

APPENDIX A

MAPS AND FIGURES

Figure 2-1. Location Map: Missouri-Cascade and Belt TMDL Planning Areas	3
Figure 2-2. Metals-impaired Streams in the Missouri-Cascade TMDL Planning Area	4
Figure 2-3a. Level III Ecoregions: Missouri-Cascade TMDL Planning Area.....	5
Figure 2-3b. Level IV Ecoregions: Missouri-Cascade TMDL Planning Area	6
Figure 2-4. Topography: Missouri-Cascade TMDL Planning Area.....	7
Figure 2-5. Geology: Missouri-Cascade TMDL Planning Area.....	8
Figure 2-6. Erodibility: Missouri-Cascade TMDL Planning Area	9
Figure 2-7. Slope: Missouri-Cascade TMDL Planning Area	10
Figure 2-8. Hydrography: Missouri-Cascade TMDL Planning Area	11
Figure 2-9. Precipitation: Missouri-Cascade TMDL Planning Area	12
Figure 2-10. Land Cover: Missouri-Cascade TMDL Planning Area	13
Figure 2-11. Census Data: Missouri-Cascade TMDL Planning Area	14
Figure 2-12. Land Ownership: Missouri-Cascade TMDL Planning Area.....	15
Figure 2-13. Land Use: Missouri-Cascade TMDL Planning Area	16
Figure 2-14. Transportation Networks: Missouri-Cascade TMDL Planning Area	17
Figure 2-15. Metals-impaired streams in the Belt TMDL Planning Area	18
Figure 2-16. Level IV Ecoregions: Belt TMDL Planning Area	19
Figure 2-17. Topography: Belt TMDL Planning Area	20
Figure 2-18. Geology: Belt TMDL Planning Area.....	21
Figure 2-19. Erodibility: Belt TMDL Planning Area	22
Figure 2-20. Slope: Belt TMDL Planning Area.....	23
Figure 2-21. Hydrography: Belt TMDL Planning Area	24
Figure 2-22. Precipitation: Belt TMDL Planning Area	25
Figure 2-23. Land Cover: Belt TMDL Planning Area.....	26
Figure 2-24. Land Use: Belt TMDL Planning Area	27
Figure 2-25. Wildfire: Belt TMDL Planning Area	28
Figure 2-26. Census Data: Belt TMDL Planning Area.....	29
Figure 2-27. Land Ownership: Belt TMDL Planning Area.....	30
Figure 2-28. Transportation Networks: Belt TMDL Planning Area.....	31
Figure 2-29. Point Sources: Belt TMDL Planning Area.....	32
Figure 5-1. Carpenter Creek Historic and Abandoned Mining Sources.....	33
Figure 5-1a. Carpenter Creek Tailings.....	34
Figure 5-1b. Silver Dyke Tailings: Tributary to Carpenter Creek.....	34
Figure 5-2. Carpenter Creek Water Quality Sampling Stations	35
Figure 5-3. Galena Creek Historic and Abandoned Mining Sources	36
Figure 5-3a. Galena Creek Mine Adit & Mine Wastes	37
Figure 5-3b. Galena Creek Mine Drain/Adit	37
Figure 5-4. Galena Creek Water Quality Sampling Stations.....	38
Figure 5-5. Dry Fork Belt Creek Water Quality Sampling Stations.....	39
Figure 5-6. Upper Belt Creek Water Quality Sampling Stations.....	40
Figure 5-7. Lower Belt Creek Water Quality Sampling Stations	41
Figure 5-7a. Anaconda Mine Drain discharging to Belt Creek	42

Figure 5-7b. Belt Creek below Anaconda Mine Drain	42
Figure 5-8. Cottonwood Creek and Number Five Coulee Water Quality Sampling Stations	43
Figure 5-9. Acid Mine Discharge entering Cottonwood Creek at Stockett	44
Figure 5-10. Acid Mine Discharge entering Cottonwood Creek upstream of Stockett	44
Figure 5-11. Acid Mine Discharge (2) entering Cottonwood Creek upstream of Stockett	44
Figure 5-12. Acid Mine Drainage to Number Five Coulee	45
Figure 5-13. Lower Sand Coulee	45
Figure 5-14. Acid mine drainage to Sand Coulee	45
Figure 5-15. Mine Spoils in Sand Coulee	45
Figure 5-16. Sand Coulee Water Quality Sampling Stations	46
Figure 5-17. Sand Coulee Creek Water Quality Sampling Stations	47
Figure 5-18. Aluminum TMDL as a function of flow	48
Figure 5-19. Arsenic TMDL as a function of flow	48
Figure 5-20. Cadmium TMDL as a function of flow	48
Figure 5-21. Copper TMDL as a function of flow	49
Figure 5-22. Iron TMDL as a function of flow	49
Figure 5-23. Lead TMDL as a function of flow	49
Figure 5-24. Nickel TMDL as a function of flow	50
Figure 5-25. Silver TMDL as a function of flow	50
Figure 5-26. Zinc TMDL as a function of flow	50

