

# Level 4 Potential Conservation Area (PCA) Report

Name San Miguel River at South Fork

Site Code S.USCOFO\*152

## IDENTIFIERS

Site ID 697 Site Class PCA  
Site Alias Upper San Miguel River Preserve Site

## Network of Conservation Areas (NCA)

<u>NCA Site ID</u>	<u>NCA Site Code</u>	<u>NCA Site Name</u>
1598	S.USWRO1*418	San Miguel River

## LOCATORS

Nation United States Latitude 375806N  
State Colorado Longitude 1075826W

## Quad Code Quad Name

37107-H8 Gray Head  
37108-H1 Little Cone

## County

San Miguel (CO)

## Watershed Code Watershed Name

14030003 San Miguel

## SITE DESCRIPTION

Minimum Elevation	8,200.00 Feet	2,499.00 Meters
Maximum Elevation	13,300.00 Feet	4,054.00 Meters

## Site Description

This site consists of approximately 6.2 river miles along the South Fork of the San Miguel, a major tributary of the San Miguel River, and may include as many as 9.6 river miles along the mainstem. The expanded San Miguel River at South Fork macrosite is situated in a spectacular valley bordered by the 14,000 foot peaks of the Lizard Head Wilderness to the southeast, and the Ophir Needles rock formation to the southwest. This macrosite lies within the "cool and moist forests of the middle to high elevations of the Southern Rockies Ecoregion" (Gallant et al. 1989). The riparian corridor boundary is sharply defined by steep slopes and cliffs rising from the river plain. These surrounding upland areas support forests dominated by Engelmann spruce (PICEA ENGELMANNII), aspen (POPULUS TREMULOIDES), ponderosa pine (PINUS PONDEROSA) and subalpine fir (ABIES LASIOCARPA). The river supports excellent examples of coniferous-dominated riparian forest. The river is narrowly confined by steep banks (1-5 m high) where it enters the macrosite, but the channel widens downstream, opening into a broader floodplain which supports willow carrs. The rare Colorado blue spruce-narrowleaf cottonwood/thinleaf alder-black twinberry (PICEA PUNGENS-POPULUS ANGUSTIFOLIA/ALNUS INCANA-LONICERA INVOLUCRATA) plant association is found along the higher-gradient reaches of the river.

## Key Environmental Factors

Annual flooding and other high water events on the river, vital for all riparian communities, are caused by late spring snow melt from the western San Juan Mountains and summer convective thunderstorms.

## Climate Description

Cool and humid. 750-1,000mm annual precipitation for most of the region, mainly falling in the form of snow, which remains on ground well into late spring.

## Land Use History

There has been extensive mining activity in the region for at least 100 years. There is some evidence of placer mining. This activity occurred in an area dominated by a willow carr community, and apparently did not disturb the Colorado blue spruce/black twinberry community. Because the land was a mining claim and because of a dearth of suitable forage, it probably never received much pressure from livestock grazing. In 1914, the Trout Lake Dam, which lies on the Lake Fork of the South Fork, broke, destroying several buildings, including a smelter, in and around the town of Ames. Trout Lake Dam was rebuilt, and still exists today.

## Cultural Features

No Data

## SITE DESIGN

Site Map Y - Yes Mapped Date 12/22/1992  
Designer Neely, B.E.

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## Boundary Justification

This site will expand the original Upper San Miguel River Preserve site. Its primary boundary encompasses the floodplain surrounding the best occurrences and most promising restoration sites for the Colorado blue spruce-narrowleaf cottonwood/thinleaf alder-black twinberry (PICEA PUNGENS-POPULUS ANGUSTIFOLIA/ALNUS INCANA-LONICERA INVOLUCRATA)(G2S2) riparian forest. The secondary boundary encompasses the immediate watershed surrounding the core area. These boundaries will be finalized in early 1993.

