INSTAAR-EPA Study

Source Water Protection Areas Map

Ecologically Sensitive Areas Maps

Alta Lakes

Bear Creek (Upper Basin)

Bridal Veil Basin

Deep Creek Basin

Ingram Basin

Lake Fork

Lake Hope

Marshall Basin

Mill Creek Basin

Ophir

Prospect Basin

Savage Basin

Skunk Creek

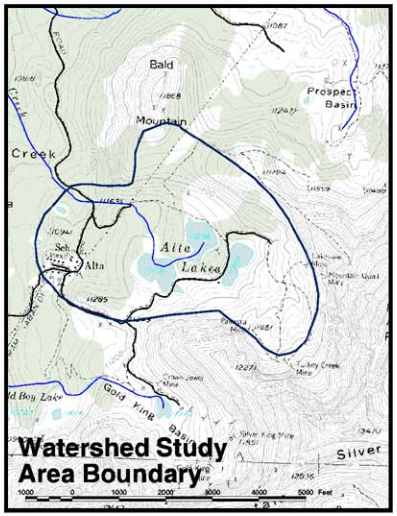
Swamp Canyon

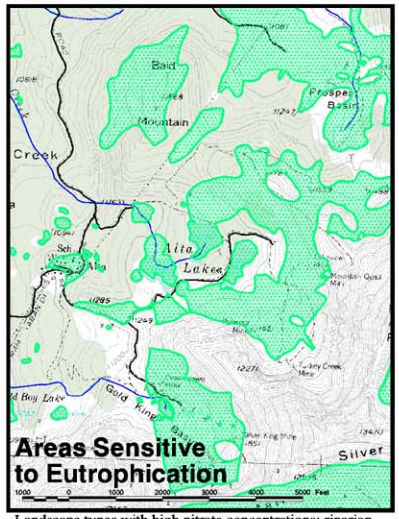
Waterfall Canyon

Ecological Sensitivity

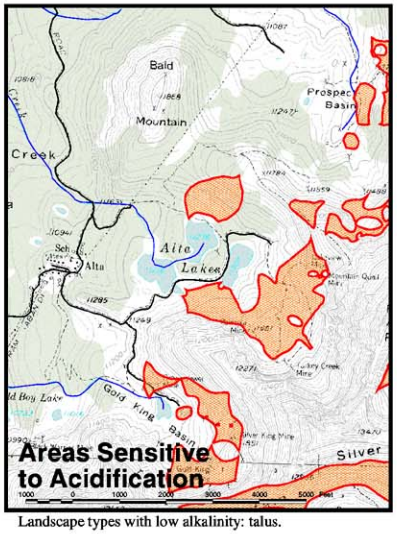
Landscape Types and Water Resources

Alta Lakes

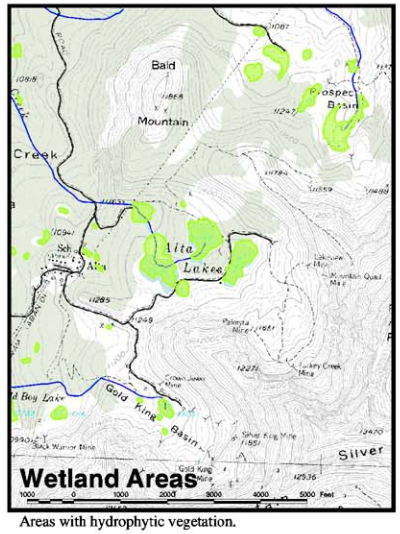




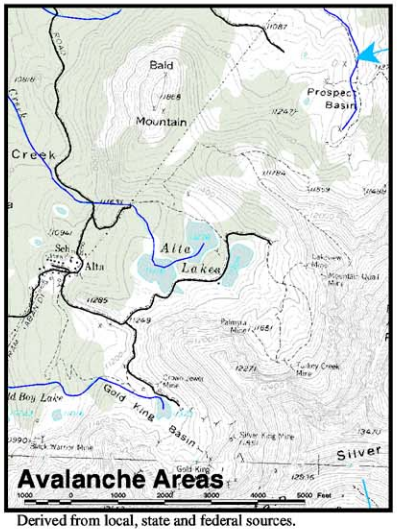
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



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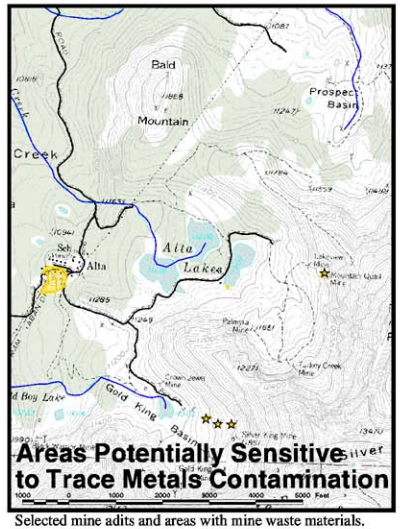


Selected mine adits and areas with mine waste materials.

Legend

- Area Sensitive to Acidification
- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
- Area Sensitive to Trace Metals Contamination
- Wetland
- Source Water Protection Area
- Private Land
- Stream
- Avalanche Chute
- Road
- Mine Adit

INSTAAR, University of Colorado Boulder

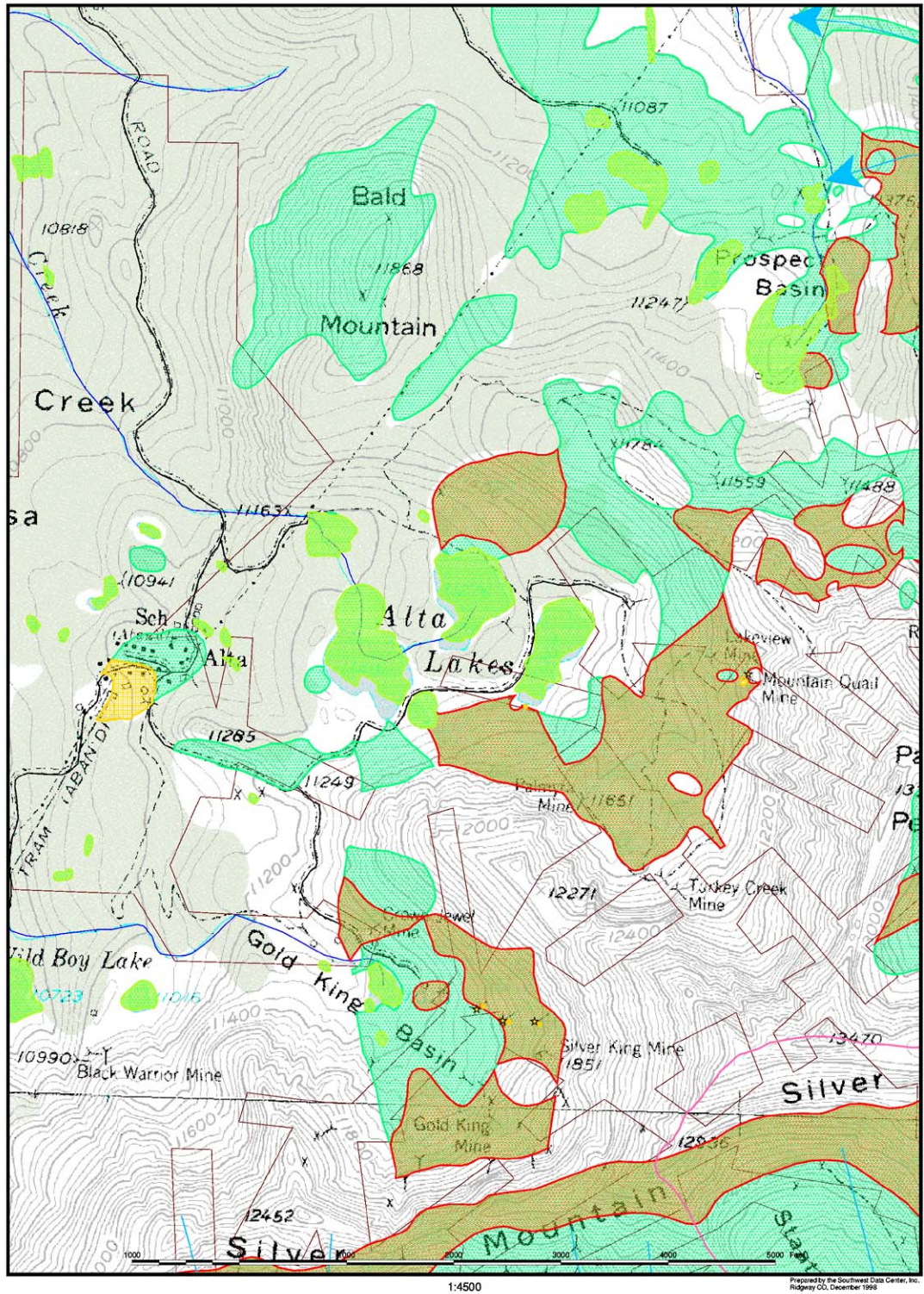
San Miguel County, Colorado

United States Environmental Protection Agency

S W D C

Accuracy of landscape type polygon boundaries is 80 feet.

Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.



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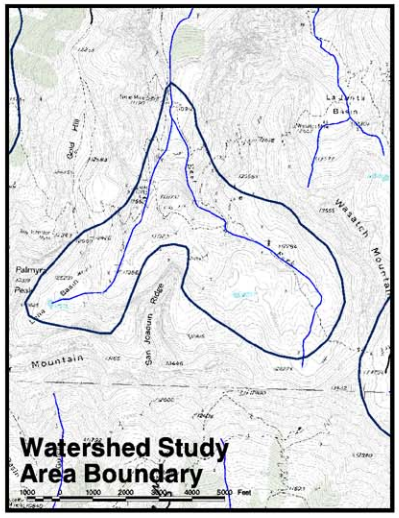
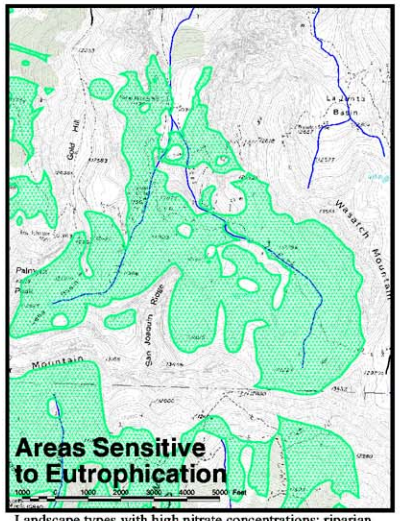
Prepared by the Southwest Data Center, Inc. Ridgway CO, December 1998

Ecological Sensitivity

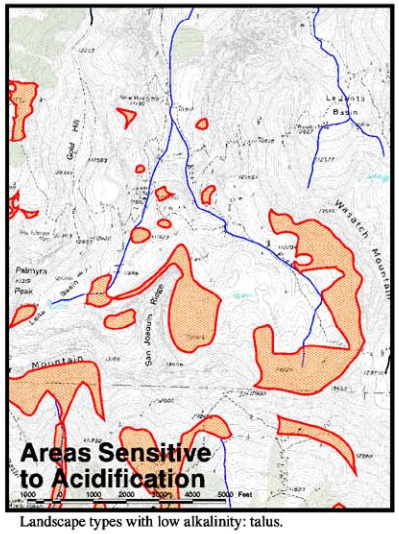
Landscape Types and Water Resources

Upper Bear Creek Basin

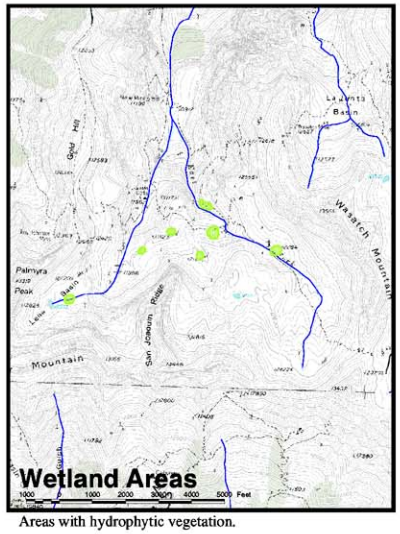




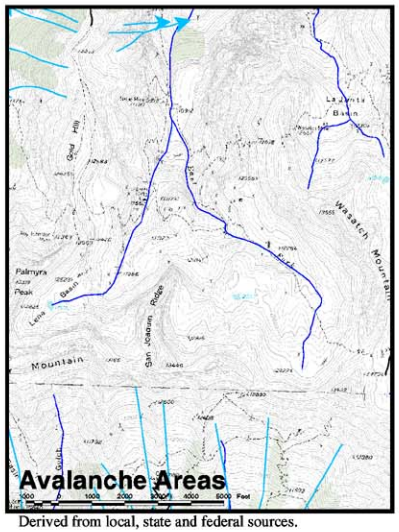
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



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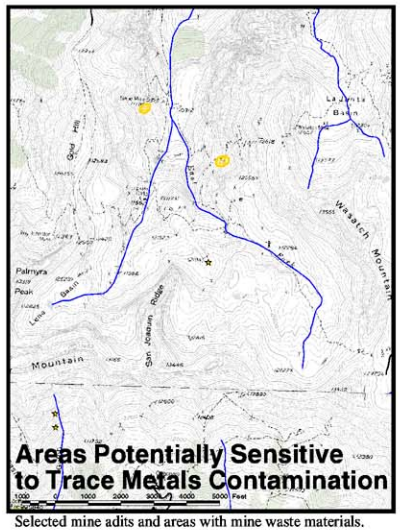

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- Area Sensitive To Eutrophication
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- Area Sensitive to Trace Metals Contamination
- Wetland
- Source Water Protection Area
- Private Land
- Stream
- Avalanche Chute
- Major Road
- Minor Road
- Mine Adit

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San Miguel County, Colorado

United States Environmental Protection Agency

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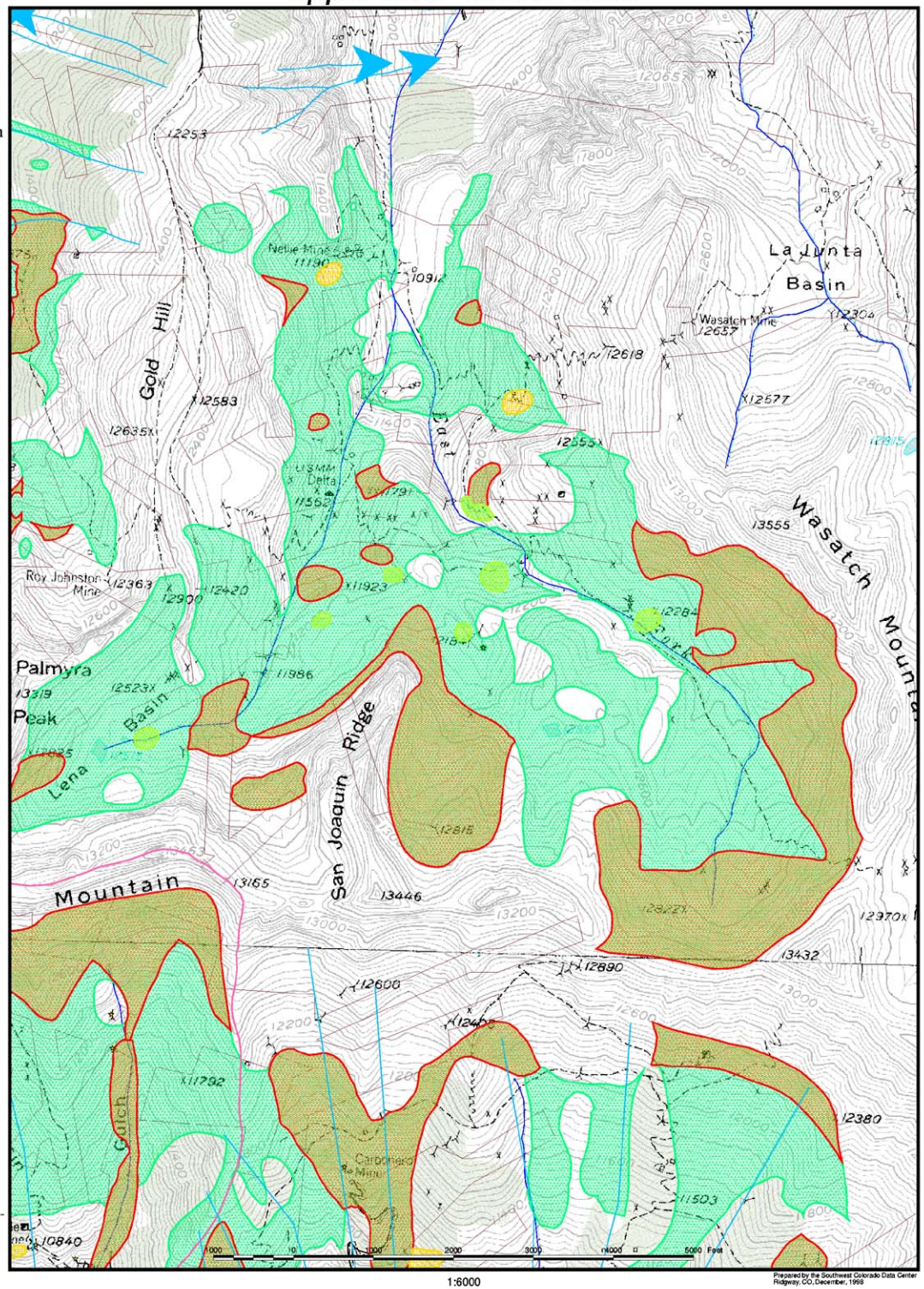
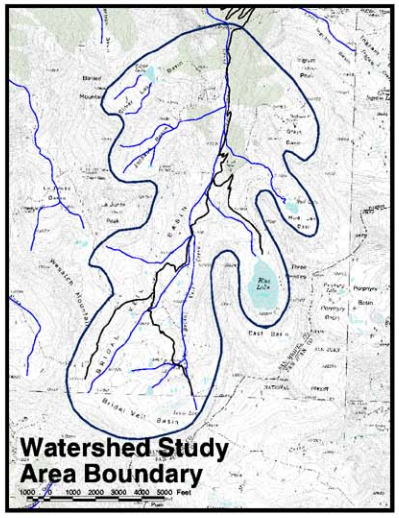