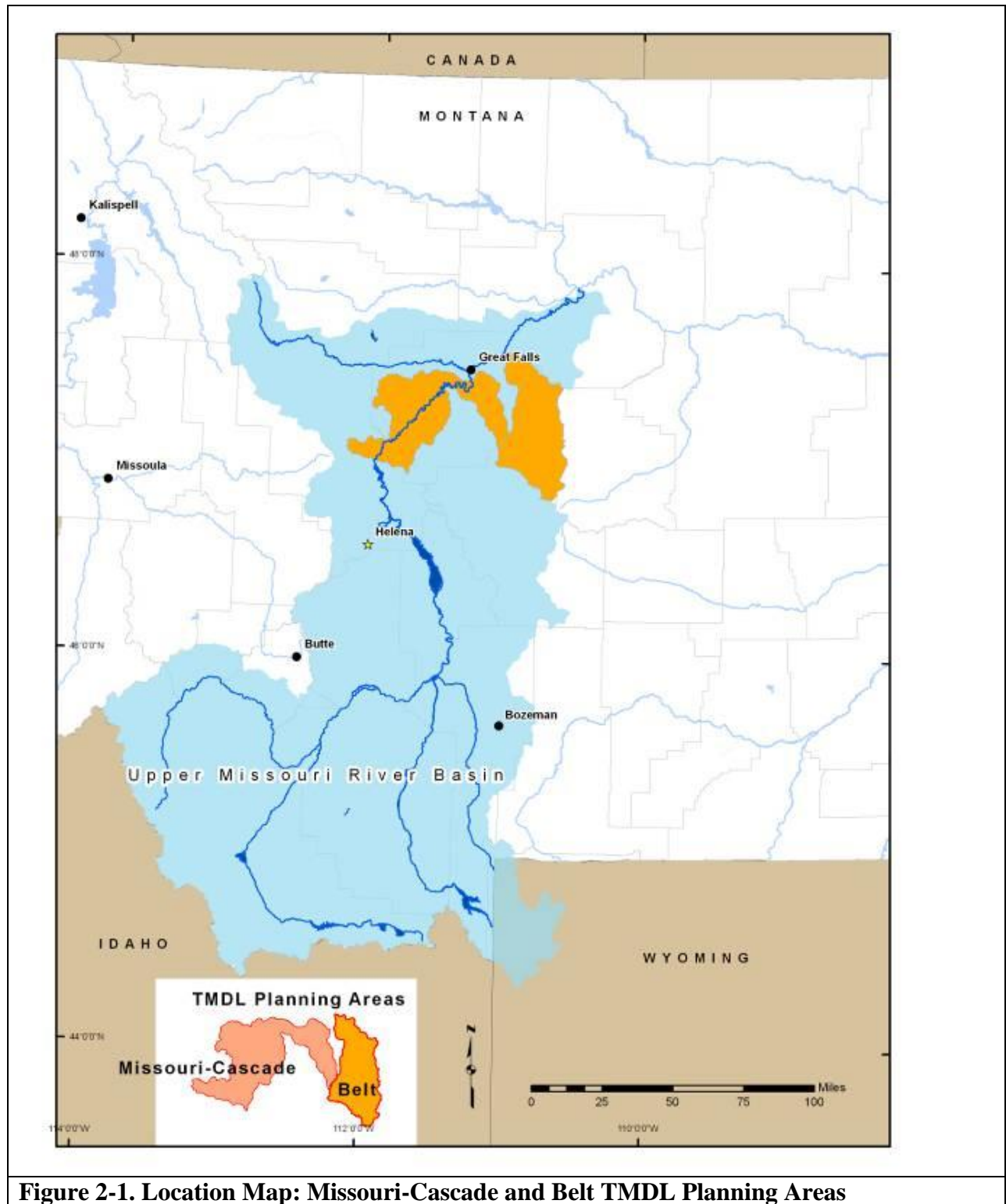


Figure 2-1. Location Map: Missouri-Cascade and Belt TMDL Planning Areas

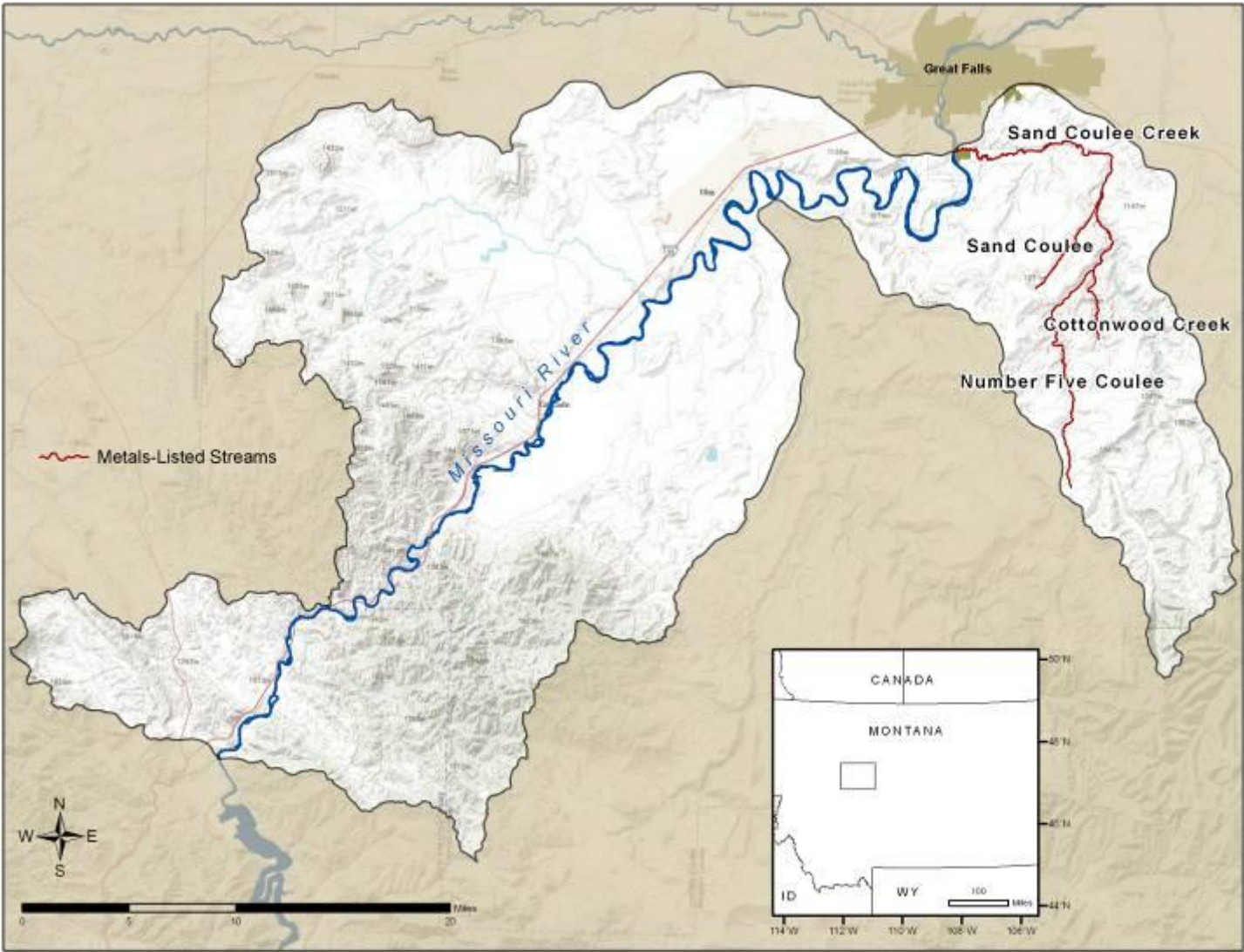


Figure 2-2. Metals-impaired Streams in the Missouri-Cascade TMDL Planning Area

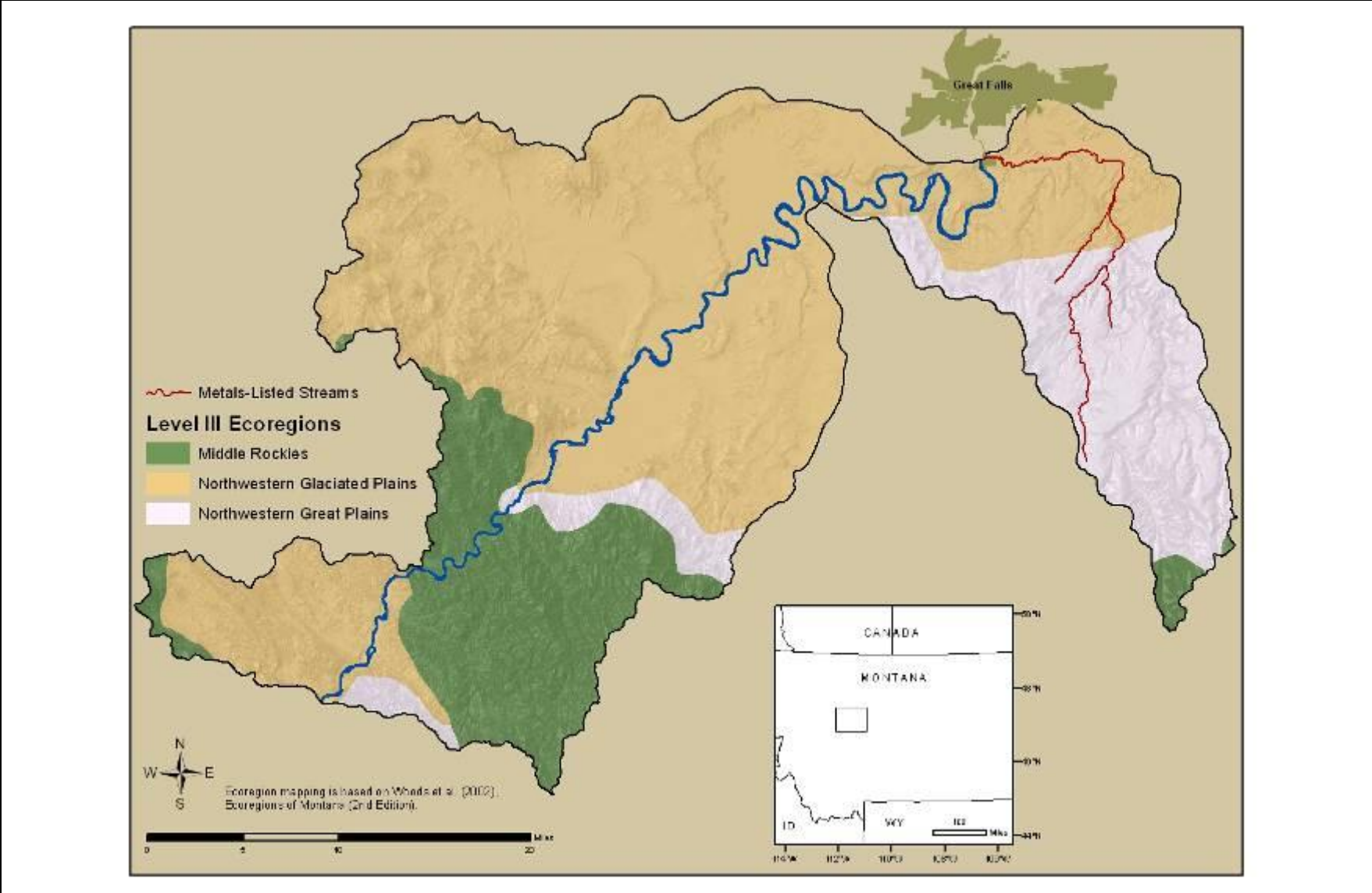


Figure 2-3a. Level III Ecoregions: Missouri-Cascade TMDL Planning Area

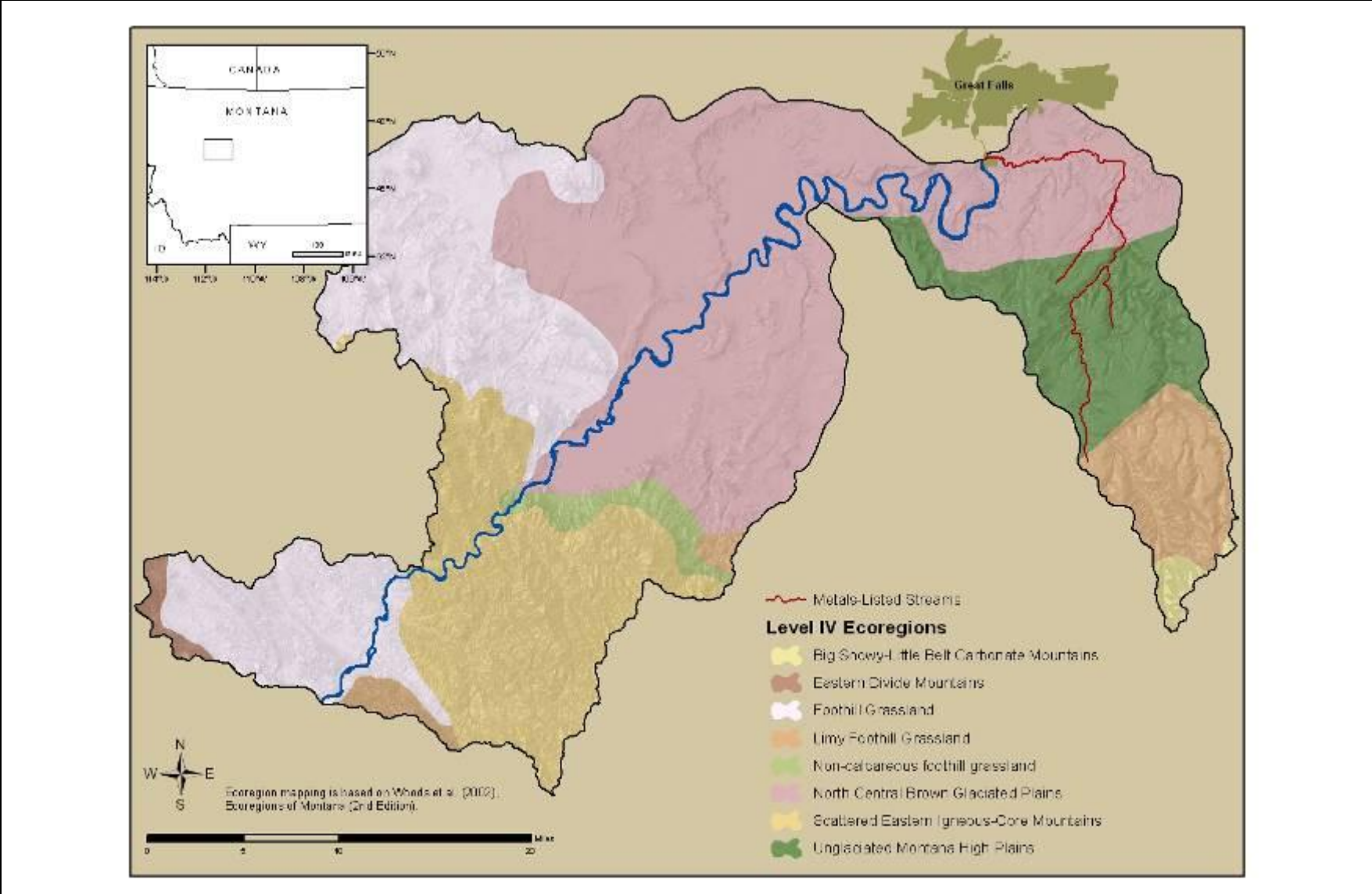


Figure 2-3b. Level IV Ecoregions: Missouri-Cascade TMDL Planning Area

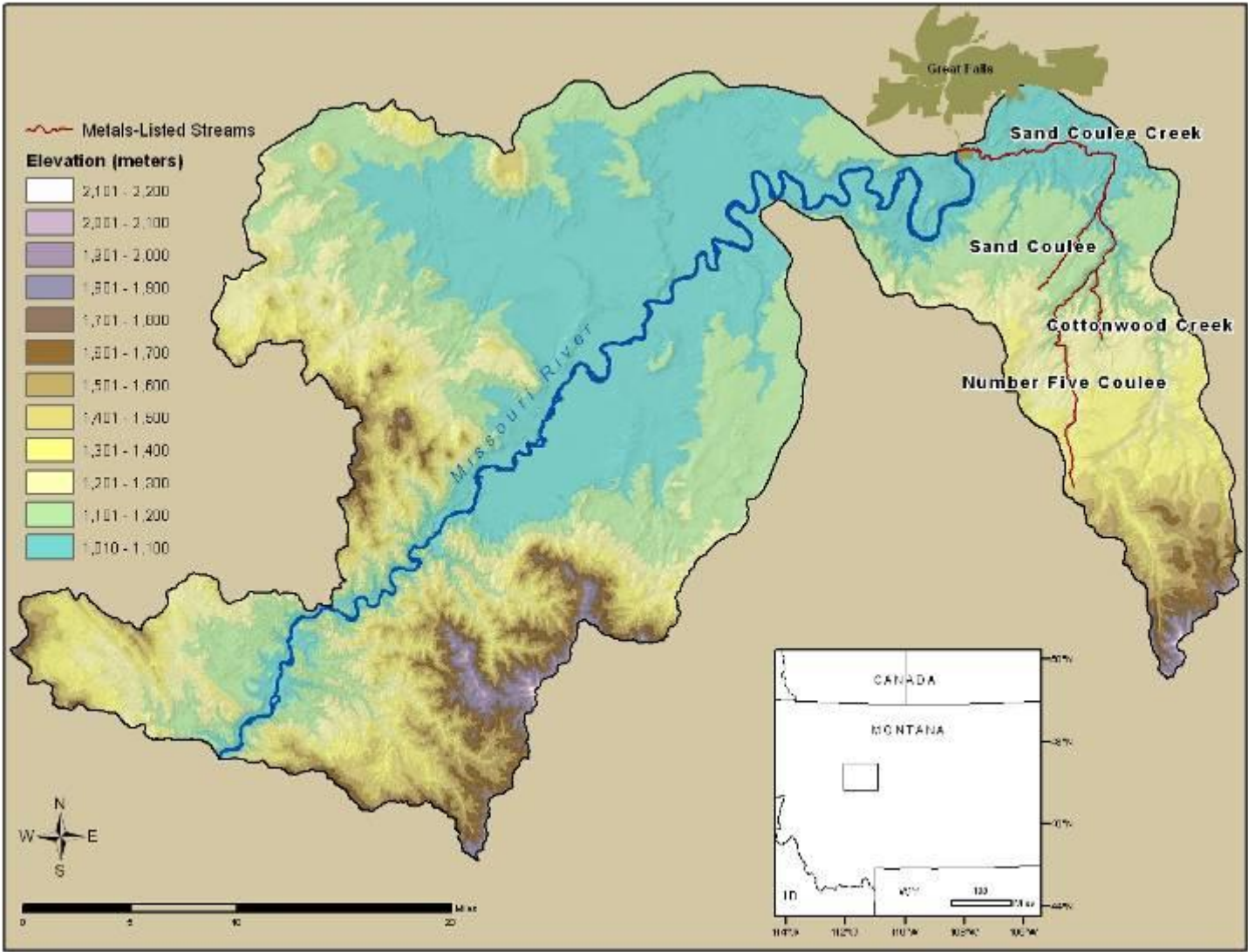


Figure 2-4. Topography: Missouri-Cascade TMDL Planning Area

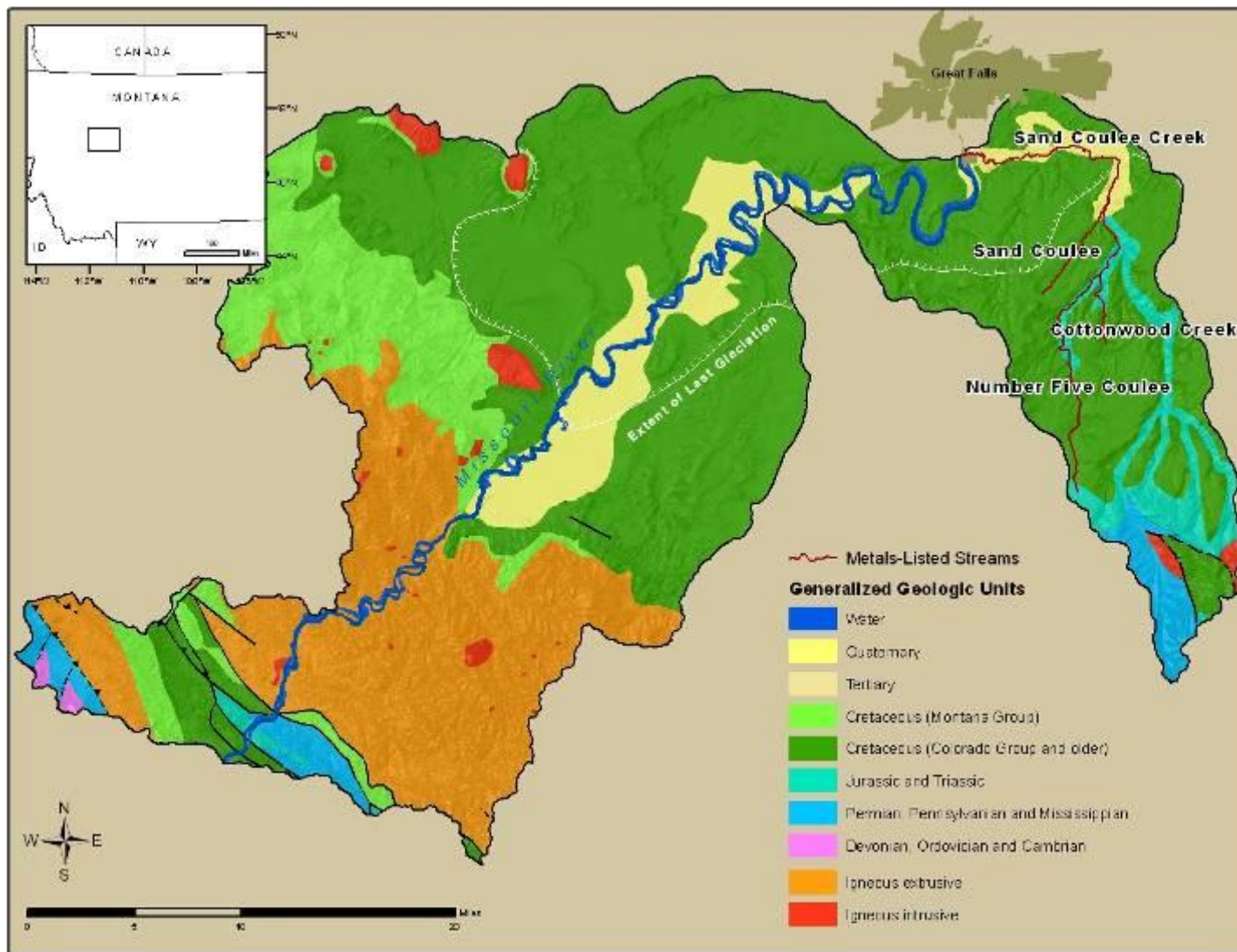


Figure 2-5. Geology: Missouri-Cascade TMDL Planning Area

