

ATTACHMENT J4

# Hill AFB Wastewater Collection System

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# J4 Hill AFB Wastewater Collection System

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## J4.1 Hill AFB Overview

Located in the Salt Lake Valley west of the Wasatch Mountains and overlooking the Great Salt Lake to the west, Hill Air Force Base (HAFB) is seven miles south of Ogden, Utah and 35 miles north of Salt Lake City. The Main Base occupies approximately 6,689 acres, 6,641 Fee and 48 leased (primarily railroad). Outlying installations include the Little Mountain Test Annex (740 acres), 25 miles northwest of the Base between Ogden City and the Great Salt Lake, and the Utah Test and Training Range (UTTR). The UTTR consists of 954,471 acres and almost 13,000 nautical square miles of airspace approximately 50 air miles west of HAFB.

Acquisition of land began in the 1940s when approximately 3,200 acres, comprising the western side of Hill AFB, was acquired from the Army. Another major acquisition occurred in 1977 when Hill acquired 760 acres from Ogden Arsenal. Approximately 120 other fee tracts, ranging from a fraction of an acre to 320 acres, were acquired from businesses and individuals through the 1940s and 1950s. Approximately 30 additional fee tracts were acquired in the 1960s and 1970s as part of the Air Installation Compatible Use Zones (AICUZ) initiative. By executive order, the vast majority of the UTTR was “withdrawn” from the Bureau of Land Management (North Range in 1940 and South Range in 1941). Little Mountain was acquired (Fee) in 1957.

Hill AFB has 1,916 structures, 1,371 buildings, and over 14 million square feet (msf) of floor space comprised of the following major functional categories: Industrial: 4,542,697 square feet (SF); Administrative: 1,542,797 SF; Military Family Housing (MFH): 1,607,605 SF; Unaccompanied Housing: 261,410 SF; Transient Quarters: 55,168 SF; and Other Community/Support: 696,137 SF; and other facilities: 5,300,000 SF.

Hill AFB expects to add 48 additional facilities totaling 957,115 square feet over the next 10 years, and an additional 9 facilities with approximately 601,483 square feet between 10 - 20 years. Hill will require the Contractor to provide all supporting utilities and will negotiate appropriate fee increases to cover the cost of utility construction.

The Base has a 13,500-foot runway that handles more than 40,000 takeoffs and landings annually. It also has 228 miles of roadway and 28 miles of railroad.

### J4.1.1 Installation History

The present day HAFB has its roots in two separate entities: the Ogden Arsenal and Hill Field. Though these Installations existed as neighbors for over a decade, and for years were both within the structure of the U.S. Army, they pursued separate missions.

Ogden Arsenal, originally established to store surplus World War I munitions, became an important supply center during World War II. The Installation stored and shipped a full range of ordnance and transportation equipment. The Arsenal also manufactured various munitions during World War II.

Hill Field was constructed in response to a War Department initiative in 1939 to increase arms production and expand military operations. Hill Field, southeast of the Arsenal, served as a supply center, but its focus was air material, repair, and maintenance of aircraft. In November 1940, the Army Air Corps activated on Hill Field the Ogden Air Depot.

After World War II, the dominant role of Hill Field was the storage of over 1,200 aircraft and support equipment. Hill Field became HAFB in 1948 with the establishment of the U.S. Air Force as a separate service. With the onset of the Korean War, HAFB reactivated and returned to flying readiness B-26 and B-29 aircraft. In 1955, the Base nearly doubled in size with the annexation of the adjacent Arsenal and the broad physical parameters that currently describe HAFB were established.

#### **J4.1.2 Mission, Organization, and Associate Units**

Hill AFB and its associated Little Mountain Test Annex and the UTTR occupy a vital place in the Air Force and Air Force Material Command (AFMC) inventory of installations. The host organization is the Ogden Air Logistics Center (OO-ALC). The Base also hosts more than 40 tenants, including combat forces (the 388<sup>th</sup> Fighter Wing and the 419<sup>th</sup> Fighter Wing [Air Force Reserve]) as well as the Defense Megacenters Ogden and the Defense Logistics Agency (DLA).

The OO-ALC provides worldwide engineering support and logistics management for the F-16 Flying Falcon as well as maintaining F-16 and C-130 aircraft. More than 250 aircraft and 16,800 avionics and structural components are processed annually. Hill AFB is also responsible for worldwide logistics management for the nation's fleet of intercontinental ballistic missiles. The Base overhauls and repairs landing gear, wheels, and brakes; rocket motors; air munitions and guided bombs; photonics equipment; training devices; avionics; instruments; hydraulics; software and other aerospace related components.

