

**Attachment J02****Fort Leonard Wood Wastewater Collection System**

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## **J02 Fort Leonard Wood Wastewater Collection System**

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### **J02.1 Fort Leonard Wood Area Overview**

Fort Leonard Wood, Missouri is a U.S. Army Installation situated approximately 160 miles southeast of Kansas City and 120 miles southwest of St. Louis. The Fort is located in Pulaski County. Occupying approximately 61,425 acres in the south central Missouri countryside, Fort Leonard Wood was established in 1940 as a basic training center. The Fort was closed for a period in the 1950's. Currently the 3<sup>rd</sup> Training Brigade trains 16,000 soldiers annually. The U.S. Army Military Police School provides training to all branches of the military as well as government agencies and U.S. allies in areas of law enforcement. The Fort's population today is about 27,973 with 15,161 military and training personnel, 4,703 civilians and 8,109 family members. The Fort provides services to about 52,000 persons including retirees, their dependents and active duty personnel and their dependents.

### **J02.2 Wastewater Collection System Description**

The Fort Leonard Wood wastewater collection system comprises all appurtenances physically connected to the system from the point in which the Government ownership currently starts to the point of demarcation defined in part J02.10 of this Section. The system may include, but is not limited to the lift stations, pump basins, septic tanks, drain fields, treatment facilities, collection piping and appurtenances. The following description and inventory is included to provide the Offeror with a general understanding of the size and configuration of the collection system. Under no circumstances shall the successful Contractor be entitled to any rate adjustments based on the accuracy of the following description and inventory.

The Fort currently holds NPDES permit numbers MO0029742, MO0029777, MO0029769 and MO0058068. Wastewater system permits are not transferable. When the Contractor assumes operation of the wastewater system, it is the responsibility of the Contractor to file an application for transfer of the permit. The application must be received by the Missouri Department of Natural Resources at least six weeks before new operation of the system is to begin. The Contractor shall comply with all applicable federal, state, and local regulations governing the operation of the wastewater system.

#### **J02.2.1 Wastewater Collection System Fixed Equipment Inventory**

##### **J02.2.1.1 Wastewater Collection Description**

The wastewater collection system at Fort Leonard Wood consists of collection piping, lift stations and treatment facilities. The original system in the cantonment area was constructed in the 1940's, and improvements have been made as needed since that time. All wastewater generated at the Fort is treated at the Fort's 5.0 million gallon per day wastewater treatment plant. This treatment plant is an attached growth system (trickling filters) originally constructed in the 1980's. The treatment train includes shredding, grit removal, primary clarification, trickling filters, secondary clarification, and disinfection. Treated wastewater is discharged to Dry Fork in accordance with the Missouri Department of Natural Resources' National Pollutant Discharge Elimination System Permit. Sludge handling facilities include anaerobic digesters and sludge drying beds. Sludge is land applied in a liquid form.

Backup emergency generators that serve specific equipment of the wastewater collection system, such as lift stations, shall be conveyed as part of that particular system.

### J02.2.1.2 Wastewater Collection Inventory

**Table 1** provides a general listing of the major fixed assets for the Fort Leonard Wood wastewater system. The system will be sold in an “as is, where is” condition without any warrant, representation, or obligation on the part of Government to make any alterations, repairs, or improvements. Ancillary equipment attached to, and necessary for operating the system, though not specifically mentioned herein, is considered part of the purchased utility.

