

Sylvan Lake State Park

2019 MANAGEMENT PLAN



Sylvan Lake State Park
Management Plan

Colorado Parks and Wildlife



March 25, 2019 (external)

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EXECUTIVE SUMMARY

Sylvan Lake State Park is located in Eagle County approximately 10 miles southeast of Eagle, Colorado in the west central portion of the State. Since its opening to the public as a state park in 1987, Sylvan Lake State Park has been touted as one of the most scenic spots in Colorado. The Park's large elevation span and relatively undisturbed habitat make it a prime location for fishing and wildlife viewing.

The Park extends from 7,500 feet in elevation at the visitor's center to about 9,000 feet at the upper end of East Brush Creek and encompasses a total of approximately 1,574 acres, defined largely by the boundaries of East and West Brush Creeks. East Brush Creek runs east to west, while West Brush Creek runs south to north, flowing into Sylvan Lake at the southwest end of the Park. Hillsides along the creek have aspects that face in all four of the cardinal directions, fostering a very interesting and diverse park.

The beautiful 42-acre mountain lake is stocked with trout and is very popular with anglers. The Park features basic campsites for tents and RVs, one large cabin, eight camper cabins and three yurts. In addition to camping and fishing, summer recreation activities include hiking, picnicking and boating (hand-propelled and electric motors only). The Park is open year-round, offering popular winter activities, such as snowshoeing, cross-country skiing, snowmobiling and ice fishing. Sylvan Lake offers environmental interpretive programs for all ages during the summer and, upon request, during the spring, fall, and winter seasons. Visitation is highest in the summer months from May through September. Apart from the visitor's center, the Park is entirely "off the grid" and all facilities are powered by solar panels.

About the Plan

Management plans are an important tool for park managers. The Sylvan Lake State Park Management Plan serves as the primary guiding document for the Park. Direction given in other park planning documents should be consistent with this plan.

The Sylvan Lake State Park Management Plan provides a conceptual framework for setting management priorities and specific management directions for park resources. The Plan also:

- Serves as a guide and policy document for current and future park staff, other partnering agencies, elected officials and interested members of the public.
- Guides management of natural, cultural and recreational resources.

- Identifies a framework for monitoring and maintaining resources at the Park.
- Identifies park enhancement opportunities, including possible upgrades to or new park facilities, recreational infrastructure, etc.
- Serves as a guide for future budget allocations and annual funding requests.

Implementation of the Sylvan Lake State Park Management Plan will assist park staff in their efforts to preserve and enhance the Park for future recreational users. The Sylvan Lake State Park Manager should regularly review the Plan to evaluate implementation progress. This includes annually reviewing the document. After 5 years, park managers should review the Plan and determine whether any formal amendments are necessary. Park and other Division staff (e.g., planning, region, natural resource and capital/region development staff) should update the Management Plan every 10 years.

Park Goals

Park-level goals provide an overarching framework for many of the suggested actions and recommendations included in Sections 5.0 and 6.0:

1. Manage the Park's natural and cultural resources to maintain and improve their condition.
2. Provide high-quality customer service that enhances visitor appreciation and enjoyment of the Park's recreational amenities and natural resources.
3. Conduct future infrastructure development with maintaining the quality of the Park's habitats, scenery and cultural resources in mind.
4. Maintain and improve the Park's scenic resources to provide a high quality, nature-based recreation experience.
5. Ensure that operations and maintenance capabilities of park staff are not exceeded when planning for additional infrastructure/operations in the future.
6. Plan for anticipated future population growth, demographic changes, and new recreational trends of local and non-local visitors.
7. Interpret the Park's natural and cultural resources to educate, inspire and inform the public to be stewards of Colorado's resources.
8. Provide recreation opportunities with visitor safety in mind.

Management Considerations

Management considerations include issues and concerns identified by park staff based on first-hand experience, knowledge and information gathered from the

public during the open house meetings and through survey responses. Some of the specific key management considerations addressed in this plan include:

- The public desire to use off-highway vehicles (OHV) on the Park's road to access adjacent USFS property. OHVs are not permitted on the road that runs through the park. However, because that road connects the town of Eagle to the USFS property adjacent to the park, there is significant local interest in using that road for OHVs. It may be necessary to develop an OHV staging area within the park to better accommodate this increasing demand.
- The increased desire to use conservation areas within the Park and the need to balance providing high quality recreational opportunities and protecting natural resources/wildlife.
- Increased visitation, which will likely include potential resource degradation and additional resource management considerations, as well as limitations on space and development.
- The management of ongoing ecological threats to lodgepole pine and aspen, as well as increasing noxious weeds.
- The challenge of offering competitive wages for temporary and full-time employees in relation to the local cost of living.
- The desire to continue to strengthen environmental education outreach to local schools and organizations.
- The challenges in meeting increasing park operating expenses with a limited and stagnant budget.

This information, in addition to knowledge and experience of park staff, directly influenced development of park enhancement opportunities described in Section 5 and suggested management actions included in Section 6.

Management Zoning

The management-zoning scheme is created specifically for this Colorado State Park. It provides a framework for identifying areas to provide different types of visitor experiences and recreation opportunities with consideration of the natural and cultural resources that occur within the Park. Within each management zone, suitable types of facilities and land uses are identified, along with a targeted visitor experience and management focus.

A number of factors influenced the zoning at the Park, including natural resources, land ownership, facilities and infrastructure, and engineering suitability. Refer to Section 4.0 for detailed information on park management zones.

Summary of Recommended Park Enhancements

“Enhancement opportunities” are potential future improvement projects identified for the Park that are based upon resource considerations, outdoor recreation trends, visitor preferences, financial considerations and other management considerations identified in this plan. These enhancement opportunities are discussed in detail in Section 5.0 - Park Enhancement Opportunities and Initiatives. All of the enhancement opportunities and other suggested management priorities are included in the Summary Implementation Priorities Table included in Section 6.0. Enhancement opportunities generally include park improvements that are significant in terms of their spatial scale and level of effort needed to implement them, and may warrant considerable financial resources.

It is important to note that consideration of new facilities and infrastructure should be balanced with maintaining and improving what already exists in the Park, and major new infrastructure investments should be balanced with resource enhancements. Finally, identification of park enhancement opportunities does not constitute a commitment to making changes to the Park. Implementation of enhancement priorities and other recommendations in the management plan are contingent on the park securing adequate financial and human resources. Any park enhancement that requires additional funding or staffing must be considered or weighed within the context of Division-wide priorities. All potential park enhancements identified for Sylvan Lake State Park are described in Section 5.

1.0 INTRODUCTION

Park Description

Sylvan Lake State Park (Park) is situated on the Western Slope of Colorado in the Colorado River drainage basin. The Park is located in Eagle County, approximately 10 miles southeast of Eagle, Colorado on West Brush Creek Road. The Park extends from 7,500 ft in elevation at the visitor's center to about 9,000 feet at the upper end of East Brush Creek. Encompassing a total of approximately 1,574 acres, the Park is defined largely by the boundaries of East and West Brush Creeks. East Brush Creek runs east to west, while West Brush Creek runs south to north.

The Park's key features include a 42 acre mountain lake, which is stocked with trout and is very popular with anglers. Additionally, the campground at Sylvan Lake State Park, which is nestled against a mountain backdrop, is one of the most scenic spots in Colorado. The Park offers campsites, yurts and cabins, which attract visitors who are looking to enjoy nature in a beautiful setting. Other popular recreational activities include hiking, picnicking and boating in the summer, and snowshoeing, cross-country skiing, snowmobiling and ice fishing in the winter. This area is home to a variety of wildlife species, including deer, elk, beaver, raccoon, mink, bear, coyote, fox, bats, osprey and eagles, providing excellent opportunities for wildlife viewing. The Park is home to several historic sites and structures, which provide excellent examples of the stories of early settlement in the region. Visitation is highest in the summer months from May through September. Apart from the visitor's center, the Park is entirely "off the grid" and all facilities are powered by solar panels.

The State of Colorado purchased the Sylvan Lake property in 1962, which included 155 acres around Sylvan Lake, from an Internal Revenue Service auction. The property was initially developed and managed by the Parks section of Colorado Game, Fish and Parks, as Sylvan Lake State Recreation Area. In 1971, when the state legislature separated the agency into the Division of Wildlife and the Division of Parks and Outdoor Recreation (DPOR), the Division of Wildlife became responsible for the management of the site and it became known as Sylvan Lake State Fishing Area. In 1987, the Division of Wildlife approached the DPOR to consider taking management responsibilities for Sylvan Lake. On July 1, 1987, Sylvan Lake State Park officially became a part of the Colorado State Park system.

In 1999, the DPOR bought several private land parcels on both East and West Brush Creeks for public fishing and hunting access. Additionally in 1999, the DPOR leased two parcels along lower East Brush Creek from the State Land

Board and constructed rental cabins at the Lake. In 2002, State Parks gained about 120 acres at the inlet of Sylvan Lake through a land exchange with the Forest Service and the visitor's center was constructed at the entrance to the park. In 2011, State Parks merged with the Division of Wildlife to form Colorado Parks and Wildlife. In the summer of 2018, the dam at Sylvan Lake was rebuilt and funding was acquired to stabilize the historic schoolhouse.

Purpose of the Plan

The Sylvan Lake State Park Management Plan (Management Plan) serves as the foremost guiding document for the Park. The ultimate purpose of developing a state park management plan is to plan for the public enjoyment of the Park and the protection of the Park's resources. The Management Plan provides a conceptual planning framework for setting management priorities and providing specific management direction for park resources. The Management Plan also:

- Serves as a guide and policy document for current and future Park staff, other partnering agencies, elected officials, and interested members of the public.
- Guides management of natural, cultural, and recreational resources.
- Identifies a framework for monitoring and maintaining resources at the Park.
- Identifies park enhancement opportunities including possible facility upgrades, new park facilities, restoration and rehabilitation projects, and important management initiatives.
- Serves as a guide for future budget allocations and annual funding requests.

Included in the Management Plan is a broad description of the complete spectrum of recreational, cultural and natural resources at the Park. Implementation of the Management Plan will assist park staff in their efforts to preserve and enhance the Park for future recreational users.

Park managers should regularly review the Management Plan to evaluate implementation progress. This includes annually reviewing the document at the beginning of each calendar year.

Relationship to the Division Strategic Plan

Using Colorado Parks and Wildlife's (CPW) Strategic Plan as an overall guide, the Management Plan serves as the primary "go-to" planning document for all Park staff. Specifically, CPW's Strategic Plan is a useful guide for achieving a

broad range of Division-wide goals and objectives, while the Management Plan is the primary guidance document for park-level management efforts. The Management Plan is consistent with the following Division-wide mission, vision and goals (as defined in the Strategic Plan) which are highlighted below.

Mission

CPW's mission is "to perpetuate the wildlife resources of the state, to provide a quality state park system, and to provide enjoyable and sustainable outdoor recreation opportunities that educate and inspire current and future generations to serve as active stewards of Colorado's natural resources" (C.R.S. 33-9-101).

Vision

CPW's vision is to be a national leader in wildlife management, conservation and sustainable outdoor recreation for current and future generations.

Strategic Goals

CPW's Strategic Plan, finalized in November 2015, provides a roadmap for achieving the agency's vision and mission through concrete goals and objectives. The six CPW goals identified in the Strategic Plan are:

1. Conserve wildlife habitat to ensure healthy sustainable populations and ecosystems
2. Manage state parks for world class outdoor recreation
3. Achieve and maintain financial sustainability
4. Maintain dedicated personnel and volunteers
5. Increase awareness and trust for CPW
6. Connect people to Colorado's outdoors.

Park Vision and Goals

Vision

Provide and maintain scenic and nature-based recreation experiences for current and future generations.

Goals

The Park's goals are to:

1. Manage the Park's natural and cultural resources to maintain and improve their condition.
2. Provide high-quality customer service that enhances visitor appreciation and enjoyment of the Park's recreational amenities and natural resources.

3. Conduct future infrastructure development with maintaining the quality of the Park's habitats, scenery and cultural resources in mind.
4. Maintain and improve the Park's scenic resources to provide a high quality, nature-based recreation experience.
5. Ensure that operations and maintenance capabilities of park staff are not exceeded when planning for additional infrastructure/operations in the future.
6. Plan for anticipated future population growth, demographic changes, and new recreational trends of local and non-local visitors.
7. Interpret the Park's natural and cultural resources to educate, inspire and inform the public to be stewards of Colorado's resources.
8. Provide recreation opportunities with visitor safety in mind.

Future Plan Updates

The Management Plan is intended to be updated every 10 years. An interdisciplinary team of CPW staff from the Park and other Division staff (e.g., planning, region, natural resource and capital/region development staff) should be developed to perform this update. To ensure that the Plan is a dynamic document that meets the changing needs of the Park and park visitors over time, park managers may supplement the Management Plan with updated information, provide minor changes to management actions, or add management actions that help the Park meet changes in recreational trends, visitor demands, adapt to changes in the natural environment and maintain a high quality visitor experience. This may occur during the annual review at the beginning of the calendar year, or whenever relevant information becomes available. In addition, park managers should review the Plan after 5 years to determine whether any formal amendments are necessary. Examples of when formal amendments to the plan may be necessary are listed below.

- There are changes to the land base (e.g., additional lands are purchased or portions of the park are sold off).
- Major new facilities or infrastructure are planned for the park.
- A policy or directive is instituted that significantly affects park management direction.
- Major changes to land use occur within or adjacent to the park.
- There are changes to the management zoning.
- There has been significant environmental stress (i.e., fish kill, drought, etc.).

Previous Planning Efforts

The first management plan for the Park was finalized in the summer of 1992 (Appendix A). In 2011, after the merger of the Division of Wildlife and the Division of Parks, a planning team was assembled and the process of updating the management plan began. However, due to constraints, including personnel changes, the process was not completed.

In September 2013, the Sylvan Lake State Park Stewardship Plan (Stewardship Plan) was developed as an internal reference to facilitate the management and conservation of the natural and cultural resources within the park. This fundamental understanding of Park resources informed this Park Management Plan. The Stewardship Plan (Appendix A) is based on a number of inventories and assessments, including:

- Wetland assessment around Sylvan Lake, 1995 and 2003
- State Parks Vegetation Management Plan, 1999
- Vegetation mapping, condition assessment and wetland monitoring plot establishment, 2003
- Cultural resource inventory, 2004
- Geo-hydro rapid assessment, 2006
- Wildlife rapid assessment, 2006
- Beaver assessment, 2005
- Lynx habitat survey and mapping, 2005
- Breeding bird survey, 2011
- Noxious Weed Mapping and Management Plan, 2014 (Appendix A)
- Cultural Resource Assessment, 2016

Other management plans that address resource issues at the Park include:

- U.S. Forest Service (USFS) Biological Evaluation, 2005 (Appendix A)
- Sylvan Lake State Park Forest Management Plan, 2011 (Appendix A)

In January 2017, the Park manager and CPW's Policy and Planning Unit began discussing the need to update the Management Plan, and the Sylvan Lake State Park Planning Team first reassembled in April 2017, to begin the process of revising the management plan.

Public Input Process

Public input is an important part of the management planning process. Members of the public were encouraged to provide input on the Management Plan at one public open house meeting on June 21, 2017 at the Eagle Public Library. Additionally, from June 7, 2017 through July 6, 2017, a public comment form and questionnaire was available online and at the Park visitor's center. Outreach for the open house and the online public comment form was

conducted in English and Spanish, via flyers, radio and newspaper advertisements, the CPW website and social media.

The open house provided community members an opportunity to learn about the planning process and offered parks staff valuable feedback on issues of interest or concern. Specifically, the public was directed to consider whether infrastructure changes or new recreational facilities are needed to preserve high quality visitor experiences for the future while conserving the Park's natural setting and wildlife habitat. To help with this process, CPW staff put out a Recreational Experience Survey, in which participants were instructed to select which recreational experiences they would like to have at three different sites throughout the park using photos to depict the current recreational classification and examples of other possible recreational classifications (i.e., "protected," "natural," "passive recreation," or "developed").

Approximately 12 people attended the open house. Seven people responded to the Recreational Experience Survey (Appendix B). These comments highlighted that the Sylvan Lake Campgrounds and Day Use Area is most frequently used, followed by the Meadows Day Use Area. At the Lake Campgrounds and Day Use Area, most respondents (71%) preferred increasing the classification from moderate to moderate/high development, indicating that they would like to see additional picnic shade shelters, family picnic areas and American Disability Act (ADA)-accessible areas. In the Meadows Day Use Area, most respondents (50%) preferred maintaining the current "passive recreation" classification. Similarly, in the East Brush Creek Areas, most respondents (50%) preferred maintaining the current "natural" classification.

Sixty-two people filled out the comment form online (Appendix B) and 11 people filled out a paper form at the public input meeting and in-person at the park. Forty-four percent of respondents visited the Park once a year and typically travel more than 50 miles (from within Colorado). Seventy-nine percent of respondents typically have two to five people in their group and 49% use the park for day visits only. Respondents identified nature-based activities as the most important activities, including relaxation in nature/mountain experience, walking/hiking, fishing and wildlife watching. Additionally, limiting new development, linking existing trails, and improving stream-fishing access were identified as the most desirable management actions. Finally, the most common feedback on the respondent's overall experience was that the Park is at or above capacity and that no other changes or additional activities are desired.

During the second public comment period, from February 1, 2019 through March 1, 2019, Park staff presented the public with copies of the draft Management Plan online, in addition to a public comment form. Five people responded to the public comment form and their feedback was discussed and incorporated into the final version of the management plan where appropriate.

Key Stakeholders

Key public and agency partners (Table 1) were involved in the development of the Management Plan through participation in the public open house and/or were contacted individually during development of the plan to ensure they were informed of the planning process and could weigh in on management plan recommendations if desired.

Table 1: Sylvan Lake Stakeholders

Stakeholder Group	Stakeholder Name
Federal Government	<ul style="list-style-type: none"> • US Forest Service
Local Government	<ul style="list-style-type: none"> • State Land Board • Eagle County • Town of Eagle, Eagle River Watershed Council • Town of Gypsum
Recreation Stakeholders	<ul style="list-style-type: none"> • Fishing outfitters • Tour guide outfitters
Key Park Partners	<ul style="list-style-type: none"> • Ute Springs Experiential Learning Center • Eagle County Schools • Walking Mountains Science School • Rocky Mountain Youth Corps
Resource Stakeholders	<ul style="list-style-type: none"> • Eagle Historical Society
Other	<ul style="list-style-type: none"> • Winter trail grooming snowmobile club

Visitor Survey

Colorado State Parks commissioned Corona Research to undertake a complete study of marketing issues related to Colorado’s state park system in 2008, including a visitor intercept survey to capture visitors’ perceptions, satisfaction levels and reasons for visiting. During this research, 203 surveys were collected at Sylvan Lake State Park over a one-year period from June 2008 to May 2009 (Appendix B).

The results indicate that most visitors to the Park:

- Were from Colorado (86%) and traveled 100-250 miles;
- Arrived in cars (72%), with an average of three people per vehicle;
- Stayed overnight (84%), with an average number of 1-2 nights stayed.

The most popular way to stay overnight at the Park was in an RV (35%), followed by a cabin (25%), and then a tent (21%). For day-use visitors, the average length stay was around 6 hours.

Visitors were highly satisfied with the Park's:

- Scenery (ranking it 2nd out of 42 total parks in the system);
- Camping (4th out of 42);
- Nature and interpretive programs (5th out of 42)
- Information/signage (6th out of 42);
- Trails (9th out of 42); and
- Recreational activities (9th out of 42).

In general, visitors preferred more:

- Non-motorized trails;
- Primitive/natural experiences;
- Primitive campsites;
- Campsites with plumbing and electricity;
- Nature and interpretive programs; and
- Restrooms/changing facilities.

Visitors were generally against more motorized trails.¹

Comparing these results to the results of the public comment form developed specifically for this management plan highlights a slight shift between 2008 and 2018 from visitors who travel longer distances and stay overnight to visitors who travel shorter distances and make day trips.

Influences on Management

Several additional factors, which are largely outside of the park manager's direct control, may influence park management. These include an Interagency Property Agreement with the State Land Board (SLB) on certain sections of the park (Appendix C). This land, totaling, 371 acres, is held in fee title by the SLB,

¹ *Colorado State Parks Marketing Assessment: Visitor Intercept Survey*. Corona Research, Inc., 2008. p. 169.

with CPW serving as the on-site manager and beneficiary. Improvements and alterations on those sections of the Park require SLB approval.

Similarly, the USFS primarily owns the land surrounding the Park, and there are sections of the Park's trails that cross the USFS land. CPW currently has permission to maintain these sections of trails through a special use permit with the USFS (Appendix C).

Finally, three sections of the Park are held in conservation easements, which limits their development and results in seasonal closures of the trails for wildlife wintering areas (Appendix C).

Management Considerations

Management considerations include issues and concerns identified by park staff based on first-hand experience, knowledge and information gathered from the public during the open house meetings and through survey responses. Some of the specific key management considerations addressed in this plan include:

- The public's desire to use off-highway vehicles (OHV) on the Park's road to access adjacent USFS property. OHVs are not permitted on the road that runs through the park. However, because that road connects the town of Eagle to the USFS property adjacent to the park, there is significant local interest in using that road for OHVs. It may be necessary develop an OHV staging area within the park to better accommodate this increasing demand.
- The increased desire to use conservation areas within the Park and the need to balance providing high quality recreational opportunities and protecting natural resources/wildlife.
- Increased visitation, which will likely include potential resource degradation and additional resource management considerations, as well as limitations on space and development.
- The management of ongoing ecological threats to lodgepole pine and aspen, as well as increasing noxious weeds.
- The challenge of offering competitive wages for temporary and full-time employees in relation to the local cost of living.
- The desire to continue to strengthen environmental education outreach to local schools and organizations.
- The challenges in meeting increasing park operating expenses with a limited and stagnant budget.

This information, in addition to knowledge and experience of park staff, directly influenced development of park enhancement opportunities described in Section 5 and suggested management actions included in Section 6.

2.0 REGIONAL PLANNING CONTEXT

This section provides information on the regional setting in which the Park is situated. Regional issues or considerations that may influence management of the Park include climate, proximity of the Park to major population centers and other geographical considerations, eco-regional issues, adjacent land ownership and regional population trends. These areas are discussed in detail below.

Climate

Average daily temperatures at the Park range from 19.8°F in January to 66.2°F in July, and may fluctuate by as much as 40°F in a given month (Table 2). The climate in the summer months is typically moderate, while temperatures in the winter months are often below freezing. The warmest month of the year is July with an average maximum temperature of 85.4°F; the coldest month of the year is January with an average maximum temperature of 34.4°F.

Above 8,000 feet, snowfall accounts for much of the yearly precipitation, while below 8,000 feet, precipitation is largely from significant summertime thunderstorms.² Average annual precipitation totals 10.9 inches (Table 3). Precipitation is concentrated in the summer and early fall. July, August, and September are the wettest months, receiving average precipitation totals of 1.17, 1.10, and 1.10 inches, respectively. Snowfall peaks in January, with an average total of 10.7 inches.

Table 2: Mean Temperatures*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max (F)	34.4	40.2	48.2	58.4	68.8	79.5	85.4	83	75.8	63.8	47	35.4	60
Mean (F)	19.8	25.6	34.5	42.6	51.4	59.8	66.2	64.1	56.4	45.4	32.1	21.1	42.9
Min (F)	3.6	9.4	19.5	25.9	33.3	39.1	45.6	44.4	35.6	25.7	15.7	5.1	25.3

*Length of record for all data is 1904-2016

² *Sylvan Lake State Park Stewardship Plan*. Colorado Parks and Wildlife, 2013. p. 88.

Source: Western Regional Climate Center, Eagle Co AP, COLORADO, COOP ID 052454, 19.4 miles from Sylvan Lake State Park <<https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?co2454>>

Table 3: Average Precipitation Totals*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Precipitation (in.)	0.9	0.6	0.8	0.9	0.9	0.9	1.2	1.1	1.1	1.0	0.7	0.9	10.9
Snowfall (in.)	10.7	6.5	7	4	1.2	0.1	0	0	0.4	2.3	5.7	10.1	48

*Length of record for all data is 1904-2016

Source: Western Regional Climate Center, Eagle Co AP, COLORADO, COOP ID 052454, 19.4 miles from Sylvan Lake State Park <<https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?co2454>>

Physical Setting

The Park is located 10 miles southeast of Eagle, Colorado, in Eagle County (Map 1). Eagle County encompasses approximately 1,694 square miles.³ Elevation in the county ranges from 6,128 feet on the Colorado River to 14,011 feet on the summit of the Mount of the Holy Cross.⁴ Within the Park, elevations range from 7,500 feet at the visitor’s center to approximately 9,000 feet at the upper end of East Brush Creek. The East and West Brush Creeks, which fork at the northwest end of the park, define the linear nature of the park. East Brush Creek runs west to east, while West Brush Creek runs south to north, flowing through the 42-acre Sylvan Lake at the southwest end of the park towards the Eagle River to the north.

Eco-Regional Setting

The Park lies within the Eagle River Watershed of the Colorado River Basin.⁵ The Eagle River Watershed covers a drainage area of approximately 970 square miles, and has an average annual water yield of 415,000 acre-feet.⁶ Snowmelt

³ "Local Information: Quick Facts." *Official Website of Eagle County, CO*, www.eaglecounty.us/localinfo/Quick_Facts/. Accessed August 07, 2018.