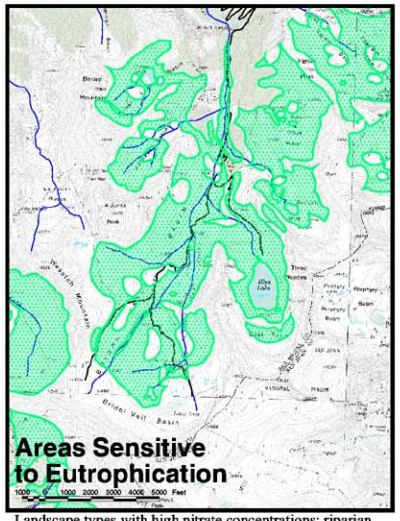
Prepared by the Southwest Colorado Data Center
Ridgway, CO, December, 1998

Ecological Sensitivity

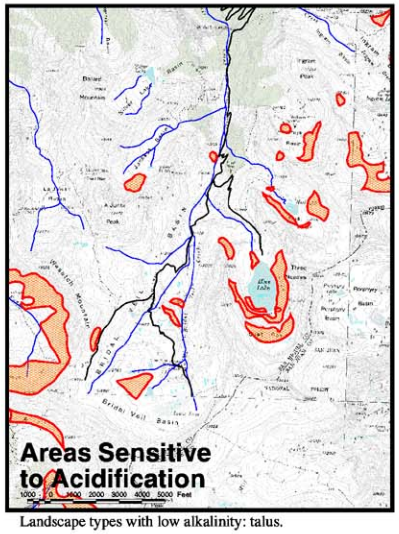
Landscape Types and Water Resources

Bridal Veil Basin

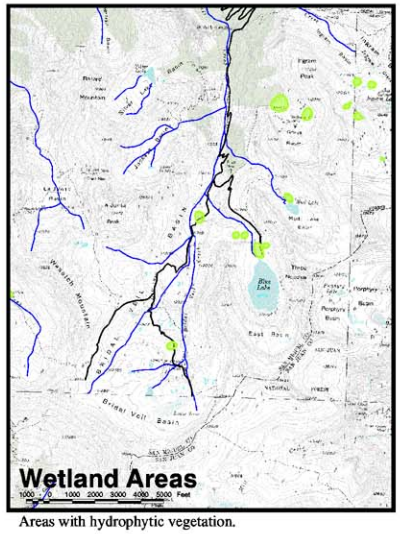




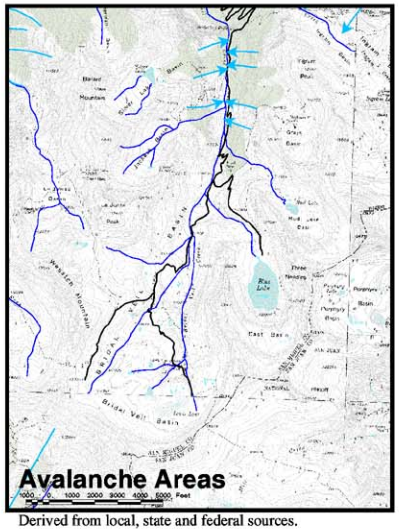
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



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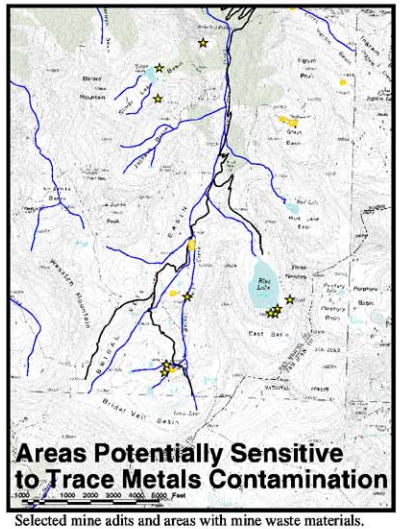

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- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
- Area Sensitive to Trace Metals Contamination
- Wetland
- Source Water Protection Area
- Private Land
- Stream
- Avalanche Chute
- Road
- Mine Adit

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San Miguel County, Colorado

U.S. Environmental Protection Agency

SWDC

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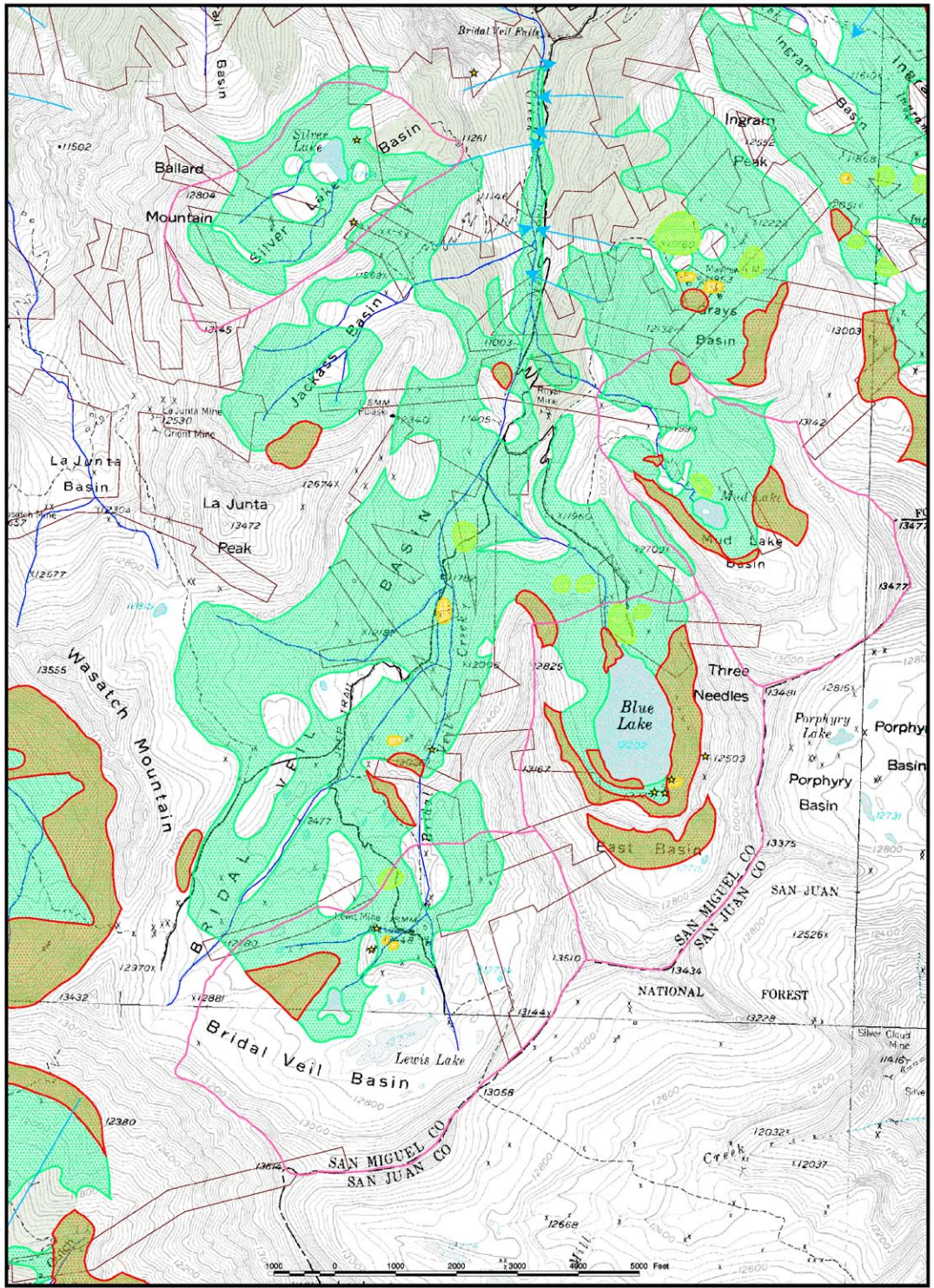
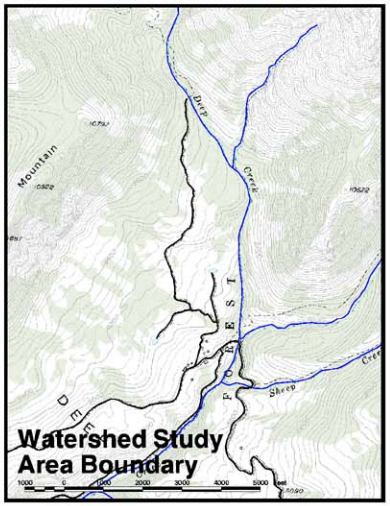
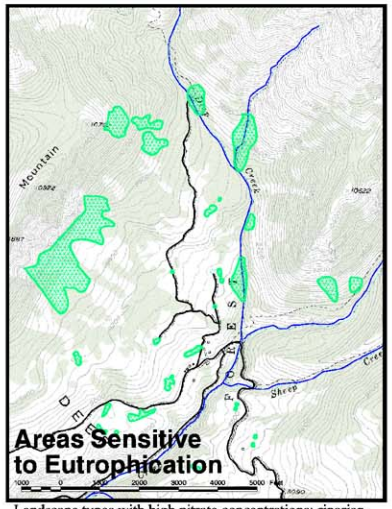


Ecological Sensitivity

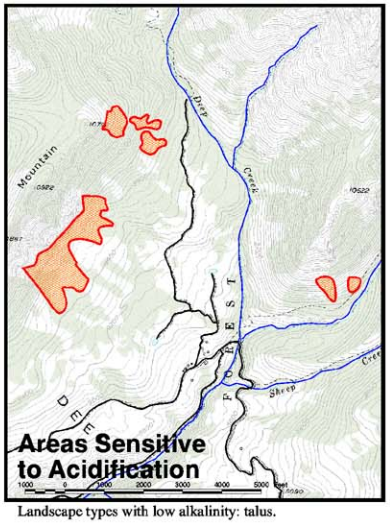
Landscape Types and Water Resources

Deep Creek Basin

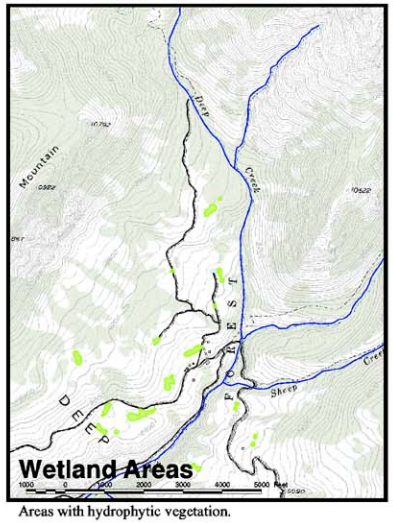




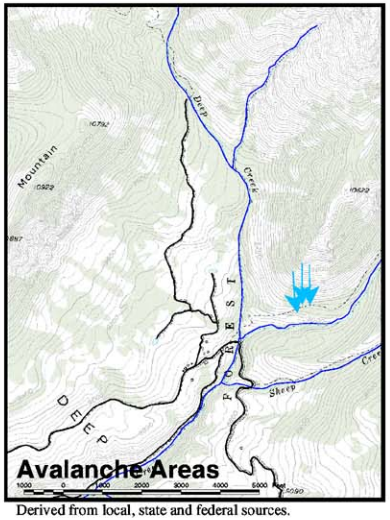
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



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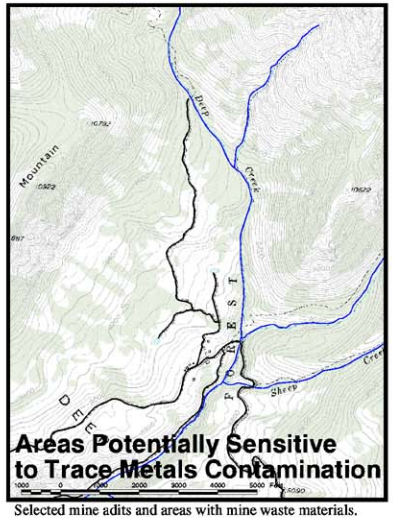

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- Wetland
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- Stream
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San Miguel County, Colorado

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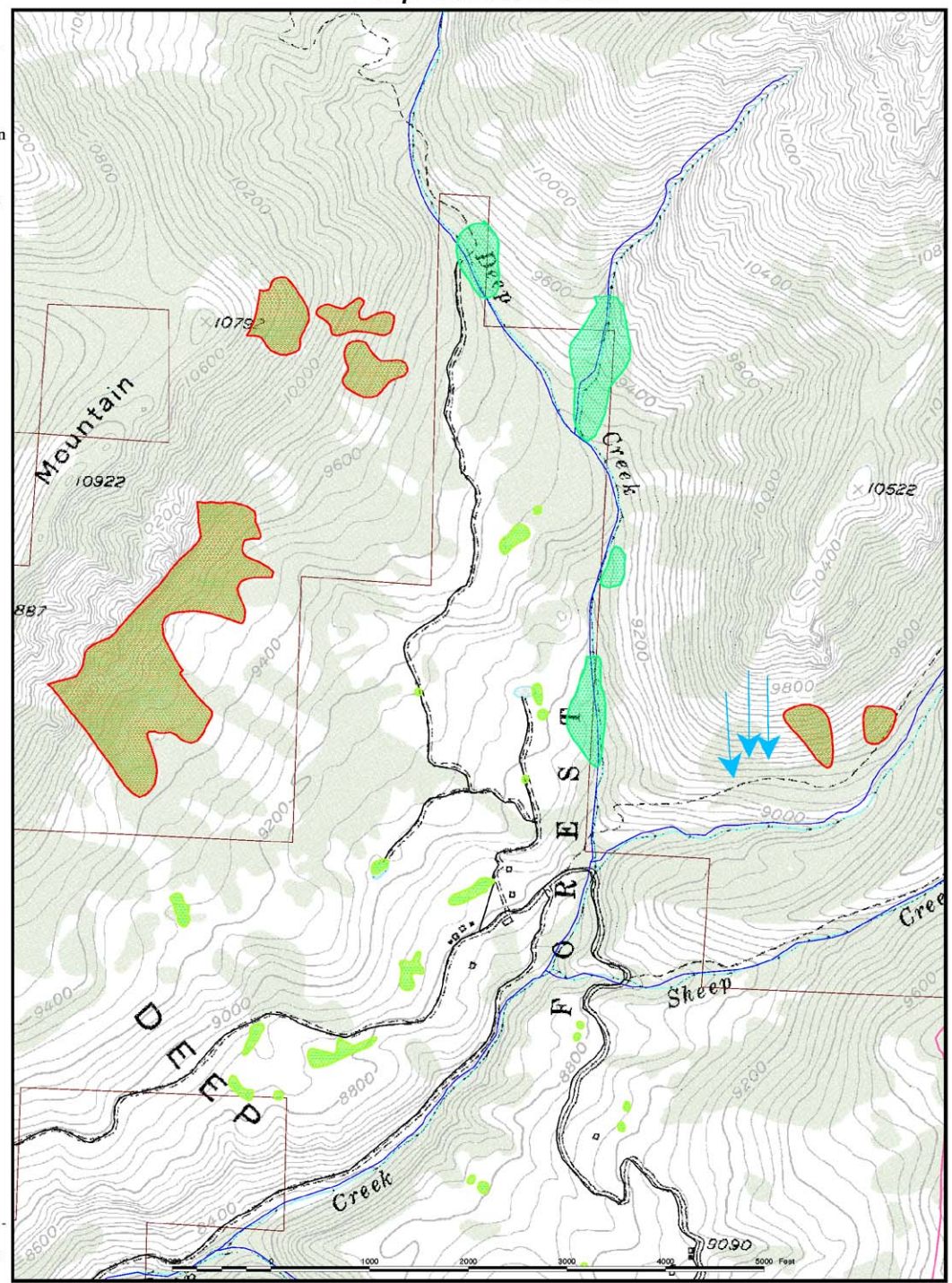
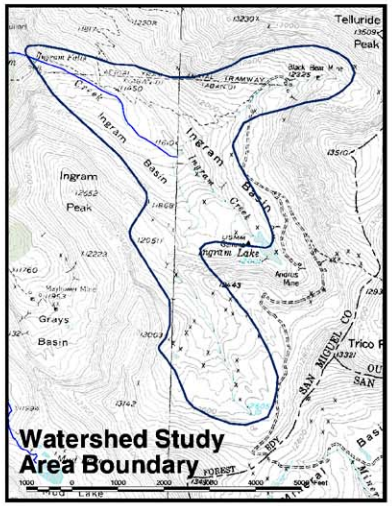


