

- Producing impacts maps that graphically illustrate both the location and magnitude of potential resource impacts.
- Developing and producing tabular impact data reports that describe the resources crossed, and the location and magnitude of potential impacts along the assumed centerline of alternative transmission line routes.
- Summarizing and comparing alternative routes for documenting impacts along each route, and selection of NorthWestern's preferred route.

The Townsend Substation, Mill Creek Substation (for location of the phase shifter), the expansion of the Midpoint Substation, and communication facilities were also evaluated during the environmental studies (refer to Chapters 3 and 4, and the appendices). Please refer to the complete project description in this chapter for the requirements of the communication facilities.

The proposed project's purpose and need statement (refer to Chapter 1), public issues, and agency concerns guided identification and evaluation of alternatives. An environmental study process was developed and implemented to ensure a systematic, uniform, and defensible framework for identifying, assessing, and comparing alternative routes for the proposed transmission line (also refer to Volume IV - Regional Study Report for documentation of the regional siting study).

The access and construction requirements determined the amount of potential ground disturbance (i.e., constructing new roads or improving existing roads, spur roads from existing roads, material and equipment staging areas, pulling and tensioning sites, and construction work areas around each structure site). Access level models estimate the ground disturbance (temporary and permanent) for these areas affected by the construction and operation activities (refer to Table 2-2 and Appendix D for a description of the estimated disturbance levels). Vegetation removal requirements were also considered.

The preferred location criteria for electric transmission lines listed in Circular MFSA-2 Section 3.1 were considered in the route alternatives evaluation process and in the elimination of some route alternatives and in the identification of the three alternative routes in Montana. A description of how each of the preferred location criteria were factored into the identification and selection of the three route alternatives is provided below:

(1)(a) where there is the greatest potential for general local acceptance of the facility: *Several adjustments, modifications and additions to alternatives routes were made following the regional siting study and during detailed corridor studies. Once the detailed corridor studies began in April 2007, the public outreach program began with public meetings and elected official briefings. In June 2007, a public meeting was held in Ennis, and it was determined that public opposition to the line was intense. In addition, much of the Madison River valley is blocked with conservation easements. In October 2007, the decision was made by NorthWestern to eliminate route alternatives in the Madison River valley, the Centennial River valley, between Ennis and Dillon and south of Dillon along the Blacktail Deer Creek valley because of public opposition. Also in May 2008, the routes between the southern Elkhorn Mountain area to Pipestone through the Boulder River valley and the Hadley Park area were eliminated due to public opposition and rugged terrain.*

Once these routing alternatives were eliminated the POWER study team evaluated the environmental consequences for each of the remaining route alternatives based on the residual impact assessment

results(i.e. after specifically recommended mitigation measures), specific resources preferences and agency and public comments received during the agency and public outreach program from April 2007 to May 2008. The impacts were evaluated and the least impact and most publically acceptable route alternatives were identified by the team. This resulted in three alternative routes between Townsend and Mill Creek and three alternative routes between Mill Creek and the Montana/Idaho border.

(1)(b) where they utilize or parallel existing utility and/or transportation corridors

The three route alternatives from Townsend to Mill Creek utilized or paralleled existing utility corridors. Alternative A-1 Preferred Route paralleled an existing 230kV and 161kV corridor for much of its length. Alternative A-2 Parallel Colstrip Line Route paralleled the existing double circuit 500kV Colstrip line. Alternative A-3 Maximize Utility Corridors utilized an existing 100kV line corridor, an existing 161kV and 230kV corridor and paralleled the I-90 transportation corridor. The three route alternatives from Mill Creek to State line also utilized or paralleled existing utility corridors. Alternative B-1 Preferred Route generally paralleled an existing 161kV line and the I-15 highway corridor. Alternative B-2 Sheep Creek Route ran south of Melrose parallel to and on the west side of an existing 230kV transmission line. Alternative B-3 I-15 Route follows an existing 161kV line and the west side of the I-15 highway corridor.

(1)(c) to allow for selection of a location in nonresidential areas

The alternative routes avoided to maximum extent possible existing residential areas and lands within incorporated boundaries. The area south of Butte which is common to the A-1 Preferred route and A-3 Maximize Utility Corridors is in close proximity to residential areas

(1)(d) on rangeland rather than cropland and on non-irrigated or flood irrigated land rather than mechanically irrigated land

Agricultural and pasture land was ranked high sensitivity and was avoided to the maximum extent possible in the selection of the alternatives. Several parcels of center-pivot irrigated lands are crossed in Alternative A2 Parallel Colstrip Lines Route and in Alternative B1 Preferred Route southwest of Dillon. Also in Alternative B-3 I-15 Route, near Dell a small portion of center pivot irrigated land would be crossed.