⁴ Ibid

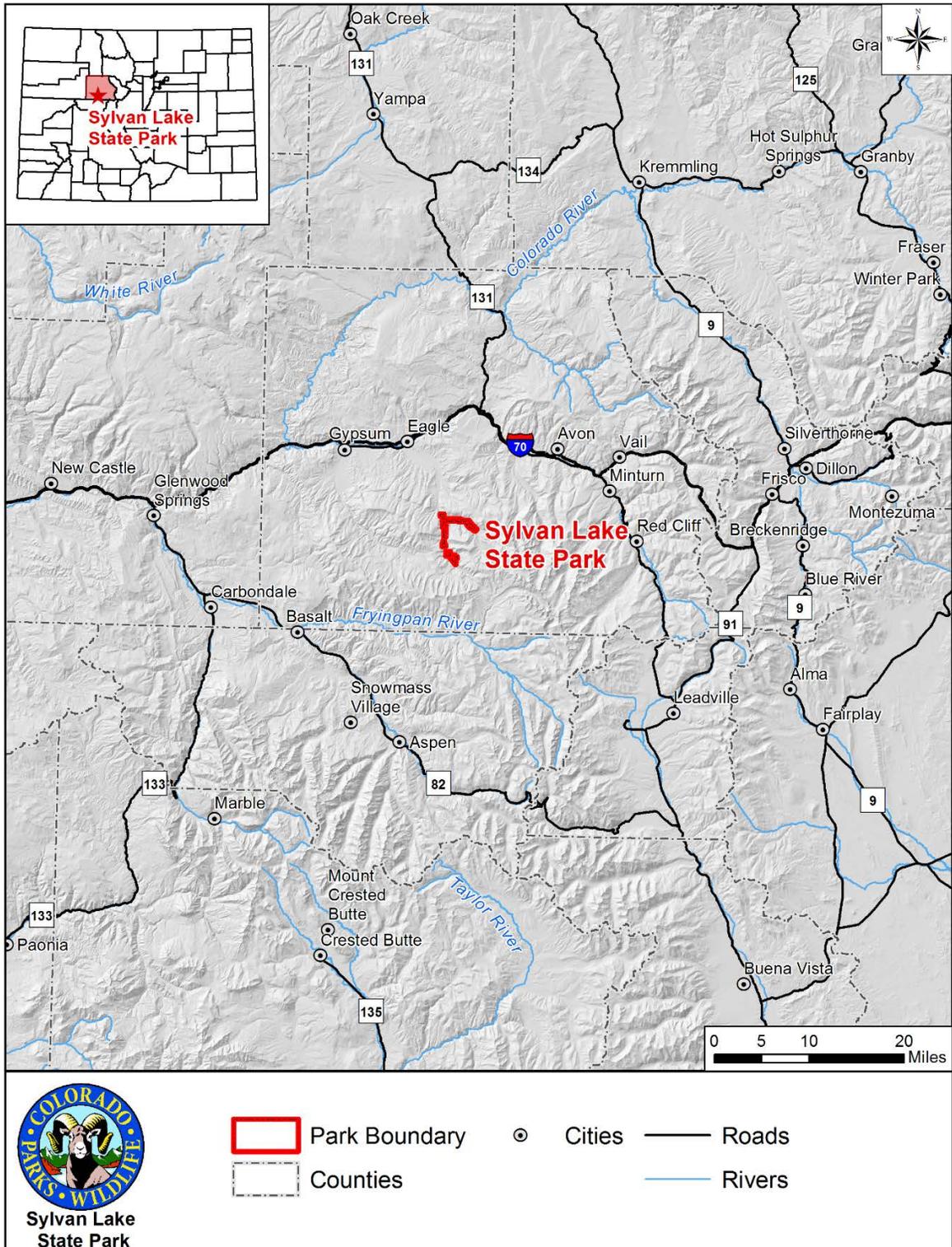
⁵ "Colorado River Basin." *Colorado Watershed Assembly*, www.coloradowater.org/colorado-basin/. Accessed 21 August 2017.

⁶ Ibid

from the Sawatch Range feeds the vast wetland complexes within the park, which are a product of historical beaver presence in the area.⁷

⁷ *Sylvan Lake State Park Stewardship Plan*. Colorado Parks and Wildlife, 2013. p. 66.

Map 1: Location



The Park and the surrounding area experience diverse climates because of the large elevation changes and the varying aspects of the mountainsides. For that reason, the park contains a variety of natural habitats that support a diverse assemblage of unique species.⁸

Adjacent Land Use and Land Ownership

The Park is located south of the I-70 corridor within the White River National Forest, the most visited national forest in the United States. The forest encompasses 2.3 million acres and includes eight wilderness areas, 12 ski resorts, four major reservoirs, and 2,500 miles of trails.⁹ Holy Cross Wilderness, part of the White River National Forest, lies east of the park, spanning over 123,400 acres. Land north of the National Forest's border is zoned for agricultural and residential use. This zoning begins approximately 1.4 miles north of the entrance to the Park.¹⁰

Adjacent Jurisdictions

As seen in Map 2, most of the land directly adjacent to the Park is owned by the USFS. There are a few parcels of land along East Brush Creek that are owned by the State Land Board (SLB), but where management of the land has been transferred to CPW. Additionally, there are several adjacent parcels of private land located north of the entrance to the Park, as well as one small parcel along East Brush Creek and several large parcels at the southeast border of the park at the end of East Brush Creek (see Section 3 for more details).

Transportation/Roads

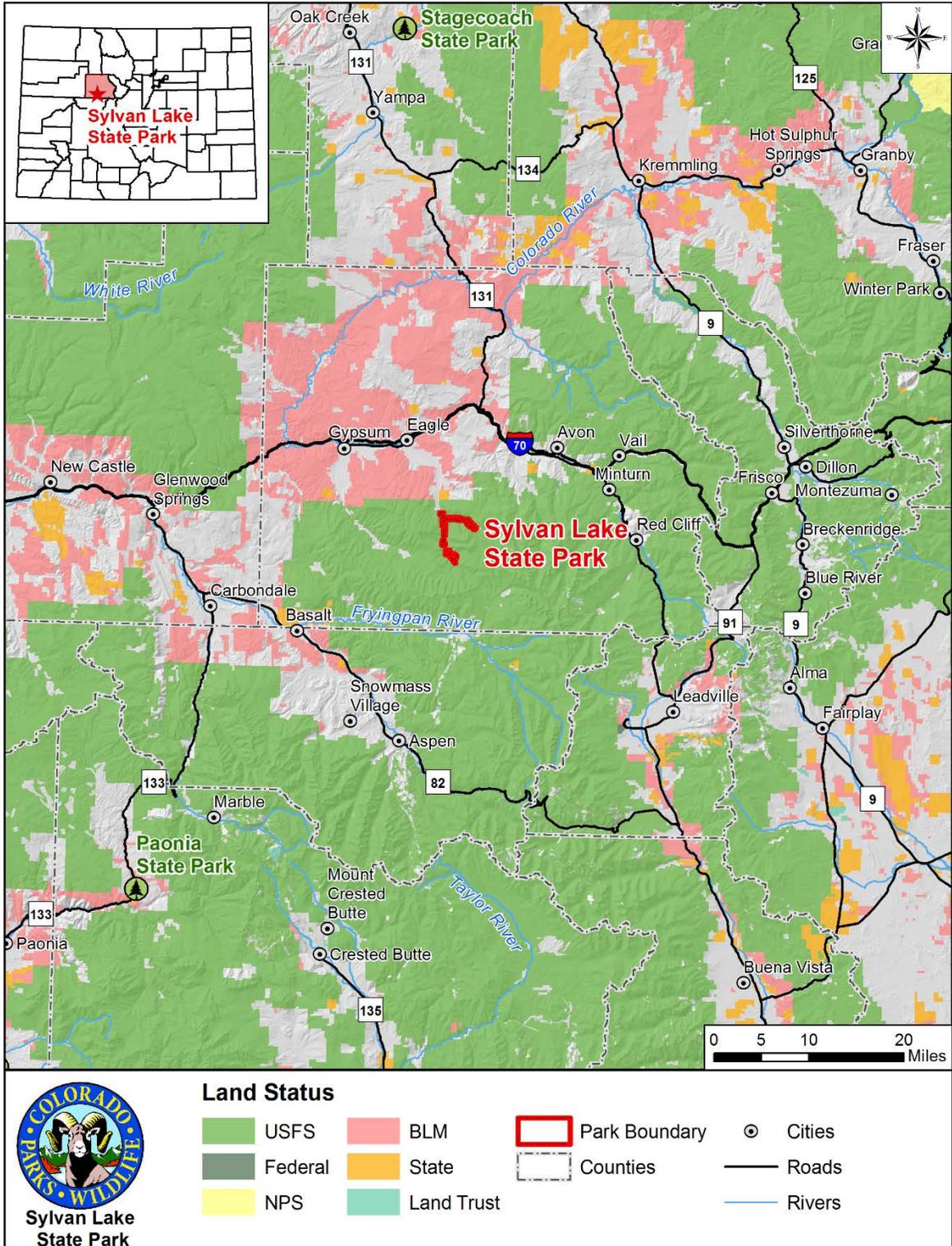
The Park is accessed via Brush Creek Road/FS400. FS 400 follows West Brush Creek to Sylvan Lake and FS 415 follows East Brush Creek to the Park's yurts. The Park also offers roads and access trails to the adjacent National Forest. While there is no explicit Memorandum of Understanding, it is believed that the road inside the Park is owned by USFS, but that Eagle County and CPW have agreed to contribute funds to help maintain it. Efforts are being made to make this agreement more explicit.

⁸ *Sylvan Lake State Park Stewardship Plan*. Colorado Parks and Wildlife, 2013. p. 18.

⁹ "White River National Forest: About the Forest." *U.S. Forest Service*, www.fs.usda.gov/main/whiteriver/about-forest. Accessed 24 August 2017.

¹⁰ Eagle County GIS Viewer. http://gismap.eaglecounty.us/GIS_View/. Accessed 24 August 2017.

Map 2: Regional Context



Regional Recreation and Tourism Trends, Needs, and Opportunities

Numerous recreation opportunities exist in the region. While Sylvan Lake is the only state park in Eagle County, additional opportunities for recreation are available at town parks, open spaces and federal lands.

Within Eagle County, White River National Forest offers a variety of recreation opportunities. The region is home to several major ski resorts,¹¹ including Aspen, Beaver Creek, Breckenridge, Keystone and Vail, the latter of which, at 5,289 acres, is the third largest single mountain ski resort in the United States.¹² In addition to over a total of 16,000 acres of skiable terrain, these resorts also offer hiking and biking trails in the summer, as well as wildlife viewing opportunities.

It is also home to Mount of the Holy Cross, which is 14,011 feet. This summit is accessible via the Half Moon Pass Trail in Minturn. Other opportunities in the forest include hiking, horseback riding, mountain biking, backpacking, camping and nature viewing. Winter opportunities include cross-country skiing, snowshoeing and snowmobiling. White River National Forest is also home to the Holy Cross Wilderness, which features over 150 miles of hiking and backpacking trails.

The Colorado and Eagle Rivers are a source of additional opportunities to recreate. The Upper Colorado River and the stretch of Eagle River between Wolcott and Eagle are both popular among anglers, kayakers, rafters and tubers, alike. Class I-IV rapids are located along the Eagle River, while class I-V rapids are found on the Upper Colorado.¹³

Eagle County features over 5,000 acres of open space on more than 20 properties.¹⁴ Recreational opportunities at regional parks and open spaces include tennis, soccer, baseball/softball, basketball, horseshoe, picnicking, disc golf, fishing, cycling, camping and hiking. The results of surveys from Basalt, Vail and Eagle residents showed that residents wanted to see additional

¹¹ *Colorado Blueprint: Region 12*. Colorado Office of Economic Development and International Trade, 2014. p. 1. www.choosecolorado.com/wp-content/uploads/2016/07/CO-BP-Region-12-summary-profile-7-28-14.pdf. Accessed 30 August 2017.

¹² "Mountains: Vail." *Vail Resorts Management Company*, www.vailresorts.com. Accessed 30 August 2017.

¹³ *Upper Colorado River Guide*. Eagle County Open Space, www.eaglecounty.us/OpenSpace/Documents/Upper_Colorado_River_Guide/. Accessed 24 August 2017.

¹⁴ "Open Space." *Official Website of Eagle County, CO*, www.eaglecounty.us/openspace/. Accessed 24 August 2017.

programs in place within the region, including mountain biking, nature tours and cross-country skiing.^{15,16}

Tourism and outdoor recreation are major drivers of the economy within the region. A 2013 survey found that one-third of the entire adult population in the Northwest Region of Colorado is employed at jobs created from outdoor recreation.¹⁷ Eagle is a popular hunting destination and is home to one of the most coveted deer hunting areas in the Western states. Hunting in Eagle County contributes more than \$11 million annually to the county's GDP; in northwestern Colorado, hunting contributes \$112 million.¹⁸

Population Trends

According to the US Census Bureau, the total population of Eagle County in 2010 was 52,197.¹⁹ Population in the county has more than doubled over the past 25 years,²⁰ outpacing population growth trends within the state. Although this rate of growth is not expected to continue, the State Demography Office predicts that the county population will continue to rise for the next 25 years, exceeding 106,000 by 2050.²¹ The statewide population estimate for 2050 is 8,541,540 people.

The most populous community in Eagle County is Edwards. In 2010, the population of Edwards was 52,197, a 25.3% increase from 2000.²² As the population continues to grow within Edwards and other towns in Eagle County, visitation to the Park is also likely to increase.

The 2019 State Comprehensive Outdoor Recreation Plan (SCORP) cites population increases and demographic changes as an important consideration in the future management of Colorado's public lands. Undoubtedly, the quality of life Colorado offers plays a key role in attracting new residents, however, as

¹⁵ *Basalt Area Parks, Open Space, and Trails Master Plan*. Town of Basalt, Colorado, 2013. p. 66. www.basalt.net/DocumentCenter/View/424. Accessed 24 August 2017.

¹⁶ *Vail Parks and Recreation Master Plan*. Town of Vail, Colorado, 2006-2007. www.vailgov.com/docs/dl_forms/Vail_Master_Plan_Draft_20070309.pdf. Accessed 24 August 2017.

¹⁷ *Statewide Comprehensive Outdoor Recreation Plan*. Colorado Parks and Wildlife, 2014. p. 63.

¹⁸ *Ibid*.

¹⁹ "Eagle County, Colorado: QuickFacts." U.S. Census Bureau. www.census.gov/quickfacts/fact/table/eaglecountycolorado/PST045217.

²⁰ Colorado State Demography Office. <https://gis.dola.colorado.gov/apps/demographic_dashboard/>. Accessed 18 August 2017.

²¹ *Ibid*

²² Missouri Census Data Center <<https://census.missouri.edu/census2010/report.php?g=05000US08037>>. Accessed 27 September 2018.

our state's population increases, there are associated challenges to conservation and outdoor recreation. While the population of Colorado continues to grow, the amount of land available for recreation and wildlife habitat is finite and there is a related decline in per capita protected areas as the population grows. In addition, as the demographics change within the state, outdoor recreation must be culturally relevant and planners must evaluate the different ways in which people recreate. Providing the same types of recreation options that we have for many years may not accommodate the unique needs and interests of different racial and ethnic groups, people with disabilities, an aging population and more.²³

The population of Colorado's citizens age 65 and older is growing as a result of aging and in-migration²⁴ and displays a strong interest in an active lifestyle and travel during retirement.²⁵ In 2000, people aged 65 and over represented 9.7% of the total population of Colorado. By 2010, this percentage had increased to 10.9%. In Eagle County, the trend towards an older population has been more pronounced. The total number of people aged 65 and over was 1,249, representing 3% of the total county population. In 2010, the total population aged 65 and over had increased to 2,938, representing 6% of the total county population, and a 135% increase since 2000.

Statewide, Hispanic populations have increased by 41.2% from 2000-2010.²⁶ Within this growing population, the under-18 population growth has outpaced the 18 and older population growth. In Eagle County, the Hispanic population in 2010 was 15,689. This represents a 62.1% increase from 2000, and accounts for 30.1% of the total county population. California-based studies indicate that outdoor recreation uses and preferences of Hispanic populations are unique.²⁷ First, a strong cultural emphasis on spending time with family may result in large group gatherings (an average of 8-15 people per group). Recreating with family in natural areas is of particular importance as it provides an opportunity to impart a love of the land onto younger generations. Second, picnicking represents an all-day activity for groups, where meals are often prepared from scratch. Family units may spend six to ten hours at a gathering, resulting in little site turnover. Lastly, many Hispanic respondents report that they are

²³ *Statewide Comprehensive Outdoor Recreation Plan*. Colorado Parks and Wildlife, 2019.

²⁴ Kemp, Rob. *The Age Wave in Colorado*, October 2014. www.allagewell.com/assets/the-age-wave-in-colorado.pdf. Accessed 21 August 2017.

²⁵ *Statewide Comprehensive Outdoor Recreation Plan*. Colorado Parks and Wildlife, 2014.

²⁶ "The Hispanic Population: 2010 Census Briefs." U.S. Census Bureau, 2011.

www.census.gov/prod/cen2010/briefs/c2010br-04.pdf. Accessed 30 August 2017.

²⁷ Chavez, Deborah J. "Latinos and Outdoor Recreation." In *Outdoor Recreation Trends and Futures*, 2012:74-77.

primarily day-use visitors. Based on studies demonstrating strong interest in outdoor activities, the anticipated outcomes of the increase in the Hispanic population - coupled with the high proportion of growth in younger age groups within this population - are increased visitation rates and more families with young children utilizing outdoor recreation facilities.²⁸ These trends in weekend use at the Park have been observed. Facilities and resources to accommodate these changes are addressed in this plan.

²⁸ Ibid

3.0 PARK SETTING & RESOURCES

This section provides an overview of the Park's resources, their current condition and various ongoing factors within the Park (e.g., visitation, budget, and staffing trends) that affect land management efforts. Included in this section is a detailed description of current land use and land ownership; park administration and special functions; visitation; existing recreation, natural and cultural resources; and other information that either directly or indirectly influences management of the Park. This information provides: 1) a contextual framework for better understanding management needs and influences and 2) a "baseline" from which to inform and identify Enhancement Opportunities and Implementation Priorities (included in Sections 5 and 6).

Park Land Ownership

The land that comprises the Park is owned by two public entities: CPW and the State Land Board (Map 3). CPW owns approximately 1,159 acres in fee title, which is about 75% of the park. This includes Sylvan Lake and the land immediately surrounding it, totaling 155 acres, which was originally purchased by Colorado Game and Fish Department in 1962, and then granted to State Parks in 2000. CPW also owns the "Confluence" parcel at the entrance of the park, the "Horton" parcel along West Branch Creek, the "Bear Gulch" parcel along West Branch Creek," and the "Borah Gulch" parcel along West Brush Creek. These parcels, which total approximately 1,004 acres, were acquired from The Conservation Fund in 1999. CPW also owns mineral rights on these parcels.

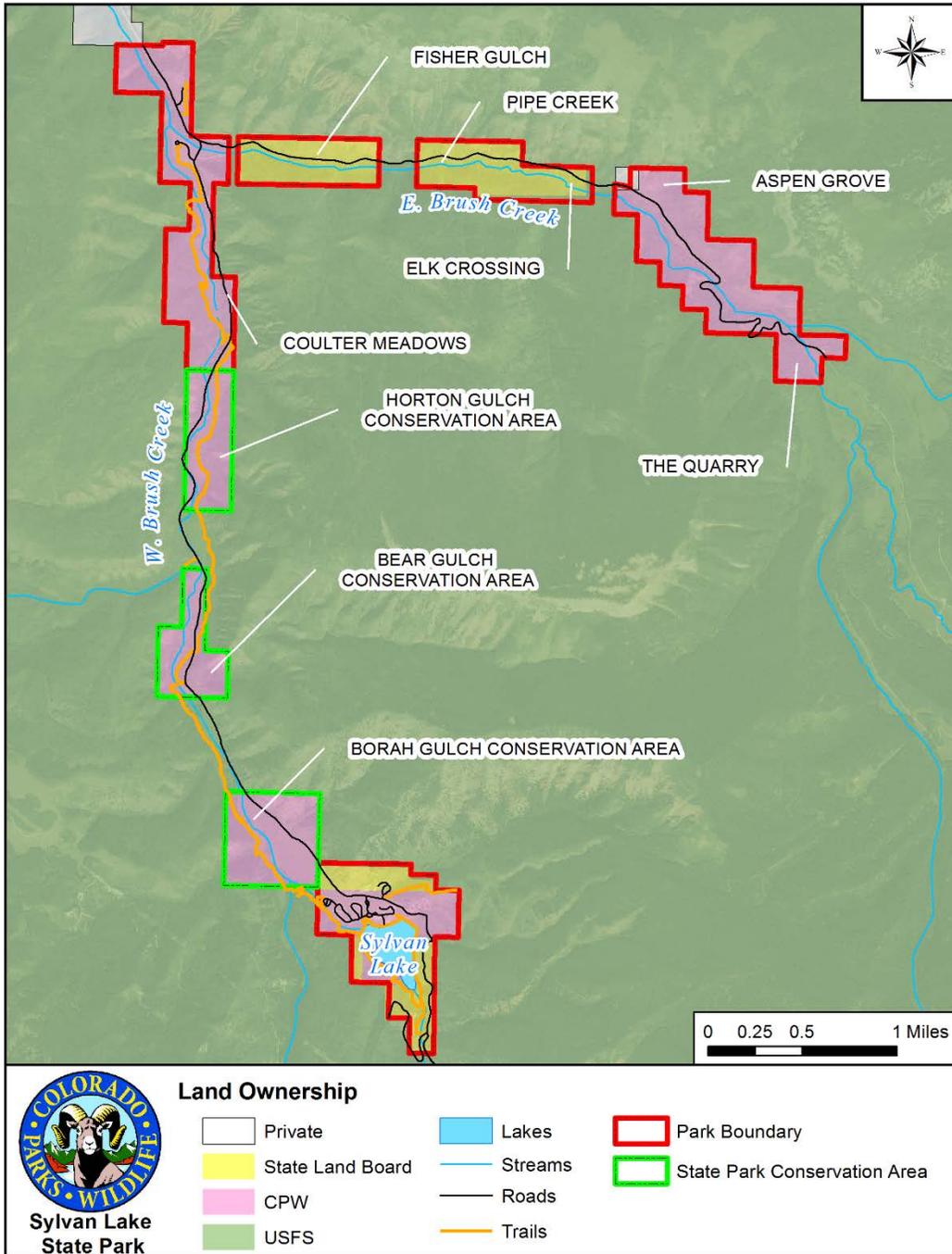
A conservation easement on all of the "Bear Gulch" and "Borah Gulch" parcels, and a portion of the "Horton" parcel, totaling 385 acres, was issued to the Colorado Division of Wildlife in 2002. These areas were previously State Wildlife Areas, but are now state park lands (held in fee title) and referred to as Conservation Areas. State Park entrance fees are not required to access the Conservation Areas due to an agreement made between the Division of Wildlife and Colorado State Parks when the transfer of these parcels was made (Map 4). In the 2017 tax year, CPW paid Eagle County \$997 in Payment In Lieu of Taxes (PILT) for the land it owns in Sylvan Lake State Park.

The SLB owns approximately 389 acres in the Park as a part of the Internal Improvement Trust, of which Colorado State Parks is a beneficiary. This includes the "Pipe Creek" parcel and the "Fisher Gulch" parcel, totaling approximately 269 acres. These parcels were transferred from The Conservation Fund to the SLB in 1999. The SLB also owns an additional 120 acres surrounding Sylvan Lake, which it acquired from the USFS in 2003. CPW manages these properties through a beneficiary use agreement. In 2014, CPW signed a statewide Interagency Agreement with the SLB, which governs the

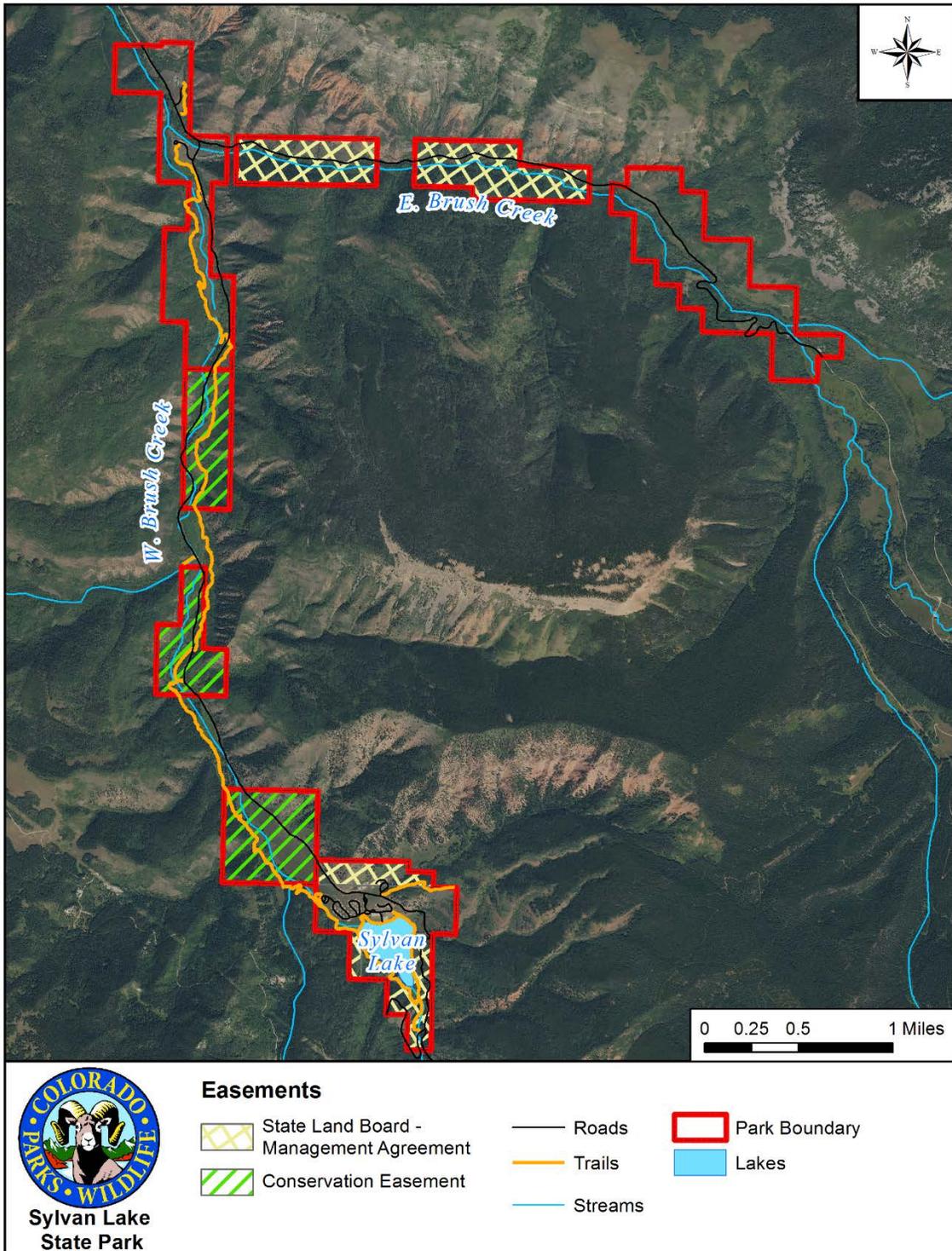
management of these, and other properties, owned by the SLB and managed by CPW.

