



DRAFT

The Standley Lake Regional Park DRAFT Master Plan

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Prepared for the City of Westminster Department of Parks, Recreation and Libraries





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In a city widely renowned for its abundance of natural beauty and open spaces, Standley Lake Regional Park stands out as the undisputed crown jewel of Westminster. The park is beloved by residents and visitors alike for its profusion of recreational opportunities, wildlife, and breathtaking scenery; in fact, more than 115,000 people visit the park each year. Generations of Coloradans have grown up and raised their families while hiking, fishing, boating, and camping along the shores of Standley Lake.

While the park's reputation as a veritable playground for outdoor enthusiasts is widespread, it is easy to overlook the fact that Standley Lake serves another critical role. The lake is the primary source of drinking water for Westminster as well as the cities of Thornton and Northglenn. Of course, the wildlife within the park—including such threatened and endangered species as the lake's celebrated nesting pair of bald eagles—is equally reliant upon this critical water source and its surrounding vegetation.

Standley Lake Regional Park's greatest challenge has always been balancing the demand for recreational usage with the need to protect and preserve critical water resources. This comprehensive master plan is the result of an exhaustive study and collaboration between park officials, environmental scientists, key stakeholders, and the community to determine the most effective guidelines and strategies for managing these sensitive resources while at the same time providing the recreational improvements the public desires. Proposed expansion and improvements outlined in the plan will include a process of review by key stakeholders, including specifically those direct to protecting and preserving the critical water source of Standley Lake.

Key features of the Standley Lake Regional Master Plan include a loop trail around the perimeter of the lake with connections to the Greenway regional trail network; a new, expanded Nature Center; a new day-use area on the southeast side of the lake; a variety of day-use pavilions and park shelters including new restrooms; expanded camping opportunities; additional wildlife viewing areas; shoreline access improvements; and an increased focus on conservation and revegetation. Proposed park enhancements will coincide with a robust expansion of environmental education programs.

The combination of increased resource protection, recreational facility enhancements, and trail network connectivity will position Standley Lake Regional Park as a premier outdoor destination and training ground for both novice and experienced recreationists. At the same time, it is important to note that water quality at Standley Lake will always take priority over the development and introduction of new programs and improvements.

As the greater metropolitan area continues to grow at unprecedented levels, land development around Standley Lake Regional Park will only increase in coming years, as will park visitation. This master plan will serve as a blueprint for responsible, sustainable growth and ensure that the park remains healthy and vibrant for future generations to enjoy.

Please see the next page.



Introduction 1.0



Figure 1-1. View of Standley Lake Regional Park

1.1. Master Plan Vision

The Standley Lake Master Plan will guide future park improvements and recreation programming that balances its value as a critical natural resource with its use as a unique Front Range recreation destination.

Master Plan Goals

- Support the lake’s function as a critical water supply for Westminster, Northglenn, Thornton and FRICO under the terms of the existing Standley Lake water quality and operational agreements.
- Maintain and enhance the natural resources at Standley Lake with restorative planning and design.
- Provide recommendations for comprehensive open space stewardship, natural resource preservation, and recreation programming.
- Reinforce Standley Lake Regional Park as a unique Front Range recreation destination.
- Communicate the unique value of Standley Lake Regional Park to current and future local and regional visitors.
- Maximize the user experience while preserving the park’s natural resources and protecting the water supply.
- Synchronize park programming and amenities with whole health, connections to nature, and overall well-being.
- Safely accommodate multi-modal traffic throughout the site.

1.2. Standley Lake History

When Colorado was first settled in the early 1860s, the area now occupied by Standley Lake was undeveloped prairie bisected by an unnamed stream. Around 1870, John S. Kinnear filed a homestead claim on part of the land, secured rights to water from Coal Creek, and constructed an irrigation ditch and reservoir that would become Standley Lake.

By 1890s, the land and reservoir were owned by Thomas B. Croke, a Denver resident and owner of Thomas B. Croke and Company, a thriving carpeting, draperies and upholstery business. In 1902, Thomas Croke teamed with Ottawa Joseph (“O. J.”) Standley and Milton Smith to incorporate the Farmers Reservoir and Irrigation Company (FRICO), an enterprise whose goal was to develop a system of canals and reservoirs that would provide water to the rapidly developing farm country north and northwest of the city.

Given their backgrounds and continued Denver residency, it is clear that Croke, Standley, and Smith pursued the development of irrigation projects not as farmers but as entrepreneurs and investors. For some time, Standley had been seeking a site to build a water storage reservoir north of city, initially settling upon Barr Lake near Brighton as an option. However, Croke and Standley decided instead to enlarge and improve Kinnear Reservoir. To accomplish this project and invest

in farmlands north of the city, the men created the Denver Reservoir and Irrigation Company and moved forward with planning (the Denver Company operated in tandem with FRICO). From that time on, O. J. Standley served as the company’s president, and the effort’s most dedicated advocate and manager.

Construction began in 1908 and continued into early 1910 with a massive earth moving effort. Excavation and earth moving were accomplished using large steam shovels and dragline dredges (see Figure 1-2). The dedication ceremony for the new Standley Lake Dam took place on Sept. 7, 1911. A special Colorado and Southern train transported dignitaries, together with several hundred citizens, from Denver’s Union Station to the site. After stepping off the train at the construction camp below the dam, the crowd ascended the massive earthen wall on foot. One reporter with the Denver Daily News (Sept. 8, 1911) described the view:

“On top, the almost dry bottom of the lake spread out like a huge amphitheater. Clumps of trees in the bottom, from one to two miles distant, appeared like bushes, and out in the heart of the big hole a group of farm buildings rested peacefully where 100 feet of water will be reposing in a year or two.”



Figure 1-2. Photo of dam and reservoir construction (Image Source: City of Westminster)

A small but growing lake in the bottom of the reservoir looked to the reporter like a tiny frog pond from atop the dam wall. The beautiful and imposing setting elicited gasps from the visitors, many of whom had never seen the site before. The lake would be named in honor of Standley, the driving force behind the project during its several years of development.

Upon completion, Standley Lake's earthen dam was reported to be the largest of its kind in the United States, and possibly the second largest in the world. Three million cubic yards of soil had been excavated and moved to create a dam wall measuring 700-feet wide at the base, 1.25 miles long and 113-feet high. The lake was filled with water from Clear Creek, Coal Creek, Ralston Creek and Leyden Creek, delivered by way of the Croke Canal and Church Ditch. Water also entered the lake from the upper reaches of Big Dry Creek and Woman Creek above the reservoir. Additional water was secured from the Farmers High Line Canal. The twin outflow from Standley Lake divided the water below the dam between the Niver Canal and Big Dry Creek.

By the early 1960s, residents of Westminster had become concerned about the quality of their water system. An attempt was made to secure water from the City of Denver, but this failed. Following more than three years of negotiations, in 1963 the City of Westminster completed its first major water agreement when FRICO's stockholders approved a contract that would allow the city to store 12,000 acre-feet of water in Standley Lake. Westminster enlarged the dam, expanding the reservoir's capacity to hold the additional water and bringing it to its current 42,000 acre-feet of storage capacity. This agreement provided residents with quality drinking water and positioned the city for growth in the coming decades.

In 1970, the city began looking to manage Standley Lake as a regional park, an idea first raised and studied in the late 1950s. However, it was determined that this could not be done unless the lake was located within the city. The following year, Westminster reached out to the west and annexed 2,500 acres of land that included

Standley Lake, bringing its primary water source and the reservoir's recreational potential into the city limits.