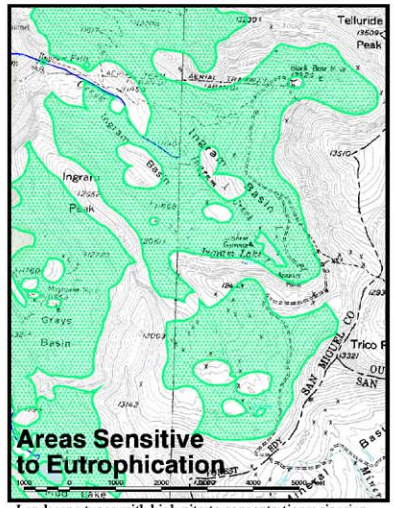
Prepared by the Southwest Data Center, Inc. Ridgway CO, December, 1998

Ecological Sensitivity

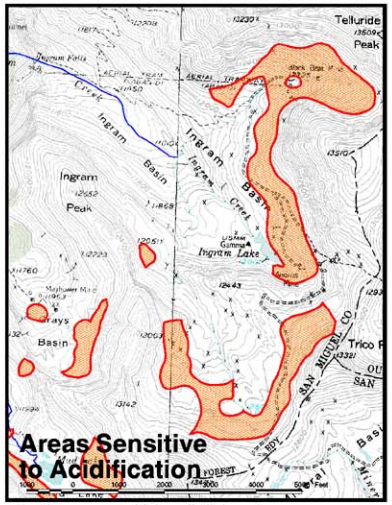
Landscape Types and Water Resources

Ingram Basin

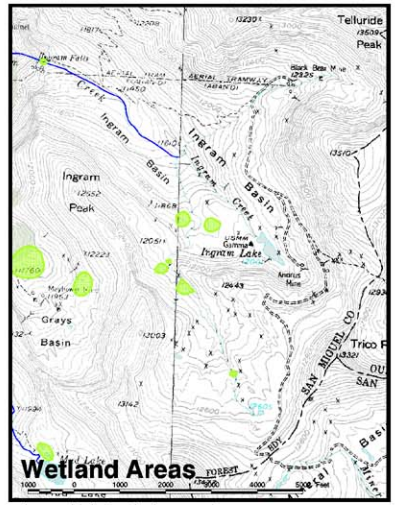




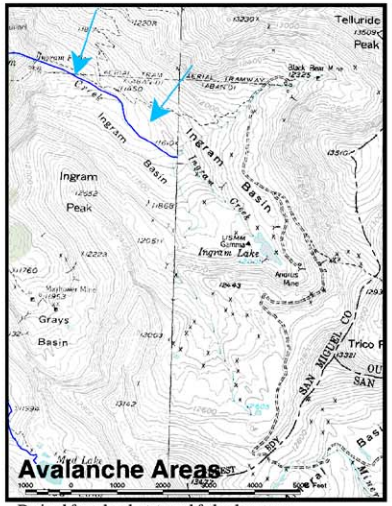
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



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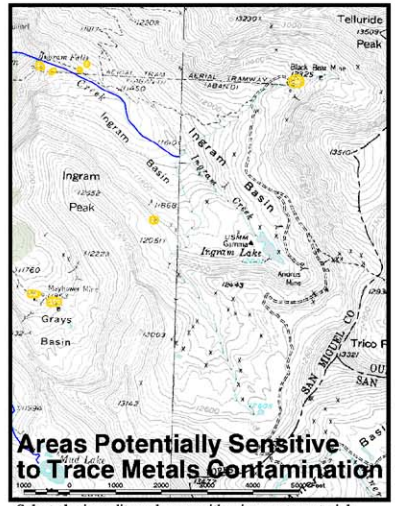

Selected mine adits and areas with mine waste materials.

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San Miguel County, Colorado

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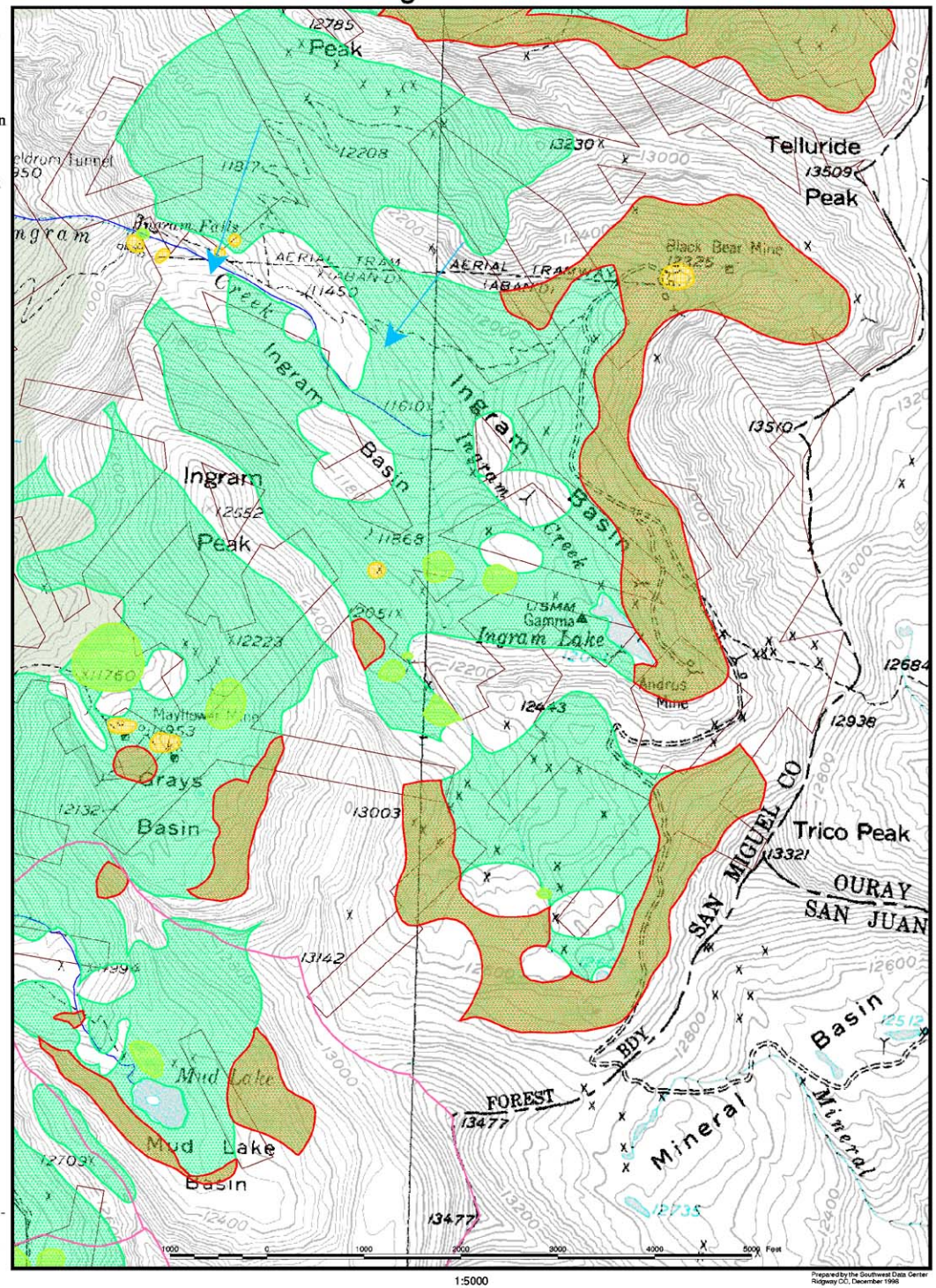

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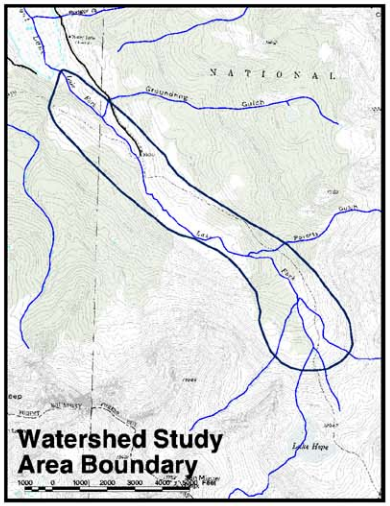
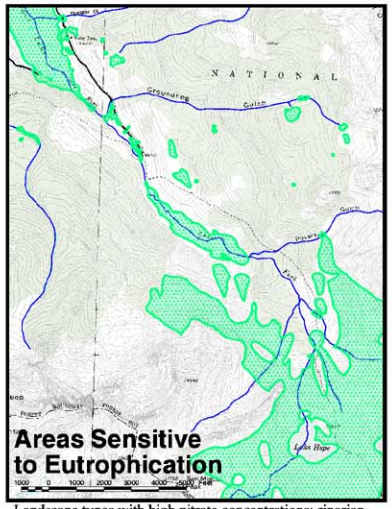
Prepared by the Southwest Data Center
Ridgway CO, December 1998

Ecological Sensitivity

Landscape Types and Water Resources

Lake Fork





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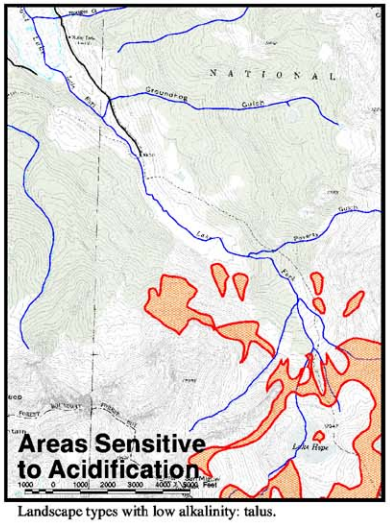
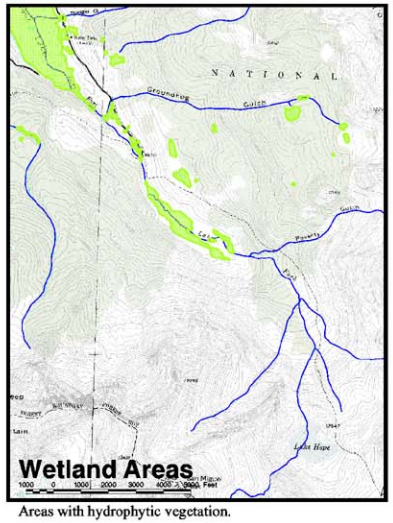
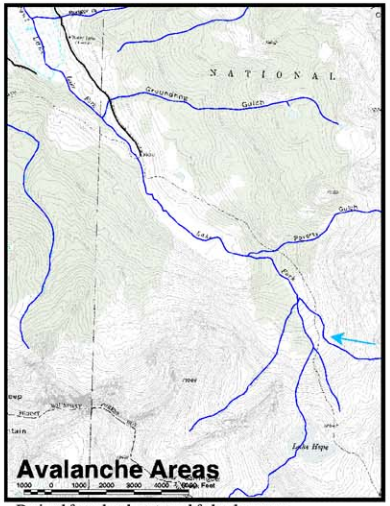


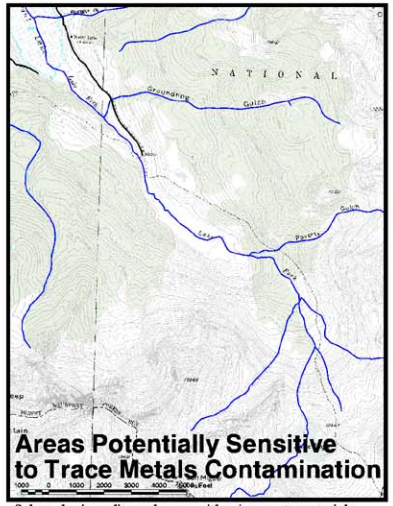
Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



Derived from local, state and federal sources.



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- Wetland
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- Stream
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- Road
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San Miguel County, Colorado

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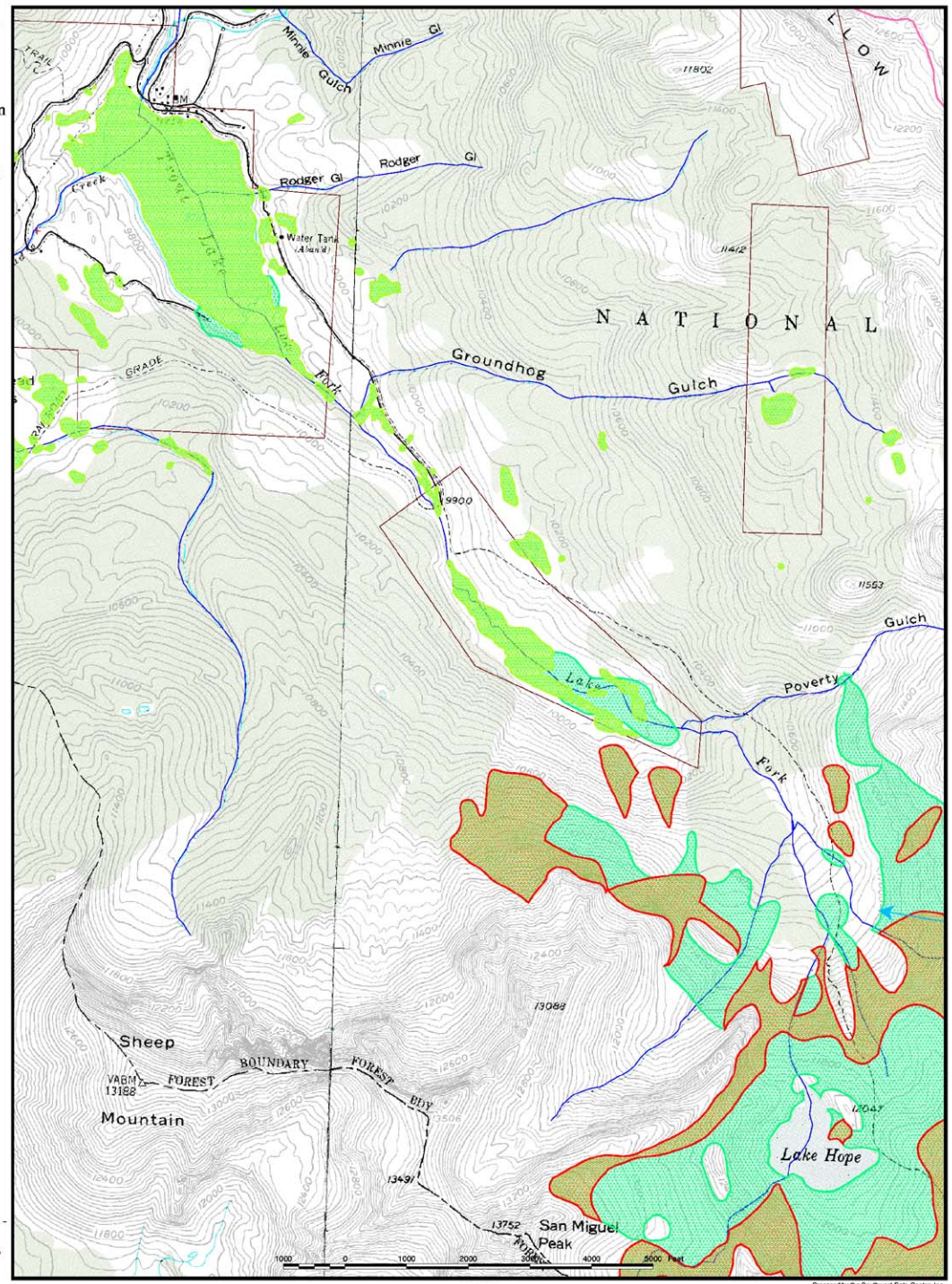