Table 1  
Fixed Inventory  
Wastewater Collection System – Fort Leonard Wood

Item	Material	Size (inches)	Quantity (Approximate)	Unit	Approximate Year of Construction
Gravity Pipe and Force Mains					
	CI	4	450	Linear Feet	1942
	CI	4	2,600	Linear Feet	1957
	VCP	4	2,200	Linear Feet	1957
	VCP	6	650	Linear Feet	1941
	VCP	6	2,600	Linear Feet	1942
	CI	6	2,600	Linear Feet	1942
	CI	6	1,200	Linear Feet	1957
	VCP	6	1,300	Linear Feet	1957
	Unknown	6	900	Linear Feet	1957
	CI	6	750	Linear Feet	1961
	CI	6	400	Linear Feet	1965
	Unknown	6	2,100	Linear Feet	1965
	CI	6	1,150	Linear Feet	1966
	PVC	6	300	Linear Feet	1966
	PVC	6	600	Linear Feet	1989
	VCP	8	31,500	Linear Feet	1941
	Unknown	8	1,000	Linear Feet	1941
	VCP	8	22,700	Linear Feet	1942
	Unknown	8	1,670	Linear Feet	1942
	VCP	8	40,800	Linear Feet	1957
	Unknown	8	3,220	Linear Feet	1957
	VCP	8	41,500	Linear Feet	1960
	Unknown	8	3,220	Linear Feet	1960
	VCP	8	13,420	Linear Feet	1961
	Unknown	8	830	Linear Feet	1961
	Unknown	8	22,720	Linear Feet	1962
	Unknown	8	9,150	Linear Feet	1965
	Unknown	8	200	Linear Feet	1966
	Unknown	8	10,000	Linear Feet	1966
	PVC	8	18,570	Linear Feet	1971
	PVC	8	7,990	Linear Feet	1978
	PVC	8	4,400	Linear Feet	1989
	PVC	8	6,920	Linear Feet	1992
	PVC	8	19,160	Linear Feet	1996
	CI	10	1,800	Linear Feet	1941
	VCP	10	6,300	Linear Feet	1941
	Unknown	10	500	Linear Feet	1941
	CI	10	900	Linear Feet	1942
	VCP	10	7,480	Linear Feet	1942

	Unknown	10	1,200	Linear Feet	1942
	VCP	10	650	Linear Feet	1957
	CI	10	1,300	Linear Feet	1960
	VCP	10	2,700	Linear Feet	1960
	Unknown	10	3,600	Linear Feet	1960
	PVC	10	90	Linear Feet	1965
	Unknown	10	1,200	Linear Feet	1965
	PVC	10	1,380	Linear Feet	1966
	PVC	10	770	Linear Feet	1971
	PVC	10	450	Linear Feet	1989
	PVC	10	410	Linear Feet	1992
	PVC	10	5,760	Linear Feet	1996
	VCP	12	5,750	Linear Feet	1941
	VCP	12	1,100	Linear Feet	1942
	VCP	12	1,850	Linear Feet	1966
	Unknown	12	5,310	Linear Feet	1971
	PVC	12	2,730	Linear Feet	1992
	Unknown	12	1,990	Linear Feet	1992
	PVC	12	7,670	Linear Feet	1996
	VCP	18	680	Linear Feet	1941
	PVC	18	6,675	Linear Feet	1992
	PVC	21	8,050	Linear Feet	1996
	VCP	24	2,610	Linear Feet	1941
	PVC	24	2,020	Linear Feet	1989
	PVC	27	570	Linear Feet	1980
Piping Total			362,265	Linear Feet	
Building Services			1808	Each	1941-2001
Manholes			1408	Each	1941-2001
Wastewater Lift/Pump Station 506	10 hp each pump		2 Pumps	One Station	1981
Wastewater Lift/Pump Station 884	5 hp each pump		2 pumps	One Station	--
Wastewater Lift/Pump Station 2228	10 hp each pump		2 Pumps	One Station	--
Wastewater Lift/Pump Station 2274	10 hp each pump		2 Pumps	One Station	1980
Wastewater Lift/Pump Station 2389	10 hp each pump		2 Pumps	One Station	1941
Wastewater Lift/Pump Station 3018	10 hp each pump		2 Pumps	One Station	1978
Wastewater Lift/Pump Station 4040	20 hp each pump		2 Pumps	One Station	1957
Wastewater Lift/Pump Station 4225	20 hp each pump		2 Pumps	One Station	1959
Wastewater Lift/Pump Station 4249	10 hp each pump		2 Pumps	One Station	1959
Wastewater Lift/Pump Station 4275	10 hp each pump		2 Pumps	One Station	1956
Wastewater Lift/Pump Station 4718	10 hp each pump		2 Pumps	One Station	1957
Wastewater Lift/Pump Station 4855	10 hp each pump		2 Pumps	One Station	1957
Wastewater Lift/Pump Station 5087	10 hp each pump		2 Pumps	One Station	1994
Wastewater Lift/Pump Station 5142	10 hp each pump		2 Pumps	One Station	1995
Wastewater Lift/Pump Station 5151	10 hp each pump		2 Pumps	One Station	1999
Wastewater Lift/Pump Station 5159	10 hp each pump		2 Pumps	One Station	--
Wastewater Lift/Pump Station 5160	15 hp each pump		2 Pumps	One Station	1967
Wastewater Lift/Pump Station 9055	10 hp each pump		2 Pumps	One Station	1960
Wastewater Lift/Pump Station 12339	5 hp each pump		2 Pumps	One Station	1997
Wastewater Lift/Pump Station 12701	2 hp each pump		2 Pumps	One Station	--
Wastewater Lift/Pump Station	15 hp each pump		2 Pumps	One Station	1989
Engineer School (3221)					
Wastewater Treatment Facility (Trickling Filters)			5.0	Million Gallons per day	1978 – 1992
Septic Systems			10	EA	1941 – 1992