After years of lawsuits between competing jurisdictions, the historic "four-way agreement" of 1979 was negotiated between Westminster, FRICO, Thornton, and Northglenn which determined the water rights to Standley Lake that still exist today.

In 1998, after years of attempts to turn Standley Lake into a regional park, Jefferson County Open Space and FRICO reached an agreement that transferred land and recreation rights to the county. The county then deeded the property, together with the lake's surface recreational rights, to the City of Westminster with the understanding that the city would maintain and improve Standley Lake as it was converted to a regional park. To accomplish this goal, Jefferson County Open Space contributed \$2.4 million to the project for improvements that included campground and restroom facilities, a new boat ramp, the visitor's center and a system of roads and trails.

The 1996 Master Plan that guided the initial improvements at Standley Lake Regional Park included a wide range of proposed uses such as a marina, restaurants, and a swimming pool. While many of these uses are no longer compatible with the character of the park, rethinking the direction of the 1996 Master Plan helps realign the City's commitment to protecting Standley Lake's natural resources, providing educational opportunities and meeting the needs of the community. Figure 1-3 provides a timeline of key milestones in the development of Standley Lake Regional Park.

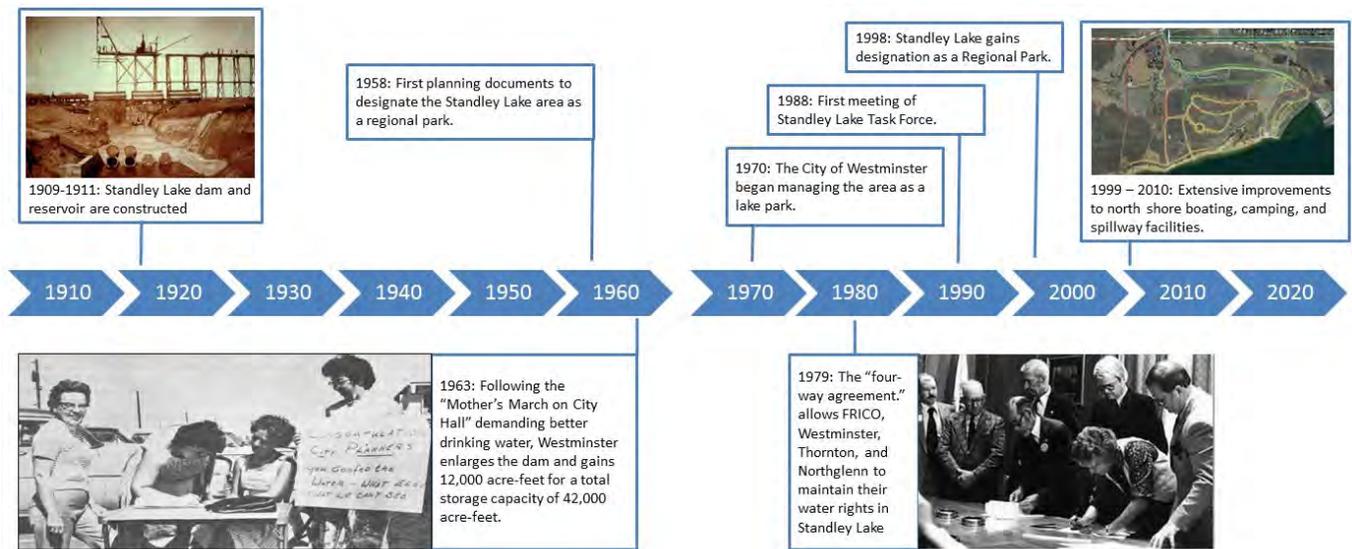


Figure 1-3. Standley Lake Regional Park Timeline

1.3. Lake, Park & Watershed Management

Standley Lake Regional Park is owned and operated by the City of Westminster. While the public has access to the parkland and recreational use of the lake, the water rights are jointly owned by the cities of Westminster, Thornton, Northglenn and the Farmers Reservoir and Irrigation Company (FRICO). A 1994 Intergovernmental Agreement (IGA) between the three municipalities governs both the water use and adjacent land use and is managed by the Standley Lake Operating Committee (SLOC). Aspects of the 1994 IGA that influence the park master plan are discussed in more detail in Chapter 2.

At capacity, Standley Lake averages 36-feet in depth, with a maximum depth of 96-feet at the face of the dam. It holds about 42,000 acre-feet of water (one acre foot can support the average suburban family of four for one year). This is the equivalent of more than 13 billion gallons. Because the lake is used as a source of drinking water, its quality and health are monitored by the City of Westminster on an ongoing basis. Consequently, activities such as swimming, overnight boating and jet skiing are not allowed, and the number of motorboats is tightly regulated. The Colorado Division of Wildlife stocks the lake each summer, providing excellent fishing for walleye, smallmouth bass,

bluegill, rainbow trout and other species. Water is delivered from Clear Creek to the south side of Standley Lake from the Church Ditch, Farmers' High Line Canal, and the Croke Canal. The remainder of the water is either delivered from the west through the Kinnear Ditch Pipeline or is direct runoff from Standley's tributary basin.

The water source for Standley Lake is the Upper Clear Creek Basin via a network of

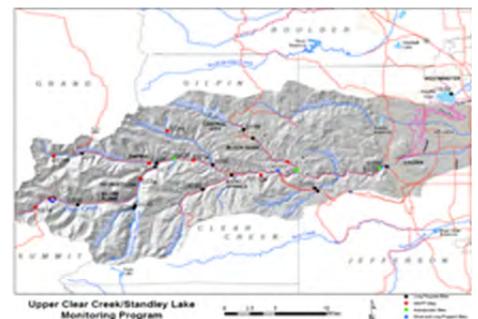


Figure 1-4. Upper Clear Creek Watershed (Image Source: City of Westminster)

ditches and canals that divert water from Clear Creek downstream of the City of Golden, specifically the Croke Canal, Church Ditch, and the Farmers' High Line Canal (Figure 1-4). Due to the reliance on Standley Lake as the primary drinking water supply for the City of Westminster and other SLOC members, the protection of the Upper Clear Creek Basin and the connecting drainageways is critical to the health and function of the lake.