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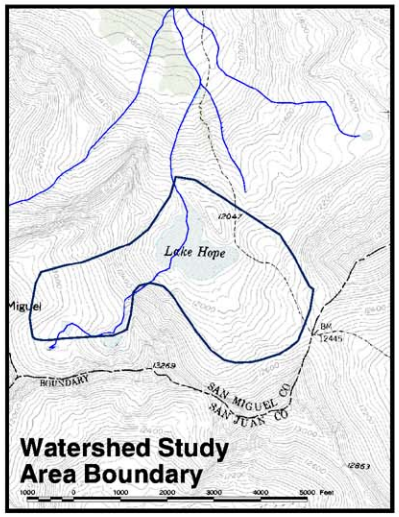
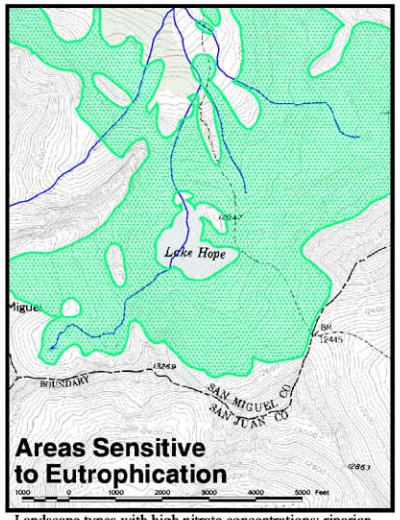
Prepared by the Southwest Data Center, Inc.
Ridgway CO, December 1998

Ecological Sensitivity

Landscape Types and Water Resources

Lake Hope





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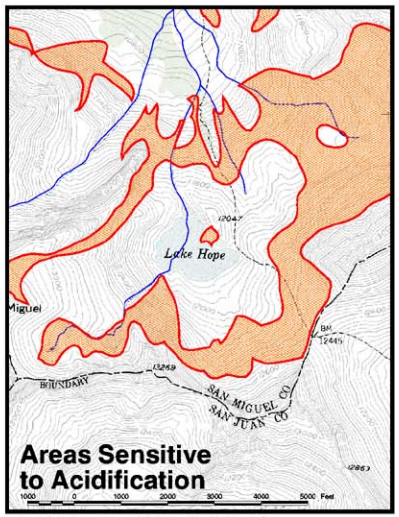
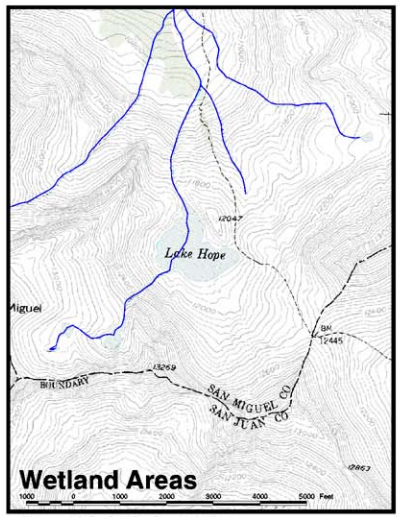


Landscape types with low alkalinity: talus.



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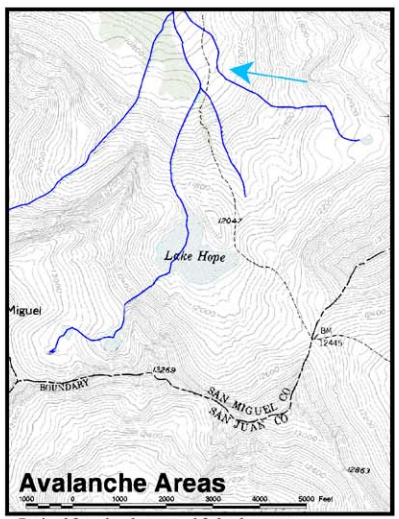

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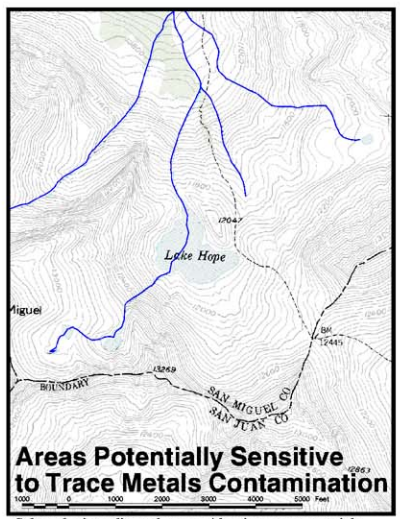

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- Wetland
- Source Water Protection Area
- Private Land
- Stream
- Avalanche Chute
- Road
- Mine Adit

INSTAAR
University of Colorado Boulder

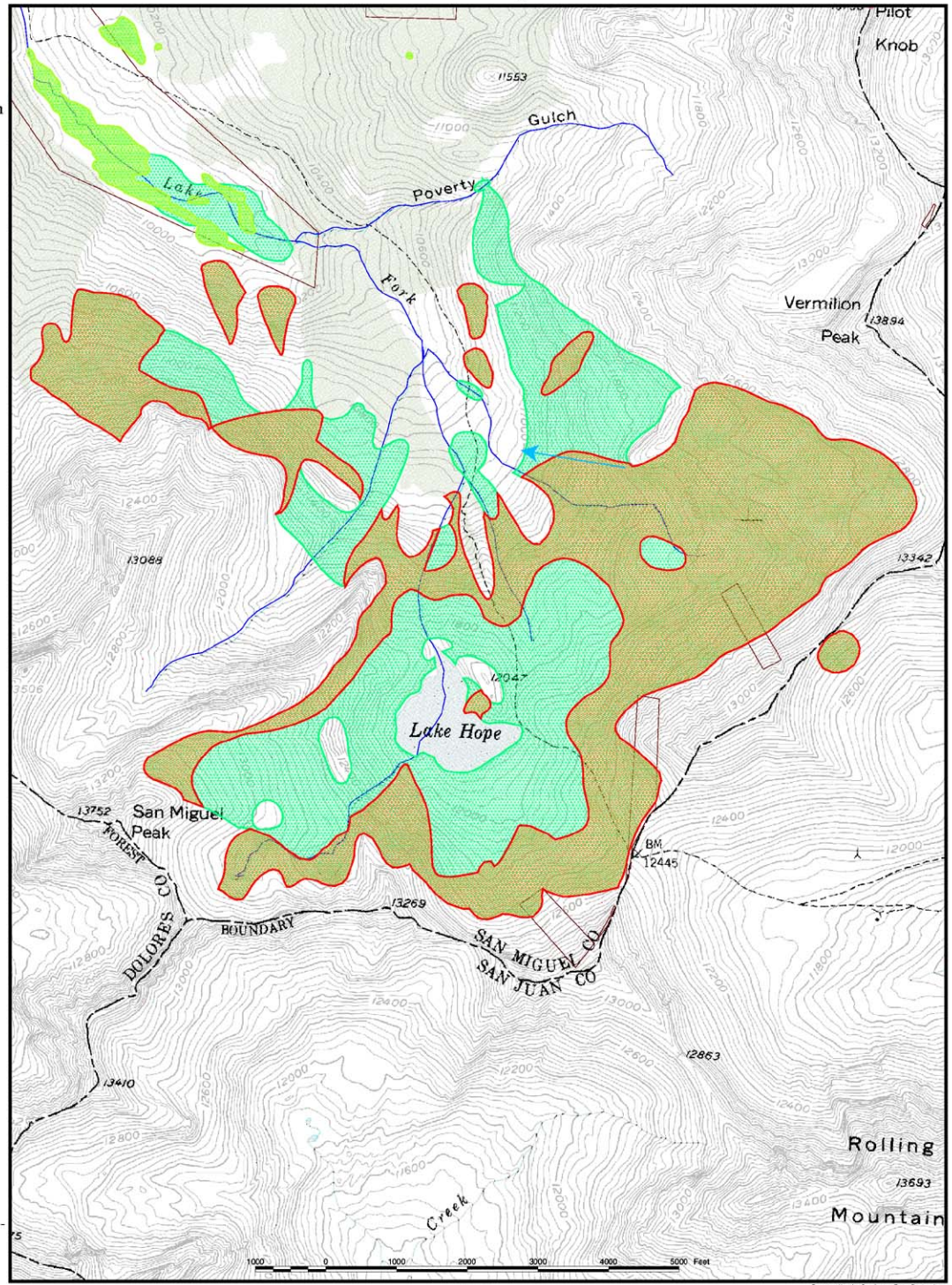
San Miguel County, Colorado

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

S W
D C

Accuracy of landscape type polygon boundaries is 80 feet.

Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.



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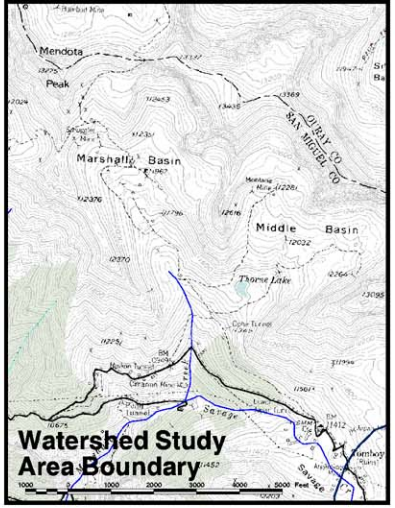
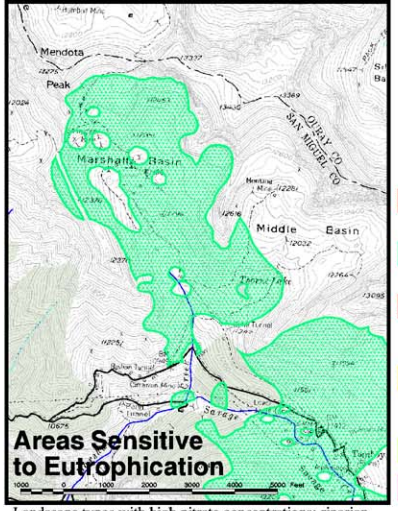
Ecological Sensitivity

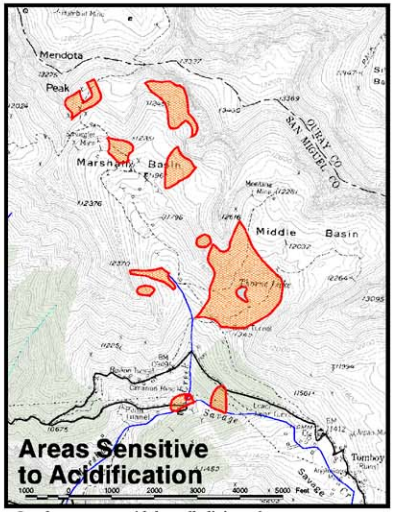
Landscape Types and Water Resources

Marshall Basin

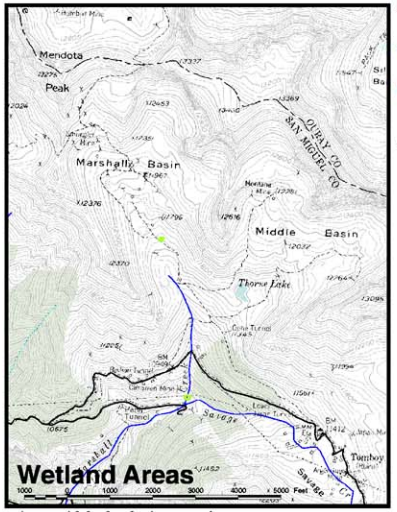




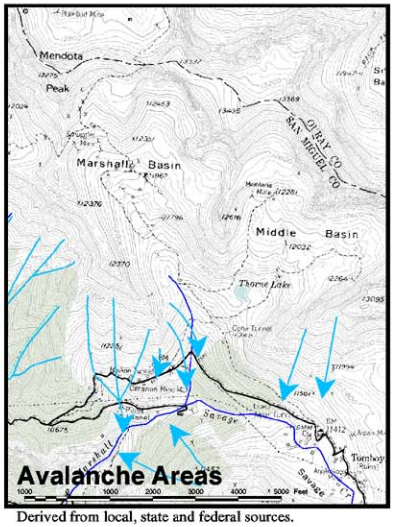
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



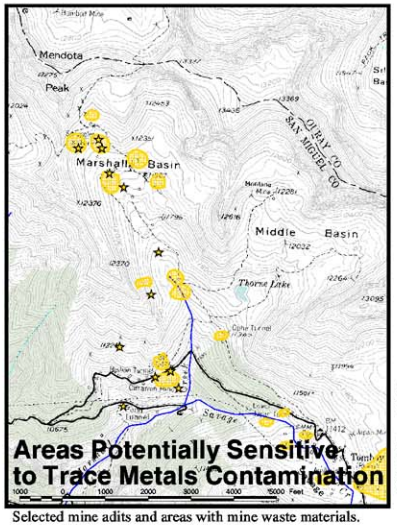
Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



Derived from local, state and federal sources.



Selected mine adits and areas with mine waste materials.

Legend

- Area Sensitive to Acidification
- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
- Area Sensitive to Trace Metals Contamination
- Wetland
- Source Water Protection Area
- Private Land
- Stream
- Avalanche Chute
- Road
- Mine Adit

INSTAAR, University of Colorado Boulder

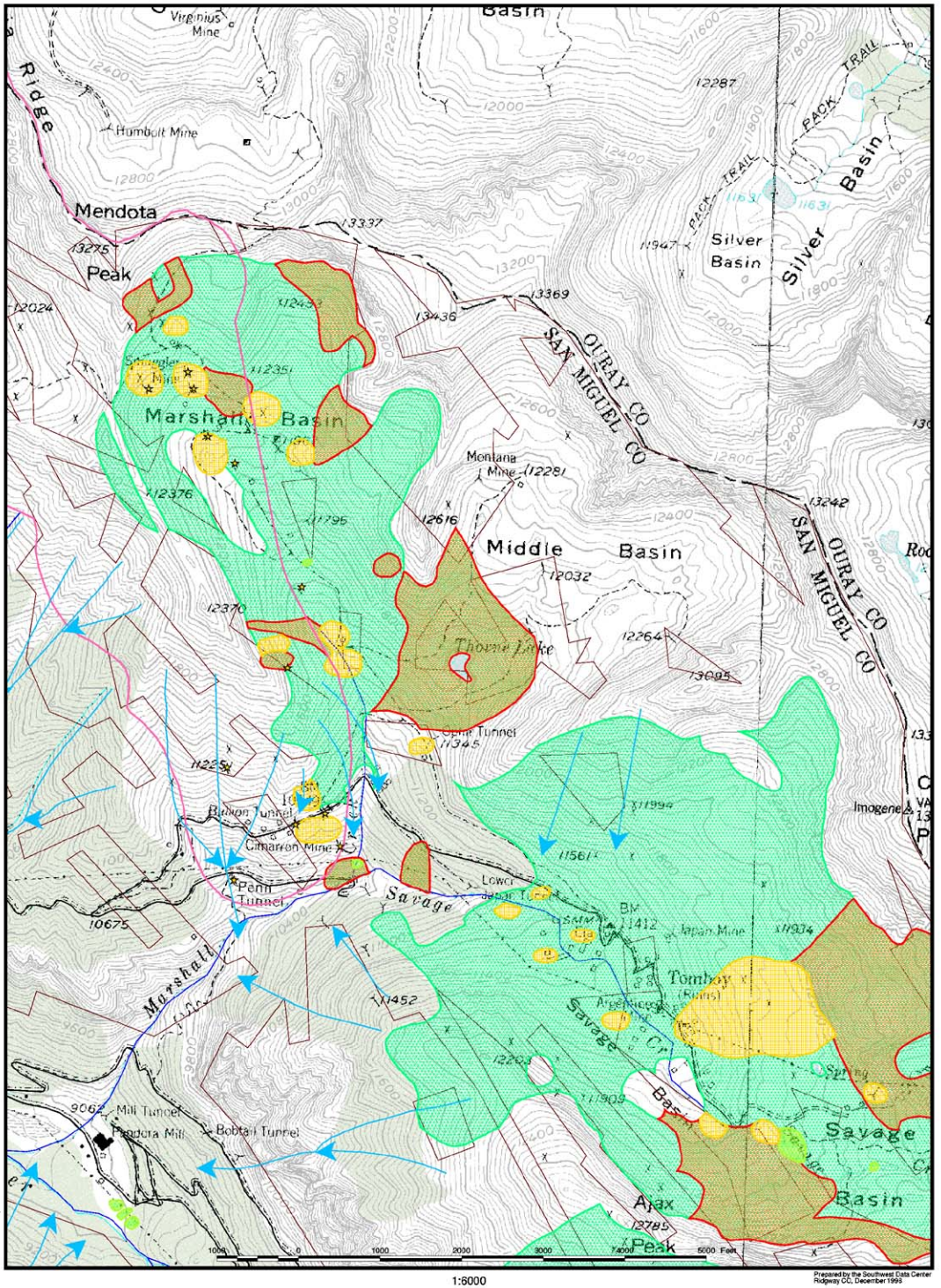
San Miguel County, Colorado

United States Environmental Protection Agency

S W D C

Accuracy of landscape type polygon boundaries is 80 feet.

Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.



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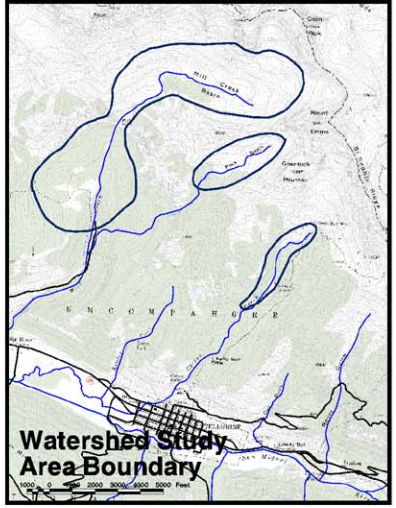
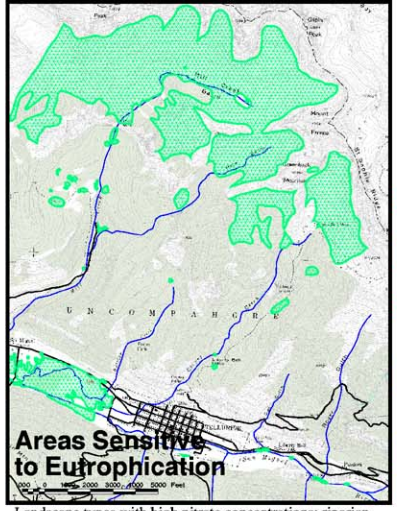
Ecological Sensitivity

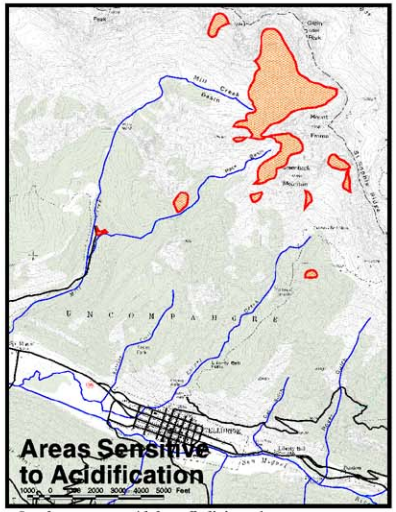
Landscape Types and Water Resources

Mill Creek Basin, Pack Creek Basin & Cornet Creek Basin

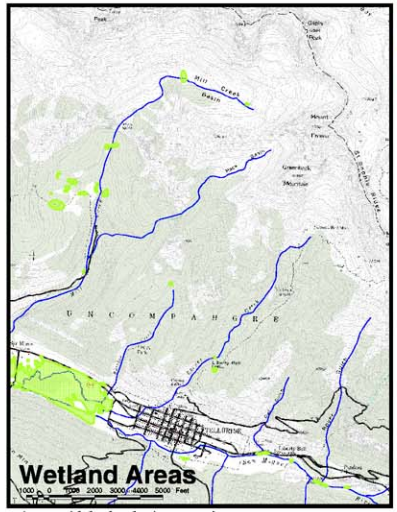




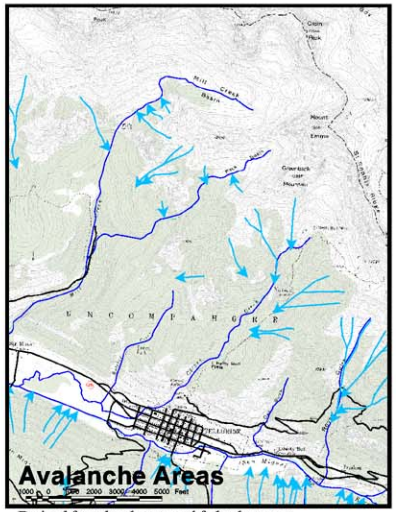
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



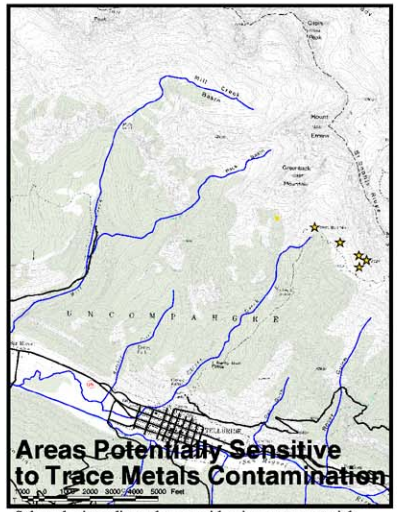
Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



Derived from local, state and federal sources.



Selected mine adits and areas with mine waste materials.

Legend

- Area Sensitive to Acidification
- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
- Area Sensitive to Trace Metals Contamination
- Wetland
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- Stream
- Avalanche Chute
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San Miguel County, Colorado

United States Environmental Protection Agency

S W D C

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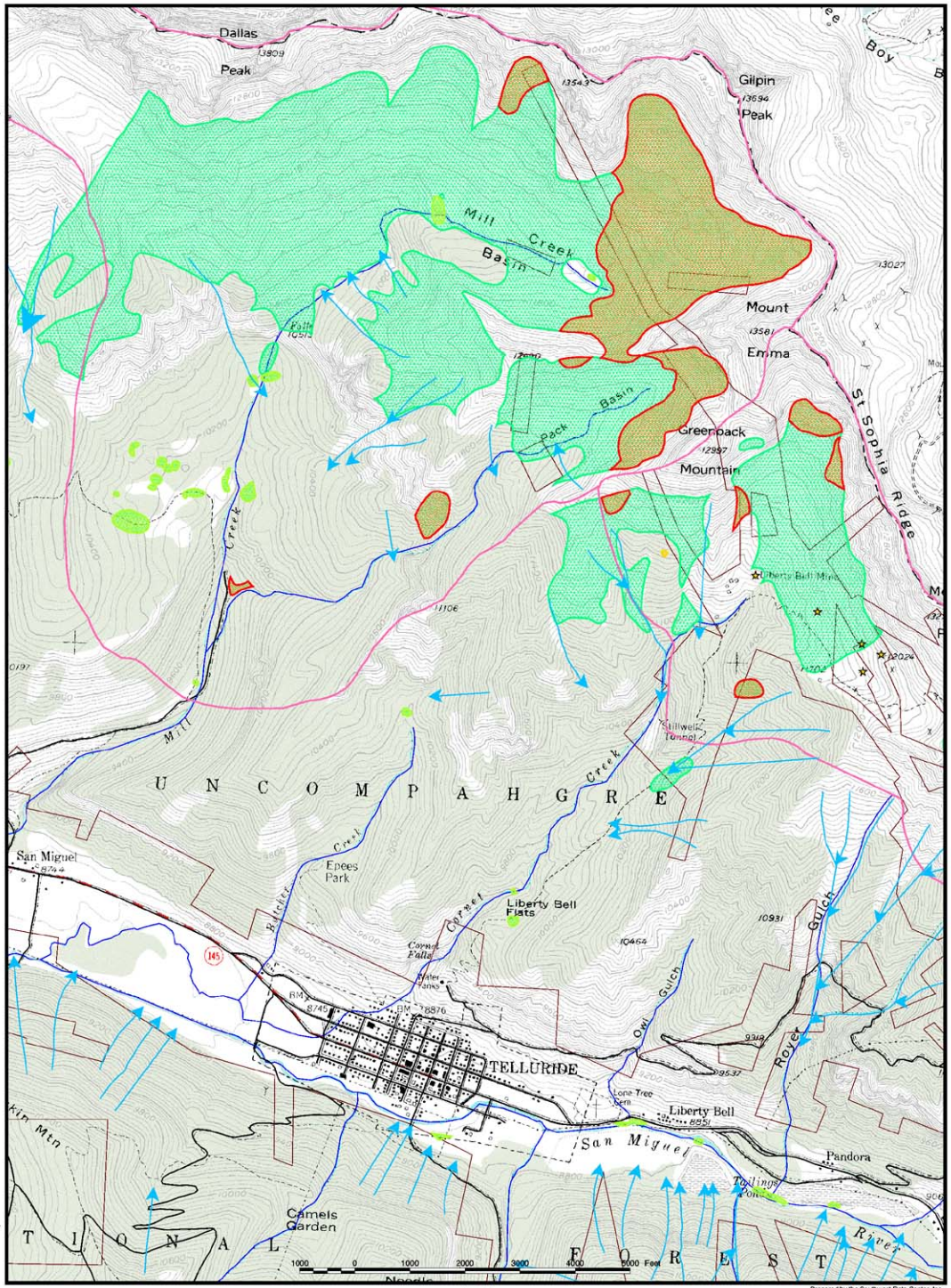
Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.



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Ecological Sensitivity
Landscape Types and Water Resources
Ophir

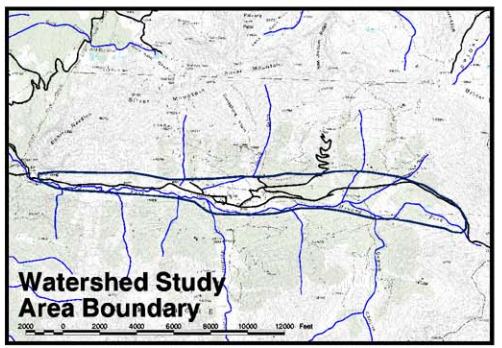
San Miguel County, Colorado

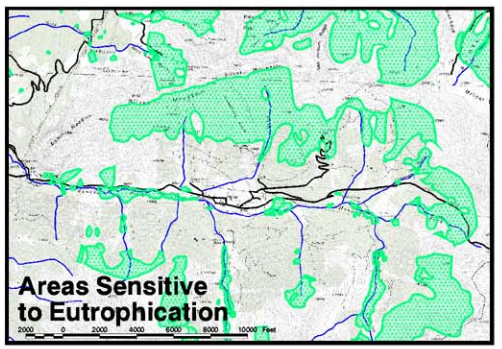
Legend

- Area Sensitive to Acidification
- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
- Area Sensitive to Trace Metals Contamination
- Wetland
- Source Water Protection Area
- Private Land
- Stream
- Avalanche Chute
- Road
- Mine Adit

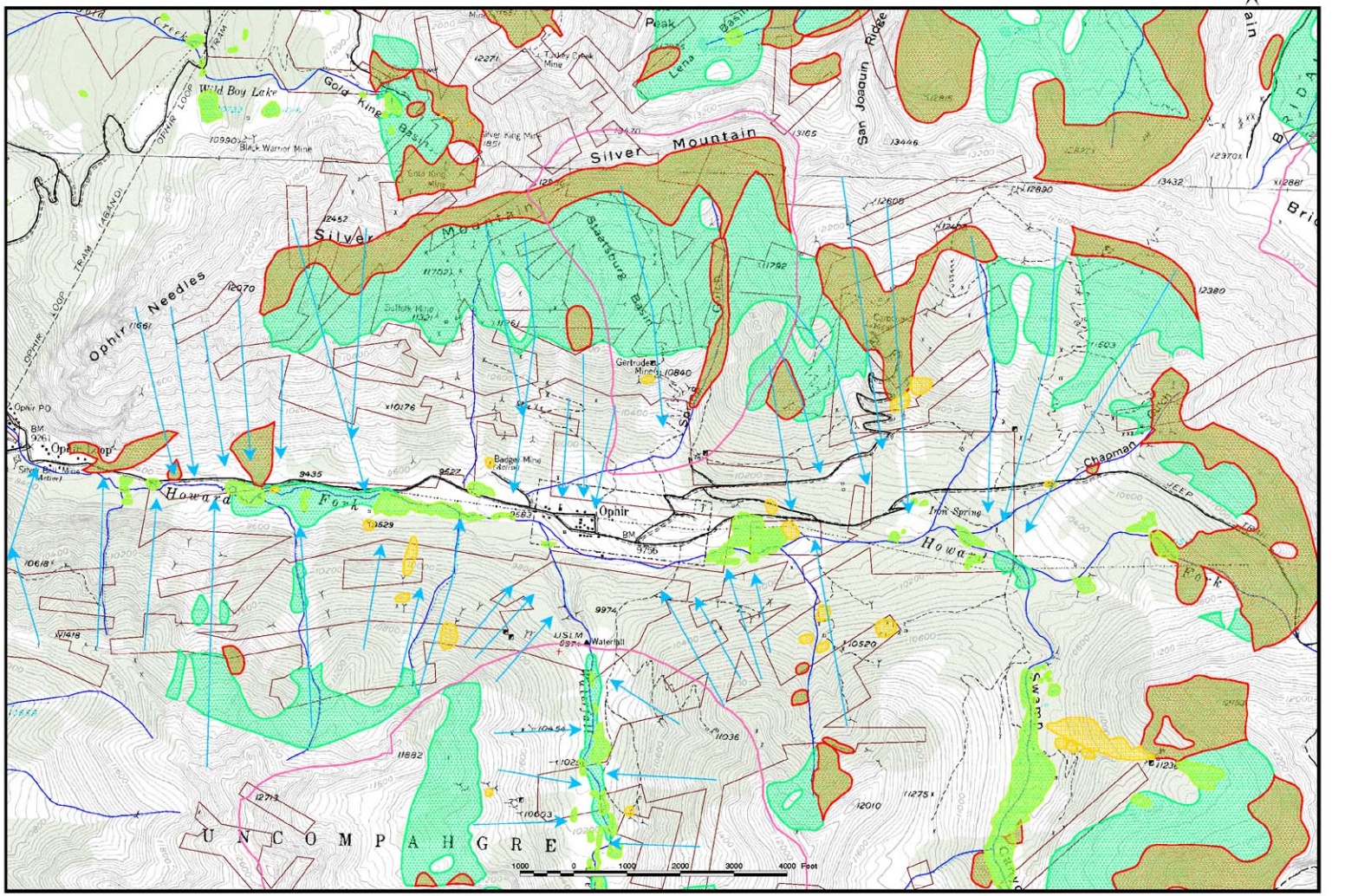
Accuracy of landscape type polygon boundaries is 80 feet.

Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.





Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



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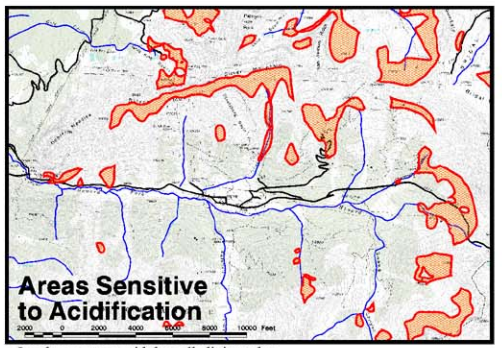
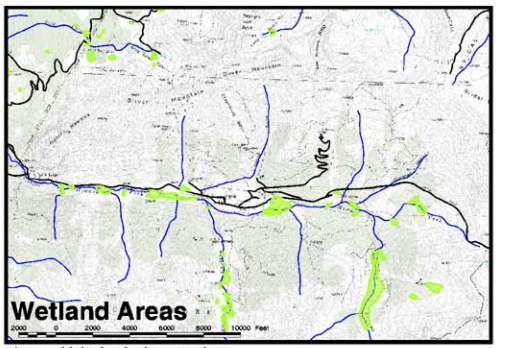
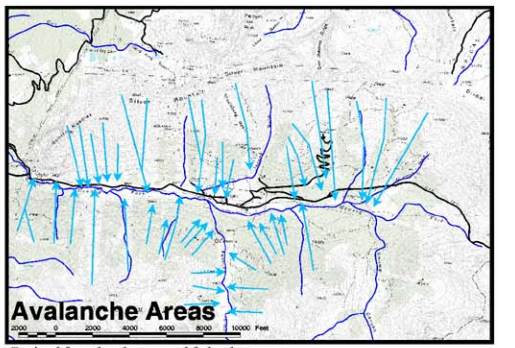


Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



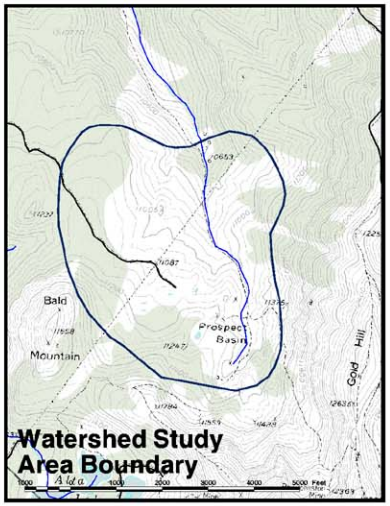
Derived from local, state and federal sources.

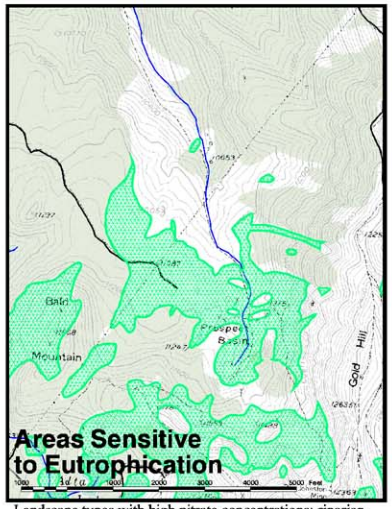
Selected mine adits and areas with mine waste materials.

Ecological Sensitivity

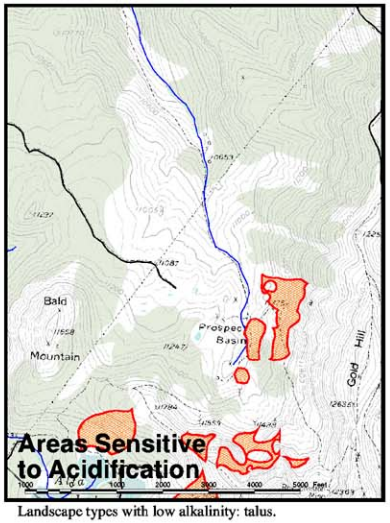
Landscape Types and Water Resources

Prospect Basin

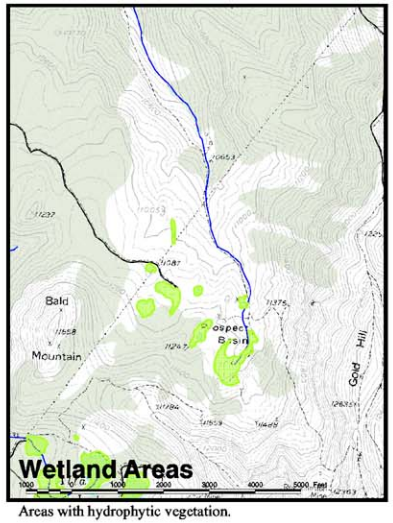




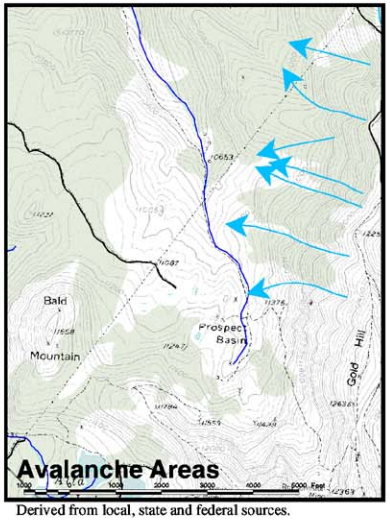
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



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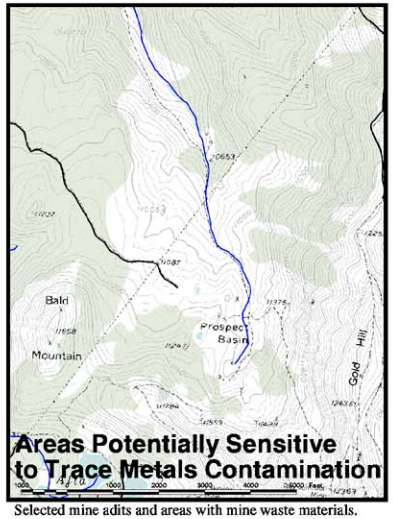

Selected mine adits and areas with mine waste materials.

Legend

- Area Sensitive to Acidification
- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
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San Miguel County, Colorado

United States Environmental Protection Agency

S W D C

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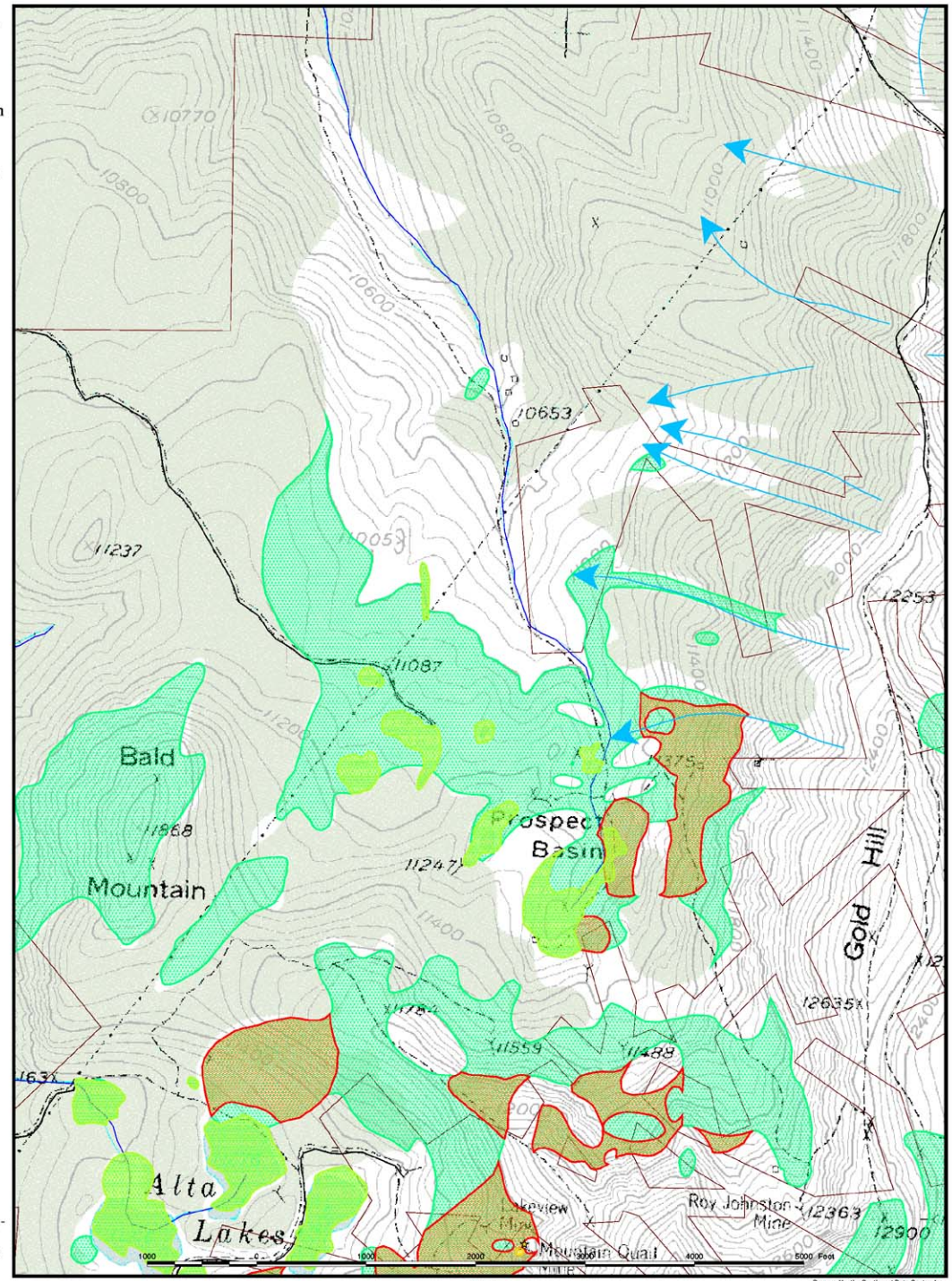

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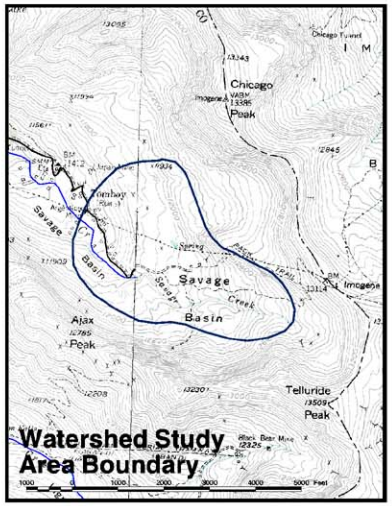
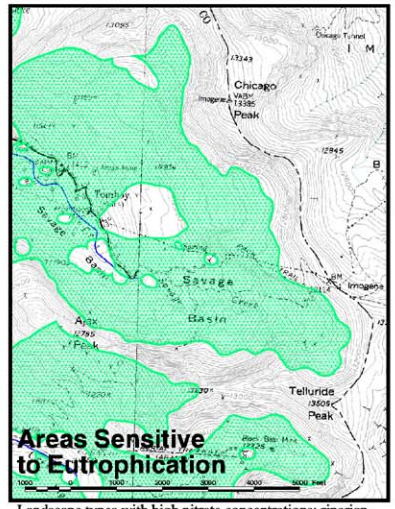
Ecological Sensitivity

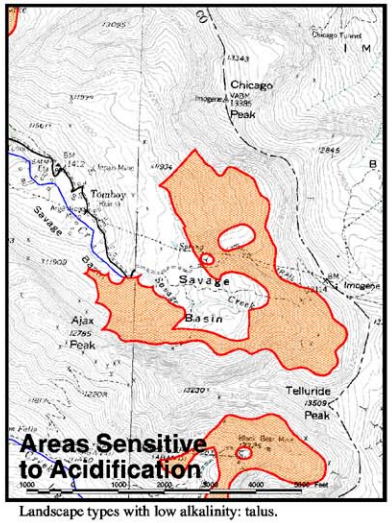
Landscape Types and Water Resources

Savage Basin

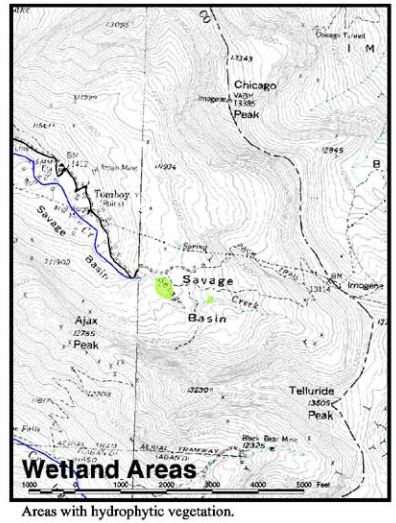




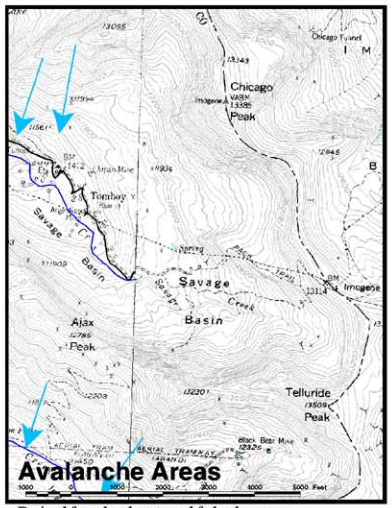
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



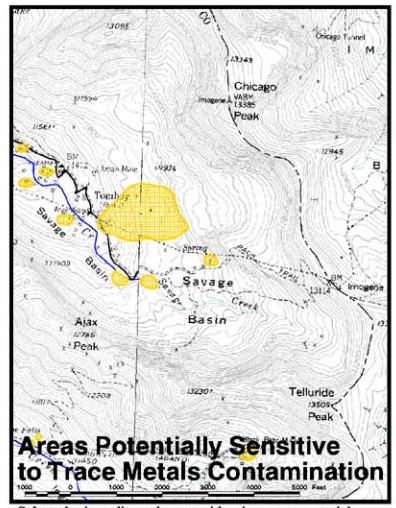
Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



Derived from local, state and federal sources.



Selected mine adits and areas with mine waste materials.

Legend

- Area Sensitive to Acidification
- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
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San Miguel County, Colorado

United States Environmental Protection Agency

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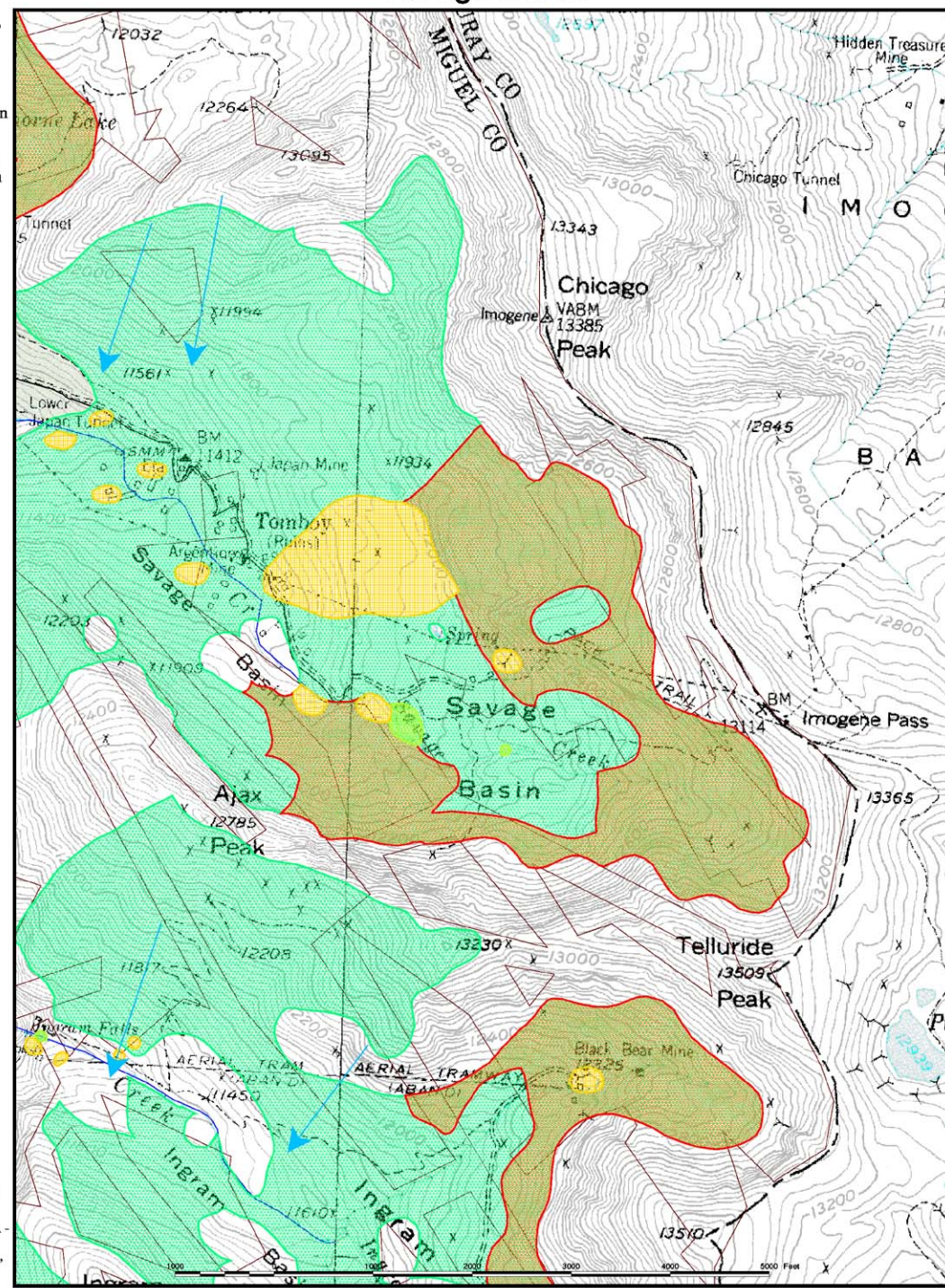

