Saline Meadow (Saltgrass) (R028AY024UT)

Hydric soil rating: Yes

Stony alluvial land

Percent of map unit: 2 percent

Ck—Chipman silty clay loam, saline, sodic, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: j6h1

Elevation: 4,200 to 4,350 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Chipman and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chipman

Setting

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Alluvium

Typical profile

A11 - 0 to 6 inches: silty clay loam

A12 - 6 to 16 inches: silty clay loam

C1ca - 16 to 36 inches: silty clay loam

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C2ca - 36 to 46 inches: silty clay loam

C3ca - 46 to 51 inches: silty clay loam

C4 - 51 to 59 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: Rare

Frequency of ponding: None

Calcium carbonate, maximum in profile: 60 percent

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 30.0

Available water storage in profile: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: D

Ecological site: Alkali Bottom (Alkali Sacaton) (R028AY001UT)

Hydric soil rating: No

Minor Components

Sandy alluvial land

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: Wet Fresh Streambank (R028AY022UT)

Hydric soil rating: No

Magna

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: Wet Saline Meadow (Saltgrass) (R028AY024UT)

Hydric soil rating: Yes

Bramwell, hardpan variant

Percent of map unit: 3 percent

Ironton

Percent of map unit: 3 percent

Mixed alluvial land

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

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Across-slope shape: Concave
Ecological site: Wet Fresh Streambank (R028AY022UT)
Hydric soil rating: Yes

HtF2—Hillfield-Taylorsville complex, 6 to 30 percent slopes

Map Unit Setting

National map unit symbol: j6j8
Elevation: 4,400 to 4,800 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 160 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Hillfield and similar soils: 60 percent
Taylorsville and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hillfield

Setting

Landform: Escarpments on terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits

Typical profile

Ap - 0 to 3 inches: loam
A1 - 3 to 10 inches: loam
Ac - 10 to 18 inches: loam
C1ca - 18 to 31 inches: loam
C2ca - 31 to 50 inches: very fine sandy loam
C3 - 50 to 60 inches: sandy loam

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 20.0
Available water storage in profile: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: Upland Loam (Bonneville Big Sagebrush) North (R028AY310UT)
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)
Hydric soil rating: No

Description of Taylorsville

Setting

Landform: Escarpments on terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits

Typical profile

Ap - 0 to 7 inches: silty clay loam
AC - 7 to 17 inches: silty clay loam
C1ca - 17 to 27 inches: silty clay loam
C2ca - 27 to 37 inches: silty clay loam
C3 - 37 to 59 inches: silty clay loam

Properties and qualities

Slope: 6 to 20 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 13.0
Available water storage in profile: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: Upland Loam (Bonneville Big Sagebrush) North (R028AY310UT)
Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)
Hydric soil rating: No

KdA—Kidman very fine sandy loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: j6jg
Elevation: 4,200 to 4,450 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 160 to 180 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Kidman and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kidman

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits

Typical profile

H1 - 0 to 8 inches: very fine sandy loam
H2 - 8 to 18 inches: fine sandy loam
H3 - 18 to 28 inches: fine sandy loam
H4 - 28 to 40 inches: very fine sandy loam
H5 - 40 to 60 inches: loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 20.0
Available water storage in profile: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 3c

Custom Soil Resource Report

Hydrologic Soil Group: A

Ecological site: Upland Loam (Bonneville Big Sagebrush) North (R028AY310UT)

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(O28AY310UT)

Hydric soil rating: No

Minor Components

Deckerman

Percent of map unit: 5 percent

Mc—Magna silty clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: j6k3

Elevation: 4,200 to 4,350 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Magna and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Magna

Setting

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Alluvium

Typical profile

A11 - 0 to 2 inches: silty clay

A12 - 2 to 12 inches: silty clay

C1cag - 12 to 28 inches: silty clay

A1b - 28 to 38 inches: silty clay loam

C2b - 38 to 70 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 0 to 24 inches

Frequency of flooding: Occasional

Custom Soil Resource Report

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Salinity, maximum in profile: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 13.0

Available water storage in profile: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: D

Ecological site: Wet Saline Meadow (Saltgrass) (R028AY024UT)

Hydric soil rating: Yes

Minor Components

Magna, peaty surface

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: Wet Saline Meadow (Saltgrass) (R028AY024UT)

Hydric soil rating: Yes

Chipman

Percent of map unit: 5 percent

Ironton

Percent of map unit: 5 percent

Mu—Mixed alluvial land

Map Unit Setting

National map unit symbol: j6k6

Elevation: 4,200 to 4,350 feet

Frost-free period: 130 to 150 days

Farmland classification: Not prime farmland

Map Unit Composition

Mixed alluvial land and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mixed Alluvial Land

Setting

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Custom Soil Resource Report

Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 60 inches: gravelly clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 13 to 36 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Calcium carbonate, maximum in profile: 40 percent

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 32.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 20.0

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: D

Ecological site: Wet Fresh Streambank (R028AY022UT)

Hydric soil rating: Yes

Minor Components

Poorly drained soils

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: Wet Saline Meadow (Saltgrass) (R028AY024UT)

Hydric soil rating: Yes

TaC—Taylorsville silty clay loam, 3 to 6 percent slopes

Map Unit Setting

National map unit symbol: j6ky

Elevation: 4,300 to 4,500 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Taylorsville and similar soils: 95 percent

Minor components: 5 percent

Custom Soil Resource Report

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Taylorsville

Setting

Landform: Lake terraces, lake plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits

Typical profile

Ap - 0 to 7 inches: silty clay loam
AC - 7 to 17 inches: silty clay loam
C1ca - 17 to 27 inches: silty clay loam
C2ca - 27 to 37 inches: silty clay loam
C3 - 37 to 59 inches: silty clay loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 13.0
Available water storage in profile: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: Upland Loam (Bonneville Big Sagebrush) North (R028AY310UT)
Other vegetative classification: Upland Loam (Mountain Big Sagebrush) (O28AY310UT)
Hydric soil rating: No

Minor Components

Hillfield

Percent of map unit: 5 percent

W—Water

Map Unit Composition

Water: 100 percent

Custom Soil Resource Report

Estimates are based on observations, descriptions, and transects of the mapunit.

WmA—Welby silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: j6lc
Elevation: 4,200 to 4,400 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 49 to 51 degrees F
Frost-free period: 130 to 150 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Welby and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Welby

Setting

Landform: Lake terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits

Typical profile

Ap - 0 to 8 inches: silt loam
A3 - 8 to 16 inches: silt loam
B2 - 16 to 25 inches: silt loam
C1ca - 25 to 33 inches: loam
C2ca - 33 to 44 inches: silt loam
C3 - 44 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Salinity, maximum in profile: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 13.0
Available water storage in profile: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2c
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Ecological site: Upland Loam (Bonneville Big Sagebrush) North (R028AY310UT)

Custom Soil Resource Report

Other vegetative classification: Upland Loam (Mountain Big Sagebrush)
(028AY310UT)
Hydric soil rating: No

Minor Components

Taylorsville

Percent of map unit: 3 percent

Deckerman

Percent of map unit: 3 percent

Hillfield

Percent of map unit: 3 percent

Kidman

Percent of map unit: 3 percent

Parleys

Percent of map unit: 3 percent

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Custom Soil Resource Report

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Appendix G.
List of Plant Species Observed

Table G-1. List of Plant Species Observed

Scientific Name ^a	Common Name ^a	Indicator Status ^b
<i>Agropyron cristatum</i>	crested wheatgrass	UPL
<i>Ambrosia artemisiifolia</i>	annual ragweed	FACU
<i>Atriplex micrantha</i>	twoscale saltbush	UPL
<i>Bromus arvensis</i>	field brome	UPL
<i>Bromus tectorum</i>	cheatgrass	UPL
<i>Cadaria draba</i>	whitetop	UPL
<i>Convolvulus arvensis</i>	field bindweed	UPL
<i>Elaeagnus angustifolia</i>	Russian olive	FAC
<i>Erodium cicutarium</i>	redstem stork's bill	UPL
<i>Grindelia squarrosa</i>	curlycup gumweed	FACU
<i>Hordeum jubatum</i>	fox-tail barley	FAC
<i>Lactuca serriola</i>	prickly lettuce	FACU
<i>Lepidium perfoliatum</i>	clasping pepperweed	FACU
<i>Linum lewisii</i>	Lewis' flax	UPL
<i>Medicago sativa</i>	alfalfa	UPL
<i>Mellilotus officinalis</i>	sweetclover	FACU
<i>Onopordum acanthium</i>	Scotch cottonthistle	UPL
<i>Phalaris arundinacea</i>	reed canarygrass	FACW
<i>Phragmites australis</i>	common reed	FACW
<i>Poa annua</i>	annual bluegrass	FAC
<i>Poa pratensis</i>	Kentucky bluegrass	FAC
<i>Puccinellia nuttalliana</i>	Nuttall's alkaligrass	FACW
<i>Secale cereale</i>	cereal rye	UPL
<i>Tamarix ramosissima</i>	tamarisk	FAC
<i>Thinopyrum intermedium</i>	intermediate wheatgrass	UPL
<i>Ulmus pumila</i>	Siberian elm	UPL

^a Naming conventions according to USDA NRCS Plants Database (<https://plants.usda.gov>)

^b Indicator Status as assigned for the Arid West Region in the National Wetland Plant List (Lichvar and others 2016). FAC = facultative; FACU = facultative upland; FACW = facultative wetland; UPL = upland plants (or not listed species assumed to be upland); OBL = obligate wetland.

APPENDIX F

Cultural Resources Correspondence

Native American Consultation



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

CARLOS M. BRACERAS, P.E.
Executive Director

SHANE M. MARSHALL, P.E.
Deputy Director of Engineering and Operations

TERIANNE S. NEWELL, P.E.
Deputy Director of Planning and Investment

Tribal Notification Form

The Utah Department of Transportation (UDOT) is preparing to undertake the subject state-aid project. In accordance with the *Programmatic Agreement between the UDOT and the Utah State Historic Preservation Officer Regarding Implementation of U.C.A. 9-8-404 for State Funded Transportation Projects in Utah* (renewed January 22, 2018), the UDOT has taken into account the effects of this undertaking on historic properties and seeks consultation with Native American tribes on the undertaking.

UDOT Project: S-0209(35)10, SR-209 (9000 South); Redwood Road to I-15 Project, Salt Lake County, Utah (PIN 14412)
Contact Name: Jonathan Dugmore Date: April 22, 2019
Address: 2010 South 2760 West, Salt Lake City, Utah 84104
Telephone: 385-414-2066 Email: jdugmore@utah.gov

Project Description: The action alternative consists of improvements to 9000 South between Redwood Road and 700 West in Salt Lake County in the cities of West Jordan and Sandy. The action alternative would widen about 1.5 miles of 9000 South between Redwood Road and 700 West from five to seven lanes. The project would add an additional 11 foot travel lane in each direction, for a total of three travel lanes in each direction plus a 14 foot center two-way left-turn turning lane. Three lanes in each direction will match the lane configuration on 9000 South east of the project. Consistent 10 foot shoulders will be incorporated on both sides of the road for safety. The new right-of-way for 9000 South would vary between 100 and 113 feet wide, depending on location.

The active transportation components of the action alternative include continuous sidewalk on both sides of the road from Redwood Road to 700 West. The sidewalk is currently discontinuous on both sides of the road between the North Jordan Canal (located east of 1075 West) and 700 West. The sidewalk on the north side of 9000 South would remain 4 feet wide but passing spaces would be provided every 200 feet. A 3.5 foot parkstrip would run adjacent to the sidewalk. The sidewalk on the south side of the road would be upgraded to 5 foot width with a 4 foot parkstrip adjacent. In some locations, the parkstrip would be removed and the sidewalk would be 6 feet wide.

The action alternative would include a separated, non-protected bicycle lane from Redwood Road to 700 West on the shoulders of 9000 South on both sides of road. The bicycle lanes would generally be 6 feet wide and reduce to 5 feet wide at right turn pockets on both sides of the roadway.

The action alternative would widen the existing bridge over the Jordan River, raise the bridge profile to meet current floodplain elevation requirements and sidewalk would be added to the bridge. To meet current UDOT standards the new bridge would be 127 feet wide on the inside of the parapets, with 12 foot lanes, a 14 foot median, and 10.5 foot wide parkstrip/sidewalk on both sides

Archaeological Potential (Prehistoric or Historic Sites):

- | | |
|---|--|
| <input type="checkbox"/> Known prehistoric sites in the project area | <input checked="" type="checkbox"/> Unlikely to find prehistoric sites in the project area |
| <input checked="" type="checkbox"/> Known historic sites in the project area | <input type="checkbox"/> Unlikely to find historic sites in the project area |
| <input type="checkbox"/> Likely to find prehistoric sites in the project area | <input type="checkbox"/> No expected ground disturbance |
| <input type="checkbox"/> Likely to find historic sites in the project area | <input type="checkbox"/> Other: |

Additional Information/Comments:

The project area has been surveyed for archaeological resources by Certus Environmental Solutions. One historic NRHP-eligible archaeological site, 42SL342, the North Jordan Canal, was identified within the project area. The site will be avoided by construction and will not be affected by the proposed project actions.

Tribal Information

«AddressBlock»

Copies to: «cc_1»
«cc_2»
«cc_3»
«cc_4»

Comments:

- 1. Do you wish to be a consulting party on this project? Yes No Not Sure
- 2. If you do not wish to be a consulting party, do you wish to continue to be involved in the development of this project? Yes No Not Sure
Note: If your answer is "Not Sure," UDOT will continue to provide information.
- 3. Are you aware of any traditional religious or culturally important places in or near the project area? Yes No Not Sure
- 4. If yes, can you share details about the place (e.g., location and other characteristics) and any concerns you may have? Yes No
- 5. Is this information sensitive? Yes No

Additional Comments:

Name of person completing this form, if different from above:

Signature:

Date:

Identical copies of the Project Notification Form sent to the following recipients:

Original to:	CC to:
Mr. Darwin St. Clair Jr., Chairman Eastern Shoshone Tribe of the Wind River Reservation P.O. Box 538/15 North Fork Rd Fort Washakie, WY 82514	Ms. Glenda Trosper, Director, Cultural Center Eastern Shoshone Tribe of the Wind River Reservation P.O. Box 538/15 North Fork Rd Fort Washakie, WY 82514
	Mr. Joshua Mann, THPO Eastern Shoshone Tribe of the Wind River Reservation P.O. Box 538/15 North Fork Rd Fort Washakie, WY 82514
Mr. Blaine Edmo, Chair Shoshone-Bannock Tribes of Fort Hall P.O. Box 306 Pima Drive Fort Hall, ID 83203	Ms. Carolyn Smith, Cultural Resource Director Shoshone-Bannock Tribes of Fort Hall P.O. Box 306 Pima Drive Fort Hall, ID 83203
Mr. Darren Parry, Chairman Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302	Ms. Patty Timbimboo-Madsen, Cultural Specialist Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302
Mr. Luke Dunkin, Chairperson Ute Indian Tribe of the Uintah and Ouray Ute Indian Reservation P.O. Box 190 Fort Duchesne, UT 84026	Ms. Betsy Chapoose, Director, Cultural Rights and Protection Ute Indian Tribe of the Uintah and Ouray Ute Indian Reservation P.O. Box 190 Fort Duchesne, UT 84026
Ms. Candace Bear, Chairwoman Skull Valley Band of Goshute Indians P.O. Box 448 Grantsville, UT 84029	None

Original to:	CC to:	Email to:
Mr. Mertin Bow, Band Chairman Cedar Band of Paiutes 600 North 100 East P.O. Box 235 Cedar City, UT 84721	Mr. Robert Pete, Cultural Resources Representative Cedar Band of Paiutes 600 North 100 East Cedar City, UT 84721	
Mr. Patrick Charles, Band Chairman Shivwits Band of Paiute Indian Tribe of Utah 6060 West 3650 North Ivins, UT 84738	Ms. Sabrina Redfoot, Cultural Resources Director Shivwits Band of Paiute Indian Tribe of Utah 6060 West 3650 North Ivins, UT 84738	mohave_paiute@yahoo.com
Mr. Rupert Steele, Chairman Confederated Tribes of the Goshute Reservation P.O. BOX 6104 195 Tribal Center Rd. Ibapah, UT 84034	Ms. Mary Pete-Freeman, Cultural Resources Coordinator Confederated Tribes of the Goshute Reservation P.O. BOX 6104 195 Tribal Center Rd. Ibapah, UT 84034	marypete@goshutetribe.com

Determination of Eligibility and Finding of Effect



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

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Executive Director

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TERIANNE S. NEWELL, P.E.
Deputy Director of Planning and Investment

May 28, 2019

Mr. Cory Jensen
Senior Historic Preservation Specialist
Utah Division of State History
300 Rio Grande
Salt Lake City, UT 84101-1182

RE: UDOT Project No. S-0209(35)10, SR-209 (9000 South); Redwood Road to I-15 Project, Salt Lake County, Utah (PIN 14412).

Determination of Eligibility and Finding of Adverse Effect.

Dear Mr. Jensen:

The Utah Department of Transportation (UDOT) is preparing to undertake the subject state-aid project. In accordance with the *Programmatic Agreement between the UDOT and the Utah State Historic Preservation Officer Regarding Implementation of U.C.A. 9-8-404 for State Funded Transportation Projects in Utah* (renewed January 22, 2018), the UDOT has taken into account the effects of this undertaking on historic properties and is affording the Utah State Historic Preservation Officer (SHPO) an opportunity to comment on the undertaking.

PROJECT DESCRIPTION

UDOT is proposing improvements to 9000 South between Redwood Road and 700 West in Salt Lake County in the cities of West Jordan and Sandy. The project would widen about 1.5 miles of 9000 South between Redwood Road and 700 West from five to seven lanes. The project would add an additional 11 foot travel lane in each direction, for a total of three travel lanes in each direction plus a 14 foot center two-way left-turn turning lane. Three lanes in each direction will match the lane configuration on 9000 South east of the project. Consistent 10 foot shoulders and continuous sidewalk will be incorporated on both sides of the road for safety. The new right-of-way for 9000 South would vary between 100 and 113 feet wide, depending on location.

Additional work would include a separated, non-protected bicycle lane from Redwood Road to 700 West on the shoulders of 9000 South on both sides of road and bridge widening. The project would widen the existing bridge over the Jordan River, raise the bridge profile to meet current floodplain elevation requirements and sidewalk would be added to the bridge. To meet current UDOT standards the widened bridge would be 127 feet wide on the inside of the parapets, with 12 foot lanes, a 14 foot median, and 10.5 foot wide parkstrip/sidewalk on both sides.

The area of potential affects (APE) has been defined as SR-209 (9000 South) between Redwood Road and I-15 in Salt Lake County, and includes all parcels adjoining this corridor. The APE has been surveyed for archaeology by Sheri Ellis of Certus Environmental Solutions, under State Antiquities Project Number U19HY0001, and the results are reported in *An Archaeological Resource Assessment for the SR-209 (9000 South), Redwood Road to I-15 Project, Salt Lake County, Utah, February 13, 2019* (see enclosed report). An intensive level pedestrian survey was conducted using 15 meter transects to identify archaeological resources. A selective reconnaissance-level survey was conducted to record architectural properties, and the results are reported in *A Selective Reconnaissance-Level*

Historic Structures Inventory for the SR-209 (9000 South); Redwood Road to I-15 Project, Salt Lake County, Utah, February 13, 2019 (see enclosed report)

The survey has resulted in the identification of 3 archaeological sites and 10 architectural properties. Of these, 3 archaeological sites and 6 architectural properties are eligible to the National Register of Historic Places (NRHP). No known traditional cultural properties or paleontological resources are located in the APE. The Determinations of Eligibility and Findings of Effects are provided in Table 1 for archaeological resources and in Table 2 for architectural properties.

ARCHAEOLOGICAL RESOURCES

Table 1. Determinations of Eligibility and Findings of Effect for Archaeological Resources

Site	Name or Description	NRHP Eligibility	Finding of Effect
42SL284	Galena Canal	Eligible (Criterion A)	No Historic Properties Affected
42SL293	Denver & Rio Grande Railroad	Eligible (Criterion A)	No Historic Properties Affected
42SL342	North Jordan Canal	Eligible (Criterion A)	No Historic Properties Affected

Description of Effects to Sites: There will be no effect to the above sites as a result of this project. Construction will avoid both canals and the railroad and will not impact or alter them in any form.

ARCHITECTURAL PROPERTIES

Table 2. Determinations of Eligibility and Findings of Effect for Architectural Properties

Address	Date	Style	NRHP Eligibility/ SHPO Rating	Finding of Effect
460 W. 9000 S.	1974	Late 20 th Century: Other	Not Eligible/NC	No Historic Properties Affected
Structure 0F 244	1971	Modern: Other	Not Eligible/NC	No Historic Properties Affected
1070 W. 9000 S.	1957	Minimal Traditional: Other	Not Eligible/NC	No Historic Properties Affected
1085 W. 9000 S.	1968	Ranch/Rambler	Eligible/EC	Adverse Effect
1091 W. 9000 S.	1968	Ranch/Rambler	Eligible/EC	No Adverse Effect
1100 W. 9000 S.	1932	Bungalow/Contem porary	Not Eligible/NC	No Historic Properties Affected
1109 W. 9000 S.	1964	Ranch/Rambler	Eligible/EC	Adverse Effect
1125 W. 9000 S.	1964	Ranch/Rambler	Eligible/EC	No Adverse Effect
1187 W. 9000 S.	1961	Ranch/Rambler	Eligible/EC	No Adverse Effect
8987 S. 1030 W.	1938	Minimal Traditional/Other	Eligible/EC	No Historic Properties Affected

Description of Effects to 1109 W. 9000 S.: This proposed project requires full acquisition and demolition of this property listed on the NRHP. This action will completely remove all contributing elements and the character-defining features for which it was determined eligible for the NRHP. Thus, the proposed project will result in a finding of Adverse Effect.

Description of Effects to 1085 W. 9000 S.: This proposed project requires full acquisition and demolition of this property listed on the NRHP. This action will completely remove all contributing elements and the character-defining features for which it was determined eligible for the NRHP. Thus, the proposed project will result in a finding of Adverse Effect

Description of Effects for All Remaining Properties: This proposed project requires right of way acquisitions of approximately 16,683 square feet in width from 3 properties eligible to the NRHP. The acquisitions and associated construction affect a relatively small portion of each property and will not substantially impact or alter any contributing elements of the properties or any of the character-defining features for which each were determined eligible for the NRHP.

CONSULTATION EFFORTS


Native American consultation was initiated through letters sent to the Eastern Shoshone Tribe of the Wind River Reservation, Shoshone-Bannock Tribes, Northwestern Band of Shoshone Nation, Uintah and Ouray Ute Tribes, and the Skull Valley Band of Goshute Indians (sent April 22, 2019). In addition, notification was also sent to those tribes with whom UDOT has Section 106 Programmatic Agreements: Cedar Band of Paiutes, Shivwits Band of Paiute Indian Tribe, and the Confederated Tribes of the Goshute Reservation (sent April 22, 2019). To date, none of the tribes have responded to these notifications.

SUMMARY

To summarize, the project will result in a finding of **Adverse Effect** for 2 architectural properties, a finding of **No Adverse Effect** for 3 architectural properties, and a finding of **No Historic Properties Affected** for all remaining architectural properties and archaeological sites. Therefore, the Finding of Effect for the proposed UDOT Project No. S-0209(35)10, SR-209 (9000 South); Redwood Road to I-15 Project, Salt Lake County, Utah, is **Adverse Effect**.

Please review this document and, providing you agree with the findings contained herein, provide written concurrence. Should you have any questions or need additional information, please feel free to contact Liz Robinson at 801-910-2035 or lizrobinson@utah.gov; or Elizabeth Giraud at 801-965-4917 or egiraud@utah.gov.

Sincerely,



Liz Robinson, M.A., RPA
Cultural Resources Program Manager
UDOT Environmental Services






Elizabeth Giraud, AICP
Architectural Historian
UDOT Environmental Services

Enclosures

cc: Rebecka Stromness, Project Manager
Tyler Allen, Environmental Manager

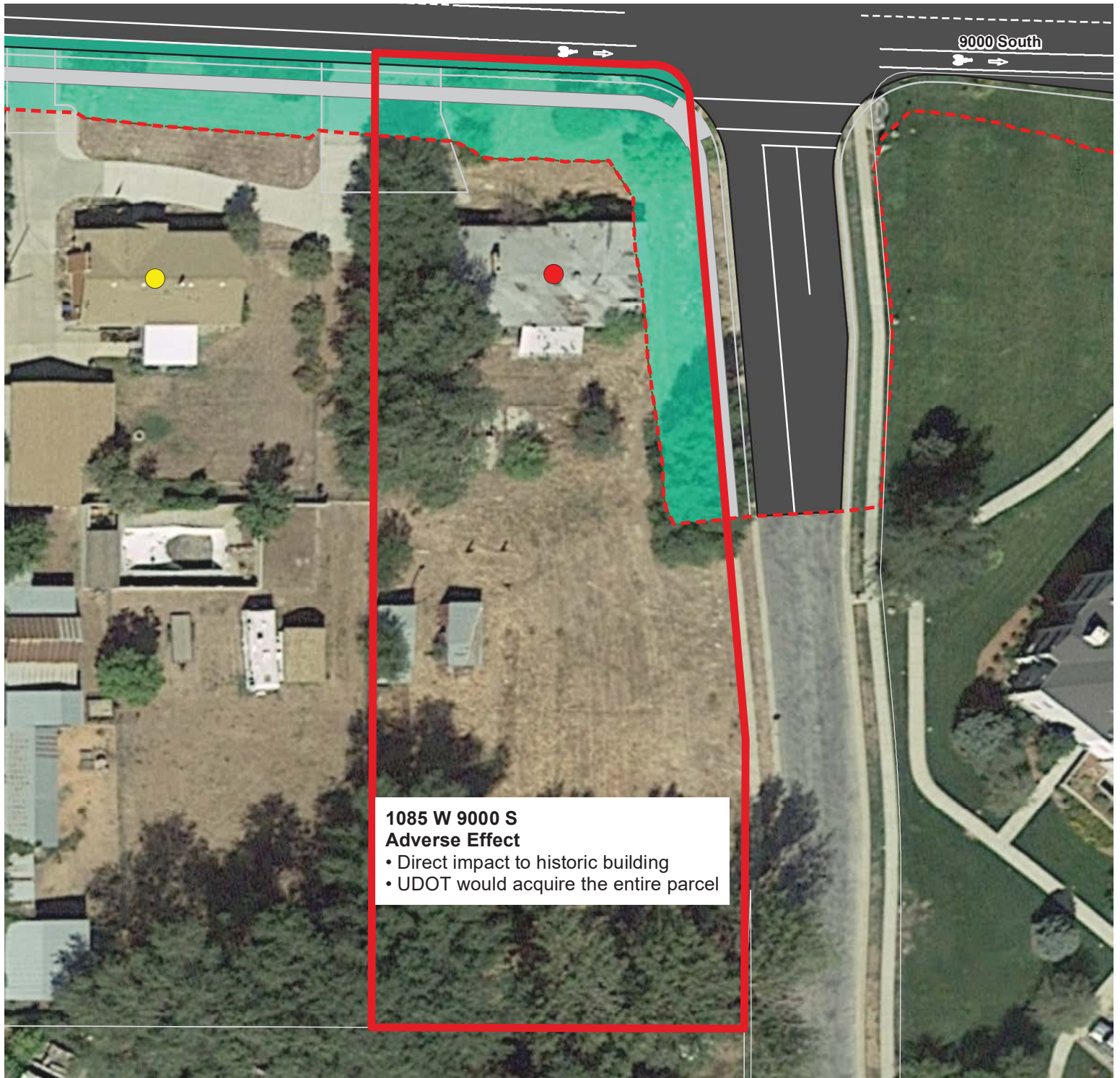


LEGEND

-  Proposed Improvements
-  Project Survey Area
-  City Boundaries

9000 South
ENVIRONMENTAL STUDY
 Redwood Road to I-15





LEGEND

- Adverse Effect
- No Adverse Effect
- No Effect
- Parcel Boundary
- 9000 S Cut and Fill Extent
- 9000 S Sidewalk
- Right-of-Way Acquisition
- 9000 S Pavement

9000 South
ENVIRONMENTAL STUDY
 Redwood Road to I-15





LEGEND

- Adverse Effect 9000 S Cut and Fill Extent
- No Adverse Effect 9000 S Sidewalk
- No Effect Right-of-Way Acquisition
- Parcel Boundary 9000 S Pavement

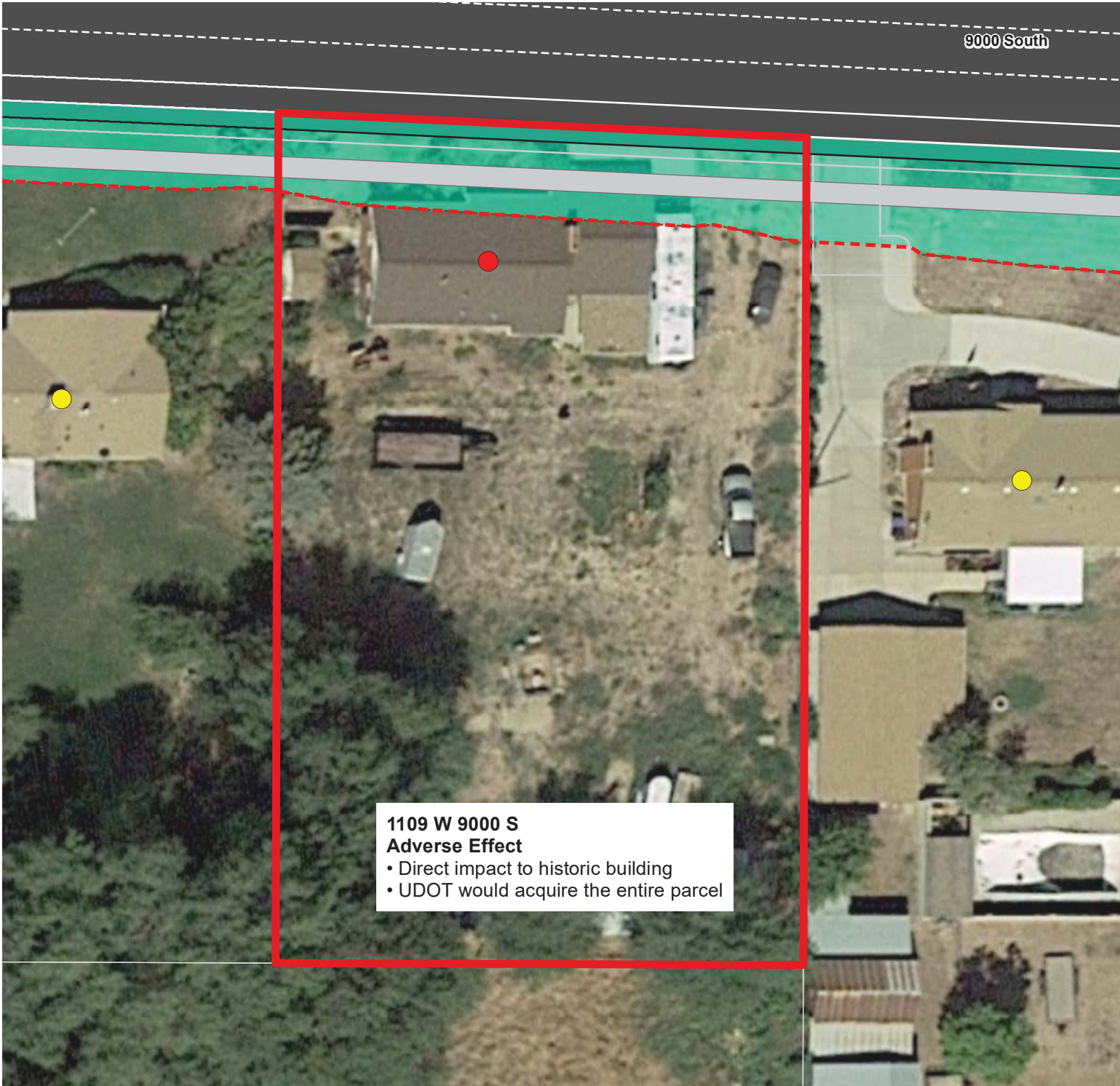
9000 South

ENVIRONMENTAL STUDY

Redwood Road to I-15



9000 South



1109 W 9000 S
Adverse Effect
 • Direct impact to historic building
 • UDOT would acquire the entire parcel

LEGEND

- Adverse Effect 9000 S Cut and Fill Extent
- No Adverse Effect 9000 S Sidewalk
- No Effect Right-of-Way Acquisition
- Parcel Boundary 9000 S Pavement

