CLARK FORK RIVER RIPARIAN EVALUATION SYSTEM (CFR RipES)
FOR SLICKENS (EXPOSED TAILINGS) POLYGONS

This evaluation is intended for use in the field by appropriately trained and qualified personnel. Knowledge of the local flora and of river channel and floodplain morphology, as well as visible indications of site contamination by metals, is required. For answering CFR RipES data form questions, use the Daubenmire (1959) method of canopy cover estimation. This is a very efficient and reliable method for doing work of this nature, ***when the observers are adequately skilled, practiced, and have calibrated their individual assessments for consistency of call.*** Frequent and periodic tests and recalibration exercises are recommended for quality control.

Polygon Delineation Criteria
Polygons to be evaluated are located throughout the historic 100-year floodplain (the area potentially containing tailings and contaminated soils). These polygons are delineated to circumscribe areas that fit the criteria defined below for sites with soils and/or vegetation impacted by mining-related metals contamination. These polygons will be further delineated using property ownership boundaries, certain landform topographic breaks, certain land use breaks (i.e., fences, roads, etc.), and other considerations as needed.

Slickens (exposed tailings) are generally characterized by a lack of vegetation, and are defined by these criteria:
1. Because of phytotoxic condition, these areas are generally devoid of vegetation, supporting less than 25 percent live plant canopy cover.
2. Tufted hairgrass (*Deschampsia cespitosa*) is present, if there is any live vegetation, at least at the edges.
3. Efflorescent metal salts are visible on the soil surface during dry periods.

No scoring is used on these polygons. If a site meets the criteria defined above, the site is designated a slickens (exposed tailings) area polygon.

Field Form
The field form for slickens (exposed tailings) polygons is found in Appendix D. Although no rating is scored for slickens polygons, a field form is necessary to record sampling and administrative data (date, location, etc.).