The UTTR is used for tests of conventional and smart munitions, missile motors, and long-range standoff weapons. It also supports tactical aircraft, bomber, and helicopter training and large force exercises.

Major units at HAFB include:

- 388<sup>th</sup> Fighter Wing (Air Combat Command)
- 419<sup>th</sup> Fighter Wing (Air Force Reserve)
- Defense Megacenters Ogden (Defense Information Systems Agency)
- Defense Depot Hill Utah (Defense Logistics Agency)
- Defense Commissary Agency
- Defense Finance and Accounting Agency
- Defense Contract Audit Agency
- Air Force Judiciary Area Defense Counsel
- Defense Reutilization and Marketing Office
- Army and Air Force Exchange Service
- Air Force Audit Agency

- Air Force Office of Special Investigations, Detachment 113
- Air Education and Training Command
- U.S. Army Corps of Engineers
- Tooele Army Depot Rail Center
- Small Business Administration
- Forest Service (U.S. Department of Agriculture)

### J4.1.3 Population

The Base population profile is as shown in the following table:

Category	Population
Active Duty U.S. Military	4,625
Air National Guard/ Air Force Reserve	1,112
Appropriated Fund Civilians (including Reserve technicians)	11,187
Non-appropriated Fund Civilians	363
Private Business (Bank/Credit Union)	30
Contractors	3,718
Active Duty Military Dependents (resident on Base)	3,500
Total	24,535*

\*Includes Little Mountain Test Annex and UTTR

### J4.1.4 Housing

Hill AFB has 1,141 MFH units located in three areas on the Base. Area A (14 units), located in the western edge of the Base immediately north of the 1200 Area; Area B (11 units), located in the center of the Main Base; and Areas D/E/F/G (1,116 units) located in the southwest corner of the Base.

The units in Areas A and B were built in the 1930s and 40s, Areas D/E (500 units) in the mid 1960s, and Area F (270 units) in the mid 1970s. The 350 units in Area G were built in the mid 1990s to replace the 350 units that were demolished in the old Area C located to the east of the runway. Currently, the 1,116 MFH units in Areas D/E/F/G are being considered for privatization in 2005.

### J4.1.5 Utah Test and Training Range

UTTR is a very large and isolated aerial gunnery, bombing and test range located approximately 60 miles due west of Hill AFB (west side of the Great Salt Lake). UTTR total land area covers 954,471 acres. The aerial portion of the range is considerably larger and merges with Dugway Proving Ground’s air space, some 50 miles to the south. The central cantonment area for UTTR is referred to as Oasis. It is comprised of several facilities housing range control, safety, civil engineering, explosive ordnance disposal (EOD), vehicle

maintenance, fire department, security, billeting, food service, and multi-purpose recreation activities. The entrance to the UTTR munitions/missile storage area (MSA) is located approximately one mile to the north of Oasis. The MSA has a perimeter of approximately 13 miles and encloses about 5,000 acres. Apart from the Oasis central cantonment area, there are several small isolated sites (Grassy Mountain, Diddle Knoll, and several others) that accommodate radar, communications, telemetry, and photographic activities. These sites are situated either on mountain peaks or on sites adjacent to the targets. Oasis population remains fairly stable through the workweek with many employees choosing to live in Government quarters rather than commute daily to their homes in distant cities. (Normally, the UTTR is on a four-day workweek, four 10-hour shifts.) The population diminishes considerably on weekends with only a handful of security and fire protection personnel remaining on site. Most of the isolated sites remain unmanned except for special range events. Average site population is approximately 30 contract personnel and 120 Government employees (military and civilian). Utility systems are Government-owned and operated by Air Force civilian employees.

#### **J4.1.6 Little Mountain Test Annex**

The Little Mountain Test Annex is located approximately 26 miles northwest of Hill AFB, adjacent to the Great Salt Lake. The total site covers 750 acres; the Main Cantonment area covers about 50 acres and is comprised of 16-18 buildings with an aggregate of 140,000 square feet. The site was constructed in the late 1950s, closed for a period of time in the late 1960s, and then subsequently reopened. Facilities are high-tech test facilities with special electrical loads and demanding HVAC parameters. Site population consists of approximately 75 contract test personnel plus four civil engineer craftsmen all of whom work an extended shift (10 hours/day) Monday through Thursday. Three firemen remain on site round-the-clock. Utility systems are Government-owned and operated by Air Force civilian employees.