9000 South
ENVIRONMENTAL STUDY
 Redwood Road to I-15



9000 South



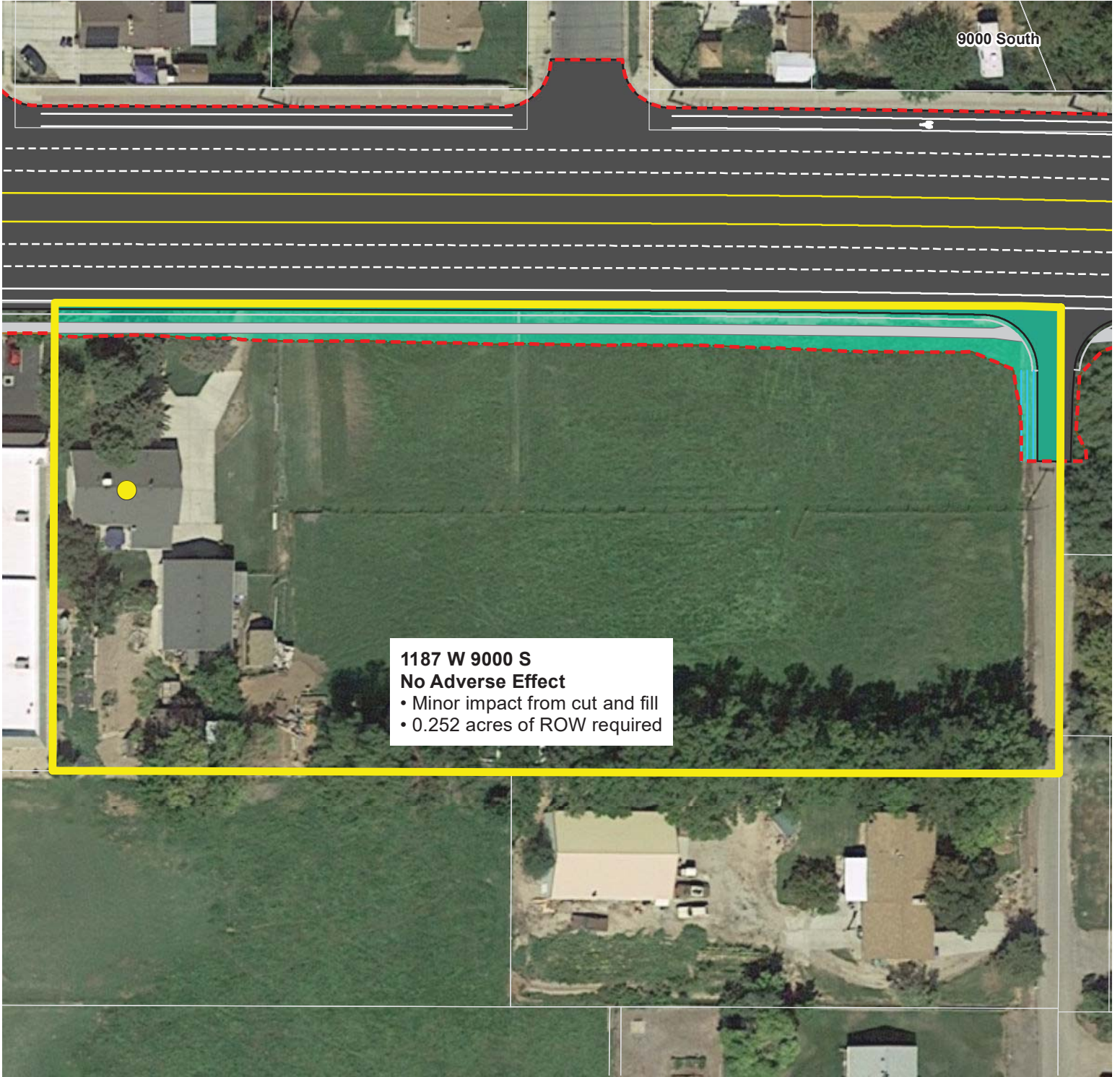
1125 W 9000 S
No Adverse Effect
 • Minor impact from cut and fill
 • 0.053 acres of ROW required

LEGEND

- Adverse Effect 9000 S Cut and Fill Extent
- No Adverse Effect 9000 S Sidewalk
- No Effect Right-of-Way Acquisition
- Parcel Boundary 9000 S Pavement

9000 South
ENVIRONMENTAL STUDY
 Redwood Road to I-15





1187 W 9000 S
No Adverse Effect
 • Minor impact from cut and fill
 • 0.252 acres of ROW required

LEGEND

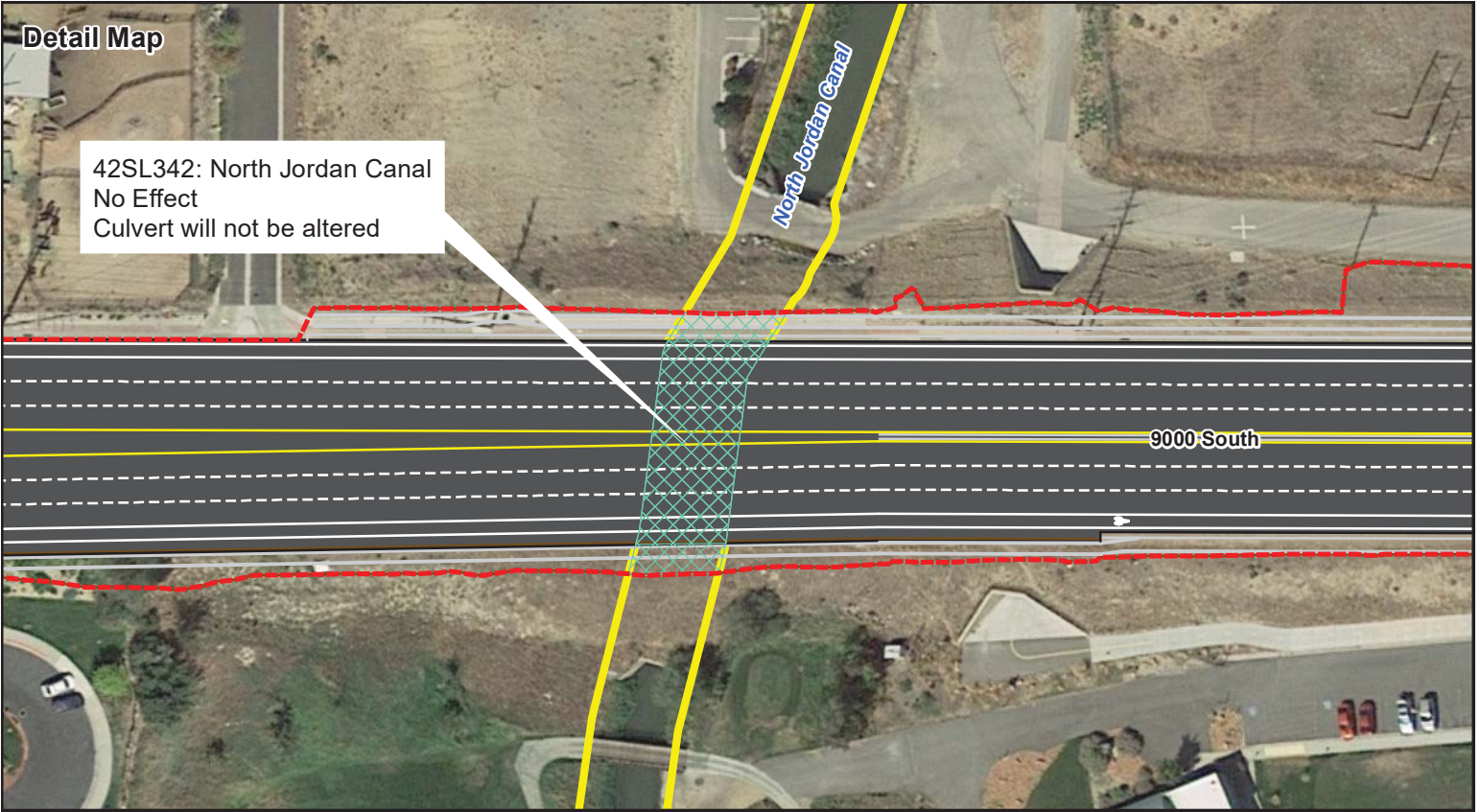
- Adverse Effect 9000 S Cut and Fill Extent
- No Adverse Effect 9000 S Sidewalk
- No Effect Right-of-Way Acquisition
- Parcel Boundary 9000 S Pavement

9000 South
ENVIRONMENTAL STUDY
 Redwood Road to I-15



Detail Map

42SL342: North Jordan Canal
No Effect
Culvert will not be altered



Overview Map

42SL342:
North Jordan Canal

Survey Area

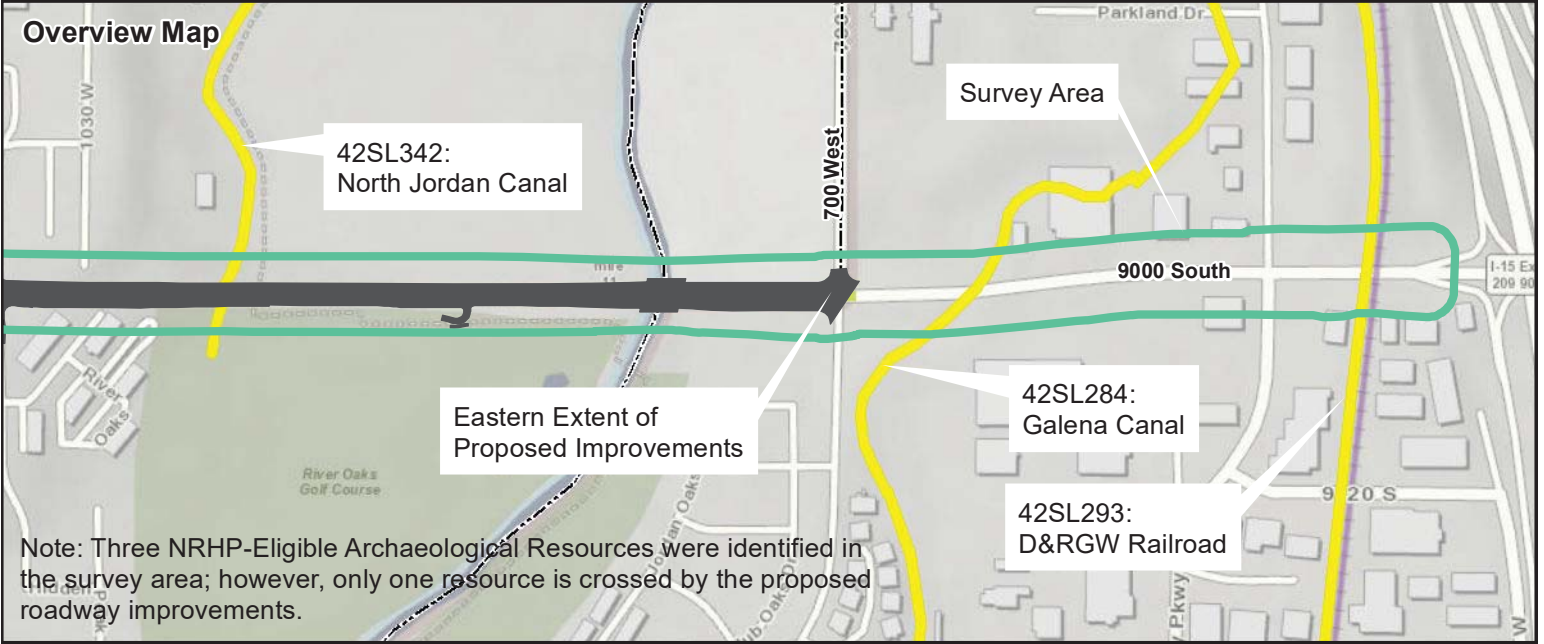
9000 South

Eastern Extent of
Proposed Improvements





42SL284:
Galena Canal

42SL293:
D&RGW Railroad

Note: Three NRHP-Eligible Archaeological Resources were identified in the survey area; however, only one resource is crossed by the proposed roadway improvements.



LEGEND

-  9000 S Cut and Fill Extent
-  North Jordan Canal Crossing
-  9000 S Pavement
-  NRHP-Eligible Archaeological Resource

9000 South
ENVIRONMENTAL STUDY
Redwood Road to I-15

0 Feet 50





GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Jill Remington Love
Executive Director
Department of
Heritage & Arts



Don Hartley
Director
State Historic Preservation Officer

May 30, 2019

Liz Robinson
Cultural Resources Program Manager
Utah Dept of Transportation (UDOT)
4501 Constitution Blvd
Salt Lake City, UT 84119

RE: PIN 14412_SR-209, Redwood to I-15_ S-0209(35)10

For future correspondence, please reference Case No. 19-1251

Dear Ms Robinson,

The Utah State Historic Preservation Office received your submission and request for our comment on the above-referenced project on May 30, 2019. Based on the information provided to our office, we concur with your determination of eligibility and finding of Adverse Effect for the proposed undertaking.

This information is provided to assist with Section 106 responsibilities as per §36CFR800. If you have questions, please contact me at (801) 245-7242 or by email at coryjensen@utah.gov.

Sincerely,

Cory Jensen
National Register & Survey Coordinator

Memorandum of Agreement

Placeholder for MOA

APPENDIX G

Environmental Data Resources Report

SR 209, 9000 South Redwood Road To I-15

9000 South and Redwood Road To 900 South and I-15
West Jordan, UT 84088

Inquiry Number: 5501450.5s

December 04, 2018

EDR Area / Corridor Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Key Map	4
Map Findings Summary	5
Focus Maps	9
Map Findings	25
Orphan Summary	OR-1
Government Records Searched/Data Currency Tracking	GR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

SUBJECT PROPERTY INFORMATION

ADDRESS

9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

TARGET PROPERTY SEARCH RESULTS

The Target Property was identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generator

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 RCRA-CESQG site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<i>JIFFY LUBE</i> EPA ID:: UTD988069662	<i>1735 WEST 9000 SOUTH</i>	<i>E22 / 6</i>	<i>33</i>

Federal ERNS list

ERNS: Emergency Response Notification System

A review of the ERNS list, as provided by EDR, and dated 09/24/2018 has revealed that there is 1 ERNS site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
Not reported NRC Report #: 985643	9000 SOUTH 1300 WEST	D11 / 6	30

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

LUST: Sites with Leaking Underground Storage Tanks

A review of the LUST list, as provided by EDR, and dated 10/16/2018 has revealed that there are 2 LUST sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
KMART #3211 Facility ID: 4000483 Date Closed: 05/02/1994	203 W 9000 S	B5 / 3	27
PIRO TEXACO Facility ID: 4000752 Date Closed: 12/03/2002 Date Closed: 12/30/1998	365 W 9000 S	C8 / 3	28

State and tribal registered storage tank lists

UST: List of Sites with Underground Storage Tanks

A review of the UST list, as provided by EDR, and dated 10/16/2018 has revealed that there are 3 UST sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
MAVERIK #541 Facility ID: 4002523	9000 S SANDY PARKWAY	A2 / 3	25
KMART #3211 Facility ID: 4000483	203 W 9000 S	B5 / 3	27
PIRO TEXACO Facility ID: 4000752	365 W 9000 S	C8 / 3	28

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

FINDS: Facility Index System/Facility Registry System

A review of the FINDS list, as provided by EDR, and dated 08/07/2018 has revealed that there are 9 FINDS sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
KMART # 3211 Registry ID:: 110002287873	203 W 9000 S	B4 / 3	26
PIRO TEXACO Registry ID:: 110002294801	365 W 9000 S	C6 / 3	27
KIB STUTZNEGGER DDS	1847 W 9000 S STE 10	12 / 6	30

EXECUTIVE SUMMARY

Registry ID:: 110020114990			
DENTAL CARE	1662 W 9000 S STE 2	F16 / 6	31
Registry ID:: 110020089296			
KENT BLADEN DDS	1662 W 9000 S STE A	F17 / 6	31
Registry ID:: 110020085502			
DENTAL FIRST	1793 W 9000 S	G20 / 6	32
Registry ID:: 110020089312			
RANDY FORBES	1781 W 9000 S	G21 / 6	33
Registry ID:: 110020082195			
JIFFY LUBE	1735 WEST 9000 SOUTH	E22 / 6	33
Registry ID:: 110005204135			
AMOR ANIMAL HOSPITAL	1823 W 9000 S	G23 / 6	35
Registry ID:: 110020091121			

ECHO: Enforcement & Compliance History Information

A review of the ECHO list, as provided by EDR, and dated 09/02/2018 has revealed that there is 1 ECHO site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
JIFFY LUBE	1735 WEST 9000 SOUTH	E22 / 6	33
Registry ID: 110005204135			

DRYCLEANERS: Registered Drycleaners

A review of the DRYCLEANERS list, as provided by EDR, and dated 10/15/2018 has revealed that there is 1 DRYCLEANERS site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
LONNIE'S LAUNDRY & D	1799 WEST 9000 SOUTH	G18 / 6	32
Facility ID: UT0801034			

Financial Assurance: Financial Assurance Information Listing

A review of the Financial Assurance list, as provided by EDR, has revealed that there is 1 Financial Assurance site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
MAVERIK #541	9000 S SANDY PARKWAY	A2 / 3	25
Database: Financial Assurance 2, Date of Government Version: 08/31/2018			
Facility ID: 4002523			

EXECUTIVE SUMMARY

NPDES: Permitted Facilities Listing

A review of the NPDES list, as provided by EDR, and dated 09/19/2017 has revealed that there is 1 NPDES site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
F-0209(31)7 I-15 900 Permit: UTR380631	I-15, 9000 SOUTH INT	1 / 3	24

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR Exclusive Historical Auto Stations

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 2 EDR Hist Auto sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
R & RS TEXACO	365 W 9000 SOUTH ST	C7 / 3	27
RED ROVER AUTO RPR &	351 W 9000 S	C10 / 3	29

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
LONNIES CLEANERS DRY	1799 W 9000 S	G19 / 6	32

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

A review of the RGA LUST list, as provided by EDR, has revealed that there are 5 RGA LUST sites within the requested target property.

<u>Site</u>	<u>Address</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
KMART #3211 Facility ID: 4000483	203 W 9000 S	B3 / 3	26
PIRO TEXACO Facility ID: 4000752	365 W 9000 S	C9 / 3	29
FLOWER PATCH/DON'S S Facility ID: 4000252	9000 S REDWOOD RD ;;	E13 / 6	30
FLOWER PATCH/DON'S S	9000 S REDWOOD RD	E14 / 6	30

EXECUTIVE SUMMARY

Facility ID: 4000252
FLOWER PATCH/DON'S S 9000 S REDWOOD RD 89 E15 / 6 31
Facility ID: 4000252

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page Numbers and Map Identifications refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 08/13/2018 has revealed that there are 2 SEMS-ARCHIVE sites within approximately 0.5 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<i>SATURN MINING AND SMM</i> Site ID: 0801251 EPA Id: UTD988075313	<i>9000 SOUTH 200 WEST</i>	<i>S 0 - 1/8 (0.046 mi.)</i>	<i>59 / 7</i>	<i>66</i>
<i>MINGO SMELTER</i> Site ID: 0801105 EPA Id: UTD988070488	<i>100 EAST 90TH SOUTH</i>	<i>E 1/4 - 1/2 (0.354 mi.)</i>	<i>85 / 8</i>	<i>93</i>

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

A review of the CORRACTS list, as provided by EDR, and dated 03/01/2018 has revealed that there are 2 CORRACTS sites within approximately 1 mile of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<i>RECLAIM BARRELL SUPP</i> EPA ID:: UTD044701936	<i>8487 SOUTH 1700 WEST</i>	<i>N 1/2 - 1 (0.645 mi.)</i>	<i>92 / 2</i>	<i>97</i>
<i>MIDVALE INDUSTRIAL C</i> EPA ID:: UTD982586679	<i>8200 SOUTH 150 EAST</i>	<i>N 1/2 - 1 (0.996 mi.)</i>	<i>93 / 3</i>	<i>102</i>

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-SQG: RCRA - Small Quantity Generators

A review of the RCRA-SQG list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
THE HOME DEPOT USA # EPA ID:: UTR000008110	1538 WEST 9000 SOUTH	N 1/8 - 1/4 (0.130 mi.)	71 / 2	74

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generator

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/01/2018 has revealed that there are 7 RCRA-CESQG sites within approximately 0.25 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
KMART #7618 EPA ID:: UTR000012153	1442 WEST 9000 SOUTH	N 0 - 1/8 (0.012 mi.)	26 / 2	37
LARRY H. MILLER FORD EPA ID:: UTR000009928	200 WEST 9000 SOUTH	N 0 - 1/8 (0.017 mi.)	B27 / 3	43
CAMIO DRY CLEANERS EPA ID:: UTD988072435	8977 SOUTH 1300 WEST	N 0 - 1/8 (0.042 mi.)	J56 / 2	62
FIRESTONE TIRE & RUB EPA ID:: UTD988070405	9030 SOUTH REDWOOD R	S 0 - 1/8 (0.045 mi.)	58 / 6	64
ABRA AUTO BODY AND G EPA ID:: UTR000009050	9110 SOUTH 300 WEST	S 1/8 - 1/4 (0.140 mi.)	72 / 7	78
AUTO PAINTING AND CO EPA ID:: UTD980955298	9130 SOUTH 150 WEST	S 1/8 - 1/4 (0.192 mi.)	75 / 7	81
JORDAN SCHOOL DISTRI EPA ID:: UTR000002980	9150 SOUTH 500 WEST	S 1/8 - 1/4 (0.243 mi.)	L80 / 7	88

State and tribal leaking storage tank lists

LUST: Sites with Leaking Underground Storage Tanks

A review of the LUST list, as provided by EDR, and dated 10/16/2018 has revealed that there are 26 LUST sites within approximately 0.5 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
HOLIDAY OIL #16 Facility ID: 4000391 Date Closed: 10/20/2014 Date Closed: 08/30/2007	1316 W 9000 S	N 0 - 1/8 (0.012 mi.)	D25 / 2	36
BUTTERFIELD FORD Facility ID: 4001702 Date Closed: 10/03/1997	200 W 9000 S	N 0 - 1/8 (0.017 mi.)	B28 / 3	45
CIRCLE K STORE 1924	8995 S 1300 W	N 0 - 1/8 (0.017 mi.)	D29 / 2	45

EXECUTIVE SUMMARY

Facility ID: 4001350 Date Closed: 10/15/1997				
FLOWER PATCH/DON'S S Facility ID: 4000252 Date Closed: 12/11/1996	8989 S REDWOOD RD	N 0 - 1/8 (0.018 mi.)	E30 / 2	46
DAVID EARLY #2 Facility ID: 4001904 Date Closed: 10/13/1998	253 W 9000 S	S 0 - 1/8 (0.021 mi.)	H36 / 7	50
HOLIDAY OIL #51 Facility ID: 4001393 Date Closed: 01/06/2012 Date Closed: 03/20/2013	153 W 9000 S	S 0 - 1/8 (0.022 mi.)	B39 / 7	53
GLADE JAMES Facility ID: 4001012 Date Closed: 04/23/1992	9015 S REDWOOD RD	S 0 - 1/8 (0.023 mi.)	F41 / 6	54
TESORO 66602 Facility ID: 4001508 Date Closed: 12/13/2002 Date Closed: 12/23/2008 Date Closed: 01/22/2015	1285 W 9000 S	S 0 - 1/8 (0.024 mi.)	I44 / 6	55
TESORO # 62112 Facility ID: 4000761 Date Closed: 05/27/2003 Date Closed: 02/04/2008	9022 S REDWOOD RD	S 0 - 1/8 (0.027 mi.)	E46 / 6	57
SUNMART #870 Facility ID: 4001435 Date Closed: 01/28/2015	8980 S REDWOOD RD	N 0 - 1/8 (0.028 mi.)	E48 / 2	58
TANNER TRANSMISSIONS Facility ID: 4002501 Date Closed: 07/22/2014	620 WEST 9000 SOUTH	N 0 - 1/8 (0.041 mi.)	K54 / 3	61
JONES EXCAVATING CO. Facility ID: 4001773 Date Closed: 02/29/2000	1650 W 9000 S	N 0 - 1/8 (0.056 mi.)	60 / 2	68
UTAH POWER & LIGHT C Facility ID: 4001211 Date Closed: 12/20/1996	9000 S 1000 W	N 0 - 1/8 (0.091 mi.)	65 / 3	70
ECONOMY BUILDERS SUP Facility ID: 4000272 Date Closed: 10/25/1999	9150 S 300 W	S 1/8 - 1/4 (0.189 mi.)	74 / 7	80
OILWELL DBA JIFFY LU Facility ID: 4000667 Date Closed: 08/23/1999	35 W 9000 S	SE 1/8 - 1/4 (0.213 mi.)	78 / 7	86
HOLIDAY OIL #23 Facility ID: 4000396 Date Closed: 10/30/2008	9010 S STATE ST	E 1/8 - 1/4 (0.241 mi.)	79 / 8	87
JORDAN SCHOOL DISTRI Facility ID: 4000626 Date Closed: 05/03/1995	9150 S 500 W	S 1/8 - 1/4 (0.243 mi.)	L81 / 7	90
CANYONS SCHOOL DISTR	9150 S 500 W	S 1/8 - 1/4 (0.243 mi.)	L82 / 7	91

EXECUTIVE SUMMARY

Facility ID: 4002168 Date Closed: 01/16/2018				
SANDY PUBLIC WORKS S	8775 S 700 W	N 1/4 - 1/2 (0.267 mi.)	83 / 3	91
Facility ID: 4000914 Date Closed: 09/18/1992 Date Closed: 11/12/1996				
7-ELEVEN 1852-22805	9009 S STATE ST	E 1/4 - 1/2 (0.289 mi.)	84 / 8	92
Facility ID: 4001006 Date Closed: 04/17/1995				
FUR BREEDERS AGRICUL	8700 SOUTH 700 WEST	N 1/4 - 1/2 (0.370 mi.)	86 / 3	94
Facility ID: 4000314 Date Closed: 10/26/1998				
INTERMOUNTAIN CONSUM	8722 S 300 W	N 1/4 - 1/2 (0.384 mi.)	87 / 3	95
Facility ID: 4000416 Date Closed: 10/07/1997				
SOUTH JORDAN PAWN SH	9361 S REDWOOD RD	S 1/4 - 1/2 (0.430 mi.)	88 / 6	95
Facility ID: 4002324 Date Closed: 11/04/2003				
BLAND BROTHERS	8630 S REDWOOD RD	N 1/4 - 1/2 (0.453 mi.)	89 / 2	96
Facility ID: 4001642 Date Closed: 01/05/1998				
SANDY ANTIQUE MALL	8672 S STATE	NNE 1/4 - 1/2 (0.466 mi.)	90 / 4	96
Facility ID: 4001961 Date Closed: 09/08/1997				
WESTERN RENTAL AND S	240 WEST 9400 SOUTH	S 1/4 - 1/2 (0.497 mi.)	91 / 7	97
Facility ID: 4001513 Date Closed: 04/17/2007				

State and tribal registered storage tank lists

UST: List of Sites with Underground Storage Tanks

A review of the UST list, as provided by EDR, and dated 10/16/2018 has revealed that there are 23 UST sites within approximately 0.25 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
HOLIDAY OIL #16 Facility ID: 4000391	1316 W 9000 S	N 0 - 1/8 (0.012 mi.)	D25 / 2	36
BUTTERFIELD FORD Facility ID: 4001702	200 W 9000 S	N 0 - 1/8 (0.017 mi.)	B28 / 3	45
CIRCLE K STORE 1924 Facility ID: 4001350	8995 S 1300 W	N 0 - 1/8 (0.017 mi.)	D29 / 2	45
FLOWER PATCH/DON'S S Facility ID: 4000252	8989 S REDWOOD RD	N 0 - 1/8 (0.018 mi.)	E30 / 2	46
MAVERIK #254 Facility ID: 4001999	425 W 9000 S	S 0 - 1/8 (0.019 mi.)	A33 / 7	47
DAVID EARLY #2	253 W 9000 S	S 0 - 1/8 (0.021 mi.)	H36 / 7	50

EXECUTIVE SUMMARY

Facility ID: 4001904				
HOLIDAY OIL #51	153 W 9000 S	S 0 - 1/8 (0.022 mi.)	B39 / 7	53
Facility ID: 4001393				
GLADE JAMES	9015 S REDWOOD RD	S 0 - 1/8 (0.023 mi.)	F41 / 6	54
Facility ID: 4001012				
TESORO 66602	1285 W 9000 S	S 0 - 1/8 (0.024 mi.)	I44 / 6	55
Facility ID: 4001508				
TESORO # 62112	9022 S REDWOOD RD	S 0 - 1/8 (0.027 mi.)	E46 / 6	57
Facility ID: 4000761				
SUNMART #870	8980 S REDWOOD RD	N 0 - 1/8 (0.028 mi.)	E48 / 2	58
Facility ID: 4001435				
TANNER TRANSMISSIONS	620 WEST 9000 SOUTH	N 0 - 1/8 (0.041 mi.)	K54 / 3	61
Facility ID: 4002501				
JONES EXCAVATING CO.	1650 W 9000 S	N 0 - 1/8 (0.056 mi.)	60 / 2	68
Facility ID: 4001773				
UTAH ROSES INC.	567 W 9000 S	S 0 - 1/8 (0.077 mi.)	64 / 7	70
Facility ID: 4001127				
UTAH POWER & LIGHT C	9000 S 1000 W	N 0 - 1/8 (0.091 mi.)	65 / 3	70
Facility ID: 4001211				
SMITHS #495	1820 W 9000 S	N 0 - 1/8 (0.101 mi.)	67 / 2	71
Facility ID: 4002377				
NEW SANDY STATION	8925 S 255 W	N 1/8 - 1/4 (0.129 mi.)	70 / 3	74
Facility ID: 4001751				
PAUL D. SCHMIDT	9120 S REDWOOD RD	S 1/8 - 1/4 (0.149 mi.)	73 / 6	80
Facility ID: 4001566				
ECONOMY BUILDERS SUP	9150 S 300 W	S 1/8 - 1/4 (0.189 mi.)	74 / 7	80
Facility ID: 4000272				
OILWELL DBA JIFFY LU	35 W 9000 S	SE 1/8 - 1/4 (0.213 mi.)	78 / 7	86
Facility ID: 4000667				
HOLIDAY OIL #23	9010 S STATE ST	E 1/8 - 1/4 (0.241 mi.)	79 / 8	87
Facility ID: 4000396				
JORDAN SCHOOL DISTRI	9150 S 500 W	S 1/8 - 1/4 (0.243 mi.)	L81 / 7	90
Facility ID: 4000626				
CANYONS SCHOOL DISTR	9150 S 500 W	S 1/8 - 1/4 (0.243 mi.)	L82 / 7	91
Facility ID: 4002168				

AST: Listing of Aboveground Storage Tanks

A review of the AST list, as provided by EDR, and dated 08/31/2018 has revealed that there is 1 AST site within approximately 0.25 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
DAVID EARLY #2	253 W 9000 S	S 0 - 1/8 (0.021 mi.)	H36 / 7	50
Facility Id: 4001904				
Tank Status: Currently In Use				

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/01/2018 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<i>FIRESTONE COMPLETE A</i> EPA ID:: UTD988069928	<i>253 WEST 9000 SOUTH</i>	<i>S 0 - 1/8 (0.021 mi.)</i>	<i>H35 / 7</i>	<i>48</i>
CHEVRON USA 71145 AP EPA ID:: UTD988071528	8980 SOUTH REDWOOD R	N 0 - 1/8 (0.021 mi.)	E37 / 2	51
<i>LOWES HIW - SANDY 15</i> EPA ID:: UTR000000158	<i>203 WEST 9000 SOUTH</i>	<i>S 0 - 1/8 (0.101 mi.)</i>	<i>68 / 7</i>	<i>71</i>
<i>JIFFY LUBE</i> EPA ID:: UTD988069696	<i>35 WEST 90TH SOUTH</i>	<i>E 1/8 - 1/4 (0.202 mi.)</i>	<i>77 / 4</i>	<i>85</i>

ABANDONED MINES: Abandoned Mines

A review of the ABANDONED MINES list, as provided by EDR, and dated 09/10/2018 has revealed that there is 1 ABANDONED MINES site within approximately 0.25 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
RAINBOW MINE	286 EASTGATE DR	N 1/8 - 1/4 (0.195 mi.)	76 / 3	84

DRYCLEANERS: Registered Drycleaners

A review of the DRYCLEANERS list, as provided by EDR, and dated 10/15/2018 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
<i>CAMIO DRY CLEANERS</i> Facility ID: UT0801032	<i>8977 SOUTH 1300 WEST</i>	<i>N 0 - 1/8 (0.042 mi.)</i>	<i>J56 / 2</i>	<i>62</i>

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR Exclusive Historical Auto Stations

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 19 EDR Hist Auto sites within approximately 0.125 miles of the requested target property.

