5.8 WRANGLER ESTATES LINE

The Wrangler Estates Line may provide service to two potential participants in the probable study boundary: Wrangler Estates and Buckskin Meadows Subdivision. The first segment delivers water to Wrangler Estates (see Mapbook "Wrangler Estates Line 1") and the second segment delivers water to Buckskin Meadows Subdivision (see Mapbook "Wrangler Estates Line 2").

The proposed Wrangler Estates Line has one tap on the existing 12-inch City distribution system pipeline located near the intersection of North Gurley Avenue and Kluver Road and one 6-inch tee at the existing 4-inch and 6-inch loop on PJ Road about half a mile east of Little Powder River Road.

5.8.1 WRANGLER ESTATES LINE 1

WRANGLER ESTATES

This system is located north of the Gillette city limits. Wrangler Estates does not have individual water meters for its customers and they disinfect their water using chlorine gas.

The returned inventory form provided the following information about Wrangler Estates. This system is a privately owned public utility which is reported to be in good condition and is five years old. Water is also provided to three shops which are on lots zoned commercial. This system has standby power; a generator is located at 3350 Little Powder River Rd, but does not provide fire protection. This system needs to increase the well production capability and replace well No. 2, so either well of the two can produce peak water demand. A flat rate of $60.00 per month is charged for water service on this system. Table 42 presents the existing water system summary for Wrangler Estates from the inventory form (Appendix E). Figures 67 through 70 are photos of the existing pump station, tanks, and wells.

When asked, the board members governing this system would not like a regional system to take over the system operation. They would possibly be interested in a raw water purchase. Their preferred management structure for a regional system is a private/public utility. Board members stated that cost and water quality would limit their participation in a regional system. This system does not currently have any water quality concerns.

TABLE 42 WRANGLER ESTATES EXISTING SYSTEM SUMMARY

Tanks	**Volume (gallons)**	
1	65,750	
2	65,750	
Well	**Production Rate (gpm)**	
1	65	
2	35	
Number of Existing Water Taps	**Number of Planned Future Water Taps**	
87	99	
Annual Water Usage (gallons)	**Peak Day Summer Usage (gallons)**	**Peak Day Winter Usage (gallons)**
18,236,671	155,000	25,000
Operating Pressure (psi)	**Optimum Operating Pressure (psi)**	
45-70	60	

FIGURE 67 **WRANGLER ESTATES PUMP STATION**

FIGURE 68 **WRANGLER ESTATES PUMP STATION AND TANKS**

FIGURE 69 **WRANGLER ESTATES WELL #1**

FIGURE 70 **WRANGLER ESTATES WELL #2**

The system may be connected to the City's distribution system by the Wrangler Estates Line (see Mapbook "Wrangler Estates Line 1" - Sheets 1 to 4). One 8-inch connection of approximately 6,030 ft of dedicated and 6,170 ft of shared waterlines would provide service to the existing tanks. A service isolation valve would be provided on the connection line and a standard master meter and altitude valve would be required. Table 43 summarizes the future connection requirements.

TABLE 43 WRANGLER ESTATES FUTURE CONNECTION SUMMARY

Class of Service	
Interim:	**Future:**
Class D	Class E
Delivery Requirements	
Connection Size: 8-inch	
Average Day Demand:	**Peak Day Average Demand:**
25 gpm	110 gpm
Preferred Delivery Point	
Connection to:	**Estimated Pressure at Delivery Point:**
Existing Storage Tanks	115 psi (reduced by Altitude Valve into Tank)
Infrastructure Needs to Establish Connection	
Service isolation valve, standard master meter, altitude valve, and approximately 6,030 feet of dedicated 8-inch pipe.	

5.8.2 WRANGLER ESTATES LINE 2

Wrangler Estates Line 2 provides a connection to one potential participant: Buckskin Meadows Subdivision. The line is along the future alignment of the Northern Drive Phase II project currently planned by Campbell County and this line should be coordinated with the project to avoid alignment and easement issues.

BUCKSKIN MEADOWS SUBDIVISION

This system is located just north of the Gillette city limits, east of Little Powder River Road. The Buckskin Meadows Subdivision is a new system with only one existing tap. A 25 gpm well was drilled and there are plans to build residential housing at this location but no additional development has occurred to date. There is no evidence that their water is being disinfected. Table 44 presents the existing water system summary for Buckskin Meadows Subdivision from the inventory form (Appendix E). Figure 71 is a photo of the existing well.

TABLE 44 BUCKSKIN MEADOWS SUBDIVISION EXISTING SYSTEM SUMMARY

Tanks	**Volume (gallons)**	
None	0	
Well	**Production Rate (gpm)**	
1	25	
Number of Existing Water Taps	**Number of Planned Future Water Taps**	
1	7	
Annual Water Usage (gallons)	**Peak Day Summer Usage (gallons)**	**Peak Day Winter Usage (gallons)**
Not Given	Not Given	Not Give
Operating Pressure (psi)	**Optimum Operating Pressure (psi)**	
Not Given	Not Given	

FIGURE 71 **BUCKSKIN MEADOWS SUBDIVISION WELL**

The system may be connected to the City's distribution system by the Wrangler Estates Line (see Mapbook "Wrangler Estates Line 2" – Sheet 1). Since there is no existing tank, a new tank with recommended volume of 36,000 gallons would be required as the delivery point. In addition, a new 50 gpm package pump station and chlorine boosting station would be required. One 6-inch connection of approximately 3,000 ft of dedicated and 4,000 ft of shared waterlines would provide service to the new tank. A service isolation valve would be provided on the connection line and a standard master meter and altitude valve would be required. Table 45 summarizes the future connection requirements.

TABLE 45 BUCKSKIN MEADOWS SUBDIVISION FUTURE CONNECTION SUMMARY

Class of Service	
Interim:	**Future:**
Class D	Class E
Delivery Requirements	
Connection Size: 6-inch	
Average Day Demand:	**Peak Day Average Demand:**
5 gpm	10 gpm
Preferred Delivery Point	
Connection to:	**Estimated Pressure at Delivery Point:**
New Storage Tank	100 psi (reduced by Altitude Valve into Tank)
Infrastructure Needs to Establish Connection	
Service isolation valve, standard master meter, altitude valve, 36,000 gallon storage tank, 50 gpm package pump station, and approximately 3,000 feet of dedicated 6-inch pipe.	