#### **J4.1.7 Geographically Separated Units**

Other geographically separated units (GSUs) are summarized below:

##### **WENDOVER FIELD**

Wendover Field is a radar, telemetry, and microwave communications site located approximately 150 miles west of Hill AFB on the Utah-Nevada border. In years past, the site had an airstrip but it has since been turned over to the City of Wendover, Utah. The Air Force compound covers approximately 160 acres.

##### **BOVINE**

Bovine is a radar site approximately 30 miles east of Motello, Nevada and 54 miles due north of Wendover Field.

##### **TROUT CREEK**

Trout Creek is a complex very similar to Bovine on the Utah-Nevada border.

##### **CARTER CREEK**

Carter Creek is an Air Force-owned recreational facility located approximately 110 miles from Hill AFB.

## **BOULDER**

The Boulder, Wyoming site, also known as Pinedale, is a special test facility located approximately 125 miles northeast of Hill AFB.

## **J4.2 Wastewater Collection System Description**

### **J4.2.1 Wastewater Collection System Fixed Equipment Inventory**

The Hill AFB wastewater collection system consists of all appurtenances physically connected to the collection system from the point of demarcation defined by the Right-of-Way. The system may include, but is not limited to, pipelines, manholes, lift stations, treatment plants, and controls. The actual inventory of items to be sold will be in the bill of sale at the time the system is transferred. The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the system. The Government makes no representation that the inventory is accurate. The Contractor shall base its proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from the wastewater collection system privatization:

- Septic tanks and drain fields
- Grease traps (food preparation facilities)

#### **J4.2.1.1 Wastewater Collection System Description**

##### **MAIN BASE**

The Main Base area wastewater system consists of collection lines and lift stations primarily located west of the runway. The wastewater system east of the runway consists of relatively small collection systems mostly from individual buildings with treatment by septic tanks and drain fields. With the exception of the sewage that flows to the septic tanks, all other sanitary sewage generated on Hill AFB is transported to the North Davis Sewer District (NDSD) for treatment.

##### **METERING STATIONS**

Wastewater flows from Hill AFB are discharged into the NDSD/Clearfield City wastewater systems along the south and west boundaries of the Base. Those flows are metered at seven locations prior to leaving the wastewater system. Air Force-owned discharge and instrumented meter points are located as follows:

1. Discharge Point 1 (Southgate Meter) – at the intersection of Southgate Avenue and Highway 193. This flow is metered near Manhole 5-27 and is generated by the southeast portion of the Main Base. Flows through this discharge point include the wastewater treated by the industrial wastewater treatment plant (IWTP) and CERCLA contaminated ground water extracted under the Federal Facilities Act Operable Unit (OU) 8 remediation project. (Discharges into NDSD system.)

2. Discharge Point 2 (Hospital Meter) – approximately 1,900 feet west of Southgate Avenue and on the north side of Highway 193. The system drawings show two meters on this line; one near the Base boundary and the other several hundred feet upstream. As additional facilities were being planned between the upstream meter and the Base boundary, the downstream meter was installed to capture the flows from these new facilities and the upstream meter was abandoned in place. The meter located near Manhole 4-19 has been abandoned for several years. The active meter is located near Manhole 5-11. The southern portion of the Main Base generates this flow. (Discharges into NDS system.)
3. Discharge Point 3 (Housing Contractor) – located in the parking lot of Building 3303 (housing contractors office facility) upstream of Manhole 33-22. (Discharges into Clearfield City system.)
4. Discharge Point 4 (Housing Meter) – located behind one of the housing units, with no other distinguishing feature, southwest of Pond 4 in the southwest corner of MFH. This discharge point is upstream of Manhole 33-25 and downstream of Manhole 33-17. (Discharges into Clearfield City system.)
5. Discharge Point 5 (Texaco Meter) – located across Highway 39 from a gasoline station (currently a Tesoro station; formerly a Texaco station at the time the meter was named). This discharge point is upstream of Manhole 33-11 and downstream of Manhole 33-10. (Discharges into Clearfield City system.)
6. Discharge Point 6 (Truck Gate Meter) – located near the truck gate for the Base. The meter is located between Manholes 8-23 and 8-24. (Discharges into Clearfield City system.)
7. Discharge Point 7 (Railroad Meter) – located in the Army Rail Shop area along the west boundary of Hill AFB, northwest of the intersection of Aspen Avenue and Maine Street, in the 1700 Area. The northern portion of the Main Base, the 1200 Industrial Area, and the facilities along Alabama Drive generate this flow. It is metered near Manhole 11-50. (Discharges into NDS system.)