EXECUTIVE SUMMARY

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
HOLIDAY OIL SERV STA	1316 W 9000 SOUTH ST	N 0 - 1/8 (0.012 mi.)	D24 / 2	36
BUDGET OIL CO GAS ST	8989 S REDWOOD RD	N 0 - 1/8 (0.018 mi.)	E31 / 2	46
MAVERIK COUNTRY STOR	425 W 9000 S	S 0 - 1/8 (0.019 mi.)	A32 / 7	47
BUDGET OIL CO GAS ST	8989 REDWOOD RD S	N 0 - 1/8 (0.019 mi.)	E34 / 2	48
CHEVRON FOOD MARTS G	8980 REDWOOD RD	N 0 - 1/8 (0.021 mi.)	E38 / 2	52
GASOMAT STA	153 W 9000 SOUTH ST	S 0 - 1/8 (0.022 mi.)	B40 / 7	54
AM-PM FOOD MART	9015 S REDWOOD ROAD	S 0 - 1/8 (0.023 mi.)	F42 / 6	55
CONOCO GAS STATIONS	1285 W 9000 S	S 0 - 1/8 (0.024 mi.)	I43 / 6	55
TESORO CORPORATION	9022 S REDWOOD RD	S 0 - 1/8 (0.027 mi.)	E45 / 6	56
APSI-CHEVRON	8980 S 1700 W	N 0 - 1/8 (0.027 mi.)	E47 / 2	58
CHEVRON FOOD MARTS	8980 S REDWOOD RD	N 0 - 1/8 (0.028 mi.)	E49 / 2	59
RAINBOW OIL GAS STAT	9022 REDWOOD RD	S 0 - 1/8 (0.031 mi.)	E50 / 6	59
KERRYS AUTOMOTIVE SP	460 W 9000 SOUTH ST	N 0 - 1/8 (0.031 mi.)	51 / 3	59
TANNER TRANSMISSIONS	620 W 9000 S	N 0 - 1/8 (0.041 mi.)	K53 / 3	60
WESTERN HONDA	8800 S 3RD WEST ST	S 0 - 1/8 (0.045 mi.)	57 / 7	64
GLENS AUTO & DIESEL	8945 S 1300 W	N 0 - 1/8 (0.065 mi.)	J61 / 2	68
WILDLIFE VENTURES IN	8950 SANDY PKWY	N 0 - 1/8 (0.065 mi.)	62 / 3	69
RAINBO OIL NO	9010 S REDWOOD RD	S 0 - 1/8 (0.067 mi.)	63 / 6	69
JIFFY LUBE AUTO LUBR	9000 REDWOOD RD	S 0 - 1/8 (0.109 mi.)	69 / 6	73

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 3 EDR Hist Cleaner sites within approximately 0.125 miles of the requested target property.

<u>Site</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID / Focus Map(s)</u>	<u>Page</u>
CAMIO DRY CLEANERS	8977 TEMPLE DR	N 0 - 1/8 (0.037 mi.)	J52 / 2	60
CAMIO DRY CLEANERS C	8977 S 1300 W	N 0 - 1/8 (0.042 mi.)	J55 / 2	61
AT YOUR SERVICE LAUN	8913 GALILEE WAY	N 0 - 1/8 (0.096 mi.)	66 / 2	70

MAPPED SITES SUMMARY

Target Property:
 9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
 WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION		
1 / 3	F-0209(31)7 I-15 900	I-15, 9000 SOUTH INT	NPDES	TP		
A2 / 3	MAVERIK #541	9000 S SANDY PARKWAY	UST, Financial Assurance	TP		
B3 / 3	KMART #3211	203 W 9000 S	RGA LUST	TP		
B4 / 3	KMART # 3211	203 W 9000 S	FINDS	TP		
B5 / 3	KMART #3211	203 W 9000 S	LUST, UST	TP		
C6 / 3	PIRO TEXACO	365 W 9000 S	FINDS	TP		
C7 / 3	R & RS TEXACO	365 W 9000 SOUTH ST	EDR Hist Auto	TP		
C8 / 3	PIRO TEXACO	365 W 9000 S	LUST, UST	TP		
C9 / 3	PIRO TEXACO	365 W 9000 S	RGA LUST	TP		
C10 / 3	RED ROVER AUTO RPR &	351 W 9000 S	EDR Hist Auto	TP		
D11 / 6		9000 SOUTH 1300 WEST	ERNS	TP		
12 / 6	KIB STUTZNEGGER DDS	1847 W 9000 S STE 10	FINDS	TP		
E13 / 6	FLOWER PATCH/DON'S S	9000 S REDWOOD RD ;;	RGA LUST	TP		
E14 / 6	FLOWER PATCH/DON'S S	9000 S REDWOOD RD	RGA LUST	TP		
E15 / 6	FLOWER PATCH/DON'S S	9000 S REDWOOD RD 89	RGA LUST	TP		
F16 / 6	DENTAL CARE	1662 W 9000 S STE 2	FINDS	TP		
F17 / 6	KENT BLADEN DDS	1662 W 9000 S STE A	FINDS	TP		
G18 / 6	LONNIE'S LAUNDRY & D	1799 WEST 9000 SOUTH	DRYCLEANERS	TP		
G19 / 6	LONNIES CLEANERS DRY	1799 W 9000 S	EDR Hist Cleaner	TP		
G20 / 6	DENTAL FIRST	1793 W 9000 S	FINDS	TP		
G21 / 6	RANDY FORBES	1781 W 9000 S	FINDS	TP		
E22 / 6	JIFFY LUBE	1735 WEST 9000 SOUTH	RCRA-CESQG, FINDS, ECHO	TP		
G23 / 6	AMOR ANIMAL HOSPITAL	1823 W 9000 S	FINDS	TP		
D24 / 2	HOLIDAY OIL SERV STA	1316 W 9000 SOUTH ST	EDR Hist Auto	63	0.012	North
D25 / 2	HOLIDAY OIL #16	1316 W 9000 S	LUST, UST, Financial Assurance	63	0.012	North
26 / 2	KMART #7618	1442 WEST 9000 SOUTH	RCRA-CESQG	64	0.012	North
B27 / 3	LARRY H. MILLER FORD	200 WEST 9000 SOUTH	RCRA-CESQG	88	0.017	North
B28 / 3	BUTTERFIELD FORD	200 W 9000 S	LUST, UST	88	0.017	North
D29 / 2	CIRCLE K STORE 1924	8995 S 1300 W	LUST, UST	88	0.017	North
E30 / 2	FLOWER PATCH/DON'S S	8989 S REDWOOD RD	LUST, UST	97	0.018	North
E31 / 2	BUDGET OIL CO GAS ST	8989 S REDWOOD RD	EDR Hist Auto	97	0.018	North
A32 / 7	MAVERIK COUNTRY STOR	425 W 9000 S	EDR Hist Auto	98	0.019	South
A33 / 7	MAVERIK #254	425 W 9000 S	UST, Financial Assurance	98	0.019	South
E34 / 2	BUDGET OIL CO GAS ST	8989 REDWOOD RD S	EDR Hist Auto	99	0.019	North
H35 / 7	FIRESTONE COMPLETE A	253 WEST 9000 SOUTH	RCRA NonGen / NLR, FINDS, ECHO	110	0.021	South
H36 / 7	DAVID EARLY #2	253 W 9000 S	LUST, UST, AST	110	0.021	South
E37 / 2	CHEVRON USA 71145 AP	8980 SOUTH REDWOOD R	RCRA NonGen / NLR	111	0.021	North
E38 / 2	CHEVRON FOOD MARTS G	8980 REDWOOD RD	EDR Hist Auto	111	0.021	North
B39 / 7	HOLIDAY OIL #51	153 W 9000 S	LUST, UST, Financial Assurance	114	0.022	South

MAPPED SITES SUMMARY

Target Property:
 9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
 WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
B40 / 7	GASOMAT STA	153 W 9000 SOUTH ST	EDR Hist Auto	114 0.022 South
F41 / 6	GLADE JAMES	9015 S REDWOOD RD	LUST, UST	124 0.023 South
F42 / 6	AM-PM FOOD MART	9015 S REDWOOD ROAD	EDR Hist Auto	124 0.023 South
I43 / 6	CONOCO GAS STATIONS	1285 W 9000 S	EDR Hist Auto	129 0.024 South
I44 / 6	TESORO 66602	1285 W 9000 S	LUST, UST, Financial Assurance	129 0.024 South
E45 / 6	TESORO CORPORATION	9022 S REDWOOD RD	EDR Hist Auto	141 0.027 South
E46 / 6	TESORO # 62112	9022 S REDWOOD RD	LUST, UST, SPILLS	141 0.027 South
E47 / 2	APSI-CHEVRON	8980 S 1700 W	EDR Hist Auto	143 0.027 North
E48 / 2	SUNMART #870	8980 S REDWOOD RD	LUST, UST, Financial Assurance	148 0.028 North
E49 / 2	CHEVRON FOOD MARTS	8980 S REDWOOD RD	EDR Hist Auto	148 0.028 North
E50 / 6	RAINBOW OIL GAS STAT	9022 REDWOOD RD	EDR Hist Auto	164 0.031 South
51 / 3	KERRYS AUTOMOTIVE SP	460 W 9000 SOUTH ST	EDR Hist Auto	164 0.031 North
J52 / 2	CAMIO DRY CLEANERS	8977 TEMPLE DR	EDR Hist Cleaner	197 0.037 North
K53 / 3	TANNER TRANSMISSIONS	620 W 9000 S	EDR Hist Auto	218 0.041 North
K54 / 3	TANNER TRANSMISSIONS	620 WEST 9000 SOUTH	LUST, UST	218 0.041 North
J55 / 2	CAMIO DRY CLEANERS C	8977 S 1300 W	EDR Hist Cleaner	221 0.042 North
J56 / 2	CAMIO DRY CLEANERS	8977 SOUTH 1300 WEST	RCRA-CESQG, DRYCLEANERS	221 0.042 North
57 / 7	WESTERN HONDA	8800 S 3RD WEST ST	EDR Hist Auto	237 0.045 South
58 / 6	FIRESTONE TIRE & RUB	9030 SOUTH REDWOOD R	RCRA-CESQG, FINDS, ECHO	239 0.045 South
59 / 7	SATURN MINING AND SM	9000 SOUTH 200 WEST	SEMS-ARCHIVE, LEAD SMELTERS	242 0.046 South
60 / 2	JONES EXCAVATING CO.	1650 W 9000 S	LUST, UST	294 0.056 North
J61 / 2	GLENS AUTO & DIESEL	8945 S 1300 W	EDR Hist Auto	343 0.065 North
62 / 3	WILDLIFE VENTURES IN	8950 SANDY PKWY	EDR Hist Auto	345 0.065 North
63 / 6	RAINBO OIL NO	9010 S REDWOOD RD	EDR Hist Auto	355 0.067 South
64 / 7	UTAH ROSES INC.	567 W 9000 S	UST	406 0.077 South
65 / 3	UTAH POWER & LIGHT C	9000 S 1000 W	LUST, UST	481 0.091 North
66 / 2	AT YOUR SERVICE LAUN	8913 GALILEE WAY	EDR Hist Cleaner	508 0.096 North
67 / 2	SMITHS #495	1820 W 9000 S	UST, Financial Assurance	532 0.101 North
68 / 7	LOWES HIW - SANDY 15	203 WEST 9000 SOUTH	RCRA NonGen / NLR, FINDS, ECHO	534 0.101 South
69 / 6	JIFFY LUBE AUTO LUBR	9000 REDWOOD RD	EDR Hist Auto	578 0.109 South
70 / 3	NEW SANDY STATION	8925 S 255 W	UST	680 0.129 North
71 / 2	THE HOME DEPOT USA #	1538 WEST 9000 SOUTH	RCRA-SQG	686 0.130 North
72 / 7	ABRA AUTO BODY AND G	9110 SOUTH 300 WEST	RCRA-CESQG, FINDS, ECHO	737 0.140 South
73 / 6	PAUL D. SCHMIDT	9120 S REDWOOD RD	UST	787 0.149 South
74 / 7	ECONOMY BUILDERS SUP	9150 S 300 W	LUST, UST	997 0.189 South
75 / 7	AUTO PAINTING AND CO	9130 SOUTH 150 WEST	RCRA-CESQG, FINDS, ECHO	1013 0.192 South
76 / 3	RAINBOW MINE	286 EASTGATE DR	ABANDONED MINES	1030 0.195 North
77 / 4	JIFFY LUBE	35 WEST 90TH SOUTH	RCRA NonGen / NLR, FINDS, ECHO	1068 0.202 East
78 / 7	OILWELL DBA JIFFY LU	35 W 9000 S	LUST, UST	1124 0.213 SE

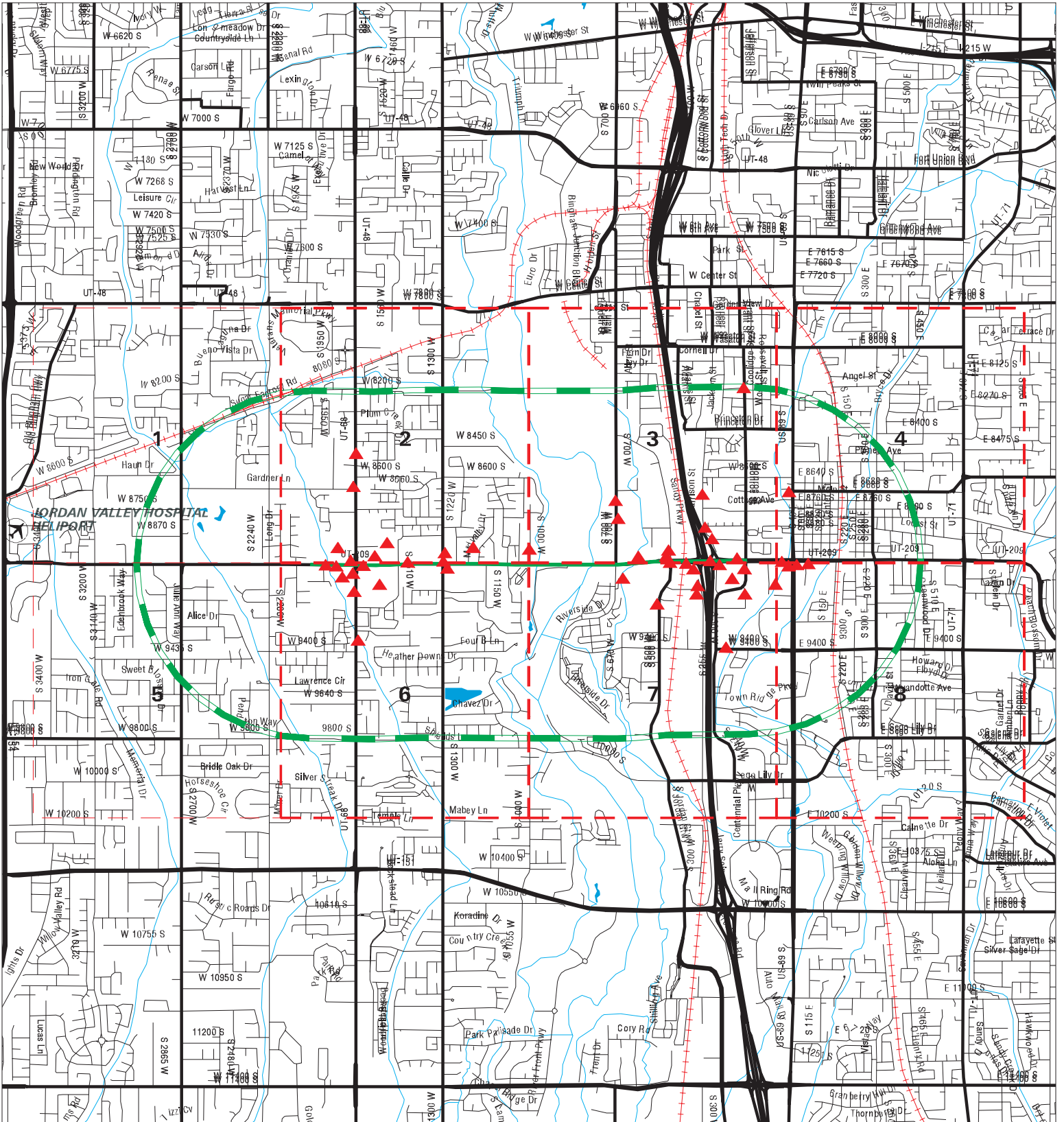
MAPPED SITES SUMMARY

Target Property:

9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
79 / 8	HOLIDAY OIL #23	9010 S STATE ST	LUST, UST, Financial Assurance	1274 0.241 East
L80 / 7	JORDAN SCHOOL DISTRI	9150 SOUTH 500 WEST	RCRA-CESQG, FINDS, ECHO	1282 0.243 South
L81 / 7	JORDAN SCHOOL DISTRI	9150 S 500 W	LUST, UST	1282 0.243 South
L82 / 7	CANYONS SCHOOL DISTR	9150 S 500 W	LUST, UST	1282 0.243 South
83 / 3	SANDY PUBLIC WORKS S	8775 S 700 W	LUST, UST	1412 0.267 North
84 / 8	7-ELEVEN 1852-22805	9009 S STATE ST	LUST, UST	1525 0.289 East
85 / 8	MINGO SMELTER	100 EAST 90TH SOUTH	SEMS-ARCHIVE, LEAD SMELTERS	1871 0.354 East
86 / 3	FUR BREEDERS AGRICUL	8700 SOUTH 700 WEST	LUST, UST, Financial Assurance	1953 0.370 North
87 / 3	INTERMOUNTAIN CONSUM	8722 S 300 W	LUST, UST	2030 0.384 North
88 / 6	SOUTH JORDAN PAWN SH	9361 S REDWOOD RD	LUST	2268 0.430 South
89 / 2	BLAND BROTHERS	8630 S REDWOOD RD	LUST, UST, AST	2394 0.453 North
90 / 4	SANDY ANTIQUE MALL	8672 S STATE	LUST	2458 0.466 NNE
91 / 7	WESTERN RENTAL AND S	240 WEST 9400 SOUTH	LUST, UST	2624 0.497 South
92 / 2	RECLAIM BARRELL SUPP	8487 SOUTH 1700 WEST	CORRACTS, RCRA NonGen / NLR	3407 0.645 North
93 / 3	MIDVALE INDUSTRIAL C	8200 SOUTH 150 EAST	CORRACTS, RCRA NonGen / NLR, FINDS, ECHO	5258 0.996 North

Key Map - 5501450.5s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- Focus Map - Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18 11:28 AM

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>STANDARD ENVIRONMENTAL RECORDS</u>								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		1	0	1	NR	NR	2
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	2	NR	2
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	1	NR	NR	NR	1
RCRA-CESQG	0.250	1	4	3	NR	NR	NR	8
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP	1	NR	NR	NR	NR	NR	1
<i>State- and tribal - equivalent CERCLIS</i>								
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500	2	13	5	8	NR	NR	28
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250	3	16	7	NR	NR	NR	26
AST	0.250		1	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		3	1	NR	NR	NR	4
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	1	NR	NR	NR	1
FINDS	TP	9	NR	NR	NR	NR	NR	9
UXO	1.000		0	0	0	0	NR	0
ECHO	TP	1	NR	NR	NR	NR	NR	1
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250	1	1	0	NR	NR	NR	2
EWA	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP	1	NR	NR	NR	NR	NR	1
FUDS	TP		NR	NR	NR	NR	NR	0
MMRP	TP		NR	NR	NR	NR	NR	0
NPDES	TP	1	NR	NR	NR	NR	NR	1
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UOPF	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125	2	19	NR	NR	NR	NR	21
EDR Hist Cleaner	0.125	1	3	NR	NR	NR	NR	4

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	TP		NR	NR	NR	NR	NR	0
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MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
RGA LUST	TP	5	NR	NR	NR	NR	NR	5
- Totals --		28	61	18	9	2	0	118

NOTES:

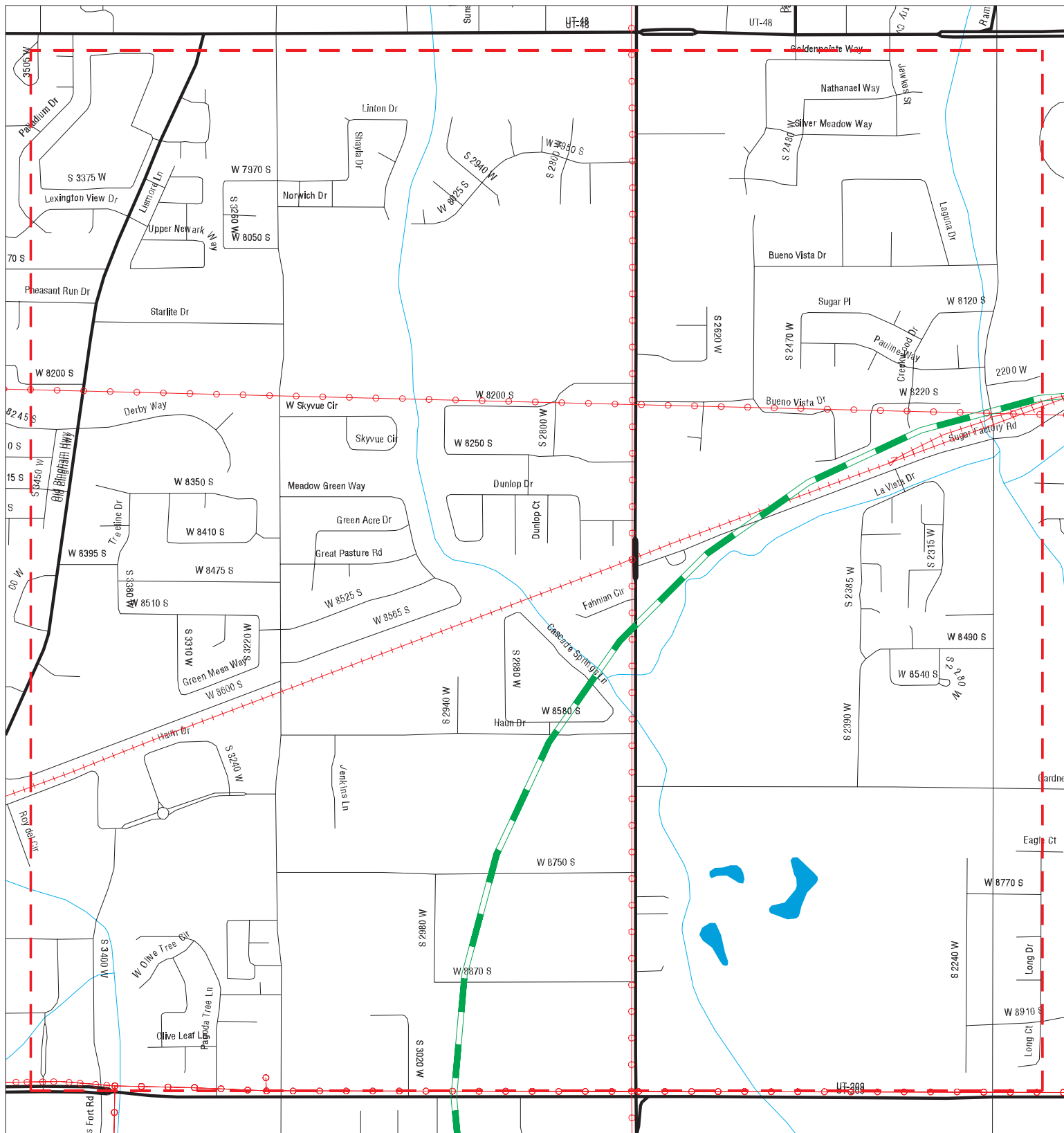
TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Focus Map - 1 - 5501450.5s



- ▲ Sites
- - - Focus Map - Sites
- Indian Reservations BIA
- - - Target Property
- - - Power Line
- National Priority List Sites
- - - Search Buffer
- Dept. Defense Sites
- - - Focus Map - No Sites
- Dept. Defense Sites



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

MAPPED SITES SUMMARY - FOCUS MAP 1

Target Property:
9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND

Focus Map - 2 - 5501450.5s



- ▲ Sites
- - - Focus Map - Sites
- Indian Reservations BIA
- - - Target Property
- - - Power Line
- - - Search Buffer
- National Priority List Sites
- - - Focus Map - No Sites
- Dept. Defense Sites



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

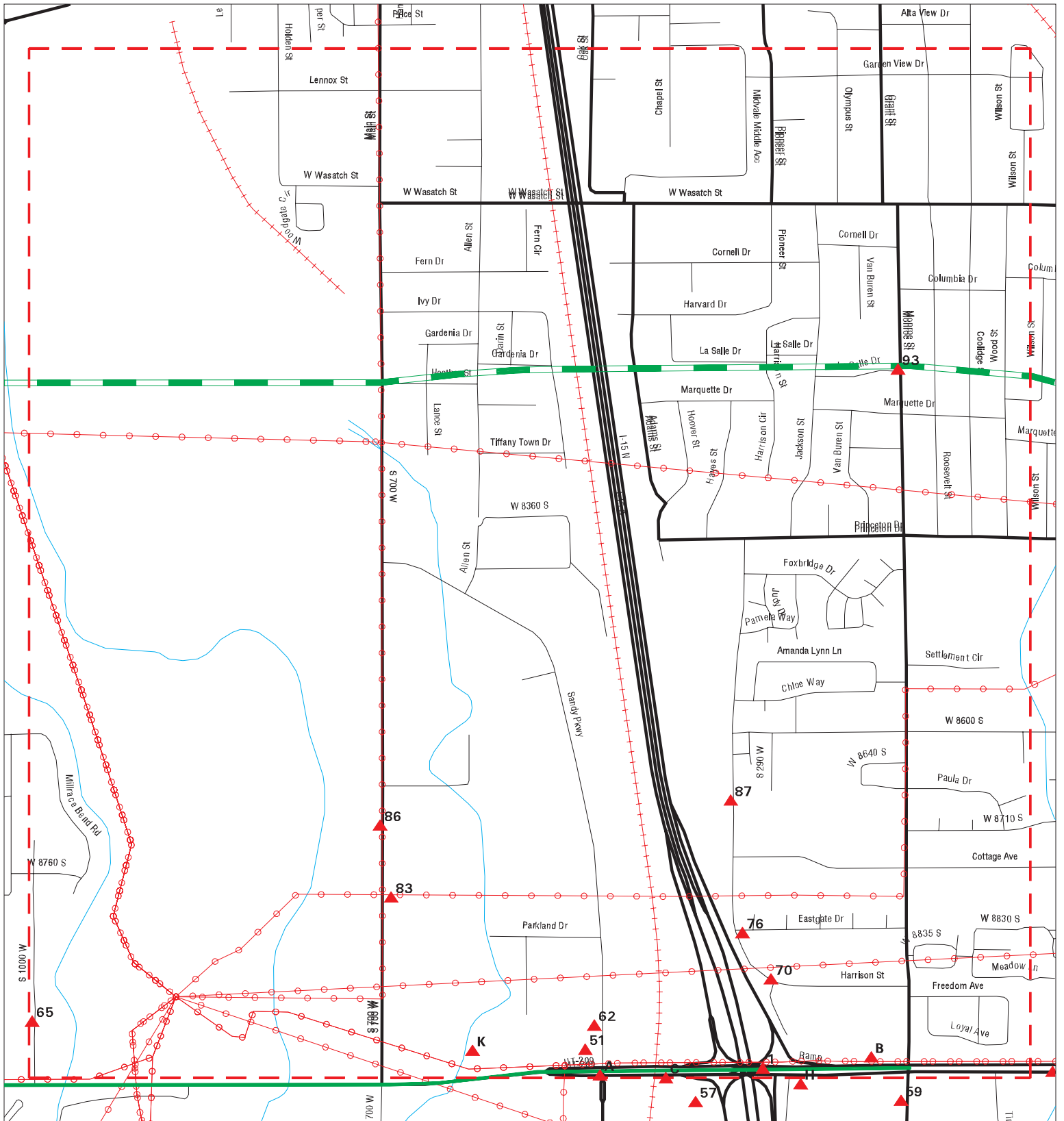
MAPPED SITES SUMMARY - FOCUS MAP 2

Target Property:

9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION		
D24 / 2	HOLIDAY OIL SERV STA	1316 W 9000 SOUTH ST	EDR Hist Auto	63	0.012	North
D25 / 2	HOLIDAY OIL #16	1316 W 9000 S	LUST, UST, Financial Assurance	63	0.012	North
26 / 2	KMART #7618	1442 WEST 9000 SOUTH	RCRA-CESQG	64	0.012	North
D29 / 2	CIRCLE K STORE 1924	8995 S 1300 W	LUST, UST	88	0.017	North
E30 / 2	FLOWER PATCH/DON'S S	8989 S REDWOOD RD	LUST, UST	97	0.018	North
E31 / 2	BUDGET OIL CO GAS ST	8989 S REDWOOD RD	EDR Hist Auto	97	0.018	North
E34 / 2	BUDGET OIL CO GAS ST	8989 REDWOOD RD S	EDR Hist Auto	99	0.019	North
E37 / 2	CHEVRON USA 71145 AP	8980 SOUTH REDWOOD R	RCRA NonGen / NLR	111	0.021	North
E38 / 2	CHEVRON FOOD MARTS G	8980 REDWOOD RD	EDR Hist Auto	111	0.021	North
E47 / 2	APSI-CHEVRON	8980 S 1700 W	EDR Hist Auto	143	0.027	North
E48 / 2	SUNMART #870	8980 S REDWOOD RD	LUST, UST, Financial Assurance	148	0.028	North
E49 / 2	CHEVRON FOOD MARTS	8980 S REDWOOD RD	EDR Hist Auto	148	0.028	North
J52 / 2	CAMIO DRY CLEANERS	8977 TEMPLE DR	EDR Hist Cleaner	197	0.037	North
J55 / 2	CAMIO DRY CLEANERS C	8977 S 1300 W	EDR Hist Cleaner	221	0.042	North
J56 / 2	CAMIO DRY CLEANERS	8977 SOUTH 1300 WEST	RCRA-CESQG, DRYCLEANERS	221	0.042	North
60 / 2	JONES EXCAVATING CO.	1650 W 9000 S	LUST, UST	294	0.056	North
J61 / 2	GLENS AUTO & DIESEL	8945 S 1300 W	EDR Hist Auto	343	0.065	North
66 / 2	AT YOUR SERVICE LAUN	8913 GALILEE WAY	EDR Hist Cleaner	508	0.096	North
67 / 2	SMITHS #495	1820 W 9000 S	UST, Financial Assurance	532	0.101	North
71 / 2	THE HOME DEPOT USA #	1538 WEST 9000 SOUTH	RCRA-SQG	686	0.130	North
89 / 2	BLAND BROTHERS	8630 S REDWOOD RD	LUST, UST, AST	2394	0.453	North
92 / 2	RECLAIM BARRELL SUPP	8487 SOUTH 1700 WEST	CORRACTS, RCRA NonGen / NLR	3407	0.645	North

