

Appendix 4F

Ownership-Specific Management-Related Shallow Landslide Loading

This appendix provides shallow landslide loading estimates for specific ownerships within Upper Elk River.

Road-Related Landslides

Landslide sediment delivery and annual average loading are presented for Bureau of Land Management (BLM) lands (Figures 1 and 2, respectively), Green Diamond Resource Company (GDRC) lands (Figures 3 and 4, respectively), and Humboldt Redwood Company (HRC) lands (Figures 5 and 6, respectively). Reactivated slides comprised 22%, 0%, and 15% of the number of road-related slides on BLM, GDRC, and HRC lands, respectively.

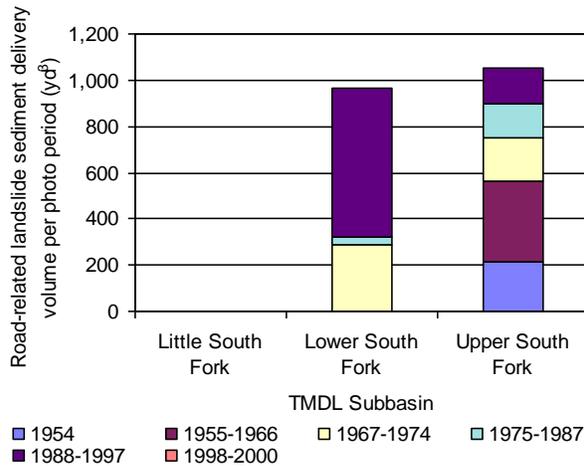


Figure 1 Road-related landslide delivery volume from BLM lands.

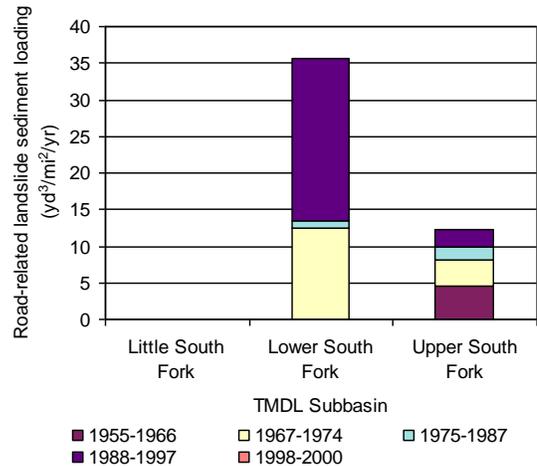


Figure 2 Road-related landslide loading for BLM lands.

Appendix 4F – Management-Related Shallow Landslide by Ownership

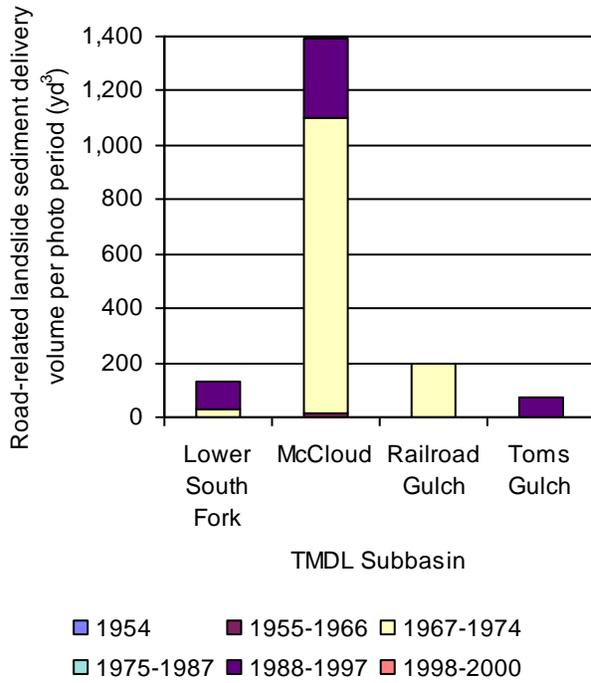


Figure 3. Road-related landslide delivery volume by photo period for GDR lands.

