

6. South Platte Headwaters and Upper South Platte Watersheds

6.1. Introduction and Overview

The South Platte River is comprised of four major drainages. The North, Middle, and South Forks of the South Platte River and Tarryall River, which flow through two watersheds— South Platte Headwaters and Upper South Platte Watersheds. The South and Middle Forks and Tarryall River are located in the South Platte Headwaters Watershed and the North Fork is located in the Upper South Platte Watershed.

The South Platte Headwaters Watershed is almost entirely within Park County, except for a small portion in the northwestern portion of Teller County; the Upper South Platte Watershed overlaps five counties—Park, Teller, Clear Creek, Jefferson, and Douglas. Teller County is unique because it has a natural drainage divide running east-west through the county: the southern portion is in the Arkansas River Basin and the northern portion is in the South Platte River Basin.

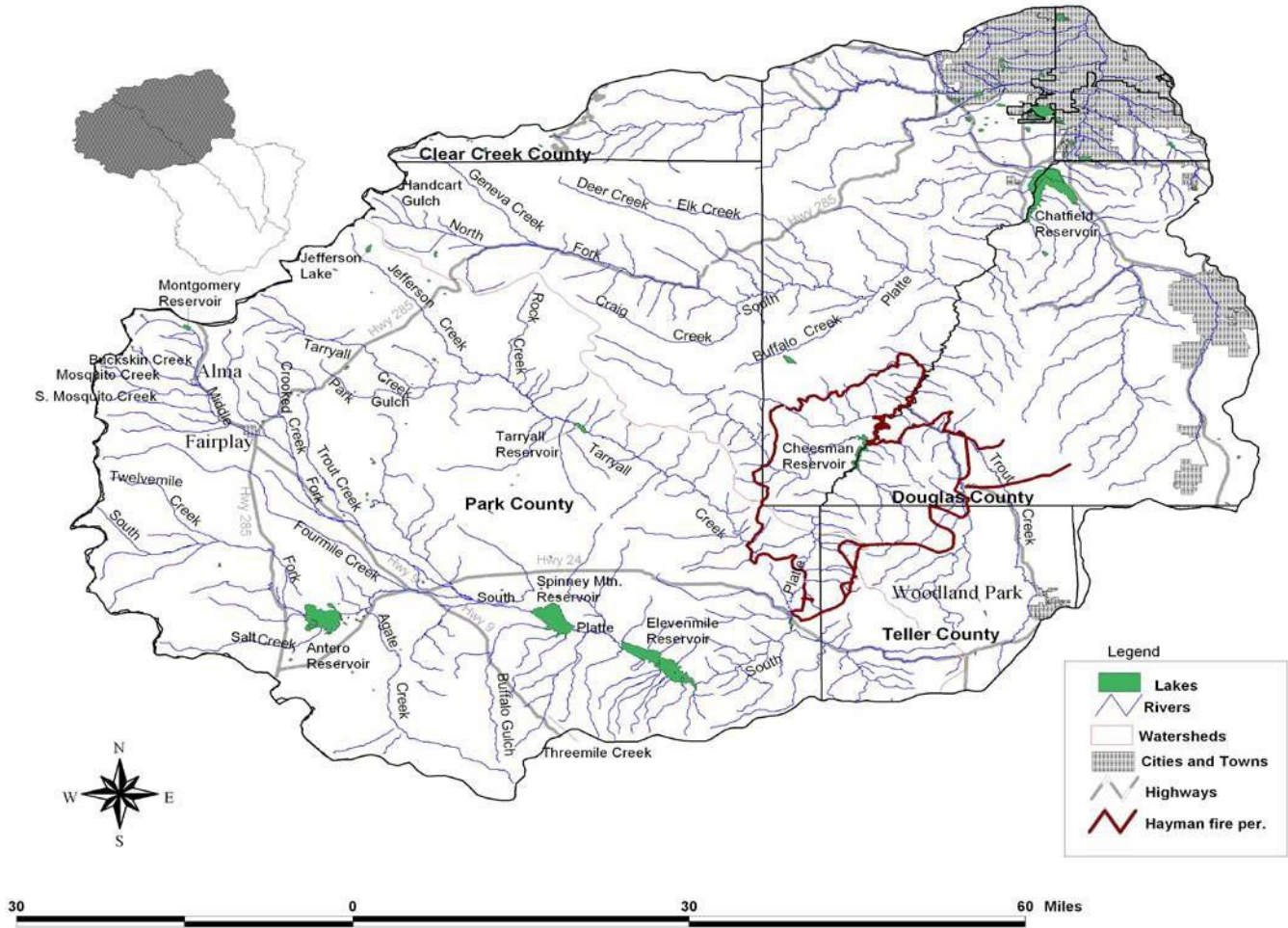
The portions of Park and Teller counties located within these watersheds are sparsely populated, with several small towns located near historic mining, recreation, and agricultural areas. The cities/towns of Woodland Park (located partially within the watershed), Fairplay, and Bailey are the largest in the watershed. The smaller communities include Lake George, Jefferson, Alma, Bailey, Divide, and Deckers. Many of the communities throughout the watershed have a mix of permanent and seasonal residences. Many homes are located adjacent to the river and its tributaries.