Focus Map - 3 - 5501450.5s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ⚡ Power Line
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

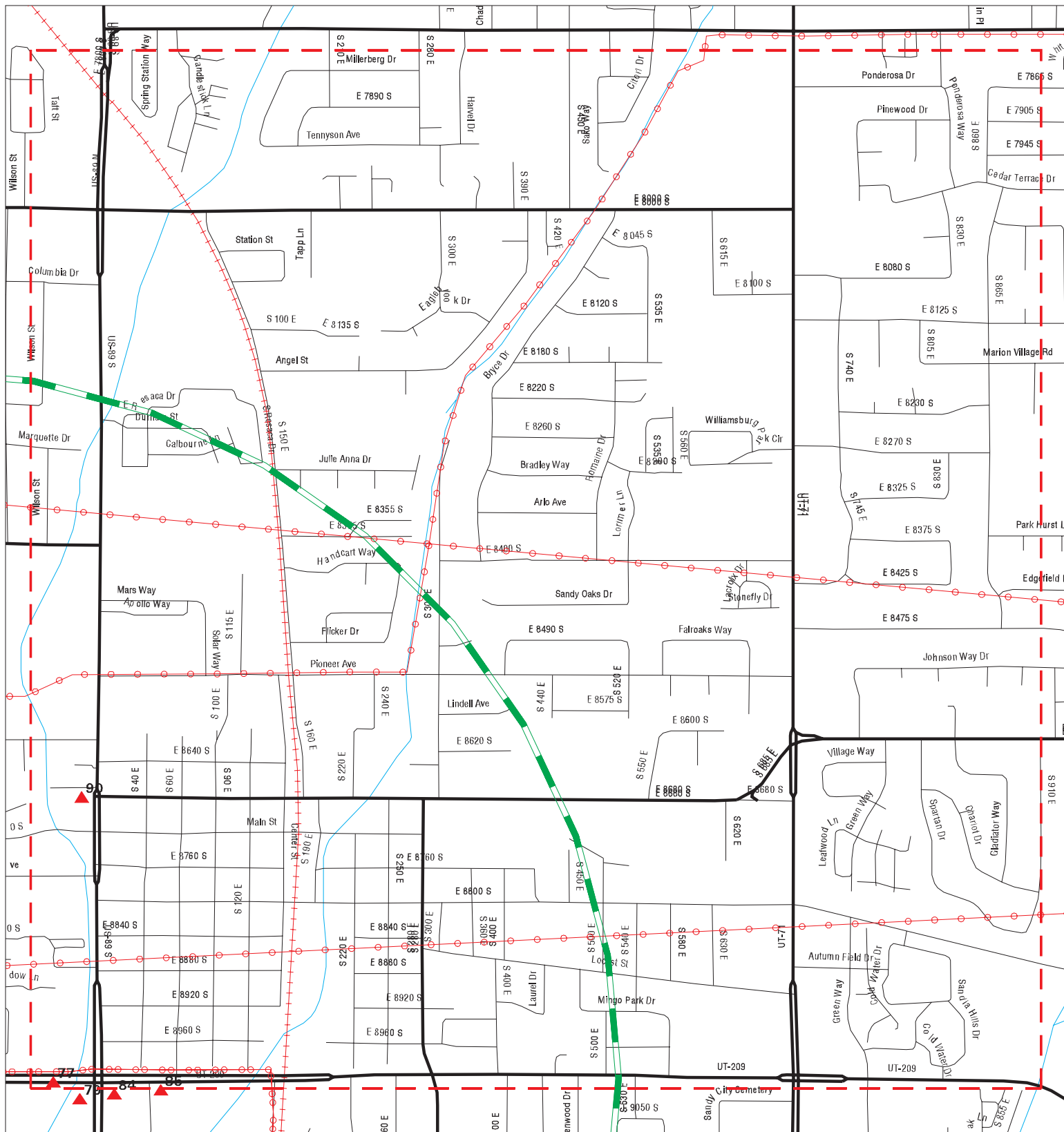
MAPPED SITES SUMMARY - FOCUS MAP 3

Target Property:

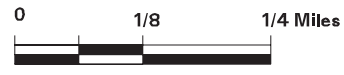
9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION		
1 / 3	F-0209(31)7 I-15 900	I-15, 9000 SOUTH INT	NPDES	TP		
A2 / 3	MAVERIK #541	9000 S SANDY PARKWAY	UST, Financial Assurance	TP		
B3 / 3	KMART #3211	203 W 9000 S	RGA LUST	TP		
B4 / 3	KMART # 3211	203 W 9000 S	FINDS	TP		
B5 / 3	KMART #3211	203 W 9000 S	LUST, UST	TP		
C6 / 3	PIRO TEXACO	365 W 9000 S	FINDS	TP		
C7 / 3	R & RS TEXACO	365 W 9000 SOUTH ST	EDR Hist Auto	TP		
C8 / 3	PIRO TEXACO	365 W 9000 S	LUST, UST	TP		
C9 / 3	PIRO TEXACO	365 W 9000 S	RGA LUST	TP		
C10 / 3	RED ROVER AUTO RPR &	351 W 9000 S	EDR Hist Auto	TP		
B27 / 3	LARRY H. MILLER FORD	200 WEST 9000 SOUTH	RCRA-CESQG	88	0.017	North
B28 / 3	BUTTERFIELD FORD	200 W 9000 S	LUST, UST	88	0.017	North
51 / 3	KERRYS AUTOMOTIVE SP	460 W 9000 SOUTH ST	EDR Hist Auto	164	0.031	North
K53 / 3	TANNER TRANSMISSIONS	620 W 9000 S	EDR Hist Auto	218	0.041	North
K54 / 3	TANNER TRANSMISSIONS	620 WEST 9000 SOUTH	LUST, UST	218	0.041	North
62 / 3	WILDLIFE VENTURES IN	8950 SANDY PKWY	EDR Hist Auto	345	0.065	North
65 / 3	UTAH POWER & LIGHT C	9000 S 1000 W	LUST, UST	481	0.091	North
70 / 3	NEW SANDY STATION	8925 S 255 W	UST	680	0.129	North
76 / 3	RAINBOW MINE	286 EASTGATE DR	ABANDONED MINES	1030	0.195	North
83 / 3	SANDY PUBLIC WORKS S	8775 S 700 W	LUST, UST	1412	0.267	North
86 / 3	FUR BREEDERS AGRICUL	8700 SOUTH 700 WEST	LUST, UST, Financial Assurance	1953	0.370	North
87 / 3	INTERMOUNTAIN CONSUM	8722 S 300 W	LUST, UST	2030	0.384	North
93 / 3	MIDVALE INDUSTRIAL C	8200 SOUTH 150 EAST	CORRACTS, RCRA NonGen / NLR, FINDS, ECHO	5258	0.996	North

Focus Map - 4 - 5501450.5s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ⚡ Power Line
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

MAPPED SITES SUMMARY - FOCUS MAP 4

Target Property:
9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
77 / 4	JIFFY LUBE	35 WEST 90TH SOUTH	RCRA NonGen / NLR, FINDS, ECHO	1068 0.202 East
90 / 4	SANDY ANTIQUE MALL	8672 S STATE	LUST	2458 0.466 NNE

Focus Map - 5 - 5501450.5s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ⚡ Power Line
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

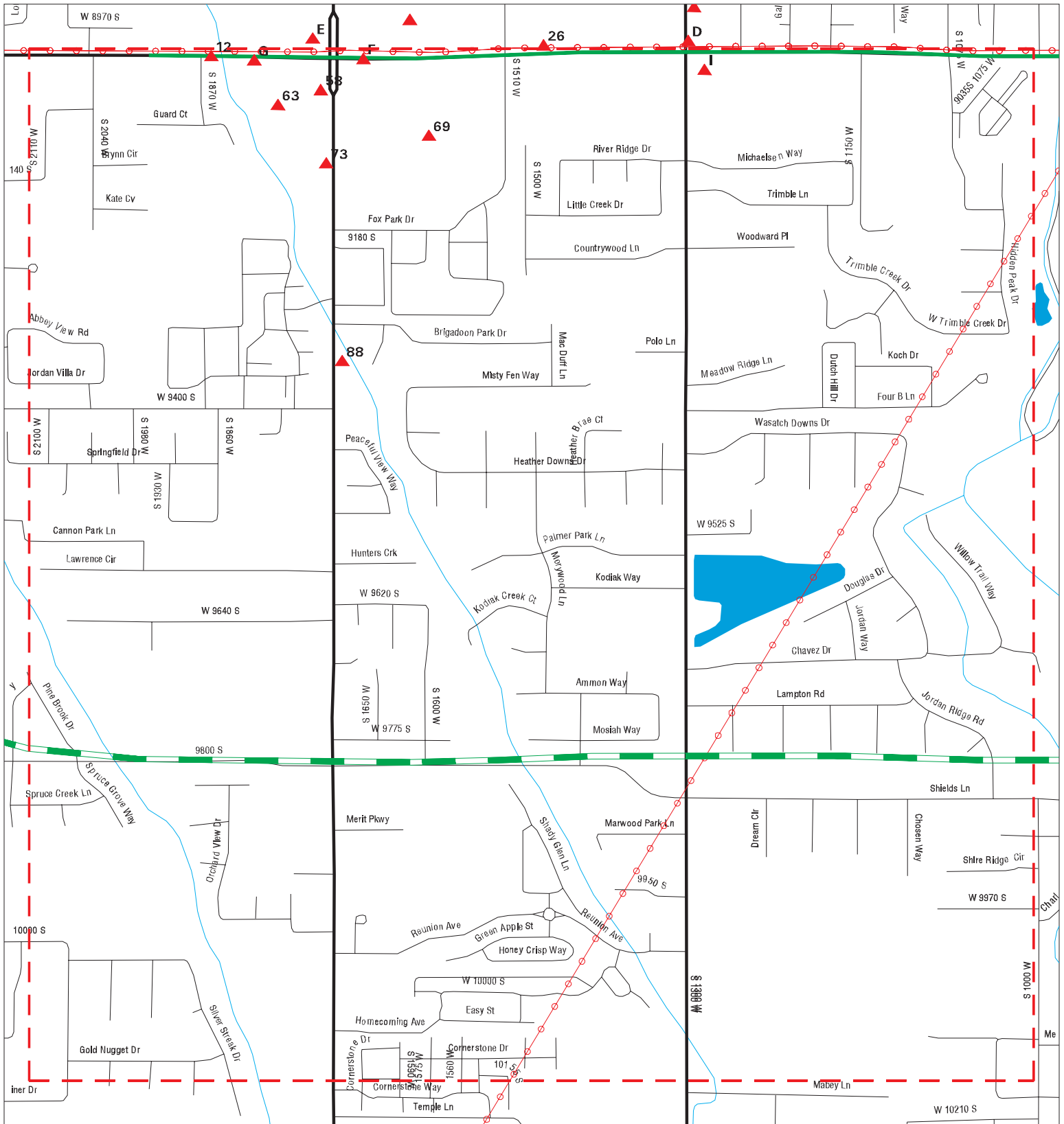
MAPPED SITES SUMMARY - FOCUS MAP 5

Target Property:
9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
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NO MAPPED SITES FOUND

Focus Map - 6 - 5501450.5s



- ▲ Sites
- - - Target Property
- - - Search Buffer
- - - Focus Map - No Sites
- - - Focus Map - Sites
- - - Power Line
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

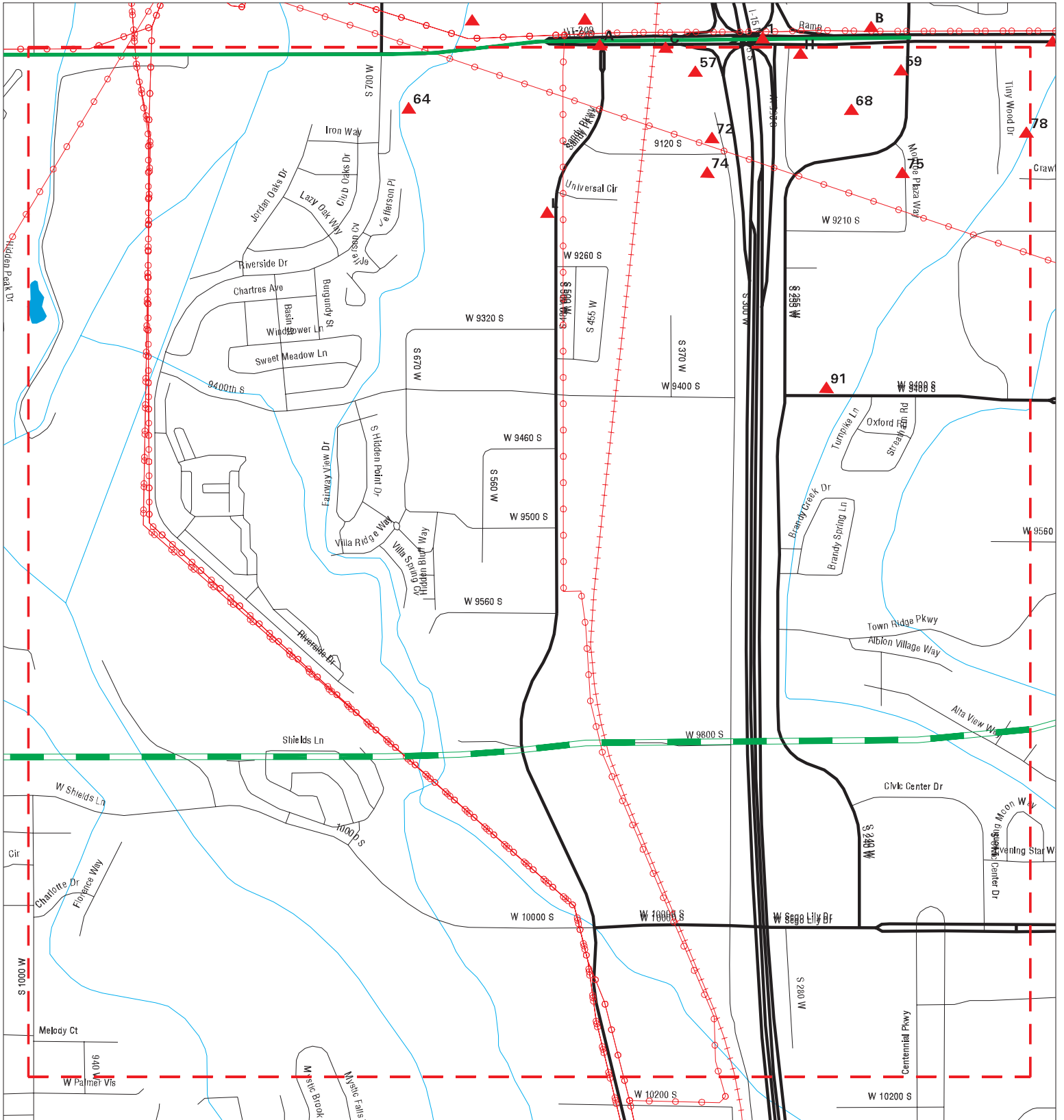
MAPPED SITES SUMMARY - FOCUS MAP 6

Target Property:

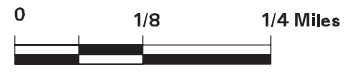
9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
D11 / 6		9000 SOUTH 1300 WEST	ERNS	TP
12 / 6	KIB STUTZNEGGER DDS	1847 W 9000 S STE 10	FINDS	TP
E13 / 6	FLOWER PATCH/DON'S S	9000 S REDWOOD RD ;;	RGA LUST	TP
E14 / 6	FLOWER PATCH/DON'S S	9000 S REDWOOD RD	RGA LUST	TP
E15 / 6	FLOWER PATCH/DON'S S	9000 S REDWOOD RD 89	RGA LUST	TP
F16 / 6	DENTAL CARE	1662 W 9000 S STE 2	FINDS	TP
F17 / 6	KENT BLADEN DDS	1662 W 9000 S STE A	FINDS	TP
G18 / 6	LONNIE'S LAUNDRY & D	1799 WEST 9000 SOUTH	DRYCLEANERS	TP
G19 / 6	LONNIES CLEANERS DRY	1799 W 9000 S	EDR Hist Cleaner	TP
G20 / 6	DENTAL FIRST	1793 W 9000 S	FINDS	TP
G21 / 6	RANDY FORBES	1781 W 9000 S	FINDS	TP
E22 / 6	JIFFY LUBE	1735 WEST 9000 SOUTH	RCRA-CESQG, FINDS, ECHO	TP
G23 / 6	AMOR ANIMAL HOSPITAL	1823 W 9000 S	FINDS	TP
F41 / 6	GLADE JAMES	9015 S REDWOOD RD	LUST, UST	124 0.023 South
F42 / 6	AM-PM FOOD MART	9015 S REDWOOD ROAD	EDR Hist Auto	124 0.023 South
I43 / 6	CONOCO GAS STATIONS	1285 W 9000 S	EDR Hist Auto	129 0.024 South
I44 / 6	TESORO 66602	1285 W 9000 S	LUST, UST, Financial Assurance	129 0.024 South
E45 / 6	TESORO CORPORATION	9022 S REDWOOD RD	EDR Hist Auto	141 0.027 South
E46 / 6	TESORO # 62112	9022 S REDWOOD RD	LUST, UST, SPILLS	141 0.027 South
E50 / 6	RAINBOW OIL GAS STAT	9022 REDWOOD RD	EDR Hist Auto	164 0.031 South
58 / 6	FIRESTONE TIRE & RUB	9030 SOUTH REDWOOD R	RCRA-CESQG, FINDS, ECHO	239 0.045 South
63 / 6	RAINBO OIL NO	9010 S REDWOOD RD	EDR Hist Auto	355 0.067 South
69 / 6	JIFFY LUBE AUTO LUBR	9000 REDWOOD RD	EDR Hist Auto	578 0.109 South
73 / 6	PAUL D. SCHMIDT	9120 S REDWOOD RD	UST	787 0.149 South
88 / 6	SOUTH JORDAN PAWN SH	9361 S REDWOOD RD	LUST	2268 0.430 South

Focus Map - 7 - 5501450.5s



- ▲ Sites
- Target Property
- Search Buffer
- Focus Map - No Sites
- Focus Map - Sites
- Power Line
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

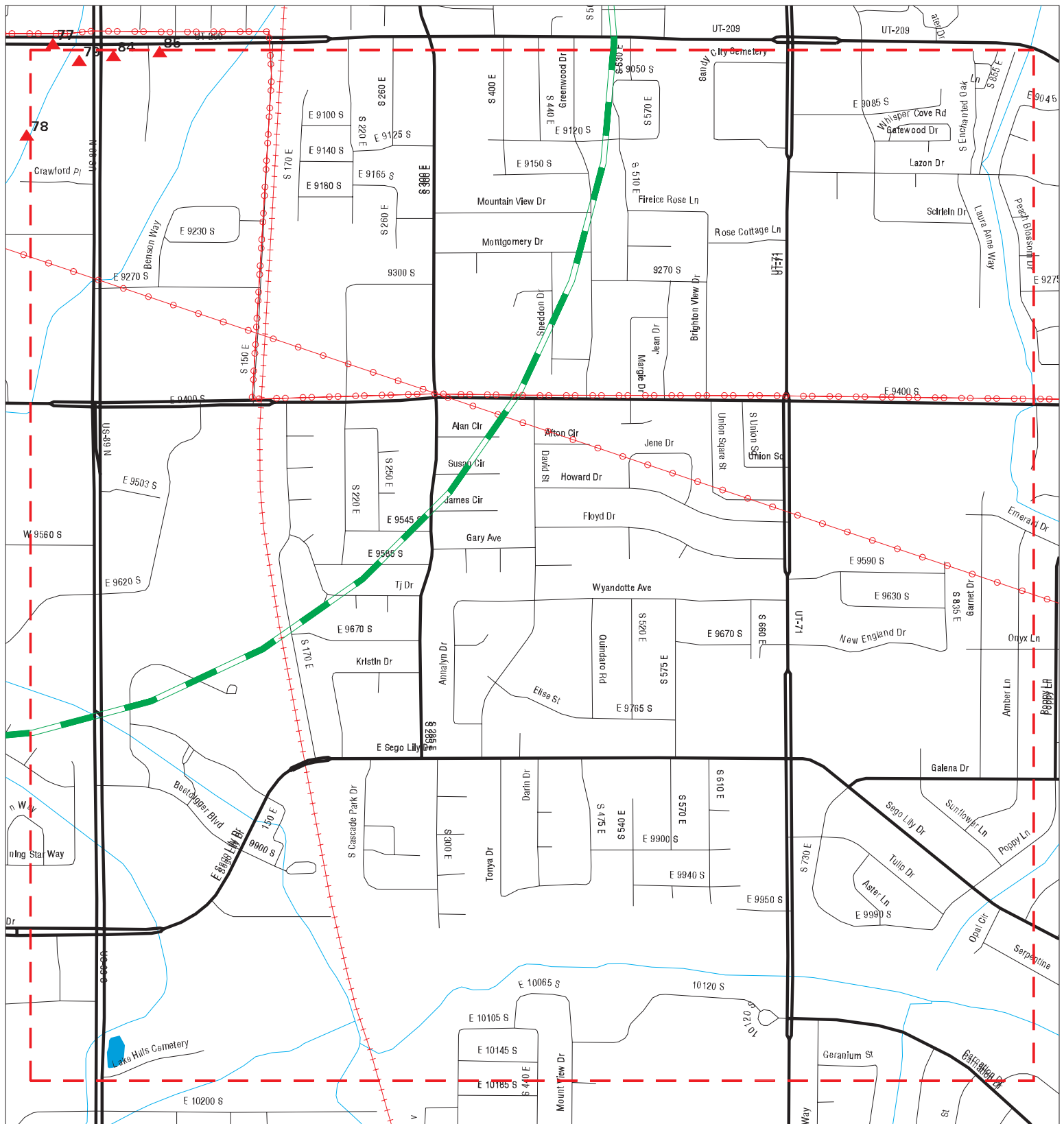
MAPPED SITES SUMMARY - FOCUS MAP 7

Target Property:

9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
A32 / 7	MAVERIK COUNTRY STOR	425 W 9000 S	EDR Hist Auto	98 0.019 South
A33 / 7	MAVERIK #254	425 W 9000 S	UST, Financial Assurance	98 0.019 South
H35 / 7	FIRESTONE COMPLETE A	253 WEST 9000 SOUTH	RCRA NonGen / NLR, FINDS, ECHO	110 0.021 South
H36 / 7	DAVID EARLY #2	253 W 9000 S	LUST, UST, AST	110 0.021 South
B39 / 7	HOLIDAY OIL #51	153 W 9000 S	LUST, UST, Financial Assurance	114 0.022 South
B40 / 7	GASOMAT STA	153 W 9000 SOUTH ST	EDR Hist Auto	114 0.022 South
57 / 7	WESTERN HONDA	8800 S 3RD WEST ST	EDR Hist Auto	237 0.045 South
59 / 7	SATURN MINING AND SM	9000 SOUTH 200 WEST	SEMS-ARCHIVE, LEAD SMELTERS	242 0.046 South
64 / 7	UTAH ROSES INC.	567 W 9000 S	UST	406 0.077 South
68 / 7	LOWES HIW - SANDY 15	203 WEST 9000 SOUTH	RCRA NonGen / NLR, FINDS, ECHO	534 0.101 South
72 / 7	ABRA AUTO BODY AND G	9110 SOUTH 300 WEST	RCRA-CESQG, FINDS, ECHO	737 0.140 South
74 / 7	ECONOMY BUILDERS SUP	9150 S 300 W	LUST, UST	997 0.189 South
75 / 7	AUTO PAINTING AND CO	9130 SOUTH 150 WEST	RCRA-CESQG, FINDS, ECHO	1013 0.192 South
78 / 7	OILWELL DBA JIFFY LU	35 W 9000 S	LUST, UST	1124 0.213 SE
L80 / 7	JORDAN SCHOOL DISTRI	9150 SOUTH 500 WEST	RCRA-CESQG, FINDS, ECHO	1282 0.243 South
L81 / 7	JORDAN SCHOOL DISTRI	9150 S 500 W	LUST, UST	1282 0.243 South
L82 / 7	CANYONS SCHOOL DISTR	9150 S 500 W	LUST, UST	1282 0.243 South
91 / 7	WESTERN RENTAL AND S	240 WEST 9400 SOUTH	LUST, UST	2624 0.497 South

Focus Map - 8 - 5501450.5s



- ▲ Sites
- ▬ Target Property
- ▬ Search Buffer
- ▬ Focus Map - No Sites
- ▬ Focus Map - Sites
- ⚡ Power Line
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA



SITE NAME: SR 209, 9000 South Redwood Road To I-15
ADDRESS: 9000 South and Redwood Road To 900 South and I-15
CITY/STATE: West Jordan UT
ZIP: 84088

CLIENT: HDR Engineering, Inc.
CONTACT: Terry Warner
INQUIRY #: 5501450.5s
DATE: 12/04/18

MAPPED SITES SUMMARY - FOCUS MAP 8

Target Property:
 9000 SOUTH AND REDWOOD ROAD TO 900 SOUTH AND 1-15
 WEST JORDAN, UT 84088

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
79 / 8	HOLIDAY OIL #23	9010 S STATE ST	LUST, UST, Financial Assurance	1274 0.241 East
84 / 8	7-ELEVEN 1852-22805	9009 S STATE ST	LUST, UST	1525 0.289 East
85 / 8	MINGO SMELTER	100 EAST 90TH SOUTH	SEMS-ARCHIVE, LEAD SMELTERS	1871 0.354 East

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)
EDR ID Number
EPA ID Number

1 F-0209(31)7 I-15 9000 SOUTH INTERCHANGE
Target I-15, 9000 SOUTH INTERCHANGE
Property SANDY, UT 84070

NPDES S120718858
N/A

Actual:
4368 ft.
Focus Map:
3

NPDES:
Permit: UTR380631
NonConstruction Storm Water: STORMWATER
Facility Oper Name: Stapp Construction
Facility Oper Address: 125 North 400 West, Suite E
Facility Oper City: NORTH SALT LAKE
Facility Oper State: UT
Facility Oper Zip: 84054
Facility Oper Phone #: 801-294-4385
Status Of Owner/Oper: GENERAL_CONTRACTOR
Facility Oper Contact Person: Dale Warren
Facility Oper Contact Title: Not reported
Facility Oper Contact Phone: 801-690-8262
Facility Site Contact Person: Not reported
Facility Site Contact Title: Not reported
Facility Site Contact Phone: Not reported
Muni Operating Storm Sewer System: UDOT
Receiving Water Body: Jordan and Salt Lake City Canal
Primary SIC Code: Not reported
Group 1: Not reported
Group 2: Not reported
Group 3: Not reported
Group 4: Not reported
Group 5: Not reported
Primary Sector: Not reported
Secondary Sector: Not reported
Third Sector: Not reported
Fourth Sector: Not reported
Certification Name: Dale Warren
Date Signed: 05/16/2017
Amount Paid: \$150.00
Date Noi Received: 05/16/2017
Date Noi Complete: Not reported
Date Coverage Issued/Renewed: Not reported
Date Coverage Effective: 05/16/2017
Date Coverage Expires: 05/16/2018
Inactivated: Not reported
No Exposure: 0
Not Received: Not reported
Permit Type: CONSTRUCTION
Permit Name: Not reported
DMR Cognizant Official: Not reported
DMR Cognizant Official Tele: Not reported
Facility Site Lat: 40.588078
Facility Site Long: -111.899905

Permit: UTR380631
NonConstruction Storm Water: STORMWATER
Facility Oper Name: Utah Department of Transportation
Facility Oper Address: 2010 S 2760 W
Facility Oper City: SALT LAKE CITY
Facility Oper State: UT
Facility Oper Zip: 84104
Facility Oper Phone #: 801-975-4900
Status Of Owner/Oper: MAIN

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

F-0209(31)7 I-15 9000 SOUTH INTERCHANGE (Continued)

S120718858

Facility Oper Contact Person: Guy Evans
 Facility Oper Contact Title: Not reported
 Facility Oper Contact Phone: 801-450-1967
 Facility Site Contact Person: Not reported
 Facility Site Contact Title: Not reported
 Facility Site Contact Phone: Not reported
 Muni Operating Storm Sewer System: UDOT
 Receiving Water Body: Jordan and Salt Lake City Canal
 Primary SIC Code: Not reported
 Group 1: Not reported
 Group 2: Not reported
 Group 3: Not reported
 Group 4: Not reported
 Group 5: Not reported
 Primary Sector: Not reported
 Secondary Sector: Not reported
 Third Sector: Not reported
 Fourth Sector: Not reported
 Certification Name: Dale Warren
 Date Signed: 05/16/2017
 Amount Paid: \$150.00
 Date Noi Received: 05/16/2017
 Date Noi Complete: Not reported
 Date Coverage Issued/Renewed: Not reported
 Date Coverage Effective: 05/16/2017
 Date Coverage Expires: 05/16/2018
 Inactivated: Not reported
 No Exposure: 0
 Not Received: Not reported
 Permit Type: CONSTRUCTION
 Permit Name: Not reported
 DMR Cognizant Official: Not reported
 DMR Cognizant Official Tele: Not reported
 Facility Site Lat: 40.588078
 Facility Site Long: -111.899905

A2 MAVERIK #541
Target 9000 S SANDY PARKWAY
Property SANDY, UT 84070

UST U004250294
Financial Assurance N/A

Site 1 of 3 in cluster A

Actual: UST:
4357 ft. Facility ID: 4002523
Focus Map: Owner Name: MAVERIK, INC.
3 Owner Address: 185 S. STATE ST. STE 800
 Owner City,St,Zip: SALT LAKE CITY, UT 84111
 Owner Phone: (877) 936-5557
 Total Tanks: 5
 Closed Tanks: 0

UT Financial Assurance 2:
 Region: 2
 Facility ID: 4002523
 Mechanism: Self-insurance

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

B3
Target
Property

KMART #3211
203 W 9000 S
SANDY, UT

RGA LUST **S116253877**
N/A

Site 1 of 7 in cluster B

Actual: 4381 ft.	RGA LUST:	2012	KMART #3211	203 W 9000 S
Focus Map: 3		2011	KMART #3211	203 W 9000 S
		2010	KMART #3211	203 W 9000 S
		2009	KMART #3211	203 W 9000 S
		2008	KMART #3211	203 W 9000 S
		2007	KMART #3211	203 W 9000 S
		2006	KMART #3211	203 W 9000 S
		2004	KMART #3211	203 W 9000 S
		2003	KMART #3211	203 W 9000 S
		2002	KMART #3211	203 W 9000 S
		2001	KMART #3211	203 W 9000 S
		2000	KMART #3211	203 W 9000 S
		1999	KMART #3211	203 W 9000 S
		1998	KMART #3211	203 W 9000 S

B4
Target
Property

KMART # 3211
203 W 9000 S
SANDY, UT 84070

FINDS **1005794356**
N/A

Site 2 of 7 in cluster B

Actual:
4381 ft.