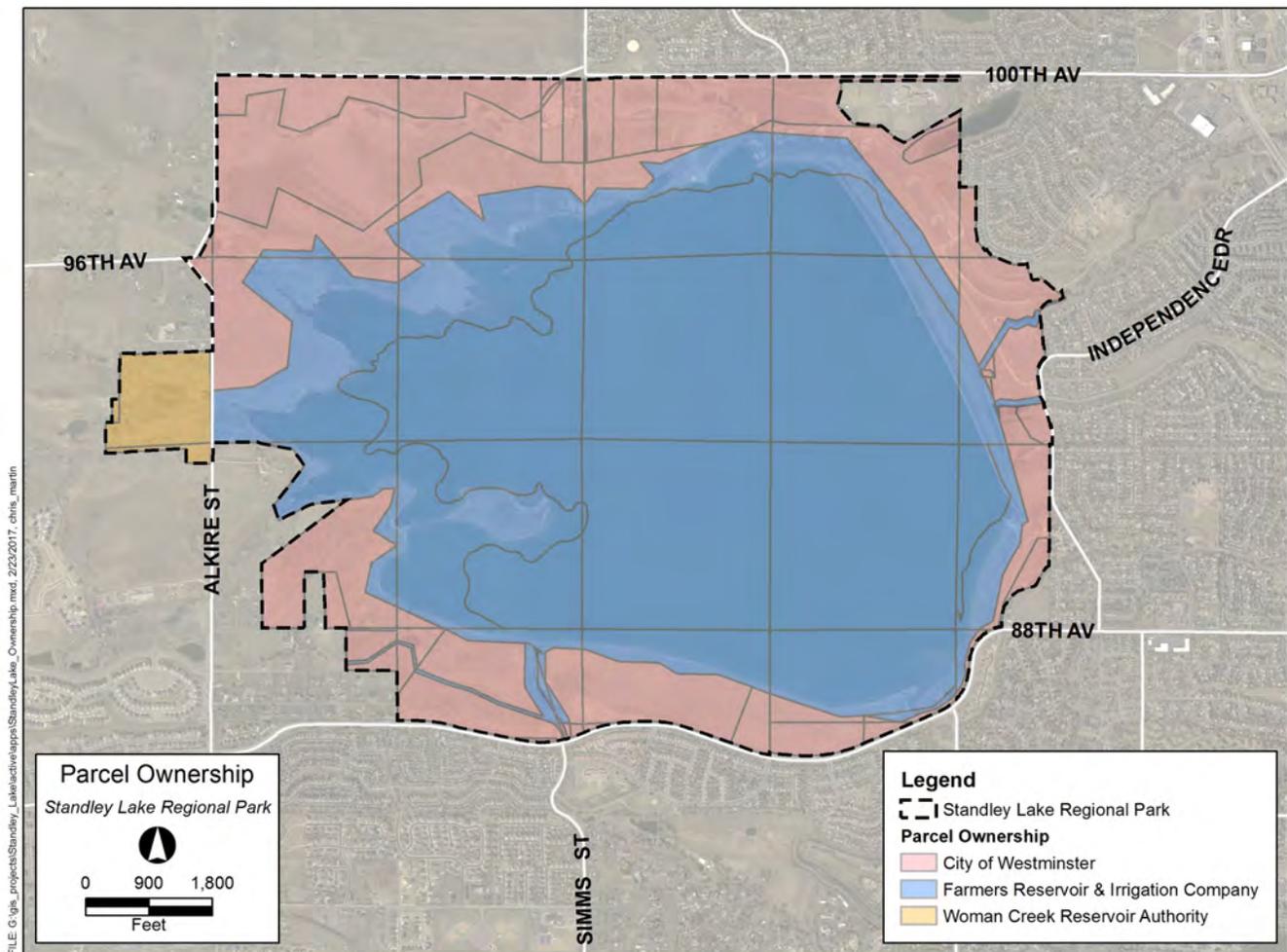


Figure 1-4a Parcel Ownership

The ownership of Standley Lake includes the City of Westminster, FRICO, and the Woman Creek Reservoir Authority. Figure 1-4a delineates the land ownership throughout the park.

The City of Westminster and other Upper Clear Creek Basin-dependent communities have taken great effort to protect this critical natural resource. The 1993 Clear Creek Watershed Management Agreement addressed water quality issues across the basin by implementing Best Management Practices (BMPs) to protect water quality and adopting a long-term monitoring plan.

The 2009 Source Water Protection Plan for Upper Clear Creek Watershed and Standley Lake was completed under a grant from the Colorado Department of Public Health and Environment to the Standley Lake Cities (Westminster, Thornton, and Northglenn). The report

prioritized water sources based on the highest total susceptibility and/or physical setting vulnerability ratings as well as potential contaminant sources based on those that are (1) most prevalent, (2) most concerning, or (3) most prevalent and concerning.

In addition to watershed planning, the management of recreational uses allowed on the lake and within the adjacent park and open space areas is critical to the health of Standley Lake and its role as a critical community resource. The City of Westminster has led projects that have greatly improved the water quality by reducing uncontrolled surface flows of the drainage sub-basins above Standley Lake and its tributaries. Figure 1-5 illustrates the reduction of land draining to Standley Lake between 1990 and 2009 due to basin water quality improvement projects. The degree of reduction demonstrates the successful investment of public funds to protect critical natural resources.

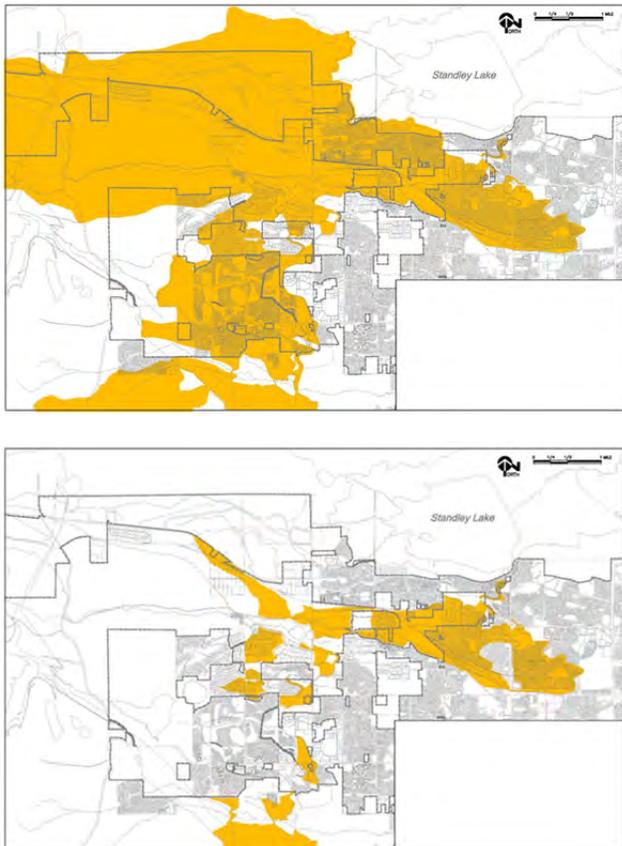


Figure 1-5. Lands draining to Standley Lake
In 1990 top image
In 2009 bottom image
(Image Source: City of Westminster)

drainage basin to the west of Standley Lake. This project was also instrumental in preventing additional stormwater from the September 2013 major flood event from entering the lake.

The nearby Rocky Flats Environmental Technology Site (RFETS) was a nuclear production facility that was converted to a national wildlife refuge in 2007. While some degree of concern can be expected related to its adjacency to Standley Lake is expected, the drainage basin for the Rocky Flats facility is separated from the lake drainage basin by the Woman Creek Reservoir and does not pose a threat to the water quality of the lake. The City of Westminster has maintained active participation in technical workgroups related to the RFETS since 1989.

Water levels within the lake can fluctuate depending on the available supply and user demand. Low lake levels are anticipated routinely under future modeled scenarios. Furthermore, the Standley Lake IGA notes that "...the users of Standley Lake shall have at all times the right to raise and lower the water levels in Standley Lake without restriction or liability...and that there shall be no minimum water level for Standley Lake ..." Given the historic and projected fluctuations of the lake water level, consideration should be given to the impacts on park recreation when the water levels are low.

