

Chapter 4 Forestville/Mystery Cave State Park: Description and Recreational Usage

Forestville/Mystery Cave State Park lies at the confluence of the three major drainages of the Upper South Branch Root River Watershed. These drainages are highly complex due to the karst (dissolved limestone) characteristics of the area. Surface waters flow generally easterly until encountering crevices and cave systems, at which point they become subsurface streams. These streams reemerge in or near the park producing three of Minnesota's best trout streams: Canfield Creek, Forestville Creek, and the South Branch Root River.

Forestville/Mystery Cave was established in 1963. It has evolved into one of Minnesota's most popular state parks, with about 140,000 visitors each year. The park offers a tremendous variety of resources and recreation. Many of the park's favorite resources and activities relate to the streams, which makes the park particularly vulnerable to effects of the watershed. The park's popularity and its significant natural and cultural resources were factors in designating the project area. Some specific resources and uses impacted by the streams include:

Historic Forestville

The principal namesake of the park is the historic village of Forestville. It became a boom town in the 1850's after treaties with the Dakota (Sioux) opened the area to white settlement. The village was located on the banks of the South Branch Root River just downstream from the confluence with Forestville Creek. The stream provided power for milling of grain and lumber, which in turn provided an economic base for the young community. As milling changed to large centralized urban operations, and with the advent of railroads which bypassed Forestville, the town declined. The remnant village is now operated as a living history site by the Minnesota Historical Society. Visitors can tour remaining buildings from the 1800's including the general store built in 1857. The

tours are a major attraction for the area with over 16,000 visitors each year. Projected tour income for 2002 is over \$36,000.

The historic site is especially vulnerable to flooding and has suffered through serious flood damage in each of the last four years. Floods typically inundate the general store cellar, damaging furnaces, electrical equipment, and water systems. Floods also deposit mud and debris, damage historic fixtures, and destroy historic gardens used for the interpretive program.

A flood typically requires the site to shut down for several days resulting in a significant loss of attendance. Considerable funds are typically required for pumping the cellar during a flood event and for drying the building afterward. Considerable cleanup of grounds is also needed. A typical 50-year interval flood will cost the site over \$4,000.

Mystery Cave

Minnesota's longest known cave is especially intimate to the South Branch Root River. The river actually shortcuts through the cave, and during periods of low flow, six miles of stream channel are bypassed. Intermittent flooding actually formed much of the cave although this occurred hundreds of thousands of years ago and was likely the result of periodic glacial meltwater runoff.

The picnic ground adjacent to the main cave entrance has been used at least since the late 1800's. The cave, which was discovered in 1937 has been operated as a show cave since that time. A major flood in 1942 damaged the cave so severely that most feared it would never reopen. It finally did in 1949 after extensive cleanup. The former ticket building was swept away along with souvenirs and money which local people found scattered along the streambed for years afterward.

The cave was acquired by the state in 1988. A major renovation of the main tour route was completed in 1993 including new accessible walkways and modern lighting. The

cave now hosts one of the premier interpretive tours in the state park system with about 20,000 annual visitors and an annual income of about \$100,000. The cave is another key attraction for the local tourism industry.

Floods have created havoc for cave tours in the last several years. Inside the cave electrical systems and trails have been submerged and coated with slippery mud. The picnic grounds have been devastated with severe damage to roads and parking areas. The current ticket building has been undermined and twice had water inside during the 2000 floods. About \$30,000 in damage to cave facilities has occurred over the past four years. Significant loss of tour income due to flood closures has also occurred.

Trout fishing/Wading

The moderating effect of 48 degrees Fahrenheit ground temperature creates ideal conditions for trout once the groundwater resurges at the major springs near the park. Trout naturally attract trout anglers. Park staff estimate that 20,000 people fish in the park each year. Throughout the past few decades, the Forestville Creek and Canfield Creek drainages have maintained suitable water quality for self-sustaining populations of brown trout. These streams have recovered from severe degradation which resulted from poor land use practices in the late 1800's and early 1900's. Trout fishing is another significant visitor attraction for the area. Many anglers come from long distances to fish the watershed including many non-residents. Many other park visitors also utilize park streams for wading, tubing, and swimming, especially during periods of hot weather.

Water quality concerns have resurfaced in recent years with the return of more serious flooding and apparent associated drainage and cropping practices in headwater areas. Ultimately, increased flooding, siltation, and nutrient loading threaten what has been a sustainable and successful cold water fishery.

Picnicking

The park maintains two picnic areas (one previously described above at Mystery Cave). A large shelter was completed in 1980 which serves as the main day use building for the main park. The building was built near a former mill site slightly upstream of Historic Forestville.

Though visitor counts of the shelter and surrounding picnic area can only be estimated, the site is heavily used. The building has been designated to withstand high water but had never been reached by water until the 2000 floods. The July flood produced water in the building interior over 12” deep. Both floods left a thick ooze of organic silt in the building which required extensive cleaning. In addition, the grounds were ravaged by mud and debris. Stream bank erosion in the picnic area was severe. The effects are still obvious today. It is clear that impacts due to recent floods are costly. They range into thousands of dollars not to mention the loss of use by visitors.

Trails

Forestville/Mystery Cave has some of the heaviest trail use of any state park. It is Minnesota’s busiest horse trail system with over 10,000 riders each year. Many of the most important trails parallel or cross park streams. They are highly vulnerable to flooding. Flood damage to trails has been severe in recent years, causing extensive trail closures and costly repairs. Park staff estimate that over \$50,000 in trail repairs have been required due to flood damage over the past four years. Most of this has been due to the increased frequency and severity of floods in recent years.

Flood damage at Forestville/Mystery Cave since 1998 has been severe requiring extensive repairs. The park was funded through FEMA for reimbursement totaling nearly \$45,000 for damage incurred in 1998 and 2000. This amount is only part of the actual repair cost and does not measure lost use by visitors and lost income to the park

and Historic Forestville. It is clear why a healthy watershed is valued by visitors to the park.

The park has taken action in recent years to enhance water quality of the streams. Serious erosion from park trails has been eliminated through reconstruction and resurfacing. Banks have been fortified with timbers, crushed rock, and rip rap at sensitive stream crossings. Park plans seek to preserve natural vegetation in riparian areas, and to also minimize developments in these areas. For example, the flood prone ticket building and parking at Mystery Cave will be replaced. New facilities will be set away from the stream and out of the flood plain.

The Division of Fisheries has also contributed to improved water quality both within the park and elsewhere in the watershed. Much of the stream habitat work completed over the last 30 years has included stabilizing banks to reduce siltation. Extensive repairs have been made on Forestville Creek and Canfield Creek.

Perhaps the most significant action on behalf of Forestville/Mystery Cave State Park is no action. The most recent (1995) park plan calls for no significant addition of facilities or use such as new campgrounds. This recommendation is made even though strong demand for additional campgrounds exists. Most planning participants agreed that preserving the undeveloped character of the park was the highest priority. Ultimately, this will benefit the watershed.