**SANITARY LIFT STATIONS**

There are 22 sanitary wastewater lift stations with associated force mains located throughout the Main Base area. General information on the lift stations is as follows:

**SANITARY WASTEWATER LIFT STATIONS**

<b>Lift Station ID/Facility Number/Location</b>	<b>Size</b>	<b>Construction Type</b>
#1/1847	Large	Masonry
#2/866	Medium	Pre-cast
#4/Near Bldg 220	Medium	Pre-cast
Log Cabin (DRMO Area)	Medium	Pre-cast
1961	Medium	Pre-cast
5096	Large	Pre-cast
475	Small	Pre-cast
570	Large	Pre-cast

Lift Station ID/Facility Number/Location	Size	Construction Type
899	Medium	Pre-cast
1299	Small	Pre-cast
206	Medium	Pre-cast
265	Medium	Pre-cast
267	Medium	Pre-cast
Near Bldg 202	Small	Pre-cast
268	Medium	Pre-cast
849	Large	Pre-cast
233	Medium	Pre-cast
589	Large	Pre-cast
866	Medium	Pre-cast
505	Large	Masonry
Near Bldg 5	Small	Pre-cast
Near Bldg 916	Small	Pre-cast

None of the lift stations have installed emergency generators. All are equipped with high-water alarms (local flashing red lights; no remote annunciation).

#### **WASTEWATER COLLECTION SYSTEM**

The Hill AFB wastewater collection system consists of approximately 300,000 feet of wastewater collection lines, varying in size between 6 to 15 inches, and 852 manholes. The wastewater collection system dates back to the 1940s. In the older areas of the Base, the wastewater lines are vitrified clay pipes and the manholes are constructed of brick. Since the 1990s, as lines were replaced and new lines added, the piping used has been PVC pipe and the new manholes have been constructed of pre-cast concrete. Depth of burial for wastewater collections mains ranges from 6' to 20'. Average depth of building service laterals is approximately 6'.

Within the last few years, two video surveys of the wastewater system have been performed. One survey took place in December 1996 over two selected areas of the wastewater system. One area was generally the Main Base between the runway and Avenue E. The second area is in the northern portion of Main Base between ammunition storage area and New Hampshire Drive. There were 12 areas of deterioration that were severe enough to merit immediate corrective action. Generally, the problems were related to cracked or broken pipes. The report identified about 45 other areas of concern that are not as severe but will become so if not corrected. These problem areas were mostly the result of tree root intrusions. The report further identified six areas where there are low spots or sags in the pipe. The manholes inspected with this report were considered to be in good condition.

A second survey took place in October 1997 and covered the entire wastewater collection piping in Military Housing Areas D, E, and F. As part of the survey, the wastewater lines with tree roots large enough to interfere with video camera operation were cleaned. The report presented five areas of immediate concern. Four of the areas were related to manhole problems. Another area was identified related to the service laterals from the residences to

the main. In many cases, large tree roots could be identified that could cause problems in the future. The report identified 16 other areas where there are problems but do not present an immediate concern. There were nine areas identified where sections of pipe have sagged enough to reduce the effectiveness of the wastewater collection system.

The repairs from each survey are still waiting for funding and have not been accomplished.

Base technicians advise that Hill AFB does not experience significant infiltration and inflow (I/I) problems, nor are there recurring problems with overflows.

## **UTTR**

The wastewater system at UTTR consists of two sewer lift stations approximately 12 and 35 years old that move flows to wastewater lagoons for treatment. Both stations were upgraded and lined in 1997 and 1998, respectively. The piping system that feeds and leaving the lift stations are approximately the same age as the lift stations. Twelve manholes are shown on the utility map. (Lagoons are an integral part of the system and are included in the privatization package.) The sewer lagoons were upgraded and enlarged as well as being modified to act as a mini-wetlands area. The project was completed in Spring 2000. Other remote sites with septic tanks and drain fields are excluded from the privatization study.

