Resource Impact Summary

			RESULTS FROM EACH ALTERNATIVE IN COMPARISON TO MINING UNDER EXISTING REGULATIONS (NO ACTION ALTERNATIVE)						
Category	Impact	Rule Element Generating Impact	Environmentally Preferable Alternative (Alternative 2)	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7	Preferred Alternative (Alternative 8)
Water Quality *Increased water quality enhances ecosystems, recreational opportunities, and some consumptive uses.*	Fewer stream miles adversely impacted, improved water quality (e.g., pH, selenium, total dissolved solids) within watershed. Potential for adverse and beneficial impacts to groundwater quality and quantity (contamination and well loss).	Stream restoration, landforming, fill design changes, and reforestation requirements; indirect effects of changes in mining activity.	8 stream miles not filled; 57 stream miles restored; 26 downstream preserved stream miles; 267 downstream improved stream miles per year.	0 stream miles not filled; 29 stream miles restored; 1 downstream preserved stream mile; 291 downstream improved stream miles per year.	4 stream miles not filled; 29 stream miles restored; 1 downstream preserved stream mile; 291 downstream improved stream miles per year.	4 stream miles not filled; 1 stream mile restored; 1 downstream preserved stream mile; 174 downstream improved stream miles per year.	4 stream miles not filled; 30 stream miles restored; 1 downstream preserved stream mile; 292 downstream improved stream miles per year	4 stream miles not filled; 14 stream miles restored; 1 downstream preserved stream mile; 178 downstream improved stream miles per year.	4 stream miles not filled: 29 stream miles restored; 1 downstream preserved stream mile; 292 downstream improved stream miles per year.
Biological Resources *Increased quality or quantity of habitat enhances recreational opportunities and aesthetic conditions.*	Reduced impacts to aquatic communities, habitat enhancements for threatened and endangered species.	Stream restoration, landforming, reforestation and species protection requirements.	Water quality benefits stated above; 2,343 acres of forest improved; 311 acres of forest preserved per year.	Water quality benefits stated above; 2,836 acres of forest improved; 31 acres of forest preserved per year.	Water quality benefits stated above; 2,808 acres of forest improved; 25 acres of forest preserved per year.	Water quality benefits stated above; 1,346 acres of forest improved; 21 acres of forest preserved per year.	Water quality benefits stated above; 0 acres of forest improved; 11 acres of forest preserved per year.	Water quality benefits stated above; 1,764 acres of forest improved; 26 acres of forest preserved per year.	Water quality benefits stated above; 2,811 acres of forest improved: 20 acres of forest preserved per year.
Visual Resources *Improved aesthetics may improve property values and the quality of recreational opportunities.*	Improved aesthetics.	Approximate original contour requirements, landforming and reforestation requirements.	Improved visual quality due to biological resource benefits described above.						
Air Quality *Increased carbon storage and reductions in emissions reduce human health risks and climate-change related risks.*	Additional carbon storage, changes in emissions (e.g., nitrogen oxides, sulfur dioxide, methane, and particulate matter) from mining activity.	Reforestation requirements, fill design changes, indirect effects of changes in mining activity.	Increased reforestation (see Biological resources above) and associated increased carbon storage; increased air pollutant emissions due to increased underground mining activity (e.g., methane emissions increase by approximately 363 million cubic feet per year).	Increased reforestation (see Biological resources above) and associated increased carbon storage; reduced air pollutant emissions due to decreased mining activity (e.g., methane emissions decrease by approximately 400 million cubic feet per year).	Increased reforestation (see Biological resources above) and associated increased carbon storage; reduced air pollutant emissions due to decreased mining activity (e.g., methane emissions decrease by approximately 353 million cubic feet per year).	Increased reforestation (see Biological resources above) and associated increased carbon storage; reduced air pollutant emissions due to decreased mining activity (e.g., methane emissions decrease by approximately 283 million cubic feet per year).	Increased reforestation (see Biological resources above) and associated increased carbon storage; reduced air pollutant emissions due to decreased mining activity (e.g., methane emissions decrease by approximately 204 million cubic feet per year).	Increased reforestation (see Biological resources above) and associated increased carbon storage; reduced air pollutant emissions due to decreased mining activity (e.g., methane emissions decrease by approximately 396 million cubic feet per year).	Increased reforestation and associated increased carbon storage; reduced air pollutant emissions due to decreased mining activity (e.g., methane emissions decrease by approximately 311 million cubic feet (million cubic feet per year).
Public Health *Reduced probability of adverse health effects due to contaminated water, or incurring costs to mitigate those effects.*	Reduced exposure to contaminants in drinking water.	Stream restoration, landforming, and reforestation requirements.	Reduced probability of adverse effects due to water quality resource benefits described above.						
Recreation *Increased quality or quantity of recreational fishing, hunting, wildlife viewing, or hiking opportunities.*	Potential for increased recreational opportunities, improved aesthetics.	Elements directly affecting water quality and biological resources (e.g., stream restoration) as well as approximate original contour requirements and post-mining land use.	Increased recreational opportunities and improved aesthetics due to water quality and biological resource benefits described above.						
Other *Reduced risk of long-term water quality contamination and potential reduced risk of climate change- related damages.*	Reduced risk and severity of adverse impacts, including long-term pollutional discharges during and after mining.	Baseline data collection, monitoring, material damage definition, corrective action thresholds.	Reduced risk and severity of adverse impacts, including long-term pollution discharges during and after mining as indicated by the water, biological, and air quality resource benefits described above.						

NOTES:

As most current mining practices are consistent with the SBZ, Alternative 9 is anticipated to have negligible impacts and therefore is not included in the exhibit.

The potential for the Alternatives to reduce air pollutant emissions is due to the aggregate effect of the rule elements on the overall level of coal mining activity. Reduced production would produce reduced emissions under most alternatives.