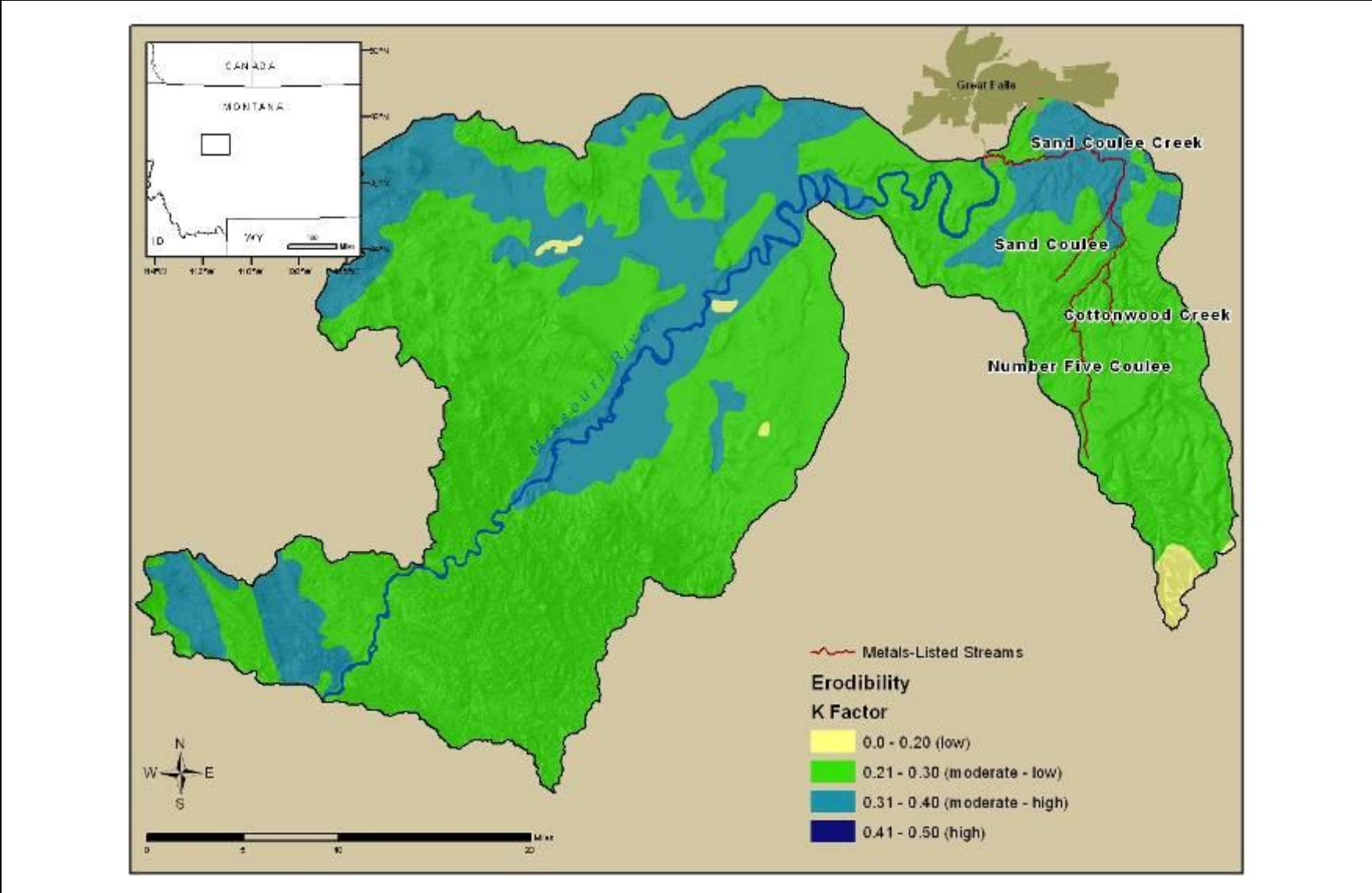


Figure 2-6. Erodibility: Missouri-Cascade TMDL Planning Area

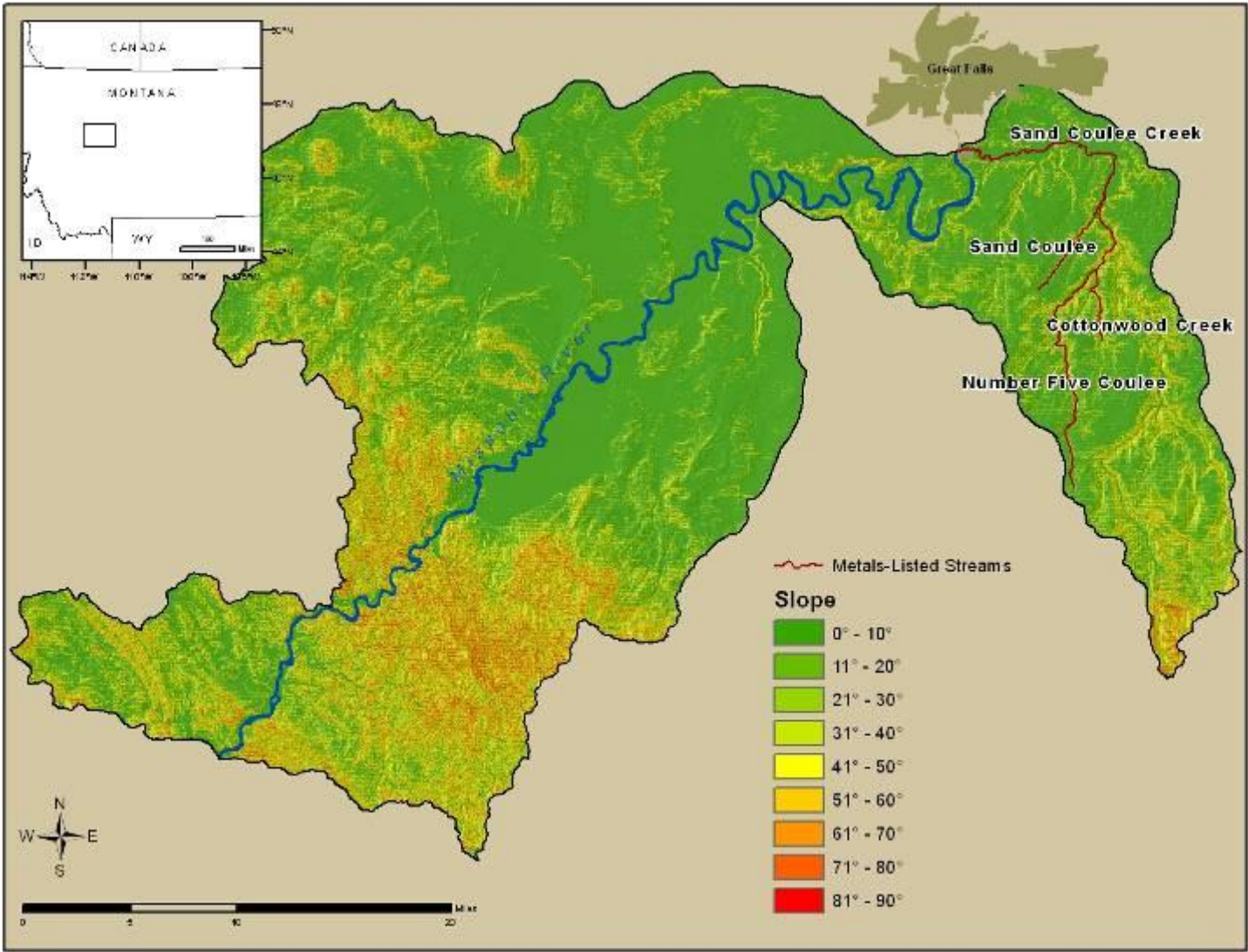


Figure 2-7. Slope: Missouri-Cascade TMDL Planning Area

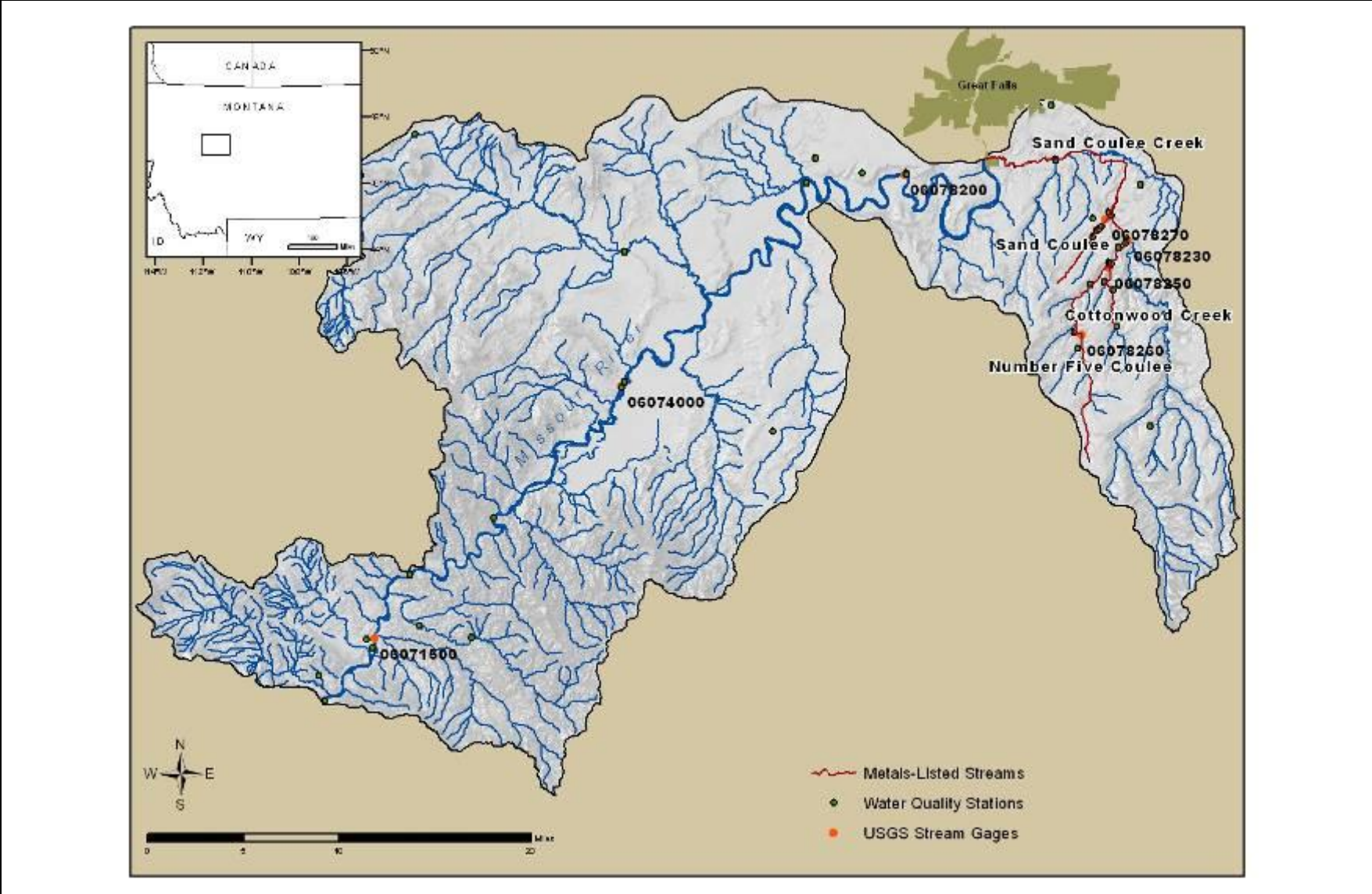


Figure 2-8. Hydrography: Missouri-Cascade TMDL Planning Area

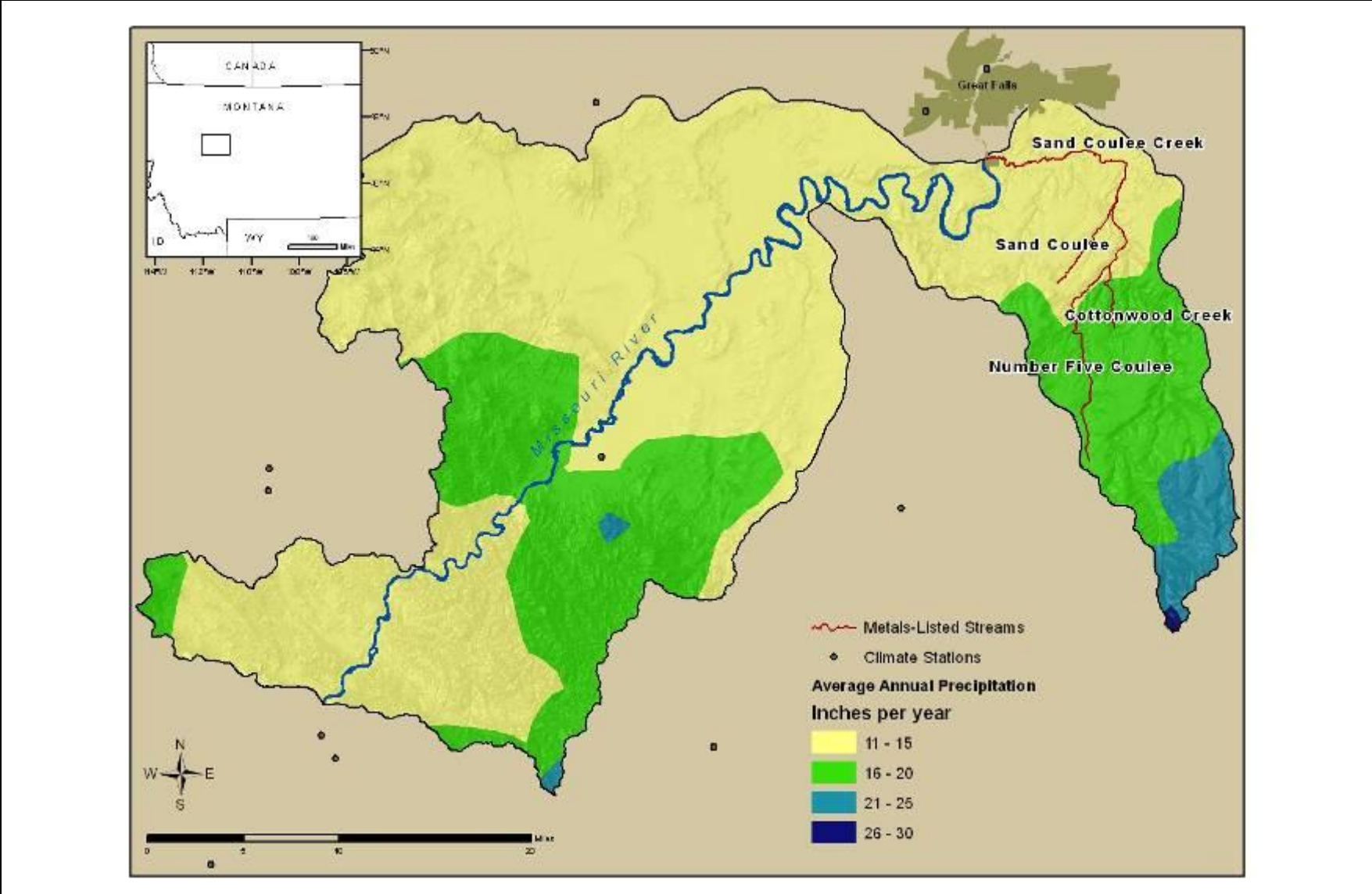


Figure 2-9. Precipitation: Missouri-Cascade TMDL Planning Area

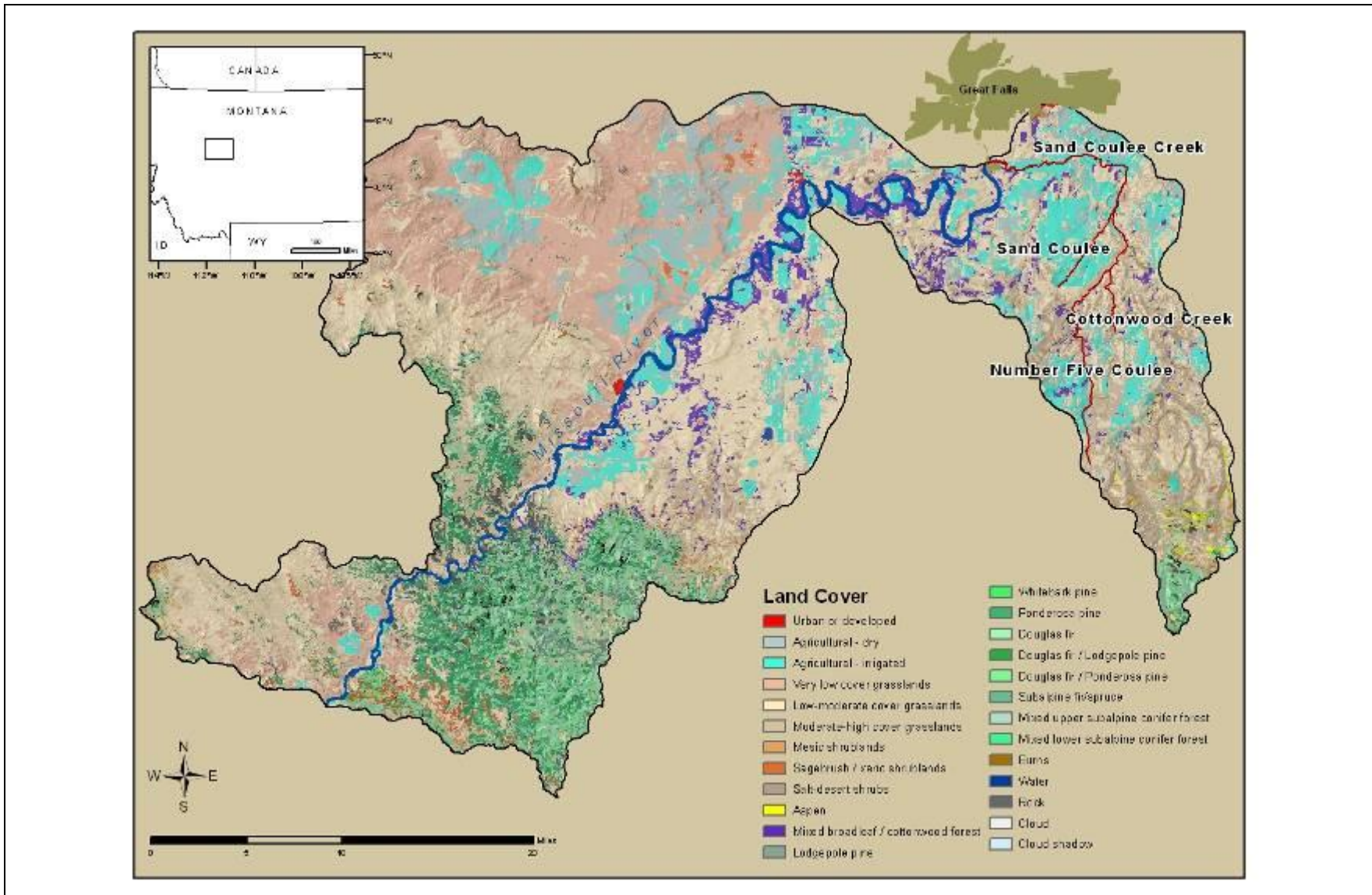


Figure 2-10. Land Cover: Missouri-Cascade TMDL Planning Area

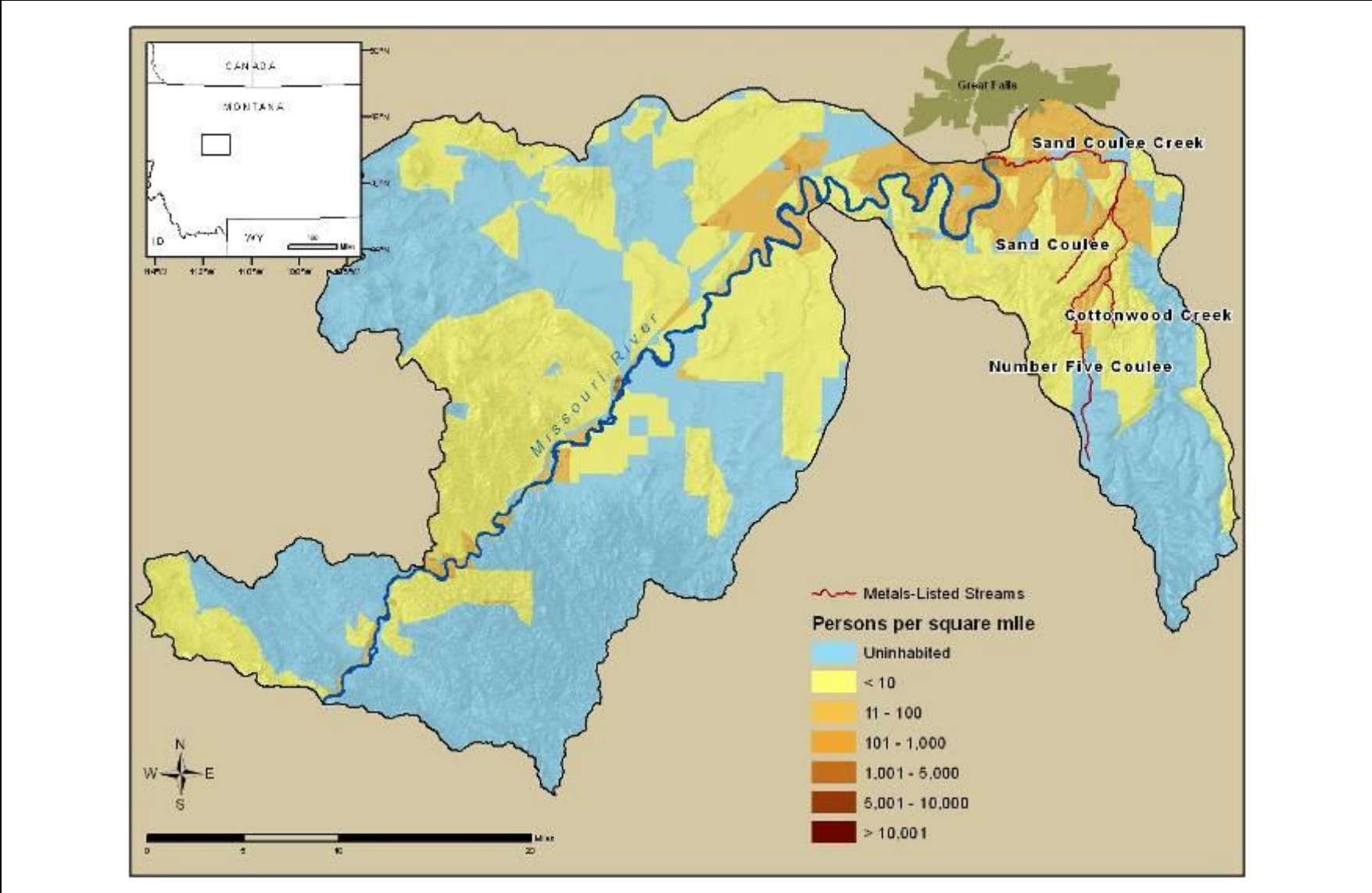


Figure 2-11. Census Data: Missouri-Cascade TMDL Planning Area

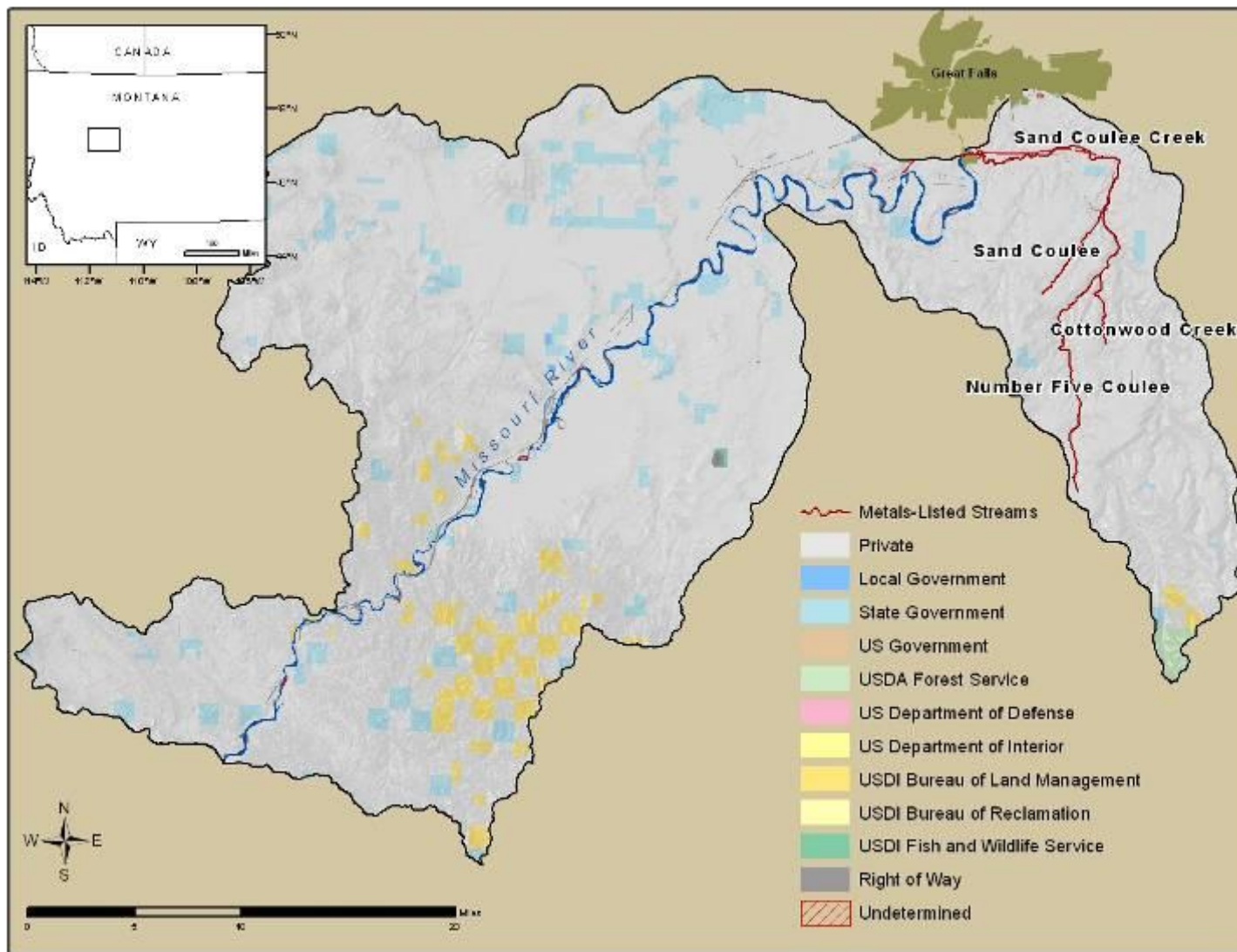