A wastewater system map of the UTTR area was provided with a scale of 1"=1,200'. Measurements of the wastewater lines taken from the map are used in the development of the inventory. Manholes were identified on drawings prepared as part of a Wastewater Facilities Evaluation Study completed in 1994 for UTTR.

## **LITTLE MOUNTAIN TEST ANNEX**

The wastewater system at Little Mountain consists of a gravity collection system where the flows move to a septic tank and drain field for treatment. (The septic tank and drain field are not included in the privatization study; the point of demarcation is the septic tank inlet.) The original system was installed in 1960, and contains approximately 3,000 feet of wastewater lines. The collection mains are primarily six and eight-inch PVC pipe while service laterals are older cast iron pipe. The original septic tank, installed in 1960, has been abandoned; the new tank and drain field was installed in 1987 at different site. The new system is a very large system, 27,000-gallon tank, sized for approximately 300 people. With a daylight population of only 80 people and only 3 persons remaining on site round-the-clock, the system has more than enough capacity for any foreseeable growth. Long-range plans for Little Mountain call for replacement of the septic tank and drain field with a package treatment plant.

A Little Mountain wastewater system map (scale of 1"=1,200') was provided. Measurements of the wastewater lines taken from the map are used in the development of the inventory.

## **OTHER GEOGRAPHICALLY SEPARATED UNITS (GSUs)**

**WENDOVER FIELD.** Wastewater collection and treatment systems are provided by the City of Wendover; there are no Air Force-owned wastewater collection system components to be privatized at this site.

**BOVINE.** An incineration unit treats the wastewater; there is no Air Force-owned collection system to be privatized at this site.

**TROUT CREEK.** There is no Air Force-owned collection system to be privatized at this site.

**CARTER CREEK.** Sewage is handled by an on-site septic tank; there are no Air Force-owned wastewater collection system components to be privatized at this site.

**BOULDER.** There are no Air Force-owned wastewater collection system components to be privatized at this site.

#### J4.2.1.2 Inventory

**Table 1** provides a general listing of the major wastewater collection system fixed assets for the Hill AFB wastewater collection system included in the sale. The drawings used to develop the inventory are listed in Paragraph J4.2.3.

**TABLE 1**  
 Fixed Inventory  
 Wastewater Utility System - Hill AFB

Component	Size	Unit	Quantity	Approximate Year of Construction
<b>MAIN BASE</b>				
<b>Pipe</b>				
PVC	6"	LF	1,020	1993
PVC	8"	LF	360	1993
VC	4"	LF	140	1940
VC	6"	LF	70,510	1940
VC	6"	LF	6,950	1960
VC	8"	LF	81,690	1940
VC	8"	LF	6,280	1960
VC	10"	LF	33,600	1940
VC	10"	LF	2,600	1960
VC	12"	LF	24,340	1940
VC	15"	LF	9,560	1960
<b>Force Main</b>				
PVC	3"	LF	10	1993
PVC	4"	LF	120	1993
PVC	4"	LF	10	1996
PVC	8"	LF	1,000	1995
PVC	10"	LF	200	1995
VC	6"	LF	1,750	1942
<b>Manholes</b>				
	4x6	EA	583	1940
	4x6	EA	49	1960
	4x6	EA	2	1993
<b>Cleanouts</b>				
	6"	EA	314	1940
	6"	EA	16	1960

	6"	EA	4	1993
<b>Oil/Water Separators</b>				
	500 gal	EA	1	1960
	500 gal	EA	2	1970
	500 gal	EA	1	2000
	550 gal	EA	1	1980
	550 gal	EA	1	1998
	808 gal	EA	1	1960
	1,000 gal	EA	2	2000
<b>Lift Stations</b>				
<b>Lift Station #1 – Bldg 1847</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1942
	Building	EA	1	1942
	Pumps, Piping, Controls, & Elect	EA	1	1999
<b>Lift Station #2 – Bldg 866</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1993
	Building	EA	1	1993
	Pumps, Piping, Controls, & Elect	EA	1	1996
<b>Lift Station #4</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1996
	Building	EA	1	1996
	Pumps, Piping, Controls, & Elect	EA	1	1996
<b>Log Cabin Lift Station (DRMO)</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1995
	Building	EA	1	1995
	Pumps, Piping, Controls, & Elect	EA	1	1995
<b>Lift Station #1961</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1993
	Building	EA	1	1993
	Pumps, Piping, Controls, & Elect	EA	1	1996
<b>Lift Station #5096</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1995
	Building	EA	1	1995
	Pumps, Piping, Controls, & Elect	EA	1	1995
<b>Lift Station #475</b>				
	Structure incl Exc, Bkfl, & Conc	EA	1	1991
	Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #570</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
	Building	EA	1	1991
	Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #899</b>				
	Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
	Building	EA	1	1991

Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #1299</b>			
Structure incl Exc, Bkfl, & Conc	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #206</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #265</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #267</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station Near Bldg 202</b>			
Structure incl Exc, Bkfl, & Conc	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #268</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #849</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #233</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #589</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #866</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991
<b>Lift Station #505</b>			
Wet Well incl Exc, Bkfl, & Conc	EA	1	1991
Building	EA	1	1991
Pumps, Piping, Controls, & Elect	EA	1	1991

<b>Lift Station Near Bldg 5</b>				
Structure incl Exc, Bkfl, & Conc		EA	1	1991
Pumps, Piping, Controls, & Elect		EA	1	1991
<b>Lift Station Near Bldg 916</b>				
Structure incl Exc, Bkfl, & Conc		EA	1	1991
Pumps, Piping, Controls, & Elect		EA	1	1991
<b>LITTLE MOUNTAIN TEST ANNEX</b>				
VC Pipe	6"	LF	1,540	1960
VC Pipe	10"	LF	1,450	1960
Manholes	4x6	EA	16	1960
<b>UTTR</b>				
VC Pipe	8"	LF	11,000	1961
Manholes	4x6	EA	12	1961
Lagoon		EA	1	2000
<b>HOUSING</b>				
<b>Pipe</b>				
PVC	6"	LF	6,020	1978
PVC	6"	LF	540	1994
PVC	8"	LF	9,310	1978
PVC	8"	LF	11,180	1994
PVC	10"	LF	5,940	1978
VC	6"	LF	30,200	1960
VC	10"	LF	1,720	1960
<b>Manholes</b>				
	4x6	EA	87	1960
	4x6	EA	80	1978
	4x6	EA	51	1994
<b>Cleanouts</b>				
	4"	EA	198	1960
	4"	EA	174	1978
	4"	EA	163	1994

Notes:

VC = vitrified clay	CI = cast iron	Exc = excavation
PVC = polyvinyl chloride	LS = lift station	Bkfl = backflow preventers
LF = linear feet	EA = each	Conc = concrete
Elect = electrical	incl = including	gal = gallon

### J4.2.2 Wastewater Collection System Non-Fixed Equipment and Specialized Tools

Tables 2 and 3 list other ancillary equipment (spare parts) and specialized vehicles and tools included in the purchase.

**TABLE 2**  
 Spare Parts  
 Wastewater Utility System - Hill AFB

Item	Quantity	Location	Description
None			

**TABLE 3**  
 Specialized Vehicles and Tools  
 Wastewater Utility System - Hill AFB

Description	Size	Location	Quantity	Maker
None				

### J4.2.3 Wastewater Collection System Manuals, Drawings, and Records

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

**TABLE 4**  
 Manuals, Drawings, and Records  
 Wastewater Utility System - Hill AFB

Quantity	Item	Description	Remarks
1	Drawing Set	Comprehensive Plan, Sanitary Sewer System, Tab G-2 (1993)	Sheets 1 - 5
1	Utility Drawing	Sanitary Sewer System	UTTR
1	Utility Drawing	Sanitary Sewer System	Little Mountain
1	Study	Wastewater Facility Evaluation (Dec 1994)	UTTR

### J4.3 Specific Service Requirements

The service requirements for the Hill AFB wastewater collection system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Hill AFB wastewater collection and treatment system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

- The Contractor will be required to mark his own utilities and will be responsible for initiating, officiating, and tracking digging permits for his own utilities. The Contractor will provide not less than 2 and not more than 5 working days notice (emergencies being excepted) of any needed excavations to 75 CES and to said Utilities Privatization Administrative Contracting Officer so the location of underground utilities may be located and marked by the applicable utility owner.

The applicable utility owner must mark their utilities as requested within 48 hours of receipt of request for non-emergency work.

- The Contractor shall enter into a Memorandum of Understanding (MOU) with the Base Fire Department for fire protection of all facilities included in the purchase of the utility. The MOU shall be completed during the transition period and a copy provided to the Contracting Officer.
- The Contractor will maintain a 24/7 presence on the Installation in order to respond immediately to wastewater problems that could impact extraordinary mission requirements.