Focus Map:
3

FINDS:

Registry ID: 110002287873

Environmental Interest/Information System
The CIM (Utah - Common Identifier Mechanism) is Utah's Department of Environmental Quality (UDEQ) mechanism for compliance and permitting operations.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

B5 **KMART #3211**
Target **203 W 9000 S**
Property **SANDY, UT 84070**

LUST **U003150692**
UST **N/A**

Site 3 of 7 in cluster B

Actual: **LUST:**
4381 ft. Facility ID: 4000483
Focus Map: Release Id: IBC
3 **Closed Date:** **05/02/1994**
 Notification Date: 03/09/1993
 Owner Name: KMART CORPORATION
 Owner Address: 3100 W BIG BEAVER
 Owner City: TROY
 Owner State: MI
 Owner Zip: 48084
 Owner City,St,Zip: TROY, MI 48084
 Project Manager: [Jim Martin]

UST:
Facility ID: 4000483
Owner Name: KMART CORPORATION
Owner Address: 3100 W BIG BEAVER
Owner City,St,Zip: TROY, MI 48084
Owner Phone: (810) 643-1790
Total Tanks: 1
Closed Tanks: 1

C6 **PIRO TEXACO**
Target **365 W 9000 S**
Property **SANDY, UT 84070**

FINDS **1005793696**
N/A

Site 1 of 5 in cluster C

Actual: **FINDS:**
4363 ft.
Focus Map: Registry ID: 110002294801
3

Environmental Interest/Information System
The CIM (Utah - Common Identifier Mechanism) is Utah's Department of Environmental Quality (UDEQ) mechanism for compliance and permitting operations.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

C7 **R & RS TEXACO**
Target **365 W 9000 SOUTH ST**
Property **SANDY, UT 84070**

EDR Hist Auto **1014182117**
N/A

Site 2 of 5 in cluster C

Actual: **EDR Hist Auto**
4363 ft.
Focus Map: Year: Name: Type:
3 1972 KRUEGER NORMAN C Gasoline Service Stations
 1973 TEXACO CAFE Gasoline Service Stations

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

R & RS TEXACO (Continued)

1014182117

1974	TEXACO CAFE	Gasoline Service Stations
1975	TEXACO CAFE	Gasoline Service Stations
1975	TEXACO CAFE	Gasoline Service Stations
1976	TEXACO CAFE	Gasoline Service Stations
1977	TEXACO CAFE	Gasoline Service Stations
1978	TEXACO CAFE	Gasoline Service Stations
1980	R BS TEXACO	GASOLINE STATIONS
1982	R & R TEXACO	Gasoline Service Stations
1983	R & R TEXACO	Gasoline Service Stations
1985	R & RS TEXACO	GASOLINE STATIONS
1985	R & R TEXACO	Gasoline Service Stations
1986	R & R TEXACO	Gasoline Service Stations
1987	R & R TEXACO	Gasoline Service Stations
1988	R & R TEXACO	Gasoline Service Stations
1989	R & R TEXACO	Gasoline Service Stations, NEC
1990	R & R TEXACO	Gasoline Service Stations, NEC
1991	R & RS TEXACO	GASOLINE STATIONS
1991	L & L TEXACO	Gasoline Service Stations, NEC
1992	L & L TEXACO	Gasoline Service Stations, NEC
1994	L & L TEXACO	Gasoline Service Stations, NEC
1995	L & L TEXACO	Gasoline Service Stations, NEC
1996	L & L TEXACO	Gasoline Service Stations, NEC
1997	L & L TEXACO	Gasoline Service Stations, NEC

C8 **PIRO TEXACO**
Target **365 W 9000 S**
Property **SANDY, UT 84070**

LUST **U003367147**
UST **N/A**

Site 3 of 5 in cluster C

Actual: **LUST:**
4363 ft. Facility ID: 4000752
Focus Map: Release Id: KJT
3 **Closed Date:** **12/03/2002**
 Notification Date: 02/26/1998
 Owner Name: HOWARD FIELD
 Owner Address: 1233 E COUNTRY RD
 Owner City: FRUIT HEIGHTS
 Owner State: UT
 Owner Zip: 84037
 Owner City,St,Zip: FRUIT HEIGHTS, UT 84037
 Project Manager: Hong-Lei Tao

Facility ID: 4000752
 Release Id: KMP
Closed Date: **12/30/1998**
 Notification Date: 05/28/1998
 Owner Name: HOWARD FIELD
 Owner Address: 1233 E COUNTRY RD
 Owner City: FRUIT HEIGHTS
 Owner State: UT
 Owner Zip: 84037
 Owner City,St,Zip: FRUIT HEIGHTS, UT 84037
 Project Manager: [Bruce Hagans]

UST:
 Facility ID: 4000752

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PIRO TEXACO (Continued)

U003367147

Owner Name: HOWARD FIELD
Owner Address: 1233 E COUNTRY RD
Owner City,St,Zip: FRUIT HEIGHTS, UT 84037
Owner Phone: (801) 546-1103
Total Tanks: 4
Closed Tanks: 4

**C9
Target
Property**

**PIRO TEXACO
365 W 9000 S
SANDY, UT**

**RGA LUST S116254809
N/A**

Site 4 of 5 in cluster C

**Actual:
4363 ft.**

RGA LUST:

**Focus Map:
3**

2012	PIRO TEXACO	365 W 9000 S
2011	PIRO TEXACO	365 W 9000 S
2010	PIRO TEXACO	365 W 9000 S
2009	PIRO TEXACO	365 W 9000 S
2008	PIRO TEXACO	365 W 9000 S
2007	PIRO TEXACO	365 W 9000 S
2006	PIRO TEXACO	365 W 9000 S
2004	PIRO TEXACO	365 W 9000 S
2003	PIRO TEXACO	365 W 9000 S
2002	PIRO TEXACO	365 W 9000 S
2001	PIRO TEXACO	365 W 9000 S
2000	PIRO TEXACO	365 W 9000 S
1999	PIRO TEXACO	365 W 9000 S
1998	PIRO TEXACO	365 W 9000 S

**C10
Target
Property**

**RED ROVER AUTO RPR & SERV
351 W 9000 S
SANDY, UT 84070**

**EDR Hist Auto 1014177745
N/A**

Site 5 of 5 in cluster C

**Actual:
4363 ft.**

EDR Hist Auto

**Focus Map:
3**

Year: Name:
2007 RED ROVER AUTO RPR & SERV

Type:
AUTOMOBILE REPAIRING & SERVICE

MAP FINDINGS

Map ID			
Direction			
Distance			
Elevation	Site	Database(s)	EDR ID Number EPA ID Number

D11		ERNS	2011985643
Target	9000 SOUTH 1300 WEST		N/A
Property	WEST JORDAN, UT		

Site 1 of 4 in cluster D

Actual: 4367 ft. [Click this hyperlink](#) while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Focus Map:
6

12	KIB STUTZNEGGER DDS	FINDS	1007842725
Target	1847 W 9000 S STE 103		N/A
Property	WEST JORDAN, UT 84088		

FINDS:

Actual: 4417 ft. Registry ID: 110020114990

Focus Map: 6 Environmental Interest/Information System
The CIM (Utah - Common Identifier Mechanism) is Utah's Department of Environmental Quality (UDEQ) mechanism for compliance and permitting operations.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

E13	FLOWER PATCH/DON'S SERVICE	RGA LUST	S116253050
Target	9000 S REDWOOD RD ;; 8989 S REDWOOD RD		N/A
Property	WEST JORDAN, UT		

Site 1 of 15 in cluster E

Actual: 4403 ft. RGA LUST: 1999 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD ;; 8989 S REDWOOD RD

Focus Map: 6 1998 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD ;; 8989 S REDWOOD RD

E14	FLOWER PATCH/DON'S SERVICE	RGA LUST	S116253051
Target	9000 S REDWOOD RD		N/A
Property	WEST JORDAN, UT		

Site 2 of 15 in cluster E

Actual: 4403 ft. RGA LUST: 2004 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD

Focus Map: 6 2003 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD
2002 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

FLOWER PATCH/DON'S SERVICE (Continued)

S116253051

2001 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD
 2000 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD

E15 **FLOWER PATCH/DON'S SERVICE**
Target **9000 S REDWOOD RD 8989 S REDWOOD RD**
Property **WEST JORDAN, UT**

RGA LUST **S116253049**
N/A

Site 3 of 15 in cluster E

Actual: RGA LUST:
4403 ft.

Focus Map: 2008 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD 8989 S
6 REDWOOD RD

 2007 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD 8989 S
 REDWOOD RD

 2006 FLOWER PATCH/DON'S SERVICE 9000 S REDWOOD RD 8989 S
 REDWOOD RD

F16 **DENTAL CARE**
Target **1662 W 9000 S STE 2**
Property **WEST JORDAN, UT 84088**

FINDS **1007840177**
N/A

Site 1 of 4 in cluster F

Actual: FINDS:
4400 ft.

Focus Map: Registry ID: 110020089296
6

 Environmental Interest/Information System
 The CIM (Utah - Common Identifier Mechanism) is Utah's Department of
 Environmental Quality (UDEQ) mechanism for compliance and permitting
 operations.

[Click this hyperlink](#) while viewing on your computer to access
 additional FINDS: detail in the EDR Site Report.

F17 **KENT BLADEN DDS**
Target **1662 W 9000 S STE A**
Property **WEST JORDAN, UT 84088**

FINDS **1007839798**
N/A

Site 2 of 4 in cluster F

Actual: FINDS:
4400 ft.

Focus Map: Registry ID: 110020085502
6

 Environmental Interest/Information System
 The CIM (Utah - Common Identifier Mechanism) is Utah's Department of
 Environmental Quality (UDEQ) mechanism for compliance and permitting
 operations.

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

KENT BLADEN DDS (Continued)

1007839798

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

G18	LONNIE'S LAUNDRY & DRYCLEANING	DRYCLEANERS	S106515136
Target	1799 WEST 9000 SOUTH		N/A
Property	WEST JORDAN, UT		

Site 1 of 5 in cluster G

Actual: 4413 ft.	DRYCLEANERS:		
	Facility ID:	UT0801034	
Focus Map: 6	Date Installed:	Not reported	
	Out of Business:	False	
	Not Regulated:	True	
	Date of Last Inspection:	Not reported	
	# Machines:	0	
	CoResidential?:	Not reported	
	Mailing Address:	Not reported	
	Mailing City/State/Zip:	Not reported	
	Comments:	Not reported	

G19	LONNIES CLEANERS DRY	EDR Hist Cleaner	1014156461
Target	1799 W 9000 S		N/A
Property	WEST JORDAN, UT 84088		

Site 2 of 5 in cluster G

Actual: 4413 ft.	EDR Hist Cleaner		
Focus Map: 6	Year:	Name:	Type:
	1985	LONNIES LAUNDRY SELF SERV	LAUNDRIES-SELF SERVE
	1987	LONNIES LAUNDRY AND DRY CLG	Coin-Operated Laundries And Cleaning
	1991	LONNIES LAUNDRY & DRY CLEANING	LAUNDRIES-SELF SERVE
	2007	LONNIES CLEANERS DRY	CLEANERS

G20	DENTAL FIRST	FINDS	1007840178
Target	1793 W 9000 S		N/A
Property	WEST JORDAN, UT 84088		

Site 3 of 5 in cluster G

Actual: 4412 ft.	FINDS:		
Focus Map: 6	Registry ID:	110020089312	
	Environmental Interest/Information System		
	The CIM (Utah - Common Identifier Mechanism) is Utah's Department of Environmental Quality (UDEQ) mechanism for compliance and permitting operations.		

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

G21	RANDY FORBES Target 1781 W 9000 S Property WEST JORDAN, UT 84088	FINDS	1007651563 N/A
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Site 4 of 5 in cluster G

Actual: 4411 ft. **FINDS:**

Focus Map: 6
 Registry ID: 110020082195

Environmental Interest/Information System
 The CIM (Utah - Common Identifier Mechanism) is Utah's Department of Environmental Quality (UDEQ) mechanism for compliance and permitting operations.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

E22	JIFFY LUBE Target 1735 WEST 9000 SOUTH Property WEST JORDAN, UT 84088	RCRA-CESQG	1000472413 FINDS UTD988069662 ECHO
------------	--	-------------------	---

Site 4 of 15 in cluster E

Actual: 4406 ft. **RCRA-CESQG:**

Focus Map: 6
 Date form received by agency: 10/15/2009
 Facility name: JIFFY LUBE
 Facility address: 1735 WEST 9000 SOUTH
 WEST JORDAN, UT 84088
 EPA ID: UTD988069662
 Mailing address: PO BOX 1509
 OREM, UT 84059
 Contact: JEREMY SEMON
 Contact address: PO BOX 1509
 OREM, UT 84059
 Contact country: US
 Contact telephone: 801-566-4075
 Contact email: Not reported
 EPA Region: 08
 Land type: Private
 Classification: Conditionally Exempt Small Quantity Generator

Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
 Owner/operator name: OILWELL INC

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JIFFY LUBE (Continued)

1000472413

Owner/operator address: DATA NOT REQUESTED
DATA NOT REQUESTED, UT 99999
Owner/operator country: Not reported
Owner/operator telephone: 999-999-9999
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: JIFFY LUBE
Owner/operator address: 9000 SOUTH
WEST JORDAN, UT 84088
Owner/operator country: US
Owner/operator telephone: 801-566-4075
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/15/2009
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D009
. Waste name: MERCURY

Historical Generators:

Date form received by agency: 11/21/1990
Site name: JIFFY LUBE
Classification: Small Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D008
. Waste name: LEAD

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JIFFY LUBE (Continued)

1000472413

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 10/08/2009
Evaluation: COMPLIANCE ASSISTANCE VISIT
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005204135

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000472413
Registry ID: 110005204135
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110005204135>

G23 **AMOR ANIMAL HOSPITAL**
Target **1823 W 9000 S**
Property **WEST JORDAN, UT 84088**

FINDS **1007840357**
N/A

Site 5 of 5 in cluster G

Actual:
4415 ft.

FINDS:

Focus Map:
6

Registry ID: 110020091121

Environmental Interest/Information System

The CIM (Utah - Common Identifier Mechanism) is Utah's Department of Environmental Quality (UDEQ) mechanism for compliance and permitting operations.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

D24 **HOLIDAY OIL SERV STA**
North **1316 W 9000 SOUTH ST**
< 1/8 **WEST JORDAN, UT 84084**
0.012 mi.
63 ft. **Site 2 of 4 in cluster D**

EDR Hist Auto **1014166981**
N/A

Actual: EDR Hist Auto
4368 ft.

Focus Map:
2

Year:	Name:	Type:
1991	HOLIDAY OIL SERV STA	GASOLINE STATIONS
2003	HOLIDAY OIL CO	Gasoline Service Stations, NEC
2004	HOLIDAY OIL CO	Gasoline Service Stations, NEC
2005	HOLIDAY OIL CO	Gasoline Service Stations, NEC
2006	HOLIDAY OIL COMPANY	Gasoline Service Stations, NEC
2007	HOLIDAY OIL COMPANY	Gasoline Service Stations, NEC
2010	HOLIDAY OIL COMPANY	Gasoline Service Stations, NEC

D25 **HOLIDAY OIL #16**
North **1316 W 9000 S**
< 1/8 **WEST JORDAN, UT 84084**
0.012 mi.
63 ft. **Site 3 of 4 in cluster D**

LUST **U003150844**
UST **N/A**
Financial Assurance

Actual: LUST:
4368 ft.

Focus Map:
2

Facility ID:	4000391
Release Id:	MOY
Closed Date:	10/20/2014
Notification Date:	12/21/2009
Owner Name:	HOLIDAY OIL COMPANY
Owner Address:	3115 W 2100 S
Owner City:	SALT LAKE CITY
Owner State:	UT
Owner Zip:	84119
Owner City,St,Zip:	SALT LAKE CITY, UT 84119
Project Manager:	[Melissa Turchi]
Facility ID:	4000391
Release Id:	MHZ
Closed Date:	08/30/2007
Notification Date:	06/28/2007
Owner Name:	HOLIDAY OIL COMPANY
Owner Address:	3115 W 2100 S
Owner City:	SALT LAKE CITY
Owner State:	UT
Owner Zip:	84119
Owner City,St,Zip:	SALT LAKE CITY, UT 84119
Project Manager:	UST
Facility ID:	4000391
Release Id:	NBP
Closed Date:	10/20/2014
Notification Date:	09/09/2013
Owner Name:	HOLIDAY OIL COMPANY
Owner Address:	3115 W 2100 S
Owner City:	SALT LAKE CITY
Owner State:	UT
Owner Zip:	84119
Owner City,St,Zip:	SALT LAKE CITY, UT 84119
Project Manager:	[Melissa Turchi]

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HOLIDAY OIL #16 (Continued)

U003150844

UST:

Facility ID: 4000391
Owner Name: HOLIDAY OIL COMPANY
Owner Address: 3115 W 2100 S
Owner City,St,Zip: SALT LAKE CITY, UT 84119
Owner Phone: (801) 973-7002
Total Tanks: 6
Closed Tanks: 3

UT Financial Assurance 2:

Region: 2
Facility ID: 4000391
Mechanism: Insurance

26
North
< 1/8
0.012 mi.
64 ft.

KMART #7618
1442 WEST 9000 SOUTH
WEST JORDAN, UT 84088

RCRA-CESQG 1014927860
UTR000012153

Actual:
4378 ft.

RCRA-CESQG:

Date form received by agency: 02/10/2016
Facility name: KMART #7618
Facility address: 1442 WEST 9000 SOUTH
WEST JORDAN, UT 84088
EPA ID: UTR000012153
Mailing address: BEVERLY ROAD B5-348A
HOFFMAN ESTATES, IL 60179
Contact: CYNTHIA MILLER
Contact address: BEVERLY ROAD B5-348A
HOFFMAN ESTATES, IL 60179
Contact country: US
Contact telephone: 847-286-0037
Contact email: CHRIS.LIPMAN@SEARSHC.COM
EPA Region: 08
Land type: Private
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Focus Map:
2

Owner/Operator Summary:

Owner/operator name: KMART CORPORATION
Owner/operator address: WEST 9000 SOUTH
WEST JORDAN, UT 84101

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KMART #7618 (Continued)

1014927860

Owner/operator country: Not reported
Owner/operator telephone: 847-286-0037
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 05/17/1993
Owner/Op end date: Not reported

Owner/operator name: GFI WEST JORDAN INVESTMENTS
Owner/operator address: EAST 500 SOUTH STE 200
BOUNTIFUL, UT 84101

Owner/operator country: US
Owner/operator telephone: 801-295-6422
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/26/1992
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001

. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002

. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KMART #7618 (Continued)

1014927860

- . Waste code: D005
- . Waste name: BARIUM

- . Waste code: D006
- . Waste name: CADMIUM

- . Waste code: D007
- . Waste name: CHROMIUM

- . Waste code: D008
- . Waste name: LEAD

- . Waste code: D011
- . Waste name: SILVER

- . Waste code: D016
- . Waste name: 2,4-D

- . Waste code: D035
- . Waste name: METHYL ETHYL KETONE

- . Waste code: D039
- . Waste name: TETRACHLOROETHYLENE

Historical Generators:

Date form received by agency: 06/13/2013
Site name: KMART #7618
Classification: Large Quantity Generator

- . Waste code: D001
- . Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

- . Waste code: D002
- . Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

- . Waste code: D005
- . Waste name: BARIUM

- . Waste code: D006
- . Waste name: CADMIUM

- . Waste code: D007
- . Waste name: CHROMIUM

- . Waste code: D008

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KMART #7618 (Continued)

1014927860

- . Waste name: LEAD
- . Waste code: D011
- . Waste name: SILVER
- . Waste code: D016
- . Waste name: 2,4-D
- . Waste code: D018
- . Waste name: BENZENE
- . Waste code: D027
- . Waste name: 1,4-DICHLOROBENZENE
- . Waste code: D035
- . Waste name: METHYL ETHYL KETONE
- . Waste code: P075
- . Waste name: NICOTINE, & SALTS

Date form received by agency: 03/01/2012
Site name: KMART #7618
Classification: Large Quantity Generator

- . Waste code: D001
- . Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
- . Waste code: D002
- . Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
- . Waste code: D005
- . Waste name: BARIUM
- . Waste code: D006
- . Waste name: CADMIUM
- . Waste code: D007
- . Waste name: CHROMIUM
- . Waste code: D008
- . Waste name: LEAD
- . Waste code: D011
- . Waste name: SILVER

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KMART #7618 (Continued)

1014927860

- . Waste code: D016
- . Waste name: 2,4-D

- . Waste code: D018
- . Waste name: BENZENE

- . Waste code: D027
- . Waste name: 1,4-DICHLOROBENZENE

- . Waste code: D035
- . Waste name: METHYL ETHYL KETONE

- . Waste code: P075
- . Waste name: NICOTINE, & SALTS

Date form received by agency: 01/31/2012
Site name: KMART #7618
Classification: Large Quantity Generator

- . Waste code: D001
- . Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

- . Waste code: D002
- . Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

- . Waste code: D004
- . Waste name: ARSENIC

- . Waste code: D005
- . Waste name: BARIUM

- . Waste code: D006
- . Waste name: CADMIUM

- . Waste code: D007
- . Waste name: CHROMIUM

- . Waste code: D008
- . Waste name: LEAD

- . Waste code: D011
- . Waste name: SILVER

- . Waste code: D016
- . Waste name: 2,4-D

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KMART #7618 (Continued)

1014927860

- . Waste code: D018
- . Waste name: BENZENE

- . Waste code: D027
- . Waste name: 1,4-DICHLOROBENZENE

- . Waste code: D035
- . Waste name: METHYL ETHYL KETONE

- . Waste code: P001
- . Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

- . Waste code: P075
- . Waste name: NICOTINE, & SALTS

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: TSD IS-Contingency Plan and Emergency Procedures
Date violation determined: 05/07/2013
Date achieved compliance: 08/29/2013
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/31/2013
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Manifest
Date violation determined: 05/07/2013
Date achieved compliance: 08/29/2013
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/31/2013
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-General Facility Standards
Date violation determined: 05/07/2013
Date achieved compliance: 08/29/2013
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/31/2013
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

KMART #7618 (Continued)

1014927860

Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 05/07/2013
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Manifest
Date achieved compliance: 08/29/2013
Evaluation lead agency: State

Evaluation date: 05/07/2013
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-Contingency Plan and Emergency Procedures
Date achieved compliance: 08/29/2013
Evaluation lead agency: State

Evaluation date: 05/07/2013
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD IS-General Facility Standards
Date achieved compliance: 08/29/2013
Evaluation lead agency: State

B27
North
< 1/8
0.017 mi.
88 ft.

LARRY H. MILLER FORD LINCOLN MERCURY
200 WEST 9000 SOUTH
SANDY, UT 84070
Site 4 of 7 in cluster B

RCRA-CESQG **1011491303**
UTR000009928

Actual:
4380 ft.

RCRA-CESQG:

Date form received by agency: 12/07/2009
Facility name: LARRY H. MILLER FORD LINCOLN MERCURY
Facility address: 200 WEST 9000 SOUTH
SANDY, UT 84070
EPA ID: UTR000009928
Mailing address: 9000 SOUTH
SANDY, UT 84070
Contact: KIRK L HOLT
Contact address: 9000 SOUTH
SANDY, UT 84070
Contact country: US
Contact telephone: 801-563-4050
Contact email: KHOLT@LHM.COM
EPA Region: 08

Focus Map:
3

Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LARRY H. MILLER FORD LINCOLN MERCURY (Continued)

1011491303

Owner/Operator Summary:

Owner/operator name: LARRY H. MILLER
Owner/operator address: 150 EAST STE 1000
SANDY, UT 84070
Owner/operator country: US
Owner/operator telephone: 801-563-4050
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 06/01/2004
Owner/Op end date: Not reported

Owner/operator name: BRENT BUNKALL - GM
Owner/operator address: 9000 SOUTH
SANDY, UT 84070
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 06/01/2004
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

- . Waste code: D001
- . Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

- . Waste code: D009
- . Waste name: MERCURY

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LARRY H. MILLER FORD LINCOLN MERCURY (Continued)

1011491303

. Waste code: D018
. Waste name: BENZENE

Historical Generators:

Date form received by agency: 05/20/2008
Site name: CHAMPION FORD
Classification: Small Quantity Generator

Violation Status: No violations found

B28 BUTTERFIELD FORD
North 200 W 9000 S
< 1/8 SANDY, UT 84070
0.017 mi.
88 ft. Site 5 of 7 in cluster B

LUST U003150704
UST N/A

Actual: LUST:
4380 ft. Facility ID: 4001702
Focus Map: Release Id: ISQ
3 **Closed Date:** **10/03/1997**
Notification Date: 10/05/1994
Owner Name: ROGER BUTTERFIELD
Owner Address: 200 W 9000 S
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: [Bruce Hagans]

UST:
Facility ID: 4001702
Owner Name: ROGER BUTTERFIELD
Owner Address: 200 W 9000 S
Owner City,St,Zip: SANDY, UT 84070
Owner Phone: (801) 566-2441
Total Tanks: 2
Closed Tanks: 2

D29 CIRCLE K STORE 1924
North 8995 S 1300 W
< 1/8 WEST JORDAN, UT 84084
0.017 mi.
88 ft. Site 4 of 4 in cluster D

LUST U003150808
UST N/A

Actual: LUST:
4367 ft. Facility ID: 4001350
Focus Map: Release Id: HPQ
2 **Closed Date:** **10/15/1997**
Notification Date: 06/25/1992
Owner Name: 9013 ASSOCIATES
Owner Address: P O BOX 11605
Owner City: SALT LAKE CITY
Owner State: UT
Owner Zip: 84147
Owner City,St,Zip: SALT LAKE CITY, UT 84147
Project Manager: [Bruce Hagans]

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CIRCLE K STORE 1924 (Continued)

U003150808

UST:

Facility ID: 4001350
Owner Name: 9013 ASSOCIATES
Owner Address: P O BOX 11605
Owner City,St,Zip: SALT LAKE CITY, UT 84147
Owner Phone: Not reported
Total Tanks: 3
Closed Tanks: 3

E30 FLOWER PATCH/DON'S SERVICE
North 8989 S REDWOOD RD
< 1/8 WEST JORDAN, UT 84088

LUST U003150806
UST N/A

0.018 mi.
97 ft.

Site 5 of 15 in cluster E

Actual:
4401 ft.

LUST:

Focus Map:
2

Facility ID: 4000252
Release Id: IQU
Closed Date: 12/11/1996
Notification Date: 07/22/1994
Owner Name: UTAH STATE FUEL NETWORK
Owner Address: PO BOX 141152
Owner City: SALT LAKE CITY
Owner State: UT
Owner Zip: 84114
Owner City,St,Zip: SALT LAKE CITY, UT 84114
Project Manager: [Bruce Hagans]

UST:

Facility ID: 4000252
Owner Name: UTAH STATE FUEL NETWORK
Owner Address: PO BOX 141152
Owner City,St,Zip: SALT LAKE CITY, UT 84114
Owner Phone: (801) 619-7232
Total Tanks: 5
Closed Tanks: 5

E31 BUDGET OIL CO GAS ST
North 8989 S REDWOOD RD
< 1/8 WEST JORDAN, UT 84084

EDR Hist Auto 1014160861
N/A

0.018 mi.
97 ft.

Site 6 of 15 in cluster E

Actual:
4401 ft.

EDR Hist Auto

Focus Map:
2

Year:	Name:	Type:
1975	BUDGET OIL CO GAS STA	GASOLINE STATIONS
1980	BUDGET OIL CO GAS ST	GASOLINE STATIONS
1985	BUDGET OIL CO GAS STA	GASOLINE STATIONS

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

A32 MAVERIK COUNTRY STORES INC
South 425 W 9000 S
< 1/8 SANDY, UT 84070
0.019 mi.
98 ft. Site 2 of 3 in cluster A

EDR Hist Auto 1014167810
N/A

Actual: EDR Hist Auto
4358 ft.

Focus Map:
7

Year:	Name:	Type:
1995	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
1996	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
1997	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
1998	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
1999	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
1999	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2000	MAVERIK COUNTRY STORES GAS	GASOLINE STATIONS
2000	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2001	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2002	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2003	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2004	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2005	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2006	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2007	MAVERIK COUNTRY STORES INC	Gasoline Service Stations, NEC
2008	MAVERIK INC	Gasoline Service Stations, NEC
2009	MAVERIK INC	Gasoline Service Stations, NEC
2010	MAVERIK INC	Gasoline Service Stations, NEC
2011	MAVERIK INC	Gasoline Service Stations, NEC
2012	MAVERIK INC	Gasoline Service Stations, NEC
2013	MAVERIK INC	Gasoline Service Stations, NEC
2014	MAVERIK INC	Gasoline Service Stations, NEC

A33 MAVERIK #254
South 425 W 9000 S
< 1/8 SANDY, UT 84070
0.019 mi.
98 ft. Site 3 of 3 in cluster A

UST U003167797
Financial Assurance N/A

Actual:
4358 ft.

UST:

Focus Map:
7

Facility ID:	4001999
Owner Name:	MAVERIK, INC.
Owner Address:	185 S. STATE ST. STE 800
Owner City,St,Zip:	SALT LAKE CITY, UT 84111
Owner Phone:	(877) 936-5557
Total Tanks:	4
Closed Tanks:	0

UT Financial Assurance 2:

Region:	2
Facility ID:	4001999
Mechanism:	Self-insurance

MAP FINDINGS

Map ID Direction Distance Elevation Site Database(s) EDR ID Number EPA ID Number

E34 **BUDGET OIL CO GAS STA** **EDR Hist Auto** **1014160862**
North **8989 REDWOOD RD S** **N/A**
< 1/8 **WEST JORDAN, UT 84084**
0.019 mi.
99 ft. **Site 7 of 15 in cluster E**

Actual: EDR Hist Auto
4402 ft.
Focus Map: Year: Name: Type:
2 1970 BUDGET OIL CO GAS STA GASOLINE STATIONS

H35 **FIRESTONE COMPLETE AUTO CARE (WAS DAVID EARLY)** **RCRA NonGen / NLR** **1004788679**
South **253 WEST 9000 SOUTH** **FINDS** **UTD988069928**
< 1/8 **SANDY, UT 84070** **ECHO**
0.021 mi.
110 ft. **Site 1 of 2 in cluster H**

Actual: RCRA NonGen / NLR:
4371 ft. Date form received by agency: 12/13/2007
Focus Map: Facility name: FIRESTONE COMPLETE AUTO CARE (WAS DAVID EARLY)
7 Facility address: 253 WEST 9000 SOUTH
 SANDY, UT 84070
 EPA ID: UTD988069928
 Mailing address: WEST 900 SOUTH
 SANDY, UT 84070
 Contact: RYAN REESE
 Contact address: 253 WEST 900 SOUTH
 SANDY, UT 84070
 Contact country: US
 Contact telephone: 801-255-4231
 Contact email: Not reported
 EPA Region: 08
 Land type: Private
 Classification: Non-Generator
 Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
 Owner/operator name: DAVID EARLY
 Owner/operator address: DATA NOT REQUESTED
 DATA NOT REQUESTED, UT 99999
 Owner/operator country: Not reported
 Owner/operator telephone: 999-999-9999
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported
 Owner/operator name: FIRESTONE COMPLETE AUTO CARE
 Owner/operator address: 9000 SOUTH
 SANDY, UT 84070
 Owner/operator country: US
 Owner/operator telephone: 801-255-4231
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FIRESTONE COMPLETE AUTO CARE (WAS DAVID EARLY) (Continued)

1004788679

Owner/Operator Type: Owner
Owner/Op start date: 01/01/2004
Owner/Op end date: Not reported

Owner/operator name: FIRESTONE COMPLETE AUTO CARE
Owner/operator address: 9000 SOUTH
SANDY, UT 84070

Owner/operator country: US
Owner/operator telephone: 801-255-4231
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/2004
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 12/10/1990
Site name: DAVID EARLY TIRES
Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 12/03/2013
Evaluation: COMPLIANCE ASSISTANCE VISIT
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/07/2007
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FIRESTONE COMPLETE AUTO CARE (WAS DAVID EARLY) (Continued)

1004788679

Registry ID: 110005204224

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1004788679
Registry ID: 110005204224
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110005204224>

H36
South
< 1/8
0.021 mi.
110 ft.

DAVID EARLY #2
253 W 9000 S
SANDY, UT 84070
Site 2 of 2 in cluster H

LUST **U003150715**
UST **N/A**
AST

Actual:
4371 ft.