The land surrounding the Park is primarily owned by the USFS, with one small private land inholding (Heath Property, ~5 acres) (Map 3).

Map 3: Land Ownership within the Park



Map 4: Easements within the Park



Natural Resources

The foundation of the Park rests on the condition of its natural resources. The Park extends from 7,500 feet in elevation at the visitor's center to about 9,000 feet at the upper end of East Brush Creek. East Brush Creek runs east to west, making the steep slopes beside the creek have north or south aspects. West Brush Creek runs south to north, giving the slopes beside the creek an east of west aspect. The combination of the relatively large elevation span and the four different aspects of the slopes surrounding the creeks create an interesting and diverse suite of habitats in the park.

Significant vegetation characteristics include:

- The presence of Harrington's penstemon (*Penstemon harringtonii*), a rare plant species found only in Eagle County, Colorado.
- Riparian habitats, including montane riparian forest and montane riparian willow carr.
- Healthy stands of aspen.
- Mixed mountain shrub communities.

The wildlife resources that are of particular interest include:

- Numerous beaver pond complexes.
- Year-round big game habitat.
- Excellent trout habitat.
- Habitat for Canada Lynx, which is a federally-listed threatened species.

The water resources in the park include:

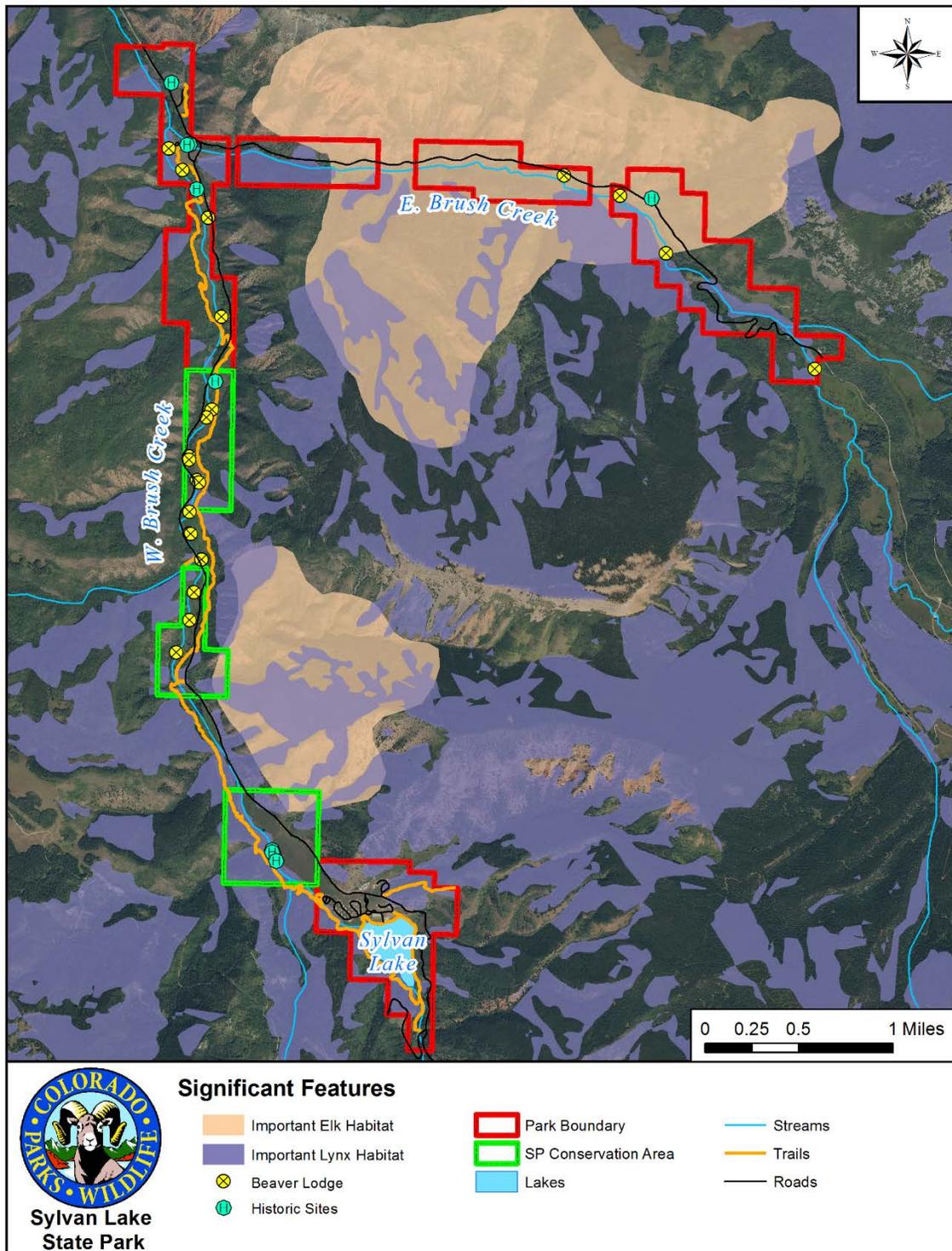
- East and West Brush Creeks, which provide valuable habitat for wildlife, fishing opportunities, and sustainable hydrological function.
- Sylvan Lake, which provides important water storage for the Town of Eagle, as well as a beautiful setting for recreation activities.
- Cowboy Spring, which is the water source for the infrastructure around Sylvan Lake.

There are also several cultural/historical resources at the Park, including:

- The Upper Brush Creek School House.
- The Halfway House.
- The Vassar cabin site.
- The Fulford stage road.
- Sites with pre-historic resources, among others.

The following sections provide more information about some of the key natural resources that occur at Sylvan Lake State Park. Map 5 highlights several significant natural resources that occur at the park. A more extensive description of natural resources is available in the Stewardship Plan (Appendix A).

Map 5: Significant Features



Wildlife

With a high amount of variability of vegetation types and habitats, the Park supports many different wildlife species. Large and varied wetland complexes developed by beaver activity are found along East and West Brush Creeks. Sylvan Lake and the mainstems of East and West Brush Creeks also provide excellent trout habitat. As highlighted in Map 6, the park contains year-round habitat for deer and elk, as well as important elk winter range and elk production range. Habitat for the Canada lynx, a federally listed threatened species is also located within the park, as well as habitat for several species of birds including American dipper, several species of swallow, osprey, golden eagles and great horned owls.

Mammals

Beavers are generally concentrated in the gentle gradient sections of the East and West Brush Creek; however, some beavers are dispersing into steeper, faster flowing waters. While beavers may cause some damage to trees, the long-term presence of beavers contributes significantly to the condition and extent of the riparian systems in the park, including supporting aspen stands along the creek corridors and providing habitat for amphibians, reptiles, fish, birds and other mammals.

Black bear use the park during the spring, summer and fall seasons, and hibernate during the winter months. During difficult foraging seasons, bears will congregate in the riparian areas within the East and West Brush Creek drainages during the summer and fall.

While rare, there have been numerous sightings of the Canada lynx in the Sylvan Lake and Yeoman Park areas. Within the Park, lynx habitat is primarily limited to small stands of conifers that are linked to larger coniferous habitat on adjacent USFS lands. Because of the small acreages of suitable habitat within the park, it is unlikely that lynx reside in or use the park for extended periods.

Moose have been sighted in the park. They generally travel in riparian drainages and have a home range of three to six miles, but yearling moose have been known to travel farther distances in search of forage and habitat. No permanent population is known within the area surrounding the park.

Mule deer and elk occupy much of the park. Mule deer utilize the shrubby south-facing hillsides during the winter months and the dense forest stands or thickets during fawning. Elk, which are more sensitive to human presence, use the park during the nighttime and early morning hours. In late fall, elk congregate on Adam and Eve Mountains adjacent to the park as a refuge from hunting pressure. Additionally, two major elk migration corridors pass through

the Park. From mid-November to early December, elk head north towards East Brush Creek and onto the south-facing slopes of their winter ranges. **Hunting is allowed on the state wildlife areas along West Brush Creek.**

Birds

The Park contains various habitats for birds. Birds species common to the park include black-capped and mountain chickadee, dark-eyed junco, yellow-rumped warbler, Stellar’s jay, Townsend’s solitaire, raven, black-billed magpie, Clark’s nutcracker, saw-whet owl, Colorado’s three nuthatches (pygmy, red-breasted and white-breasted), red crossbill, red-tailed hawk and Cooper’s hawk. Commonly observed in the wetland areas are Wilson’s warbler, yellow warbler, song sparrow, fox sparrow, Lincoln’s sparrow, mallard, American dipper, red-winged blackbird, tree and violet-green swallows. A 2011 breeding bird survey identified 58 species, of which 56 were potential nesting species and seven that were confirmed nesting within the park (Table 4).

Table 4: Confirmed nesting bird species within Sylvan Lake State Park

Name	Habitat
Black-billed Magpie	Riparian woodland
American Crow	Cliffs
Tree Swallow	Rural residential
Violet-green Swallow	Aspen forest
American Dipper	Creek shoreline
American Robin	Aspen forest, conifer forest
Pine siskin	Conifer forest

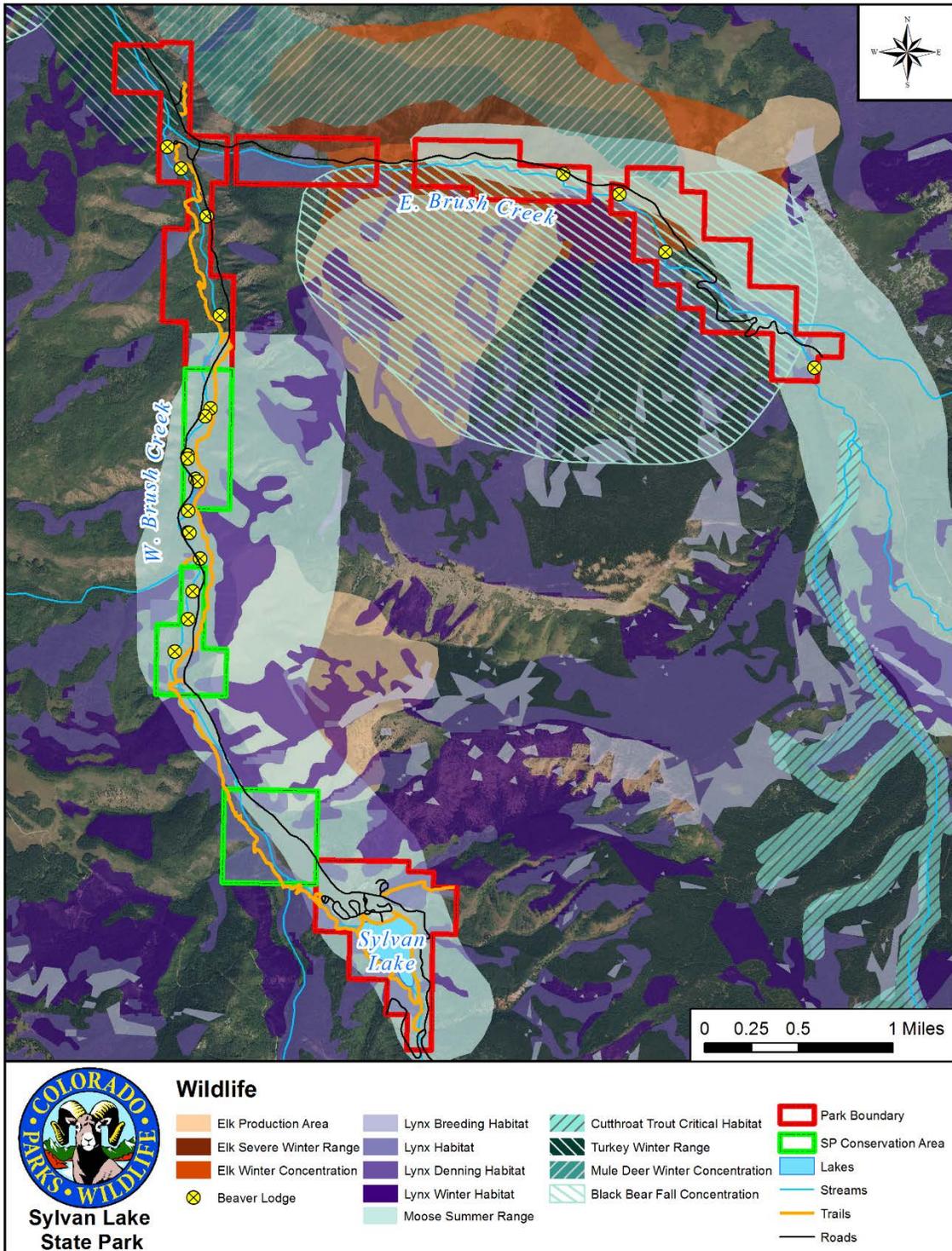
Wild turkey are also know to use the Horton Gulch area, as well as other places along West Brush Creek. Turkey vultures, red-tailed hawks, golden eagles, great horned owls, and bald eagles have been spotted in the Park as well. West Brush Creek, which is managed as Conservation Area, has little fragmentation by roads or trails and provides excellent nesting habitat for birds native to Colorado’s upper montane zone. Based on available habitat, the park could provide nesting habitat for several birds that are tracked by the Colorado Natural Heritage Program, including the bald eagle, northern goshawk, prairie falcon, northern pygmy-owl, boreal owl, willow flycatcher and white-winged crossbill.

Reptiles and Amphibians

The abundance of wetlands in the Park create good habitat for amphibians and reptiles. The marshes and wet meadows found in beaver pond complexes provide breeding and forage areas for amphibians. Chorus frogs are known to

reside in the park and tiger salamanders are likely residents. Bull snakes, garter snakes and northern leopard frogs are also likely park residents. Boreal toads are known to occur in the East Brush Creek drainage south of the park; as detection of this species via surveys is difficult to achieve, it is likely that the toads also occupy other parts of excellent habitat available within the park.

Map 6: Wildlife



Fish

The Park has excellent fish habitat. Sylvan Lake, which is managed as a cold-water fishery and is stocked intermittently, contains rainbow, brown and brook trout. The riffles, runs, drop pools and extensive beaver ponds of East and West Brush Creek provide excellent trout habitat. Brook and rainbow trout are the dominant fish species, but brown trout can also be found in low numbers. Sylvan Lake once contained Colorado River Cutthroat trout, but this species has not been seen since at least 1995.

Vegetation

The habitats found within the Park offer a diverse collection of aspects, slopes, elevations and temperatures, creating many different vegetation communities that blend throughout sections of the Park. (Map 7). Generally, on the slopes above the lake, the cool, moist, north facing slopes are home to mixed conifer and aspen stands, while the drier south facing slopes support mixed mountain shrublands and pinyon/juniper woodlands.

Forest Communities

Mixed conifer forests occupy approximately 167 acres of the Park, consisting of intermixed stands of Engelmann spruce, limber pine, lodgepole pine, and Douglas fir. While some stands have no clear dominant tree species, approximately 100 acres on the north-facing toe of Adam Mountain are dominated by lodgepole pine forests. The understory of the Park's forests includes common juniper, snowberry and Oregon grape, as well as forbs and grasses such as Nelson's needlegrass, elk sedge, mutton grass, and mat penstemon. Mixed conifer stands within the Park have reached a climax condition, with dense tree stands and a highly diverse community, offering resilience against pests. The same resilience is not present in the lodgepole pine-dominated stands as; even though they do contain a large proportion of conifers, their small size makes them susceptible to species-specific pests, such as mountain pine beetle.

Aspen stands are the largest vegetation community in the Park, comprising about 353 acres (24%). They are generally in excellent condition, free of disease with diverse understories. Stands within the Park are at different stages of succession. Those located in areas where more shade-tolerant conifers are encroaching into their habitat are considered seral communities, an intermediate stage of succession that is advancing towards climax. Young aspen sprouts tend to be better adapted than the conifers to relatively wet site conditions, and as a consequence, some aspen stands are considered persistent. Aspen stands are also rejuvenated by the removal of over-story aspen by beavers and forest management projects.

Shrublands

In the mixed mountain shrublands of the Park's south facing slopes, gambel oak and mountain mahogany are the most prevalent species and occupy approximately 349 acres of the park. Pinyon and juniper trees occupy drier slopes. Mesic sagebrush shrublands occupy south facing slopes with deeper soil, comprising approximately 86 acres. These communities consist of a mix of mountain big sagebrush and basin big sagebrush. Other shrub species, including Gambel oak and juniper, have encroached into the sagebrush habitat, resulting in smaller patches of sagebrush and isolated habitats.

Riparian Habitats

In the valley bottoms, riparian habitats support diverse vegetation communities. These communities are dynamic due to variations in hydrology, beaver activity, and debris flow. In marshes, common native species include beaked sedge and native rushes, as well as common introduced pasture species such as Kentucky bluegrass and orchardgrass - remnants of the area's past agricultural use. Common willow species include mountain willow, Drummond's willow, shining willow, beaked willow and tea-leafed willow. Montane riparian willow carrs and marshes occupy approximately 16.7 and 8.5 acres, respectively.

In addition to marshes and montane riparian willow carrs, valley bottoms are also home to montane riparian forests. This community only comprises 76.6 acres. The primary species of these riparian forests are narrow leaf cottonwood and lanceleaf cottonwood, which cover 63 acres of these riparian forests. Narrow leaf cottonwood stands have more canopy cover with little understory diversity, while lanceleaf cottonwood stands are more open, resulting in greater understory diversity. Common understory species include red osier dogwood, Wood's rose, and Rocky Mountain maple. The remaining area is composed of blue spruce montane riparian forests, which are characterized by at least 10% canopy cover by blue spruce, interspersed with cottonwood or aspen.

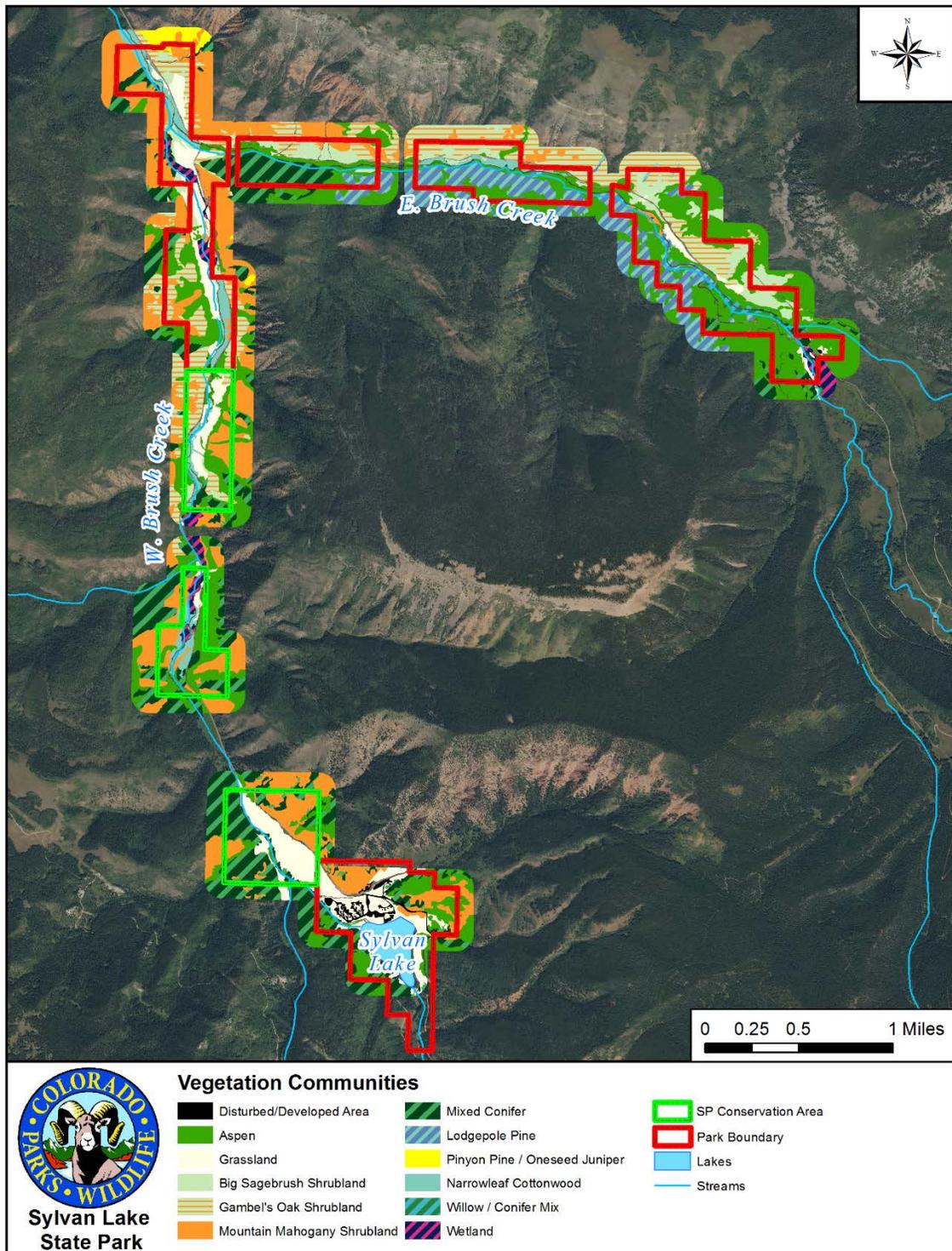
Threats to Vegetative Communities

While the high diversity of wetland species and riparian forests make them more resilient to environmental changes, increases in noxious weeds in the park (particularly ox-eye daisy and yellow toadflax) currently threaten these communities. Additionally, historical irrigation and agricultural practices, as well as the presence of roads, have changed wetland and riparian communities over time and have likely decreased the total historic area of wetlands within the park and surrounding area. The continued presence of beavers in the park is essential to maintaining the biodiversity within these communities and to maintaining the communities themselves. Beaver activity creates canopy openings necessary for maintaining different successional stages, and shifts

creek channels, altering hydrologic regimes. Both mechanisms increase the diversity of the Park's plant communities.

Grasslands and meadows make up a large area adjacent to Sylvan Lake. The native species of these communities, which were historically used for haying and grazing by the European settlers of the area, are the most threatened community type within the Park. Native grasses such as western wheatgrass, Arizona fescue and prairie junegrass are remnant in only a few areas and these areas are threatened by the expansion of non-native pasture grasses. Seeded non-native pasture grasses such as Kentucky bluegrass, timothy, meadow fescue and smooth brome dominate the Park's meadows. Most of the 189 acres of meadow within the park are under threat of invasion by noxious weeds, including plumeless thistle, musk thistle, oxeye daisy, yellow toadflax and houndstongue.

Map 7: Vegetation Communities



Noxious Weeds

Plants that are not native to Colorado are considered *exotic species*. Exotic species that outcompete native species for habitat and disrupt native ecosystem function are considered *noxious weeds*. The invasion of exotic plant species is a constant threat to local biological resources and these plants can change the plant species composition, habitat quality and scenic and recreation quality of areas of the Park. Noxious weed management is essential because exotic species have few enemies in native systems. Many of the weed species mapped in the Park are perennial species, which will require a multiple year strategy of treatment to eradicate. Annual weeds grow from the seed bank in the soil. Managing these species eliminates the addition of seed in the soil seed bank, thus moving toward eradicating them from the Park.

Mapping of the invasive plant species in the Park was performed in 2018, excluding the area where dam construction was occurring, and a Weed Management Plan was created (Appendix A). This plan will be updated with a survey of the dam construction zone scheduled for the summer of 2019. The Park will be remapped every 4 to 5 years and the weed management plan will be revised according to the findings of these future-mapping efforts. Mapping and planning efforts focus on the species identified in the Colorado Noxious Weed Act that have legal management requirements. In 2018, several perennial species (spotted knapweed, Russian knapweed, yellow toadflax, field bindweed and common mullein) were found in very low numbers in the Park. These species are highlighted in the Park's Weed Management Plan as priority species for treatment. The species found with the highest acres infested include several perennials (leafy spurge, Canada thistle, musk thistle, and oxeye daisy) and a few annuals/biennials (plumeless thistle, musk thistle, hounds tongue, several mustard species, and prickly lettuce).

Mountain Pine Beetle

Across much of the high country in Eagle County, logging around the turn of the century occurred to support the mining industry and its associated towns. This removal of many acres of trees created a succession event leading to thousands of acres of lodgepole pine in existence today. These lodgepole pine are now approximately 100 years old. Mountain pine beetle (*Dendroctonus ponderosae*) is a native bark beetle that is common in small numbers throughout western forests. When forests become stressed through drought or high tree densities, mountain pine beetle populations can reach epidemic levels and kill thousands of acres of trees. A few lodgepole and ponderosa pine trees within the park appear to be infested with this beetle (or Ips bark beetle). Management strategies are found in the park's Forest Assessment and Management Plan (Appendix A).

Threatened, Endangered and Sensitive Species

The following threatened, endangered and/or sensitive species are known or believed to occur in the Park or the immediately surrounding area (Table 5).