Figure 2-12. Land Ownership: Missouri-Cascade TMDL Planning Area

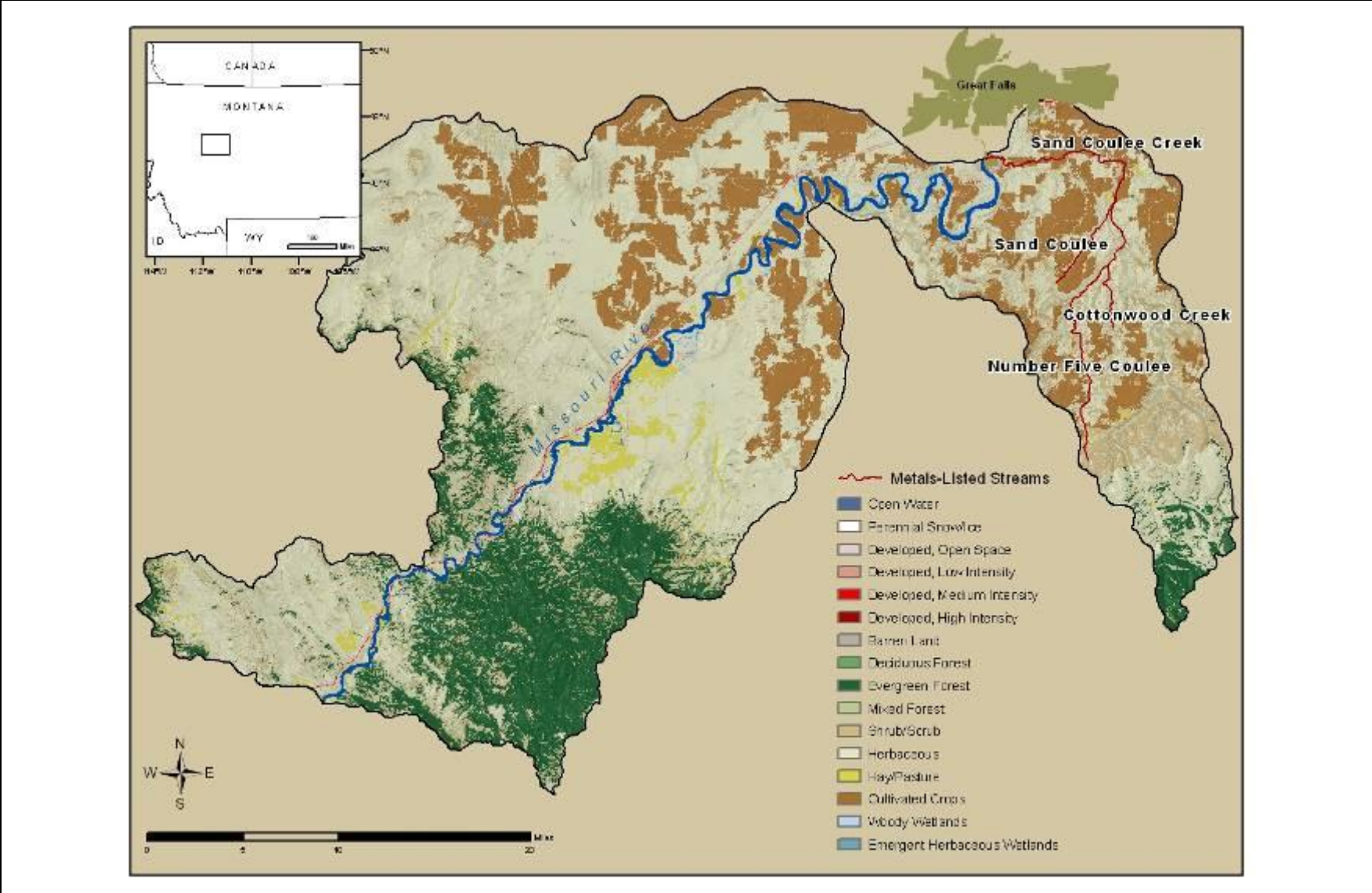


Figure 2-13. Land Use: Missouri-Cascade TMDL Planning Area

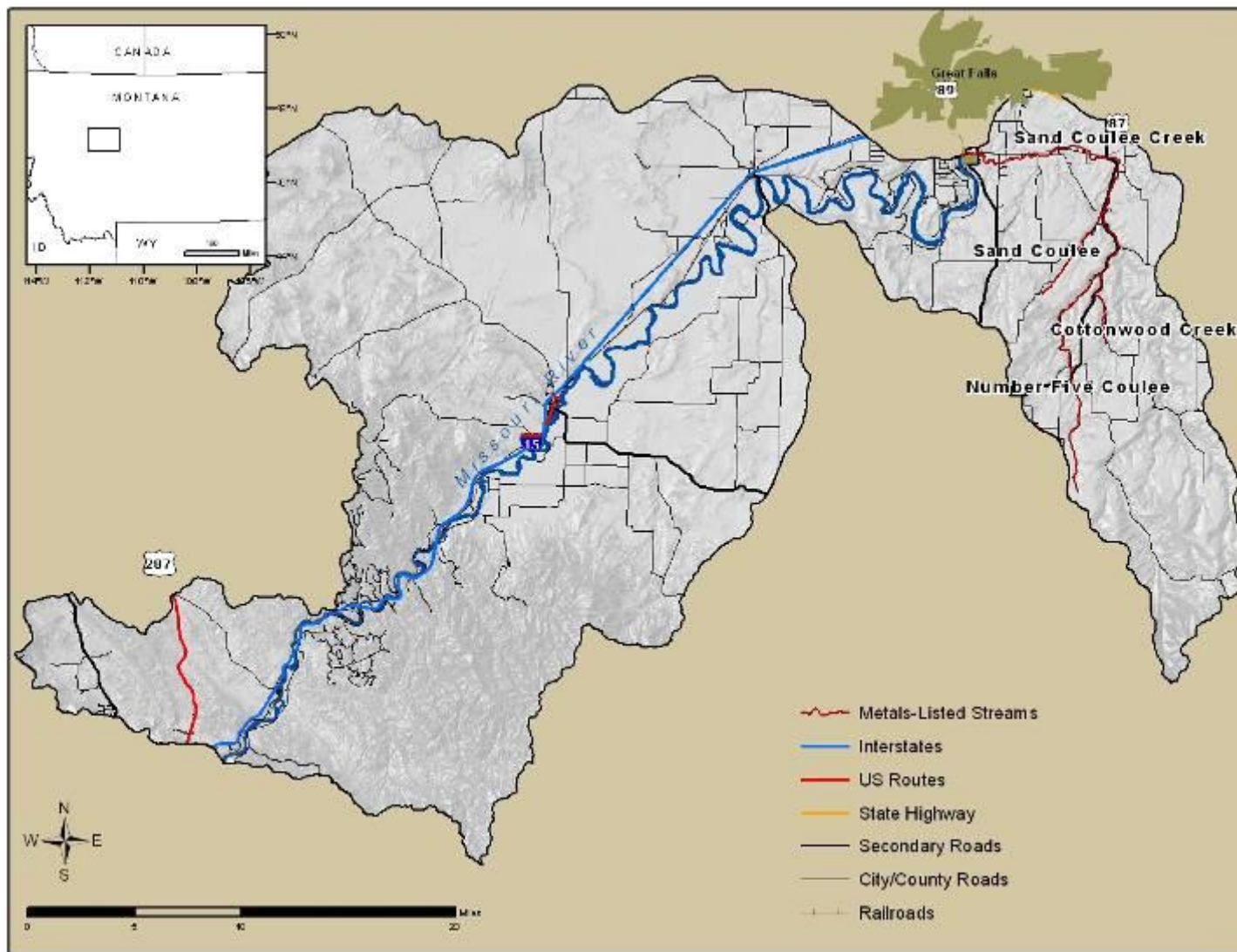


Figure 2-14. Transportation Networks: Missouri-Cascade TMDL Planning Area

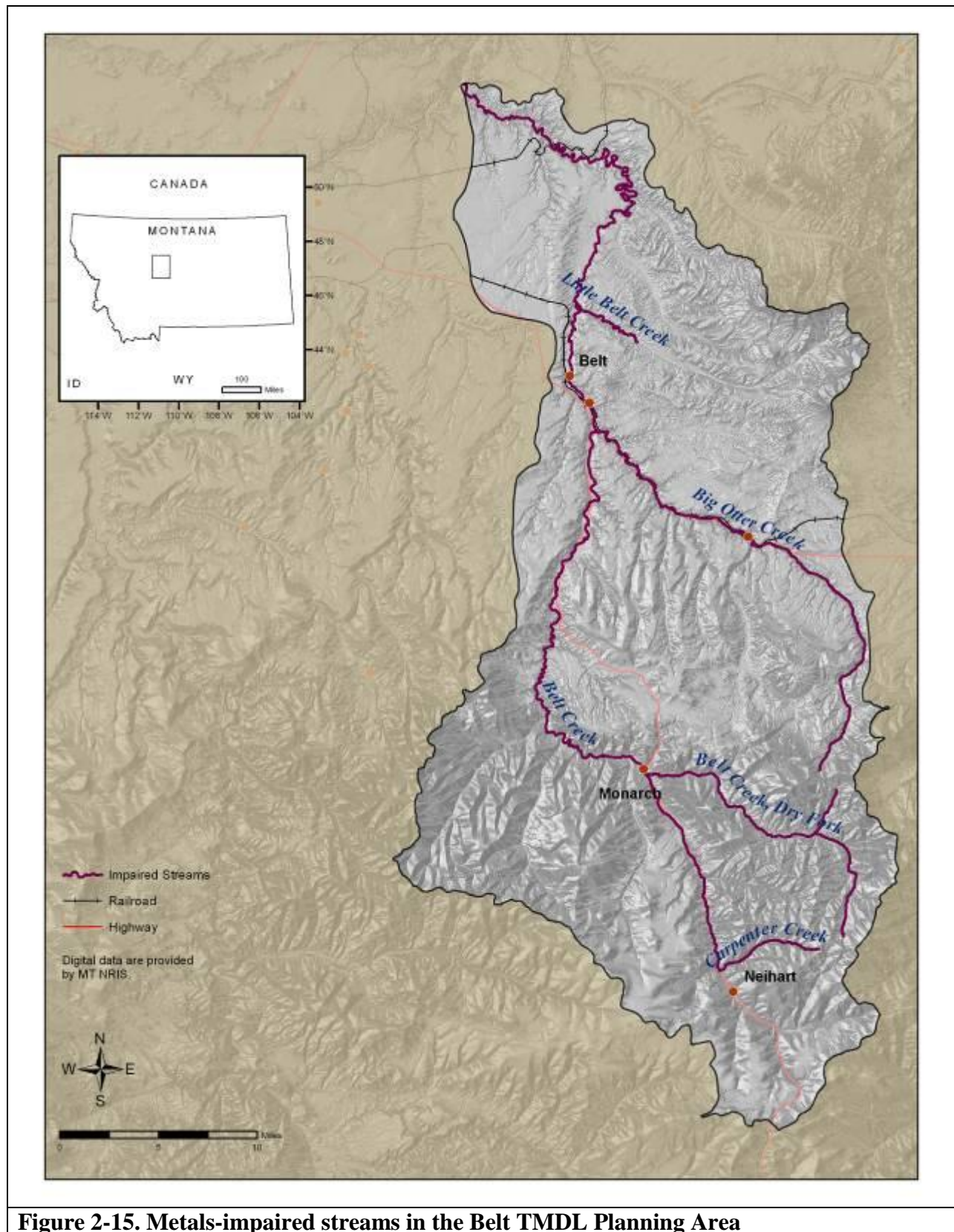
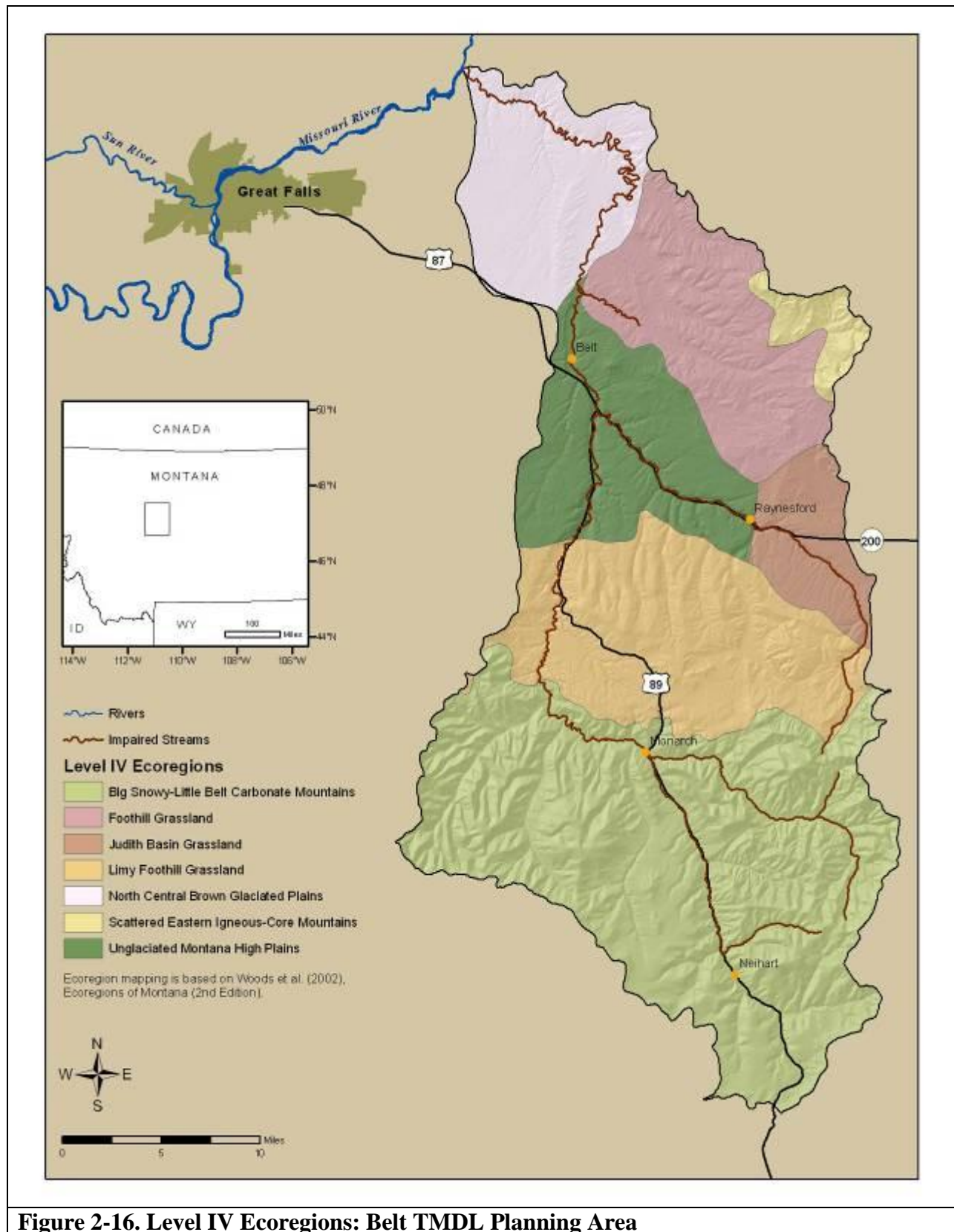


Figure 2-15. Metals-impaired streams in the Belt TMDL Planning Area



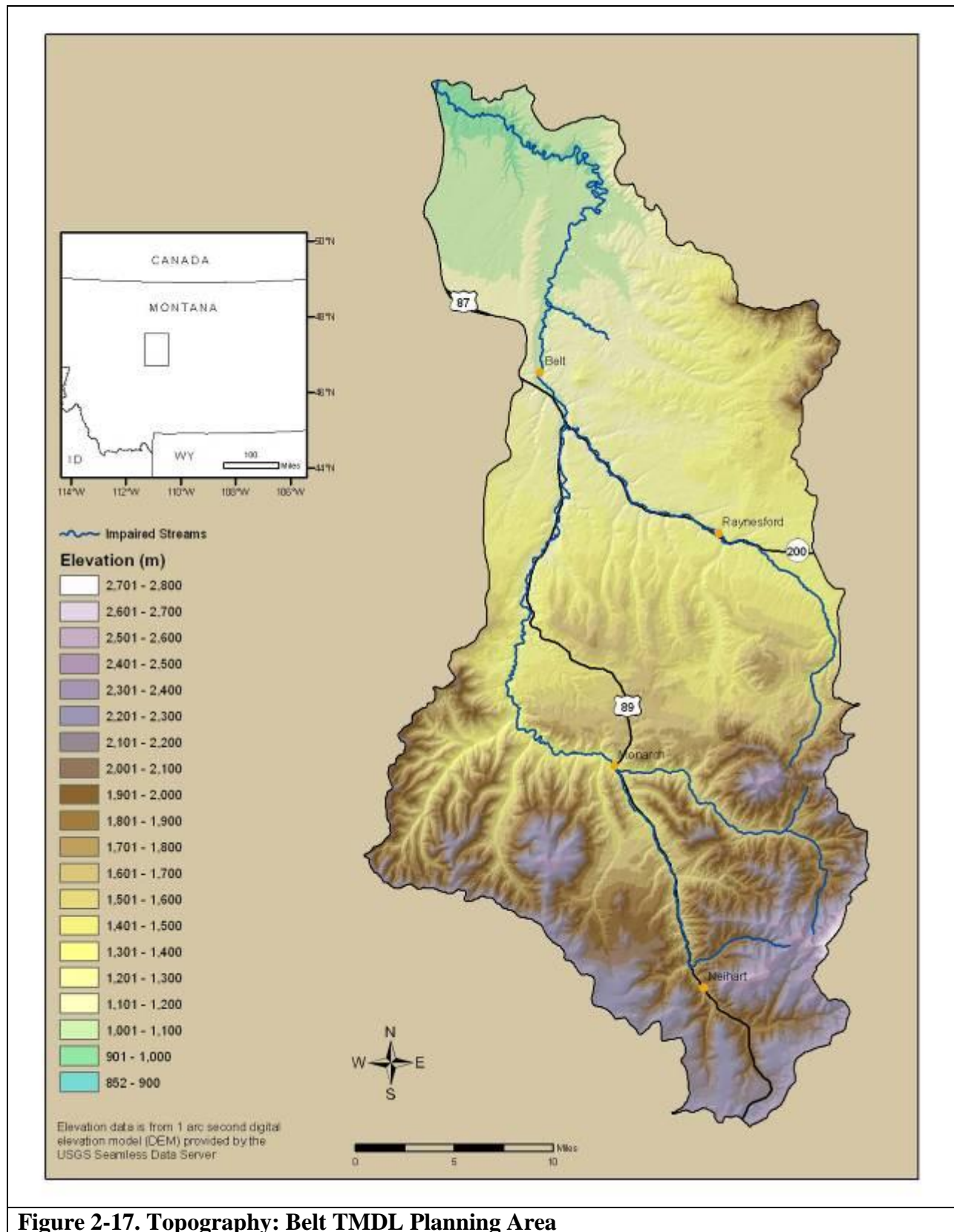
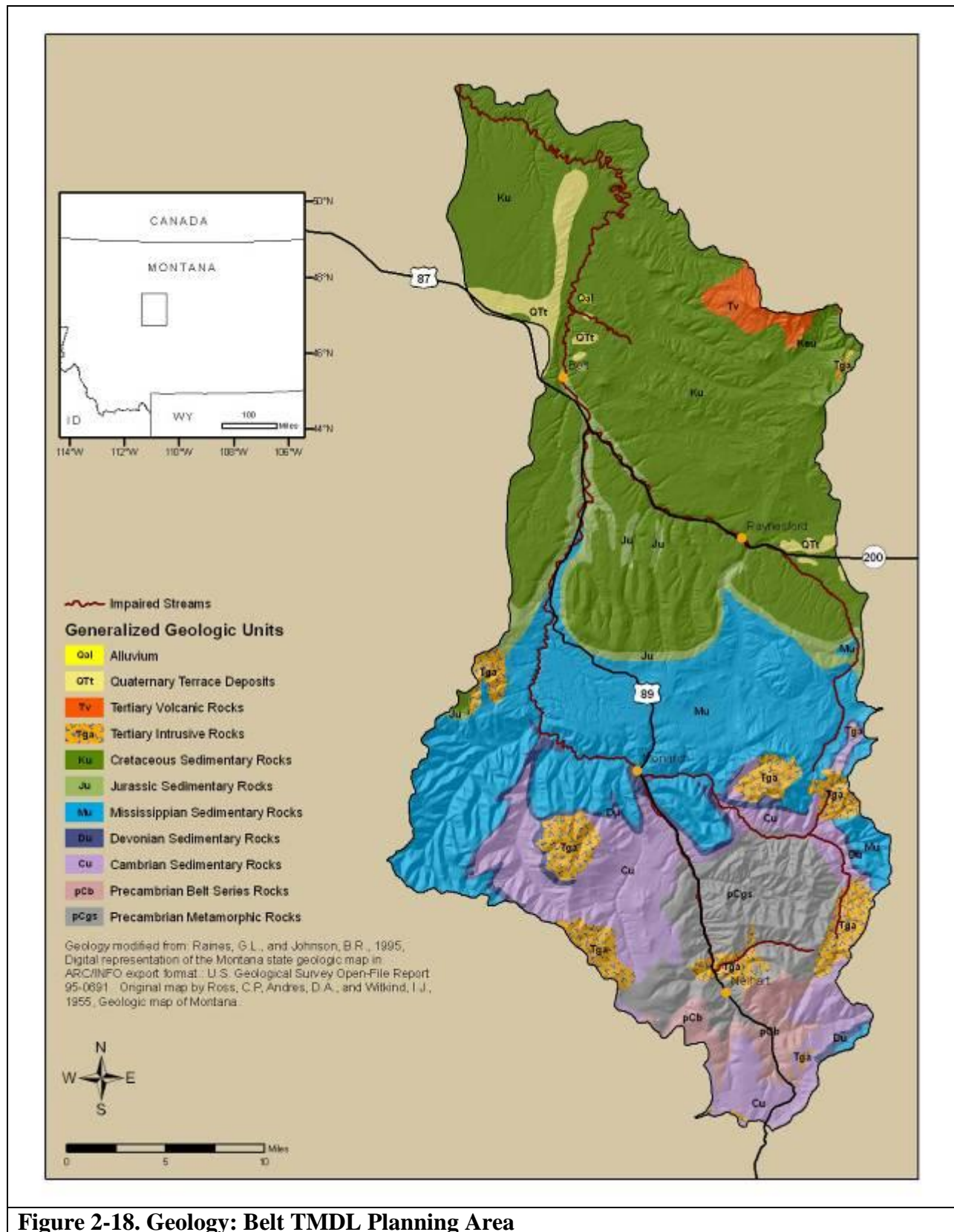


Figure 2-17. Topography: Belt TMDL Planning Area



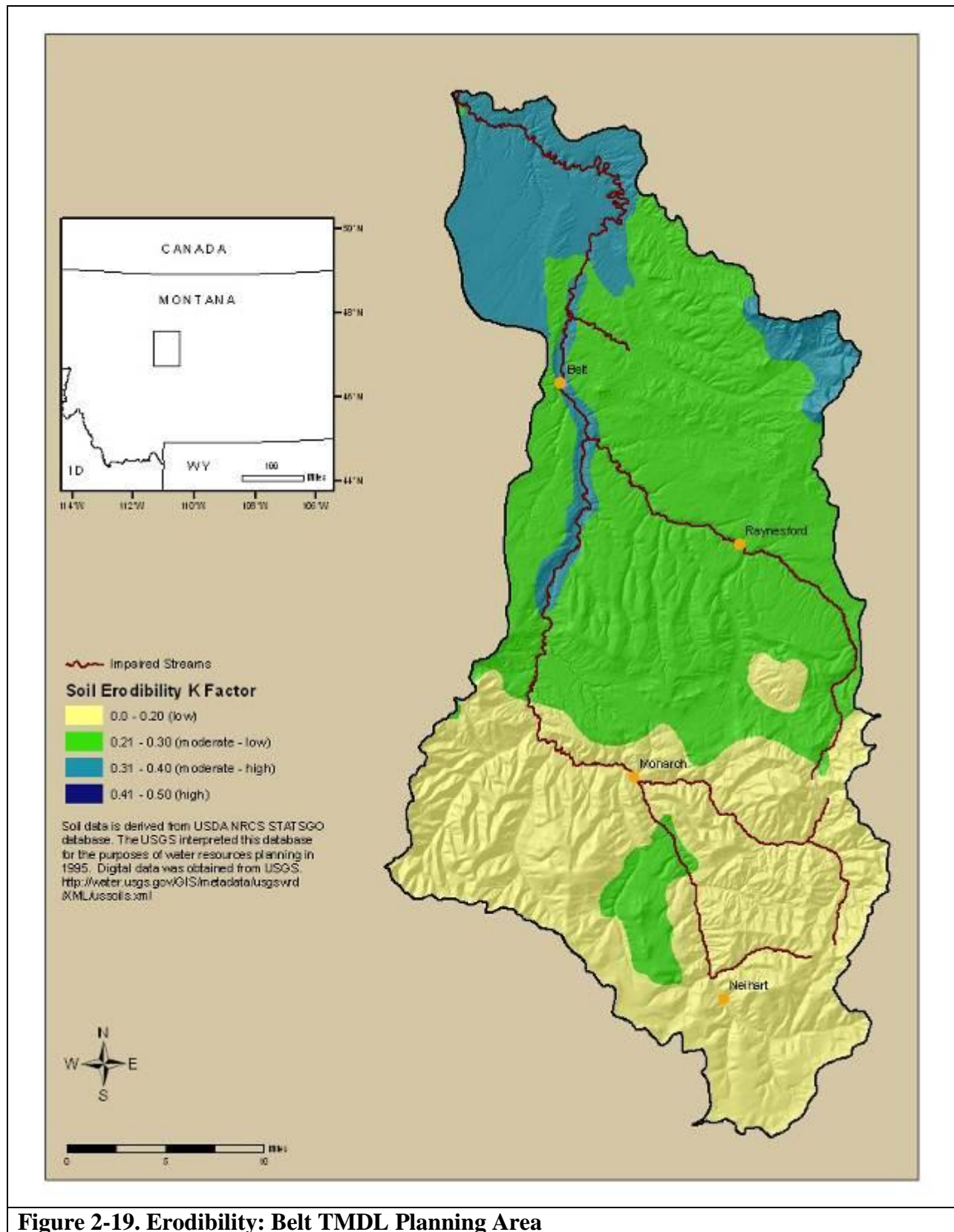
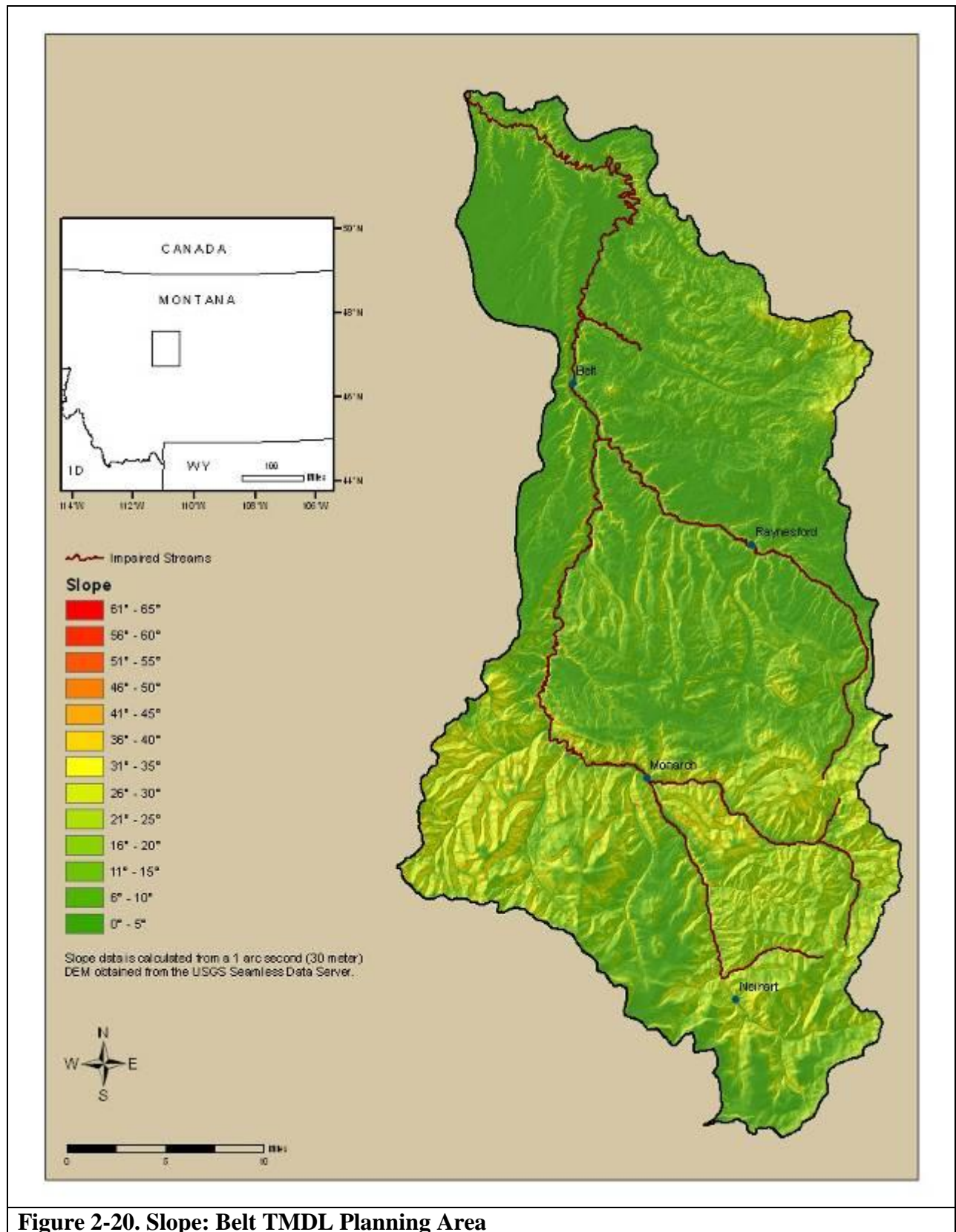