Primary Area 1,554.38 Acres

629.04 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

## Biodiversity Significance Comments

A "B" ranked occurrence of a G3 natural community. This site contains one of the best examples of the rare Colorado blue spruce-narrowleaf cottonwood/thinleaf alder-black twinberry (PICEA PUNGENS-POPULUS ANGUSTIFOLIA/ALNUS INCANA-LONICERA INVOLUCRATA)(G2S2) coniferous-dominated riparian forest (referred to as PICEA PUNGENS/LONICERA INVOLUCRATA in Reid & Bourgeron (1991)). Smaller amounts of ponderosa pine (PINUS PONDEROSA) and Douglas fir (PSEUDOTSUGA MENZIESII) may also be found here. The shrub layer may also include Utah serviceberry (AMELANCHIER UTAHENSIS), Wood's rose (ROSA WOODSII) and whortleleaf snowberry (SYMPHORICARPOS OREOPHILUS). Field horsetail (EQUISETUM ARVENSE) and starry solomon plume (SMILACINA STELLATA) are the most common forbs. Other elements occurring at the site are the Rocky Mountain willow-Geyer's willow (SALIX MONTICOLA-SALIX GEYERIANA)(G5S3S2) willow carr and beaked sedge (CAREX ROSTRATA) (G3G4S3) herbaceous wetland.

Other Values Rank V3 - Moderate values

## Other Values Comments

This site is one of three identified core sites on the San Miguel River in southwestern Colorado. The San Miguel is one of the few remaining rivers in the western United States which has not been significantly dammed or diverted. The result is a river which is home to exemplary examples of a variety of different riparian communities from the upper to the lower elevations, including at least three rare types. The San Miguel River, along with the Yampa River, is the primary focus of the Upper Colorado River Basin Bioreserve, which recognizes the importance of entire watersheds as functioning ecosystems. By securing protection of key public and private lands along the San Miguel River, the Conservancy hopes to perpetuate a naturally functioning riparian ecosystem well into the future.

## LAND MANAGEMENT ISSUES

## Land Use Comments

The site is currently used for camping and other recreational uses. There are several subdivisions and other residential buildings scattered throughout the site above the river. Dirt roads parallel the South Fork and the mainstem below their confluence.

## Natural Hazard Comments

Normal hazards associated with streams, summer thunderstorms and steep mountain slopes.

## Exotics Comments

Exotics occurring on dry slopes above the river are Canada thistle (CIRSIIUM ARVENSE), smooth brome (BROMUS INERMIS), and orchard grass (DACTYLUS GLOMERATA), clover (TRIFOLIUM HYBRIDUM), timothy (PHLEUM PRATENSE), Kentucky bluegrass (POA PRATENSIS) and other exotic grasses along the roadside. These species do not present significant management problems at this time.

## Offsite

There is a proposed hydroplant and an existing gravel mine (see PROTURGCOM for details). The Town of Telluride and the Telluride ski area lie upstream of the site along the mainstem of the San Miguel River and could be altering water flow and water quality. The Idarado Mine, where historically gold and silver were mined, lies just upstream of Telluride, and is a source of heavy metal pollution for the mainstem portion of the site. This site is currently being reclaimed.

## Information Needs

1) ANIMAL SURVEYS: Riparian corridors, especially in the hot, arid southwest, often provide critical habitat for a variety of bird and mammal species. Even at elevations exceeding 8000 feet, as in the case of the Upper Preserve, riparian areas are species rich compared to adjacent areas. It is important to know what species use the riparian area in order to better understand the role of the river corridor for bird and mammal nesting

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sites, food supply and migratory routes.

2) HYDROLOGIC RESEARCH: TNC should research amount and timing of water flows of the South Fork of the San Miguel River. We plan to work with Brian Richter, the Conservancy's national Hydrologist, to investigate the hydrologic regime and to develop an ecological model for this site. We may need to work to secure minimum flow rights to protect the riparian communities on the river, and research feasibility and usefulness of water quality monitoring. Impacts from the gravel mine should be researched.

## ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global</u>	<u>State</u>	<u>Driving</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Rank</u>	<u>Rank</u>	<u>Site Rank</u>
24823	<i>Populus angustifolia</i> - <i>Picea pungens</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forests	G3	S3	No
24823	<i>Populus angustifolia</i> - <i>Picea pungens</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forests	G3	S3	Yes

## REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
-	No Data

## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

<b>Version Date</b>	12/22/1992
<b>Version Author</b>	Neely, B.E.

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