Mining and ranching played an important role in the early development in Park County. Diversions from the South Platte River provided water for mineral processing and irrigation of hay meadows. Dams and reservoirs constructed to provide water storage for Front Range municipalities also serve as fishing and recreation sites for Park County residents and visitors.

- Montgomery Reservoir above Alma is storage for Colorado Springs.
- Antero Reservoir and 11-Mile Reservoir along the South Platte are storage for Denver Water.
- Jefferson Lake and Spinney Mountain Reservoir provide storage for Aurora.
- Tarryall Reservoir is operated by the Colorado Parks and Wildlife and is used for fishing.

The Park County Strategic Master Plan was updated in 2016 and provides countywide goals & strategies to enhance future growth and development (RPI Consulting LLC,2016). The Master Plan contains several strategies regarding Growth Management, Natural/Cultural Resources and Environmental Hazards, Open Lands and Agricultural Lands, and Infrastructure/Public Services, which will directly and indirectly affect water resource and quality issues in the future. Those goals & strategies are also given for each of the twelve (12) subareas: Bailey/Pine Junction/Crow Hill/Shawnee/Grant, Fairplay/Alma/Jefferson/Como, Hartsel, Lake George; and Guffey.

6.2. Figure: South Platte and Upper South Platte Watershed Reference Map



6.3. Land Use Description

Land ownership within the watershed is mostly public parcels. The U.S. Department of Agriculture (USDA) Forest Service is the largest landowner within the basin, owning 51% of the land. The Forest Service manages the Pike National Forest, which covers roughly a 1400-square-mile area of the watershed. National Forest Service lands are managed in accordance with the Land and Resource Management Plan for the Pike and San Isabel National Forests, and the Comanche and Cimarron National Grasslands approved in November 1984.

The second largest public landowner is the State of Colorado, managing approximately 155 square miles. The Bureau of Land Management (BLM) manages 98 square miles. Other significant public landowners include the National Park Service (Florissant Fossil Beds National Monument), Denver Water, and the City of Aurora. Private landholdings make up the remainder (41%) of the land ownership within the basin.

Mountain biking, camping, skiing, hiking, and fishing are the primary tourist activities in the area but snowmobiling and the use of off-road vehicles are growing rapidly. The number of people enjoying these activities is increasing yearly with Highway 285 becoming congested during the weekends. In addition to vehicular emissions, the heavy use of the county for tourism is adversely affecting the water quality through erosion from overuse of unsurfaced roads, backcountry trails, campgrounds, and reservoirs. South Park is recognized for its trout waters: over 50 miles of public streams are designated as Gold Medal trout water by the Colorado Parks and Wildlife. Several historic ranches were secured for limited public fly-fishing. There may come a time when permits will be needed to preserve some of these areas for everyone to use.