In 2009, after 20 years of planning and negotiations, the Church Ditch Water Quality Project was completed. This project significantly reduces stormwater runoff impacts to Standley Lake from adjacent developments in the

Threats to Standley Lake Water Quality

Despite exhaustive precautionary planning, threats to the water quality of Standley Lake exist in many forms and originate from diverse sources that are challenging to monitor and regulate including the following:

- Pathogens
- Invasive Species
- Wastewater Treatment Plants
- Organics
- Internal Lake Loading
- Nutrients
- Septic Systems
- Flooding

Due to the recreational boating that is allowed on Standley Lake, invasive species such as the zebra and quagga mussels pose a serious threat to water quality. These rapidly-spreading mussels typically enter lakes via residual water of watercraft and cling to firm surfaces such as water intake valves and pipes resulting in costly ongoing maintenance repairs to water infrastructure. Once mussels have been introduced they are potentially impossible to completely eliminate. In response to updated information from the State of Colorado regarding revised mussel survival rates of up to 30 days, the City of Westminster increased the boat quarantine period from 30 to 35 days. Given Standley Lake's role as the drinking water supply for over one quarter of a million Front Range residents and its potential susceptibility to the zebra and quagga mussels, the degree to which recreational boating is allowed on the lake should be considered in future lake recreation programming. Figure 1-7 identifies the historic minimum and average water levels which further illustrate the potential volatility of the lake levels depending on precipitation across the Upper Clear Creek Basin.

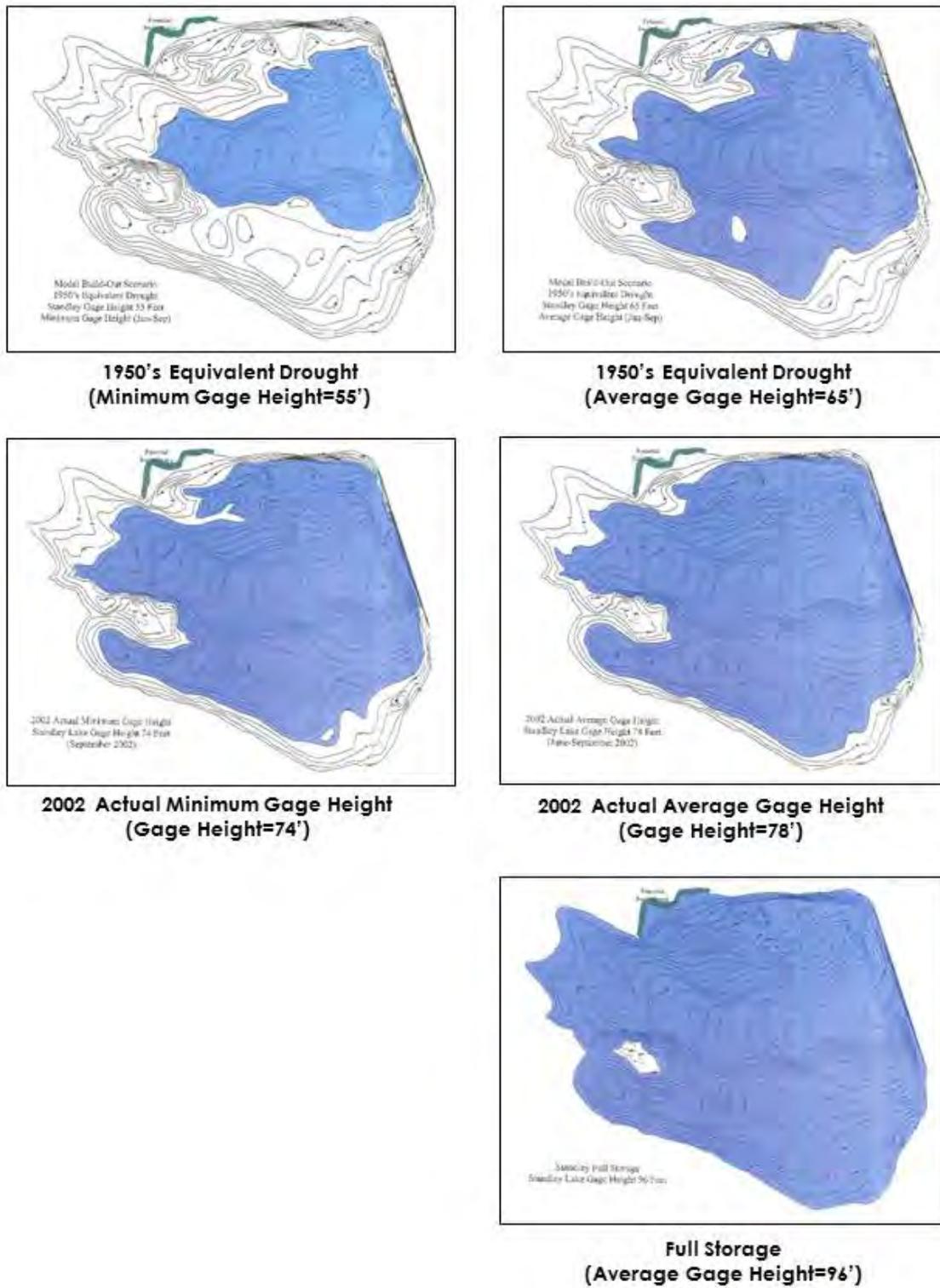


Figure 1-7. Standley Lake Historic Minimum and Average Water Levels
 (Image Source: City of Westminster)



Figure 1-8. View west across Standley Lake

1.4. Context and Environment

Standley Lake is located on the western edge of Westminster and is the centerpiece of the 2,321-acre Standley Lake Regional Park. Together the lake and park occupy a massive area of over 5 square miles, bordered by West 100th Avenue on the north, 86th Parkway on the south, Independence and Kipling streets on the east, and by Alkire Street (County Road 19) on the west.

With 1,200-acres of surface area, Standley Lake is Westminster's largest body of water. It is also the Denver metropolitan area's third largest reservoir, after Barr Lake (1,937 acres) and Chatfield Reservoir (1,479 acres).

Generally, the land uses surrounding Standley Lake Regional Park are single-family detached residential

homes to the north, east, and south and rural residential homes and open space to the west with pockets of newer, denser residential developments located west of the park.

The geographic location of the park also provides an opportunity for it to serve as a "trail nexus" between the urbanized metro area to the east and the mostly undeveloped foothills to the west and the Rocky Mountains beyond. Figure 1-9 illustrates the contrast between the extent of the public open space west of the park and the urban areas east of the park. This location between developed urban land to the east and the foothills of the Rockies to the west presents an excellent opportunity to position Standley Lake Regional Park as a premier recreation destination in the Denver metro region.

