

3.0 Past, Present, and Reasonably Foreseeable Development

3.5.3 Data Sources

Information relative to RFD transmission line projects was based on new power plant project information contained in trade journals and newspaper publications. This information was not explicit relative to supporting infrastructure; however, since power plant and transmission line projects are interrelated, it provided a reasonable basis for the conclusions on RFDs in this section.

3.5.4 Assumptions

No assumptions relative to transmission lines have been identified for this study.

3.6 Other Mines

3.6.1 Past and Present Development

Past and present uranium, sand, gravel, bentonite, clinker, and scoria mines also exist in the Wyoming PRB study area. There are three defined uranium districts in the PRB, including Pumpkin Buttes, Southern Powder River, and Kaycee (BLM 2003a). Numerous uranium mining sites occurred in these districts, but they were mined out or uneconomic. Uranium currently is produced via the in situ leach method in the Southern Powder River district at Smith Ranch and Highland/Morton Ranch (Harris 2003) (**Figure 3-4**).

There are several bentonite localities in the PRB study area, and bentonite is mined at Kaycee (Wyoming Mining Association 2004) (**Figure 3-4**).

The more important aggregate mining localities are in Johnson and Sheridan counties (U.S. Geological Survey [USGS] 2003). The largest identified aggregate operation is located in the Lighting Creek subwatershed. It has an associated total disturbance area of approximately 67 acres, of which 4 acres have been reclaimed. The remainder of the identified operations are relatively small (less than 5 acres each) and are scattered throughout Campbell and Converse counties.

Scoria or clinker (which is formed when coal beds burn and the adjacent rocks become baked) is used as aggregate where alluvial gravel or in-place granite/igneous rock is not available. Scoria generally is mined in the Converse and Campbell counties portion of the Wyoming PRB study area.

For purposes of this study, the smaller operations are not considered further in this study due to the lack of information relative to their specific locations and the low overall associated acreage (approximately 100 acres), which per subwatershed would be minimal.

3.6.2 Reasonably Foreseeable Development

Increased sand, gravel, and scoria production and associated surface disturbance are anticipated in the Wyoming PRB study area in the future. The likelihood of increased production of these materials is high, as aggregate would be required for road maintenance and new construction

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activities. As other primary resources (e.g., coal and oil and gas) are developed, aggregate would need to be produced to support these ongoing activities. New quarries and increased production from existing operations are expected. It is anticipated that these operations would vary in size based on the immediate need from the primary industries. However, based on the lack of specific information relative to related impact-causing parameters, these activities are not analyzed further in this analysis.

Based on current commodity forecasts as of June 2004, no specific uranium mine development is anticipated in the Wyoming PRB study area. Although some claims have been staked since that time, they are primarily land position plays with no specifically defined projects. As a result, RFD uranium mining has been eliminated from further consideration in this study.

It is assumed that bentonite mining would continue throughout the study period. It is anticipated that production would continue from existing active mines, with no new mines developed through 2020.

3.6.3 Data Sources

The information for past, present, and RFD sand, gravel, scoria, and uranium operations was obtained from public information available through WDEQ. Where operations are large enough to file annual reports, acreages of disturbance and reclamation were tabulated. Information relative to bentonite mines was based on WDEQ/LQD permit information and annual reports.

3.6.4 Assumptions

In addition to the information obtained from the identified data sources, the following assumptions were used to define specific impact-causing parameters for sand, gravel, scoria, and uranium mines:

Past and Present Development: No assumptions relative to past and present sand, gravel, scoria, or uranium mines have been identified.

RFD:

- It is assumed that growth in demand for aggregates for use as construction materials would occur, while growth in demand for uranium may not occur.

3.7 Oil and Gas

3.7.1 Past and Present Development

3.7.1.1 Conventional Oil and Gas

Early oil exploration in the PRB was based on direct evidence of surface seeps or drilling anticlinal structures that were exposed on the surface. Oil was first produced from the PRB in 1887 from the Newcastle Formation on the east side of the basin near Moorcroft, Wyoming (MacGregor 1972). In 1889, oil seeps led to the discovery of oil production at Shannon Field on the north end of the Salt