## J4.4 Current Service Arrangement

Wastewater flows from Hill AFB are discharged into the NDS/D/Clearfield City wastewater systems along the south and west boundaries of the Base. Those flows are metered at seven locations prior to leaving the wastewater system. Treatment of the wastewater by NDS/D is through a contract between Hill AFB and NDS/D, which will not be transferable should privatization of the system occur. Air Force-owned discharge and instrumented meter points are located as follows:

1. Discharge Point 1 (Southgate Meter) – at the intersection of Southgate Avenue and Highway 193. This flow is metered near Manhole 5-27 and is generated by the southeast portion of the Main Base. Flows through this discharge point include the wastewater treated by the industrial wastewater treatment plant (IWTP) and CERCLA contaminated ground water extracted under the Federal Facilities Act Operable Unit (OU) 8 remediation project. (Discharges into NDS/D system.)
2. Discharge Point 2 (Hospital Meter) – approximately 1,900 feet west of Southgate Avenue and on the north side of Highway 193. The system drawings show two meters on this line; one near the Base boundary and the other several hundred feet upstream. As additional facilities were being planned between the upstream meter and the Base boundary, the downstream meter was installed to capture the flows from these new facilities and the upstream meter was abandoned in place. The meter located near Manhole 4-19 has been abandoned for several years. The active meter is located near Manhole 5-11. The southern portion of the Main Base generates this flow. (Discharges into NDS/D system.)
3. Discharge Point 3 (Housing Contractor) – located in the parking lot of Building 3303 (housing contractors office facility) upstream of Manhole 33-22. (Discharges into Clearfield City system.)
4. Discharge Point 4 (Housing Meter) – located behind one of the housing units, with no other distinguishing feature, southwest of Pond 4 in the southwest corner of MFH. This discharge point is upstream of Manhole 33-25 and downstream of Manhole 33-17. (Discharges into Clearfield City system.)
5. Discharge Point 5 (Texaco Meter) – located across Highway 39 from a gasoline station (currently a Tesoro station; formerly a Texaco station at the time the meter was named). This discharge point is upstream of Manhole 33-11 and downstream of Manhole 33-10. (Discharges into Clearfield City system.)

6. Discharge Point 6 (Truck Gate Meter) – located near the truck gate for the Base. The meter is located between Manholes 8-23 and 8-24. (Discharges into Clearfield City system.)
7. Discharge Point 7 (Railroad Meter) – located in the Army Rail Shop area along the west boundary of Hill AFB, northwest of the intersection of Aspen Avenue and Maine Street, in the 1700 Area. The northern portion of the Main Base, the 1200 Industrial Area, and the facilities along Alabama Drive generate this flow. It is metered near Manhole 11-50. (Discharges into NDS system.)

For Hill Main Base, annual purchased wastewater treatment quantities (merged sanitary and pre-treated industrial wastewater flows) for fiscal years (FY) 2001, 2002, and 2003 were 388 million gallons, 465 million gallons, and 459 million gallons, respectively. Monthly wastewater totals ranged from a low of 25 million gallons to a high of 46 million gallons. The average monthly figure over the 3-year period was 36.5 million gallons.

## **J4.5 Secondary Metering**

### **J4.5.1 Existing Secondary Meters**

Wastewater flows from Hill AFB are discharged into the NDS/Clearfield City wastewater systems along the south and west boundaries of the Base. Those flows are metered at seven locations prior to leaving the wastewater system. Air Force-owned discharge and instrumented meter points are located as follows

1. Discharge Point 1 (Southgate Meter) – at the intersection of Southgate Avenue and Highway 193. This flow is metered near Manhole 5-27 and is generated by the southeast portion of the Main Base. Flows through this discharge point include the wastewater treated by the industrial wastewater treatment plant (IWTP) and CERCLA contaminated ground water extracted under the Federal Facilities Act Operable Unit (OU) 8 remediation project. (Discharges into NDS system.)
2. Discharge Point 2 (Hospital Meter) – approximately 1,900 feet west of Southgate Avenue and on the north side of Highway 193. The system drawings show two meters on this line; one near the Base boundary and the other several hundred feet upstream. As additional facilities were being planned between the upstream meter and the Base boundary, the downstream meter was installed to capture the flows from these new facilities and the upstream meter was abandoned in place. The meter located near Manhole 4-19 has been abandoned for several years. The active meter is located near Manhole 5-11. The southern portion of the Main Base generates this flow. (Discharges into NDS system.)
3. Discharge Point 3 (Housing Contractor) – located in the parking lot of Building 3303 (housing contractors office facility) upstream of Manhole 33-22. (Discharges into Clearfield City system.)
4. Discharge Point 4 (Housing Meter) – located behind one of the housing units, with no other distinguishing feature, southwest of Pond 4 in the southwest corner of MFH. This discharge point is upstream of Manhole 33-25 and downstream of Manhole 33-17. (Discharges into Clearfield City system.)