Table 5: Threatened, endangered and/or sensitive species known or believed to occur in Sylvan Lake State Park

Name	Scientific Name	State Status*
Boreal Toad	<i>Bufo boreas boreas</i>	SE, under federal review
Greater Sage Grouse	<i>Centrocercus urophasianus</i>	SC
North American wolverine	<i>Gulo gulo luscus</i>	SE
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC
Canada Lynx	<i>Lynx canadensis</i>	FT, SE
Northern Leopard Frog	<i>Rana pipiens</i>	SC
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	SC
Mexican spotted owl	<i>Strix occidentalis lucida</i>	FT, ST
Greenback Cutthroat trout	<i>Oncorhynchus clarki stomias</i>	FT, ST
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	
Uncompahgre fritillary butterfly	<i>Boloria acrocneema</i>	
North American wolverine	<i>Gulo gulo luscus</i>	SE

*FE = federally endangered; SE = state endangered; SC = special concern; FT = federally threatened; ST = state threatened

The following threatened, endangered and/or sensitive species are known or believed to occur in the broader area outside of the Park (Table 6).

Table 6: Threatened, endangered and/or sensitive species known or believed to exist in the vicinity of Sylvan Lake State Park

Name	Scientific Name	State Status*
Mountain Sucker	<i>Catostomus playtrhynchus</i>	SC
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	FE, SE
Penland alpine fen mustard	<i>Eutrema penlandii</i>	Wherever found

American Peregrine Falcon	<i>Falco peregrinus anatum</i>	SC
Colorado Roundtail Chub	<i>Gila robusta</i>	SC
Whooping Crane	<i>Grus americana</i>	FE, SE
Greater Sandhill Crane	<i>Grus canadensis tabida</i>	SC
Colorado River Cutthroat Trout	<i>Oncorhynchus clarki pleuriticus</i>	SC
Columbian Sharp-Tailed Grouse	<i>Tympanuchus phasianellus columbianus</i>	SC

*FE = federally endangered; SE = state endangered; SC = special concern; FT = federally threatened; ST = state threatened

Rare plants and plant communities

One rare plant, Harrington’s penstemon, is found within the park. Several plant communities within the boundaries of the Park are also ranked as vulnerable on both the global and state scale due to their unique combinations of plant species (Table 7).

Table 7: Vulnerable plant communities near Sylvan Lake State Park

Name	Global Status	State Status
Mountain willow/beaked sedge shrubland	Vulnerable	Vulnerable
Quaking aspen/speckled alder forest	Vulnerable	Vulnerable
Mixed mountain shrublands	Vulnerable	Vulnerable
Montane riparian forest	Vulnerable	Vulnerable

Hydrology

The most prominent hydrological feature of the Park is Sylvan Lake, an approximately 42 surface-acre reservoir established in the late 1940's by Otto Zurcher, a local businessman, to start a mink farm and fishing resort. The reservoir was formed by damming West Brush Creek, and receives additional water from adjacent slopes and intermittent drainages. The reservoir has a capacity of 449 acre-feet of water. Water rights are owned by the town of Eagle, CO (Appendix B).

The Park is home to two creeks. West and East Brush Creeks are both perennial streams of moderate size, although East Brush Creek is larger in both size and volume. Water was historically diverted from East and West Brush Creeks to irrigate nearby hay meadows. Some diversion structures such as ditches and pipes are still in place, although most have been washed out or removed.

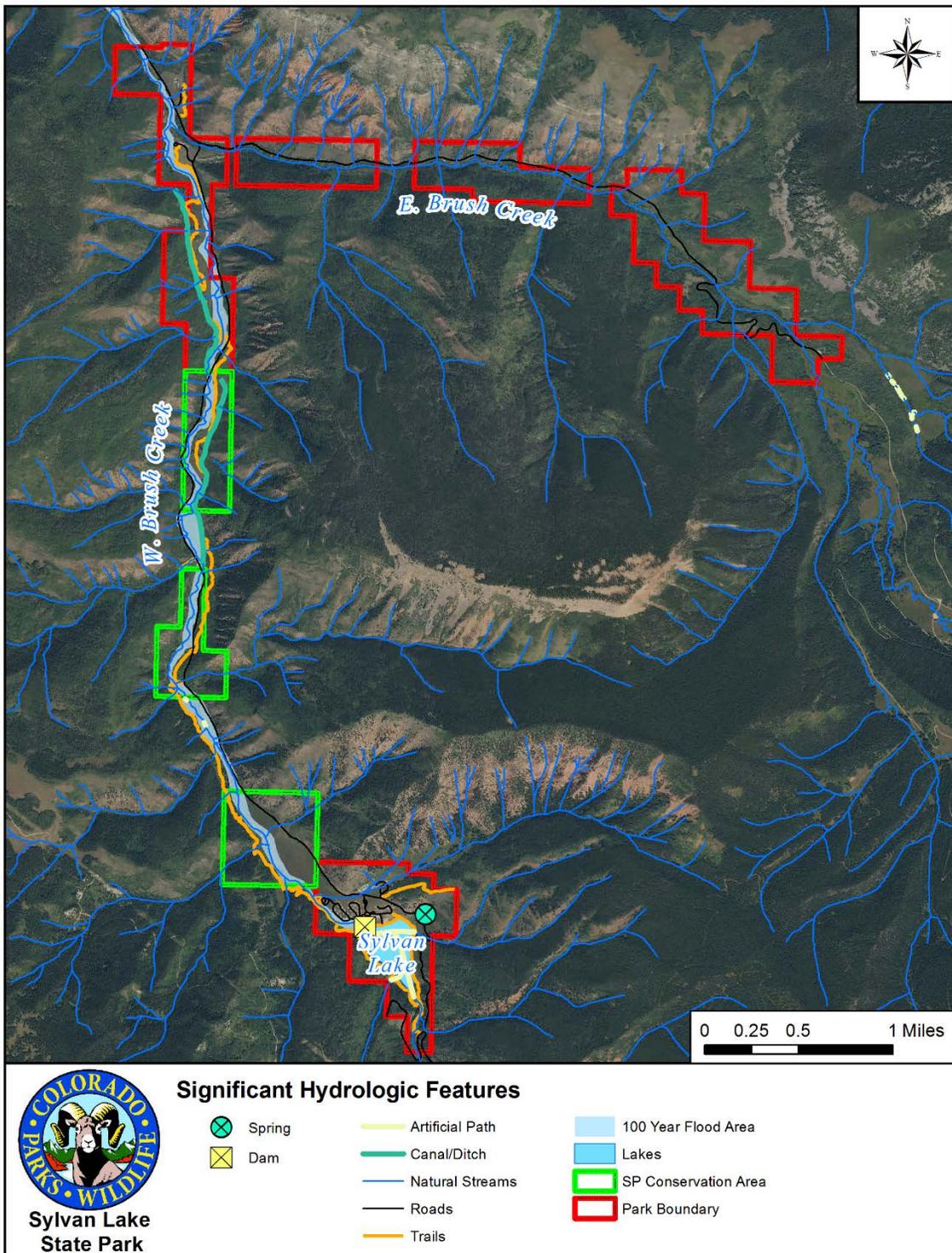
West Brush Creek originates outside of the park at Crooked Creek Pass and enters the Park just south of Sylvan Lake. Downstream of Sylvan Lake, West Brush Creek flows north along a moderately downcut channel until it reaches a confluence with McKenzie Gulch. Above the existing stream channel, there is a 1,000-year floodplain. Downstream of McKenzie Gluch, the stream channel becomes more dominated by wetland complexes, including features such as ponds, oxbows, montane riparian willow carrs, and flooded sedge meadows. The Colorado Water Conservation Board owns instream flow rights on West Brush Creek from Sylvan Lake to the confluence with East Brush Creek.

East Brush Creek originates at Mystic Island Lake in the Holy Cross Wilderness Area and enters the Park near the yurts and the Vassar Cabin site. Long-term beaver activity in the southern end of the Park has produced a large complex wetland system fed by snowmelt from the Sawatch Range. Although dominated by beaver pond complexes, many ponds are now sediment-filled, and appear to be too shallow to support beaver activity. Snowmelt from the Sawatch Range feeds the wetland complex, which stores and slowly releases the significant water resources of the basin.

Further, downstream, the shallow stream gradient of East Brush Creek begins to drop and large boulder complexes with drop pools replace shallow sediment-filled ponds. Soils in downstream East Brush Creek consist of Maroon formation sandstones, which are highly susceptible to erosion. As a result, the downstream channels of the creek are more downcut than those upstream, where geology is dominated by granite. In turn, these narrow, steep sections of the creek blowout beaver dams.

Streamflows on West Brush Creek vary from approximately 22 CFS in early June to about 8 CFS in mid-July, and to approximately 2 CFS in winter months. There is no long-term stream gage on East Brush Creek.

Map 8: Significant Hydrologic Features



Geology & Soils

Geology

Significant geological formations at the Park include the State Bridge, Chinle and Maroon formations, as well as Glacial drift. The Maroon and State Bridge formations are responsible for the distinctive red to orange colored rocks and soils throughout the Park. All four of these formations have the possibility to contain terrestrial fossils.

Eagle Valley Evaporite is a formation also exposed just west of the Park. The Eagle Valley Evaporite consists of gypsum and soft siltstone, as well as deposits of mineral salt. As the salts and minerals dissolve, the earth above it collapses, and this is responsible for some of the sinkholes in the region. In the vicinity of the Sylvan Lake dam, there is evidence of subsidence, as the dense rocks of the Maroon and State Bridge formations have sunk into the soft Eagle Valley Evaporite. In 2001, a large landslide occurred near Sylvan Lake in Sneve Gulch after a strong summer thunderstorm, which threatened many park facilities. This area is considered an active mudflow area.

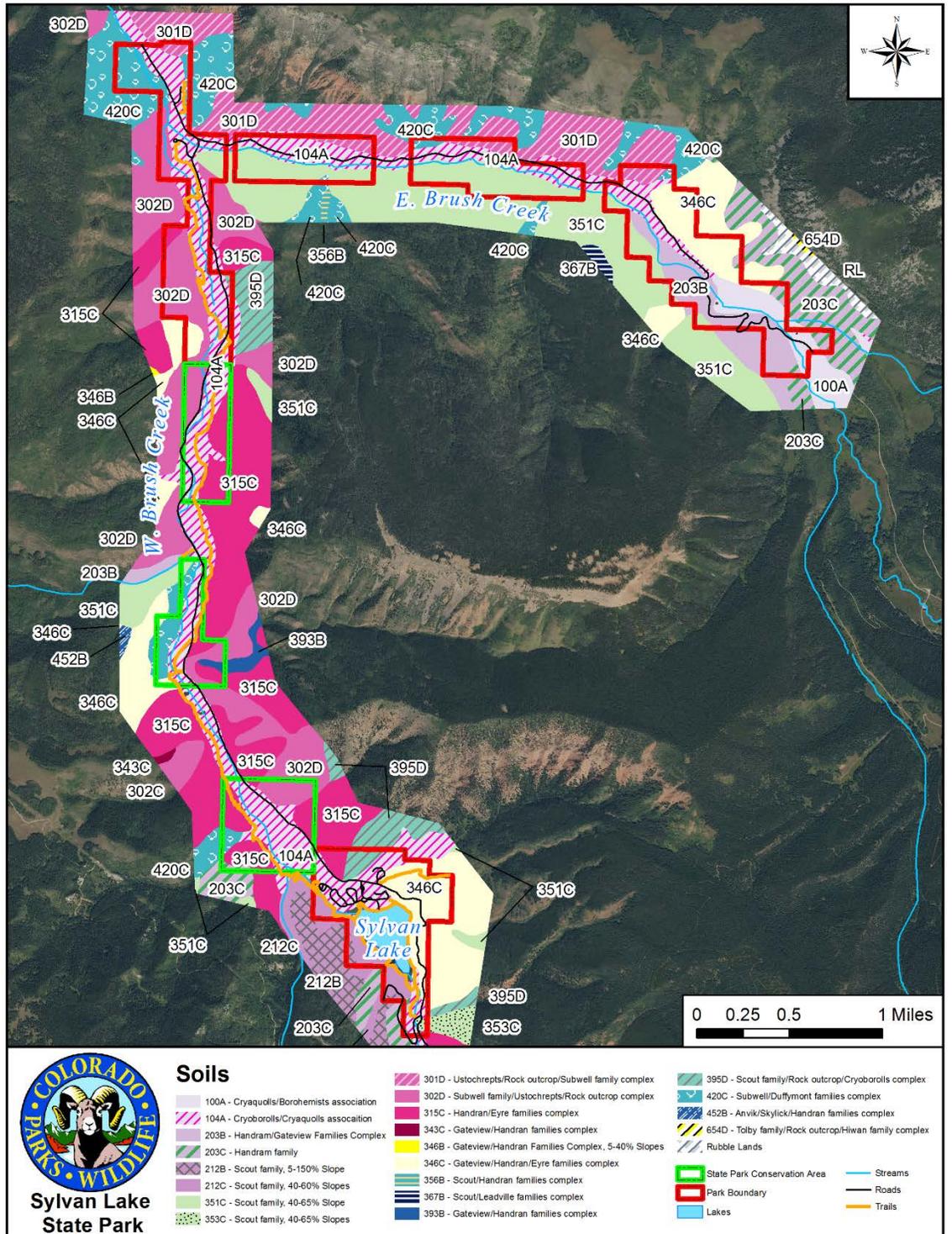
Soils

Soils in the park vary due to the geology and topography of the area. The Park consists predominantly of the following soil types:

- **Cryoborolls-Cryaquolls** soils are found in 582 acres within the Park boundary. This soil type is usually found in valley bottoms. In these areas, willows and sedges are the most typical vegetation.
- **Gateview-Handron-Eyre** families are found in 178 acres within the Park boundary. This soil type is usually found on south-facing steep mountain slopes. Aspen is the most typical vegetation.
- **Scout** family soils are found in 169 acres within the Park boundary. This soil type is usually found on north-facing steep mountain slopes. Subalpine fir and Engelmann spruce are the most typical vegetation.
- **Subwell family-Ustocrepts-Rock outcrop** complex is found in 137 acres within the Park boundary. This soil type is usually found on south-facing very steep mountain slopes. Gambel oak and mountain mahogany are the most typical vegetation.
- **Handron-Eyre** families are found in 131 acres within the Park boundary. This soil type is usually found on south-facing steep mountain slopes. Aspen is the most typical vegetation.

Many soil types within the park present erosion hazards due to the extreme topography in the area, as well as poor cohesiveness of soil materials. Erosion occurs along parking areas, trails, mountainsides and streams. Soil disturbing activities can exacerbate erosion in areas with these soil types.

Map 9: Soils



Cultural and Historical Resources

The Park has a rich history of human habitation that starts with prehistoric occupations, building toward the historic use of the area by the Ute people and eventual influx of miners and homesteaders. Ranching was the driving economic force on East and West Brush Creeks from the 1880s through the 1960s. From the early 1970s through the late 1990s, the destiny of the East and West Brush Creek valleys veered towards development, when the nearby Vail and Beaver Creek ski resorts were constructed. The purchase of the property by CPW and other government entities in 1999 ensured the future of both valleys for public visitation, creating one of the “crown jewels” of Colorado’s state parks system.

The Ute People

The Utes are the longest known continuous residents of what is now Colorado. Historically, their territory stretched from the Great Basin across the Rocky Mountains to the western edge of the Great Plains. The archaeological record shows their presence in Utah and Colorado from about 1100 Common Era (CE), although oral tradition and some archaeological evidence from a site in Delta County indicate that the Ute people lived in Colorado as far back as 7000 years ago. Utes are likely the primary Native Americans that resided in the area of Sylvan Lake prior to arrival of Europeans.

The Utes have never been a unified tribe - there is no Ute “nation” with a single chief--rather they share common territory, language and customs. Prior to acquiring horses in the early 1800s, Ute lived in family groups of 20-100 people with various local leaders who specialized in specific activities (e.g., hunting, moving camp, dances) but had little other authority. Groups would come together into larger “bands” of about 1000 people for reasons of defense, the spring Bear Dance and in seasonal hunting/fishing camps.

The names and spellings of these bands shifted over time. Location and reference to particular bands have been over-emphasized as many designations came about when the newly formed U.S. government started compartmentalizing and labeling groups they encountered.²⁹

The Ute people followed a subsistence lifestyle known as the seasonal round, where family groups followed a regular route though hunting and gathering grounds over several hundred square miles. These seasonal movements were based on extensive knowledge of their territory, local flora and fauna,

²⁹ The Ute people who inhabited this area are all generally referred to historically as the Yamparika, Parianuche and Tabeguache bands. Today they are referred to as the as the Northern Ute from Uncompahgre and White River bands (also sometimes colloquially called the “Northern Ute”). The Capote, Moache, and Weeminuche Ute bands probably also moved through this area at different times to hunt, gather food, and trade.

preservation and storage techniques, water, best places to camp and how to travel between sites. This knowledge was passed down through the generations and led to a vast network of trails that later became routes for trappers, cattle drivers, railroads and eventually our current roads. Archaeologists have recorded several sites of Ute camps in Eagle County that include wood shelters, hearths, and trade items like beads and bullets.

Ute contact with Spanish explorers and settlers began in the sixteenth century, and there was extensive trading and raiding for horses, blankets, flour, tobacco and knives for pelts and meat. The introduction of horses brought the ability to travel farther into the Plains for buffalo and to trade more with other tribes and explorers. By the late 1700s, more European explorers and fur trappers came to the west and eventually, with the discovery of gold in 1858, settlers and miners began to push the Utes off their lands. Ute hunting grounds were fenced and plowed, livestock grazed in valuable seed collecting areas and pinion pine trees (whose seeds were a high calorie food source) were cut for firewood, fence posts and mining timbers.

A well-known Ute leader, Colorow, utilized the Park area's lands and surrounding mountainous territory as Native American hunting grounds in the mid-to-late 1800s. Colorow spent much time in the Brush Creek Valley, drawn to the abundance of wildlife and life sustaining resources. For years, Colorow dictated who could pass into the Sylvan Lake area and is reported to have forced young Ute men to return stolen animals to hunters from Leadville. It was only after the death of a favored daughter that he moved from the Brush Creek Valley.

Many conflicts between Native Americans and European settlers erupted over land control. A series of treaties between 1849 and 1880 removed the Utes from their traditional lands, interrupting the Ute's migratory traditions. As 'manifest destiny' ideas spread along with the belief that Native people should leave behind traditional hunting and gathering for agriculture, negative perceptions magnified and the Ute were seen as a threat to European settlers. Attempts to 'reform' the Ute way of life led to intensifying conflicts, including the now infamous "Meeker Massacre." Ute territory was pushed farther west and into smaller areas until Utes were excluded from most of Colorado. In 1881, northern Ute were relocated to what eventually became known as the Uintah-Ouray Reservation in Utah.³⁰ Around 1895, the southern Utes' territory was reduced by the "Brunot Agreement" and the Southern Ute Reservation, as it exists today, was created in southwestern Colorado.³¹

³⁰ The Capote and Moache bands were moved to the Southern Ute Reservation south of Durango, and the Weeminuche band became the Ute Mountain Ute Tribe near Cortez.

³¹ Early History. <https://www.southernute-nsn.gov/history/>. Accessed 27 September 2018.

Relocating Native peoples to reservations and boarding schools, banning most ceremonies, and enforcing other policies that stripped Native Americans of their heritage resulted in loss of cultural knowledge and traditions. Because of this, the meanings of specific sites, stories and connections can only be hypothesized. Today Ute people work to maintain their culture, which is a living heritage that includes the whole environment, not just specific archaeological sites.

Any future work on the history of the park requires the inclusion of the story of the Ute - the "Original Coloradans." As of July 2017, 1.6% of Coloradans identify as Native American/Alaskan Natives. As of 2000, people of Native ethnicity made up 0.71% of Eagle County, totaling nearly 3,000 individuals. Any interpretive materials created on the history of the Ute in the area of the Park should be reviewed by representatives of the Ute tribes for appropriate language and content.

Early European Settlement History

Jake Borah, a resident of Gypsum and the namesake of Borah Gulch, was a famous hunting guide. His successful hunts in the local mountains attracted the attention of President Theodore Roosevelt. Borah became a close friend of Roosevelt and guided him on hunts in the Sylvan Lake State Park area, possibly within the boundaries of the park itself. On these hunts, Roosevelt developed his personal theories of conservation. Roosevelt's experiences in our part of the Rocky Mountains influenced the creation of the United States Forest Service and elevated conservation as a national policy.

Early Settlers and Homesteaders

When the price of silver plummeted in Leadville in the late 1800s, prospectors poured into the mountains from East and West Brush Creek Roads. The most famous of these prospectors was the Fulford family. The Fulfords bought many of the claims in the area, selling the rights to mine at a premium.

The Fulfords also owned and operated Halfway House, a historical building near the Sylvan Lake State Park Visitor's Center. Halfway House was situated halfway between the towns of Eagle and Fulford along a stagecoach route. The original Halfway House was reportedly built in the 1890s but burned to the ground, replaced in the 1920s by the current structure. Art Fulford, known as the "daredevil prospector" of the region, died in an avalanche on New York Mountain while staking out a claim.

The boom in Fulford, accessed through West Brush Creek Road, began in 1889 and subsided by 1894. The old Fulford stagecoach road linked the booming mining camp to the railroad in Eagle. The current East Brush Creek road aligns with the original road in several places, and the remains of five telegraph/telephone poles from this era can still be seen today. After Fulford

was declared a ghost town, travel through the area slowed significantly and ranching became the primary activity.

In the early 1900s, a few families homesteaded along East and West Brush Creek. Webb Frost was one of the earliest settlers of East Brush Creek in 1913. The wall of his historic cabin can still be seen today. The Kirts built a two-story log house by East Brush Creek that was eventually inherited by Ira and Mae Vassar, but the structure burned down in the early 1980s. Anthony Sneeve was a cattle rancher who settled on West Brush Creek in 1911 and ran a herd of about 400 cattle.

According to the Eagle County Historical Society archives, the Upper Brush Creek School, constructed in 1916, functioned as a one-room schoolhouse until 1941. The building was also used as a community-gathering place, and served as the site of many potluck dinners and dances. The schoolhouse still stands today and is listed on the Colorado State Register of Historic Properties.

Recent History

In 1945, Otto Zurcher, who was more of a businessman than a rancher, acquired the land around Sylvan Lake. He wanted to use the property as a "fur farm" where here could raise fox and mink. He tore down many of the original buildings in hopes of creating a fishing resort and built a ranch house and several cabins. He constructed a dam on West Brush Creek to create O.Z. Reservoir. In 1956, a fire destroyed several key buildings, and in 1962, the IRS seized the property for back taxes.

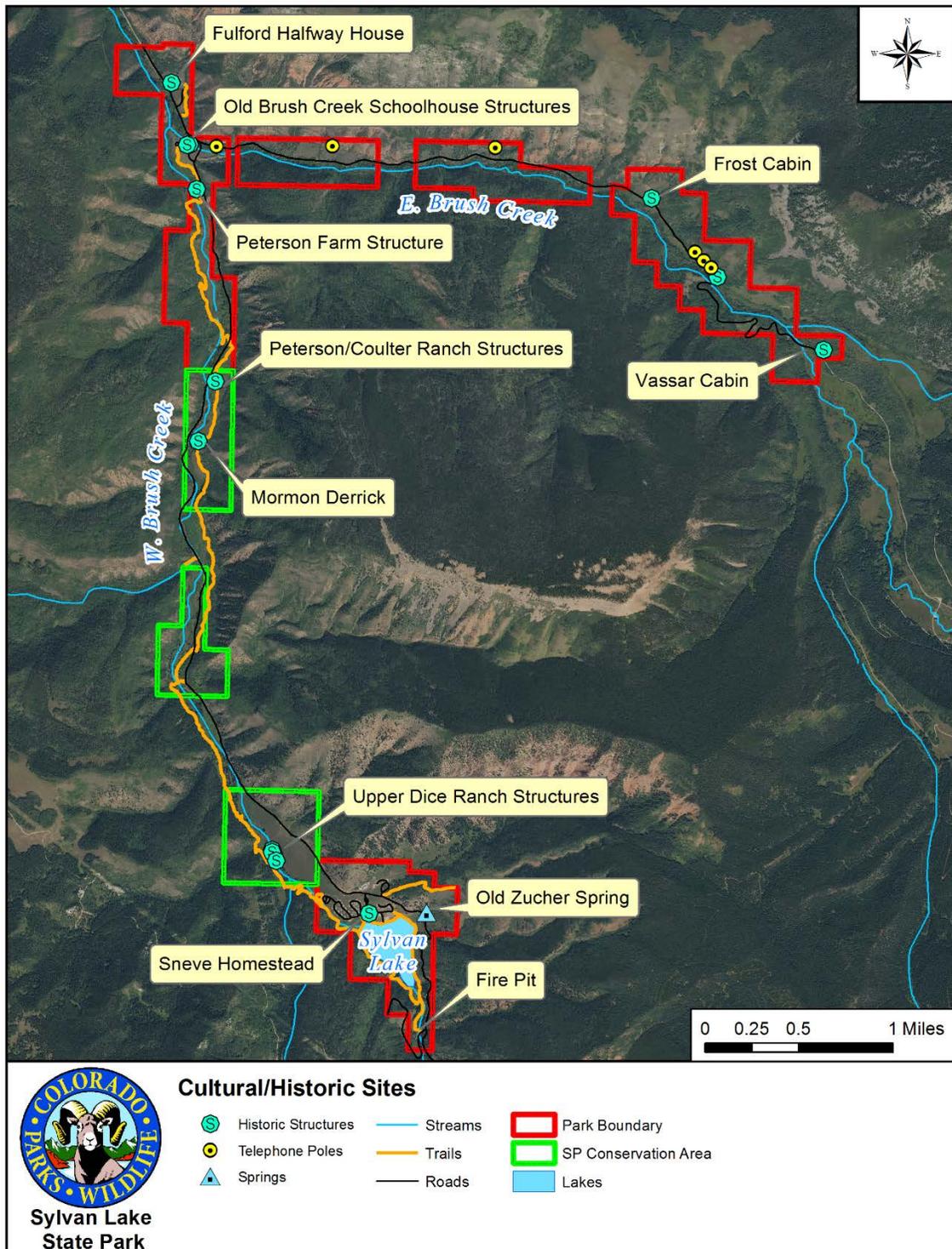
The property was sold to the Colorado Department of Game and Fish in 1962, which became the Game, Fish and Parks Department in 1963. Initially, the Parks section of Colorado Game, Fish and Parks developed and managed it as Sylvan Lake State Recreation Area. In 1971, the state legislature separated the agency into the Colorado Division of Wildlife (CDOW) and the Division of Parks and Outdoor Recreation (DPOR). The Division of Wildlife assumed management of the property at this time and it became known as Sylvan Lake State Fishing Area. In 1987, the Division of Wildlife approached the DPOR to consider taking management responsibilities for Sylvan Lake. On July 1, 1987, Sylvan Lake State Park officially became a part of the Colorado State Park system. Prior to 1999, Sylvan Lake State Park consisted only of the 155 acres around Sylvan Lake.