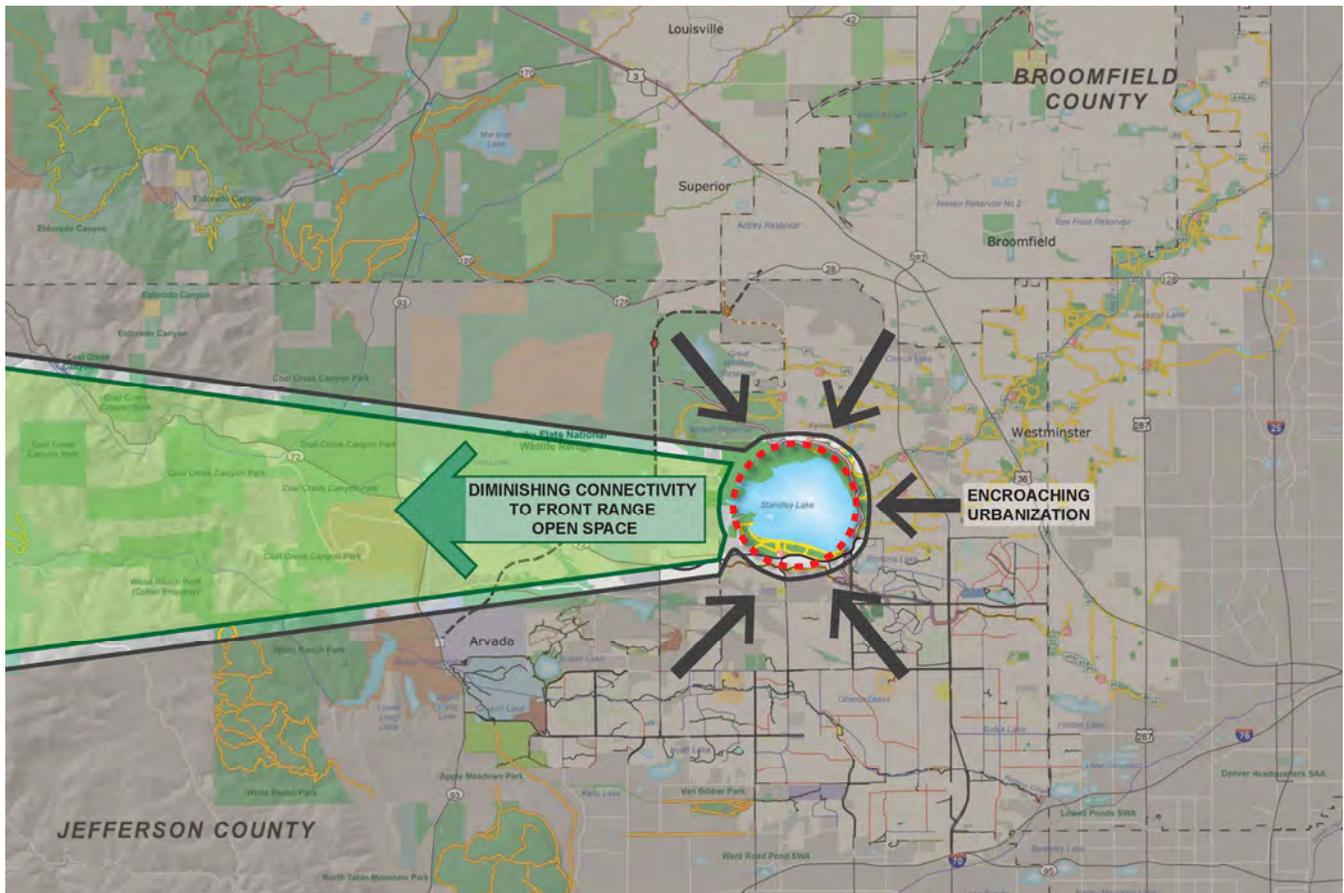


Figure 1-9. Standley Lake Regional Context

As previously noted above, land development is encroaching into the vicinity of Standley Lake, particularly on the west side of the park. In addition to predominately single-family residential developments, the final extension of the E470 highway (known as the Jefferson Parkway) is proposed between the Cities of Golden and Broomfield to “close the loop” and complete the beltway around the Denver metro region. This segment of highway will follow the Indiana Street alignment just west of Standley Lake Regional Park and less than one mile from the west edge of the park (Figure 1-10). Additionally, the Jefferson Parkway will include several new interchanges to the west of Standley Lake.

The addition of the Jefferson Parkway west of Standley Lake will certainly change traffic patterns around the lake including how future users will access the park. The demand for trail use and access to the park will continue to increase as land around Standley Lake transitions from low density, rural residential land uses to denser mixed-use developments. This increased demand further underscores the need for the Standley Lake Master Plan to balance recreational opportunities with the protection of the park’s natural resources.

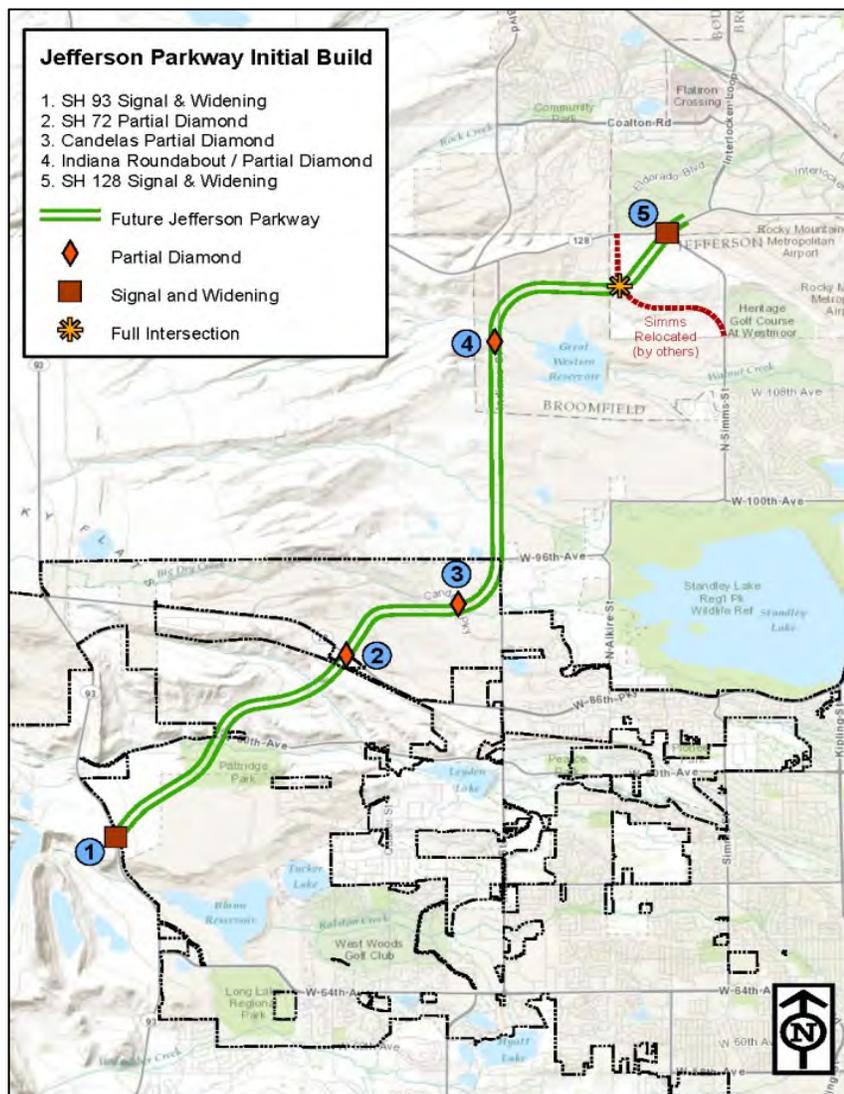


Figure 1-10. The proposed Jefferson Parkway alignment
(Image Source: Jefferson Parkway Public Authority)

In the spring of 2015, ERO Resources conducted a Natural Resource Assessment for the western portion of the park to evaluate potential trail alignments for a continuous trail loop around the lake. The following summary is comprised of excerpts from that inventory and the full Natural Resource Assessment is attached as Appendix A of this report. Upon selection of a preferred loop trail alignment, further study will be required to evaluate the potential impacts to natural resources.