Focus Map:
7

LUST:
Facility ID: 4001904
Release Id: KLP
Closed Date: 10/13/1998
Notification Date: 04/21/1998
Owner Name: DAVID EARLY TIRE INC
Owner Address: P O BOX 45340
Owner City: SALT LAKE CITY
Owner State: UT
Owner Zip: 84145
Owner City,St,Zip: SALT LAKE CITY, UT 84145
Project Manager: [Robin Jenkins]

UST:
Facility ID: 4001904
Owner Name: DAVID EARLY TIRE INC
Owner Address: P O BOX 45340
Owner City,St,Zip: SALT LAKE CITY, UT 84145
Owner Phone: Not reported
Total Tanks: 1
Closed Tanks: 1

AST:
Facility Id: 4001904
Owner Name: DAVID EARLY TIRE INC

Tank Id: 2
Tank Status: Currently In Use
Tank Capacity: 1000
Substance Stored: New Oil

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DAVID EARLY #2 (Continued)

U003150715

Tank Id: 3
Tank Status: Currently In Use
Tank Capacity: 500
Substance Stored: Used Oil

E37
North
< 1/8
0.021 mi.
111 ft.

CHEVRON USA 71145 APSI STATION 1166
8980 SOUTH REDWOOD RD
WEST JORDAN, UT 84084

RCRA NonGen / NLR

1010336429
UTD988071528

Site 8 of 15 in cluster E

Actual:
4404 ft.

RCRA NonGen / NLR:

Date form received by agency: 02/22/2007

Focus Map:
2

Facility name: CHEVRON USA 71145 APSI STATION 1166
Facility address: 8980 SOUTH REDWOOD RD
WEST JORDAN, UT 84084

EPA ID: UTD988071528

Mailing address: J. KRUGER 6601 OWENS DR #155
PLEASANTON, CA 94566

Contact: CAREY WALTERS

Contact address: J. KRUGER 6601 OWENS DR #155
PLEASANTON, CA 94566

Contact country: US

Contact telephone: 801-565-0939

Contact email: Not reported

EPA Region: 08

Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: CHEVRON USA
Owner/operator address: PO BOX 220
SEATTLE, WA 98111

Owner/operator country: Not reported

Owner/operator telephone: 206-628-5200

Owner/operator email: Not reported

Owner/operator fax: Not reported

Owner/operator extension: Not reported

Legal status: Private

Owner/Operator Type: Owner

Owner/Op start date: Not reported

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No

Mixed waste (haz. and radioactive): No

Recycler of hazardous waste: No

Transporter of hazardous waste: No

Treater, storer or disposer of HW: No

Underground injection activity: No

On-site burner exemption: No

Furnace exemption: No

Used oil fuel burner: No

Used oil processor: No

User oil refiner: No

Used oil fuel marketer to burner: No

Used oil Specification marketer: No

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

CHEVRON USA 71145 APSI STATION 1166 (Continued)

1010336429

Used oil transfer facility: No
 Used oil transporter: No

Historical Generators:

Date form received by agency: 05/15/1991
 Site name: CHEVRON USA 71145 APSI STATION 1166
 Classification: Not a generator, verified

. Waste code: D001
 . Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D008
 . Waste name: LEAD

. Waste code: D018
 . Waste name: BENZENE

Violation Status: No violations found

E38
North
< 1/8
0.021 mi.
111 ft.

CHEVRON FOOD MARTS GAS STATIONS
8980 REDWOOD RD
WEST JORDAN, UT 84088
Site 9 of 15 in cluster E

EDR Hist Auto 1014194013
N/A

Actual:
4404 ft.

EDR Hist Auto

Focus Map:
2

Year:	Name:	Type:
1993	CHEVRON FOOD MARTS	Gasoline Service Stations
1994	CHEVRON FOOD MARTS	Gasoline Service Stations
1995	CHEVRON FOOD MARTS	Gasoline Service Stations
1996	CHEVRON FOOD MARTS	Gasoline Service Stations
1997	CHEVRON FOOD MARTS	Gasoline Service Stations
1998	CHEVRON FOOD MARTS	Gasoline Service Stations
1999	CHEVRON FOOD MARTS	Gasoline Service Stations
2000	CHEVRON FOOD MARTS GAS STATIONS	GASOLINE STATIONS
2000	CHEVRON FOOD MARTS	Gasoline Service Stations
2001	CHEVRON FOOD MARTS	Gasoline Service Stations
2002	CHEVRON FOOD MARTS	Gasoline Service Stations
2003	CHEVRON FOOD MARTS	Gasoline Service Stations
2004	CHEVRON FOOD MARTS	Gasoline Service Stations
2005	CHEVRON FOOD MARTS	Convenience Stores
2006	CHEVRON FOOD MARTS	Convenience Stores
2007	CHEVRON FOOD MARTS	Convenience Stores
2008	CHEVRON FOOD MARTS	Convenience Stores
2009	CHEVRON FOOD MARTS	Convenience Stores
2010	CHEVRON FOOD MARTS	Convenience Stores
2011	CHEVRON FOOD MARTS	Convenience Stores

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

B39 **HOLIDAY OIL #51**
South **153 W 9000 S**
< 1/8 **SANDY, UT 84070**
0.022 mi.
114 ft. **Site 6 of 7 in cluster B**

LUST **U003150739**
UST **N/A**
Financial Assurance

Actual: LUST:
4384 ft. Facility ID: 4001393
Focus Map: Release Id: MWB
7 **Closed Date:** **01/06/2012**
 Notification Date: 10/27/2011
 Owner Name: HOLIDAY OIL COMPANY
 Owner Address: 3115 W 2100 S
 Owner City: SALT LAKE CITY
 Owner State: UT
 Owner Zip: 84119
 Owner City,St,Zip: SALT LAKE CITY, UT 84119
 Project Manager: [Melissa Turchi]

Facility ID: 4001393
 Release Id: MPP
Closed Date: **Not reported**
 Notification Date: 03/09/2013
 Owner Name: HOLIDAY OIL COMPANY
 Owner Address: 3115 W 2100 S
 Owner City: SALT LAKE CITY
 Owner State: UT
 Owner Zip: 84119
 Owner City,St,Zip: SALT LAKE CITY, UT 84119
 Project Manager: Kevin Beery

Facility ID: 4001393
 Release Id: NAI
Closed Date: **03/20/2013**
 Notification Date: 03/12/2013
 Owner Name: HOLIDAY OIL COMPANY
 Owner Address: 3115 W 2100 S
 Owner City: SALT LAKE CITY
 Owner State: UT
 Owner Zip: 84119
 Owner City,St,Zip: SALT LAKE CITY, UT 84119
 Project Manager: Morgan Atkinson

UST:
 Facility ID: 4001393
 Owner Name: HOLIDAY OIL COMPANY
 Owner Address: 3115 W 2100 S
 Owner City,St,Zip: SALT LAKE CITY, UT 84119
 Owner Phone: (801) 973-7002
 Total Tanks: 7
 Closed Tanks: 4

UT Financial Assurance 2:
 Region: 2
 Facility ID: 4001393
 Mechanism: Insurance

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

B40
South
< 1/8
0.022 mi.
114 ft.
GASOMAT STA
153 W 9000 SOUTH ST
SANDY, UT 84070
Site 7 of 7 in cluster B

EDR Hist Auto **1014187245**
N/A

Actual: EDR Hist Auto
4384 ft.

Focus Map:
7

Year:	Name:	Type:
1991	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1992	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1993	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1994	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1995	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1996	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1997	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1998	SINCLAIR OIL CORPORATION	Gasoline Service Stations
1999	SINCLAIR OIL CORPORATION	Gasoline Service Stations
2000	SINCLAIR OIL CORPORATION GAS	GASOLINE STATIONS
2000	SINCLAIR OIL CORPORATION	Gasoline Service Stations
2001	SINCLAIR OIL CORPORATION	Gasoline Service Stations
2002	SINCLAIR OIL CORPORATION	Gasoline Service Stations
2003	SINCLAIR OIL CORPORATION	Gasoline Service Stations
2004	SINCLAIR OIL CORPORATION	Gasoline Service Stations
2005	SINCLAIR OIL CORPORATION	Gasoline Service Stations
2006	SINCLAIR MARKETING INC	Gasoline Service Stations
2007	SINCLAIR MARKETING INC	Gasoline Service Stations
2008	SINCLAIR MARKETING INC	Gasoline Service Stations
2009	SINCLAIR MARKETING INC	Gasoline Service Stations
2010	SINCLAIR MARKETING INC	Gasoline Service Stations

F41
South
< 1/8
0.023 mi.
124 ft.
GLADE JAMES
9015 S REDWOOD RD
WEST JORDAN, UT 84084
Site 3 of 4 in cluster F

LUST **U003150812**
UST **N/A**

Actual:
4403 ft.

LUST:

Focus Map:
6

Facility ID: 4001012
Release Id: GVS
Closed Date: **04/23/1992**
Notification Date: 06/07/1991
Owner Name: 7-ELEVEN INC
Owner Address: PO BOX 711
Owner City: DALLAS
Owner State: TX
Owner Zip: 75221
Owner City,St,Zip: DALLAS, TX 75221
Project Manager: [Mike Pfeiffer]

UST:

Facility ID: 4001012
Owner Name: 7-ELEVEN INC
Owner Address: PO BOX 711
Owner City,St,Zip: DALLAS, TX 75221
Owner Phone: (214) 415-0146
Total Tanks: 3
Closed Tanks: 3

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

F42 AM-PM FOOD MART
South 9015 S REDWOOD ROAD
< 1/8 WEST JORDAN, UT 84088
 0.023 mi.
 124 ft. **Site 4 of 4 in cluster F**

EDR Hist Auto 1021245803
N/A

Actual: 4403 ft. EDR Hist Auto

Focus Map: 6 Year: 1989 Name: AM-PM FOOD MART Type: Gasoline Service Stations, NEC

I43 CONOCO GAS STATIONS
South 1285 W 9000 S
< 1/8 WEST JORDAN, UT 84088
 0.024 mi.
 129 ft. **Site 1 of 2 in cluster I**

EDR Hist Auto 1014166056
N/A

Actual: 4367 ft. EDR Hist Auto

Focus Map: 6	Year:	Name:	Type:
	1995	CONOCO INC	Gasoline Service Stations
	1996	CONOCO INC	Gasoline Service Stations
	1997	CONOCO INC	Gasoline Service Stations
	1998	KAYO OIL COMPANY	Gasoline Service Stations
	1999	KAYO OIL COMPANY	Gasoline Service Stations
	2000	CONOCO GAS STATIONS	GASOLINE STATIONS
	2000	KAYO OIL COMPANY	Gasoline Service Stations
	2001	KAYO OIL COMPANY	Gasoline Service Stations
	2002	KAYO OIL COMPANY	Gasoline Service Stations
	2003	KAYO OIL COMPANY	Gasoline Service Stations
	2004	KAYO OIL COMPANY	Gasoline Service Stations
	2005	KAYO OIL COMPANY	Gasoline Service Stations
	2006	KAYO OIL COMPANY	Gasoline Service Stations
	2007	KAYO OIL COMPANY	Gasoline Service Stations
	2008	KAYO OIL COMPANY	Gasoline Service Stations
	2009	KAYO OIL COMPANY	Gasoline Service Stations
	2010	KAYO OIL COMPANY	Gasoline Service Stations
	2011	KAYO OIL COMPANY	Gasoline Service Stations
	2012	KAYO OIL COMPANY	Gasoline Service Stations
	2013	KAYO OIL COMPANY	Gasoline Service Stations
	2014	KAYO OIL COMPANY	Gasoline Service Stations

I44 TESORO 66602
South 1285 W 9000 S
< 1/8 WEST JORDAN, UT 84088
 0.024 mi.
 129 ft. **Site 2 of 2 in cluster I**

LUST U003150866
UST N/A
Financial Assurance

Actual: 4367 ft. LUST:

Focus Map: 6	Facility ID:	4001508
	Release Id:	JTL
	Closed Date:	12/13/2002
	Notification Date:	09/30/1996
	Owner Name:	TESORO REFINING & MARKETING COMPANY LLC
	Owner Address:	19100 RIDGEWOOD PARKWAY, MS:TX1-022
	Owner City:	SAN ANTONIO
	Owner State:	TX
	Owner Zip:	78259

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO 66602 (Continued)

U003150866

Owner City,St,Zip: SAN ANTONIO, TX 78259
 Project Manager: Hong-Lei Tao

Facility ID: 4001508
 Release Id: LVA
Closed Date: 12/23/2008
 Notification Date: 02/09/2004
 Owner Name: TESORO REFINING & MARKETING COMPANY LLC
 Owner Address: 19100 RIDGEWOOD PARKWAY, MS:TX1-022
 Owner City: SAN ANTONIO
 Owner State: TX
 Owner Zip: 78259
 Owner City,St,Zip: SAN ANTONIO, TX 78259
 Project Manager: [Melissa Turchi]

Facility ID: 4001508
 Release Id: NFD
Closed Date: 01/22/2015
 Notification Date: 11/04/2014
 Owner Name: TESORO REFINING & MARKETING COMPANY LLC
 Owner Address: 19100 RIDGEWOOD PARKWAY, MS:TX1-022
 Owner City: SAN ANTONIO
 Owner State: TX
 Owner Zip: 78259
 Owner City,St,Zip: SAN ANTONIO, TX 78259
 Project Manager: UST

UST:

Facility ID: 4001508
 Owner Name: TESORO REFINING & MARKETING COMPANY LLC
 Owner Address: 19100 RIDGEWOOD PARKWAY, MS:TX1-022
 Owner City,St,Zip: SAN ANTONIO, TX 78259
 Owner Phone: (562) 495-6814
 Total Tanks: 6
 Closed Tanks: 3

UT Financial Assurance 2:

Region: 2
 Facility ID: 4001508
 Mechanism: PST Fund

E45 **TESORO CORPORATION**
South **9022 S REDWOOD RD**
< 1/8 **WEST JORDAN, UT 84088**
0.027 mi.
141 ft. **Site 10 of 15 in cluster E**

EDR Hist Auto 1020174453
N/A

Actual: EDR Hist Auto
4405 ft.

Focus Map:
6

Year:	Name:	Type:
1986	AMCO	Gasoline Service Stations
1987	AMCO	Gasoline Service Stations
1988	AMCO	Gasoline Service Stations
1989	AMCO	Gasoline Service Stations
1990	AMCO	Gasoline Service Stations
2006	TESORO CORPORATION	Gasoline Service Stations
2007	TESORO CORPORATION	Gasoline Service Stations

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO CORPORATION (Continued)

1020174453

2008 TESORO CORPORATION

Gasoline Service Stations

E46
South
< 1/8
0.027 mi.
141 ft.

TESORO # 62112
9022 S REDWOOD RD
WEST JORDAN, UT 84084

Site 11 of 15 in cluster E

LUST **U003150849**
UST **N/A**
SPILLS

Actual:
4405 ft.

LUST:

Facility ID: 4000761
Release Id: IWK
Closed Date: 05/27/2003
Notification Date: 03/23/1995
Owner Name: TESORO REFINING & MARKETING COMPANY LLC
Owner Address: 19100 RIDGEWOOD PARKWAY, MS:TX1-022
Owner City: SAN ANTONIO
Owner State: TX
Owner Zip: 78259
Owner City,St,Zip: SAN ANTONIO, TX 78259
Project Manager: [DeAnn Rasmussen]

Focus Map:
6

Facility ID: 4000761
Release Id: MGN
Closed Date: 02/04/2008
Notification Date: 06/22/2007
Owner Name: TESORO REFINING & MARKETING COMPANY LLC
Owner Address: 19100 RIDGEWOOD PARKWAY, MS:TX1-022
Owner City: SAN ANTONIO
Owner State: TX
Owner Zip: 78259
Owner City,St,Zip: SAN ANTONIO, TX 78259
Project Manager: [Doug Hansen]

UST:

Facility ID: 4000761
Owner Name: TESORO REFINING & MARKETING COMPANY LLC
Owner Address: 19100 RIDGEWOOD PARKWAY, MS:TX1-022
Owner City,St,Zip: SAN ANTONIO, TX 78259
Owner Phone: (562) 495-6814
Total Tanks: 4
Closed Tanks: 4

SPILLS:

New Incident Number: 670
Old incident number: 92243
Date Reported: 12/31/1992
Incident Start Date: 12/30/1992
Responsible Party Name: RAINBOW STATION #24
RP Address: 9022 S. REDWOOD ROAD
RP Phone: (801)-521-4966
Highway: Not reported
Mile Marker: Not reported
Material: GASOLINE
Media Impacted: Not reported
Incident Summary: NOTICED PRESSURE DROP ON ONE PUMP- PROBLEM IS IN THE LINE. TESTING TO SEE IF THERE IS A LEAK SUBSURFACE. SHUT DOWN SYSTEM, REPLACED PIPELINE. 3.3 CUBIC YARDS OF SOIL REMOVED TESTED & DISPOSED OF.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO # 62112 (Continued)

U003150849

SUBSTANCES RELEASED: LESS THAN 25 GALLONS WAS RELEASED TO THE +
Not reported

E47 APSI-CHEVRON
North 8980 S 1700 W
< 1/8 WEST JORDAN, UT 84088
0.027 mi.
143 ft. Site 12 of 15 in cluster E

EDR Hist Auto 1021785023
N/A

Actual: EDR Hist Auto
4403 ft.

Focus Map: Year: Name: Type:
2 1996 APSI-CHEVRON Gasoline Service Stations

E48 SUNMART #870
North 8980 S REDWOOD RD
< 1/8 WEST JORDAN, UT 84088
0.028 mi.
148 ft. Site 13 of 15 in cluster E

LUST U003150841
UST N/A
Financial Assurance

Actual: LUST:
4404 ft. Facility ID: 4001435
Focus Map: Release Id: JKY
2 Closed Date: 01/28/2015
Notification Date: 04/16/1996
Owner Name: PETROLEUM WHOLESale LP
Owner Address: PO BOX 4456
Owner City: HOUSTON
Owner State: TX
Owner Zip: 77210
Owner City,St,Zip: HOUSTON, TX 77210
Project Manager: [Robin Davis]

UST:
Facility ID: 4001435
Owner Name: PETROLEUM WHOLESale LP
Owner Address: PO BOX 4456
Owner City,St,Zip: HOUSTON, TX 77210
Owner Phone: (281) 681-7563
Total Tanks: 3
Closed Tanks: 0

UT Financial Assurance 2:
Region: 2
Facility ID: 4001435
Mechanism: PST Fund

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

E49
North
< 1/8
0.028 mi.
148 ft.

CHEVRON FOOD MARTS
8980 S REDWOOD RD
WEST JORDAN, UT 84088

Site 14 of 15 in cluster E

EDR Hist Auto 1022061467
N/A

Actual: EDR Hist Auto
4404 ft.

Focus Map: 2	Year:	Name:	Type:
	2012	CHEVRON FOOD MARTS	Convenience Stores
	2013	CHEVRON FOOD MARTS	Convenience Stores
	2014	CHEVRON FOOD MARTS	Convenience Stores

E50
South
< 1/8
0.031 mi.
164 ft.

RAINBOW OIL GAS STATIONS
9022 REDWOOD RD
WEST JORDAN, UT 84088

Site 15 of 15 in cluster E

EDR Hist Auto 1014177712
N/A

Actual: EDR Hist Auto
4405 ft.

Focus Map: 6	Year:	Name:	Type:
	1991	AMCO	Gasoline Service Stations
	1992	AMCO	Gasoline Service Stations
	1993	AMCO	Gasoline Service Stations
	1994	AMCO	Gasoline Service Stations
	1995	AMCO	Gasoline Service Stations
	1996	AMCO INC	Gasoline Service Stations
	1997	AMCO INC	Gasoline Service Stations
	1998	AMCO INC	Gasoline Service Stations
	1999	AMCO INC	Gasoline Service Stations
	2000	RAINBOW OIL GAS STATIONS	GASOLINE STATIONS
	2000	AMCO INC	Gasoline Service Stations
	2001	AMCO INC	Gasoline Service Stations
	2003	TESORO PETROLEUM CORPORATION	Gasoline Service Stations
2004	TESORO PETROLEUM CORPORATION	Gasoline Service Stations	
2005	TESORO CORPORATION	Gasoline Service Stations	

51
North
< 1/8
0.031 mi.
164 ft.

KERRYS AUTOMOTIVE SPECIALTIES
460 W 9000 SOUTH ST
SANDY, UT 84070

EDR Hist Auto 1014190689
N/A

Actual: EDR Hist Auto
4354 ft.

Focus Map: 3	Year:	Name:	Type:
	1985	KERRYS AUTOMOTIVE SPECIALTIES	AUTOMOBILE REPAIRING
	1991	KERRYS ATITOMOTIVE AUTO REPR	AUTOMOBILE REPAIRING & SERVICE

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

J52 **CAMIO DRY CLEANERS**
North **8977 TEMPLE DR**
< 1/8 **WEST JORDAN, UT 84088**
0.037 mi.
197 ft. **Site 1 of 4 in cluster J**

EDR Hist Cleaner **1019947793**
N/A

Actual: EDR Hist Cleaner
4366 ft.

Focus Map: 2	Year:	Name:	Type:
	1996	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
	1997	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
	1998	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs

K53 **TANNER TRANSMISSIONS INC**
North **620 W 9000 S**
< 1/8 **SANDY, UT 84070**
0.041 mi.
218 ft. **Site 1 of 2 in cluster K**

EDR Hist Auto **1014159891**
N/A

Actual: EDR Hist Auto
4349 ft.

Focus Map: 3	Year:	Name:	Type:
	1985	AAMCO TRANSMISSION	AUTOMOBILE REPAIRING
	1985	SNELL INC	Automotive Repair Shops, NEC
	1986	SNELL INC	Automotive Repair Shops, NEC
	1987	SNELL INC	Automotive Repair Shops, NEC
	1991	TANNER TRANSMISSIONS	AUTOMOBILE REPAIRING & SERVICE
	1993	TANNER TRANSMISSIONS	General Automotive Repair Shops
	1994	TANNER TRANSMISSIONS	General Automotive Repair Shops
	1995	TANNER TRANSMISSIONS	General Automotive Repair Shops
	1996	TANNER TRANSMISSIONS	General Automotive Repair Shops
	1997	TANNER TRANSMISSIONS	General Automotive Repair Shops
	1998	TANNER TRANSMISSIONS	General Automotive Repair Shops
	1999	TANNER TRANSMISSIONS	General Automotive Repair Shops
	2000	TANNER TRANSMISSIONS INC	General Automotive Repair Shops
	2001	TANNER TRANSMISSIONS INC	General Automotive Repair Shops
	2002	TANNER TRANSMISSIONS INC	General Automotive Repair Shops
2003	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2004	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2005	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2006	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2007	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2008	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2009	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2010	TANNER TRANSMISSIONS INC	General Automotive Repair Shops	
2011	TANNER TRANSMISSIONS INC	Automotive Transmission Repair Shops	
2012	TANNER TRANSMISSIONS INC	Automotive Transmission Repair Shops	
2013	TANNER TRANSMISSIONS INC	Automotive Transmission Repair Shops	

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

K54 **TANNER TRANSMISSIONS**
North **620 WEST 9000 SOUTH**
< 1/8 **SANDY, UT 84070**
0.041 mi.
218 ft. **Site 2 of 2 in cluster K**

LUST **U004221764**
UST **N/A**

Actual: **4349 ft.** **LUST:**
Focus Map: **3**
Facility ID: 4002501
Release Id: NDP
Closed Date: **07/22/2014**
Notification Date: 07/07/2014
Owner Name: BLAINE E TANNER
Owner Address: 1438 KING BENJAMIN CT
Owner City: SOUTH JORDAN
Owner State: UT
Owner Zip: 84095
Owner City,St,Zip: SOUTH JORDAN, UT 84095
Project Manager: UST

UST:
Facility ID: 4002501
Owner Name: BLAINE E TANNER
Owner Address: 1438 KING BENJAMIN CT
Owner City,St,Zip: SOUTH JORDAN, UT 84095
Owner Phone: (801) 809-3436
Total Tanks: 1
Closed Tanks: 1

J55 **CAMIO DRY CLEANERS CLEANERS**
North **8977 S 1300 W**
< 1/8 **WEST JORDAN, UT 84088**
0.042 mi.
221 ft. **Site 2 of 4 in cluster J**

EDR Hist Cleaner **1014151144**
N/A

Actual: **4366 ft.** **EDR Hist Cleaner**

Focus Map: **2**

Year:	Name:	Type:
1991	CHAMPION DRY CLEANERS	CLEANERS
1991	CHAMPION CLEANERS	Drycleaning Plants, Except Rugs
1996	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
1997	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
1998	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
1999	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2000	CAMIO DRY CLEANERS DRYCING PIT	CLEANERS
2000	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2001	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2002	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2003	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2004	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2005	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2006	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2007	CAMIO DRY CLEANERS CLEANERS	CLEANERS
2007	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2008	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2009	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2010	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2011	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2012	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs
2013	CAMIO DRY CLEANERS	Drycleaning Plants, Except Rugs

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CAMIO DRY CLEANERS CLEANERS (Continued)

1014151144

2014 CAMIO DRY CLEANERS

Drycleaning Plants, Except Rugs

J56
North
< 1/8
0.042 mi.
221 ft.

CAMIO DRY CLEANERS
8977 SOUTH 1300 WEST
WEST JORDAN, UT 84084

RCRA-CESQG 1000922412
DRYCLEANERS UTD988072435

Site 3 of 4 in cluster J

Actual:
4366 ft.

RCRA-CESQG:

Date form received by agency: 01/19/2011

Focus Map:
2

Facility name: CAMIO DRY CLEANERS
Facility address: 8977 SOUTH 1300 WEST
WEST JORDAN, UT 84084

EPA ID: UTD988072435

Mailing address: 1300 WEST
WEST JORDAN, UT 84084

Contact: KIM TAESOO

Contact address: 8977 SOUTH 1300 WEST
WEST JORDAN, UT 84084

Contact country: US

Contact telephone: 801-561-2934

Contact email: Not reported

EPA Region: 08

Land type: Private

Classification: Conditionally Exempt Small Quantity Generator

Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: KIMBERLY CHANG
Owner/operator address: 59 WEST CENTER STREET #5
MIDVALE, UT 84047

Owner/operator country: US

Owner/operator telephone: 801-566-5918

Owner/operator email: Not reported

Owner/operator fax: Not reported

Owner/operator extension: Not reported

Legal status: Private

Owner/Operator Type: Owner

Owner/Op start date: 07/07/1994

Owner/Op end date: Not reported

Owner/operator name: CAMIO DRY CLEANERS
Owner/operator address: 8977 SOUTH 1300 WEST
WEST JORDAN, UT 84084

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CAMIO DRY CLEANERS (Continued)

1000922412

Owner/operator country: US
Owner/operator telephone: 801-561-2934
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 07/07/1994
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Historical Generators:

Date form received by agency: 07/07/1994
Site name: CAMIO DRY CLEANERS
Classification: Small Quantity Generator

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE,

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

CAMIO DRY CLEANERS (Continued)

1000922412

ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 01/19/2011
 Evaluation: COMPLIANCE ASSISTANCE VISIT
 Area of violation: Not reported
 Date achieved compliance: Not reported
 Evaluation lead agency: State

DRYCLEANERS:

Facility ID: UT0801032
 Date Installed: Not reported
 Out of Business: Not reported
 Not Regulated: Not reported
 Date of Last Inspection: 10/21/15
 # Machines: 1
 CoResidential?: Not reported
 Mailing Address: 8977 South 1300 West
 Mailing City/State/Zip: West Jordan, UT 84088
 Comments: Not reported

57
 South
 < 1/8
 0.045 mi.
 237 ft.

WESTERN HONDA
8800 S 3RD WEST ST
SANDY, UT 84070

EDR Hist Auto 1014169060
N/A

Actual: EDR Hist Auto
 4364 ft.

Focus Map: 7 Year: 1985 Name: WESTERN HONDA Type: MOTORCYCLE DEALERS AND REPAIRERS

58
 South
 < 1/8
 0.045 mi.
 239 ft.

FIRESTONE TIRE & RUBBER - W JORDAN
9030 SOUTH REDWOOD RD
WEST JORDAN, UT 84088

RCRA-CESQG 1004788693
FINDS UTD988070405
ECHO

Actual: RCRA-CESQG:
 4406 ft. Date form received by agency: 03/04/1991
 Focus Map: 6 Facility name: FIRESTONE TIRE & RUBBER - W JORDAN
 Facility address: 9030 SOUTH REDWOOD RD
 WEST JORDAN, UT 84088
 EPA ID: UTD988070405
 Mailing address: SOUTH REDWOOD RD
 WEST JORDAN, UT 84088
 Contact: MICHAEL QUARTARARO
 Contact address: 9030 SOUTH REDWOOD RD
 WEST JORDAN, UT 84088

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FIRESTONE TIRE & RUBBER - W JORDAN (Continued)

1004788693

Contact country: US
Contact telephone: 801-322-0938
Contact email: Not reported
EPA Region: 08
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: FC STANGL MANAGEMENT CO
Owner/operator address: 4455 SOUTH 700 EAST SUITE 300
SALT LAKE CITY, UT 84107
Owner/operator country: Not reported
Owner/operator telephone: 801-262-0381
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110005204509

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

FIRESTONE TIRE & RUBBER - W JORDAN (Continued)

1004788693

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1004788693
 Registry ID: 110005204509
 DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110005204509>

59
 South
 < 1/8
 0.046 mi.
 242 ft.

SATURN MINING AND SMELTING COMPANY
9000 SOUTH 200 WEST
SANDY, UT 84070

SEMS-ARCHIVE 1000707545
LEAD SMELTERS UTD988075313

Actual:
4386 ft.

SEMS Archive:
 Site ID: 801251
 EPA ID: UTD988075313
 Cong District: 2
 FIPS Code: 49035
 FF: N
 NPL: Not on the NPL
 Non NPL Status: Addressed as Part of Another non-NPL Site

Focus Map:
7

SEMS Archive Detail:

Region: 8
 Site ID: 801251
 EPA ID: UTD988075313
 Site Name: SATURN MINING AND SMELTING COMPANY
 NPL: N
 FF: N
 OU: 0
 Action Code: VS
 Action Name: ARCH SITE
 SEQ: 1
 Start Date: Not reported
 Finish Date: 2001-11-06 00:00:00
 Qual: Not reported
 Current Action Lead: EPA Perf In-Hse

Region: 8
 Site ID: 801251
 EPA ID: UTD988075313
 Site Name: SATURN MINING AND SMELTING COMPANY
 NPL: N
 FF: N
 OU: 0
 Action Code: PA
 Action Name: PA
 SEQ: 1

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SATURN MINING AND SMELTING COMPANY (Continued)

1000707545

Start Date: Not reported
Finish Date: 1993-09-27 00:00:00
Qual: H
Current Action Lead: St Perf

Region: 8
Site ID: 801251
EPA ID: UTD988075313
Site Name: SATURN MINING AND SMELTING COMPANY
NPL: N
FF: N
OU: 0
Action Code: SI
Action Name: SI
SEQ: 1
Start Date: Not reported
Finish Date: 1993-09-30 00:00:00
Qual: H
Current Action Lead: St Perf

Region: 8
Site ID: 801251
EPA ID: UTD988075313
Site Name: SATURN MINING AND SMELTING COMPANY
NPL: N
FF: N
OU: 0
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1992-04-20 00:00:00
Finish Date: 1992-04-20 00:00:00
Qual: Not reported
Current Action Lead: St Perf

Lead Smelter Sites:
Site ID: 801251
Facility Region Id: 8
Latitude: Not reported
Longitude: Not reported
CoC Ind: Not reported
Contaminant Name: Not reported
FF Ind: N
NAI: N
Non-Primary Site-Sub Type: Not reported
NPL: Not on the NPL
Primary Site-Sub Type: Not reported
Special Initiative: Not reported

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

60
North
< 1/8
0.056 mi.
294 ft.

JONES EXCAVATING CO.
1650 W 9000 S
WEST JORDAN, UT 84088

LUST **U003150863**
UST **N/A**

Actual:
4393 ft.
Focus Map:
2

LUST:
 Facility ID: 4001773
 Release Id: LDX
Closed Date: 02/29/2000
 Notification Date: 02/29/2000
 Owner Name: JONES EXCAVATING CO
 Owner Address: 1650 W 9000 S
 Owner City: WEST JORDAN
 Owner State: UT
 Owner Zip: 84088
 Owner City,St,Zip: WEST JORDAN, UT 84088
 Project Manager: UST

UST:
 Facility ID: 4001773
 Owner Name: JONES EXCAVATING CO
 Owner Address: 1650 W 9000 S
 Owner City,St,Zip: WEST JORDAN, UT 84088
 Owner Phone: (801) 255-2642
 Total Tanks: 2
 Closed Tanks: 2

J61
North
< 1/8
0.065 mi.
343 ft.