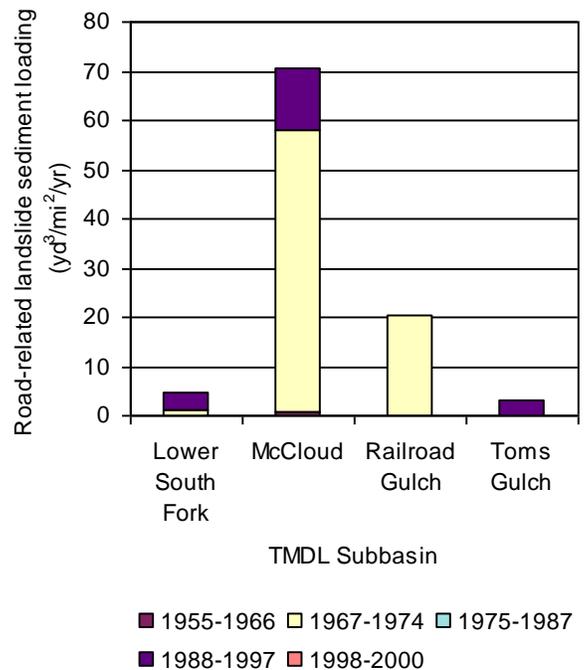


Figure 4. Road-related landslide loading by photo period for GDR lands.

