

3.0 Past, Present, and Reasonably Foreseeable Development

EOR projects using CO₂ not only would require additional transportation pipelines, but also additional field infrastructure including CO₂ delivery pipelines, collection pipelines, and compressors. In order to provide CO₂, just a few of the potential fields would require 100 to 200 hundred miles of new pipeline just by looking at the distances of candidate fields from the CO₂ pipeline terminus at Salt Creek. Most likely, disturbance from added infrastructure would be minimal since pipelines and compressors most likely would be placed in previously disturbed areas (roads and central processing facilities) (BLM 2001).

3.8.3 Data Sources

Information on major natural gas transportation pipelines was derived from FERC web site data, BLM documents, and published sources.

3.8.4 Assumptions

In addition to the information obtained in the identified data sources, the following assumptions were used to define specific impact-causing parameters for pipelines:

Past and Present Development:

- Present pipeline capacity out of the PRB is 1.9 BCF per day, and daily production is up to 1 BCF.
- It is assumed that existing pipeline rights-of-way have a disturbance width of 50 feet, which conservatively accounts for access roads, ground-disturbing maintenance activities, and permanent facilities (e.g., compressor stations, valves, etc.) located at intervals along the rights-of-way.
- In the study area, there are 2,622 miles of natural gas transportation pipelines, 906 miles of crude oil pipelines, 210 miles of petroleum product pipelines, and 37 miles of CO₂ pipeline.

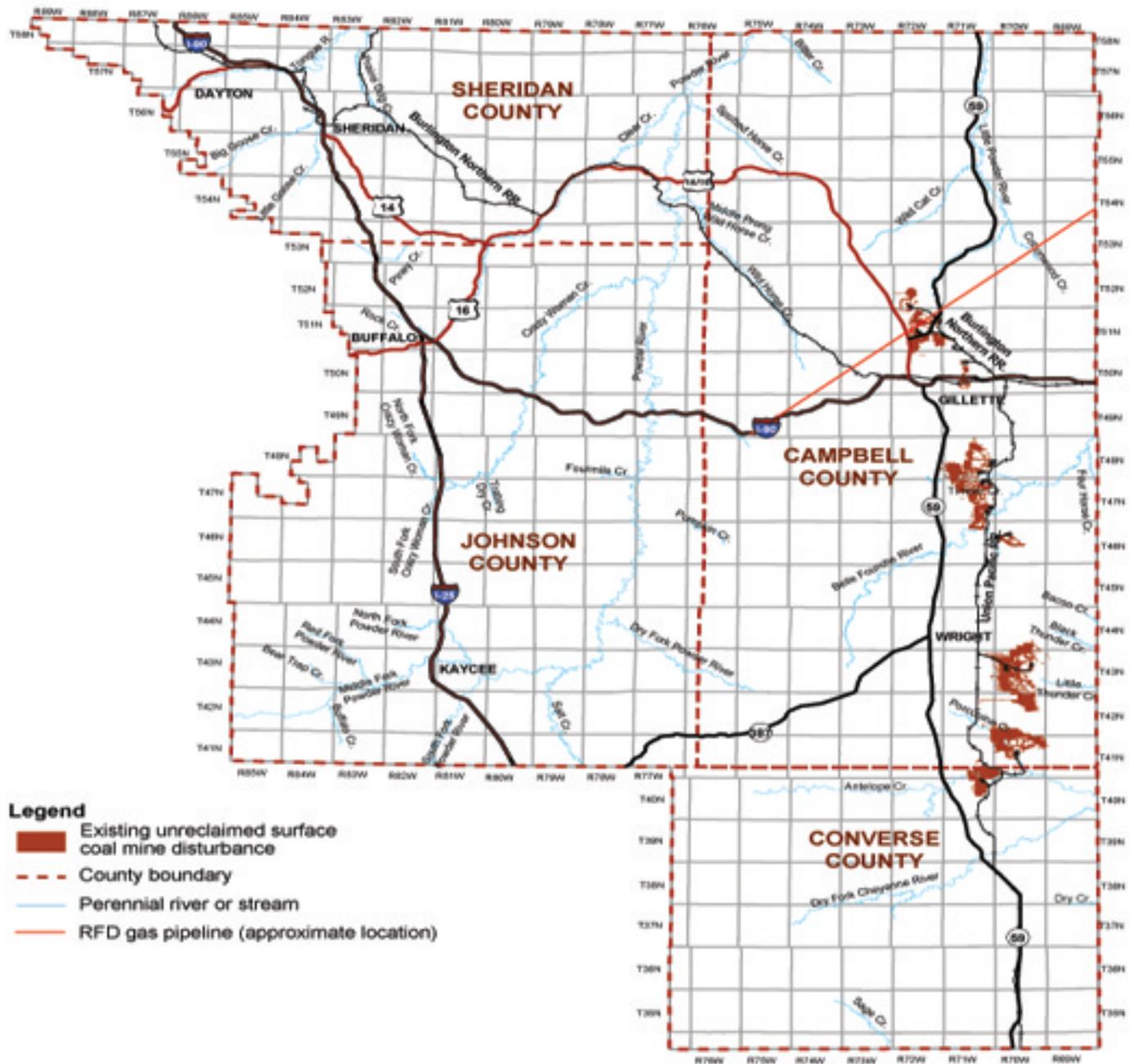
RFD:

- Any new major transportation pipelines would incur a disturbance area based on an average construction right-of-way width of 100 feet during the year of construction. It is assumed that in subsequent years there would be a potential right-of-way disturbance width of 50 feet, which conservatively accounts for access roads, ground-disturbing maintenance activities, and permanent facilities (e.g., compressor stations, valves, etc.) located at intervals along the rights-of-way.

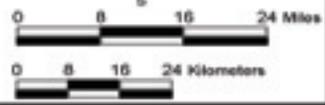
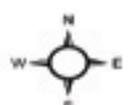
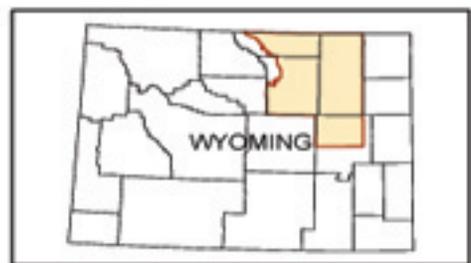
3.9 Refineries

3.9.1 Past and Present Development

There are no existing petroleum refineries in the Wyoming PRB study area.



- Legend**
- Existing unreclaimed surface coal mine disturbance
 - County boundary
 - Perennial river or stream
 - RFD gas pipeline (approximate location)



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Powder River Basin Coal Review
 Figure 3-7
 RFD Major Pipelines

Source: Debraus 2002; FERC 2004

3.9.2 Reasonably Foreseeable Development

No plans for the construction and operation of any petroleum refineries in the Wyoming portion of the PRB have been identified.

3.9.3 Data Sources

Data sources that were reviewed for potential information relative to refineries in the Wyoming PRB study area included databases maintained by the USDOE, Energy Information Administration and input from the CCEDC and Wyoming Business Council.

3.9.4 Assumptions

There are no assumptions relative to refineries.

3.10 Reservoirs and Other Water Developments

Reservoirs in the PRB study area were identified based on the Powder/Tongue River Basin Water Plan (HKM et al. 2002a) and Northeast Wyoming River Basins Water Plan (HKM et al. 2002b). These plans, which encompass the PRB study area, were prepared for the Wyoming Water Development Commission for their Basin Planning Program. The plans identified the key water supply reservoirs (generally 1,000 acre-feet or greater) in these basins; industrial ponds and impoundments were not addressed in the plans.

Industrial ponds or impoundments associated with mining and CBNG development occur within the study area. For purposes of this study, impoundments associated with coal mining activity have been accounted for in the mine-related disturbance areas. The disturbance area associated with CBNG-related impoundments has been factored in on a per well basis as discussed in Appendix B. As of 2000, there were a total of 1,976 stock water ponds in the study area (BLM 2003a); however, based on the assumed low overall associated acreage per subwatershed, they have been eliminated from further analysis.

3.10.1 Past and Present Development

Currently, there are 14 key water storage reservoirs in the Powder/Tongue River Basin and 5 key water storage reservoirs in the Northeast Wyoming River Basins (HKM Engineering et al. 2003a,b). Three of the key water storage reservoirs located in the Powder/Tongue River Basin planning area (Healy, Lake Desmet, and Muddy Guard No. 2) and two of the key water storage reservoirs in the Northeast Wyoming River Basins planning area (Gillette and Betty No. 1) occur in the Wyoming PRB study area (**Figure 3-4**). These reservoirs provide for irrigation water and recreational activities.