(1)(e) in logged areas rather than undisturbed forest, in timbered areas

The identification of the alternative routes tended to follow existing utility corridors and existing road and highway corridors and the lower foothills in less rugged terrain. The only exception is in Alternative A2 Parallel Colstrip Line where the route west past Comet crosses through forested lands of the Beaverhead-Deerlodge National Forest

(1)(f) in geologically stable areas with non-erosive soils in flat or gently rolling terrain

Known landslide areas were avoided and slopes greater than 20% were considered high sensitivity and avoided where possible in the selection of the alternatives. Most of the alternatives crossed small portions of soils with the potential for water erosion, however it was determined that implementation of recommendations following pre-construction geologic investigations would result in no or low impact.

(I) (g) in roaded areas where existing roads can be used for access to the facility during construction and maintenance

Proximity to existing roads that could be utilized for construction and operation access was maximized. The identification of the alternative routes tended to follow existing utility corridors and existing road and highway corridors and the lower foothills in less rugged terrain.

(I) (h) so that structures need not be located on a flood plain

The primary areas of moderate sensitivity included rivers and streams and associate floodplains. Avoidance of floodplains was not a primary consideration in the selection of alternatives. As determined by final engineering design any structures placed in a flood plain would be placed on a high point so as not to impede or redirect flood flows or raise flood elevation. Damage to structures with these practices is expected to be minimal and normally does not occur.

(I)(i) where the facility will create the least visual impact

A variety of visual impact factors were taken into account in the alternatives selection process, including the extent of project visibility from residential areas and designated scenic routes, the degree to which various project elements would contrast with or be integrated into the existing landscape, the extent of changes in the landscape's composition and character and the number and sensitivity of viewers. Project conformance with BLM and USFS policies regarding visual quality management objectives was also taken into account. The results of the visual impact assessment of each alternative are described in Volume 1-A pages 4-71 through 4-83. The visual resource impacts of the alternatives considered the following: number of residences within the immediate foreground (100 feet), visual contrast level, visual contrast compliance with agency management objectives, scenic quality impacts, recreation, preservation and transportation viewpoints and linear features and the residual impact after the application of specific mitigation measures.

(I)(j) a safe distance from residences and other areas of human concentration

The alternative routes avoided to maximum extent possible existing residential areas and lands within incorporated boundaries. The area south of Butte which is common to the A-1 Preferred route and A-3 Maximize Utility Corridors is in close proximity to residential areas.

(I)(k) in accordance with applicable local, state or federal management plans when public lands are crossed

Each of the technical reports in Volume II Technical Reports, considered the regulations, plans and standards applicable to the specific resource. BLM Resource Management Plans and Forest Service Plans were reviewed and considered in the route selection process along with consultation with agency personnel regarding the interpretation of the plans and policies contained in the planning documents. Within the BLM and Forest Service planning documents, avoidance areas were identified and these were avoided during the alternative route selection process. County Comprehensive Plans and Growth Policies were reviewed and considered to determine if they contained utility corridor conditional use policies and provisions. Only Deer Lodge County had a utility corridor policy, which encourages the use of existing corridors.

2.7.4 COMPARISON OF ROUTING ALTERNATIVES

Preferred route selection was based upon the comparison of alternatives routes in three route segments:

1. Townsend Substation south of Townsend, Montana to the Mill Creek Substation southeast of Anaconda (the common end point used to compare alternatives is south of Mill Creek and is referred in this document as Melrose).
2. Mill Creek Substation (Melrose) and Montana/Idaho border in the Monida Pass and Sheep Creek areas and on the Continental Divide.
3. Montana/Idaho border to Midpoint Substation near Shoshone, Idaho.

Two alternative routes and NorthWestern's Preferred Route were identified and compared in this document between Townsend and Mill Creek; two alternative routes and the Preferred Route between Mill Creek and the Montana / Idaho border. Also identified and compared is an alternative route from Townsend to Mill Creek along the Preferred Route, but with a switching station at Pipestone where the route would continue south to the state line through the Jefferson Valley and along I-15. Four alternative routes and NorthWestern's Preferred Route were identified and compared between the Montana / Idaho border and Midpoint Substation. The Idaho alternatives routes are not presented

