5.12 GREEN VALLEY LINE

The Green Valley Line may provide service to three potential participants in the possible service boundary: RAG Coal West, Inc./Rawhide School, Glory Hole Homeowners Association, and Green Valley Estates Improvement & Service District. The proposed Green Valley Line is fed from the Airport Line north of the Campbell County Airport connection (see Mapbook "Green Valley Line").

The Green Valley Line could provide service to another potential participant, Pine Butte Ranchettes. A tap and isolation valve was provided for potential future connection to Pine Butte Ranchettes (see Mapbook "Green Valley Line" Sheet 17).

RAG COAL WEST INC/RAWHIDE SCHOOL

This system is located to the north of the Gillette city limits. An inventory form was not completed for Rag Coal West Inc/Rawhide School so limited information is available about the system. This system appears to be in good repair. There are two wells providing water to one tank in the system. An existing pump station provides service pressure from the storage tank to the distribution system. Table 74 presents the known existing water system summary for Rag Coal West Inc/Rawhide School. Figures 124 through 127 are photos of the existing pump station, tank, and wells.

TABLE 74 RAG COAL WEST INC / RAWHIDE SCHOOL EXISTING SYSTEM SUMMARY

Tank	**Volume (gallons)**	
1	Unknown	
Well	**Production Rate (gpm)**	
2	Unknown	
Number of Existing Water Taps	**Number of Planned Future Water Taps**	
Unknown	Unknown	
Annual Water Usage (gallons)	**Peak Day Summer Usage (gallons)**	**Peak Day Winter Usage (gallons)**
Unknown	Unknown	Unknown
Operating Pressure (psi)	**Optimum Operating Pressure (psi)**	
Unknown	Unknown	

FIGURE 124 **RAG COAL WEST INC/RAWHIDE SCHOOL PUMP STATION**

FIGURE 125 **RAG COAL WEST INC/RAWHIDE SCHOOL PUMP STATION AND TANK**

FIGURE 126 **RAG COAL WEST INC/RAWHIDE SCHOOL WELL #1**

FIGURE 127 **RAG COAL WEST INC/RAWHIDE SCHOOL WELL #2**

The system may be connected to the Airport Line by the Green Valley Line (see Mapbook "Green Valley Line" – Sheets 1 to 6). One 6-inch connection of approximately 1,300 ft of dedicated and 18,100 ft of shared waterlines would provide service to the existing tank. A service isolation valve would be provided on the connection line and a standard master meter and altitude valve would be required. No existing disinfection facilities have been inventoried; therefore a new chlorine booster station would be required at the existing pump station. Table 75 summarizes the future connection requirements. The interim class of service has been defined as Class A because Rag Coal West Inc / Rawhide School are located outside the probable service boundary established in the Master Plan. The Green Valley Line may not be built until much later than other Lines.

TABLE 75 RAG COAL WEST INC / RAWHIDE SCHOOL FUTURE CONNECTION SUMMARY

Class of Service	
Interim:	**Future:**
Class A	Class E
Delivery Requirements	
Connection Size: 6-inch	
Average Day Demand:	**Peak Day Average Demand:**
3 gpm	10 gpm
Preferred Delivery Point	
Connection to:	**Estimated Pressure at Delivery Point:**
Existing Storage Tank	70 psi (reduced by Altitude Valve into Tank)
Infrastructure Needs to Establish Connection	
Service isolation valve, standard master meter, altitude valve, chlorine booster station, and approximately 1,300 feet of dedicated 6-inch pipe.	

GLORY HOLE HOMEOWNERS ASSOCIATION

This system is located north of the Gillette city limits. Glory Hole Homeowners Association does not have individual water meters for customers. They have collected water quality data that is available.

The returned inventory form provided the following information about Glory Hole Homeowners Association. A local Homeowners association governs this system, reported to be in good condition. An existing pump station provides service pressure from the storage tank to the distribution system. This system does not have standby power, and does not provide fire protection. The largest issues this system faces are the need for a water storage tank and possible easement issues. Table 76 presents the known existing water system summary for Glory Hole Homeowners Association. Figures 128 through 130 are photos of the existing pump station, tank, and well.

When asked, the board of this system was unsure if they would prefer a regional system to take over the operation of their system.

TABLE 76 GLORY HOLE HOMEOWNERS ASSOCIATION EXISTING SYSTEM SUMMARY

Tank	**Volume (gallons)**	
0	0	
Well	**Production Rate (gpm)**	
1	Not given	
Number of Existing Water Taps	**Number of Planned Future Water Taps**	
24	Not given	
Annual Water Usage (gallons)	**Peak Day Summer Usage (gallons)**	**Peak Day Winter Usage (gallons)**
3,194,000	21,097	4,581
Operating Pressure (psi)	**Optimum Operating Pressure (psi)**	
Not given	Not given	