## J02.2.2 Wastewater Collection System Non-Fixed Equipment and Specialized Tools Inventory

**Table 2** lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Contractor shall provide any and all equipment, vehicles, and tools, whether included in the purchase or not, to maintain a fully operating system under the terms of this contract.

Table 2

Spare Parts

Wastewater Collection System – Fort Leonard Wood

Qty	Item	Make/Model	Description	Remarks
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None.

Table 3

Specialized Equipment and Vehicles

Wastewater Collection System – Fort Leonard Wood

Description	Quantity	Location	Maker
1995 Sludge Truck; Make/Model – 2204M Sludge; Serial No. – 2200765; 2,200-gallon capacity; semi-flotation tires; deflector sludge bar	1	Department of Public Works	N/A
Meter, Oxygen, Dissolved	1	B. 185	YSI
pH Meter	1	B. 185	Hach
Meter, Specific pH	1	B. 185	Hach
Cabinet, Dessicator	1	B. 185	Buekl
Centrifuge, Rheostat	1	B. 185	Fisher
Centrifuge, Head	1	B. 185	Fisher
Muffle Furnace	1	B. 185	Sylvania
Drying Oven	2	B. 185	Fisher
Water Bath	1	B. 185	Fisher
Incubator, BOD	2	B. 185	RB
Spectrophotometer	1	B. 185	Hach
Cabinet, Storage, Flammable	1	B. 185	Eagle
Glassware, Lot	1	B. 185	Various
Reagents, Lot	1	B. 185	Various

### J02.2.3 Wastewater Collection System Manuals, Drawings, and Records Inventory

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

Table 4  
Manuals, Drawings, and Records  
Wastewater Collection System – Fort Leonard Wood

Qty	Item	Description	Remarks
			The installation maintains a limited collection of manuals, drawings and records on installed components of the wastewater collection system. The drawings are located in the library in Building 2201. This information or copies thereof will be transferred during the transition period.

### J02.3 Current Wastewater Collection Service Arrangements

There are no current service arrangements with any organization to provide wastewater collection or treatment service at the Fort.

### J02.4 Secondary Metering

The Fort may require secondary meters for internal billings of their reimbursable customers, utility usage management, and energy conservation monitoring. The Contractor shall assume full ownership and responsibility for existing and future secondary meters IAW Paragraph C.3.

#### J02.4.1 Existing Secondary Wastewater Collection Meters

**Table 5** provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings once a month for all secondary meters IAW Paragraph C.3 and J02.5 below.

Table 5  
Existing Secondary Meters  
Wastewater Collection System – Fort Leonard Wood

Meter Location:	Building Number	Description
None.		

#### J02.4.2 Required New Secondary Wastewater Collection Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. New secondary meters shall be installed IAW Paragraph C.13, Operational Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3 and J02.5 below.

Table 6  
New Secondary Meters  
Wastewater Collection System – Fort Leonard Wood

Meter Location	Meter Description
None.	

## J02.5 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following: Invoice (IAW Paragraph 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 the Contracting Officer's designee. (This information will be provided upon award.)