In 1971, developer Fred Kummer first began piecing together his vision for a residential and ski resort on Adam's Rib Ranch along Brush Creek. While he won the initial approval of Eagle County and the Forest Service, several Eagle residents staunchly opposed the plans, eventually forming a 100-member committee called Concerned Citizens for Eagle County. Eagle County residents and commissioners wondered how they would support the population influx from the resort - estimated to double - while struggling to maintain water and

sewer infrastructure. By the late 1990s, Kummer changed course and developed a subset of his initial plans - a golf course and country club in the main Brush Creek Valley.

In 1999-2000, Krummer sold his East and West Brush Creek holdings, around 1,800 acres, to DPOR and the USFS. This land is now protected from development as part of the Park and is surrounded by federally owned public land.

Map 10: Cultural and Historic Sites



Scenic Resources

The Park features scenic views of Mount Thomas and Red Table Mountain to the south. The view overlooking the lake is especially attractive, serving as a venue for numerous weddings. Ensuring the viewscape is preserved and dark skies are maintained is important to the management of the Park going forward.

Recreation Resources

The Park is a popular recreation destination. Anglers enjoy fishing for trout stocked in the beautiful 42-acre mountain lake. The Park features basic campsites for tents and RVs, one large full amenities cabin, eight camper cabins and three yurts. In addition to camping and fishing, popular activities include hiking, picnicking and boating (hand-propelled and electric motors only). The Park is open year-round and visitors enjoy snowshoeing, cross-country skiing, snowmobiling and ice fishing in winter months. Sylvan Lake also offers environmental interpretive programs for all ages during the summer months and upon request the rest of the year.

Recent research into recreation participation in the Park highlights camping as one of the most popular activities, followed by sightseeing/wildlife viewing, picnicking, trail use, fishing and boating (Figure 1).

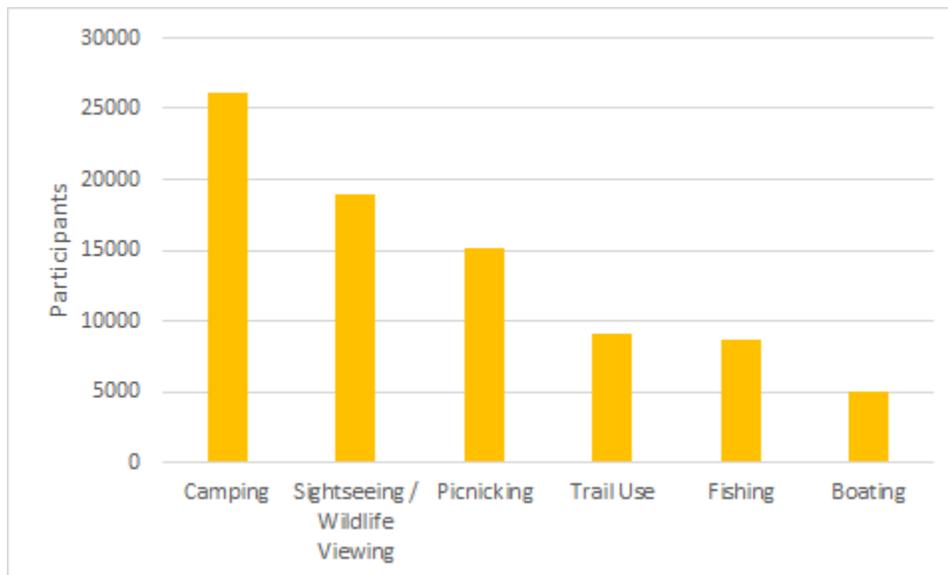
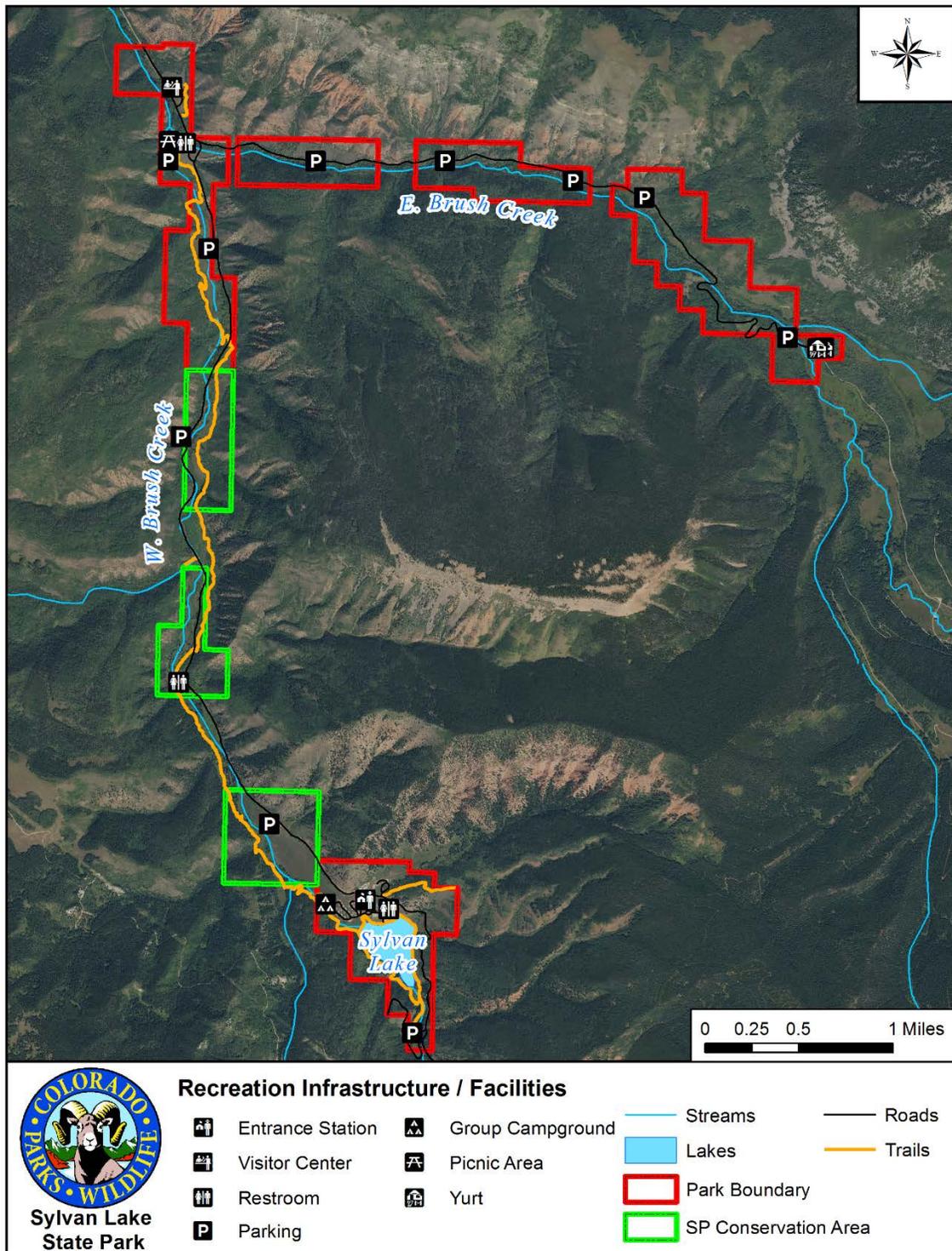


Figure 1: Recreation Participation at Sylvan Lake State Park (Average FY 2015-2017)

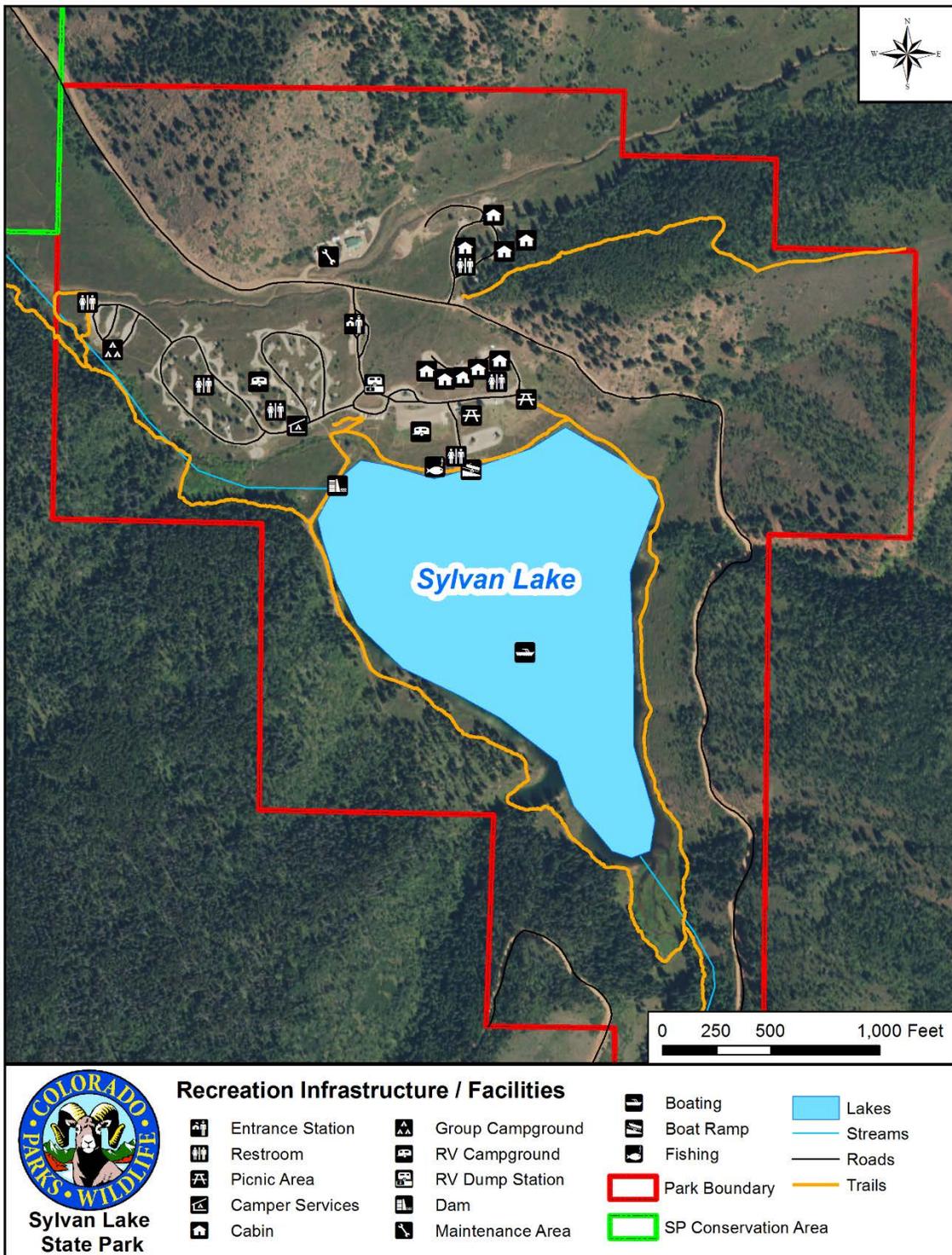
To date, a capacity number has not been set for high visitation days. Historically, when no parking spots are available, visitors are discouraged from entering and are only occasionally turned away. Unofficial overflow parking areas have been identified and staff assists with parking the additional vehicles in these cases. The creation of new additional parking would require more resources for resource and visitor management. As such,

the Park would benefit from the development of an official visitor capacity number and policy.

Map 11: Recreation Infrastructure and Facilities



Map 12: Recreation Infrastructure and Facilities around Sylvan Lake



Camping

The Park offers year-round camping with a variety of camping opportunities. Two campgrounds lie within the Park, with 46 campsites that accommodate tents, trailers and RVs. In addition to camping, the Park features eight small cabins, one large cabin and three yurts.

Table 8: Total Camping Sites by Location (2017)

Location	Campsite, basic	Cabin	Yurt
Elk Run	34	0	0
Fisherman's Paradise	12	9 (8 standard, 1 large)	0
East Brush Creek	0	0	3
Total	46	9	3

Camper Services Building

Located in Elk Run Campground, the camper services building provides coin-operated showers and flush toilets from mid-May through October.

Campgrounds

The park has 46 non-electric, basic campsites; no individual site hook-ups are available. Each campsite accommodates up to two tents, or one tent and one RV, permitting a maximum six people and no more than two vehicles. Visitors have access to a table, grill, drinking water, and vault toilets, and may bring pets if they are leashed at all times.

Elk Run Campground is the westernmost campground, containing 34 campsites. It is divided into the Upper and Lower Loop, each with 17 campsites. Two ADA-accessible campsites are available in the Lower Loop. The group campground, available from mid-May through September for groups of up to 60 people, is located at the northern end of the Upper Loop. Fisherman's Paradise Campground has 12 campsites (one of which is ADA accessible) that are set up for side-by-side parking. Because of its scenic location overlooking Sylvan Lake, this area is in high demand.

Cabins and Yurts

Cabins are available year-round, and yurts are available from mid-May to mid-November. The small cabins and yurts sleep up to six people each, offering heat, limited solar lighting, universally accessible outdoor picnic table, a fire ring a grill, and seasonal access to the camper services building. The large cabin sleeps up to twelve people and features a full kitchen, furnished living/dining area and a bathroom with a shower. Pets are only permitted in

small cabins #2 and #8. Yurts can be found on the northeast fork of the park, approximately 4.5 miles from the visitor’s center on East Brush Creek Road.

Table 9: Total Overnight Use Participation by Type (FY 2015-2017)

Type	Overnight Use Participants		
	FY 2015	FY 2016	FY 2017
Group camping	930	1,050	1,344
Basic camping	16,930	17,435	19,004
Cabins	5,389	6,060	6,460
Yurts	1,178	1,206	1,408
Grand Total	24,427	25,751	28,216

Total overnight use participation has increased steadily from FY 2015 through FY 2017 (Table 9). Basic camping was the most popular way to spend the night at the Park, followed by cabins, yurts and group camping (Figure 2). However, the occupancy rate for premium cabins, standard cabins and yurts was greater on average than the occupancy rate of basic camping from FY 2015 to FY 2017 (Table 10).

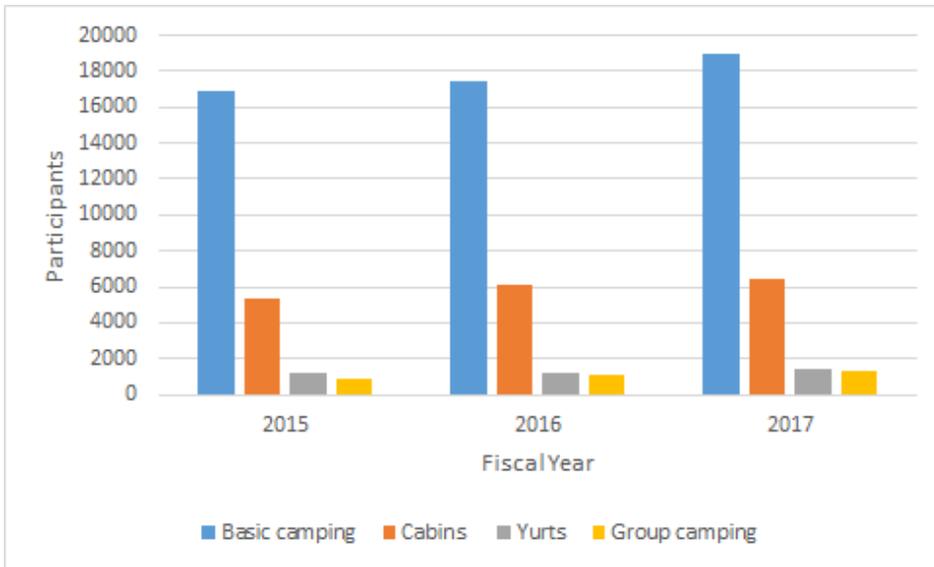


Figure 2: Total Overnight Use Participation by Type

Table 10: Percent Occupancy by Site Type

Site Type	FY 15	FY 16	FY 17
Basic Camping	43%	46%	45%
Premium Cabin	71%	68%	70%

Standard Cabin	51%	49%	49%
Yurt	61%	63%	65%

Average occupancy rates for campgrounds, cabins and yurts during peak season months (May-September) at the Park was 58% in FY 2015, 60% in FY 2016 and 62% in FY 2017 (Table 10). According to the 2009 Corona Insights Visitor Intercept Survey, 84% of visitors stay overnight, with an average stay of 1.95 nights.³²

Table 11: Percent Total Occupancy (Campground, Cabin and Youth) by Month (FY 2015-2017)

Month	FY 2015	FY 2016	FY 2017
Jul	79%	85%	83%
Aug	68%	66%	67%
Sep	41%	50%	51%
Oct	8%	11%	13%
Nov	4%	6%	5%
Dec	3%	4%	5%
Jan	4%	6%	5%
Feb	6%	3%	6%
March	1%	4%	4%
Apr	2%	3%	3%
May	30%	26%	24%
Jun	71%	75%	83%
Peak Season Monthly Average	58%	60%	62%
Off-Season Monthly Average	3%	4%	5%

Picnicking

Picnicking is a popular activity at the Park, drawing the highest participation rate in fiscal year 2016 (15,191 participants) (Table 12). Located at the northwest end of the Park, Meadows Day Use Picnic Area offers eight picnicking sites with grills along the banks of West Brush Creek. Additional picnic sites are stationed along the Lake Shore Loop Trail, which encircles Sylvan Lake. The

³² Colorado State Parks Marketing Assessment: Visitor Intercept Survey. Corona Research, Inc., 2008. p. 169.

Lake Picnic Area offers twelve lakefront picnic sites. There is potential to increase and improve picnic opportunities along East Brush Creek.

Table 12: Total Picnicking Participation (FY 2015-2017)

Type	Picnicking Participants		
	FY 2015	FY 2016	FY 2017
Picnic	15,065	15,191	15,100

Trails

As of 2017, the Park contained two trails, with a combined length of 7.3 miles. Lake Shore Loop, an easy 1.5 mile loop around Sylvan Lake, provides continuous access to fishing, as well as several picnic areas along the west shore of the lake. The West Brush Creek Trail connects the Meadows Day Use Area near the Visitor Center to the Sylvan Lake Dam. Although the 5.8-mile trail follows the West Brush Creek, the majority of the route stays high above the creek, offering little access to fishing areas.

The adjacent White River National Forest provides additional trails for hiking, mountain biking, horseback riding, snowmobiling and skiing. Hikers, mountain bikers and horseback riders can access the forest directly using Sneeve Gulch Trail or McKenzie Gulch Trail. The Fulford and Nolan Lake trailheads are a short drive away. Park roads can be used to access the National Forest by snowmobilers and other users.

Table 13: Trails at Sylvan Lake State Park

Trail	Miles	Difficulty/Type	Summer Uses	Winter Uses
Lake Shore Loop	1.5	Easy - natural surface	Hiking, mountain biking	Snowshoeing
West Brush Creek	5.8	Moderate - natural surface	Hiking, horseback riding	Cross Country Skiing, Snowshoeing

The most popular use of the trails is hiking, followed by biking, snowshoeing, snowmobiling, cross-country skiing and walking. Snowshoes are loaned for no charge from the visitor center.

Table 14: Total Trail Use Participation by Type (FY 2015-2017)

Type	Trail Use Participants		
	FY 2015	FY 2016	FY 2017

Walking	255	80	491
Hiking	4,240	7,050	6,538
Biking	215	1803	1759
X-Country Skiing	140	172	110
Snowshoeing	470	770	525
Snowmobiling	160	320	235
Total	5,480	10,430	9,658

Angling

Sylvan Lake has excellent fish habitats. CPW aquatics staff actively manages the fishery at the Park as a cold-water fishery. Sylvan Lake itself is stocked with rainbow and cutthroat trout, although it is not stocked on a regular schedule. Fish species that may be caught in Sylvan Lake include brook, brown and rainbow trout. East and West Brush Creeks also contain excellent fish habitat, providing 10 miles of mountain stream fishing. Brown trout fisheries with little fishing pressure can be found in the larger beaver ponds in West Brush Creek. In East Brush Creek, the drop pools and riffles providing much of the dominant fish habitat are minimally accessible. Consequently, despite an abundance of fish in the creek, fishing opportunities are limited along East Brush Creek in the northeast section of the park.

To allow for spawning, fishing is not permitted from the lake inlet to 0.5 miles upstream from September 1 to November 30.

Shore fishing is most popular at the Park, followed by boat fishing and then ice fishing. 2016 held the highest recent participation numbers, with 9,693 participants.

Table 15: Total Fishing Participation by Type (FY 2015-2017)

Type	Fishing Participants		
	<i>FY 2015</i>	<i>FY 2016</i>	<i>FY 2017</i>
Boat fishing	2537	2585	2580
Shore fishing	4535	5605	4750
Ice fishing	755	1503	1095
Total	7827	9693	8425

Boating

Only non-motorized boats or boats with electric trolling motors are allowed on the reservoir. Paddleboards, canoes and kayaks are available for rent from the entrance station during the summer months, and a boat ramp is available. Boating participation has increased slightly each year from FY 2015 to FY 2017 (Table 16).

Table 16: Total Boating Participation by Type (FY 2015-2017)

Type	Total Boating Participants		
	<i>FY 2015</i>	<i>FY 2016</i>	<i>FY 2017</i>
Boat fishing	2537	2585	2580
Other non-motorized boating	2410	2350	2500
Total	4947	4935	5080

Other Activities

Wildlife viewing and sightseeing offer exciting recreational opportunities for visitors, attracting over 21,000 participants in fiscal year 2015 (Table 17). The area is also popular for big game hunting, which is permitted during legal seasons in the undeveloped sections of the park. The Park also provides access to the White River National Forest for hunting.

Table 17: Total Other Activities Participation (FY 2015-2017)

Type	Total Participants		
	<i>FY 2015</i>	<i>FY 2016</i>	<i>FY 2017</i>
Wildlife viewing/ Sightseeing	21794	19920	15158
Hunting	204	263	230
Special events	180	50	250

In addition to these activities, park visitors enjoy geocaching, OHV riding, snow tubing and ice-skating.

Interpretation and Environmental Education

As part of its recreational development, the Park has invested in a range of interpretive infrastructure, including interpretive displays at the visitor center, a kiosk at the dam area and signs at historic sites.

Interpretive Facilities

Many of the Park's buildings and infrastructure include elements that evoke interpretive experiences, including interpretive signage along West Brush Creek Trail.

Park Headquarters/Visitor Center

The park headquarters has a nature interpretation activities space, in addition to a visitor center and park offices. The visitor center provides materials such as field guides, brochures and maps, as well as books and other items for sale.

Amphitheater

The amphitheater, constructed in 2016, lies next to the camper services building and includes a fire ring and seating for about 30 people. The amphitheater is the site of weekly interpretive programs.

Interpretive Programs

The Park offers interpretive programming both on park property and in Eagle County. From Memorial Day to Labor Day each season, a GOCO-funded interpreter leads an average of seven nature-themed programs per week for both children and adults. Common topics include wildlife biology, riparian ecology, wildlife adaptations, aquatic invertebrate identification, birding basics and botany hikes. Special programs are planned around natural phenomena such as solar eclipses and super moons.

Park staff collaborates with non-profits to provide wildlife and outdoor recreation education for local youth and families. In 2017 and 2018, park staff assisted Walking Mountains Science Center in obtaining a GOCO grant that launched the Eagle Valley Outdoors Movement (EVOM). Through EVOM, the Park reaches out to underserved Eagle County communities by leading wildlife discussions, teaching introductory birding courses and overseeing family camping trips. The Park's interpretive program also offers educational series to Western Eagle County Metropolitan Recreation District (WECMRD) summer camp attendees at various sites on and off the park.

Each year, the Park hosts special events with naturalist themes, like the Halloween party and Spring Festival. Independent partners, such as Vail Valley Anglers, Nature's Educators, the Eagle River Watershed Council and Alpine Arts Center, provide an array of activities at these events. The park hosts a seminar

each year on medical plants, and offers live animal demonstrations at least once a summer.

A Master Interpretation Plan is being developed to provide a framework for seasonal programming and future interpretive program development. The Interpretation Plan includes grade-specific programming that the seasonal GOCO Interpreter will lead from May-October. This program will complement CPW's annual interpretive guide training and covers themes such as wildlife adaptations, ecology, astronomy, botany, birding, mindfulness in nature and natural phenomena.

Plans for adapting the visitor's center into an interactive and educational nature center are being discussed (upgraded taxidermy displays, upgraded information panels and the creation of a hands-on field station). These enhancements will be completed through acquired grants, private donors and local volunteers (such as Eagle Scouts Troop 222). In August of 2018, an interpretive trail with rotating themes was installed along the Sylvan Lake 1-mile loop hike. Signposts, built by local Eagle Scouts, will be set every quarter mile. Visitors will check out themed books (on topics such as wildlife, wildflowers, and mindfulness in nature) from the entrance station; these themed books will correlate with the signpost locations.