Climate and Vegetation | The climate of the area is typical of mid-continental semiarid temperate zones, but the strong rain shadow effect of the Southern Rocky Mountains makes the area somewhat drier. The average annual precipitation is between 12 and 18 inches, most of which occurs between April and September. The mean annual temperature is between 45°F and 55°F. The majority of the region historically consisted of short- and mid-grass prairie. Major vegetation communities observed in the project area during the June surveys include disturbed uplands, mixed upland grasslands, pasturelands, riparian woodlands, and wetlands.

Streams, Open Water, & Wetlands | Woman Creek, Big Dry Creek, and several other small intermittent streams can flow into Standley Lake from the west and south if not intercepted by the Church Ditch as part of the Church Ditch Water Quality Project. Water was flowing within portions of the ditch during the June surveys. Little to no wetland vegetation was observed along the ditch during the March and June surveys. Seep and swale wetlands dominated by cattails, spikerush, water and Nebraska sedges, and sandbar willows do, however, occur down-gradient of the ditch within the Park along the southern portion of the Lake Loop trail alignment. Open water and wetlands were mapped along two intermittent streams that flow into Standley Lake as well as along the shoreline of Standley Lake and other natural drainage and seep areas within the project area). A variety of wetland species including several sedges species, artichoke rush, spikerush, reed canarygrass, cottonwoods, and sandbar willow occur along the shoreline of Standley Lake.

Wildlife | The park's location at the interface of the foothills montane shrubland and the grasslands of the Great Plains support a wide variety of wildlife species

that depend on habitat in either or both ecosystems. The quality and connectivity of wildlife habitat in the project area is supported by the large areas of protected open space or otherwise undeveloped land, which preserves several habitat types as well as movement corridors between different habitat areas.

Although they are most commonly found in upland or riparian shrublands, mule deer are common throughout the project area, and are known to occur within almost all available habitat types including open grasslands. Carnivores common in the project area include the coyote, raccoon, red and grey foxes, and striped skunk. These species are typically observed in open grasslands and in close proximity to riparian corridors. A variety of small mammals are found in various habitat types in the project area. Grassland species include white-tailed jackrabbit, eastern cottontail, desert cottontail, and the black-tailed prairie dog. Small mammals associated with riparian and wetland habitats include the meadow vole, prairie vole, and various mice and shrews, including the threatened Preble's meadow jumping mouse.

A wide variety of bird species use different habitat types in the project area for shelter, breeding, wintering, and foraging at various times during the year. Common grassland birds include the western meadowlark, sparrow, horned lark, and lark bunting. Shrubland birds include the spotted towhee, song sparrow, yellow-breasted chat, and black-capped chickadee.

Wetland habitats typically support red-winged blackbirds, song sparrows, common yellowthroats and common snipes, while riparian vegetation supports the northern oriole, American goldfinch, house finch, and American robin. Shorebirds such as the killdeer and the American avocet are common along lake environments. Open water within Standley Lake provides nesting and foraging habitat for a variety of waterfowl species such as the mallard pintail and Canada goose. Use of these areas by herons varies depending on the water level, which fluctuates. American white pelicans are regularly observed during the summer at the lake. In addition, great blue herons and double-crested cormorants nest in rookeries located on the island in the western portion of Standley Lake, as well as on the lake's northwestern shoreline.

Raptors commonly occurring in the project area include the red-tailed hawk, great horned owl, American kestrel, and Swainson's hawk. An active bald eagle nest is located south of 100th Avenue within the Park. ERO observed three potential raptor nests and one active red-tailed hawk's nest during the March and June surveys. Burrowing owls potentially occur in prairie dog colonies throughout the project area (ERO, 2015).

Standley Lake Regional Park has been home to a pair of bald eagles (*Haliaeetus leucocephalus*) since 1992. When the eagles were first observed building a nest in the northwest portion of the property, Standley Lake officials closed off access to the area so the eagles would be undisturbed in their attempt to nest. Bald eagles usually mate for life and reuse nest sites. Because they are sensitive to human disturbance, it is imperative that the area remains closed to protect the nesting habitat.



Figure 1-11. View of eagle next in northeast portion of the park (Image Source: City of Westminster)

The eagles at Standley Lake first produced offspring in 1996. They usually lay their eggs in the first weeks of February. Incubation lasts for a period of approximately 35 days, at which time 1 to 2 nestlings will hatch. These nestlings will first leave the nest in late May to early June, approximately 72 days after hatching. Both parents take care of the young eagles even after they leave the nest. The young will leave the area sometime before October or November, either on their own or when the parents force them out. The bald eagles at Standley Lake rely primarily on small mammals for food, but fish is an important part of their diet as well. In November 2016 the City installed a solar-powered eagle

camera on a nearby utility pole to live stream the eagle's activities, connecting the outside world with Standley Lake's most famous residents.

The lake is stocked regularly throughout the summer by Colorado Parks and Wildlife. In addition, the lake supports a variety of other fish. The following list shows the species of fish in the lake, as well as their availability as defined and established by Colorado Parks and Wildlife:

Fish	Availability
Rainbow Trout	Common
Brown Trout	Rare
Walleye	Moderate
Yellow Perch	Moderate
Channel Catfish	Moderate
Large Mouth Bass	Rare
Small Mouth Bass	Moderate
Wiper	Moderate
Striper	Rare
Sunfish	Rare
Bluegill	Rare
Carp	Common

1.5. The Planning Process

The Standley Lake Master Plan will guide future park improvements and recreation programming that balances its value as a critical natural resource with its use as a unique Front Range recreation destination. Given the lake's critical importance as a water supply for three municipalities and FRICO, maintaining water quality was the highest priority throughout the master planning process.

The planning process was divided into three phases which are illustrated in Figure 1-12. A Standley Lake Master Plan Advisory Committee was created to provide project oversight and plan review throughout the planning process. In addition to regular meetings with the Master Plan Advisory Committee, a series of Stakeholder Workshops and Public Open Houses were conducted at each phase of the master plan development to maximize community engagement.

A Public Outreach campaign was conducted using a series of online surveys to understand the recreation interests and desires of core users of Standley Lake Regional Park, local residents (both users and non-users of the park), and residents from the broader Front Range region. Current usage characteristics, community values with respect to open space, priorities for trails and other facilities, satisfaction with current facilities, importance of various facilities and services, communication, and decision-making factors were probed through the various survey efforts. Additionally, current recreation trends and demographics were evaluated for applicability within the park. The survey findings are summarized in Section 2 of this report and attached as an appendix. A Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis was conducted with the Advisory Team, Project Stakeholders, and community to assess the full spectrum of issues within and around the park. The SWOT Analysis is discussed in more detail in Section 2 of this report.

The combination of traditional community engagement techniques, online surveying, trend research, and the SWOT analysis provided the foundation for the master plan alternatives discussed in Section 3 of this report. The Public Open House events were very well attended with 89 participants attending the first open house and 39 attending the second. Additionally, the outreach surveys received above average response rates which suggest a high degree of public interest in the future of Standley Lake Regional Park.