Figure 2-19. Erodibility: Belt TMDL Planning Area



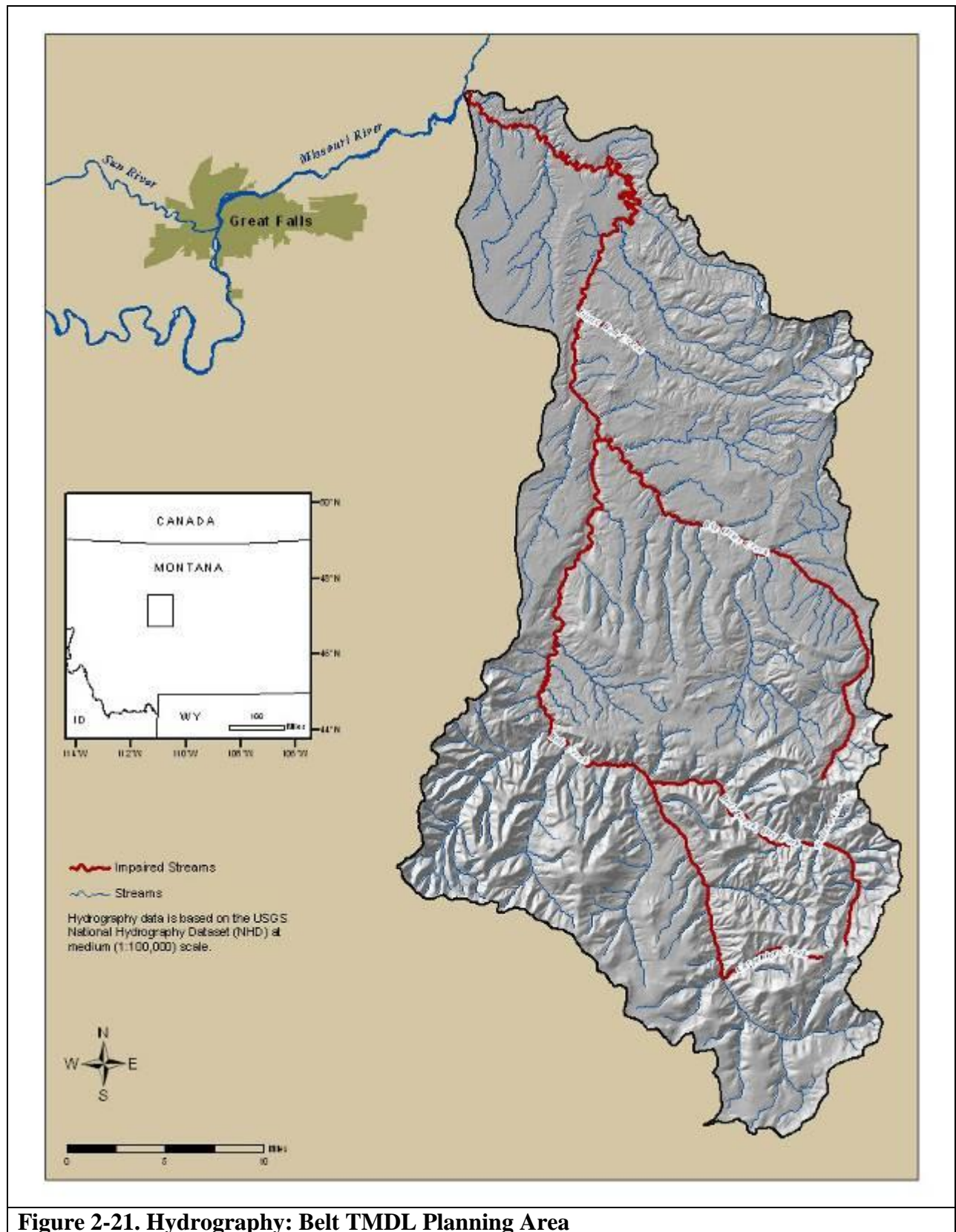


Figure 2-21. Hydrography: Belt TMDL Planning Area

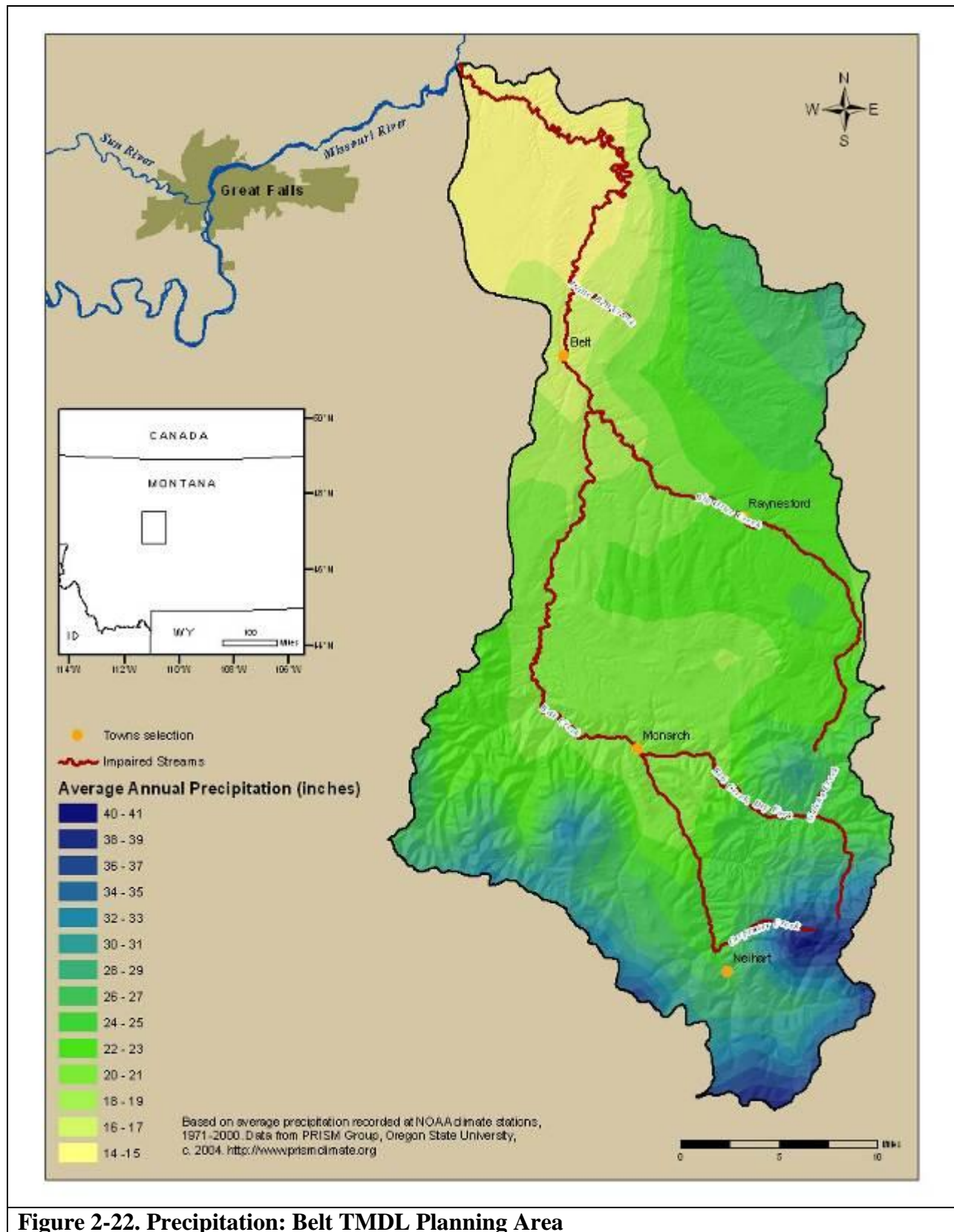
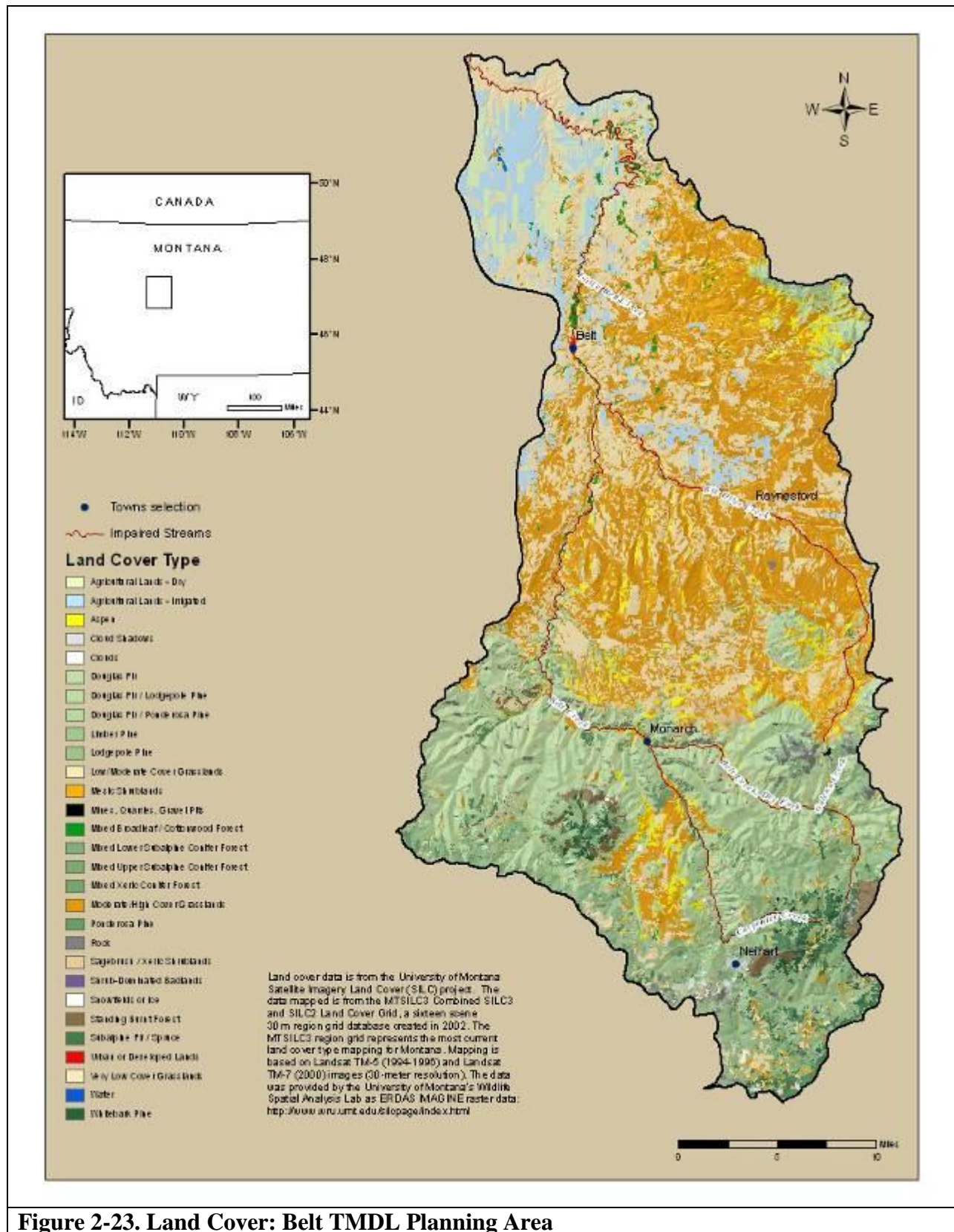