5. Discharge Point 5 (Texaco Meter) – located across Highway 39 from a gasoline station (currently a Tesoro station; formerly a Texaco station at the time the meter was named). This discharge point is upstream of Manhole 33-11 and downstream of Manhole 33-10. (Discharges into Clearfield City system.)
6. Discharge Point 6 (Truck Gate Meter) – located near the truck gate for the Base. The meter is located between Manholes 8-23 and 8-24. (Discharges into Clearfield City system.)
7. Discharge Point 7 (Railroad Meter) – located in the Army Rail Shop area along the west boundary of Hill AFB, northwest of the intersection of Aspen Avenue and Maine Street, in the 1700 Area. The northern portion of the Main Base, the 1200 Industrial Area, and the facilities along Alabama Drive generate this flow. It is metered near Manhole 11-50. (Discharges into NDS system.)

#### J4.5.2 Required Meters

There are no known requirements for additional metering devices.

#### J4.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. **Invoice** (IAW G.2): The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25<sup>th</sup> of each month for the previous month. Invoices shall be submitted to:

*Name:* 75 CES (AF Utilities Privatization)  
*Address:* 7302 Wardleigh Road  
Hill AFB, UT 84056  
*Phone number:* (801) 771-0547

2. **Outage Report:** The Contractor's monthly outage report (blockage and overflow information) will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 25<sup>th</sup> of each month for the previous month. Outage reports shall be submitted to:

*Name:* 75 CES (AF Utilities Privatization)  
*Address:* 7302 Wardleigh Road  
Hill AFB, UT 84056  
*Phone number:* (801) 771-0547

3. **Infiltration and Inflow Report:** If required by Paragraph C.3, the Contractor shall submit an Infiltration and Inflow report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25<sup>th</sup> of each month for the previous month. System efficiency reports shall be submitted to:

*Name:* 75 CES (AF Utilities Privatization)  
*Address:* 7302 Wardleigh Road  
 Hill AFB, UT 84056  
*Phone number:* (801) 771-0547

4. **Meter Reading Report:** The monthly meter reading report shall show the current and previous month readings for all identified meters. The Contractor’s monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15<sup>th</sup> of each month for the previous month. Meter reading reports shall be submitted to:

*Name:* 75 CES (AF Utilities Privatization)  
*Address:* 7302 Wardleigh Road  
 Hill AFB, UT 84056  
*Phone number:* (801) 771-0547

## J4.7 Infiltration and Inflow (I&I) Projects

IAW Paragraph C.3, Requirement, there are currently no I&I efforts that require continuation after privatization other than the I&I report mentioned in J4.6.

## J4.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Hill AFB boundaries and the boundaries of Hill AFB GSUs.

## J4.9 Off-Installation Sites

Only UTTR and Little Mountain (Hill GSUs) have sanitary wastewater components included in this privatization package as described in Paragraph J4.2.1.1. There are no such components at the other GSUs (Wendover, Bovine, Trout Creek, Carter Creek, and boulder).

## J4.10 Specific Transition Requirements

The current contract between Hill AFB and NDSO for treatment of wastewater is not transferable. The contractor must establish his own contract with NDSO for treatment of discharged sanitary wastewater.

IAW Paragraph C.13, Transition Plan, **Table 5** provides a listing of service connections and disconnections required upon transfer.

**TABLE 5**  
 Service Connections and Disconnections  
 Wastewater Utility System - Hill AFB

Location	Description
None	

## J4.11 Government Recognized System Deficiencies

Table 6 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Hill AFB wastewater system. If the utility system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

**TABLE 6**  
System Deficiencies  
*Wastewater Utility System - Hill AFB*

Project Location	Project Description
None	