In addition to on-park program development, the Park will bring interpretive programming to families in the Eagle County community. Park staff efforts were integral to the obtaining a \$1.4 million GOCO Inspire Initiative grant to fund the Eagle Valley Outdoor Movement (EVOM); staff members currently sit on the EVOM Leadership & Education Committees. Through EVOM, park staff lead family programming in the West Edwards community, offer a Pathways Internship for local high school youth to learn about career opportunities in outdoor recreation and conservation, and host local family camping trips. Beginning in the summer of 2018, park staff collaborated with the Western Eagle County Metropolitan Recreation District (WECMRD) to provide programs at the Gypsum Ponds and the Meadows Day Use Area to summer camp children (reaching about 120 children). Staff are also involved in the Eagle River Valley Youth Master Plan, though their role is yet to be determined. An important focus of the Interpretation Plan is to help further CPW's mission of inspiring the next generation of conservationists in Colorado through increased community participation in outdoor activities.

Facilities and Infrastructure

The Park includes the following facilities listed below. Please refer to Appendix G for a more detailed inventory of park facilities and infrastructure.

Park Office/Visitor Center/Residence

Located ten miles south of Eagle on Brush Creek Road, the one-story, 5,082-square-foot visitor center was constructed in 2001 with a metal standing seam roof and basement. The visitor center features interpretive displays, area information, a nature bookstore, and the latest information on trail conditions and wildlife sightings. It also doubles as a park office and residence for employees.

Park Entrance Station at Sylvan Lake

The 247-square-foot park entrance station was constructed in 1999 with a metal standing seam roof. The building runs off of solar power.

Amphitheater

The amphitheater, constructed in 2016, sits next to the camper services building. It has a fire ring and seating for about 30 people.

Camper Services Building

The Elk Run Camper Service Building is 1,000 square feet and was constructed in 1999 with a metal standing seam roof. The building provides visitors with showers and flush toilets. The camper services building provides coin-operated showers and flush toilets from mid-May through October. The building runs off solar power.

Maintenance Shop and Sheds

The 2,240-square-foot maintenance shop was constructed in 1999 with a metal standing seam roof and doubles as a residence for employees. The Park also has a 200-square-foot tool shed and a 120-square-foot wood tool shed, both constructed in 1999 with metal standing seam roofs. This facility runs off solar power with a backup generator.

Boat Ramp

The boat ramp is gravel and accommodates small, hand-powered and electric vessels only.

Cabins

The Park holds nine cabins, the oldest of which (Otto's Cabin) was built in 1940. This cabin, which burned down in 2003 and was rebuilt in 2004, is 2,000 square feet with a metal standing seam roof. The eight other cabins were built in 1999 with metal standing seam roofs, and all except one are 540 square feet. They include the Golden Eagle Cabin (#2) (320 square feet); the Glacier Cabin (#3); the Mink Cabin (#4); the Mallard Cabin (#5); the Hummingbird Cabin (#6); the Columbine Cabin (#7); the Spruce Cabin (#8); and Sneeve's Cabin (#9).

All nine of these cabins are located near the Fisherman's Paradise Campground and across West Brush Creek Road in a scenic mountain setting. The eight smaller camper cabins have beds for up to six people, with picnic tables inside and outside. The largest, Otto's Cabin (#1), has a full kitchen, bathroom and

shower, and three bedrooms that can accommodate up to 12 people. The cabins have propane heat and solar lights, as well as an outside fire ring and grill. Visitors must bring their own gear including bedding. Reservations can be made year-round via online or phone call.

Yurts

The Park also includes three yurts, all of which were constructed in 2003 at 314 square feet each and are identified by number. They rest in a quiet, wooded spot on East Brush Creek Road and provide easy access to recreation in the Park and surrounding White River National Forest. The yurts have propane heat and solar lights, as well as an outside fire ring and grill. Visitors must bring their own gear including bedding. Reservations can be made via online or phone call.

Flush Toilet Facilities

The Park has two flush toilet facilities, the first of which was built in 1973 at 400 square feet with a metal standing seam roof, called the Camper Services Building. The second flush toilet facility was built in 1995 at 148 square feet with a metal standing seam roof, called the Elk Run Bathroom. There are also flush toilets at the Visitor Center.

Vault Toilet Facilities

The Park has six vault toilet facilities. These include: the Bear Gulch Vault Toilet (45 square feet, constructed in 2004); the GRP Area Vault Toilet (144 square feet, constructed in 1999 with a metal standing seam roof); the Lower Cabin Vault Toilet (81 square feet, constructed in 2005); the Meadows Vault Toilet (81 square feet, constructed in 2003); the Upper Cabin Vault Toilet (157 square feet, constructed in 1999 with a metal standing seam roof); and the Yurt Vault Toilet (91 square feet, constructed in 2003). All vault toilet facilities have been retrofitted with wildlife deterrent screens.

Dump Station

The park currently has a "dry" dump station with a 1,000-gallon holding tank that requires pumping up to three times per year. Currently, no water is available at the dump station. There has been discussions about moving the dump station to accommodate a leach field system.

Other

The chlorinator building (200 square feet, constructed in 2005) gathers water collected from surface springs to be filtered and chlorinated before distribution to the park.

Camping

The Park has forty-six campsites: thirty-four sites at the Elk Run Campground and twelve sites at the Fisherman's Paradise Campground. These campsites can accommodate tents, trailers, campers, and some pull-through sites for larger units. Each campsite has a table and grill. There are no individual hookups, but

water is available from hydrants throughout the campgrounds. Campers are required to purchase a camping permit, in addition to a parks pass, at either the Entrance Station, Visitor Center, or self-service station. Reservations can also be made via online or phone call.

Operations and Maintenance

General Park Operations

All of the Park's major facilities are generally operational during the peak use season, from May through mid-October. The visitor center, cabins and shop are open and maintained year round. The entrance station is open as staffing allows. Park passes, registrations and licenses are available for purchase at the visitor center during staffed hours, from 8:00 AM to 4:30 PM daily during the peak use season, and limited hours during the winter months. Self-service day passes are available during the hours that the entrance station or visitor center is not open.

Vehicles

The park has five full-time fleet vehicles. Other equipment includes one large tractor, one small tractor, two utility vehicles, a golf cart, three snowmobiles, three all-terrain vehicles and a patrol boat. When feasible, minor equipment repairs are performed in the park maintenance shop, while vehicle maintenance vendors perform most vehicle servicing and major equipment repairs.

Campgrounds

Camping is restricted to designated sites. A tent pad, picnic table, fire ring and grill are located at all campsites. Two volunteer camp hosts oversee campground operations each year.

Campground reservations are accepted from May 15 through September 30. Sites may be reserved from three to 180 days in advance. Sites not reserved are available on a first-come, first-served basis. After September 30, all campsites are available on a first-come, first-served basis until snow occurs, at which point the only camping is at Fisherman's Paradise until snowmelt in spring. The group campsite is only available for use during summer months.

Camp hosts, rangers and maintenance staff assist in the cleaning and maintenance of the Park's 46 campsites. While the campgrounds are relatively new and generally in good condition, common repairs include cleaning fire rings, removing noxious weeds, raking sites, moving picnic tables, removing trash and cleaning bathroom facilities.

Cabins/Yurts

Rangers and maintenance staff perform the daily cleaning of the cabins and yurts, including trash removal, sweeping, mopping and adjusting the heater. Volunteers also assist with these duties.

Picnic Sites

All rangers and maintenance staff perform the periodic cleaning and maintenance of the Park's 30 day-use picnic sites. A picnic table is located at each day-use site and a grill is located at the picnic sites along West Brush Creek. They are available year-round on a first-come, first-served basis.

Road Access

Currently, the Park maintains about 0.1 mile of paved road and 11.8 miles of unpaved road. There are numerous parking spaces distributed throughout the Park's 15 parking lots. The Park contracts for crack sealing of all paved surfaces every few years, as needed. While no official Memorandum of Understanding exists, the road is believed to be owned by the Forest Service and maintained by Eagle County. CPW pays the County for upkeep of the road, which is graded a few times a year.

Trail Access

Park staff and volunteer groups generally maintain trails.

Trash and Waste Disposal

Trash is collected in dumpsters and disposed of by licensed contractors (currently Waste Management). All wastewater generated by flush-restroom facilities and showers, flows into septic systems and leach fields. Dump station and vault toilets have no running water and require pumping several times a year.

Fencing and Wayfinding

Very little boundary fencing has been constructed and maintained in the Park. There is fencing along the campground area to reduce livestock entering the area from the surrounding forest.

The Park's sign along the entrance road welcomes visitors to the park boundary. Signage has also been placed along roadways outside the Park to advertise amenities and direct visitors.

Noxious Weeds

Park staff and volunteers are actively engaged in identifying, monitoring and removing noxious weeds within the park. A contractor is hired to perform the majority of the weed spraying. Every five years, the CPW Resource Stewardship Team maps noxious weeds and updates the park's Noxious Weed Management Plan.

Information Technology

Much of the Parks' day-to-day business is currently conducted via web-based programs linked to external servers for various reporting functions, which require fast, stable internet connections. These reporting functions include revenue collection, visitation counts, budgeting and accounting, law enforcement queries, payroll and personnel management. Most of these administrative tasks are completed by staff working out of the visitor center and park headquarters, which is served by a T1 line and part of the State's broadband network.

Computer hardware at the park visitor center consists of a mainframe server, five stand-alone desktop computers and one laptop computer with standard network capabilities. The computers are linked to a central printer and a file server. The entrance gate is linked to the main visitor center via wireless LAN connections to provide a telephone line. This system, though not currently working, should be able to provide internet access to enable pass sales through IPAWS.

An upgrade that should be considered is adding wireless connectivity for visitors at the visitor center and campgrounds. Financial resources should be planned for the lifecycle of IT equipment, computers and server that support this wireless access. According to the state lifecycle requirements, these should be modernized/replaced every four years.

Utilities

Electrical Service

There are five different solar systems to power facilities at the lake area. The shop facility has a backup generator that is propane operated. Holy Cross Energy provides electricity at the visitor center. The highest usage of electricity occurs during the summer months.

Propane

Propane is used to power all furnaces and hot water tanks at the Park. Energy consumption has been minimized using energy efficient appliances and fixtures. There are eight propane tanks throughout the park.

Water Supply and Wastewater Treatment

The Park's lead Park Resource Technician is responsible for all water supply and treatment infrastructure. This responsibility requires a wastewater system maintenance certification. Water at the visitor center is collected from a sub-surface well and treated onsite. The water supplied to the lake area is collected from two surface springs, is treated, and stored onsite before distribution to the public.

Visitor Circulation

The road system at the Park consists mainly of USFS roads. There are 0.1 mile of paved roads and 11.8 miles of unpaved roads (Table 18). The ancillary roads providing campground and lake access are owned and operated by CPW. Each of the main roads also functions to access USFS lands beyond the park.

Table 18: Inventory of Roads at Sylvan Lake State Park

Name	Description	Miles	Surface	Condition
FS 400	Forest Road access to lake	6	natural	fair
FS 415	Forest road access to yurts	5	natural	fair

Visitation

Camping, picnicking, angling and hiking are the main attractions for visitors to the Park. Boating is also a popular activity, but is limited to hand and electric powered boats and comprises a smaller portion of all visitation. Educational program offerings are diverse and provide learning for adults and children alike.

Sylvan Lake is currently a destination park, meaning that visitors typically drive from other areas outside of Eagle County to visit the park. This is meaningful because people are making a conscious choice to come specifically to Sylvan Lake (destination), versus choosing the park for a specific recreation activity (i.e., boating). However, this is starting to shift as the park sees increasing numbers of day-use visitors from Eagle County who come to the park for picnicking and fishing.

Visitor Demographics

In FY 2017, the Park attracted over 103,000 visitors. A 2008 Visitor Intercept Survey, conducted by Corona Insights, provided extensive visitation data for the Park.³³ Some of the key findings are provided below.

Age

The Park has a substantially higher than average number of visitors younger than 6 years old (21% compared to 14% division-wide), between the ages of 6-17 (42% compared to 26% division-wide) and between the ages of 35-44 (39% compared to 31% division-wide). The Park has a slightly higher than average number of visitors between the ages of 25-34 (23% compared to 22% division-wide), the ages of 45-54 (38% compared to 33% division-wide), the ages of 55-64 (30% compared to 25% division-wide), and the ages of 65-74 (17% compared

³³ Colorado State Parks Marketing Assessment: Visitor Intercept Survey. Corona Research, Inc., 2008. p. 169.

to 16% division-wide). The Park has a slightly lower than average number of visitors between the ages of 18-24 (10% compared to 13% division-wide). This may be because the park is more of a destination park than a local visitation park.

Ethnicity

Ninety-one percent (91%) of survey respondents were white, 7% Hispanic and 2% Asian. These percentages are broadly comparable to division-wide averages, with the exception of a higher percentage of white visitors than most parks (91% compared to 83% division-wide).

Gender

The gender composition for visitors to the Park was more heavily weighted to females than other state parks. Fifty-five percent (55%) of survey respondents were female, which was higher than the statewide average of 47%. Thirty-four percent (34%) of survey respondents were male, compared to the statewide average of 45%.

Transportation

Seventy-two percent (72%) of visitors access the Park in their own vehicles, which is slightly lower than then division-wide average (74%). Twenty-six percent (26%) of visitors access the Park in an RV/camper, which is slightly higher than the division-wide average of 17%.

Group Size

Ninety-four percent (94%) of all visitors came to the park with at least two people in their vehicles, which is much higher than the division-wide average 80%. The mean number of persons in a vehicle was 3.09, which is higher than the division-wide average of 2.69. This may be because of Sylvan Lake's appeal as a destination park.

Distance from Home

Seventy-six percent (76%) of visitors to the park traveled over 100 miles from their home to get to the Park, which is significantly higher than the division-wide average of 28%. Conversely, only 12% of visitors traveled less than 25 miles visit the Park, which is substantially lower than the division-wide average of 41%. This is similar to other small, mountain parks, like Steamboat Lake (81%) and Pearl Lake (80%) state parks.

Visitors to the Park live a median distance of 148 miles from the park substantially higher than the division-wide median distance of 35 miles - likely, due to the fact that the Park is not in close proximity to a large urban center.

Eighty-five percent (85%) of visitors to the Park are Colorado residents and 14% are from out of state. These figures only slightly differ from the statewide averages of 88% and 12% respectively.

Comparing these results to those of the online public comment form developed specifically for this management plan highlights a shift between 2008 and 2018 from visitors who travel longer distances and stay overnight to visitors who travel shorter distances and make day trips. In 2018, 44% of respondents visited the Park once a year and typically travel more than 50 miles (from within Colorado) and 49% use the park for day visits only.

Type of Entrance Pass Used

Sixty percent (60%) of visitors paid a daily entrance fee to either a gate attendant or a self-service dispenser (Figure 3). This is 12% greater than the division-wide average of 48%. Thirty percent (30%) of visitors use an annual pass to visit the Park, which is slightly less than the division-wide average of 34%.

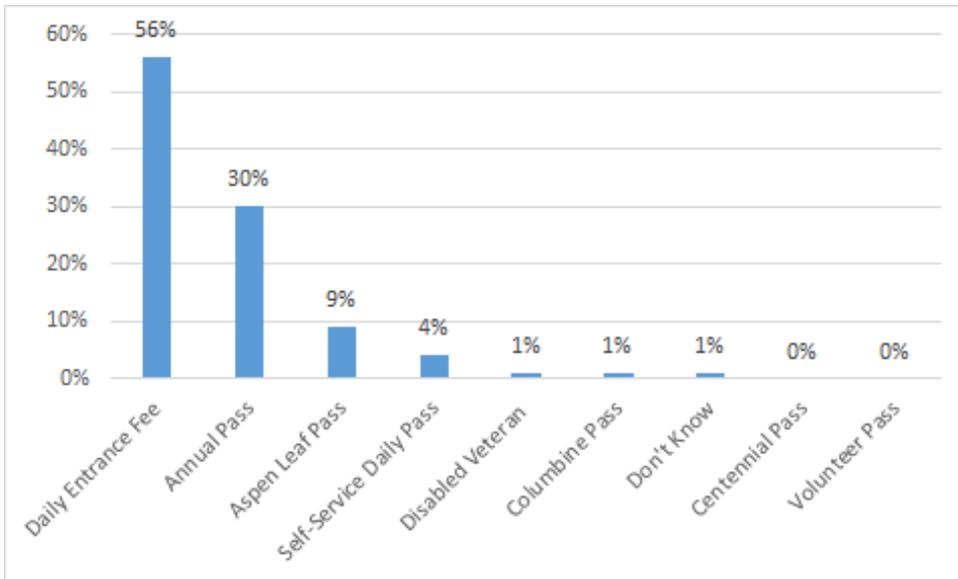


Figure 3: Type of Entrance Pass Used

Visitation Trends

Annual and Monthly Visitation

Over the past 10 years, the Park's visitation levels have hovered around 100,000 visitors per year, with a high in 2009 of just under 105,000 and a low in 2014 of just over 95,000. Since 2014, visitation has increased steadily to about 103,400 in 2017 (Figure 4).

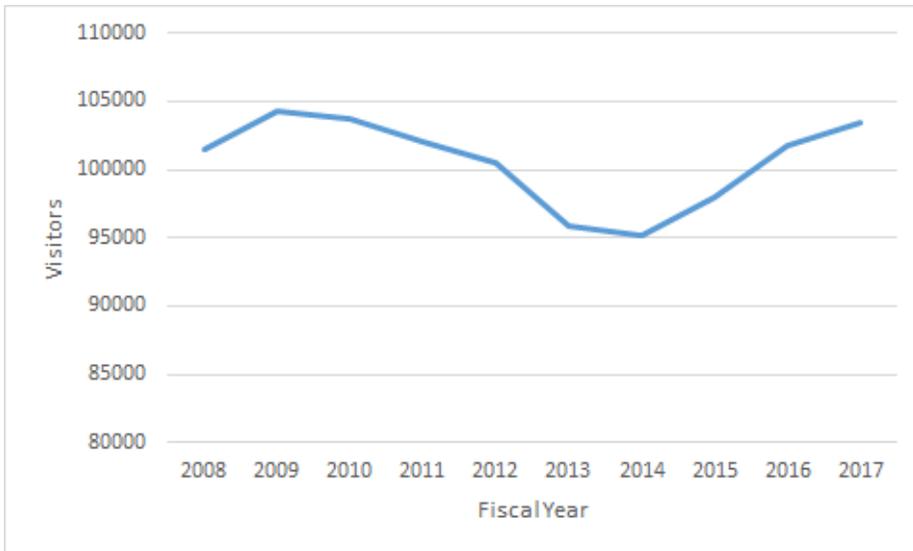


Figure 4: Annual Park Visitation (2004-2017)

The majority of the Park’s visitation occurs between the months of May and September (Figure 5). This follows the trends of the state park system, which sees the highest number of visitors between May and September and the lowest number of visitors between December and January.

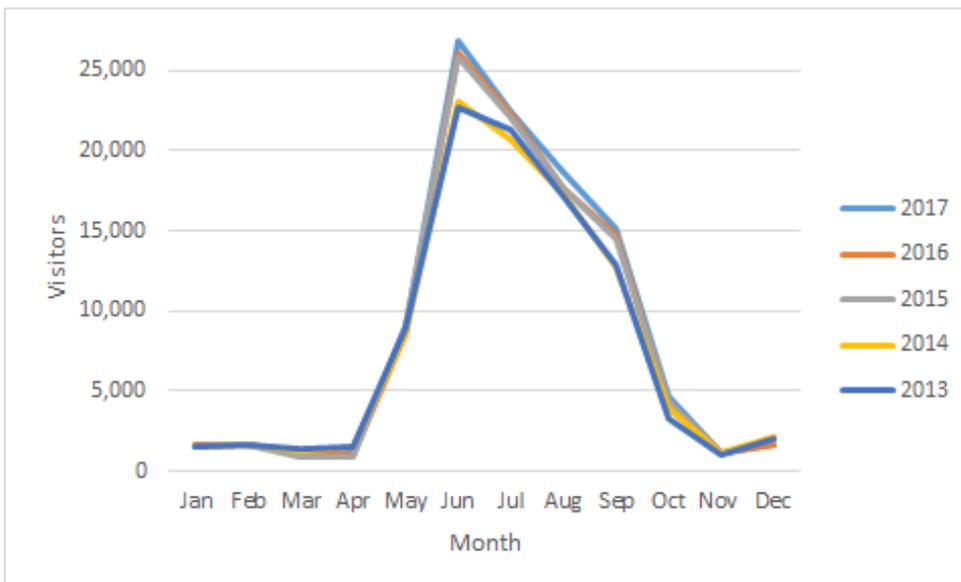


Figure 5: Monthly Park Visitation (2013-2017)

Importance of Park Features

According to the 2009 Visitor Intercept Survey, 98% of the Park’s visitors rate their overall quality of experience at the park as “excellent” or “good” (ranked 5th out of 42 state parks).

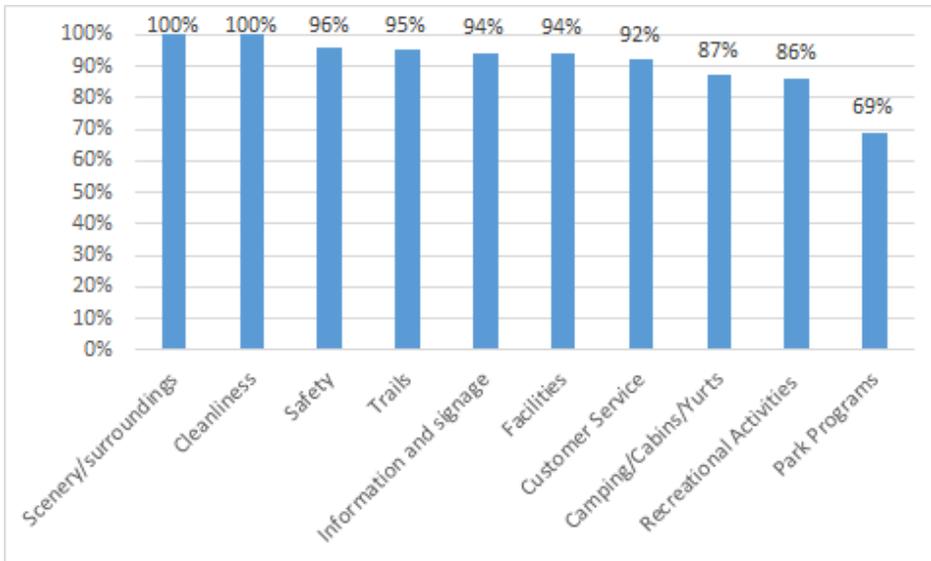


Figure 6: Importance of Park Features 2008 (Very Important or Somewhat Important)

Satisfaction with Park Features

Sylvan Lake ranked in the top ten state parks for visitor satisfaction in six of ten park features surveyed, including scenery satisfaction (2nd of 42 state parks), camping/cabins/yurts (4th of 42 state parks), nature and interpretive programs (5th), information and signage (6th), customer service (7th), trails (9th), safety (9th) and recreational activities (9th). The two features ranking below 10th out of 42 state parks were cleanliness (17th) and facilities (17th).

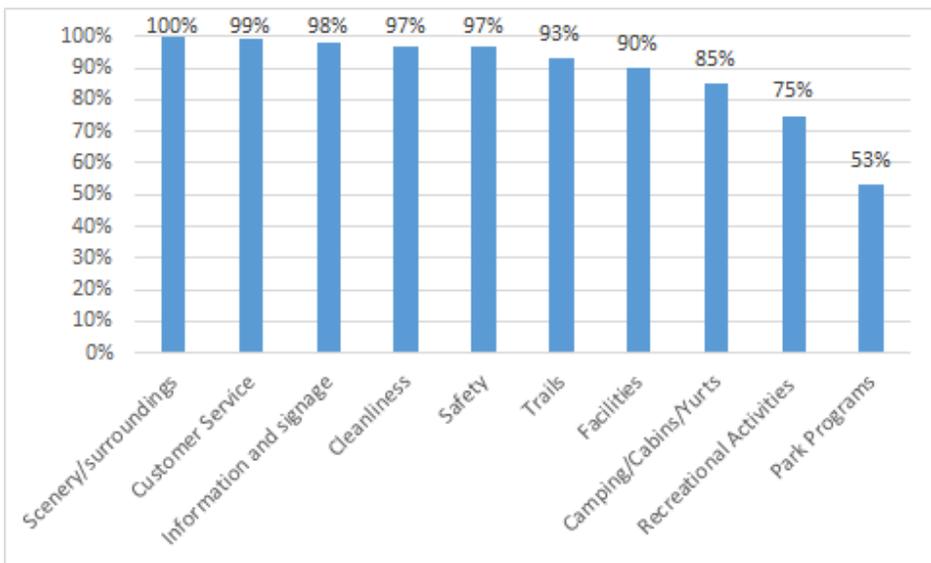


Figure 7: Satisfaction with Park Features 2008 (Very Satisfied or Somewhat Satisfied)

Visitor Preferences

In addition to visitor trend data, the visitor intercept survey conducted by Corona Insights in 2008 provided details about visitor preferences. Several key findings about visitor preferences at the Park are outlined below:

- More visitors (45%) preferred more “backcountry-oriented” parks than “amenity-oriented” parks (38%).
- Fifty-eight percent (58%) of visitors would greatly or slightly increase the number of times they visit the Park if the park offered more non-motorized trails.
- Forty-nine percent (49%) of visitors would greatly increase or slightly increase the number of times they visit the Park if the park offered more natural/primitive experiences.
- Forty-seven percent (47%) of visitors would greatly increase or slightly increase the number of times they visit the Park if the park offered more campsites that are primitive.
- Thirty-nine percent (39%) of visitors would greatly increase or slightly increase the number of times they visit the Park if the park offered more campsites with plumbing and electricity.
- Thirty-nine percent (39%) of visitors would greatly increase or slightly increase the number of times they visit the Park if the park offered more nature and interpretative programs.
- Thirty-four percent (34%) of visitors would greatly increase or slightly increase the number of times they visit the Park if the park offered more restrooms and change facilities.
- On the other hand, 46% of visitors would decrease the number of times they visit the Park if the park offered more motorized trails.