Figure 2-22. Precipitation: Belt TMDL Planning Area



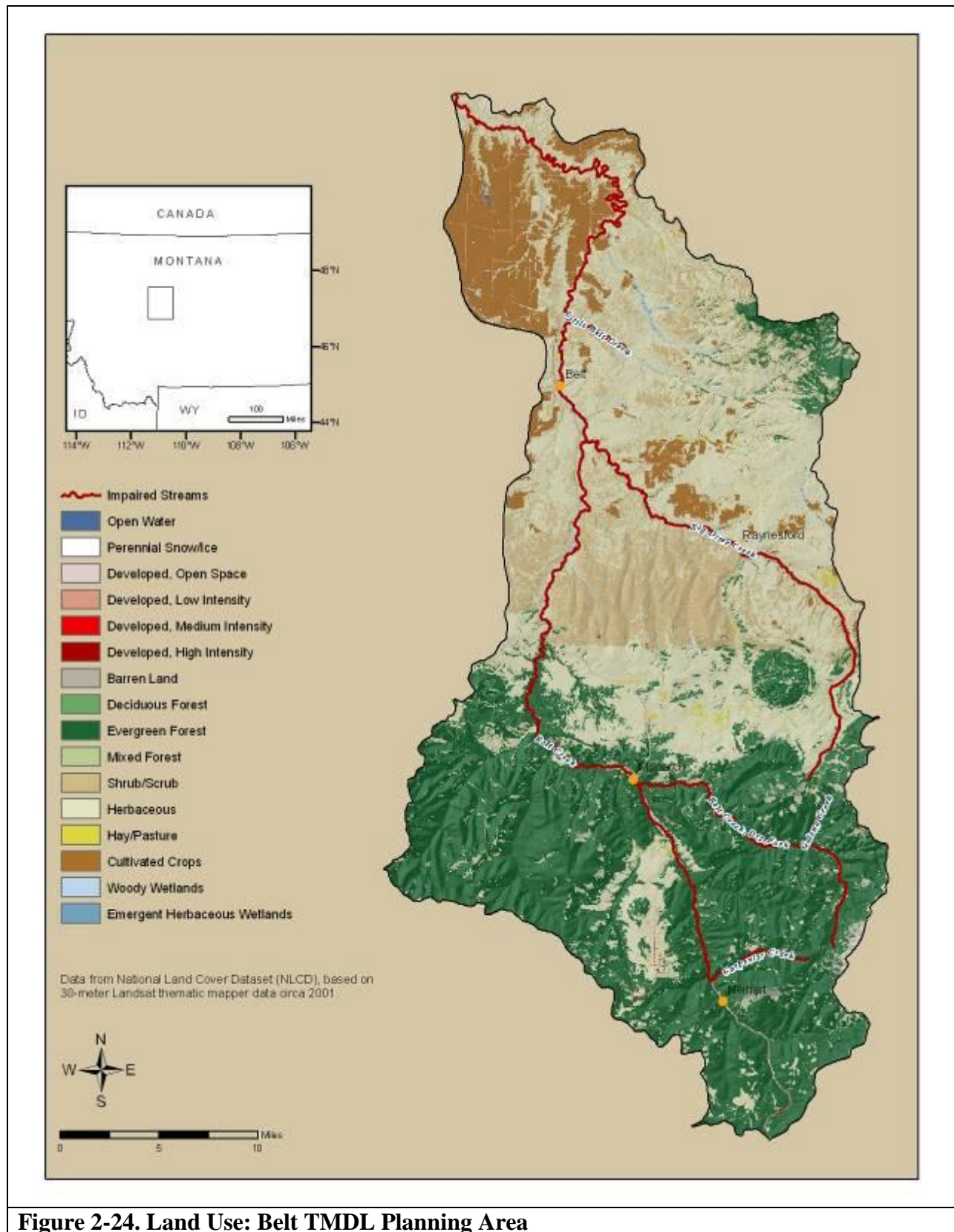


Figure 2-24. Land Use: Belt TMDL Planning Area

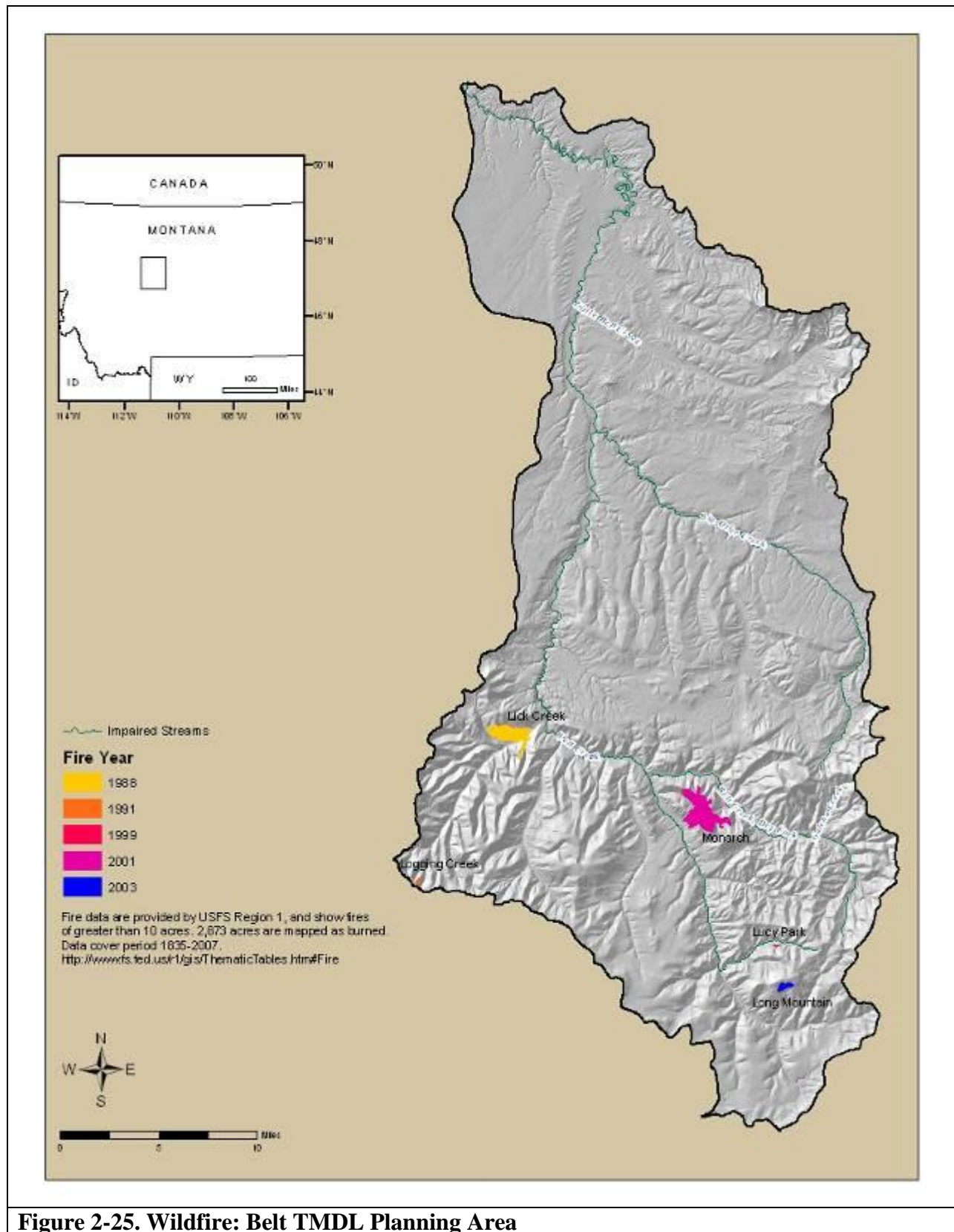
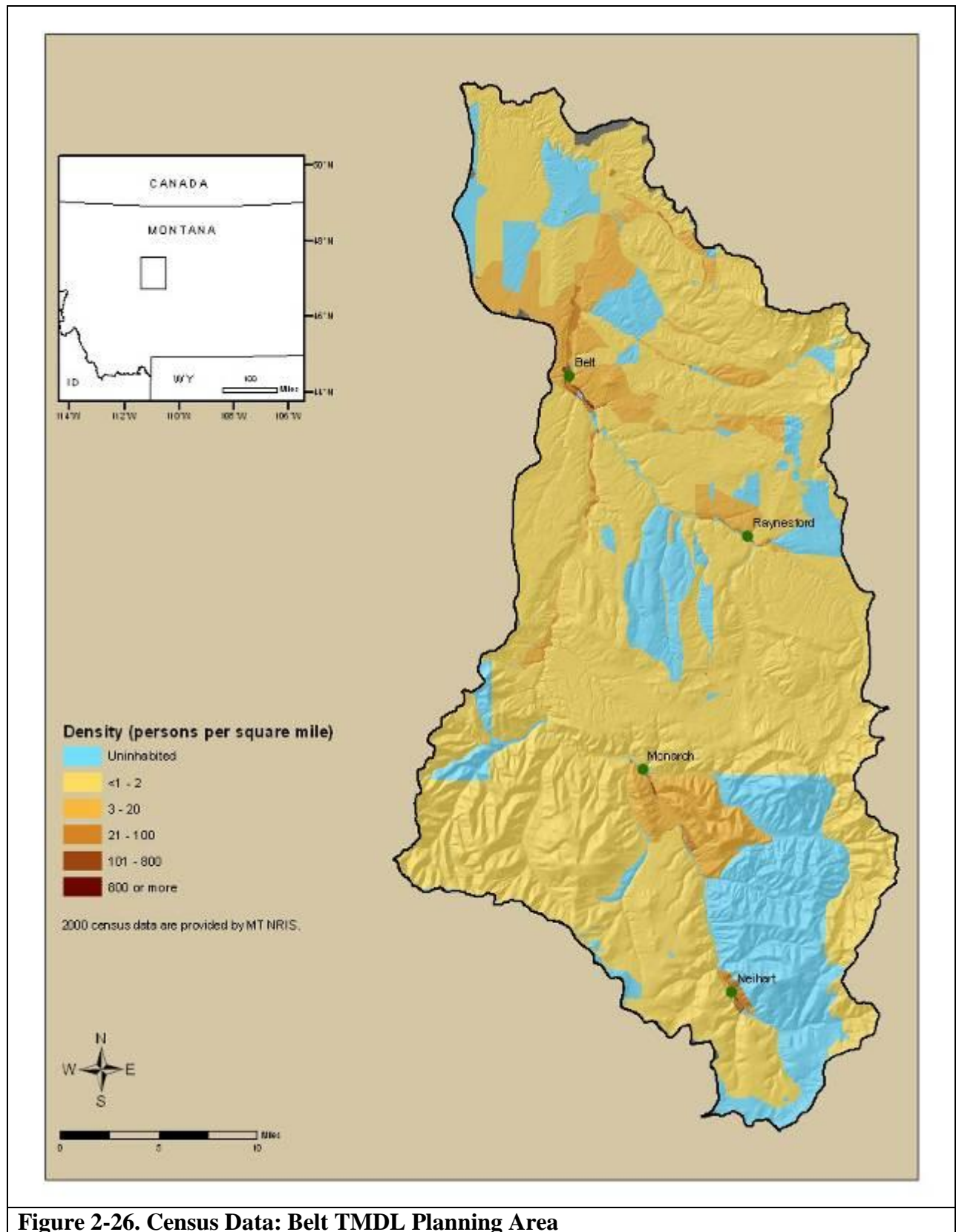
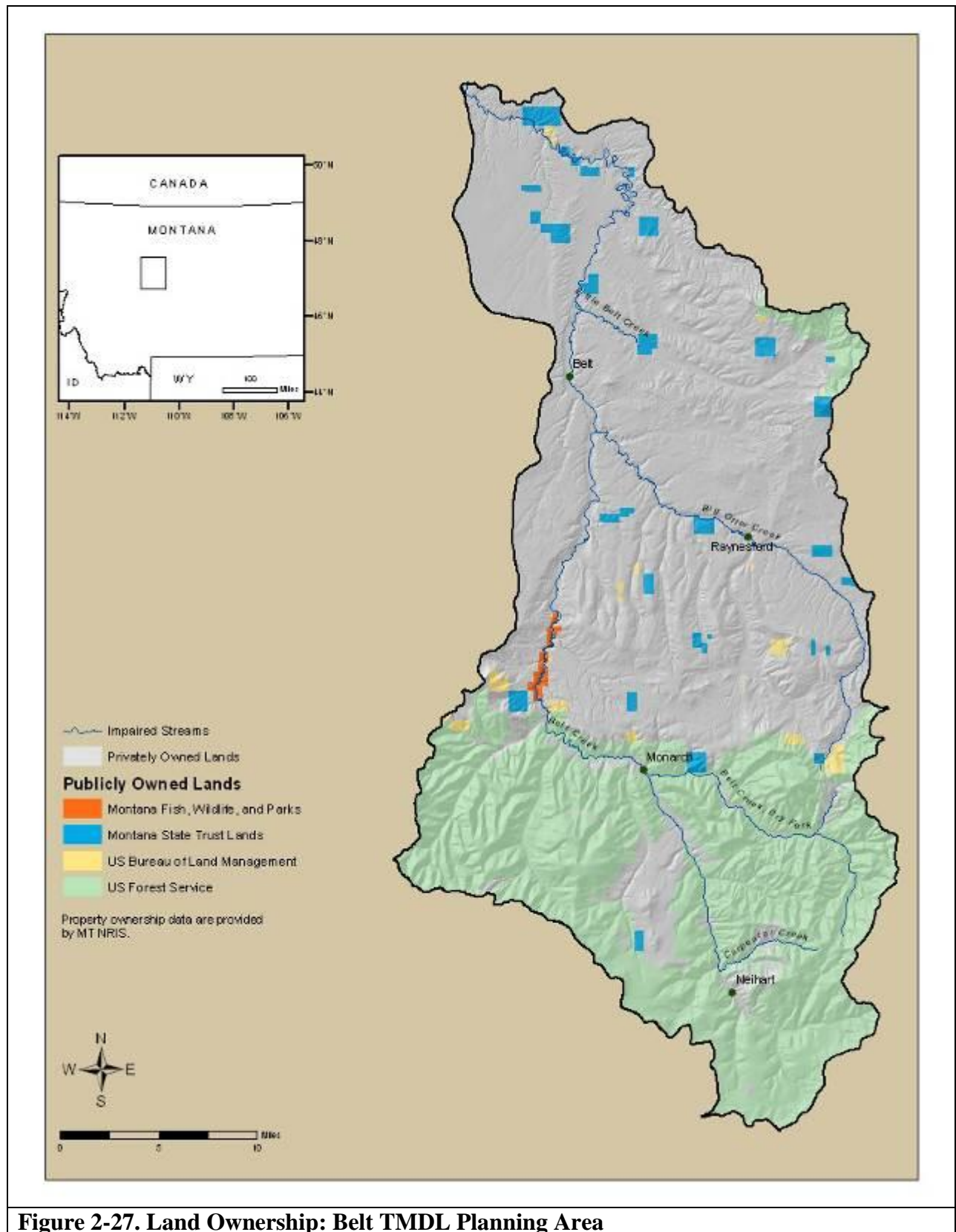