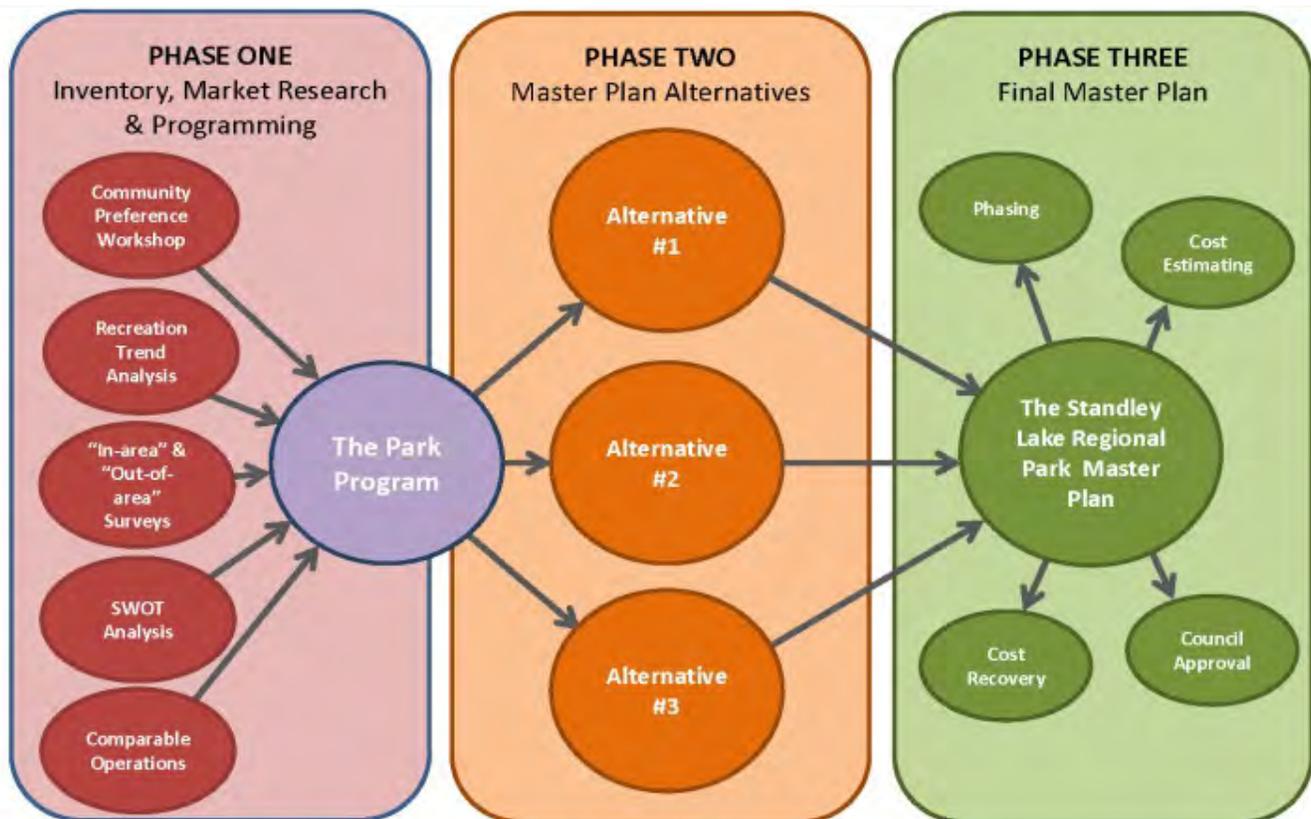


Figure 1-12. The Standley Lake Master Plan Process (Image Source: Matrix Design Group)



2.1 Introduction

The park’s main entrance is located north of the lake at West 100th Avenue and Simms Street. At this location, visitors find a staffed entry booth for information and payment of vehicle entry fees. No entry fees are charged for pedestrian and bicycle access and three trailhead parking areas are offered for fee-free access into the park: (1) south of 100th Avenue at Owens St., (2) north of 100th Avenue west of Simms Street, and (3) north of 86th Parkway at Simms Street.

Most of the lake surface, lakeshore and park area is open to the public. However, access is restricted in two areas. The first of these is the lake’s northwest corner, which is closed to the public due to the presence of nesting bald eagles. The second closed area includes the spillway and mile-long dam wall that stretch along the lake’s northeast shore. This is the private property of FRICO, and for safety and security reasons is off-limits to the public. In 2004, a new outlet works, spillway, and valve house were constructed at the northeast corner of the lake, and the original outlet works to the southeast near the middle of the dam were abandoned. Below the new spillway, a massive drainage way curves below the dam wall and then drops into Big Dry Creek.

Park Districting

Based on existing ecology, topography, uses, and access, the park was divided into five districts (Figure 2-1) to facilitate further detailed analysis which are as follows:

Park Center District | The primary center for camping, boating, and day use activities and for the operational headquarters for the park.

Conservation District | A mosaic of wetland, riparian, and upland prairie ecosystems and the current nesting location of several raptors including the resident bald eagles.

Southshore District | A popular day use area with an extensive trail network and accessible lake shoreline.

Lakeview District | The original park entry and trailhead prior to the north side “Park Center” development which is currently underutilized in terms of its recreational potential, accessibility, and scenic western views across the lake to the Front Range.

Spillway District | A use-restricted area that includes the dam and the area that extends eastward to Big Dry Creek. An existing trail connection within this area serves as a segment of the Rocky Mountain Greenway Trail connecting Rocky Mountain Arsenal National Wildlife Refuge near Denver International Airport to Rocky Flats National Wildlife Refuge and potentially extending further to Rocky Mountain National Park.

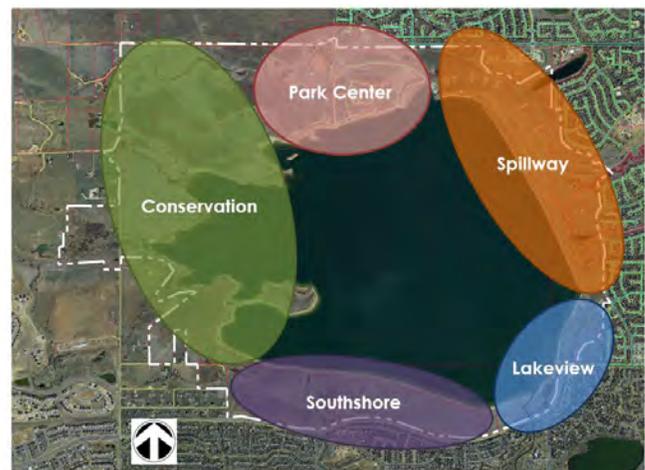


Figure 2-1. Standley Lake Master Plan Planning Districts

2.2 SWOT Analysis

A Strengths, Weaknesses, Opportunities and Threats, or SWOT Analysis, was conducted to evaluate the full spectrum of issues within and around the park. An important distinction to make regarding this analytical approach is that Strengths and Weaknesses evaluate current conditions whereas Opportunities and Threats consider potential conditions. In order to manage the extensive data collected during this analysis, the park was divided into five districts based on the park use, landform, and environmental conditions.

The SWOT Analysis was first conducted with the Master Plan Advisory Committee due to the member’s in-depth knowledge of the park, lake, and watershed issues. The input from the committee was integrated into exhibits for use at the first Community Open House to further expand the SWOT Analysis findings.

Participants at the Community Open House were encouraged to visit various SWOT stations and place sticky note comments directly on the illustrative boards. Additionally, project team members were available to answer questions and record comments.

Figure 2-2 includes the SWOT Analysis exhibits that were developed with the Master Plan Advisory Committee and presented at the Stakeholder Advisory Meeting and the Public Open House.