GLENS AUTO & DIESEL AUTO RPR
8945 S 1300 W
WEST JORDAN, UT 84088

EDR Hist Auto **1014171409**
N/A

Site 4 of 4 in cluster J

Actual:
4365 ft.
Focus Map:
2

Year:	Name:	Type:
1983	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1985	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1986	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1987	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1988	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1989	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1990	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1991	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1992	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1993	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1994	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1995	SURE FIRE AUTOMOTIVE	General Automotive Repair Shops
1996	SURE FIRE AUTOMOTIVE INC	General Automotive Repair Shops
1997	SURE FIRE AUTOMOTIVE INC	General Automotive Repair Shops
1998	SURE FIRE AUTOMOTIVE INC	General Automotive Repair Shops
1999	SURE FIRE AUTOMOTIVE INC	General Automotive Repair Shops
2000	SURE FIRE AUTOMOTIVE AUTO	AUTOMOBILE REPAIRING & SERVICE
2000	SURE FIRE AUTOMOTIVE INC	General Automotive Repair Shops
2001	SURE FIRE AUTOMOTIVE INC	General Automotive Repair Shops
2002	SURE FIRE AUTOMOTIVE INC	General Automotive Repair Shops
2003	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2004	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

GLENS AUTO & DIESEL AUTO RPR (Continued)

1014171409

2005	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2005	GLEN S AUTO & DIESEL	General Automotive Repair Shops
2006	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2006	GLEN S AUTO & DIESEL	General Automotive Repair Shops
2007	GLENS AUTO & DIESEL AUTO RPR	AUTOMOBILE REPAIRING & SERVICE
2007	GLEN S AUTO & DIESEL	General Automotive Repair Shops
2007	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2008	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2009	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2010	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2010	GLEN S AUTO & DIESEL	General Automotive Repair Shops
2011	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2012	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2013	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2014	SURE FIRE AUTOMOTIVE REPAIRS	General Automotive Repair Shops
2014	JP AUTO WORKS LLC	General Automotive Repair Shops

62
 North
 < 1/8
 0.065 mi.
 345 ft.

WILDLIFE VENTURES INC
8950 SANDY PKWY
SANDY, UT 84070

EDR Hist Auto 1014183535
N/A

Actual:
4346 ft.

EDR Hist Auto

Focus Map:
3

Year:	Name:	Type:
2000	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2001	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2002	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2003	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2004	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2005	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2006	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2007	AAMCO TRANSMISSIONS	TRANSMISSIONS-AUTOMOBILE
2007	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2008	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2009	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2010	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2011	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2012	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2013	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops
2014	WILDLIFE VENTURES INC	Automotive Transmission Repair Shops

63
 South
 < 1/8
 0.067 mi.
 355 ft.

RAINBO OIL NO
9010 S REDWOOD RD
WEST JORDAN, UT 84084

EDR Hist Auto 1014168355
N/A

Actual:
4412 ft.

EDR Hist Auto

Focus Map:
6

Year:	Name:	Type:
1991	RAINBO OIL NO	GASOLINE STATIONS

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

64 South < 1/8 0.077 mi. 406 ft.	UTAH ROSES INC. 567 W 9000 S SANDY, UT 84070	UST	U000559197 N/A
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Actual: 4352 ft.	UST:	
Focus Map: 7	Facility ID:	4001127
	Owner Name:	UTAH ROSES INC
	Owner Address:	567 W 9000 S
	Owner City,St,Zip:	SANDY, UT 84070
	Owner Phone:	(801) 566-7673
	Total Tanks:	1
	Closed Tanks:	1

65 North < 1/8 0.091 mi. 481 ft.	UTAH POWER & LIGHT COMPANY 9000 S 1000 W WEST JORDAN, UT 84084	LUST UST	U003150804 N/A
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Actual: 4327 ft.	LUST:	
Focus Map: 3	Facility ID:	4001211
	Release Id:	IYE
	Closed Date:	12/20/1996
	Notification Date:	06/08/1995
	Owner Name:	ROCKY MOUNTAIN POWER
	Owner Address:	3133 WEST 900 SOUTH
	Owner City:	SALT LAKE CITY
	Owner State:	UT
	Owner Zip:	84104
	Owner City,St,Zip:	SALT LAKE CITY, UT 84104
	Project Manager:	[DeAnn Rasmussen]

	UST:	
	Facility ID:	4001211
	Owner Name:	ROCKY MOUNTAIN POWER
	Owner Address:	3133 WEST 900 SOUTH
	Owner City,St,Zip:	SALT LAKE CITY, UT 84104
	Owner Phone:	(801) 220-2535
	Total Tanks:	2
	Closed Tanks:	2

66 North < 1/8 0.096 mi. 508 ft.	AT YOUR SERVICE LAUNDRY 8913 GALILEE WAY WEST JORDAN, UT 84088	EDR Hist Cleaner	1014155372 N/A
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Actual: 4359 ft.	EDR Hist Cleaner	
Focus Map: 2	Year:	2000
	Name:	AT YOUR SERVICE LAUNDRY
	Type:	LAUNDRIES-SELF SERVICE

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance			
Elevation	Site	Database(s)	

67 North < 1/8 0.101 mi. 532 ft.	SMITHS #495 1820 W 9000 S WEST JORDAN, UT 84088	UST Financial Assurance	U004022380 N/A
---	--	--	---------------------------------

Actual: 4408 ft.

Focus Map: 2

UST:

Facility ID:	4002377
Owner Name:	SMITH'S FOOD & DRUG CENTERS, INC.
Owner Address:	PO BOX 305103
Owner City,St,Zip:	NASHVILLE, TN 37230
Owner Phone:	(801) 977-1048
Total Tanks:	3
Closed Tanks:	0

UT Financial Assurance 2:

Region:	2
Facility ID:	4002377
Mechanism:	Insurance

68 South < 1/8 0.101 mi. 534 ft.	LOWES HIW - SANDY 156 203 WEST 9000 SOUTH SANDY, UT 84070	RCRA NonGen / NLR FINDS ECHO	1004788827 UTR000000158
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Actual: 4381 ft.

Focus Map: 7

RCRA NonGen / NLR:

Date form received by agency:	12/11/2006
Facility name:	LOWES HIW - SANDY 156
Facility address:	203 WEST 9000 SOUTH SANDY, UT 84070
EPA ID:	UTR000000158
Mailing address:	CURTIS BRIDGE ROAD WILKESBORO, NC 28697
Contact:	LISA LENDERMAN
Contact address:	1605 CURTIS BRIDGE ROAD WILKESBORO, NC 28697
Contact country:	US
Contact telephone:	336-658-4095
Contact email:	Not reported
EPA Region:	08
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	LOWES HIW INC.
Owner/operator address:	1605 CURTIS BRIDGE ROAD WILKESBORO, NC 28697
Owner/operator country:	Not reported
Owner/operator telephone:	336-658-4095
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LOWES HIW - SANDY 156 (Continued)

1004788827

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 06/07/2001

Site name: LOWES HIW - SANDY 156

Classification: Small Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D005
. Waste name: BARIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: U002

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

LOWES HIW - SANDY 156 (Continued)

1004788827

- . Waste name: ACETONE (I)
- . Waste code: U159
- . Waste name: 2-BUTANONE (I,T)
- . Waste code: U220
- . Waste name: BENZENE, METHYL-
- . Waste code: U239
- . Waste name: BENZENE, DIMETHYL- (I,T)

Date form received by agency: 12/31/1999
Site name: LOWES HIW - SANDY 156
Classification: Not a generator, verified

Violation Status: No violations found

FINDS:

Registry ID: 110009450281

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1004788827
Registry ID: 110009450281
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110009450281>

69
South
< 1/8
0.109 mi.
578 ft.

JIFFY LUBE AUTO LUBRICATION SERV
9000 REDWOOD RD
WEST JORDAN, UT 84088

EDR Hist Auto 1014186089
N/A

Actual: EDR Hist Auto
4396 ft.

Focus Map: Year: Name: Type:
6 2007 JIFFY LUBE AUTO LUBRICATION SER AUTOMOBILE LUBRICATION SERVICE

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s) EDR ID Number
EPA ID Number

70 **NEW SANDY STATION**
North **8925 S 255 W**
1/8-1/4 **SANDY, UT 84070**
0.129 mi.
680 ft.

UST **U000559284**
N/A

Actual: **4367 ft.**
Focus Map: **3**

UST:
 Facility ID: 4001751
 Owner Name: MING YIN NEW SANDY STATION
 Owner Address: 8925 S 255 W
 Owner City,St,Zip: SANDY, UT 84070
 Owner Phone: (801) 255-2289
 Total Tanks: 1
 Closed Tanks: 1

71 **THE HOME DEPOT USA #4410**
North **1538 WEST 9000 SOUTH**
1/8-1/4 **WEST JORDAN, UT 84088**
0.130 mi.
686 ft.

RCRA-SQG **1007571977**
UTR000008110

Actual: **4384 ft.**
Focus Map: **2**

RCRA-SQG:
 Date form received by agency: 11/21/2007
 Facility name: THE HOME DEPOT USA #4410
 Facility address: 1538 WEST 9000 SOUTH
 WEST JORDAN, UT 84088
 EPA ID: UTR000008110
 Mailing address: ASTON AVE #100
 CARLSBAD, CA 92008
 Contact: BECKY WILBANKS
 Contact address: ASTON AVE #100
 CARLSBAD, CA 92008
 Contact country: US
 Contact telephone: 760-602-8700
 Contact email: BWILBANKS@3ECOMPANY.COM
 EPA Region: 08
 Land type: Private
 Classification: Small Small Quantity Generator
 Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
 Owner/operator name: THE HOME DEPOT USA
 Owner/operator address: 1538 WEST 9000 SOUTH
 WEST JORDAN, UT 84088
 Owner/operator country: US
 Owner/operator telephone: 760-602-8700
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Operator
 Owner/Op start date: 04/13/2000
 Owner/Op end date: Not reported

Owner/operator name: THE HOME DEPOT USA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

THE HOME DEPOT USA #4410 (Continued)

1007571977

Owner/operator address: 2455 PACES FERRY RD
ATLANTA, GA 30339
Owner/operator country: US
Owner/operator telephone: 760-602-8700
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 04/13/2000
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D009
. Waste name: MERCURY

. Waste code: D016
. Waste name: 2,4-D

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

THE HOME DEPOT USA #4410 (Continued)

1007571977

- . Waste name: METHYL ETHYL KETONE

- . Waste code: F003
- . Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

- . Waste code: F005
- . Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Historical Generators:

Date form received by agency: 06/27/2005
Site name: THE HOME DEPOT USA #4410
Classification: Conditionally Exempt Small Quantity Generator

- . Waste code: D001
- . Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

- . Waste code: D002
- . Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

- . Waste code: D009
- . Waste name: MERCURY

- . Waste code: D016
- . Waste name: 2,4-D

- . Waste code: D018
- . Waste name: BENZENE

- . Waste code: D035
- . Waste name: METHYL ETHYL KETONE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

THE HOME DEPOT USA #4410 (Continued)

1007571977

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency: 08/09/2004

Site name: THE HOME DEPOT #4410

Classification: Conditionally Exempt Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D009
. Waste name: MERCURY

. Waste code: D016
. Waste name: 2,4-D

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 08/18/2011

Evaluation: COMPLIANCE ASSISTANCE VISIT

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

THE HOME DEPOT USA #4410 (Continued)

1007571977

Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

72
South
1/8-1/4
0.140 mi.
737 ft.

ABRA AUTO BODY AND GLASS
9110 SOUTH 300 WEST
SANDY, UT 84070

RCRA-CESQG
FINDS
ECHO

1010337093
UTR000009050

Actual:
4366 ft.

RCRA-CESQG:

Date form received by agency: 06/09/2006

Focus Map:
7

Facility name: ABRA AUTO BODY AND GLASS
Facility address: 9110 SOUTH 300 WEST
SANDY, UT 84070

EPA ID: UTR000009050
Mailing address: ORCHARD LANE STE 300
WINNETKA, IL 60073

Contact: JOSEPH A HAYES
Contact address: ORCHARD LANE STE 300
WINNETKA, IL 60073

Contact country: US
Contact telephone: 847-441-5137
Contact email: Not reported

EPA Region: 08
Classification: Conditionally Exempt Small Quantity Generator

Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: SHANNON HOLDEN
Owner/operator address: SOUTH 300 WEST
SANDY, UT 84070

Owner/operator country: US
Owner/operator telephone: 801-568-0606
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported

Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 06/01/2002
Owner/Op end date: Not reported

Owner/operator name: ABRA AUTO BODY AND GLASS
Owner/operator address: SHINGLE CREEK PKWY STE 300
BROOKLYN CENTER, MN 55430

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ABRA AUTO BODY AND GLASS (Continued)

1010337093

Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 06/01/2002
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110031327099

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ABRA AUTO BODY AND GLASS (Continued)

1010337093

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1010337093
Registry ID: 110031327099
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110031327099>

73
South
1/8-1/4
0.149 mi.
787 ft.

PAUL D. SCHMIDT
9120 S REDWOOD RD
WEST JORDAN, UT 84088

UST U003167811
N/A

Actual:
4410 ft.

UST:

Facility ID: 4001566
Owner Name: PAUL D SCHMIDT
Owner Address: 9120 S REDWOOD RD
Owner City,St,Zip: WEST JORDAN, UT 84088
Owner Phone: (801) 255-1143
Total Tanks: 1
Closed Tanks: 1

Focus Map:
6

74
South
1/8-1/4
0.189 mi.
997 ft.

ECONOMY BUILDERS SUPPLY
9150 S 300 W
SANDY, UT 84070

LUST U003150689
UST N/A

Actual:
4367 ft.

LUST:

Facility ID: 4000272
Release Id: IIU
Closed Date: 10/25/1999
Notification Date: 11/12/1993
Owner Name: ECONOMY BUILDERS SUPPLY
Owner Address: 9150 S 300 W
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: [Kimberly Shelley]

Focus Map:
7

UST:

Facility ID: 4000272
Owner Name: ECONOMY BUILDERS SUPPLY
Owner Address: 9150 S 300 W

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

ECONOMY BUILDERS SUPPLY (Continued)

U003150689

Owner City,St,Zip: SANDY, UT 84070
 Owner Phone: (801) 566-1500
 Total Tanks: 4
 Closed Tanks: 4

75
 South
 1/8-1/4
 0.192 mi.
 1013 ft.

AUTO PAINTING AND COLLISION
9130 SOUTH 150 WEST
SANDY, UT 84070

RCRA-CESQG
FINDS
ECHO

1000326428
UTD980955298

Actual:
4391 ft.

RCRA-CESQG:

Date form received by agency: 09/18/2002

Focus Map:
7

Facility name: AUTO PAINTING AND COLLISION
 Facility address: 9130 SOUTH 150 WEST
 SANDY, UT 84070

EPA ID: UTD980955298
 Mailing address: 150 WEST
 SANDY, UT 84070

Contact: MORTENSEN RON
 Contact address: 9130 SOUTH 150 WEST
 SANDY, UT 84070

Contact country: US
 Contact telephone: 801-566-4851
 Contact email: Not reported
 EPA Region: 08

Land type: Facility is not located on Indian land. Additional information is not known.
 Classification: Conditionally Exempt Small Quantity Generator

Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: RON MORTENSEN, OWNER
 Owner/operator address: DATA NOT REQUESTED
 DATA NOT REQUESTED, UT 99999

Owner/operator country: Not reported
 Owner/operator telephone: 999-999-9999
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AUTO PAINTING AND COLLISION (Continued)

1000326428

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AUTO PAINTING AND COLLISION (Continued)

1000326428

SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F004
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Historical Generators:

Date form received by agency: 12/10/1985
Site name: AUTO PAINTING AND COLLISION
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/12/1986
Date achieved compliance: 03/31/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/17/1986
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 04/17/2008
Evaluation: COMPLIANCE ASSISTANCE VISIT
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/12/1986
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Generators - General
Date achieved compliance: 03/31/1986
Evaluation lead agency: State

FINDS:

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

AUTO PAINTING AND COLLISION (Continued)

1000326428

Registry ID: 110005200219

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000326428
 Registry ID: 110005200219
 DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110005200219>

76
 North
 1/8-1/4
 0.195 mi.
 1030 ft.

RAINBOW MINE
286 EASTGATE DR
SANDY, UT 84070

ABANDONED MINES 1018240972
N/A

Actual:
4365 ft.

Focus Map:
3

ABANDONED MINES:

Mine ID: 4202602
 Mine Type: Surface
 Mine Status Description: Abandoned
 Mine Status Date: 2013-11-13 00:00:00
 Coal (C) or Metal (M) Mine: M/NM
 Controller ID: 0111241
 Controller Name: Richard Proctor
 Operator ID: 0130713
 Operator name: Provis Enterprises, Inc.
 Address of Record Street: 268 Eastgate
 Address of Record PO Box: Not reported
 Address of Record City: Sandy
 Address of Record State: UT
 Address of Record Zip Code: 84070
 Assessment Address Street: 0
 Assessment Address PO Box: Not reported
 Assessment Address City: Sandy
 Assessment Address State: UT
 Assessment Address Zip Code: 840708232
 Mine Health and Safety Address Street: 0
 Mine Health and Safety Address PO Box: 708232
 Mine Health and Safety Address City: Sandy
 Mine Health and Safety Address State: UT
 Mine Health and Safety Address Zip Code: 84070
 Latitude: Not reported
 Longitude: Not reported

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

77
East
1/8-1/4
0.202 mi.
1068 ft.

JIFFY LUBE
35 WEST 90TH SOUTH
SANDY, UT 84070

RCRA NonGen / NLR
FINDS
ECHO

1000472416
UTD988069696

Actual:
4406 ft.

RCRA NonGen / NLR:

Focus Map:
4

Date form received by agency: 10/15/2009
 Facility name: JIFFY LUBE
 Facility address: 35 WEST 90TH SOUTH
 SANDY, UT 84070
 EPA ID: UTD988069696
 Mailing address: PO BOX 1509
 OREM, UT 84059
 Contact: JEFF RANDOLPH
 Contact address: PO BOX 1509
 OREM, UT 84059
 Contact country: US
 Contact telephone: 801-562-2035
 Contact email: Not reported
 EPA Region: 08
 Land type: Facility is not located on Indian land. Additional information is not known.
 Classification: Non-Generator
 Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: OIL WELL INC
 Owner/operator address: DATA NOT REQUESTED
 DATA NOT REQUESTED, UT 99999
 Owner/operator country: Not reported
 Owner/operator telephone: 999-999-9999
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: No
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Historical Generators:

Date form received by agency: 11/21/1990

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JIFFY LUBE (Continued)

1000472416

Site name: JIFFY LUBE
Classification: Small Quantity Generator
. Waste code: D000
. Waste name: Not Defined
. Waste code: D008
. Waste name: LEAD
. Waste code: D018
. Waste name: BENZENE
Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 10/08/2009
Evaluation: COMPLIANCE ASSISTANCE VISIT
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005204153

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000472416
Registry ID: 110005204153
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110005204153>

78
SE
1/8-1/4
0.213 mi.
1124 ft.

OILWELL DBA JIFFY LUBE
35 W 9000 S
SANDY, UT 84070

LUST U003150695
UST N/A

Actual:
4409 ft.
Focus Map:
7

LUST:
Facility ID: 4000667
Release Id: KYL
Closed Date: 08/23/1999
Notification Date: 05/07/1999
Owner Name: MBI INC
Owner Address: P O BOX 1509
Owner City: OREM
Owner State: UT

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

OILWELL DBA JIFFY LUBE (Continued)

U003150695

Owner Zip: 84057
Owner City,St,Zip: OREM, UT 84057
Project Manager: [Kimberly Shelley]

UST:

Facility ID: 4000667
Owner Name: MBI INC
Owner Address: P O BOX 1509
Owner City,St,Zip: OREM, UT 84057
Owner Phone: (801) 224-6434
Total Tanks: 3
Closed Tanks: 3

79
East
1/8-1/4
0.241 mi.
1274 ft.

HOLIDAY OIL #23
9010 S STATE ST
SANDY, UT 84070

LUST **U003150731**
UST **N/A**
Financial Assurance

Actual:
4412 ft.
Focus Map:
8

LUST:

Facility ID: 4000396
Release Id: MMD
Closed Date: 10/30/2008
Notification Date: 09/17/2008
Owner Name: HOLIDAY OIL COMPANY
Owner Address: 3115 W 2100 S
Owner City: SALT LAKE CITY
Owner State: UT
Owner Zip: 84119
Owner City,St,Zip: SALT LAKE CITY, UT 84119
Project Manager: UST

UST:

Facility ID: 4000396
Owner Name: HOLIDAY OIL COMPANY
Owner Address: 3115 W 2100 S
Owner City,St,Zip: SALT LAKE CITY, UT 84119
Owner Phone: (801) 973-7002
Total Tanks: 5
Closed Tanks: 2

UT Financial Assurance 2:

Region: 2
Facility ID: 4000396
Mechanism: Insurance

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

L80
South
1/8-1/4
0.243 mi.
1282 ft.

**JORDAN SCHOOL DISTRICT MANAGEMENT PLANS FOR PORTAB
9150 SOUTH 500 WEST
SANDY, UT 84070**

**RCRA-CESQG 1004788936
FINDS UTR000002980
ECHO**

Site 1 of 3 in cluster L

Actual:
4362 ft.

RCRA-CESQG:

Focus Map:
7

Date form received by agency: 06/03/1997
Facility name: JORDAN SCHOOL DISTRICT AUX. SRV.
Facility address: 9150 SOUTH 500 WEST
SANDY, UT 84070
EPA ID: UTR000002980
Mailing address: 300 EAST
SANDY, UT 84070
Contact: TODD WARDRUP
Contact address: 9150 SOUTH 500 WEST
SANDY, UT 84070
Contact country: US
Contact telephone: 801-567-8865
Contact email: Not reported
EPA Region: 08
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name: JORDAN SCHOOL DIST. BRD OF BD.
Owner/operator address: 9361 SOUTH 300 EAST
SANDY, UT 84070
Owner/operator country: Not reported
Owner/operator telephone: 801-567-8100
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JORDAN SCHOOL DISTRICT MANAGEMENT PLANS FOR PORTABLES (Continued)

1004788936

On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110012362987

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JORDAN SCHOOL DISTRICT MANAGEMENT PLANS FOR PORTABLES (Continued)

1004788936

Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

The CIM (Utah - Common Identifier Mechanism) is Utah's Department of Environmental Quality (UDEQ) mechanism for compliance and permitting operations.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1004788936
Registry ID: 110012362987
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110012362987>

L81 JORDAN SCHOOL DISTRICT #2 MAINTENANCE
South 9150 S 500 W
1/8-1/4 SANDY, UT 84070
0.243 mi.
1282 ft. Site 2 of 3 in cluster L

LUST U004281692
UST N/A

Actual: 4362 ft. LUST:
Focus Map: 7 Facility ID: 4000626
Release Id: GTQ
Closed Date: 05/03/1995
Notification Date: 05/14/1991
Owner Name: JORDAN SCHOOL DISTRICT
Owner Address: 9361 S 300 E
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: [Robin Jenkins]

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

JORDAN SCHOOL DISTRICT #2 MAINTENANCE (Continued)

U004281692

UST:

Facility ID: 4000626
Owner Name: JORDAN SCHOOL DISTRICT
Owner Address: 9361 S 300 E
Owner City,St,Zip: SANDY, UT 84070
Owner Phone: (801) 567-8865
Total Tanks: 5
Closed Tanks: 5

L82 **CANYONS SCHOOL DISTRICT TRANSPORTATION #2**
South **9150 S 500 W**
1/8-1/4 **SANDY, UT 84070**
0.243 mi.
1282 ft. **Site 3 of 3 in cluster L**

LUST **U004281727**
UST **N/A**

Actual:
4362 ft.

Focus Map:
7

LUST:

Facility ID: 4002168
Release Id: NQL
Closed Date: 01/16/2018
Notification Date: 01/05/2018
Owner Name: UTAH STATE FUEL NETWORK
Owner Address: PO BOX 141152
Owner City: SALT LAKE CITY
Owner State: UT
Owner Zip: 84114
Owner City,St,Zip: SALT LAKE CITY, UT 84114
Project Manager: UST

UST:

Facility ID: 4002168
Owner Name: UTAH STATE FUEL NETWORK
Owner Address: PO BOX 141152
Owner City,St,Zip: SALT LAKE CITY, UT 84114
Owner Phone: (801) 619-7232
Total Tanks: 2
Closed Tanks: 2

83 **SANDY PUBLIC WORKS SHOP**
North **8775 S 700 W**
1/4-1/2 **SANDY, UT 84070**
0.267 mi.
1412 ft.

LUST **U004281698**
UST **N/A**

Actual:
4300 ft.

Focus Map:
3

LUST:

Facility ID: 4000914
Release Id: FLH
Closed Date: 09/18/1992
Notification Date: 09/29/1989
Owner Name: SANDY CITY CORP
Owner Address: 8775 S 700 W
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: [Robin Jenkins]

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SANDY PUBLIC WORKS SHOP (Continued)

U004281698

Facility ID: 4000914
Release Id: JVW
Closed Date: 11/12/1996
Notification Date: 11/12/1996
Owner Name: SANDY CITY CORP
Owner Address: 8775 S 700 W
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: UST

UST:

Facility ID: 4000914
Owner Name: SANDY CITY CORP
Owner Address: 8775 S 700 W
Owner City,St,Zip: SANDY, UT 84070
Owner Phone: (801) 561-6700
Total Tanks: 4
Closed Tanks: 4

84 **7-ELEVEN 1852-22805**
East **9009 S STATE ST**
1/4-1/2 **SANDY, UT 84070**
0.289 mi.
1525 ft.

LUST **U003150684**
UST **N/A**

Actual:
4418 ft.
Focus Map:
8

LUST:

Facility ID: 4001006
Release Id: HRI
Closed Date: 04/17/1995
Notification Date: 07/07/1992
Owner Name: 7-ELEVEN INC
Owner Address: PO BOX 711
Owner City: DALLAS
Owner State: TX
Owner Zip: 75221
Owner City,St,Zip: DALLAS, TX 75221
Project Manager: [Dale Urban]

UST:

Facility ID: 4001006
Owner Name: 7-ELEVEN INC
Owner Address: PO BOX 711
Owner City,St,Zip: DALLAS, TX 75221
Owner Phone: (214) 415-0146
Total Tanks: 3
Closed Tanks: 3

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

85 **MINGO SMELTER**
East **100 EAST 90TH SOUTH**
1/4-1/2 **SANDY, UT 84070**
0.354 mi.
1871 ft.

SEMS-ARCHIVE **1000476627**
LEAD SMELTERS **UTD988070488**

Actual: **4435 ft.** SEMS Archive:
Focus Map: **8** Site ID: 801105
EPA ID: UTD988070488
Cong District: 2
FIPS Code: 49035
FF: N
NPL: Not on the NPL
Non NPL Status: Addressed as Part of Another non-NPL Site

SEMS Archive Detail:
Region: 8
Site ID: 801105
EPA ID: UTD988070488
Site Name: MINGO SMELTER
NPL: N
FF: N
OU: 0
Action Code: VS
Action Name: ARCH SITE
SEQ: 1
Start Date: Not reported
Finish Date: 2001-11-06 00:00:00
Qual: Not reported
Current Action Lead: EPA Perf In-Hse

Region: 8
Site ID: 801105
EPA ID: UTD988070488
Site Name: MINGO SMELTER
NPL: N
FF: N
OU: 0
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1991-03-07 00:00:00
Finish Date: 1991-03-07 00:00:00
Qual: Not reported
Current Action Lead: EPA Perf

Region: 8
Site ID: 801105
EPA ID: UTD988070488
Site Name: MINGO SMELTER
NPL: N
FF: N
OU: 0
Action Code: SI
Action Name: SI
SEQ: 1
Start Date: Not reported
Finish Date: 1993-09-22 00:00:00
Qual: H
Current Action Lead: St Perf

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MINGO SMELTER (Continued)

1000476627

Region: 8
Site ID: 801105
EPA ID: UTD988070488
Site Name: MINGO SMELTER
NPL: N
FF: N
OU: 0
Action Code: PA
Action Name: PA
SEQ: 1
Start Date: Not reported
Finish Date: 1991-09-23 00:00:00
Qual: H
Current Action Lead: St Perf

Lead Smelter Sites:

Site ID: 801105
Facility Region Id: 8
Latitude: Not reported
Longitude: Not reported
CoC Ind: Not reported
Contaminant Name: Not reported
FF Ind: N
NAI: N
Non-Primary Site-Sub Type: Not reported
NPL: Not on the NPL
Primary Site-Sub Type: Not reported
Special Initiative: Not reported

86
North
1/4-1/2
0.370 mi.
1953 ft.

FUR BREEDERS AGRICULTURAL CO-OP (FBAC)
8700 SOUTH 700 WEST
SANDY, UT 84070

LUST U003150741
UST N/A
Financial Assurance

Actual:
4300 ft.
Focus Map:
3

LUST:
Facility ID: 4000314
Release Id: KRI
Closed Date: 10/26/1998
Notification Date: 10/05/1998
Owner Name: FUR BREEDERS AGRICULTURAL CO OP
Owner Address: 8700 S 700 W
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: [Bruce Hagans]

UST:
Facility ID: 4000314
Owner Name: FUR BREEDERS AGRICULTURAL CO OP
Owner Address: 8700 S 700 W
Owner City,St,Zip: SANDY, UT 84070
Owner Phone: (801) 255-4290
Total Tanks: 4
Closed Tanks: 2

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FUR BREEDERS AGRICULTURAL CO-OP (FBAC) (Continued)

U003150741

UT Financial Assurance 2:

Region: 2
Facility ID: 4000314
Mechanism: PST Fund

87
North
1/4-1/2
0.384 mi.
2030 ft.

INTERMOUNTAIN CONSUMER POWER A.
8722 S 300 W
SANDY, UT 84070

LUST **U003167796**
UST **N/A**

Actual:
4365 ft.
Focus Map:
3

LUST:
Facility ID: 4000416
Release Id: KEU
Closed Date: 10/07/1997
Notification Date: 08/25/1997
Owner Name: INTERMOUNTAIN CONSUMER POWER A
Owner Address: 8722 S 300 W
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: [Bruce Hagans]

UST:
Facility ID: 4000416
Owner Name: INTERMOUNTAIN CONSUMER POWER A
Owner Address: 8722 S 300 W
Owner City,St,Zip: SANDY, UT 84070
Owner Phone: (801) 566-3933
Total Tanks: 3
Closed Tanks: 3

88
South
1/4-1/2
0.430 mi.
2268 ft.

SOUTH JORDAN PAWN SHOP
9361 S REDWOOD RD
SOUTH JORDAN, UT 84095

LUST **S106032067**
N/A

Actual:
4416 ft.
Focus Map:
6

LUST:
Facility ID: 4002324
Release Id: LOJ
Closed Date: 11/04/2003
Notification Date: 06/20/2002
Owner Name: MICHAEL CARLSON
Owner Address: 14750 S 1300 W
Owner City: RIVERTON
Owner State: UT
Owner Zip: 84065
Owner City,St,Zip: RIVERTON, UT 84065
Project Manager: John Menatti

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

89
North
1/4-1/2
0.453 mi.
2394 ft.

BLAND BROTHERS
8630 S REDWOOD RD
WEST JORDAN, UT 84088

LUST **U003150859**
UST **N/A**
AST

Actual:
4389 ft.
Focus Map:
2

LUST:
 Facility ID: 4001642
 Release Id: KBQ
Closed Date: 01/05/1998
 Notification Date: 06/12/1997
 Owner Name: BLAND BROS INC
 Owner Address: 8630 S REDWOOD RD
 Owner City: WEST JORDAN
 Owner State: UT
 Owner Zip: 84088
 Owner City,St,Zip: WEST JORDAN, UT 84088
 Project Manager: [Bruce Hagans]