Figure 2-25. Wildfire: Belt TMDL Planning Area





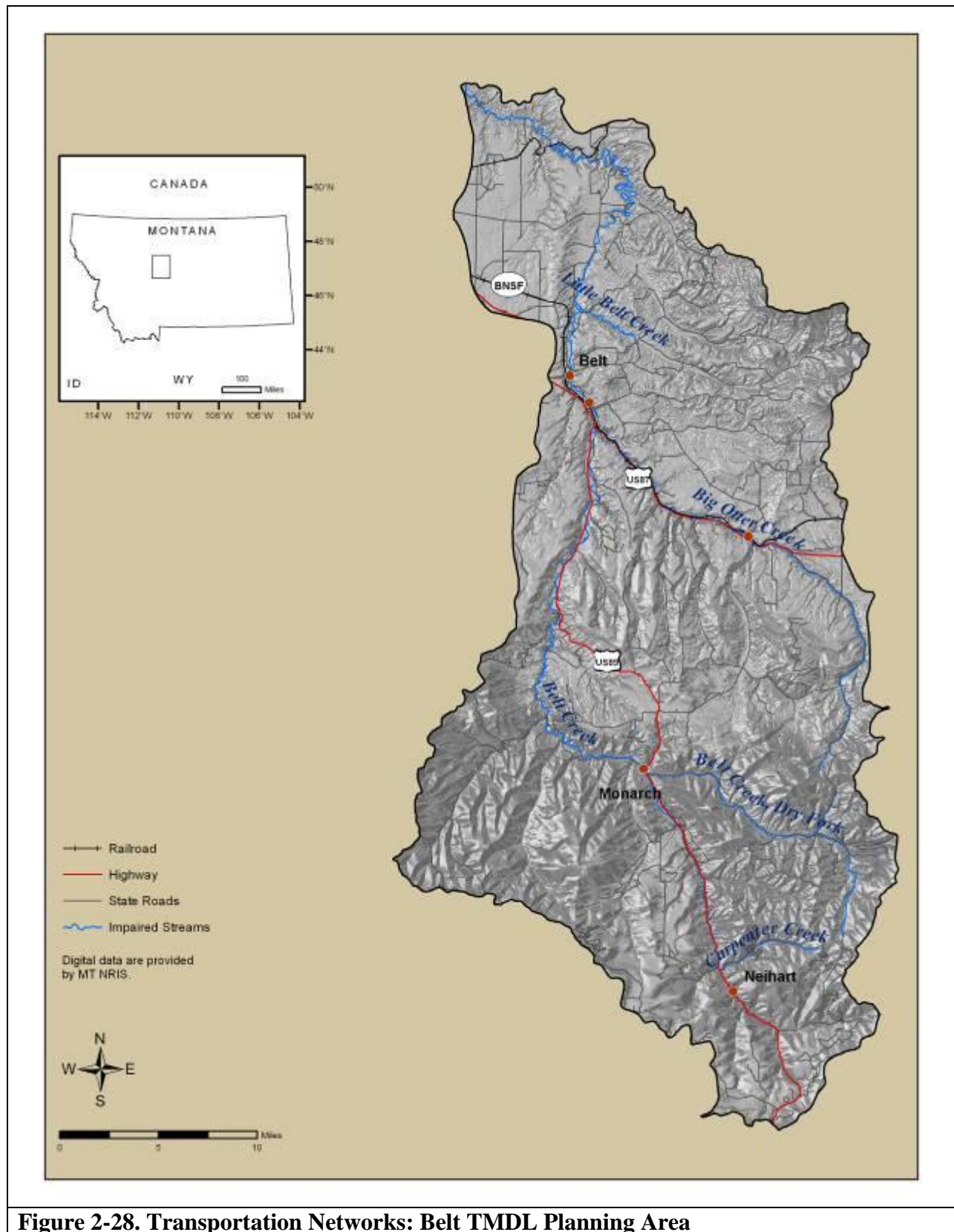


Figure 2-28. Transportation Networks: Belt TMDL Planning Area

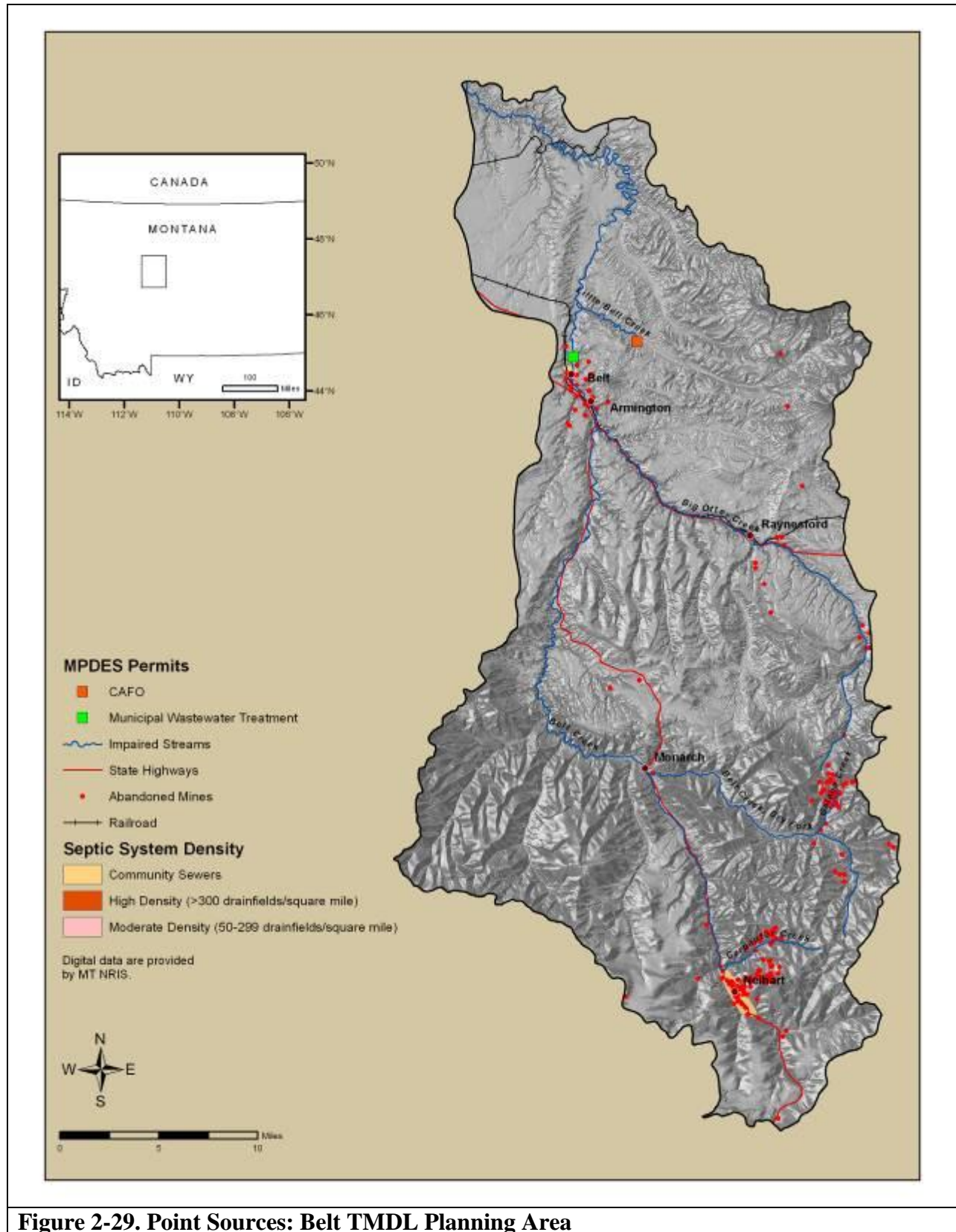


Figure 2-29. Point Sources: Belt TMDL Planning Area

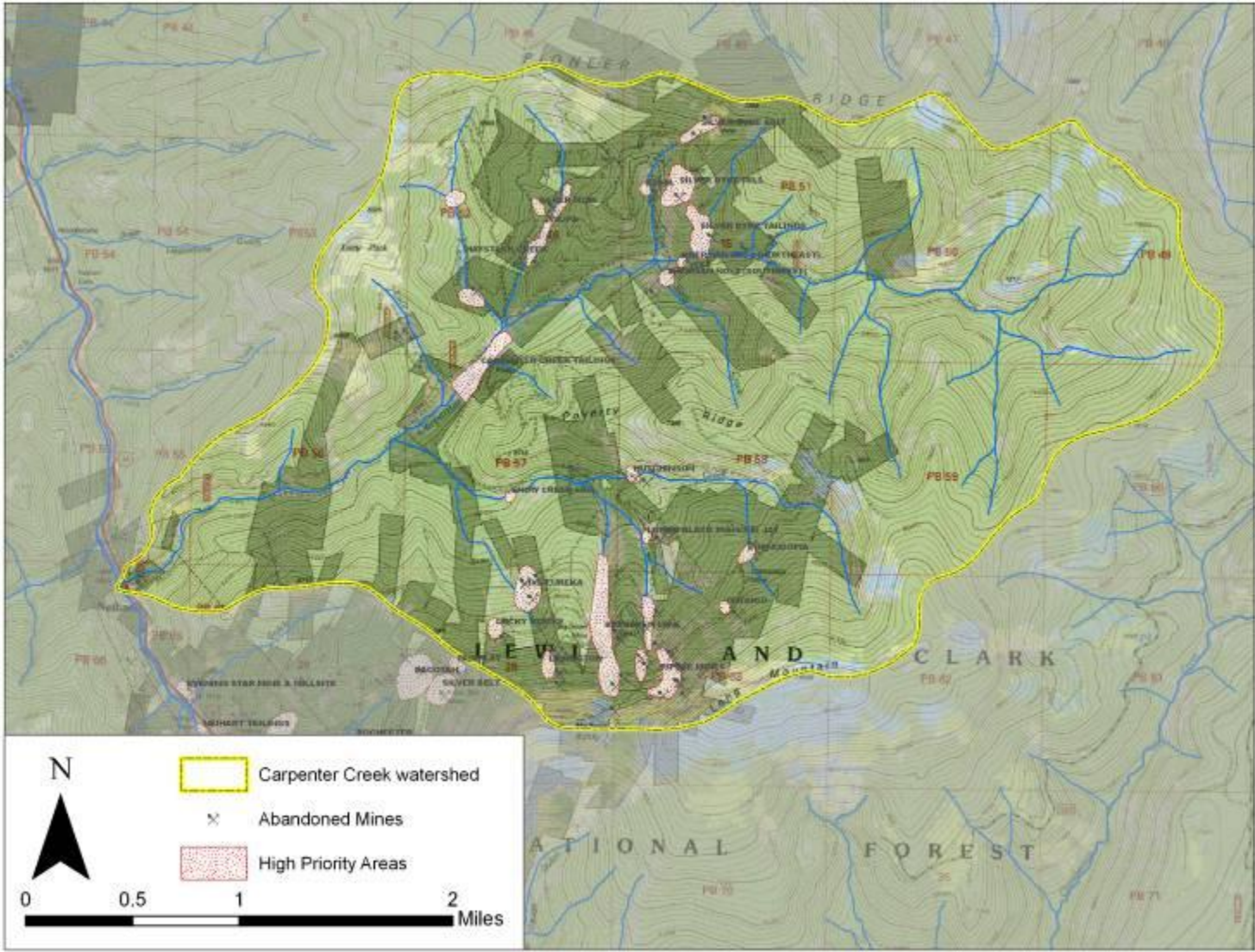


Figure 5-1. Carpenter Creek Historic and Abandoned Mining Sources



Figure 5-1a. Carpenter Creek Tailings



Figure 5-1b. Silver Dyke Tailings: Tributary to Carpenter Creek

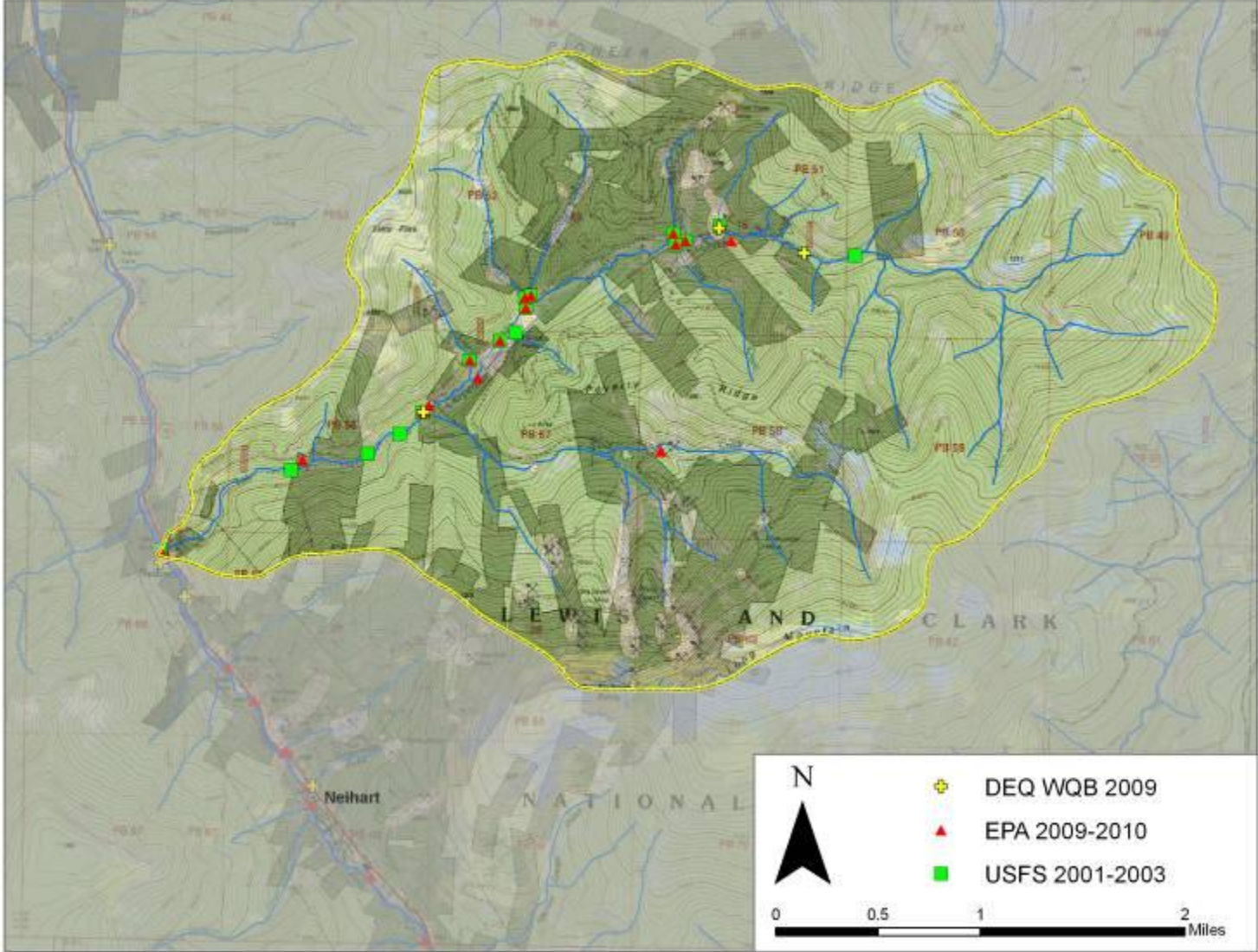


Figure 5-2. Carpenter Creek Water Quality Sampling Stations

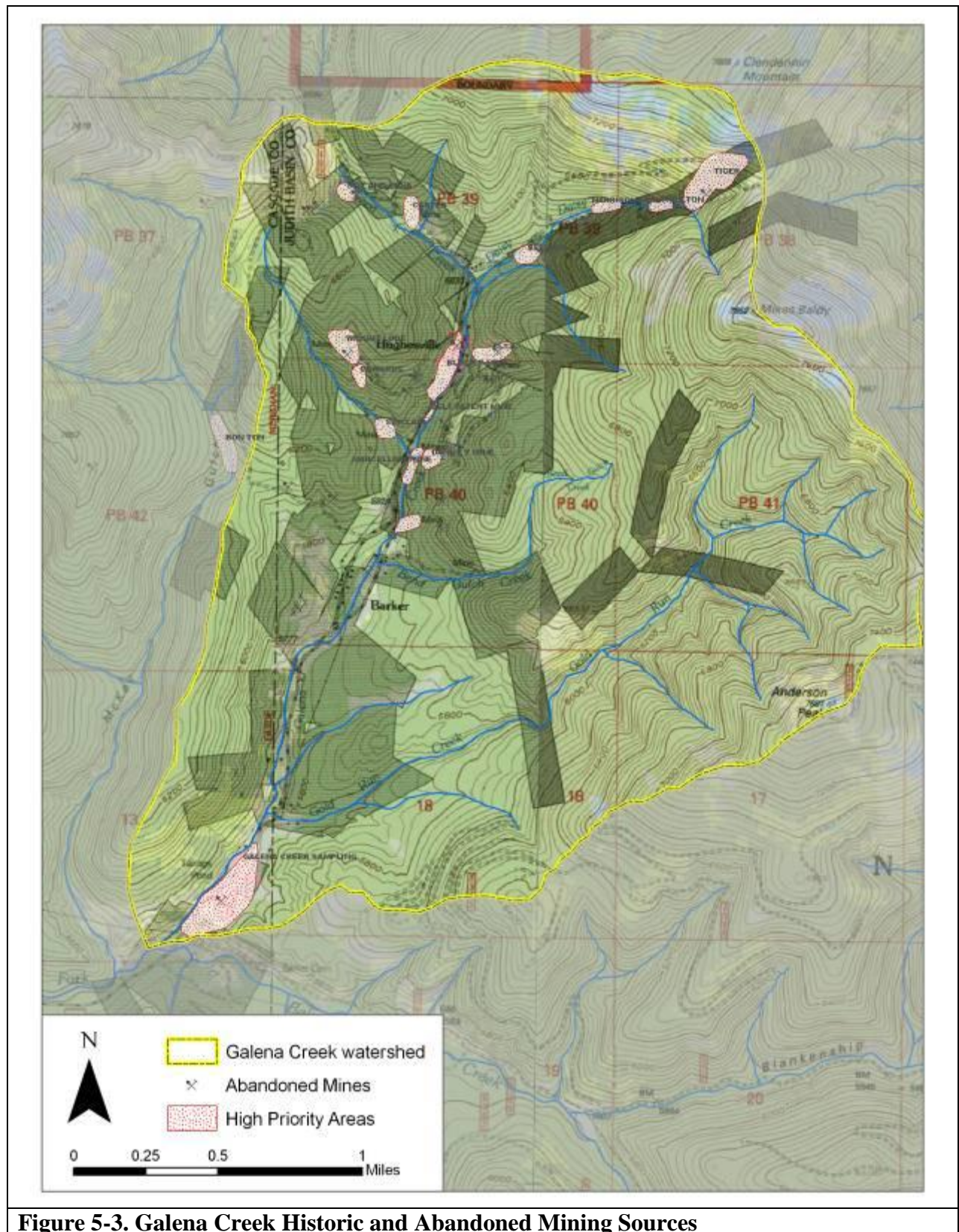




Figure 5-3a. Galena Creek Mine Adit & Mine Wastes



Figure 5-3b. Galena Creek Mine Drain/Adit

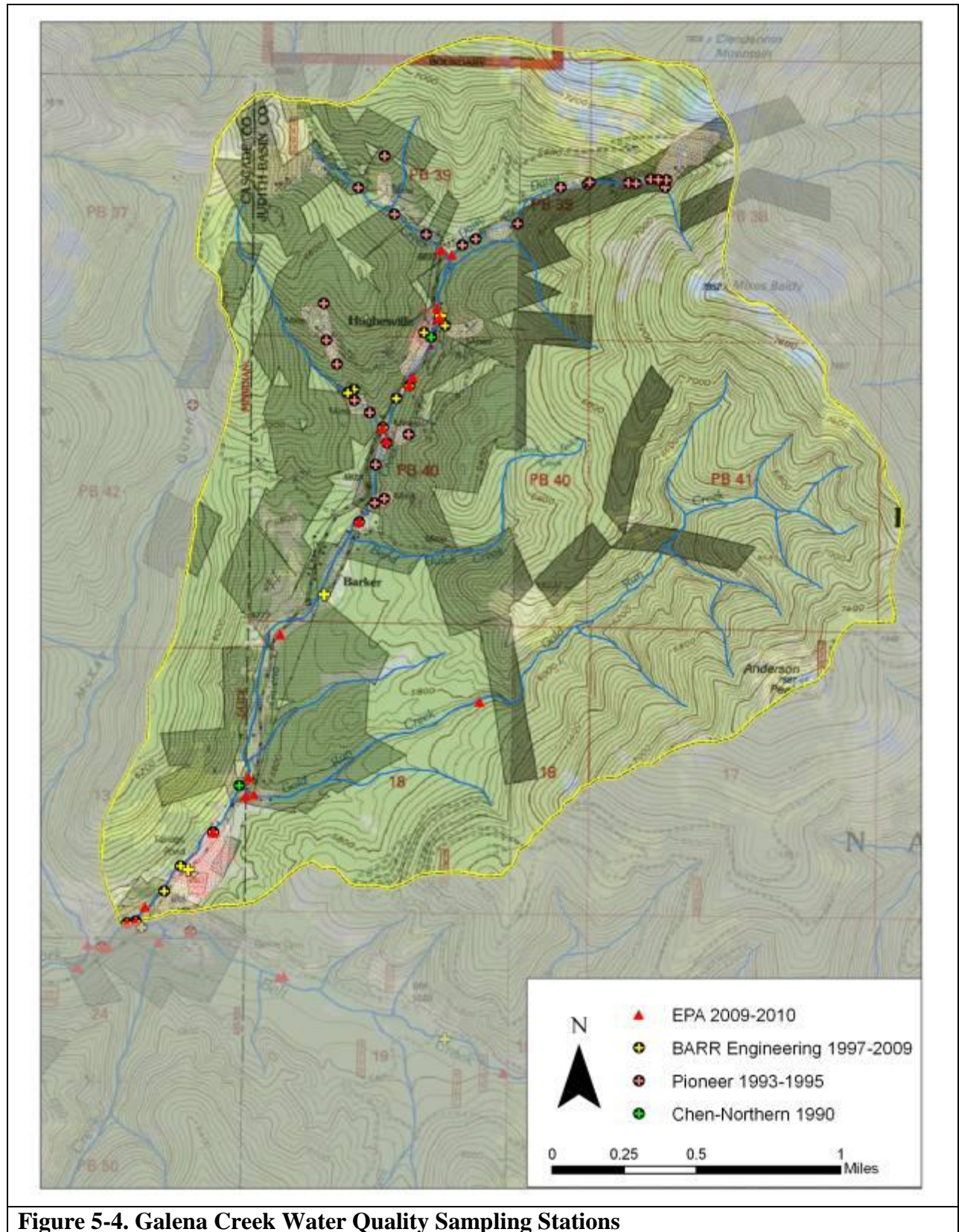


Figure 5-4. Galena Creek Water Quality Sampling Stations

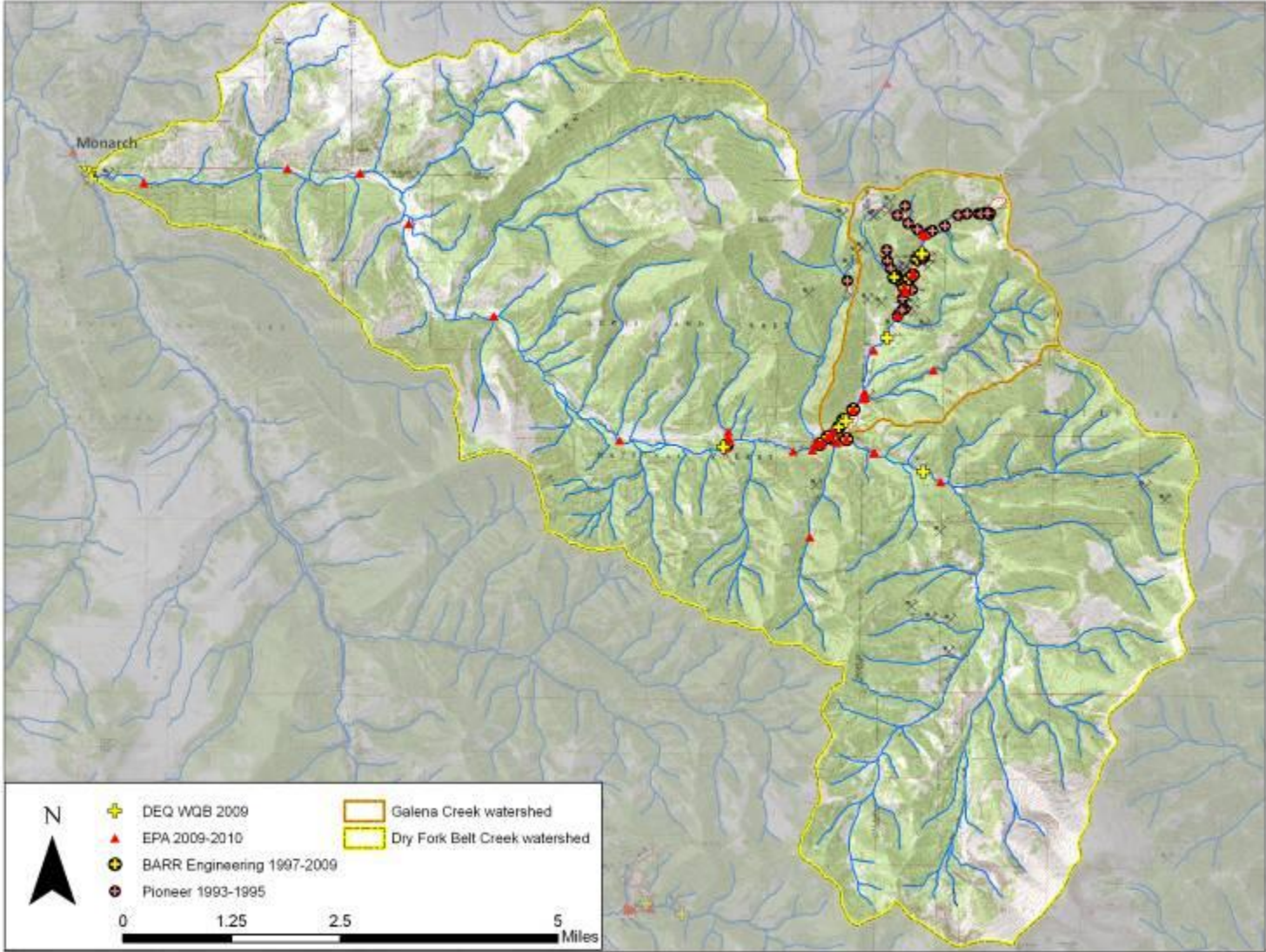


Figure 5-5. Dry Fork Belt Creek Water Quality Sampling Stations

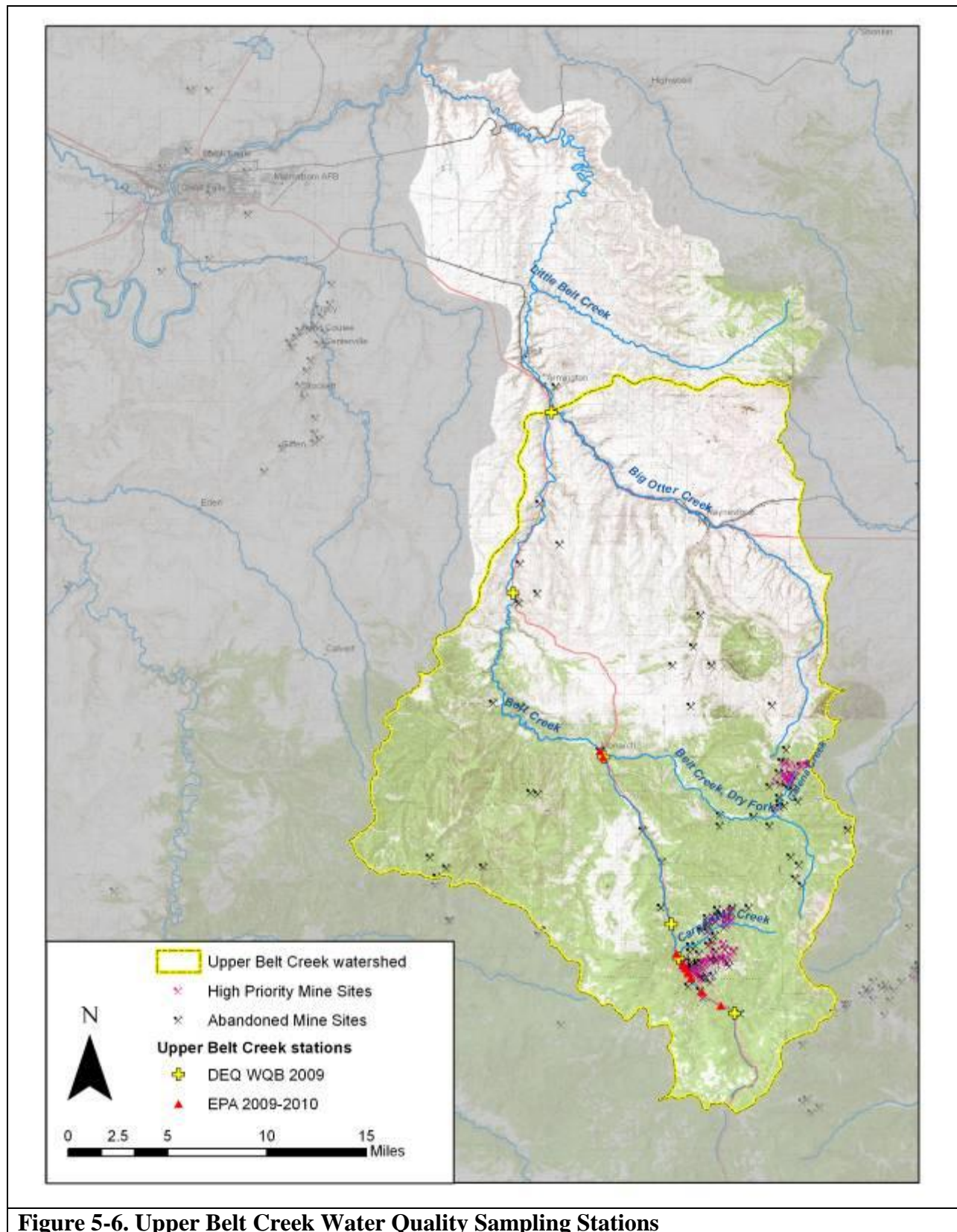


Figure 5-6. Upper Belt Creek Water Quality Sampling Stations

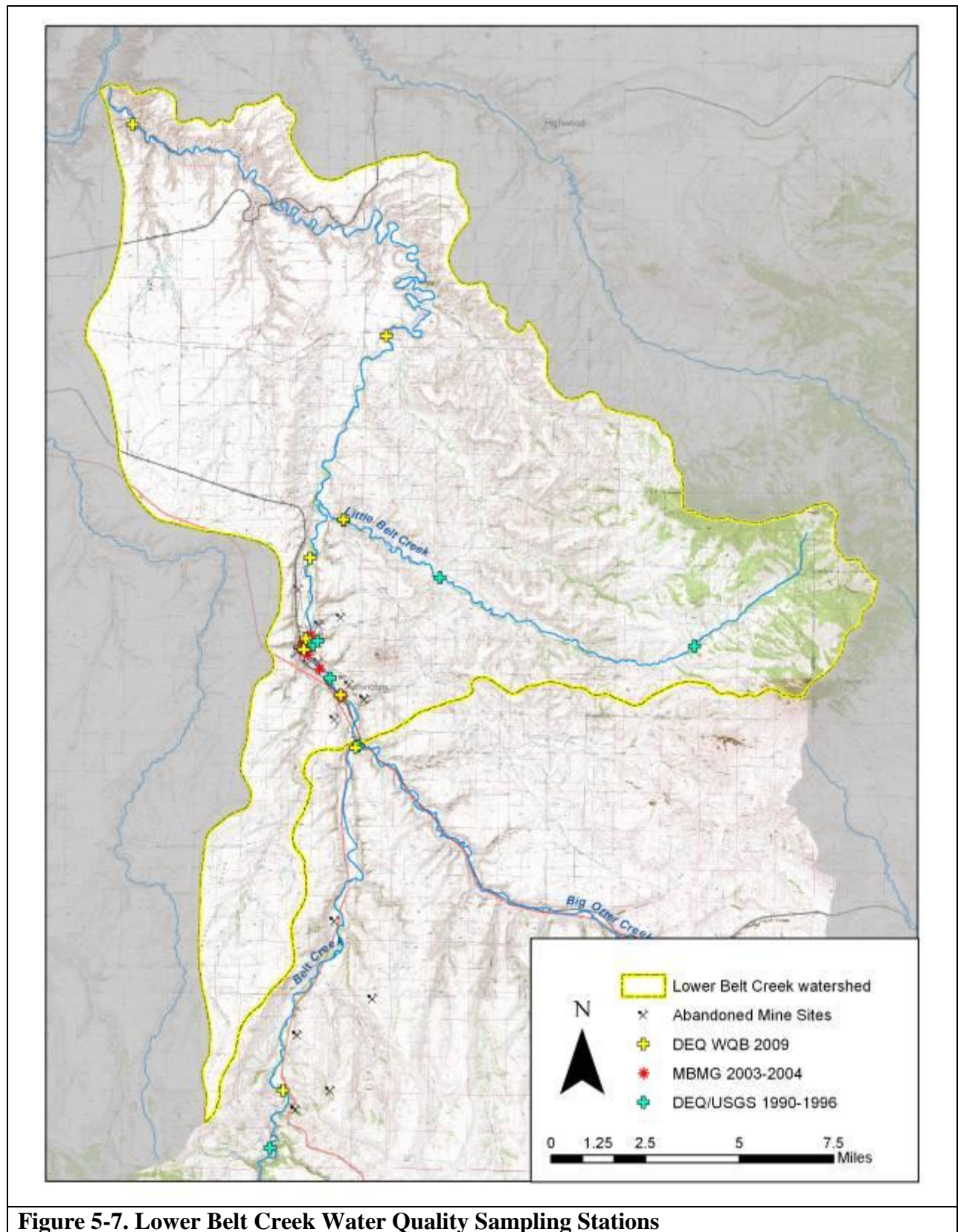
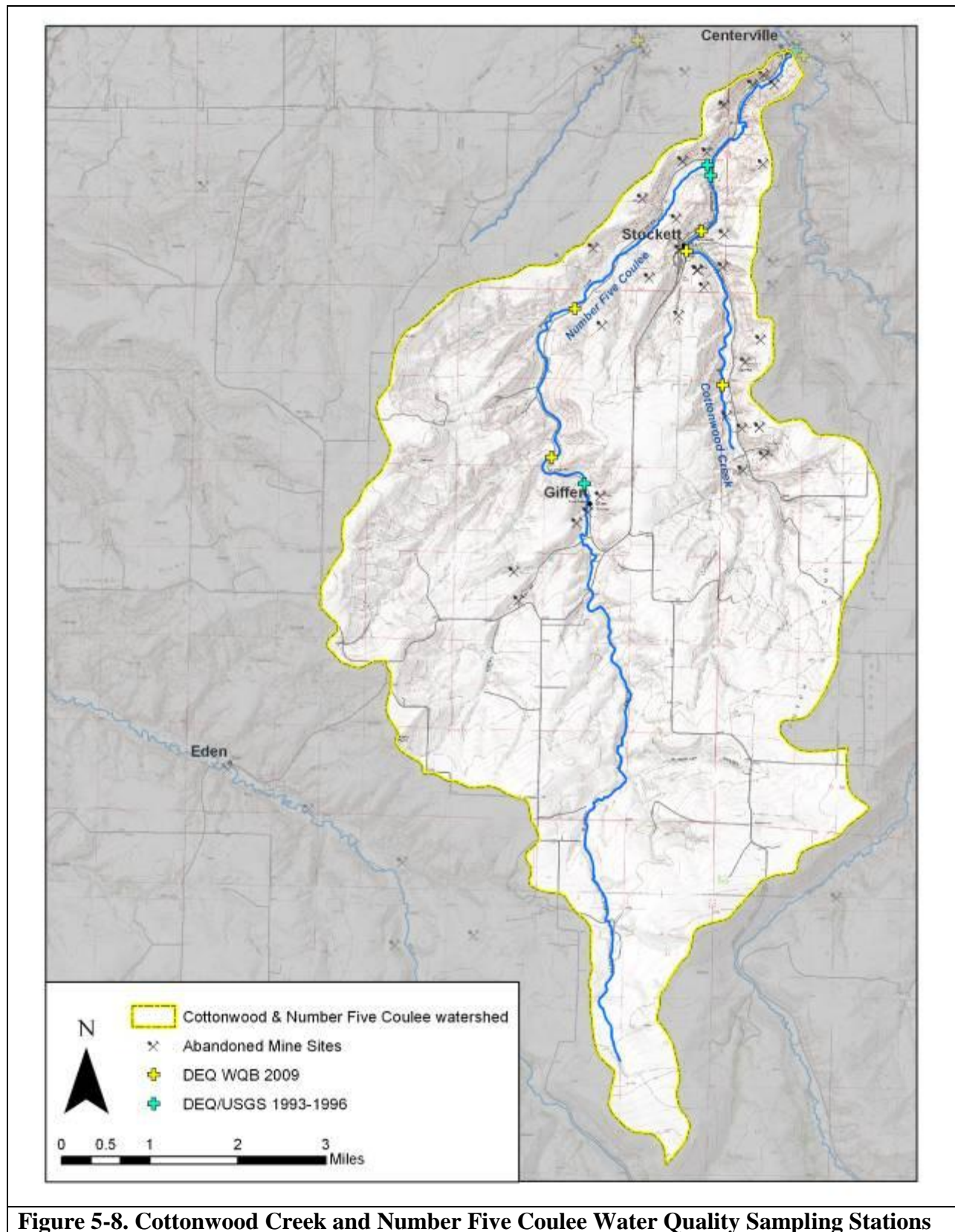