Appendix 4F – Management-Related Shallow Landslide by Ownership

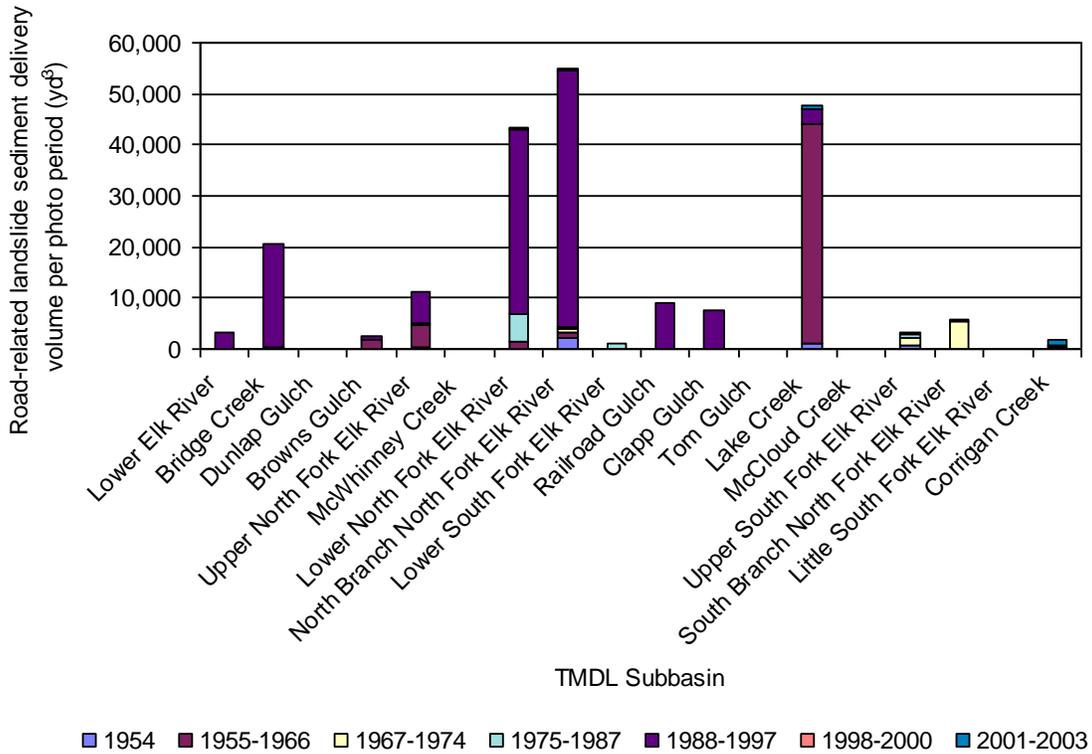


Figure 5. Road-related landslide delivery volume by photo period for HRC Lands

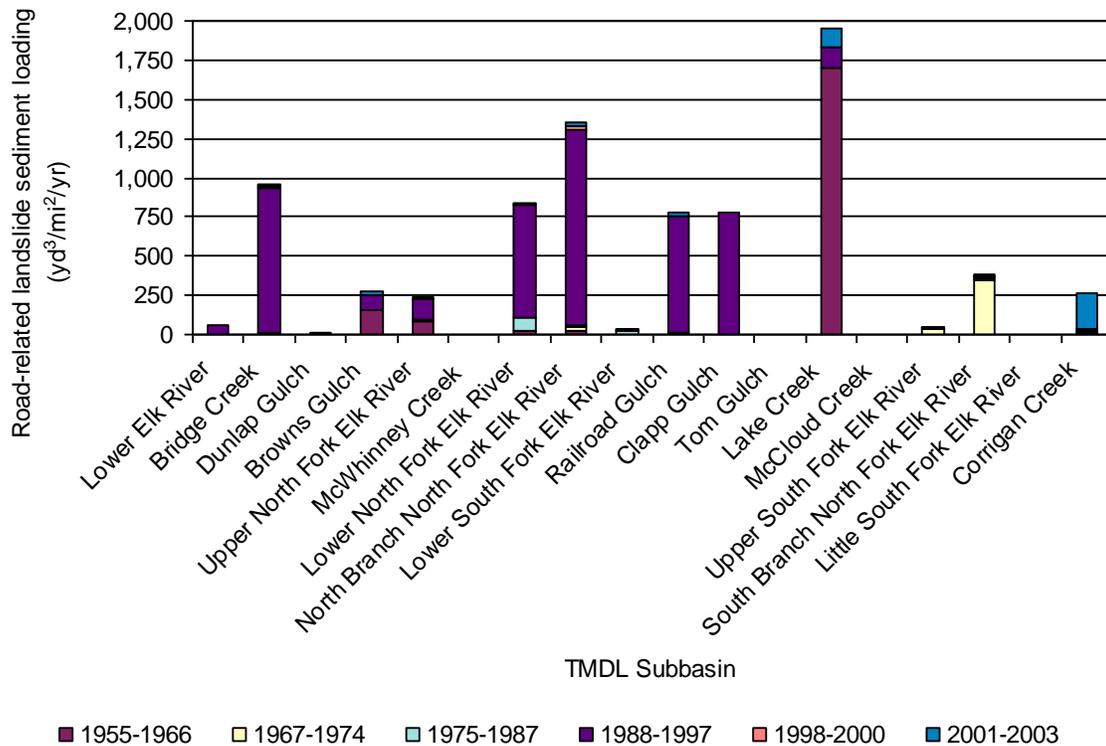


Figure 6. Road-related landslide sediment loading by photo period for HRC lands

Open Slope Shallow Landslides

Landslide sediment delivery and annual average loading are presented for BLM lands (Figures 7 and 8, respectively), GDRC lands (Figures 9 and 10, respectively), and HRC lands (Figures 11 and 12, respectively). Naturally produced open slope shallow landslides (are/are not) included in these estimates. Reactivated slides comprised 8%, 9%, and 8% of the total number of open-slope slides on BLM, GDRC, and HRC lands, respectively.

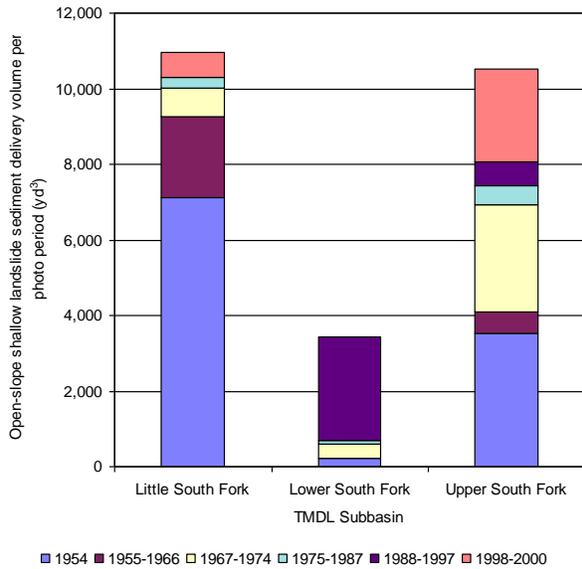


Figure 7. Open-slope landslide volume from BLM lands (based upon the Palco WA Landslide Database)

