

**Table 2-8. Environmental Impacts of Alternatives**

Environmental Resource	Existing Conditions	Agency Proposed Action	Single-Circuit Line Alternative	Short Line Alternative	SVC Alternative	No Action Alternative
<b>Land Use (See Sections 3.1 and 4.1)</b>	Mostly rangeland and timberland on Forest Service land. Private land includes agricultural land and residential/commercial land.	No to moderate impacts would occur on agricultural land depending on amount of land temporarily or permanently taken out of production. Timber and rangeland would experience a low impact because the Targhee Forest Plan limits the removal of this land for other purposes over the next decade. On the Bridger-Teton, the amount of timberland harvested is less than 1% of the available timber supply.	Similar to the Agency Proposed Action. Slightly more agricultural land would permanently be taken out of production because of the single-circuit structures used instead of double-circuit structures near Teton Substation. More timber would need to be cut because of the additional ROW needed.	Similar to the Single-Circuit Line Alternative east of Targhee Tap. Moderate impacts would occur at the switching station site because land could be permanently removed from agricultural production and grazing practices could be altered.	No impacts are expected. BPA would need to meet the City or County regulations for placing utilities in residential neighborhoods.	No impacts are expected.
<b>Visuals and Recreation (See Sections 3.2, 3.3, 4.2 and 4.3)</b>	The area's visual character and quality are recognized as an important resource at national, state, and local levels, and tourists from around the world come to see and enjoy nearby natural features. The ROW follows the general contours of the land with forested buffers and no long stretches along ridgetops. It also follows common routes for tourists and recreationists using the area.	Visual impacts would be low to high. High impacts would occur at Teton Pass and from Fish Creek Road to Teton Substation. Recreation impacts would be low to moderate because of interference with construction activities. Roads that had been open to the public in the past may be gated and closed in the future, limiting recreation access.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative east of Targhee Tap. The new switching station could be located to minimize visual impacts if placed off the ROW in agricultural land. The on ROW site would be more difficult to blend into the hillside. No recreation impacts are expected from the new switching station.	Visual impacts would be high to most residents surrounding Teton Substation. Impacts would be low in the Jackson Substation area. No recreation impacts are expected.	No impacts are expected to visuals and recreation use.
<b>Wilderness, Wilderness Study Areas, Recommended Wilderness, and Roadless Areas (See Sections 3.4 and 4.4)</b>	The existing ROW and access roads cross the Palisades Roadless Area on the Targhee National Forest and the Palisades Wilderness Study Area on the Bridger-Teton National Forest. No wilderness or recommended wilderness areas are crossed by the existing ROW and access roads.	No impacts to designated wilderness and recommended wilderness will occur. The existing line and roads existed at the time of the Palisades WSA and the Palisades Roadless Area designation. Double-circuit structures would be used in the Palisades WSA eliminating the need for new ROW. Existing roads and new spur roads within the ROW would be used in the roadless area. These actions would not appreciably change the character of the existing ROW in these areas or the potential for future designation as wilderness.	More ROW clearing and use of the existing access roads would be required in the Palisades WSA. Expanding the ROW could compromise the character of the WSA and affect its future designation as wilderness. For the portions of line in the Palisades Roadless Area, more tree clearing would be required and slightly more area would be disturbed.	Similar to the Single-Circuit Line Alternative for the Palisades Wilderness Study Area.	No impacts would occur because Teton and Jackson substations are not in the vicinity of these resource areas.	No impacts are expected.
<b>Public Health and Safety (See Sections 3.5 and 4.5)</b>	Electric and magnetic fields are found around any electrical wiring, appliances and equipment. The existing line and substations do not create loud noise. Hazardous and toxic materials are found in substation equipment and are used during construction and maintenance activities. Mostly mature forests surround the existing line creating a larger fire hazard.	Transmission line magnetic field levels from Fish Creek Road to Teton Substation would result in lower field levels than the No Action Alternative. Substation magnetic field levels are not expected to increase. No new noise source is expected. Swan Valley and Teton Substation have oil spill containment plans. A Fire Plan would be completed before construction to assure that fire hazards are kept to a minimum.	Similar to the Agency Proposed Action for substation magnetic field levels, noise, oil spill and fire. Transmission magnetic field levels would decrease on the south side of the ROW near Teton Substation and increase on the north side relative to the No Action Alternative.	Similar to the Single-Circuit Line Alternative east of Targhee Tap for transmission and substation magnetic field levels, noise, oil spill and fire.	Noise would increase at Jackson or Teton Substation but stay within Town of Jackson and Teton County standards. Teton Substation has an oil spill containment plan. Jackson Substation has oil spill containment. Increases in magnetic field levels to nearby residences at Teton Substation are possible. The amount would depend on the design, location and operating modes of the SVC equipment.	Could lead to voltage collapse. Important services would be interrupted possibly causing lost revenues. Safety and security are compromised. There would be no change in magnetic field levels.
<b>Water Quality, Soils and Geology (See Sections 3.6, 3.7, and 4.6)</b>	A diversity of landforms exist in the project area including broad level slopes, ridges, canyons, and mountain ranges. Mass-wasting is one of the most active erosion processes. Water quality is good to excellent.	Impacts range from none to high depending on amount of erosion and mass movement prone areas, soil compaction, slopes, clearing requirements, and success of erosion control measures controlling increased sedimentation and turbidity in streams.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative east of Targhee Tap. Either switching station location site may increase runoff because of its impervious surface. Erosion hazards are low.	There would be no to low impacts at Jackson or Teton Substation if erosion control measures are used.	No impacts are expected.
<b>Floodplains and Wetlands (See Sections 3.8 and 4.7)</b>	Wetlands can be found associated with the floodplain of low-gradient streams and along narrow riparian zones of steeper streams. Wet mountainside meadows can also be found in the project area.	Improving fords for maintenance and replacing and building bridges could impact floodplains and wetlands where abutments are placed. There would be no to high impacts to wetlands from construction but impacts could be minimized with prudent placement of erosion control measures. Maintenance activities such as improving access roads could impact wetlands.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative east of Targhee Tap.	No impacts are expected.	No impacts are expected.