The results of the 2018 online public comment form point towards similar preferences. Respondents identified nature-based activities as the most important activities, including relaxation in nature/mountain experience, walking/hiking, fishing and wildlife watching. Additionally, limiting new development, linking existing trails, and improving stream-fishing access were identified as the most desirable management actions. Finally, the most common feedback on the respondent’s overall experience was that the Park is at or above capacity and that no other changes or additional activities are desired.

Other Relevant Visitation Information

In FY 2016 and FY 2017, there was a notable increase in stand up paddle (SUP) boarding in the Park. The park began offering stand up paddleboards for rental in 2016. This offering may have also changed the image of the park to a SUP destination.

Park Administration and Special Functions

Full-time and Seasonal Staffing

There are currently four full-time permanent employees assigned to the park. These include a Park Manager (PM IV), Park Manager II (PM II), Maintenance Technician (Tech IV) and Administrative Assistant (AA III). An organizational chart and the job-related duties of the full-time staff are included in Appendix F.

The Park also typically employs approximately eight temporary employees during the summer months. These employees occupy essential front-line positions as seasonal rangers, gate attendants, visitor center attendants and maintenance workers.

Volunteers

The Park relies on volunteers to serve as campground hosts and to support maintenance and visitor services efforts. Volunteers also provide interpretive and educational programs at the park. School groups, youth groups and other volunteers work on trail maintenance, litter pick-up and noxious weed control projects.

Volunteers also serve as camp hosts. There is one campsite available for camp hosts to reside in the campground. This campsite has water and sewer connections, and the park provides camp hosts with solar panels to charge the batteries on their camper.

Park staff is currently attempting to set up a Friends of Sylvan Lake State Park group.

In 2019, a Raptor Monitoring Program will launch under the direction of the Resource Stewardship Program Coordinator and the Administrative Assistant III. The program will adhere to the CPW Raptor Monitoring Volunteer Program Handbook and engage more Eagle County locals with CPW, while increasing the Park's annual volunteer hours.

Enforcement/Public Safety

Enforcement issues at the Park are not nearly as significant as they are at other larger parks. When enforcement is necessary, park ranger actions are guided by three priorities (ordered from highest to lowest):

- Ensure the safety and well-being of the public
- Protect visitor's personal property and the Park's natural and man-made resources
- Enforce administrative functions, such as issuing fees or permits

Compared to most parks, there are very few citations and arrests at Sylvan Lake. If there are minor violations, rangers are generally able to rectify the problem and gain compliance without the need to issue citations. Resource damage or wildlife violations are primarily addressed with citations.

Approximately 3 to 4 medical assists occur per year. They have generally consisted of sprains and breaks caused by falls, cycling injuries, and OHV crashes. They also include medical emergencies such as dehydration, heart attacks and general illnesses.

Emergency Response

The most likely emergencies to occur at the Park include medical emergencies and OHV crashes. Park rangers are trained in cardiopulmonary resuscitation, first aid, emergency, and wildfire response. They provide emergency assistance until the paramedic staff from Greater Eagle Fire Protection District arrives. Table 19 outlines staff emergency procedures in the event of a life threatening or non-life threatening incident at the park.

Table 19: Emergency Response Protocol

Emergency	Contact	Staff Procedure
Medical Emergency	Eagle County Dispatch	Provide aid within scope of duties and training, remain on scene with victim, and assist with EMS staff.
Search and Rescue	Eagle County Dispatch, Eagle County Sheriff’s Office, Vail Mountain Rescue	Stay with reporting party and gather pertinent information, remain on scene with reporting party, and assist VMR and ECSO.
Fire	Eagle County Dispatch	Relay information, evacuate area, and assist where possible.

MOUs, IGAs or Other Agreements

This section includes a brief summary of the Park’s various Memoranda of Understand (MOU), Intergovernmental Agreements (IGAs), and other agreements, including easements. Park staff should consult with CPW Real Estate Section for complete copies of these documents, some of which have been included in Appendix C for quick reference.

State of Colorado, Land Board (SLB)

- a. Interagency Property Agreement for Park Trust Lands

SLB and CPW signed an IGA in 2014 regarding the management of Internal Improvements Trust Lands, which are held in fee title by the

SLB and for which CPW is a beneficiary. At the Park, this affects the Brush Creek parcel, which is approximately 371 acres. The IGA permits CPW the right to access, administer, manage and use the Park Trust Lands to provide the public with recreational activities. It also requires CPW to manage the Park Trust Lands in accordance with park master plans, which must be provided to the SLB where they exist. Written authorization by the SLB is required for modifying or removing pre-existing improvements or constructing new improvements on Park Trust Lands.

United States Forest Service (USFS)

a. Special Use Permit

The USFS granted Sylvan Lake State Park a special use permit on December 4, 2008 to construct and maintain three segments of the West Brush Creek Trail for approximately 1.3 miles that crosses National Forest lands. The trail must consist of a native surface and only provide non-motorized recreation opportunities.

b. Communications Use Lease

The USFS granted Sylvan Lake State Park a communications use lease on December 4, 2008 for the construction, operation and maintenance of a wireless phone-line extension system within the White River National Forest. The lease terminates on December 31, 2038.

State of Colorado, Colorado Parks and Wildlife

a. Conservation and Access Easement

On January 29, 2002, the Colorado Division of Parks and Outdoor Recreation granted the Colorado Division of Wildlife the right to allow the public to fish, hunt and engage in wildlife related outdoor recreation on three parcels of land on West Brush Creek (Borah Gulch Parcel, Bear Gulch Parcel and a part of the Horton Parcel), totaling approximately 385 acres. Parks is prohibited from charging a fee for the public to access this property for fishing, hunting and wildlife-related outdoor recreational purposes.³⁴

Colorado State University (CSU)

a. License to Enter Upon Land and Release of Liability

³⁴ These areas were previously State Wildlife Areas, but are now state park lands (held in fee title) and referred to as Conservation Areas. State Park entrance fees are not required to access the Conservation Areas due to an agreement made between the Division of Wildlife and Colorado State Parks when the transfer of these parcels was made (Map 9).

CSU and CPW entered into an agreement, for the period of December 1, 2014 through January 14, 2030, that permits CSU to access Sylvan Lake State Park in order to operate and maintain a U.S. Historical Climatology Network Modernization monitoring station, located to the northeast of the maintenance shop at the Park.

Partnerships

Partnerships with various local, state and federal government agencies and other organizations have played a key role in the establishment and continuing development of the Park. These vital partnerships offer mutual benefits in diverse areas including conservation, restoration, funding, education and other tasks. Table 20 illustrates some of the major partnerships with the park.

Table 20: Partnerships

Partner	Nature of partnership
<i>Local</i>	
Eagle County	Shared expenses for road maintenance.
Ute Springs Experiential Learning Center	Interpretive programs conducted at park.
Eagle County Schools	Field trips, interpretive programs, SOLE programs at local schools.
Walking Mountains Science School	Interpretive programs on and off park. Internship program, Eagle County Outdoor Movement.
<i>State</i>	
Colorado State Land Board	Owner of several parcels of park where CPW is beneficiary.
<i>Federal</i>	
U.S. Forest Service	Neighbors. Road owners.
<i>Other</i>	
Rocky Mountain Youth Corps	General projects and trail maintenance.

Special Uses

The Park attracts many visitors through its special events throughout the year. In 2017, the park hosted two special events, drawing a combined 250 participants. The Park generates considerable revenue from special activity agreements through fees for application, entrance, vending and parking lot and facility rental. The special events held at the park in 2017 included: Snowshoe

for Peru (i.e. Corazon de Esperanza, a snowshoe race around reservoir to benefit Peruvian children) and Boy Scout Klondike (a winter camping trip for several troops to earn special badges).

Park Budget and Finances

The Park relies on various budget allocations (i.e., General Operating, Permanent Personnel Services, etc.). These are commonly referred to as agency “Budget Buckets” or “Categories”, which are summarized in the table below. Budgets are requested through various CPW processes on an annual or ad-hoc basis based on the nature of the type of request. Table 21 provides a breakdown of the Park’s total expenses in FY 2016 and FY 2017. The significant decrease in spending for permanent personnel services in FY 2016-17 reflects vacancies in permanent staff during that time.

Table 21: Park Expenses (FY 2016 and FY 2017)

Category	FY 2015-16	% of Total	FY 2016-17	% of Total
Permanent Personnel Services (Includes Permanent Benefits)	\$292,696	52%	\$131,601	28%
General Operating (Includes Temporary Personnel Services Salary and Benefits)	\$196,872	35%	\$188,653	40%
Parks Small Capital (Projects under \$100,000 each)	\$42,989	8%	\$107,098	23%
Vehicle Leases	\$18,868	3%	\$21,188	5%
Retail Operations	\$14,274	2%	\$17,519	4%
Snowmobile Allocations	\$1,182	<1%	-	-
Total	\$566,881	100%	\$466,059	100%

Sections below highlight some of the recent budget allocations and expenses for the primary budget categories shown above.

General Operating Costs

The operating costs for the Park remained relatively constant between FY 2016 and FY 2017. The majority of the operating budget is spent on temporary employees’ salary and benefits, followed by property repair, maintenance and improvements and utilities.

Table 22: General Operating Expenses (FY 2016 and FY 2017)

Category	FY 2015-16	% of Total	FY 2016-17	% of Total
Temporary Personnel Services (Salary and Benefits)	\$72,786	37%	\$77,961	41%
Property Repair, Maintenance, Improvements	\$52,846	27%	\$40,986	22%
All Utilities	\$24,435	12%	\$22,376	12%
Supplies and Materials	\$15,382	8%	\$17,624	9%
Motor Vehicles (Supplies, Maintenance)	\$16,544	8%	\$10,405	6%
Equipment (Maintenance, Rental, Repair and Purchase)	\$7,494	4%	\$7,576	4%
Services (Construction, Repair, IT, Testing, etc.)	\$3,414	2%	\$5,239	3%
Communications (Telephone and Telecommunications)	\$2,627	1%	\$2,764	1%
Other Miscellaneous Expenses	\$1,344	1%	\$3,722	2%
Total	\$196,872	100%	\$188,653	100%

Temporary Staff Resources

In addition to Sylvan Lake State Park's four full-time employees, the Park hires an additional eight temporary employees during the summer months as seasonal rangers, gate attendants, visitor center attendants and maintenance workers.

Table 23: Temporary Employee Expenditure Detail (Salary and Benefits) (FY 2017)

Activity	Amount	% of Total
Recreation on State Parks Management	\$58,864	75%
Youth Education and Outreach	\$7,224	9%
Encourage Natural Resource Careers	\$11,872	16%
Total	\$77,960	100%

Large Capital Construction Projects

Large capital construction projects are high-dollar improvements to the Park that are considered on an annual basis. For example, in FY 2017, large capital construction projects included work on the Sylvan Lake spillway design and other dam maintenance projects. These expenses do not come directly out of the Park's funds.

Table 24: Large Capital Projects in FY 2017

Category	FY 2015-16	FY 2016-17
Parks Large Capital (Projects over \$100,000 each)	\$527,075	\$423,131

Concessions

There are no true concessionaires currently operating at the Park. However, several special use agreements with local businesses are annually renewed. These include fishing guides, jeep tours and scuba diving lessons. There is an annual fee and the park receives 5% of total gross income from each activity.

Economic Value

The Park has a positive impact on the economy of neighboring communities. In addition to visitor trend data, the visitor intercept survey conducted by Corona Insights in 2008 provided details about visitor spending. Key findings about visitor spending in and near the Park are outlined below:

- All visitors (local and non-local) spent an average of \$277.01 per vehicle within 50 miles of the Park, which is higher than the division-wide average of \$125.17 per vehicle.³⁵ This spending contributed a total of over \$9.4 million in total annual expenditures to the Park and the surrounding communities within a 50-mile radius of the Park.³⁶
- Non-local visitors alone spend an average of \$278.13 per vehicle, for a total annual expenditure of \$7.8 million to the Park and the surrounding communities within a 50-mile radius of the Park.³⁷

³⁵ Colorado State Parks Marketing Assessment: Visitor Spending Analysis, 20098-2009.. Corona Research, Inc., 2008. p. 12.

³⁶ Ibid.

³⁷ Ibid.

4.0 MANAGEMENT ZONES

CPW's management zoning scheme provides a framework for distinguishing areas of the Park for different visitor experiences and recreation opportunities, based on local resource considerations. Within each management zone, suitable types of facilities and land uses are identified, along with the targeted visitor experience and management focus.

Management zones are a tool to identify where in the park priority recreation opportunities are most appropriate while considering visitor expectations and mitigating the influences of visitor use on the Park's resources. In addition, management zoning helps park managers identify and avoid potential conflicts between recreation user groups, maintain the quality of the Park's resources, and more effectively plan future park development.

The first step to establishing management zones at Sylvan Lake State Park involved members of the park management planning team working with CPW GIS staff to compile park specific mapping data. Maps used in the analysis process included:

- 1) Ecological Sensitivity Zone map (from the Sylvan Lake State Park Stewardship Plan)
- 2) Park Land Ownership (Map 3)
- 3) Cultural Resource Occurrence Map (Map 11)
- 4) Recreation Infrastructure and Facilities Map (Map 12)
- 5) Engineering Suitability Map (Map 14) that depicts high, medium, and low development suitability based on soils, slope, and floodplains.

The first four maps are referred to in Section 3 - Park Setting and Resources; the Engineering Suitability Map (Map 14) was created to ensure the consideration of local geology and topography in land use decision processes. See Appendix H for additional details on the geologic hazard and engineering suitability mapping.

Description of Management Zones

Using the above zoning scheme, as well as input from park staff and the park management planning team, a map was developed that identifies suitable Park management zones (Map 15). The Park is primarily zoned as "*Natural*," which emphasizes maintaining the Park's native flora and fauna, wildlife habitat, and ecological functions.

"Protection Zones" are areas that are primarily natural environments with little to no infrastructure. On the Pipe Creek parcel along East Brush Creek, a population of the rare plant Harrington's beardtongue is located, classifying this area as a "*Protection Zone*." This area requires lower visitation levels to support the preservation of this globally rare resource. Additionally, the riparian areas along West Brush Creek and East Brush Creek are classified as a

“Protection Zone,” to maintain these habitats for wildlife use and species diversity.

“Passive recreation” areas generally include trails and emphasize hiking, fishing, equestrian use and other dispersed forms of recreation. These areas are generally managed to maintain their natural character and provide sustainable recreation. There are small areas identified as *“passive recreation”* zones within the Park. Along West Brush Creek and East Brush Creek *“passive recreation”* zones include fishing access points, pull-offs, maintenance roads and the trail system. The Bear Gulch parcel contains a *“passive recreation”* zone, reflecting an area around a footbridge and bathroom. A small *“passive recreation”* zone lies near the Meadows Day Use Area at the fork in the road along East Brush Creek, where a 3-D archery range is identified as a potential new recreation opportunity.

Development Zones are areas that emphasize providing recreational opportunities that rely on motor vehicle access and require more intense management to maintain the good condition of the park. The Park’s *“development”* zones are located around the visitor’s center, the Meadow’s Day Use area, the campgrounds and cabins at the northwest side of Sylvan Lake and in the far northeastern corner of the park where the yurts are located. [Internal Note: while this area is zoned development, special care needs to be taken during all ground-disturbing activities to avoid pre-historic and historic cultural resources. Excavation in this area may require an archaeologist to be on site during construction activities.]

From December 15th through April 1st, three conservation areas along West Brush Creek, Horton Gulch, Bear Gulch and Borah Gulch, require a seasonal trail closure for the conservation of wintering wildlife. There is also a seasonal fishing closure at the inlet of Sylvan Lake for fish spawning in the fall.

The construction of the new dam in 2018 does not influence the management zoning, as this area is a *“development zone.”* The water level in Sylvan Lake will increase by 1 foot after the new dam is constructed, but this will also not affect the management zoning.

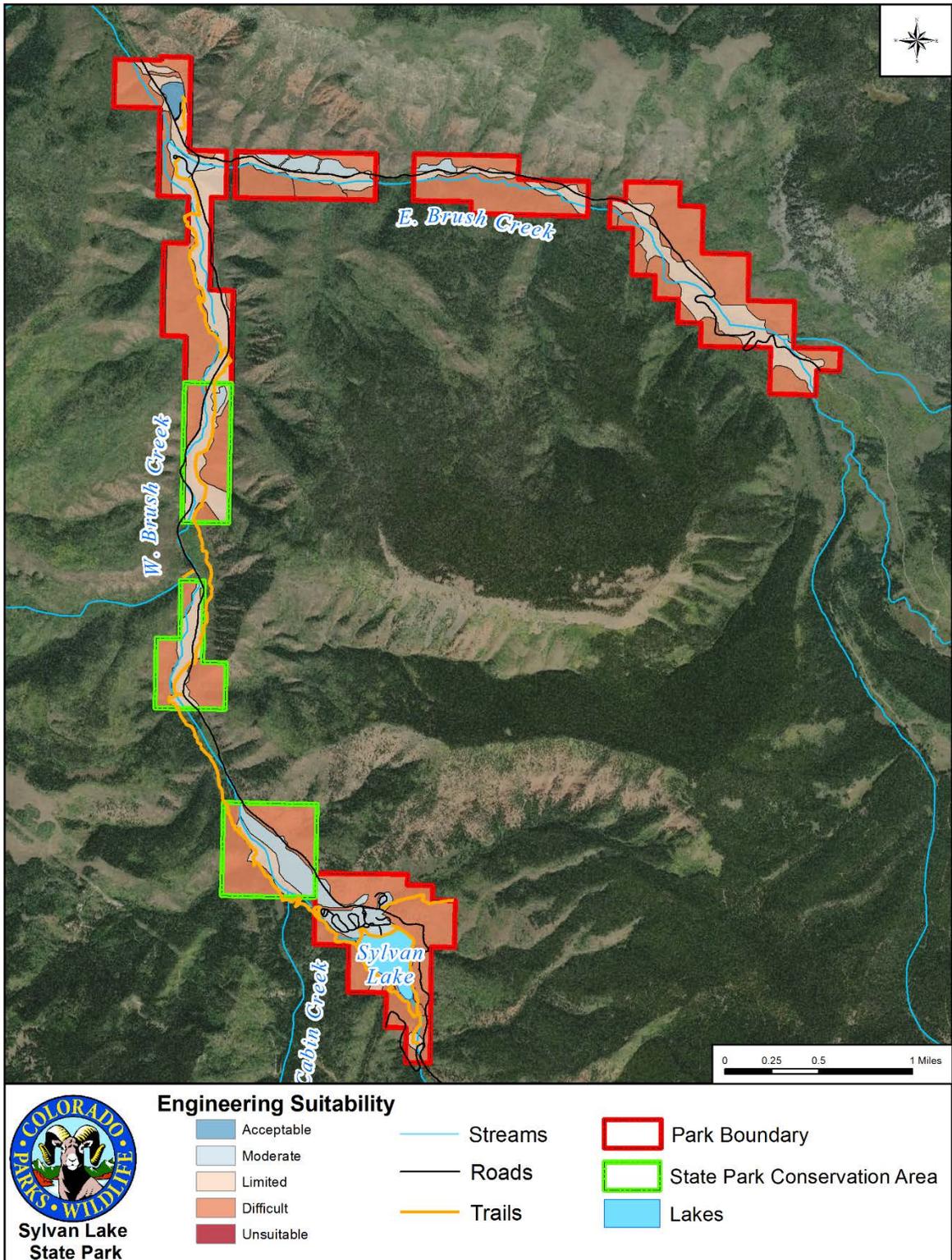
Table 25: Management Zone Classification Scheme and Characteristics

Zone Classification/ Visitor Experience	Recreation Opportunities	Potential Facilities	Management Focus
Development <ul style="list-style-type: none"> • High social interaction • Low opportunity for solitude • Low opportunity for challenge 	<ul style="list-style-type: none"> • High-density recreation • Emphasis on providing opportunities that rely on motor vehicle access via 	<ul style="list-style-type: none"> • Typically parking areas, paved or high-use roads, utilities, group picnic areas, visitor services, restrooms, 	<ul style="list-style-type: none"> • Intense management needs • Manage to provide sustainable recreation and aesthetic qualities

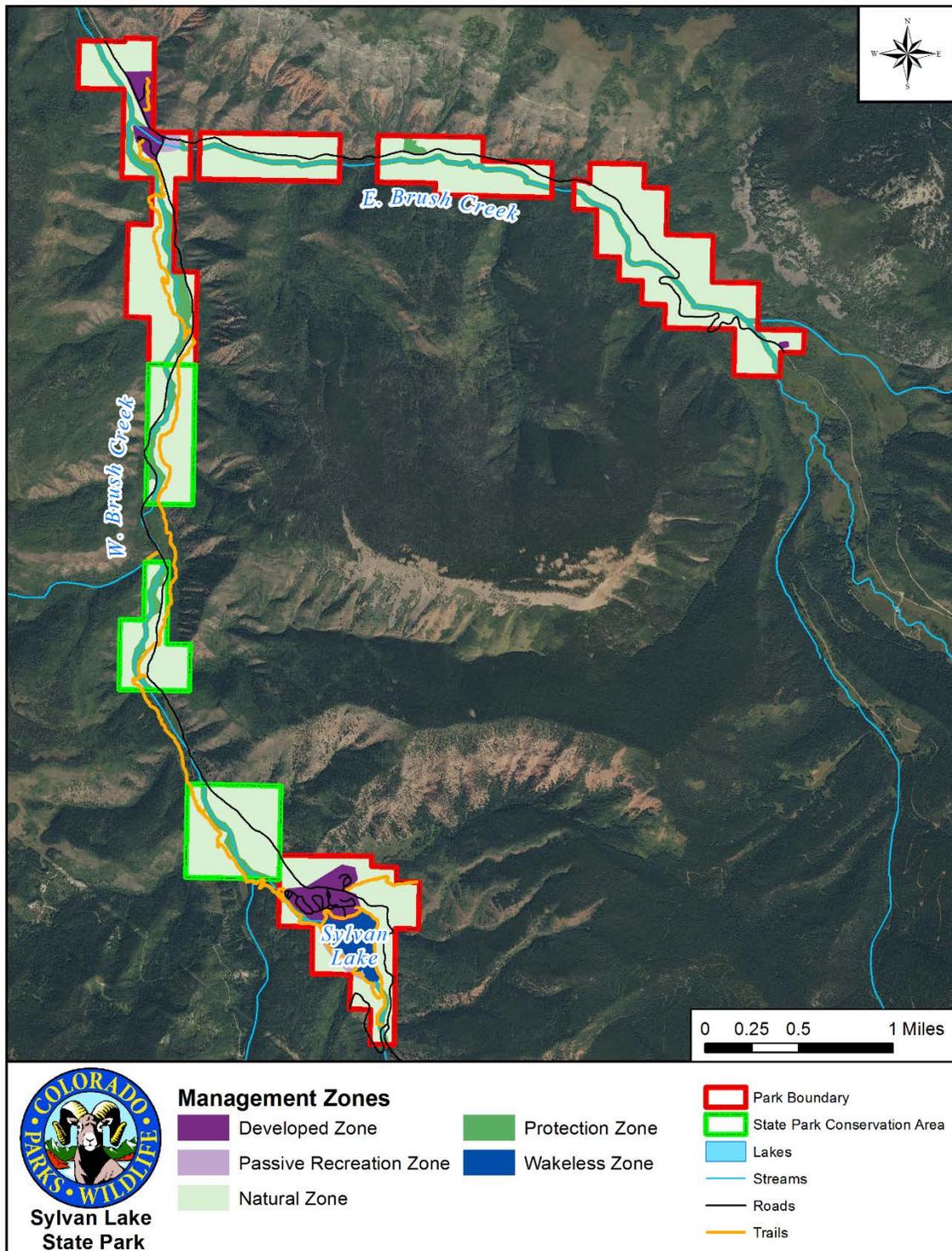
	<p>roads such as picnicking, and at some parks could include RV and tent camping, and potentially motorized uses in designated areas</p> <ul style="list-style-type: none"> • Some fishing, boating, equestrian use, mountain biking, hiking, and watchable wildlife may occur in this zone 	<p>concessions, and interpretive facilities and, at overnight parks, developed camping areas.</p> <ul style="list-style-type: none"> • Less typically, this could include marinas, motorized use areas, and dog off leash areas at some parks. 	<ul style="list-style-type: none"> • Prevent weed spread, erosion, or other degradation • Intense fire prevention mitigation • Revegetate with native species.
<p>Passive Recreation</p> <ul style="list-style-type: none"> • Moderate social interaction/low opportunity for solitude • Moderate degree of interaction with the natural environment • Moderate opportunity for challenge 	<ul style="list-style-type: none"> • Medium-density recreation • Emphasis on providing hiking, fishing, equestrian use, mountain biking and other dispersed recreation. • Some picnicking or backcountry camping, canoeing and other non-motorized boating, watchable wildlife, interpretive opportunities are likely to occur in this zone 	<ul style="list-style-type: none"> • Typically trails, interpretive facilities and individual picnic areas. • Less typically this could include dirt roads or light use roads, limited motorized uses (in larger parks only), hike-in campgrounds, or yurts • Minimize utilities to the extent possible 	<ul style="list-style-type: none"> • Moderate to High management needs • Manage to maintain the natural character and provide sustainable recreation • Actively manage weeds in order to eradicate or suppress, and prevent erosion or other degradation • High level of fire prevention • Revegetate with native species
<p>Natural</p> <ul style="list-style-type: none"> • Low social interaction/moderate opportunity for solitude • High degree of interaction with the natural environment • Moderate to high opportunity for challenge 	<ul style="list-style-type: none"> • Medium- to low-density recreation. • Emphasis on providing low impact, non-motorized and dispersed recreation. • All recreation opportunities in the Passive Recreation Zone are likely to occur here with the exception that there be little to no infrastructure 	<ul style="list-style-type: none"> • Primarily trails and some interpretive facilities • Minimize utilities to the extent possible 	<ul style="list-style-type: none"> • Moderate to low management needs • Manage to maintain local ecological function, the native flora and fauna, the wildlife habitat, and the ecological functions • Actively manage weeds for eradication, prevent erosion or other degradation

	<p>and an emphasis on providing non-motorized dispersed recreation.</p> <ul style="list-style-type: none"> • Hunting also permissible at some parks 		<ul style="list-style-type: none"> • Moderate to high level of fire prevention • Revegetate with native species
<p>Protection</p> <ul style="list-style-type: none"> • Typically unmodified natural environment 	<ul style="list-style-type: none"> • None, or very low density recreation 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Least intense management needs • Preservation of very sensitive resources or restriction of visitor use for legal or safety reasons.