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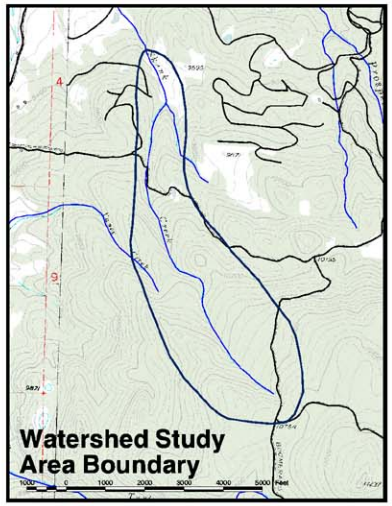
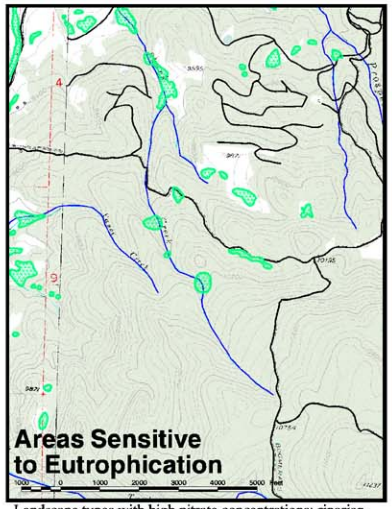
Ridgway CO, December 1998

Ecological Sensitivity

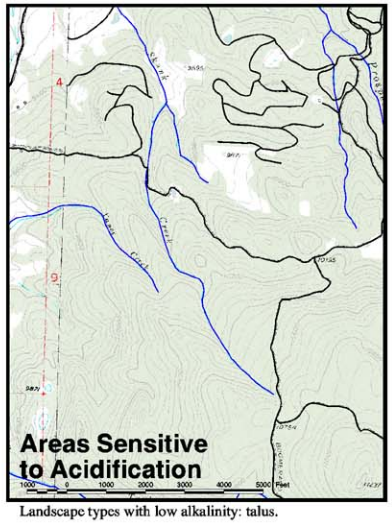
Landscape Types and Water Resources

Skunk Creek

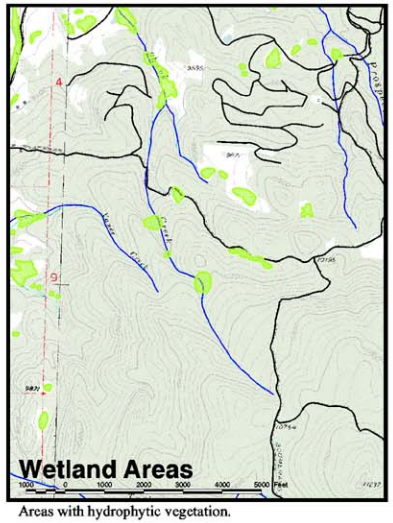




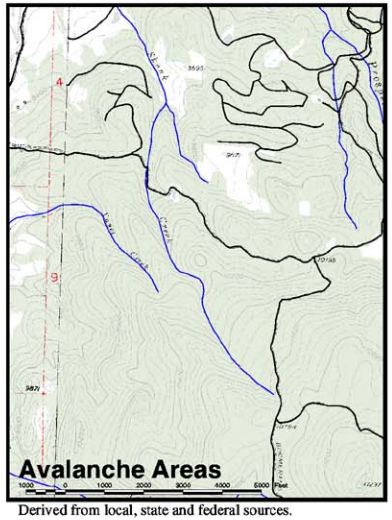
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



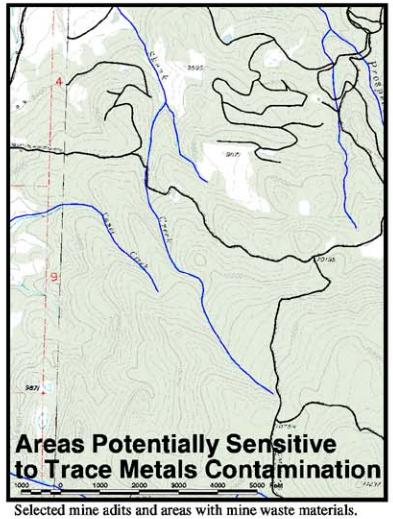
Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



Derived from local, state and federal sources.



Selected mine adits and areas with mine waste materials.

Legend

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- Area Sensitive To Eutrophication
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U.S. Environmental Protection Agency

S W
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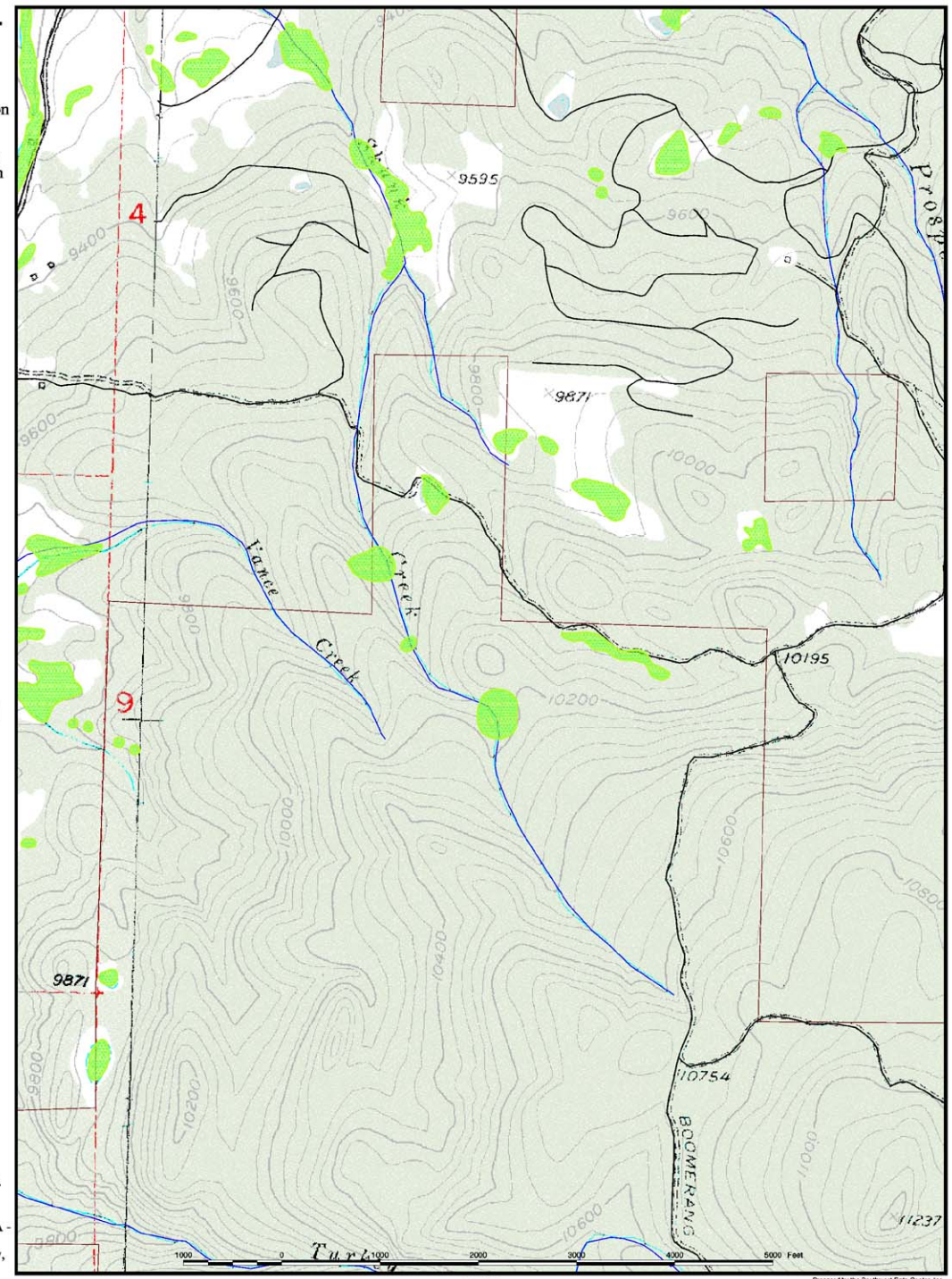

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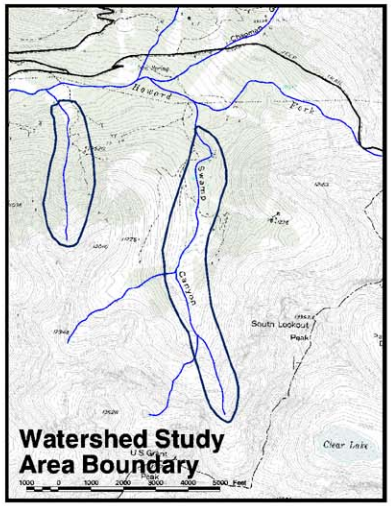
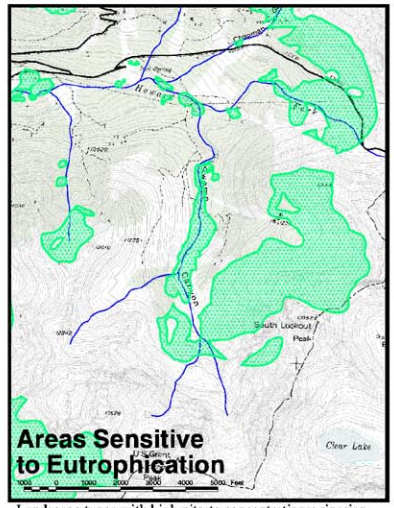
Ridgway CO, December, 1998

Ecological Sensitivity

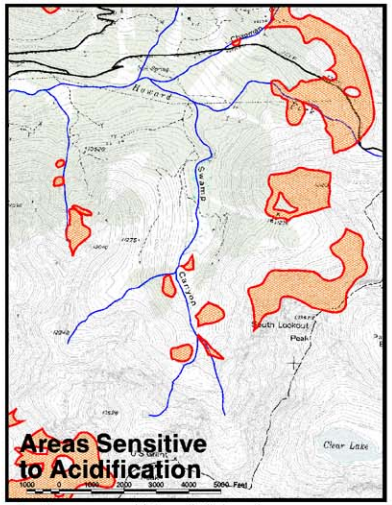
Landscape Types and Water Resources

Swamp Canyon & Nevada Gulch

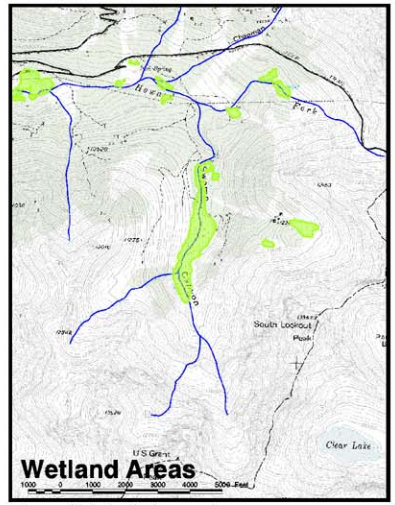




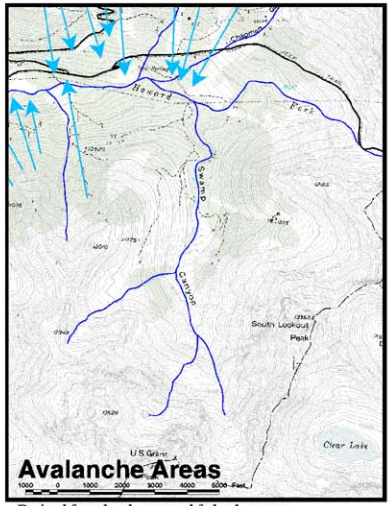
Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.



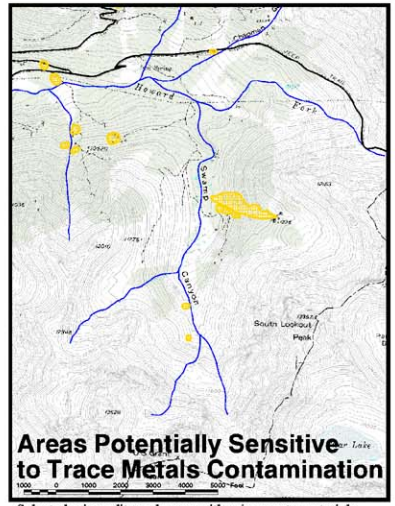
Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.



Derived from local, state and federal sources.



Selected mine adits and areas with mine waste materials.

Legend

- Area Sensitive to Acidification
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- Area Sensitive To Acidification & Eutrophication
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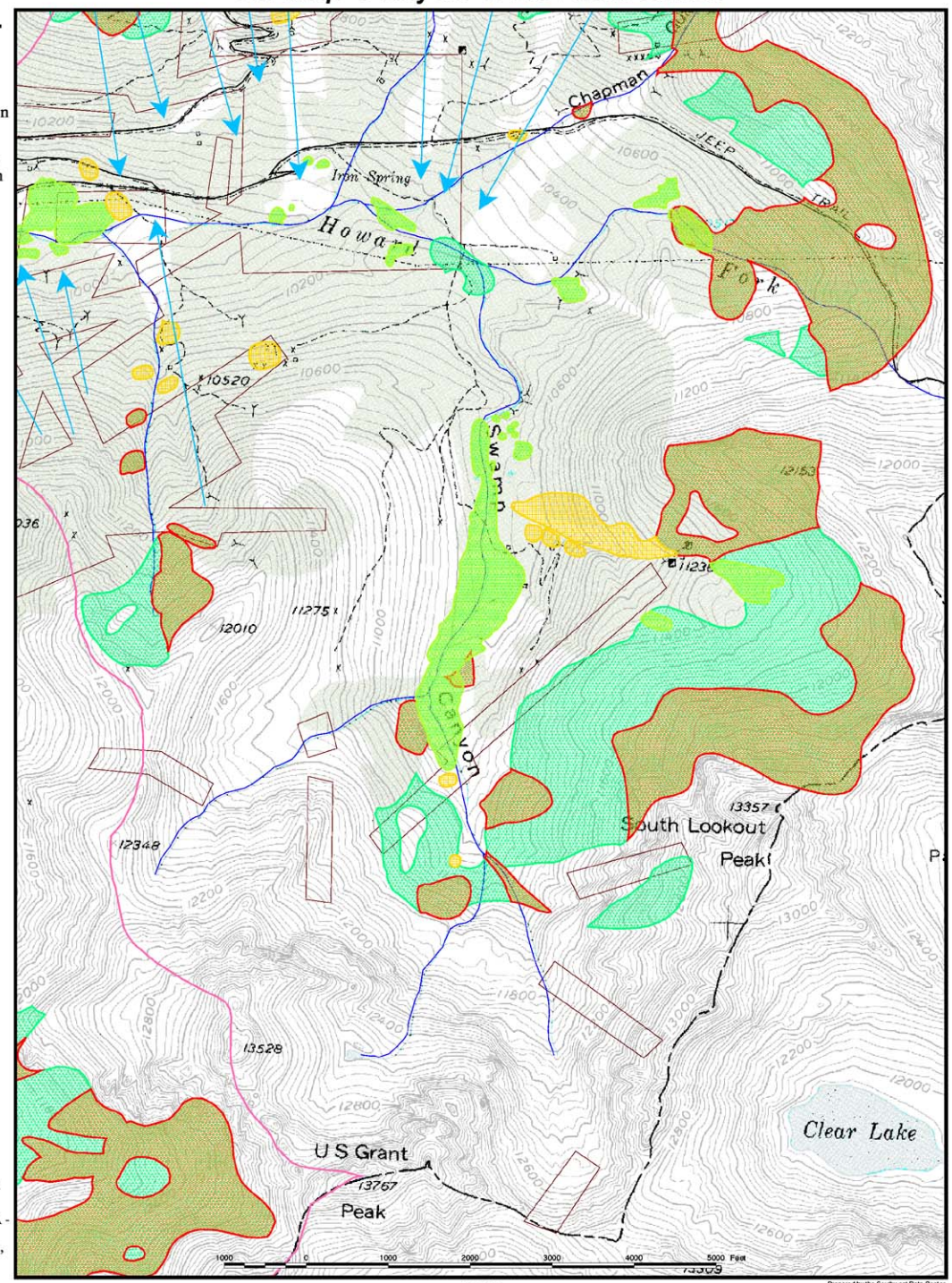
Accuracy of landscape type polygon boundaries is 80 feet.

Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.



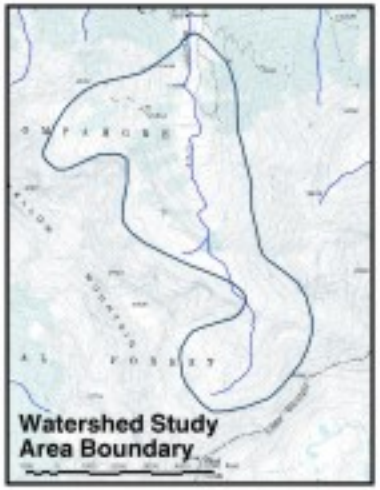
1:6000

Prepared by the Southwest Data Center Ridgway CO, December 1998

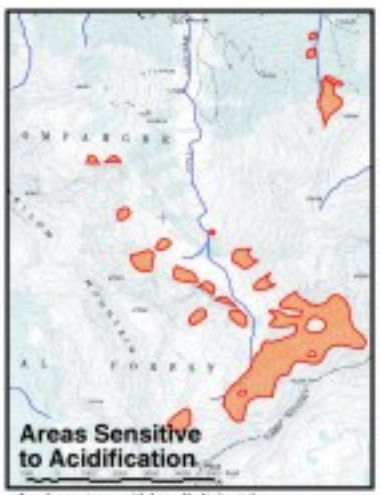
Ecological Sensitivity

Landscape Types and Water Resources

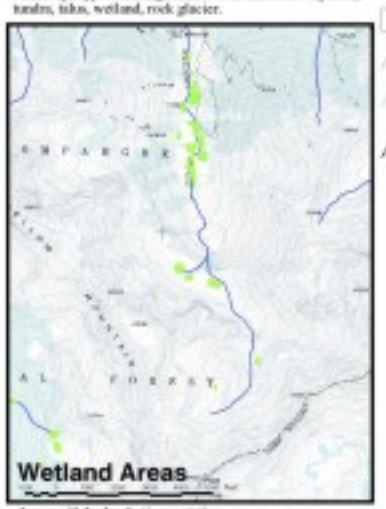
Waterfall Canyon



Landscape types with high nitrate concentrations: riparian, tundra, talus, wetland, rock glacier.

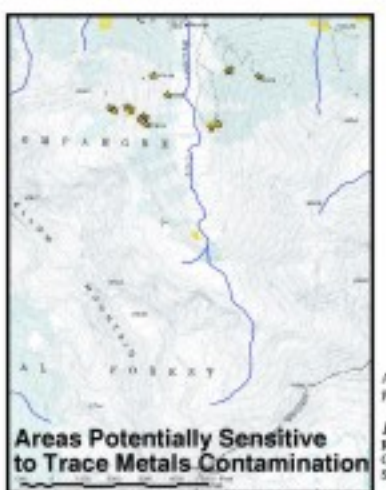


Landscape types with low alkalinity: talus.



Areas with hydrophytic vegetation.

Derived from local, state and federal sources.



Selected mine adits and areas with mine waste materials.

Legend

- Area Sensitive to Acidification
- Area Sensitive To Eutrophication
- Area Sensitive To Acidification & Eutrophication
- Area Sensitive to Trace Metals Contamination
- Wetland
- Source Water Protection Area
- Private Land
- Stream
- Avalanche Chute
- Road
- Mine Adit

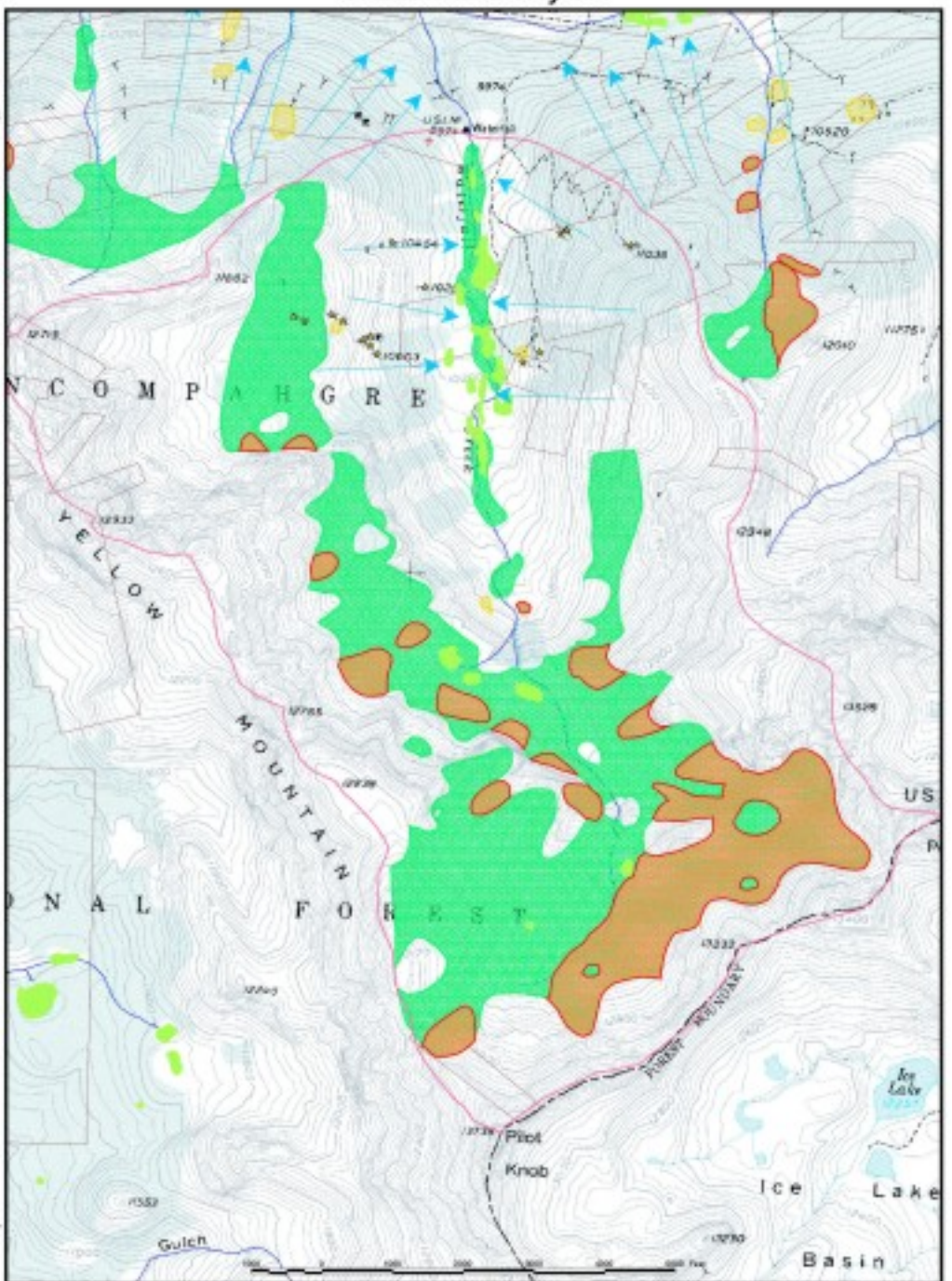
INSTAAR

San Miguel County, Colorado

S W
D C

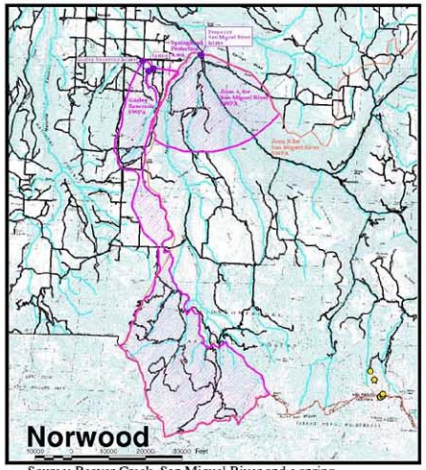
Accuracy of landscape type polygon boundaries is 80 feet.

Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.

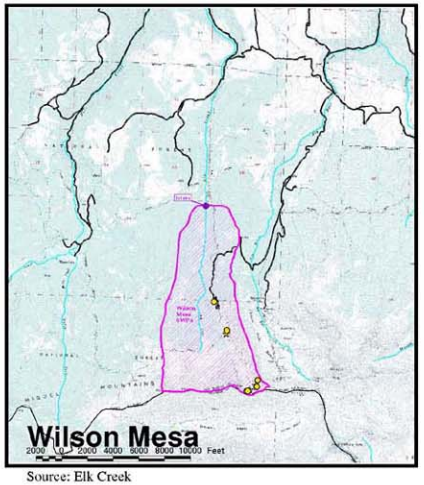


Source Water Protection Areas

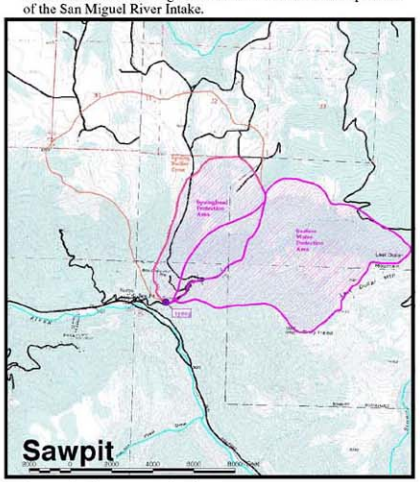
San Miguel County, Colorado



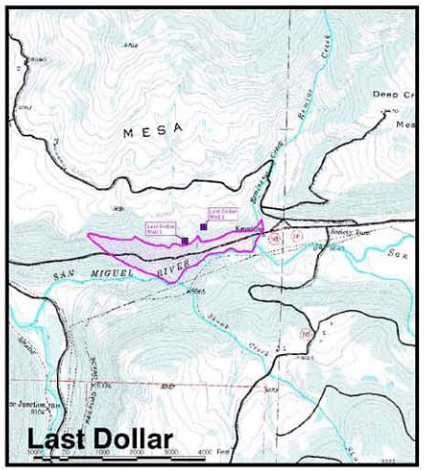
Source: Beaver Creek, San Miguel River and a spring
Note: Zone A for San Miguel River SWPA is five miles upstream of the San Miguel River Intake.



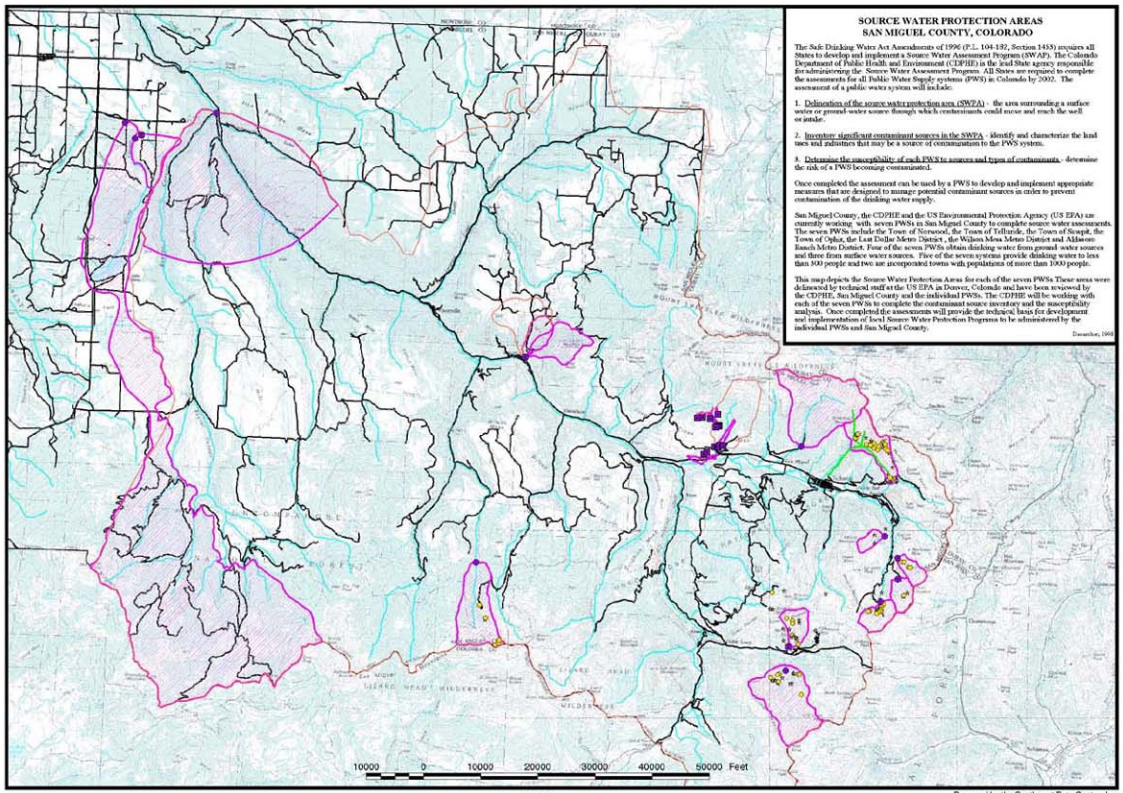
Source: Elk Creek

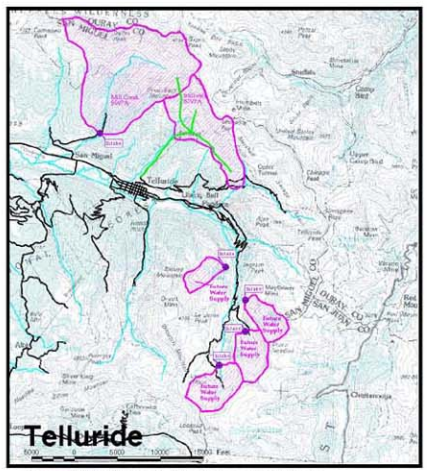


Source: Surface water and springs

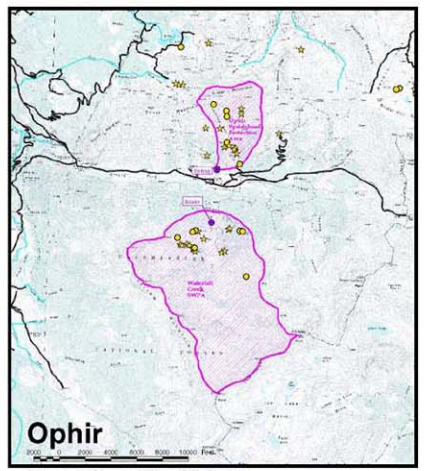


Source: Ground water

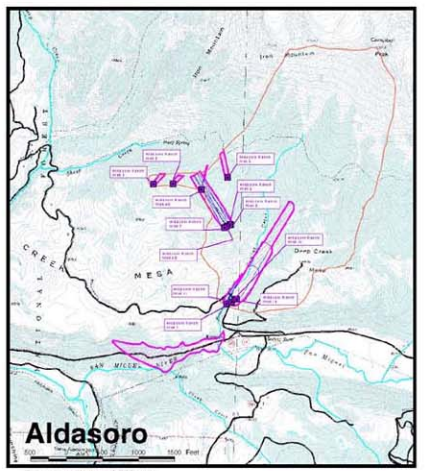




Source: Stillwell Tunnel, Blue Lake and Mill Creek



Source: Springs and Waterfall Canyon



Source: Ground Water

Source Water Protection Areas

Areas around public water supplies (surface or groundwater) over or through which contaminants can travel and affect the water supply.

- Zone A Source Water Protection Area (SWPA)
- Zone B Source Water Protection Area
- Well Protection Area
- Mine Adit
- Potential Contamination Source
- Stillwell Tunnel
- Road
- Major Stream
- Spring
- Intake
- Well

Accuracy of landscape type polygon boundaries is 80 feet.

Coverage extent is San Miguel County.

Data Sources: USGS, EPA - Region VIII, University of Colorado, San Miguel County, Southwest Data Center, Inc.

Colorado Department of Public Health and Environment

San Miguel County, Colorado