Table 2-8. continued

Environmental Resource	Existing Conditions	Agency Proposed Action	Single-Circuit Alternative	Short Line Alternative	SVC Alternative	No Action Alternative
<b>Vegetation (See Sections 3.9 and 4.8)</b>	Vegetation communities can be classified into four general categories: forest, shrublands, grass/forb, and agriculture.	Impacts would be low to high depending on cleared amounts, what function the vegetation serves, ability to revegetate, and types of maintenance activities. Disturbed areas typically become infested with non-native species.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative east of Targhee Tap.	No to low impacts are expected if erosion control measures are used.	No impacts are expected.
<b>Wildlife (See Sections 3.10 and 4.9)</b>	The project area supports many birds including raptors, small mammals, and reptiles. This region is known for the variety and richness of North American large mammals.	Impacts vary from none to moderate. Construction noise can temporarily disturb most species. Bird collisions with transmission lines create a greater risk if mitigation measures are not used. Clearing can negatively affect some species associated with lodgepole pine and other forest species at the local level, while benefiting species that prefer open areas.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative east of Targhee Tap.	No impacts are expected.	No impacts are expected.
<b>Fish (See Sections 3.11 and 4.10)</b>	Fine-spotted form of the Yellowstone cutthroat trout, rainbow, German brown, brook trout, mountain whitefish, redbreast shiners, longnose dace, Utah suckers, mottled and Paiute sculpin, and bluehead suckers are present in the project area.	Low to moderate impacts could occur to stream turbidity depending on how successful contractors are at locating and placing erosion control measures and culverts. Impacts from maintenance activities are expected to be low.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative east of Targhee Tap.	No impacts are expected.	No impacts are expected.
<b>Cultural Resources (See Sections 3.12 and 4.11)</b>	A cultural resource survey was done in September 1997. Two historic sites that are eligible to the NRHP were found. No prehistoric sites were found. Tribes identified a concern that a new line would have a potential to affect traditional cultural property.	BPA has made a determination of no adverse affect as portions of the historic sites could be affected by construction but the effect would not be harmful. BPA will coordinate this determination with the SHPO's and the Council. Mitigation in the form of recordation is proposed. No traditional cultural property in or near the ROW have been identified by the Tribes.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative.	No sites or traditional uses were found nor are known to occur at Teton or Jackson substations.	No impacts are expected.
<b>Socioeconomics (See Sections 3.13 and 4.12)</b>	Population is largely rural and dependent to a large degree on tourism (services) and agriculture. Employment is in the services, manufacturing, and agriculture sectors. Idaho and Wyoming have sales, property, and use taxes. Idaho has an income tax.	Construction creates a positive impact on employment. Population could grow because of improved infrastructure. Temporary relocation of workers in the area would not affect housing. Tax revenues on goods, property, etc. would be minor. Property values are not expected to be adversely impacted over the long-term. Landowners would be compensated with the fair market value for any land rights needed for the project.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Line Alternative east of Targhee Tap.	Similar to the Agency Proposed Action.	Could lead to voltage collapse. Important services would be interrupted possibly causing lost revenues. Safety and security are8 compromised. Over the long term, businesses and residents could relocate because of a stable power supply elsewhere.
<b>Air Quality (See Sections 3.14 and 4.13)</b>	Swan Valley and Teton Valley have no significant air quality problems although Jackson's local air quality can be affected during the winter months. There are protected airsheds in the project area.	Impacts from vehicle emissions and construction dust are expected to be none or low. Moderate impacts could occur if all slash material from cleared trees is burned on the ROW. Burning this material is extremely unlikely.	Similar to the Agency Proposed Action.	Similar to the Single-Circuit Alternative east of Targhee Tap.	No impacts are expected.	No impacts are expected.