Outage Report. The Contractor's monthly outage report will be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall include the following information for Scheduled and Unscheduled outages:

**Scheduled:** Requestor, date, time, duration, facilities affected, feedback provided during outage, outage notification form number, and digging permit number. Digging Permits are required for all excavations over 6 inches in depth. Permits are available from the Work Management Branch, DPW, in Building 2200.

**Unscheduled:** Include date, time and duration, facilities affected, response time after notification, completion times, feedback provided at time of outage, specific item failure, probability of future failure, long term fix, and emergency digging clearance number. Outage reports shall be submitted by the 25<sup>th</sup> of each month for the previous month. Outage reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award.)

Meter Reading Report. The monthly meter reading report shall show the current and previous month readings for all secondary 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 the Contracting Officer's designee. (This information will be provided upon award.)

System Efficiency Report. If required by Paragraph C.3, the Contractor shall submit a system efficiency 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 the Contracting Officer's designee. (This information will be provided upon award.)

## J02.6 Infiltration and Inflow (I&I) Projects

There are currently no infiltration and inflow projects in development or execution.

## J02.7 Service Area

IAW Paragraph C.4, Service Area. The service area is defined as the boundaries of Fort Leonard Wood. The Fort generally lies south of N715,000, of the Missouri state plane system; north of the Texas/Pulaski County line; west of the Phelps/Pulaski County line, and east of the Laclede/Pulaski County line.

## J02.8 Off-Installation Sites

This package includes the Lake of the Ozarks Recreation Area (LORA), located about 50 miles north northwest of the Fort. The Lake of the Ozarks Recreation area is divided into North and South areas. There are also remote areas that are served by septic systems. These areas include all septic systems listed in **Table 13**. Paragraphs J02.2.2, "Wastewater Collection System Non-Fixed Equipment and Specialized Tools Inventory"; J02.2.3, "Wastewater Collection System Manuals, Drawings, and Records Inventory"; and J02.5, "Monthly Submittals" apply to all of the following off-installation sites. In addition, there are no secondary meters or infiltration and inflow projects at any of the following sites that have not already been listed.

Lake of the Ozarks – North (300 acres)

Lake of the Ozarks – South (59.3 acres)

### Lake of the Ozarks – North

This area is served by a lift station (Building 151) and a wastewater treatment facility on site.

Table 7

Fixed Inventory

Wastewater Collection System – Lake of the Ozarks – North

Item	Material	Size	Quantity	Unit	Approximate year installed
Gravity Pipe	PVC	6 inch	8,807	LF	1992
Piping Total			8,807	LF	1992
Building Services			62	EA	1992
Manholes			39	EA	1992
Wastewater Lift/Pump Station 151		5 hp each pump	2 pumps	One station	1961
Wastewater Treatment Facility		0.03		MGD	1997

### Lake of the Ozarks – South

This area is served by two lift stations on site (Buildings 610 and 615) and a wastewater lagoon.

Table 8  
Fixed Inventory  
Wastewater Collection System – Lake of the Ozarks – South

Item	Material	Size	Quantity	Unit	Approximate year installed
Force Main	Steel	2 inch	300	LF	1961
Gravity Pipe	Unknown	6 inch	150	LF	1961
Gravity Pipe	Unknown	8 inch	1,800	LF	1961
Piping Total			2,250	LF	
Building Services			2	EA	1961
Manholes			3	EA	1961
Wastewater Lift/Pump Station 610		5 hp each pump	1 pump	One station	1961
Wastewater Lift/Pump Station 615		5 hp each pump	2 pumps	One station	1961
Wastewater Lagoon		0.0025		MGD	1961

**Abbreviations:**

PVC = Polyvinyl Chloride

LF = Linear Feet

EA = Each

MGD = Million Gallons per Day

## J02.9 Specific Transition Requirements

IAW Paragraph C.13, Operational Transition Plan. **Table 9** lists service connections and disconnections required upon transfer, and **Table 10** lists the improvement projects required upon transfer of the Fort Leonard Wood wastewater system.

Table 9  
Service Connections and Disconnections  
Wastewater Collection System – Fort Leonard Wood

Location	Description
None.	