Map 13: Engineering Suitability



Map 14: Management Zones



Area Descriptions that Influence Park Zoning

In addition to resource, land ownership and engineering suitability mapping, other factors influencing park zoning included historical activities, established land uses and other issues that affected the overall compatibility of outdoor recreation in specific areas within the park. For Sylvan Lake State Park, five distinct areas were identified in the plan (these are depicted on Map 16). A brief summary of these areas and key considerations that were taken into account during the park management zoning process are highlighted below.

Fisher Gulch, Pipe Creek and Elk Crossing

These areas have low recreation opportunities due mostly to topography and access, and they function predominantly as habitat for wildlife.

Coulter Meadows

This area includes the visitor center and the Meadows Day Use Area. Visitor services, picnic areas, and the historic School House site are included in this area. Potential future development of overnight yurts and an archery range have been identified in the “developed zone” of this area. Other areas outside these zones are natural habitat areas with little to no visitor access.

Aspen Grove and the Quarry

This area is a large aspen grove with a riparian corridor running through it. Forest management activities have occurred in this area. The quarry is a historic site with some potential for future development. The Park’s yurts exist at the far end of this zone.

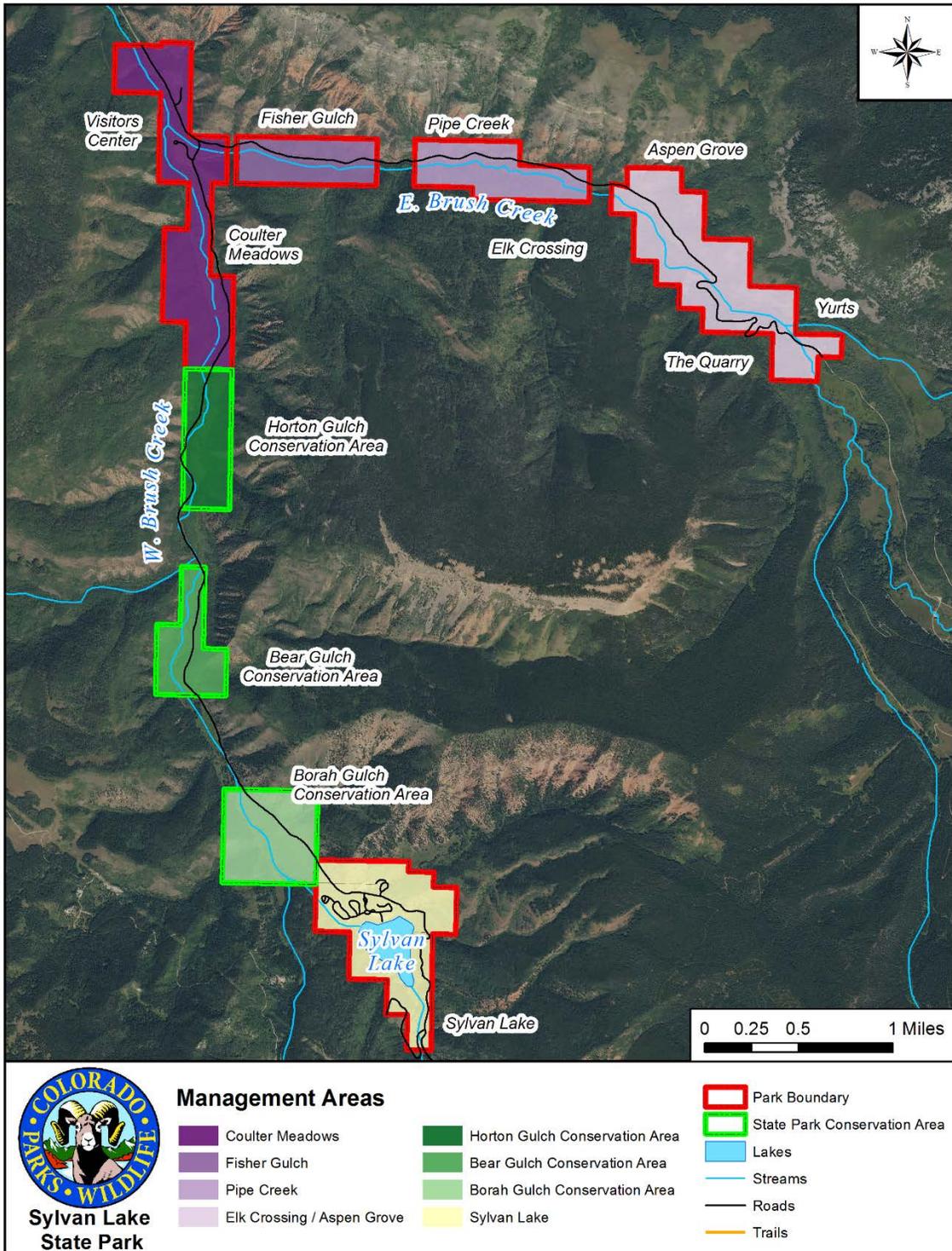
Sylvan Lake

This is the primary recreation area of the park. Campgrounds, visitor services, lake access, trails and park maintenance facilities exist here.

Horton Gulch, Bear Gulch and Borah Gulch Conservation Areas

These areas are managed under conservation easements. They exist primarily to provide wildlife habitat. There is a foot travel only trail through these areas and angler access exists.

Map 15: Management Areas



5.0 PARK ENHANCEMENT OPPORTUNITIES & INITIATIVES

Enhancement Opportunities

Park enhancement opportunities include significant potential park improvements or efforts to help the park meet its full potential (as defined by the park's vision and goals). Some enhancement opportunities include park improvements that are significant in terms of their financial resources. Enhancement opportunities are also substantial enough to warrant supporting documentation to help clarify rationale, potential contribution and overall value to the park.

It is important to note that park enhancement opportunities and initiatives are not necessarily "commitments." In addition, new development should be balanced with maintaining and preserving what we already have and major new facility investments should be balanced with resource enhancements. Finally, implementation is contingent on the park securing adequate financial and human resources and must be considered or weighed within the context of other Division-wide needs.

Park enhancement opportunities for Sylvan Lake State Park were developed based on suggestions from the public, professional knowledge and experience of staff, and discussions with key partners and stakeholders. Park enhancements are described in detail in this section and include:

1. Major rehabilitation or improvements to existing facilities and infrastructure
2. New facilities and infrastructure
3. Natural resource rehabilitation and restoration efforts
4. Management initiatives critical to the long-term operational success of the park.

Enhancements to Existing Facilities and Infrastructure (EE)

EE1. FUNDED - Develop campsites for resident volunteers and employees near maintenance shop area. Providing on-site housing for park employees and resident volunteers would help alleviate personnel constraints. Constructing campsites near the maintenance shop, which is already in a developed zone, would provide these amenities, with minimal impacts to park management.

- Approved Funding Sources: CPW Small Capital Budget

EE2: Construct a trail from the Visitor’s Center to the Brush Creek Trail. Constructing a trail that connects the Visitor’s Center interpretation trail to the Brush Creek Trailhead will significantly enhance Sylvan Lake State Park’s trail system. Currently the two trails are unconnected, which means visitors must drive and park at the Meadows Day Use Area to access the Brush Creek Trail. The segment of missing trail is approximately 0.5 mile in length and includes a road crossing and a creek crossing, requiring the construction of a bridge. The area for this potential trail is already zoned for “development.”

EE3: Construct a horse crossing on Brush Creek Trail at Bear Gulch. Equestrian use of trails requires additional infrastructure and maintenance. Enhancing the existing Brush Creek Trail crossing at Bear Gulch by constructing a horse ramp will allow equestrians to use this section of the trail. One side of the crossing has already been completed.

EE4: Develop group picnic area at Sylvan Lake Day Use Area. The day use area at Sylvan Lake provides numerous recreational opportunities. However, there are no large trees to provide shade and the picnic areas are not ADA accessible. Constructing a group picnic area, possibly with two sites, that are ADA accessible with a concrete pad and removable shade structures (possibly brown or green sail-like structures) would greatly improve the usability of the Sylvan Lake Day Use Area for all user groups - especially for large groups and visitors that require ADA access. This area is already zoned for “development.”

EE5. Enhance existing pullout areas and fishing access trails along East Brush Creek. Enhancing existing pullout areas along East Brush Creek would provide better access for anglers to fish in that section of the Park. Access to the creeks of the park would greatly increase angling opportunities. Currently anglers use social trails to access the river. Creating defined fishing access points and trails to the creek would reduce the existence of these social trails and improve trail quality and sustainability. Picnic tables could also be added to the pullout areas for enhanced recreational opportunities.

EE6: Construct yurts or portable cabins near Brush Creek Trailhead. The Meadows Day Use Area is already a developed zone with established picnic sites; however, it is not well used currently. Constructing yurts or portable cabins near the Brush Creek Trailhead at the Meadows Use Day Area could increase recreational usage, especially during the winter. The cabins or yurts could have lights, powered by solar panels, and access to water, provided by pumps or a well. It

should be noted that adding more cabins or yurts would increase the amount of operations and maintenance time required by staff.

EE7: Protect and add trees at Elk Run Campground. The Elk Run Campground is widely used and would be enhanced by protecting existing trees and adding additional trees for shade, privacy, and visual appeal. Because environmental factors such as beaver and mountain pine beetle are a concern, it is important to select the trees carefully and cage newly planted trees following the Sylvan Lake Forest Management Plan. Transplanting trees from existing areas inside the Park may also be an option.

EE8: Replace and expand boat docks to accommodate rescue and rental boats. To accommodate for expanded boating access, new docks are needed.

EE9: Develop leach field for dump station. The park currently has a "dry" dump station with a 1,000-gallon holding tank that requires pumping up to three times per year. Currently, no water is available at the dump station. There has been talk of moving the dump station to accommodate a leach field system.

EE10: Add wireless connectivity at visitor center and campgrounds. Adding wireless connectivity would improve visitors' experience at the visitor center and campgrounds.

EE11: Replace fencing between Elk Run Campground and FS 400. The fencing between FS 400 and the Elk Run Campground is important to keep animals out of the campground and is in need of replacement.

EE12: Replace flagstone on the patios in front of the cabins. The patios in front of the cabins are a tripping hazard in some places. It is advisable to replace the flagstone with concrete.

EE13: Formalize the trail between the upper cabins and the lake area. There is currently a social trail between the upper cabins and the lake area.

EE14: Identify and implement improvements at Quarry Area. The Quarry Area along East Brush Creek could be enhanced, possibly to include additional historical interpretation. This could also be a potential site for a yurt.

EE15: Enhance the parking lot at the Meadows Day Use Area to better accommodate equestrian usage. The Meadows Day Use Area parking lot could be enhanced to make it more accessible for equestrian users. This would include developing a turn-around area for horse trailers, constructing corrals and possibly expanding clearance on the trail to better accommodate horseback riding.

New Facilities and Infrastructure

N1. Construct Hunter Education Shooting Range. A Hunter Education Shooting Range with 3-4 lanes would be an important addition to providing educational opportunities at Sylvan Lake State Park. This shooting range would not be open to the public and is forecasted to be used around four times per year during educational and training events only. This range would provide a safe, formal area to conduct hunter education classes, which usually involves 1-2 hours of class on Sunday afternoons. (At this time, there is no interest in creating a firearms range that is open to the public due to the noise and disturbance associated with a public range.) The new facility would be located behind the Visitor Center on CPW property. It would include a covered shooting area (possibly a lean-to structure) with a small storage area, a target area approximately 20 yards away from the shooting area, a trail leading from the Visitor Center to the Shooting Range and appropriate signage.

N2. Construct standard archery range and 3D archery range. To increase recreational opportunities at the Park, a standard (2-3) lane archery range and a 3D archery range could be located on or across the road from the Meadows Day Use Area on the State Land Board parcel. If the facility were constructed on the west side of West Brush Creek, it would not be necessary to construct a bridge for access. The prospective area includes both developed zones (where the parking would be located) and natural zones.

N3. Develop premium angler camping sites on East Brush Creek. Constructing two to three primitive, "premium" fishing camping sites along East Brush Creek would expand access for anglers and disperse additional overnight visitation to the East Brush Creek side of the Park. This would require adding a vault toilet with access trails. This area is currently considered a natural zone.

N4. Construct East Brush Creek Trail. A trail from the Meadows Creek Day Use Area to the Quarry or to the yurts along East Brush Creek would expand the recreational opportunities in the Park and respond to

reported visitor preferences. The area along East Brush Creek where this trail would be located is currently a natural zone.

Rehabilitation/Restoration Efforts

R1. FUNDED - Restore vegetation impacted by dam project. Once the Sylvan Lake Dam renovation is complete, the areas near the lake and campground that were disturbed during construction need to be revegetated. This should be done using native grasses, forbs and other plants. The restored areas should be monitored and maintained to prevent invasive species and ensure the restoration of vegetation is successful. Consult with the Resource Stewardship Program (Jeff Thompson) for assistance.

- Approved Funding Source: Land and Water Conservation Fund

R2. Restore area near Cowboy Spring. The Cowboy Spring area near the maintenance shop is in need of restoration, including removing gravel and replacing it with top soil. There are also several trash piles in the area that need to be burned or removed. This area should be reseeded using native species, monitored and maintained.

R3. Implement Sylvan Lake Forest Management Plan as needed. Several areas throughout the Park, especially on the west side of Sylvan Lake, require forestry work to mitigate and reduce forest fuels as a means of preventing damaging fires. This work is performed in collaboration with the CPW Forest Management Program (Matt Schulz - Coordinator) and is often performed in conjunction with the Colorado State Forest Service.

R4. Stabilize and restore historical structures. Several historical structures throughout the Park require stabilization and restoration. This includes significant structures such as the halfway house and the schoolhouse, which are listed on the Colorado State Register of Historic Properties.

R5. Stabilize erosion areas and limit undesignated trails around Sylvan Lake. The trail circumnavigating Sylvan Lake requires stabilization in eroding areas on the east side of the lake. There are also several undesignated trails to the lake that need to be reclaimed and revegetated.

R6. Reseed and monitor mudslide area to prevent weed infestation as needed. Several areas of the park are at risk of mudslides, including an

area along East Brush Creek and the area surrounding Sneeve Gulch on west side of the park. It is important to monitor these areas for movement, stabilize them, replant with a native seed mix as needed (see Weed Management Plan in Appendix A).

Management Initiatives

M1. Maintain relations with key stakeholders and neighbors.

Maintaining good relationships with key partners and stakeholders is important to the success of Sylvan Lake State Park. This includes maintaining relationships with the USFS and Eagle County, as well as local interpretation organizations that provide educational programs in the park. It would also be beneficial to enhance the partnership with Eagle County Historical Society.

M2. Develop outreach and communications plan. Because Sylvan Lake State Park is often at capacity during the summer months, a full-scale marketing initiative may not be necessary to improve summer visitation. However, it is important for Sylvan Lake State Park to be better at communicating with visitors via social media and to promote off-season visitation. Developing an outreach and communications plan that guides communication with the public would help with this initiative.

M3: Develop MOU to define the ownership and responsibilities of maintenance of the roads in the park. The park is accessed via Brush Creek Road/FS400. FS 400 follows West Brush Creek to Sylvan Lake and FS 415 follows East Brush Creek to the park's yurts. The park also offers roads and access trails to the adjacent National Forest. While there is no explicit Memorandum of Understanding, it is believed that the road inside the park is owned by USFS, but that Eagle County and CPW have agreed to contribute funds to help maintain it. It is important to develop a formal MOU with USFS and Eagle County regarding the roads in the park.

M4. Evaluate and improve park retail operations. Many park visitors appreciate the opportunity to purchase retail goods, particularly visitors who stay overnight and travel from outside the local region. Sylvan Lake State Park has designated retail space in its visitor center and camper services building. The visitor center offers souvenirs, clothing and books. The camper services building offers firewood, food, beverages and other sundries. Retail sales at the park are expected to increase in response to increasing visitation.

In the future, Sylvan Lake State Park staff should continue to work with Retail Program staff to identify the most profitable goods and reduce inventory of good that do not add to profitability. One suggestion includes exploring the possibility of adding fishing bait to the products that are sold.

M5. Develop interpretation driving tour materials for historic resources. Sylvan Lake State Park has many important historical and cultural resources, including the Halfway House and School House, which are not currently an integral component of the park visitor experience. These park resources tell the story of settlement in the mountains of Colorado. Developing interpretive materials for these historic sites, including signs, a brochure, and materials to encourage a driving tour of these sites would greatly expand their visitation.

M6. Develop ways to market and increase winter visitation and use of the park specifically. Expanding Sylvan Lake State Park's winter visitation and usage is an important management priority. This could include developing additional winter recreation opportunities and improving off-season marketing.

M7. Evaluate the potential of a Friends of Sylvan Lake State Park group. Sylvan Lake State Park has many volunteers and volunteer opportunities, but it does not have a core group of regular volunteers nor a Friends of Sylvan Lake State Park Group. As the town of Eagle grows and day use at the park increases, it may be possible and important to institute a Friends of Sylvan Lake State Park Group.

M8. Develop an official visitor capacity number and policy. To date, a capacity number has not been set for high visitation days. Historically, when no parking spots are available, visitors are discouraged from entering and are only occasionally turned away. Unofficial overflow parking areas have been identified and staff assists with parking the additional vehicles in these cases. The creation of new additional parking would require more resources for resource and visitor management. As such, the Park would benefit from the development of an official visitor capacity number and policy.

M9. Develop fact sheet to direct the use of park facilities for weddings. The campground/day use area near Sylvan Lake could be a scenic venue for weddings and other events. This could also be a revenue-enhancement opportunity for the park. To better inform the public of these opportunities, it will be important to develop a fact sheet with information about the use of the venue, pertinent regulations and pricing.

M10: Establish Fishing is Fun Program. This program provides opportunities to local and county governments, park and recreation departments, angling organizations, water districts and others to improve angling opportunities in Colorado. Starting a Fishing is Fun Program at Sylvan Lake would enhance angling opportunities throughout the park.

6.0 IMPLEMENTATION PRIORITIES

This section highlights management actions that have been established by the Sylvan Lake State Park Planning Team to help identify management needs and priorities, more effectively plan future park development, and help protect and maintain Sylvan Lake State Park's unique resources. Implementation priorities are based on park goals, their influences on park management, and other management considerations identified in Section 1, and include park enhancement opportunities discussed in Section 5. Information included in this section has been reviewed and is supported by Parks and Wildlife leadership.

Table 26, provided on the following page, is intended to serve as a quick reference for the park manager and staff responsible for implementing this plan. Included in Table 26 is a breakdown of each management action, the "category," or type of management action, applicable management zone, applicable Enhancement Opportunity numbers (as reflected in Section 5) and corresponding priority level. Prioritization criteria are identical to those described in Section 5 and range from "low" priority to "high" priority. Items in the table that do not have numbers are important ongoing aspects of managing the park but are not a specific enhancement opportunity.

Implementation Considerations

Implementation priorities are a reflection of Sylvan Lake State Park's greatest needs as of winter 2018 and may change over time depending on a variety of factors. Implementation priorities highlighted in this section should be viewed only in the context of Sylvan Lake State Park. Any actions that are dependent on additional funding or staffing must first be considered or weighed within the context of other statewide needs with the help of CPW leadership. Effective implementation of the priorities listed in Table 26 is contingent on the park maintaining adequate financial and human resources necessary to initiate and follow through with recommendations outlined in this section.

Using the Implementation Plan

The implementation priorities outlined in Table 26 will be used by park staff to guide future management efforts at the Park. This section of the management plan is to be reviewed annually by the park manager and other park staff to evaluate and monitor implementation progress. Specifically, park staff will refer to the plan to:

- Guide future park budget allocations and annual funding requests.
- Guide park management planning, including management of existing resources and possible upgrades to or new park facilities, recreation infrastructure, etc.
- Guide development of annual work plans. By tasking specific park staff with implementation of various management plan actions in annual

work plans, and tracking implementation over time through regular performance reviews, the Management Plan provides a useful accountability tool for park managers.

Table 26: Implementation Priorities

PRIORITIES	Category	Applicable Management Zones	Enhancement Opportunity Number
Develop MOU to define the ownership and responsibilities of maintenance of the roads in the park.	Land ownership	Not applicable	M3
Maintain Memorandum Of Understanding (MOU) with USFS regarding access to and maintenance of Brush Creek Trail on the west side of the park.	Land ownership	Natural	
Acquire East Brush Creek private land inholding (Heath Property, 5 acres).	Land ownership	Not applicable	
Restore, maintain and monitor vegetation impacted by dam project.	Vegetation	Developed	R1
Follow management prescriptions identified in Stewardship Plan	Vegetation; Wildlife	Developed (where possible); Passive Recreation; Natural; Protection	
Restore, maintain and monitor area near Cowboy Spring	Vegetation	Developed; Passive Recreation	R2
Maintain the health of the forest through proactive management using guidelines set forth in the forest management plan. Monitor for possible future Mountain pine beetle infestations. Mitigate and reduce fuels as needed.	Vegetation	All	R3
Stabilize erosion areas and limit undesignated trails around Sylvan Lake.	Vegetation	Passive Recreation	R5
Monitor movement and reseed mudslide areas (Sneve Gulch and East Brush Creek). Conduct hazard assessment as needed. Monitor for weed infestation.	Vegetation	Natural	R6
Seek funding for stabilization of schoolhouse including new roof and foundation stabilization. Change fence from chain-link to buck-and-rail.	Cultural	Developed	R4
Conduct structural condition assessment of halfway house and roof to prevent deterioration.	Cultural	Developed	R4

Maintain and increase partnership with Eagle County Historical Society.	Cultural	Not applicable	M1
Develop driving tour about historic structures/cultural history of area.	Cultural	Developed and Natural	M5
Follow cultural resource recommendations from stewardship plan Cultural Chapter 7 - p 78	Cultural	Developed and Natural	
Assess and monitor condition of prehistoric and historic sites at yurts.	Cultural	Developed	
Maintain existing scenic viewsheds of the park and consider viewshed with future improvements.	Scenic	Not applicable	
Maintain scenic viewsheds around Sylvan Lake. Avoid impacts to viewshed from future improvements at campground and day use area.	Scenic	Developed	
Maintain rental boat and paddle board fleet.	Recreation	Developed	
Maintain fishing loaner gear program.	Recreation	Developed	
Maintain and increase number of hunting education courses.	Recreation	Developed	
Develop archery instruction.	Recreation	Developed	
Maintain relationship with local interpretation organizations providing programs on park.	Interpretive Programs	Not applicable	M1
Develop interpretation driving tour materials for historical resources, including a brochure that describes different structures and interpretive signs at each point.	Interpretive Programs	Not applicable	M5
Establish youth Fishing is Fun program.	Recreation/Interpretation	Not applicable	M10

Develop campsites for resident volunteers and employee near maintenance shop area.	Operations	Developed	EE1
Connect trail from the Visitor's Center to the Brush Creek Trail.	Trails	Developed	EE2
Construct a horse crossing of Brush Creek on Brush Creek Trail at Bear Gulch.	Trails	Natural	EE3
Develop a group picnic area at Sylvan Lake Day Use Area.	Recreation	Developed	EE4
Maintain aging solar infrastructure	Camping /Facilities	Developed	
Construct standard archery range and 3D archery range at confluence of East and West Brush Creek	Recreation	Developed/Natural	N2
Construct Hunter Education Shooting Range.	Recreation	Developed	N1
Enhancing existing pullout areas along East Brush Creek.	Recreation	Natural/Passive Recreation	EE5
Develop official fishing access trails on West Brush Creek.	Trails	Natural	
Construct yurts or portable cabins near Brush Creek Trailhead.	Camping	Developed	EE6
Install tree protection cages on existing trees and add more trees for shade and visual appeal at Elk Run Campground.	Camping	Developed	EE7
Replace and expand boat docks to accommodate rescue and rental boats	Recreation	Developed	EE8
Develop primitive fishing camping site area on East Brush Creek	Recreation	Natural	N3

Develop leach field for dump station	Camping/Facilities	Developed	EE9
Add wireless connectivity at visitor center and campgrounds	Camping/Facilities	Developed	EE10
Replace fencing between Elk Run Campground and FS 400	Camping/Facilities	Developed	EE11
Replace flagstone on the patios in front of the cabins	Camping/Facilities	Developed	EE12
Formalize the trail between the upper cabins and the lake area	Recreation	Developed	EE13
Construct horse parking/corrals at Meadows Day Use Area.	Recreation	Developed	EO10
Yet to be identified improvements at Quarry Area			EE14
Enhance the parking lot at the Meadows Day Use Area to better accommodate equestrian usage	Recreation	Developed	EE15
Construct East Brush Creek Trail from Meadows Day Use Area to the Quarry.	Trails	Natural	N4
Develop data collection system to accurately report visitation.	Recreation	Not applicable	
Develop ways to market and increase winter visitation and use of park.	Revenue Enhancement	Not applicable	M6
Develop an official visitor capacity number and policy	Recreation	Not applicable	M8
Develop outreach and communications plan.	Revenue Enhancement	Not applicable	M2
Maintain relations with key stakeholders and neighbors.	Operations	Not applicable	M1
Recruit and retain full-time employees.	Staffing	Not applicable	

Evaluate whether to start a Friends of Sylvan Lake State Park group.	Volunteers	Not applicable	M7
Develop fact sheet to regulate using park facilities for weddings	Operations	Not applicable	M9
Seek funding mechanisms for historic structure management.	Cultural	Not applicable	R4
Evaluate and improve park retail operations.	Revenue Enhancement	Not applicable	M4