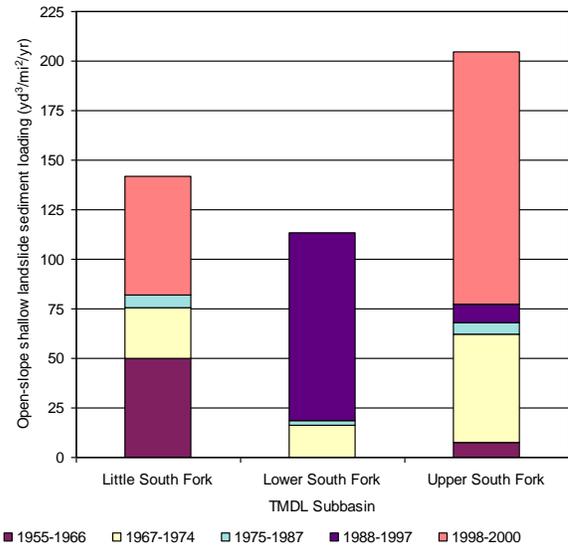


Figure 8. Open-slope landslide loading on BLM lands (includes natural loading).

Appendix 4F – Management-Related Shallow Landslide by Ownership

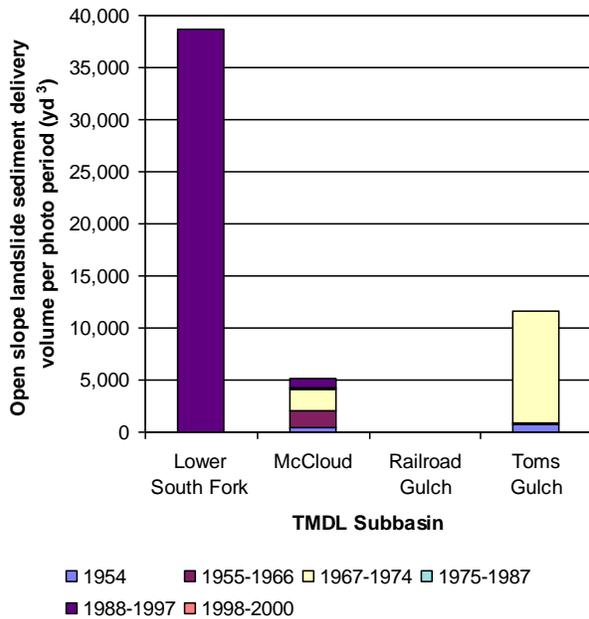


Figure 9. Open-slope landslide delivery volume per photo period for GDRC lands¹.

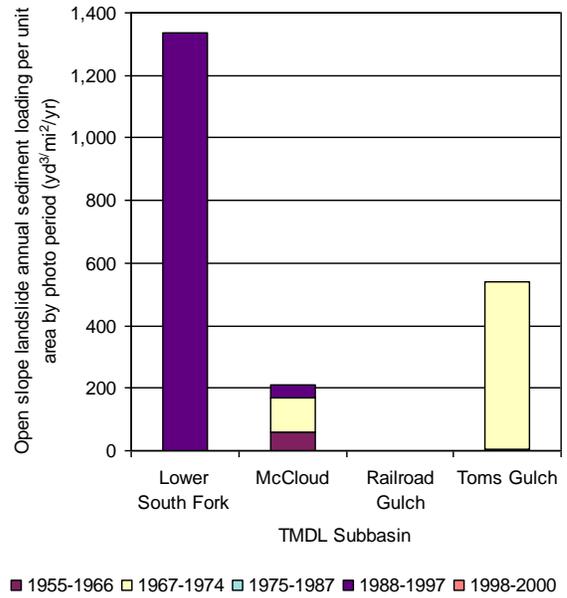


Figure 10. Open-slope landslide loading for GDRC lands (includes natural loading).