The Park County Land Use Regulations were updated in 2005, and additional revisions were made in 2008 and February 2009. The land use regulations were revised to make them easier to understand and to cut out redundant and useless sections. The regulations include governing water and wastewater, wildlife habitat, zoning, and subdivision use regulations. The regulations can be found at: <https://parkco.us/189/Land-Use-Regulations>.

The Land Use Regulations recognize and attempt to implement the goals, objectives, and policies of Park County as contained in the Park County Strategic Master Plan (Park County, 2016). This plan can be found at: <https://parkco.us/188/Strategic-Master-Plan>.

Conceptually, a master plan is a guide to develop, rather than an instrument to control, land

use; thus, the master plan is only one source of comprehensive planning and is by express state law and statute advisory only. Some important components of the plan include:

- Provide for protection of the public health, safety, welfare, comfort, convenience, and prosperity of the residents and the cultural environment.
- Provide for balanced, orderly growth patterns and efficient, phased government services to accommodate existing and future residents.
- Preserve and promote the value of property, protect the tax base of Park County, and respect the property rights of citizens.

6.4. Population and Socioeconomic Characteristics

According to the Census 2010, Park County had 16,262 residents. Population forecasting conducted by the Department of Local Affairs, available at <https://demography.dola.colorado.gov/population/data/profile-county/> showed:

- Because many portions of Park County consist of national forest and state-owned lands, significant growth will not occur in certain areas.
- The growth in the municipalities can be attributed to their proximity to metropolitan areas.
- The Alma/Fairplay area is expected to grow significantly over the long term because is an affordable place to live for employees of Summit County's resorts.
- Lake George has become an attractive place to live for retirees and the semi-retired, due to its lower elevation and milder climate.

6.5. Overview of Watershed Issues and Activities

The high-priority watershed issues **identified** include:

- Agriculture—where livestock grazing is a concern in the southwestern portion of the county and especially near riparian areas and streams. Cattle are being fenced out in certain areas to perform stream restoration projects.
- Erosion—prevalent throughout the watershed, but especially in the

east and southwestern portion and areas impacted by the Hayman wildfire.

- Mine discharges and runoff—many of the water quality problems are from historic mining activities. Examples of these are in Mosquito Creek, South Mosquito Creek, and Geneva Creek.
- Wildfires—Wildfires have caused severe damage in the watershed. Restoration efforts are still ongoing and are being coordinated by the Coalition of Upper South Platte (CUSP) with the U.S. Forest Service; local fire departments; Park, Jefferson, Teller and Douglas counties; and NRCS.
- Wetlands—Wetland conservation efforts are being concentrated on the South and Middle Forks of the South Platte River and the Tarryall River Corridor. Park County, Colorado Open Lands, The Nature Conservancy, and other agencies are working on acquiring conservation easements to help private landowners keep their natural and agriculture resources intact in the future.

6.6. Summary of Major Planning Efforts

Major planning efforts completed in the watershed include:

- Park County Strategic Master Plan (RPI Consulting LLC, 2016);
- Upper South Platte River Conservation Project;
- Revised Land Use Regulations (2016);
- USGS Water Resource Investigations Report 07-5220 (USGS, 2007);
- South Park Basin Legacy Project;
- Park County Inventory of Critical Biological Resources (CNHP, 2001);
- Town of Alma Source Water Protection Plan (CRWA, 2014)
- Source Water Protection Plan for the Upper South Platte River (Denver Water, 2015). Report can be found at <https://cusp.ws/reports>

- 2011 Ground and Surface Water Monitoring Project: Baseline Monitoring to Address Oil and Gas Development in South Park (CUSP, 2012)
- Geology and Groundwater Resources of Park County (Colorado Geologic Survey, 2017). Report can be found at <https://store.coloradogeologicalsurvey.org/product/geology-groundwater-resources-park-colorado>