Table 10  
System Improvement Projects  
Wastewater Collection System – Fort Leonard Wood

Location	Description	Year of Completion
800 Motor Pool Lift Station	Rehabilitate full station	2005
Lake of the Ozarks – South, Pump Stations	Rehabilitate stations	2003
1200 area	Replace sewer mains	2009
2200 and 2300 areas	Replace sewer mains	2008
Lake of the Ozarks – South, Sewer Lines	Replace sewer mains	2003

## J02.10 Wastewater Collection System Points of Demarcation

The point of demarcation is defined as the point on the wastewater collection pipe where ownership changes from the Grantee to the building owner. The table below identifies the general locations of these points with respect to the building served.

Table 11  
Points of Demarcation  
Wastewater Collection System – Fort Leonard Wood

Point of Demarcation	Applicable Scenario	Sketch
The point of demarcation is 5 feet away from the exterior of the structure or to a point beyond the cleanout whichever is closer to the building.	All scenarios.	
The point of demarcation is 5 feet away from the exterior of the structure or to a point beyond the cleanout whichever is closer to the building.	All scenarios.	

### J02.10.1 Unique Points of Demarcation

The following table lists anomalous points of demarcation that do not fit any of the above scenarios.

Table 12  
Unique Points of Demarcation  
Wastewater Collection System – Fort Leonard Wood

Building No.	Point of Demarcation Description
None.	

## J02.11 Wastewater Treatment Plants

The following table lists all wastewater treatment plants.

Table 13

### Wastewater Treatment Plants

#### Wastewater Treatment System – Fort Leonard Wood

Description	Facility #	State Coordinates	Other Information
Trickling Filter Treatment Plant 5 MGD	180 - 199	N 710,900 E 613,000	NPDES Permit Number MO0029742
Wastewater Treatment, Lake of the Ozarks – North (30,000 gpd)			NPDES Permit Number MO0029769
Wastewater Treatment, Lake of the Ozarks – North (2,500 gpd)			NPDES Permit Number MO0029777
Septic System	2282		1969
Septic System	5282		1977
Septic System	5660		1980
Septic System	10200		1984
Septic System	10221		1992
Septic System	10250		1941
Septic System	10300		1966
Septic System	10320		1966
Septic System	10330		1966
Septic System	TA 236		Unknown

\*There may other septic systems located around the Fort that have not been listed here but would be included in scope of utilities to be maintained by the Offerors.

## J02.12 Utility Response

Service and Trouble calls. The Utility's 24-hour Service Office telephone number will be made available to key offices on the Installation. The Government office(s) responsible for coordinating service, trouble, and emergency calls will contact the Utility's Service Office to report any problems, outages, leaks, overflows, or request other service. Restoration of service shall be coordinated with the Government Office reporting the problem or service and person(s) responsible for the building or facility. Once work has started the work has to be continued to completion.

Scheduled Water/Wastewater Outages. Utility requests for scheduled outages shall be coordinated with the Directorate of Public Works and the facility manager/user five (5) working days prior to the scheduled outage. All reasonable effort will be made to minimize the facilities affected and the duration of the outage. The Government reserves the right to either disapprove a scheduled outage or to cancel at any time, before or during, a scheduled outage if such outage might adversely affect Government missions and operations. In the event of such disapproval or cancellation, the parties will coordinate a mutually acceptable alternative time for the scheduled outage. The Government may require the alternative time for the scheduled outage to be outside of normal working hours.

Emergency Work Directives during Normal Working Hours (7:30 a.m. - 4:30 p.m., Monday through Friday, excluding holidays). The Utility shall respond to emergency work directives and begin to work the problem within sixty (60) minutes of the report of the occurrence.

Emergency Work Directives (Outside of normal working hours). The Utility shall be able to respond to a emergency work directive outside of normal working hours and begin work on the problem within one hundred and twenty (120) minutes of the report of the occurrence. The Utility shall have in place a mechanism, a means, or procedure by which Fort Leonard Wood's DPW personnel can quickly notify the Utility of the emergency work. If there is an order of preference of phone numbers/Utility personnel to call, the Utility shall clearly define that precedence.

Routine Work Directives. The Utility shall respond to Routine Work Directives within 72 hours.