UST:
 Facility ID: 4001642
 Owner Name: BLAND BROS INC
 Owner Address: 8630 S REDWOOD RD
 Owner City,St,Zip: WEST JORDAN, UT 84088
 Owner Phone: (801) 566-3224
 Total Tanks: 2
 Closed Tanks: 2

AST:
 Facility Id: 4001642
 Owner Name: BLAND BROS INC

Tank Id: 3
 Tank Status: Currently In Use
 Tank Capacity: Not reported
 Substance Stored: Unknown

Tank Id: 4
 Tank Status: Currently In Use
 Tank Capacity: Not reported
 Substance Stored: Unknown

90
NNE
1/4-1/2
0.466 mi.
2458 ft.

SANDY ANTIQUE MALL
8672 S STATE
SANDY, UT 84070

LUST **S106152182**
N/A

Actual:
4415 ft.
Focus Map:
4

LUST:
 Facility ID: 4001961
 Release Id: IGQ
Closed Date: 09/08/1997
 Notification Date: 09/21/1993
 Owner Name: RANDY TANSKI
 Owner Address: 8672 S STATE
 Owner City: SANDY
 Owner State: UT
 Owner Zip: 84070

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SANDY ANTIQUE MALL (Continued)

S106152182

Owner City,St,Zip: SANDY, UT 84070
Project Manager: [Tamie Call]

91
South
1/4-1/2
0.497 mi.
2624 ft.

WESTERN RENTAL AND SALES
240 WEST 9400 SOUTH
SANDY, UT 84070

LUST U003150717
UST N/A

Actual:
4400 ft.
Focus Map:
7

LUST:
Facility ID: 4001513
Release Id: MGF
Closed Date: 04/17/2007
Notification Date: 11/14/2006
Owner Name: WESTERN RENTAL AND SALES
Owner Address: 240 WEST 9400 SOUTH
Owner City: SANDY
Owner State: UT
Owner Zip: 84070
Owner City,St,Zip: SANDY, UT 84070
Project Manager: UST

UST:
Facility ID: 4001513
Owner Name: WESTERN RENTAL AND SALES
Owner Address: 240 WEST 9400 SOUTH
Owner City,St,Zip: SANDY, UT 84070
Owner Phone: (801) 858-2023
Total Tanks: 2
Closed Tanks: 2

92
North
1/2-1
0.645 mi.
3407 ft.

RECLAIM BARRELL SUPPLY CO.
8487 SOUTH 1700 WEST
WEST JORDAN, UT 84084

CORRACTS 1010335377
RCRA NonGen / NLR UTD044701936

Actual:
4380 ft.
Focus Map:
2

CORRACTS:
EPA ID: UTD044701936
EPA Region: 8
Area Name: ENTIRE FACILITY
Actual Date: 19951201
Action: CA050RF - RFA Completed, Assessment was an RFA
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: UTD044701936
EPA Region: 8
Area Name: ENTIRE FACILITY
Actual Date: 19951201
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RECLAIM BARRELL SUPPLY CO. (Continued)

1010335377

EPA ID: UTD044701936
EPA Region: 8
Area Name: ENTIRE FACILITY
Actual Date: 19951201
Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

RCRA NonGen / NLR:

Date form received by agency: 02/22/2007
Facility name: RECLAIM BARRELL SUPPLY CO.
Facility address: 8487 SOUTH 1700 WEST
WEST JORDAN, UT 84084
EPA ID: UTD044701936
Mailing address: PO BOX 1013
WEST JORDAN, UT 84088
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 08
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 02/15/1994
Site name: RECLAIM BARRELL SUPPLY CO.
Classification: Not a generator, verified

Date form received by agency: 01/01/1986
Site name: RECLAIM BARRELL SUPPLY CO.
Classification: Not a generator, verified

. Waste code: D000
. Waste name: Not Defined

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RECLAIM BARRELL SUPPLY CO. (Continued)

1010335377

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Corrective Action Summary:

Event date: 12/01/1995
Event: RFA COMPLETED-ASSESSMENT WAS A RFA

Event date: 12/01/1995
Event: CA PRIORITIZATION-MEDIUM CA PRIORITY

Event date: 12/01/1995
Event: DETERMINATION OF NEED FOR AN INVESTIGATION-INVESTIGATION IS NECESSARY

Facility Has Received Notices of Violations:

Regulation violated: FR - 40 CFR 262.11
Area of violation: Generators - General
Date violation determined: 06/30/1994
Date achieved compliance: 06/30/1994
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/19/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 488749
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 40 CFR 265, Subpart J
Area of violation: TSD - General Facility Standards
Date violation determined: 06/30/1994
Date achieved compliance: 06/30/1994
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/19/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 488749
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 40 CFR 262.34
Area of violation: Generators - General
Date violation determined: 06/30/1994
Date achieved compliance: 06/30/1994
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/19/1994
Enf. disposition status: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RECLAIM BARRELL SUPPLY CO. (Continued)

1010335377

Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 488749
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FS - RCRA 3010(a)
Area of violation: TSD - General Facility Standards
Date violation determined: 06/30/1994
Date achieved compliance: 06/30/1994
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/19/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 488749
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 40 CFR 265
Area of violation: TSD - General Facility Standards
Date violation determined: 06/30/1994
Date achieved compliance: 06/30/1994
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/19/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 488749
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FS - RCRA 3005 & 40 CFR 270
Area of violation: TSD - General Facility Standards
Date violation determined: 06/30/1994
Date achieved compliance: 06/30/1994
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 09/19/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 488749
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - R315
Area of violation: Generators - General
Date violation determined: 04/29/1992
Date achieved compliance: 06/30/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/29/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RECLAIM BARRELL SUPPLY CO. (Continued)

1010335377

Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 12/17/1985
Date achieved compliance: 03/12/1986
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 03/03/2005
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 06/30/1994
Evaluation: SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 06/30/1994
Evaluation: NOT A SIGNIFICANT NON-COMPLIER
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 02/15/1994
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Generators - General
Date achieved compliance: 06/30/1994
Evaluation lead agency: EPA

Evaluation date: 02/15/1994
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: TSD - General Facility Standards
Date achieved compliance: 06/30/1994
Evaluation lead agency: EPA

Evaluation date: 08/31/1993
Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: Generators - General
Date achieved compliance: 06/30/1994
Evaluation lead agency: EPA

Evaluation date: 08/31/1993

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RECLAIM BARRELL SUPPLY CO. (Continued)

1010335377

Evaluation: CASE DEVELOPMENT INSPECTION
Area of violation: TSD - General Facility Standards
Date achieved compliance: 06/30/1994
Evaluation lead agency: EPA

Evaluation date: 01/16/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/30/1994
Evaluation lead agency: State

Evaluation date: 12/17/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 03/12/1986
Evaluation lead agency: State

Evaluation date: 12/17/1985
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

93
North
1/2-1
0.996 mi.
5258 ft.

MIDVALE INDUSTRIAL CENTER
8200 SOUTH 150 EAST
MIDVALE, UT 84121

CORRACTS **1000429347**
RCRA NonGen / NLR **UTD982586679**
FINDS
ECHO

Actual:
4384 ft.
Focus Map:
3

CORRACTS:
EPA ID: UTD982586679
EPA Region: 8
Area Name: ENTIRE FACILITY
Actual Date: 19891017
Action: CA050 - RFA Completed
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

RCRA NonGen / NLR:

Date form received by agency: 03/22/2007
Facility name: MIDVALE INDUSTRIAL CENTER
Facility address: 8200 SOUTH 150 EAST
MIDVALE, UT 84121
EPA ID: UTD982586679
Mailing address: SOUTH 900 EAST
SALT LAKE CITY, UT 84117
Contact: GREG WITTWER
Contact address: 4885 SOUTH 900 EAST
SALT LAKE CITY, UT 84117
Contact country: US
Contact telephone: 801-262-4637
Contact email: Not reported
EPA Region: 08
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDVALE INDUSTRIAL CENTER (Continued)

1000429347

Owner/Operator Summary:

Owner/operator name: THE PROWSWOOD CORP
Owner/operator address: DATA NOT REQUESTED
DATA NOT REQUESTED, UT 99999
Owner/operator country: Not reported
Owner/operator telephone: 999-999-9999
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 03/18/2004
Site name: MIDVALE INDUSTRIAL CENTER
Classification: Not a generator, verified

- . Waste code: U002
- . Waste name: ACETONE (I)

- . Waste code: U159
- . Waste name: 2-BUTANONE (I,T)

- . Waste code: U161
- . Waste name: METHYL ISOBUTYL KETONE (I)

- . Waste code: U165
- . Waste name: NAPHTHALENE

- . Waste code: U220
- . Waste name: BENZENE, METHYL-

- . Waste code: U239
- . Waste name: BENZENE, DIMETHYL- (I,T)

Date form received by agency: 05/09/1989
Site name: MIDVALE INDUSTRIAL CENTER

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDVALE INDUSTRIAL CENTER (Continued)

1000429347

Classification: Large Quantity Generator

. Waste code: U002
. Waste name: ACETONE (I)

. Waste code: U159
. Waste name: 2-BUTANONE (I,T)

. Waste code: U161
. Waste name: METHYL ISOBUTYL KETONE (I)

. Waste code: U165
. Waste name: NAPHTHALENE

. Waste code: U220
. Waste name: BENZENE, METHYL-

. Waste code: U239
. Waste name: BENZENE, DIMETHYL- (I,T)

Corrective Action Summary:

Event date: 10/17/1989
Event: RFA COMPLETED

Facility Has Received Notices of Violations:

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 06/16/1989
Date achieved compliance: 04/09/1990
Violation lead agency: State
Enforcement action: FINAL 3008(H) I.S. CA ORDER
Enforcement action date: 04/09/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 06/16/1989
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Generators - General
Date achieved compliance: 04/09/1990
Evaluation lead agency: State

FINDS:

Registry ID: 110006453382

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MIDVALE INDUSTRIAL CENTER (Continued)

1000429347

corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000429347
Registry ID: 110006453382
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110006453382>

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COTTONWOOD HEIGHTS	1010030687	PARK CENTRE V PHASE II	7200 SOUTH 1300 EAST	84047	FINDS, ECHO
MIDVALE	1009463038	BINGHAM GOLD AND COPPER COMPANY	7300 SOUTH 100 WEST	84047	SEMS-ARCHIVE
MIDVALE	1001814596	MIDVALE RAILYARD	JUST W OF I-15 BETWEEN 7200 S AND 6400 S	84047	SEMS-ARCHIVE
MIDVALE	1003025985	MIDVALE LAGOONS	7030 SOUTH AND JORDAN RIVER	84047	SEMS-ARCHIVE
MIDVALE	U003149556	SHARON STEEL/MIDVALE TAILINGS PROJ.	300 S MAIN ST	84047	LUST, UST
MIDVALE	U003149542	MINERAL FERTILIZER COMPANY INC.	150 9TH AVE	84047	LUST, UST
MIDVALE	U003367102	GREG LARSON RESIDENCE	6640 S 700 W	84047	LUST, UST
MIDVALE	2005702545	7200 SOUTH OFF RAMP FROM I-15	7200 SOUTH OFF RAMP FROM I-15		HMIRS
MIDVALE	S111085713		8610 SOUTH MONROE		SPILLS
MIDVALE	S106954917		I-15/I-215 BELTWAY		SPILLS
MIDVALE	S105221908		450 SOUTH MAIN - CITY SHOP		SPILLS
MIDVALE	S107413706		I-15 AT 7200 SOUTH INTERCHANGE		SPILLS
MIDVALE	S109345637		8000 SOUTH & I-15		SPILLS
MIDVALE	S105221917		APPROX. 7800 SOUTH 700 WEST		SPILLS
MIDVALE	S105221918		6800 S. AND INTERSTATE 15 (ON HIGHWAY)		SPILLS
MIDVALE	S105221926		6200 SOUTH AND UNION PARK AVENUE		SPILLS
MIDVALE	1005850944	MIDVALE LAGOONS	7030 S AND JORDAN RIVER	84047	FINDS
MIDVALE	1007738184	MIDVALE RAILYARD	6400 TO 7200 SOUTH AND JUST WEST OF I-15	84047	FINDS
MIDVALE	S108781098	BINGHAM JUNCTION N-2A RESIDENTIAL	1000 WEST 7800 SOUTH	84047	NPDES
RIVERTON	S105222663		APPROXIMATELY 130TH SOUTH AND BANGERTER HIWAY		SPILLS
SALT LAKE COUNTY	2003646700		4900 SOUTH AND 8900 WEST		ERNS
SALT LAKE COUNTY	2010930019		SEE LAT AND LONG		ERNS
SANDY	1000707544	SANDY SAMPLING WORKS	8580-8586 SO. 150 EAST	84070	SEMS-ARCHIVE
SANDY	1004789160	REFERENCE PATHOLOGY SERVICES	ONE SANDY CENTER	84070	RCRA-CESQG
SANDY	97398842		106TH SOUTH AND 7TH EAST		ERNS
SANDY	98454841		I-15 / BLOCK 8000 SOUTH		ERNS
SANDY	98462441		150 FT NORTH EAST OF		ERNS
SANDY	2012023804		8347 S & 150 E		ERNS
SANDY	2010946939		9000 SOUTH		ERNS
SANDY	U003150710	11400 SOUTH PUMP STATION	150 E 11400 S	84070	LUST, UST
SANDY	S106514988		6855 SOUTH 1300 EAST		SPILLS
SANDY	S105223566		90TH SOUTH 1300 EAST		SPILLS
SANDY	S109540449		I-15 SOUTH AT 9000 EXIT ON-RAMP		SPILLS
SANDY	S109485667		1300 EAST 9130 SOUTH		SPILLS
SANDY	S113452741		I-15 S. EXIT 295		SPILLS
SANDY	S105223558		12030 S. I-15		SPILLS
SANDY	S105223562		DRY CREEK APPROX. 1300 E. 10500 S.		SPILLS
SANDY	S105223564		I-15 AT 11400 SOUTH		SPILLS
SANDY	S105223568		I-15 7300 SOUTH		SPILLS
SANDY	S105223569		BETWEEN 8700 & 9700 SOUTH SANDY PARKWAY		SPILLS
SANDY	S105223584		150 FEET NORTH OF MM5		SPILLS
SANDY	S105223590		9000 SOUTH 225 WEST		SPILLS
SANDY	S105618526		I-15 SOUTHBOUND 10600 SOUTH EXIT		SPILLS

Count: 63 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SANDY	1009510141	ASBESTOS SPECIALISTS INC/MCMILLAN ELEMEN	10101 SANDY STATE ST	84070	FTTS, HIST FTTS
SANDY	1016301268	REFERENCE PATHOLOGY SERVICES	ONE SANDY CENTER	84070	FINDS, ECHO
SANDY	1005796699	GAS SAVER STATION	700 E 9778 S	84070	FINDS
SANDY	1007840010	IHC SANDY INSTACARE	3493 S 700 E	84070	FINDS
SANDY	S121144916	O'REILLY'S	700 EAST SEGO LILY DR.	84070	NPDES
SOUTH JORDAN	U003150760	DENNY'S RIVERTON AUTO CLINIC	11999 S REDWOOD RD	84095	LUST, UST
SOUTH JORDAN	S109149833		I-15		SPILLS
SOUTH JORDAN	1023640158	SANTORINI VILLAGE	SANTORINI DRIVE AND EMPORIA DRIVE	84095	FINDS, ECHO
SOUTH JORDAN	1016981388	PHILLIPS 66 # 27938	NORTH WEST CORNER 11400 S REDWOOD RD	84095	FINDS
SOUTH JORDAN	S119016459	HAMILTON ESTATES	FOUR B LANE 1300 WEST	84095	NPDES
SOUTH JORDAN	S121145013	SSMF2 AND BLACK TWIG	LAKE RUN RD AND DUCKHORN DR.	84095	NPDES
SOUTH JORDAN	S121145178	DAYBREAK VILLAGE 5 MULTI FAMILY 2	REDKNIFE DR. AND BOWSTRING WAY	84095	NPDES
SOUTH JORDAN	S121145046	VILLAGE 8 P4A	11800 S AND WILLOW WALK DRIVE	84095	NPDES
WEST JORDAN	8862301		LIVINSTON PROPERTY 3050 WEST 700 SOUTH		ERNS
WEST JORDAN	99496953		7800 SOUTH AND 4600 WEST		ERNS
WEST JORDAN	S107596880	WELBY RAILYARD	4300 WEST & 9000 SOUTH		VCP
WEST JORDAN	S111272509		GAS STATION AT 9000 SOUTH 1300 WEST		SPILLS
WEST JORDAN	S111272532		6652 SOUTH 1300 WEST		SPILLS
WEST JORDAN	1007842735	MARK ARROYO	18547 W 9000 S STE 202	84088	FINDS
WEST JORDAN	S111282098	SOUTHWEST GROUNDWATER TREATMENT PLANT	8300 SOUTH 1000 WEST	84088	NPDES

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 08/13/2018	Source: EPA
Date Data Arrived at EDR: 10/04/2018	Telephone: N/A
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 08/13/2018	Source: EPA
Date Data Arrived at EDR: 10/04/2018	Telephone: N/A
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/15/2011
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 08/13/2018	Source: EPA
Date Data Arrived at EDR: 10/04/2018	Telephone: N/A
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8704
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 07/06/2018
Number of Days to Update: 92	Next Scheduled EDR Contact: 10/15/2018
	Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 08/13/2018	Source: EPA
Date Data Arrived at EDR: 10/04/2018	Telephone: 800-424-9346
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 43	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Quarterly

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 08/13/2018	Source: EPA
Date Data Arrived at EDR: 10/04/2018	Telephone: 800-424-9346
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 11/28/2018
Number of Days to Update: 43	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018	Source: EPA
Date Data Arrived at EDR: 03/28/2018	Telephone: 800-424-9346
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: 303-312-6149
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: 303-312-6149
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: 303-312-6149
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: 303-312-6149
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/14/2018	Source: Department of the Navy
Date Data Arrived at EDR: 05/18/2018	Telephone: 843-820-7326
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/28/2018	Telephone: 703-603-0695
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 11/28/2018
Number of Days to Update: 17	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/28/2018	Telephone: 703-603-0695
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 11/28/2018
Number of Days to Update: 17	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/24/2018	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 09/25/2018	Telephone: 202-267-2180
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 09/25/2018
Number of Days to Update: 45	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

UT SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A	Source: Department of Environmental Quality
Date Data Arrived at EDR: N/A	Telephone: 801-536-4100
Date Made Active in Reports: N/A	Last EDR Contact: 10/22/2018
Number of Days to Update: N/A	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: N/A

State and tribal landfill and/or solid waste disposal site lists

UT SWF/LF: List of Landfills

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 10/11/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 10/12/2018	Telephone: 801-538-6170
Date Made Active in Reports: 10/19/2018	Last EDR Contact: 10/09/2018
Number of Days to Update: 7	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal leaking storage tank lists

UT LAST: Leaking Aboveground Storage Tank Sites

A listing of leaking aboveground storage tank locations.

Date of Government Version: 08/31/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 09/05/2018	Telephone: 801-536-4141
Date Made Active in Reports: 09/26/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Varies

UT LUST: Sites with Leaking Underground Storage Tanks

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 10/16/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 10/18/2018	Telephone: 801-536-4115
Date Made Active in Reports: 11/27/2018	Last EDR Contact: 10/18/2018
Number of Days to Update: 40	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018	Source: EPA Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017	Source: FEMA
Date Data Arrived at EDR: 05/30/2017	Telephone: 202-646-5797
Date Made Active in Reports: 10/13/2017	Last EDR Contact: 10/10/2018
Number of Days to Update: 136	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Varies

State and tribal registered storage tank lists

UT UST: List of Sites with Underground Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 10/16/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 10/18/2018	Telephone: 801-536-4115
Date Made Active in Reports: 11/27/2018	Last EDR Contact: 10/18/2018
Number of Days to Update: 40	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Quarterly

UT AST: Listing of Aboveground Storage Tanks
Aboveground storage tank site locations.

Date of Government Version: 08/31/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 09/05/2018	Telephone: 801-536-4100
Date Made Active in Reports: 09/26/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R7: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016	Source: N/A
Date Data Arrived at EDR: 03/02/2017	Telephone: N/A
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 36	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal institutional control / engineering control registries

UT INST CONTROL: Sites with Institutional Controls

Sites included on the Brownfields Sites listing that have institutional controls in place.

Date of Government Version: 10/23/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 10/24/2018	Telephone: 801-536-4100
Date Made Active in Reports: 11/27/2018	Last EDR Contact: 10/24/2018
Number of Days to Update: 34	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

UT VCP: Voluntary Cleanup Sites List

The purpose of the program is to encourage the voluntary cleanup of sites where there has been a contaminant release threatening public health and the environment, thereby removing the stigma attached to these sites which blocks economic redevelopment. Voluntary cleanup of these sites will hopefully result in clearing the pathway for returning these properties to beneficial use.

Date of Government Version: 06/08/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 08/16/2018	Telephone: 801-536-4100
Date Made Active in Reports: 09/05/2018	Last EDR Contact: 11/12/2018
Number of Days to Update: 20	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

State and tribal Brownfields sites

UT BROWNFIELDS: Brownfields Assessment Sites

A Brownfields site means real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant, controlled substance or petroleum product.

Date of Government Version: 06/08/2018	Source: Department of Environmental Quality
Date Data Arrived at EDR: 06/12/2018	Telephone: 801-536-4100
Date Made Active in Reports: 07/26/2018	Last EDR Contact: 11/26/2018
Number of Days to Update: 44	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Annually

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/18/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/18/2018	Telephone: 202-566-2777
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 09/18/2018
Number of Days to Update: 52	Next Scheduled EDR Contact: 12/31/2018
	Data Release Frequency: Semi-Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 10/25/2018
Number of Days to Update: 52	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/22/2018
Number of Days to Update: 137	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014	Source: Department of Health & Human Services, Indian Health Service
Date Data Arrived at EDR: 08/06/2014	Telephone: 301-443-1452
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 11/02/2018
Number of Days to Update: 176	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/21/2018	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 09/21/2018	Telephone: 202-307-1000
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 11/26/2018
Number of Days to Update: 49	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: No Update Planned

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

UT CDL: Methamphetamine Contaminated Properties Listing

Utah Administrative Rule 19-6-901 Illegal Drug Operations Site Reporting and Decontamination Act requires local health departments to maintain a list of properties believed to be contaminated by the illegal manufacture of drugs. The following properties were reported to the Salt Lake Valley Health Department by a complaint or report from a law enforcement agency and the Department has determined that reasonable evidence exists that the property is contaminated.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/24/2018
Date Data Arrived at EDR: 09/06/2018
Date Made Active in Reports: 09/26/2018
Number of Days to Update: 20

Source: Salt Lake Valley Health Department
Telephone: 801-468-2750
Last EDR Contact: 09/06/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Semi-Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

Records of Emergency Release Reports

UT SPILLS: Spills Data

Incidents reported to the Division of Environmental Response and Remediation

Date of Government Version: 09/13/2018
Date Data Arrived at EDR: 09/13/2018
Date Made Active in Reports: 09/26/2018
Number of Days to Update: 13

Source: Department of Environmental Quality
Telephone: 801-536-4100
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

UT SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 07/31/2011
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: 303-312-6149
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 07/08/2015	Telephone: 202-528-4285
Date Made Active in Reports: 10/13/2015	Last EDR Contact: 11/19/2018
Number of Days to Update: 97	Next Scheduled EDR Contact: 03/04/2019
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/12/2018
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/12/2018
Number of Days to Update: 339	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/03/2017	Telephone: 615-532-8599
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 11/16/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/05/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/09/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/21/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/24/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/23/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/07/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2014	Telephone: N/A
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 12/03/2018
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/30/2017	Telephone: 202-566-0517
Date Made Active in Reports: 12/15/2017	Last EDR Contact: 10/26/2018
Number of Days to Update: 15	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/03/2018	Telephone: 202-343-9775
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 10/03/2018
Number of Days to Update: 37	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/30/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/17/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 80

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 08/13/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/04/2018	Telephone: 703-603-8787
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 43	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 08/13/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/04/2018	Telephone: 703-603-8787
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 43	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem

Date of Government Version: 10/27/2009	Source: N/A
Date Data Arrived at EDR: 11/10/2009	Telephone: N/A
Date Made Active in Reports: 12/08/2009	Last EDR Contact: 11/12/1996
Number of Days to Update: 28	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Annually

US AIRS MINOR: Aerometric Information Retrieval System Facility Subsystem

Date of Government Version: 10/27/2009	Source: N/A
Date Data Arrived at EDR: 11/10/2009	Telephone: N/A
Date Made Active in Reports: 12/08/2009	Last EDR Contact: 11/12/1996
Number of Days to Update: 28	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Annually

US MINES: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 11/30/2018
Number of Days to Update: 97	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

US MINES 2: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 11/30/2018
Number of Days to Update: 97	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 11/30/2018
Number of Days to Update: 97	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2018	Source: Department of Interior
Date Data Arrived at EDR: 09/11/2018	Telephone: 202-208-2609
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 09/10/2018
Number of Days to Update: 3	Next Scheduled EDR Contact: 12/24/2018
	Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/07/2018	Source: EPA
Date Data Arrived at EDR: 09/05/2018	Telephone: (303) 312-6312
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 09/18/2018
Number of Days to Update: 30	Next Scheduled EDR Contact: 12/17/2018
	Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2017	Source: Department of Defense
Date Data Arrived at EDR: 06/19/2018	Telephone: 703-704-1564
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 87	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/05/2018	Telephone: 202-564-2280
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 09/05/2018
Number of Days to Update: 9	Next Scheduled EDR Contact: 12/17/2018
	Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/26/2018	Telephone: 202-564-0527
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 11/30/2018
Number of Days to Update: 71	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Quarterly

Other Ascertainable Records

UT DRYCLEANERS: Registered Drycleaners
A listing of registered drycleaners.

Date of Government Version: 10/15/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 11/27/2018
Number of Days to Update: 42

Source: Department of Environmental Quality
Telephone: 801-536-4437
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

UT EWA: Enforceable Written Assurances

EWA contains locations of potential Enforceable Written Assurance sites. EWAs will generally ensure to property owners or prospective property owners that there is no unacceptable risk to human health or the environment. EWA locations are based on coordinates derived from maps and GPS data. These locations represent sites, not contaminated areas.

Date of Government Version: 09/05/2018
Date Data Arrived at EDR: 09/19/2018
Date Made Active in Reports: 10/19/2018
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 801-536-4167
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

UT Financial Assurance 1: Financial Assurance Information Listing

Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/11/2018
Date Data Arrived at EDR: 10/12/2018
Date Made Active in Reports: 10/19/2018
Number of Days to Update: 7

Source: Department of Environmental Quality
Telephone: 801-538-6794
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Varies

UT Financial Assurance 2: Financial Assurance Information Listing

Financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/26/2018
Date Made Active in Reports: 10/19/2018
Number of Days to Update: 23

Source: Department of Environmental Quality
Telephone: 801-536-4141
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

UT FUDS: Formerly Used Defense Sites

Formerly used defense sites.

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 10/25/2017
Date Made Active in Reports: 12/05/2017
Number of Days to Update: 41

Source: Utah AGRC
Telephone: 801-538-3665
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UT MMRP: Military Munitions Response Program

Environment.MMRP contains locations of Military Munitions Response Program sites. MMRP manages the environmental, health and safety issues presented by unexploded ordnances (UXO), discarded military munitions (DMM) and munitions constituents (MC). Locations are based on coordinates derived from maps and GPS data. These locations represent sites, not contaminated areas.

Date of Government Version: 05/16/2018
Date Data Arrived at EDR: 06/21/2018
Date Made Active in Reports: 07/27/2018
Number of Days to Update: 36

Source: Department of Environmental Quality
Telephone: 801-539-4164
Last EDR Contact: 09/21/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

UT NPDES: Permitted Facilities Listing

A listing of Division of Water Quality permits.

Date of Government Version: 09/19/2017
Date Data Arrived at EDR: 09/22/2017
Date Made Active in Reports: 11/20/2017
Number of Days to Update: 59

Source: Department of Environmental Quality
Telephone: 801-538-6146
Last EDR Contact: 09/06/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Varies

UT TIER 2: Tier 2 Facility Listing

TIER 2 contains locations of Tier II facilities under the Emergency Planning and Community Right-to-Know Act (EPCRA). Qualifying facilities report on hazardous and toxic chemicals and are labeled either tier I or tier II. Locations are based on coordinates derived from maps and GPS data. These locations represent sites, not contaminated areas.

Date of Government Version: 09/05/2018
Date Data Arrived at EDR: 09/19/2018
Date Made Active in Reports: 10/19/2018
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 801-536-4152
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

UT UIC: UIC Site Location Listing

A listing of underground injection control wells.

Date of Government Version: 08/28/2018
Date Data Arrived at EDR: 08/29/2018
Date Made Active in Reports: 09/26/2018
Number of Days to Update: 28

Source: Department of Natural Resources
Telephone: 801-538-5329
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Quarterly

UT UOPF: Used Oil Permitted Facilities

DSHW Permitted Used Oil Facilities contains locations in Utah of all Used Oil Facilities: Marketers, Processors, Transfer, Transport and Off-specification Permitted by UDEQ Division of Hazardous Waste (DSHW) ? Used Oil Section.

Date of Government Version: 09/05/2018
Date Data Arrived at EDR: 09/19/2018
Date Made Active in Reports: 10/19/2018
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 801-538-9408
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

UT RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Utah.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/16/2014
Number of Days to Update: 199

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

UT RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Utah.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Provider List

Source: Department of Health

Telephone: 801-538-9299

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Utah Geological Survey
Telephone: 801-537-3300

STREET AND ADDRESS INFORMATION

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APPENDIX H

Pertinent Agency Correspondence

February 19, 2019

Sindy Smith
Governor's Office of Planning and Budget, Resource Development Coordinating Committee
P.O. Box 141107
Salt Lake City, UT 84114-1107

**Subject: Request for Agency Input on State Route 209 (9000 South) State Environmental Study
– UDOT Project S-0209(35)10**

Dear Ms. Smith,

The Utah Department of Transportation (UDOT) is preparing a State Environmental Study (SES) to evaluate improvements to State Route 209 (9000 South) from Redwood Road to 700 West in southwestern Salt Lake County, Utah. The improvements would be made in the cities of Sandy and West Jordan (see the enclosed map). In preparing the SES, UDOT will evaluate the environmental, social, and economic impacts of the proposed 9000 South improvements.

9000 South is an urban principal arterial that connects the east and west portions of the Salt Lake Valley. It is an important road for both Sandy and West Jordan, serving current and planned development between I-15 and the Mountain View Corridor and points west. According to West Jordan City's Transportation Master Plan, 9000 South favors commuters on both ends of the city regardless of whether their ultimate destination is north, south, east, or west. Consequently, the road has become a major route into and out of the city in the east-west direction. Moreover, because of growth in western Salt Lake County, east-west roadway connectivity is limited and therefore places an even greater strain on arterials such as 9000 South.

The purpose of this letter is to request information from your agency regarding the resources under your jurisdiction in the study area that could be affected by the project, identify the issues that should be analyzed in the SES, and determine whether project construction would require any permits or approvals from your agency. UDOT will use information from your agency, other agencies, and the public to develop project alternatives in the study area, which is shown on the enclosed map.

We request written comments no later than March 19, 2019. Please mail your comments to:

9000 South Project
C/O Heidi Spoor
HDR Engineering, Inc.
2825 East Cottonwood Parkway, Suite 200
Salt Lake City, UT 84121-7077

Comments can also be emailed to heidi.spoor@hdrinc.com. Please include the project name **[UDOT Project S-0209(35)10]** in the subject line of either written or email correspondence.

If you would like to meet in person to discuss the project, please contact me to set up a date and time for a meeting. Please contact me at (801) 910-2010 with any questions about the project.

Sincerely,

A handwritten signature in blue ink that reads "Tyler Allen". The signature is fluid and cursive, with a long horizontal stroke extending to the right.



Tyler Allen
UDOT Environmental Manager Region 2

Enclosure: Study area map

cc: Becky Stromness, UDOT



LEGEND

-  Study Extent
-  City Boundaries

9000 South
ENVIRONMENTAL STUDY
 Redwood Road to I-15