Figure 5-7a. Anaconda Mine Drain discharging to Belt Creek



Figure 5-7b. Belt Creek below Anaconda Mine Drain






		
<p>Figure 5-9. Acid Mine Discharge entering Cottonwood Creek at Stockett</p>	<p>Figure 5-10. Acid Mine Discharge entering Cottonwood Creek upstream of Stockett</p>	<p>Figure 5-11. Acid Mine Discharge (2) entering Cottonwood Creek upstream of Stockett</p>



Figure 5-12. Acid Mine Drainage to Number Five Coulee



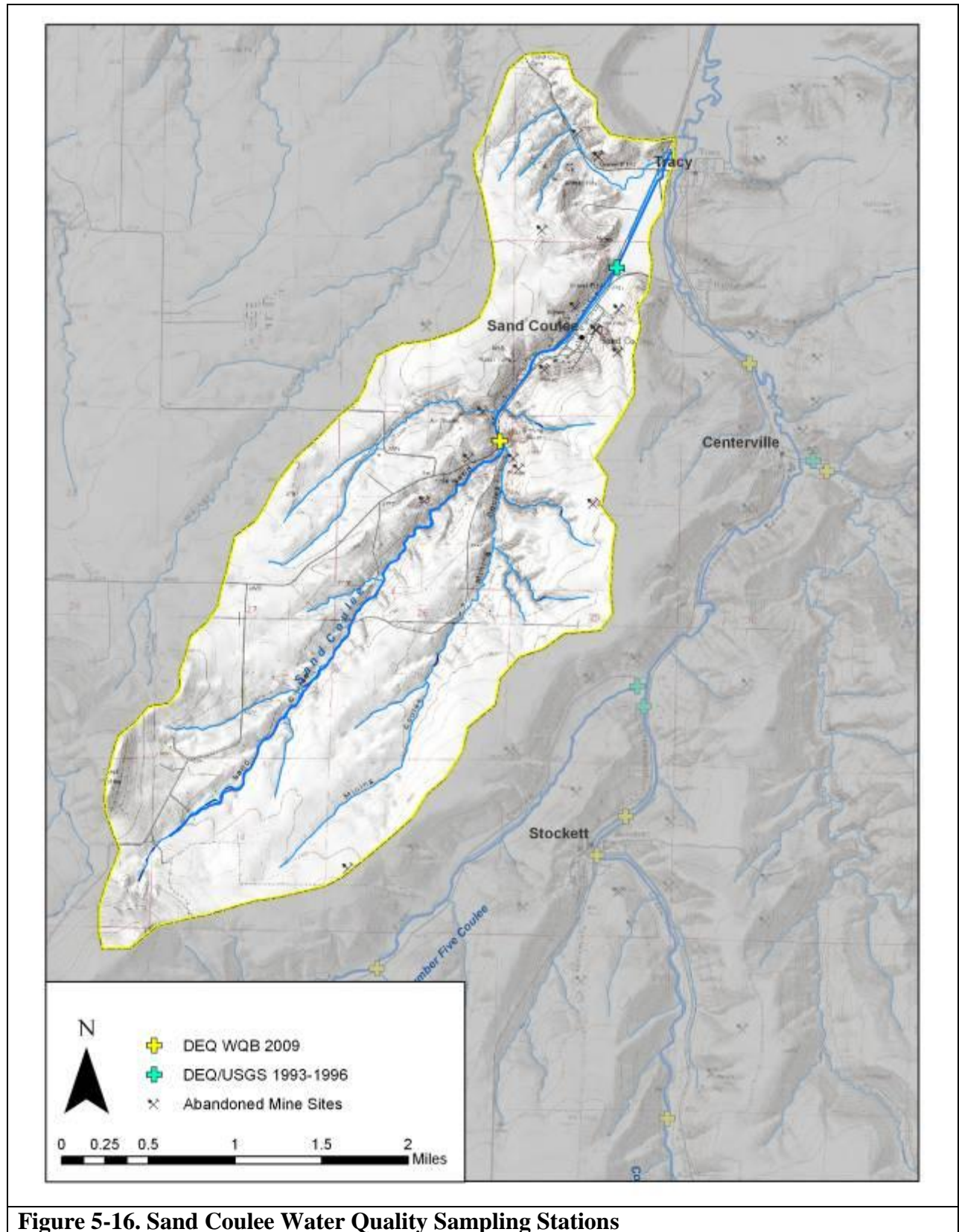
Figure 5-13. Lower Sand Coulee



Figure 5-14. Acid mine drainage to Sand Coulee



Figure 5-15. Mine Spoils in Sand Coulee



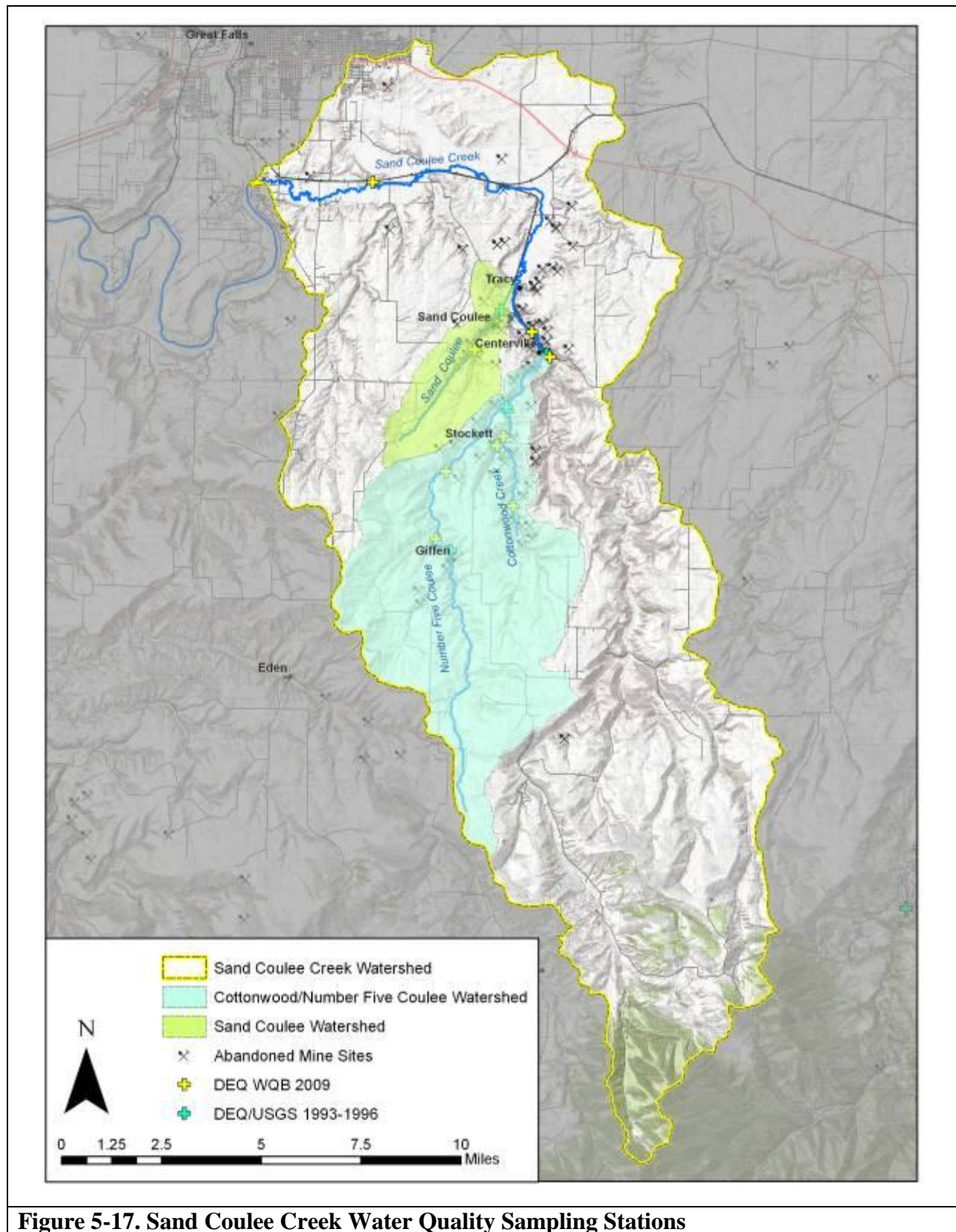


Figure 5-17. Sand Coulee Creek Water Quality Sampling Stations

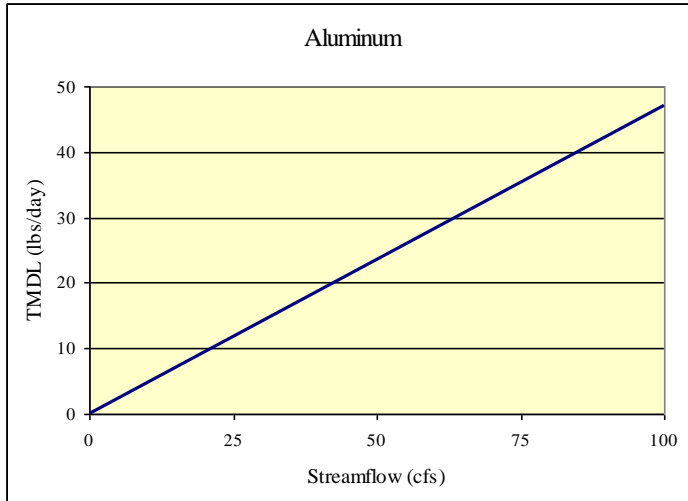


Figure 5-18. Aluminum TMDL as a function of flow

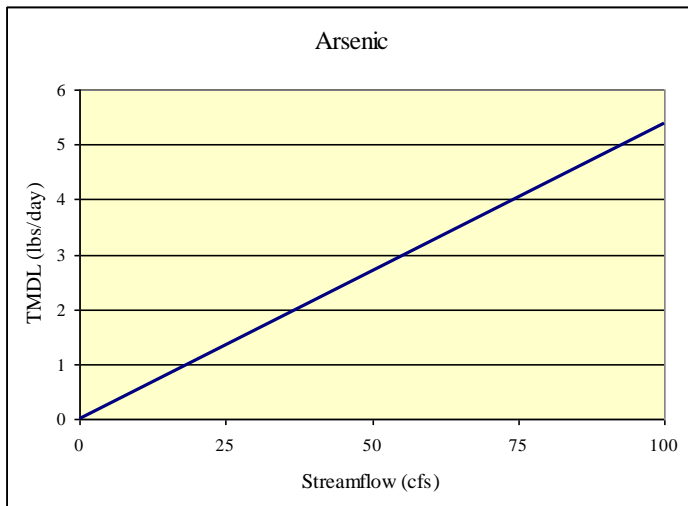


Figure 5-19. Arsenic TMDL as a function of flow

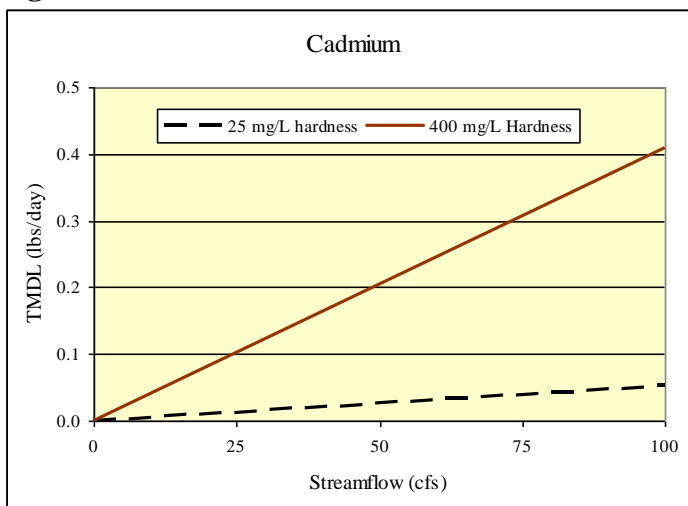


Figure 5-20. Cadmium TMDL as a function of flow

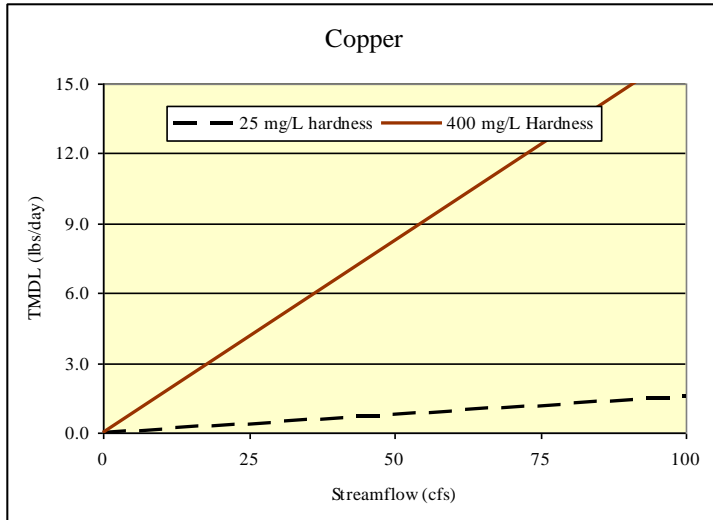


Figure 5-21. Copper TMDL as a function of flow

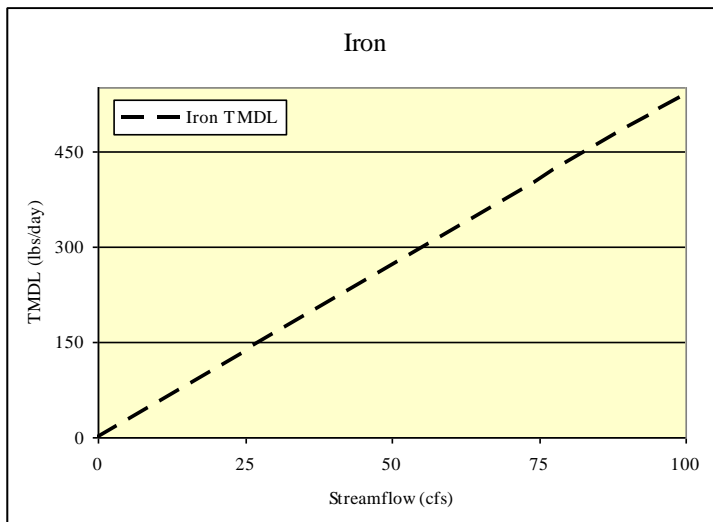


Figure 5-22. Iron TMDL as a function of flow

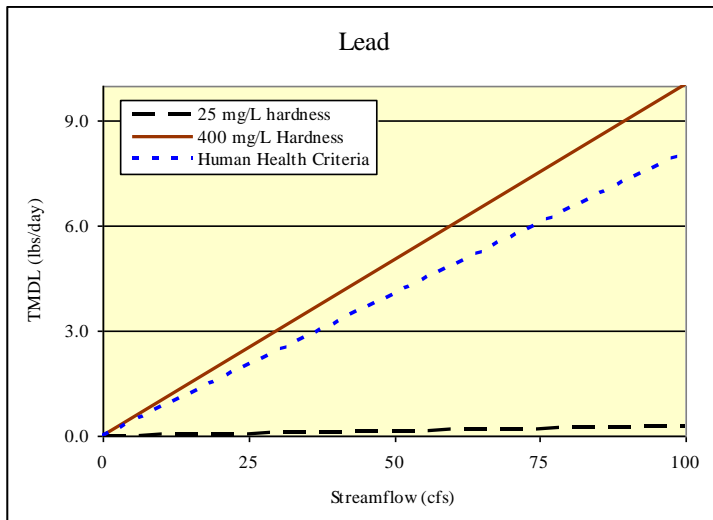


Figure 5-23. Lead TMDL as a function of flow

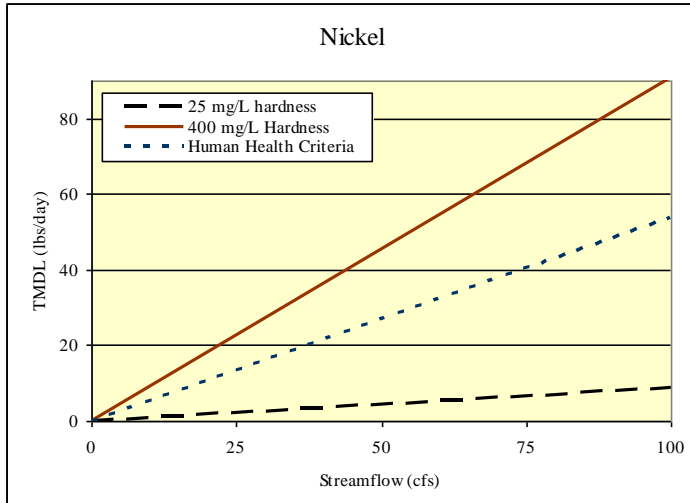


Figure 5-24. Nickel TMDL as a function of flow

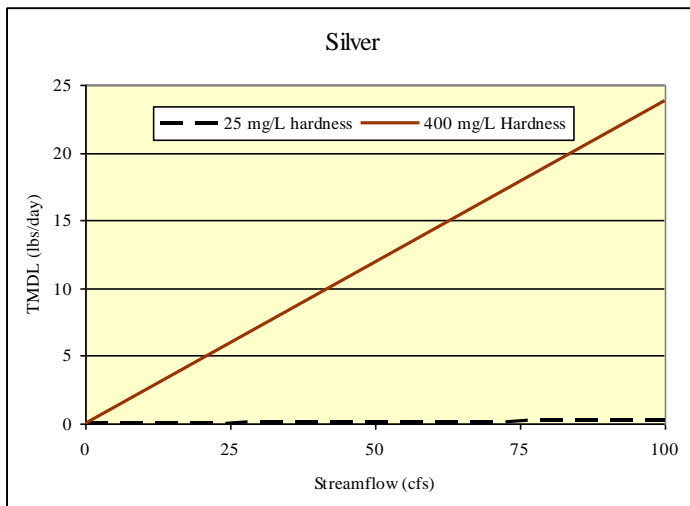


Figure 5-25. Silver TMDL as a function of flow

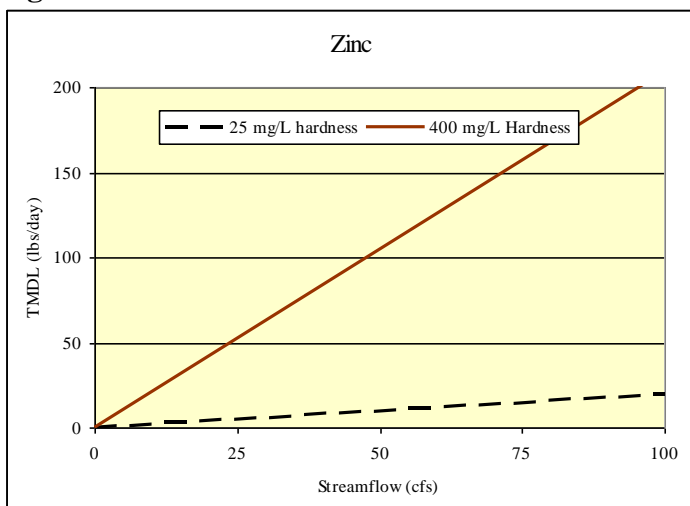


Figure 5-26. Zinc TMDL as a function of flow