FIGURE 128 **GLORY HOLE HOMEOWNERS ASSOCIATION PUMP STATION**

FIGURE 129 **GLORY HOLE HOMEOWNERS ASSOCIATION PUMP STATION**

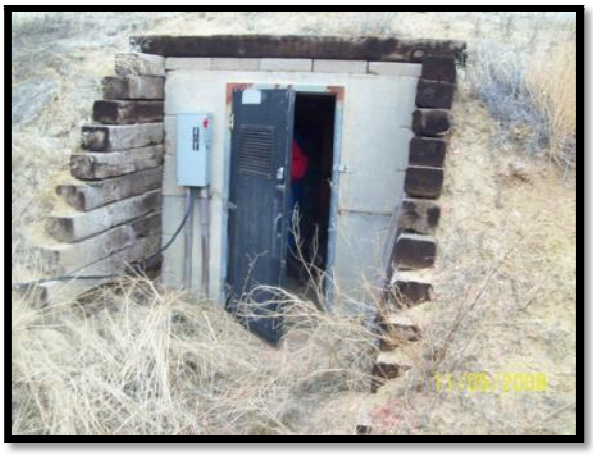

FIGURE 130 **GLORY HOLE HOMEOWNERS ASSOCIATION WELL**

The system may be connected to the Airport Line by the Green Valley Line (see Mapbook "Green Valley Line" – Sheets 1 to 16). One 6-inch connection of approximately 2,200 ft of dedicated and 45,400 ft of shared waterlines would provide service to a new recommended 25,000 gallon storage tank. A service isolation valve would be provided on the connection line and a standard master meter and altitude valve would be required. No existing disinfection facilities have been inventoried; therefore a new chlorine booster station would be required at the existing pump station. Table 77 summarizes the future connection requirements. The interim class of service has been defined as Class A because Glory Hole Homeowners Association is located outside the probable service boundary established in the Master Plan. The Green Valley Line may be built much later than other Lines.

TABLE 77 GLORY HOLE HOME OWNERS ASSOCIATION FUTURE CONNECTION SUMMARY

Class of Service	
Interim:	**Future:**
Class A	Class E
Delivery Requirements	
Connection Size: 6-inch	
Average Day Demand:	**Peak Day Average Demand:**
6 gpm	15 gpm
Preferred Delivery Point	
Connection to:	**Estimated Pressure at Delivery Point:**
New 25,000 Gallon Storage Tank	45 psi (reduced by Altitude Valve into Tank)
Infrastructure Needs to Establish Connection	
Service isolation valve, standard master meter, altitude valve, chlorine booster station, 25,000 gallon storage tank and approximately 2,200 feet of dedicated 6-inch pipe.	

GREEN VALLEY ESTATES IMPROVEMENT & SERVICE DISTRICT

This system is located north of the Gillette city limits. Green Valley Estates does not have individual water meters for customers and disinfects their water using sodium hypochlorite. They have collected water quality data that is available.

The returned inventory form provided the following information about Green Valley Estates Improvement & Service District. A local Improvement & Service District governs this system which is reported to be in good condition and provides fire protection. An existing pump station provides service pressure from the storage tank to the distribution system. This system does not have standby power but can be gravity fed from the storage tank during power failure. All users of this system are residential. Supply is the largest issue that the system faces. Table 78 presents the existing water system summary for Green Valley Estates Improvement & Service District. Figures 131 through 134 are photos of the existing pump station, tank, and well.

TABLE 78 GREEN VALLEY ESTATES IMPROVEMENT & SERVICE DISTRICT EXISTING SYSTEM SUMMARY

Tank	**Volume (gallons)**	
1	150,000	
Well	**Production Rate (gpm)**	
1	80	
Number of Existing Water Taps	**Number of Planned Future Water Taps**	
22	Not given	
Annual Water Usage (gallons)	**Peak Day Summer Usage (gallons)**	**Peak Day Winter Usage (gallons)**
9,879,000	73,903	8,677
Operating Pressure (psi)	**Optimum Operating Pressure (psi)**	
20	Not given	

FIGURE 131 **GREEN VALLEY ESTATES IMPROVEMENT & SERVICE DISTRICT PUMP STATION**

FIGURE 132 **GREEN VALLEY ESTATES IMPROVEMENT & SERVICE DISTRICT PUMP STATION**

FIGURE 133 **GREEN VALLEY ESTATES IMPROVEMENT & SERVICE DISTRICT TANK**

FIGURE 134 **GREEN VALLEY ESTATES IMPROVEMENT & SERVICE DISTRICT WELL**

The system may be connected to the Airport Line by the Green Valley Line (see Mapbook "Green Valley Line" – Sheets 1 to 17). One 6-inch connection of approximately 7,500 ft of dedicated and 45,400 ft of shared waterlines would provide service to the existing storage tank. A service isolation valve would be provided on the connection line and a standard master meter and altitude valve would be required. Table 79 summarizes the future connection requirements. The interim class of service has been defined as Class A because Green Valley Estates Improvement & Service District is located outside the probable service boundary established in the Master Plan. The Green Valley Line may be built much later than other Lines. The future class of service would not include fire protection because of the distance from the City's distribution system to Green Valley Estates. Fire protection may continue to be supplied locally using existing storage.

TABLE 79 GREEN VALLEY ESTATES IMPROVEMENT & SERVICE DISTRICT FUTURE CONNECTION SUMMARY

Class of Service	
Interim:	**Future:**
Class A	Class E
Delivery Requirements	
Connection Size: 6-inch	
Average Day Demand:	**Peak Day Average Demand:**
20 gpm	50 gpm
Preferred Delivery Point	
Connection to:	**Estimated Pressure at Delivery Point:**
Existing Storage Tank	50 psi (reduced by Altitude Valve into Tank)
Infrastructure Needs to Establish Connection	
Service isolation valve, standard master meter, altitude valve, and approximately 7,500 feet of dedicated 6-inch and 8-inch pipe.	