¹ Based upon the Palco WA Landslide Database

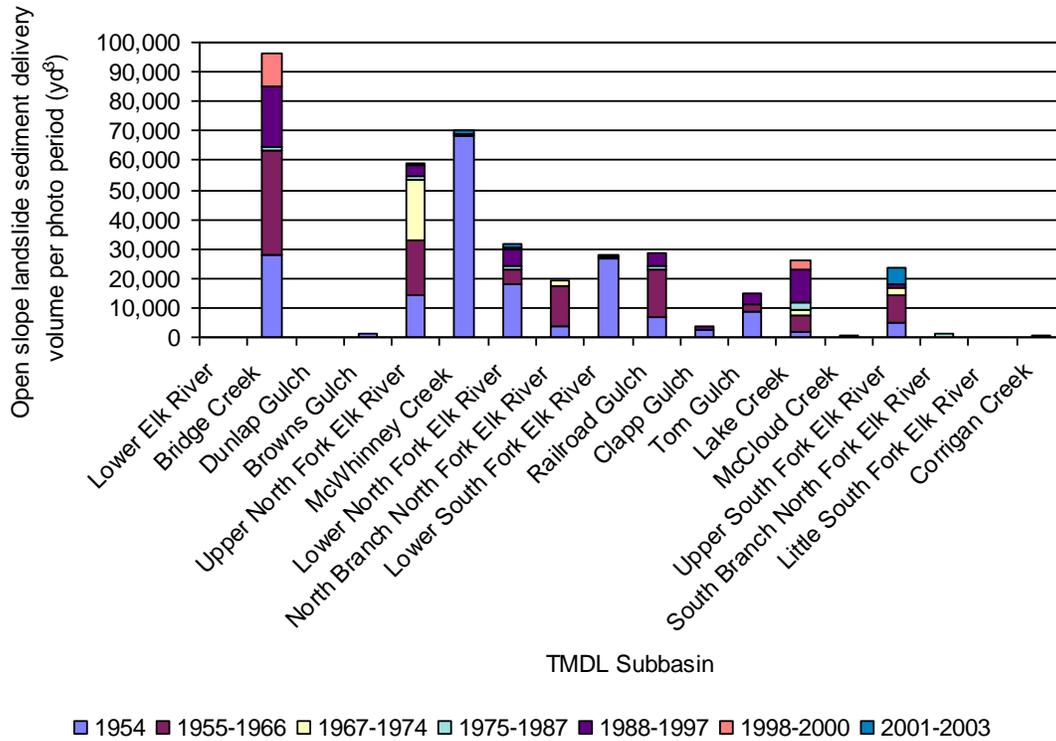


Figure 11. Open-slope landslide delivery volume on HRC lands .²

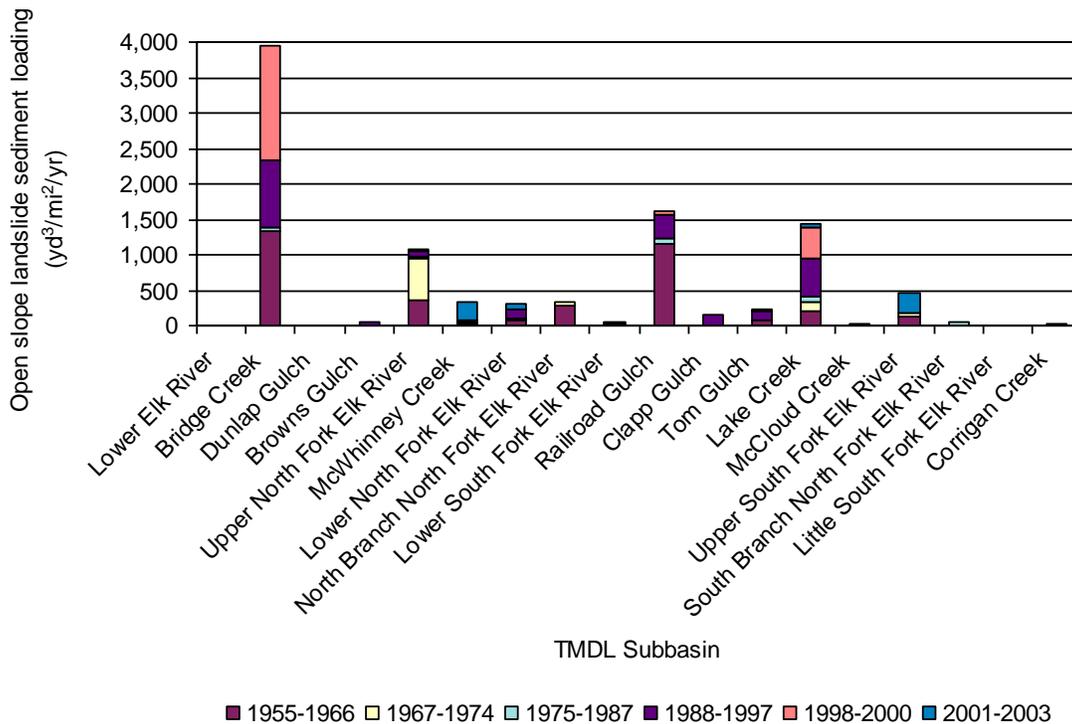


Figure 12. Annual average open-slope landslide loading on HRC lands (includes natural loading).

² Based upon the Palco ROWD Landslide Database