Figure 2-2. 'SWOT' Analysis Exhibits were developed for each park district

Park Central District Existing Facilities

- The Park Central District (Figure 2-3) is currently the primary recreation activity center in Standley Lake Regional Park. It serves as the main entry to the park and includes the administrative and visitor center, day use, campgrounds, and boating facilities.
- The visitor center includes a nature center with wildlife displays and a multipurpose room that hosts environmental education activities, administrative staff offices, restrooms, and visitor information desk. A spacious outdoor deck provides an ancillary outdoor classroom and gathering area.
- A fenced boat storage area is located behind the visitor center with storage space for 350 boats and park maintenance and storage facilities.
- Day use areas include lakeside picnic areas, non-motorized boat/paddleboard rentals, hiker parking, and a handicapped accessible fishing pier.
- Camping facilities are provided in two (2) campgrounds that are separated by the boat ramp, providing 70 total campsites. The camp sites allow both RV and tent camping however they do not provide electrical, water, or data service amenities. The campgrounds are served by two (2) flush toilet restrooms that include outdoor showers. In 2016, six tipis were installed and include double and single cots, fire pit, and picnic table.
- A four-lane concrete boat ramp allows simultaneous launch capabilities, however limited courtesy dock facilities result in congestion at peak periods. A boat trailer parking area is located above the ramp in relatively close proximity to the ramp. A fish cleaning station is provided above the boat ramp and trailer parking area.



Figure 2-3. Park Central Existing Facilities

Strengths

- Consolidated activity center
- Heavy demand for existing programs and facilities
- Excellent views of lake and Front Range
- Growth potential available
- Buildings & infrastructure in relatively good condition
- Strong visitation from surrounding neighborhoods
- Serves as north trailhead of the park
- Current site grading is in conformance with IGA requirements to divert stormwater away from lake
- Boat storage generates revenue
- Excellent wildlife viewing to west park area

Weaknesses

- Un-signalized intersection at 100th Avenue and Simms Parkway creates unsafe access point into park
- Vehicular queuing at entry gate during peak weekends extends cars from gatehouse into 100th Ave/Simms Pkwy intersection
- Parking is limited during peak weekends
- Nature Center is under-sized
- Campground spaces are limited and under-sized for RV parking
- No electrical/service connections for RV's = generator noise
- Campers are 70% boat permit holders and frequently reserve premium campsites throughout the season, limiting the opportunity for new visitors to experience these preferred camping locations
- Limited plant material, shade, site furnishings, etc.
- No play areas for children
- No concessions available

- Day use areas are limited and in high demand
- Boat storage is limited and in high-demand
- General storage areas are limited and in high-demand
- Courtesy dock too small
- Irrigation capacity is limited

Opportunities

- Expansion/growth areas are available
- Existing programs are in high-demand
- The Greenway Trail provides a regional trail connection
- Potential connections to open space areas west of park
- Excellent access to potential environmental education sites
- Potential to partner with school district for increased field trip visits
- Proposed JeffCo Parkway may increase regional access from the north
- Park merchandising

Threats

- Increased programs and facilities may create water quality issues
- Droughts/low water levels may reduce park appeal and viability of some programs
- Proposed JeffCo parkway may inhibit access to western open spaces and Front Range

ACTIONS SYNTHESIS

1. Focus new and expanded active use in the Park Center district, building upon existing infrastructure investment and enhancing as necessary to accommodate future growth in facilities and activity;
2. Improve entry safety and traffic accommodation by realigning the Simms/100th Avenue intersection to

improve visibility, turning movements and vehicle entry stacking;

3. Expand visitor programs and service accommodations by incorporating a new, expanded visitor center, picnic and events pavilion(s), non-motorized boating facilities, and other day use facilities with limited lawn areas;
4. Retain and remodel the existing visitor center to serve as expanded administration, operations and management center to house expanded staffing requirements;
5. Observe and acknowledge current provisions of the Standley Lake IGA by respecting lake development setbacks and preserving the future reservoir expansion potential;
6. Expand, enhance and diversify camping facilities;
7. Retain boat launch, power boat accommodations, ANS control station, and boat storage facilities;
8. Enhance and expand nature-based playground activity areas for day use and campground areas;
9. Provide connectivity to the Rocky Mountain Regional Greenway trail within the park and enhance regional trail visitor experience by providing linkages to the expanded and enhanced Standley Lake trail system;
10. Institute shoreline protection and enhancement measures adjacent to active use areas to stabilize the lake shoreline, enhance riparian edge conditions, and improve water quality.

Spillway District Existing Conditions



Figure 2-4. Spillway Existing Facilities

- The Spillway District (Figure 2-4) is primarily devoted to the lake’s dam and spillway facilities, a large portion of which are fenced and closed to the public, for security and safety reasons. There is an access trail to an unimproved overlook of the spillway at the north end of the dam.
- Trails connecting the north and south sides of the lake are located below the dam and spillway, on the east edge of the park, offering a topographically challenging course from the dam rim elevation, down to the outflow elevation of Big Dry Creek and back up again.
- Loon Lake is a small reservoir on the north side of Big Dry Creek, east of the loop trail connections, encircled by fairly extensive wetland and riparian vegetation. Currently, the east half of the lake is designated as open space while the west half lies within the boundary of the park. Existing fenced residential neighborhood back yards tightly line south and east banks of the lake. The lake has hosted limited activities, such as youth fishing derbies, but has remained largely un-programmed due to potential use conflicts with adjacent neighbors.
- Big Dry Creek Trail, one of the City’s premier Open Space and trail corridors, extends eastward from the Standley Lake spillway extending through Westminster City Park to the eastern city

Limits at Interstate 25 (I-25). Other trail corridors extending eastward from the park include the Church Ditch (to the northeast), and the Niver Ditch and Farmers Highline Ditch extending eastward from the east edge of the park.

Strengths

- Under-utilized open space may provide additional program opportunities
- Provides a neighborhood buffer with multiple connection points
- Existing trails provide connections from north to south side of lake
- Loon Lake is an excellent fishing and educational resource
- Proximity to existing neighborhood provides a strong visitor base
- IGA-required drainage away from lake is not an issue

Weaknesses

- Poor visibility for safety monitoring/security
- Potential for additional programs on dam embankment are limited due to concerns for the protection of a critical resource
- Steep slopes limit development
- Spillway may be a barrier to internal circulation

Opportunities

- Under-utilized open space may provide additional program opportunities
- Better connectivity to surrounding neighborhoods including wayfinding signage
- Increased Loon Lake programming
- Better defined/designated trails to support a wide range of non-motorized travel modes
- Increased/shared programs with Wayne Carle Middle School

Threats

- Future maintenance and improvements to the dam and spillway facilities may necessitate the disturbance, modification, or removal of existing or proposed recreational facilities
- Surrounding neighborhood may resist additional programs/development (i.e. previous attempts to enhance Loon Lake were opposed)

ACTIONS SYNTHESIS

1. Preserve and protect the Standley Lake dam and spillway facilities through continuing current access restriction measures;
2. Improve and enhance trail network connections to the regional Rocky Mountain Regional Greenway Trail and the adjacent neighborhoods;
3. Consider future low-impact program and enhancement opportunities at Loon Lake that could be developed with minimal encroachment and impact to adjacent residents;
4. Maintain access and ability to operate and maintain water supply and water quality facilities.

Lakeview District Existing Facilities

- The Lakeview District (Figure 2-5) served as the original recreation area and main entry to the park before improvements were made on the north side of the lake. It includes an old concrete boat ramp that is in disrepair, trails that previously served as access drives to picnic areas on a relatively flat terrace above the lake.
- The upper portion of the site is still the site of the Dam Keeper's residence and maintenance materials storage. The residence is located with direct access to the dam crest for maintenance and emergency repairs. Since the extension of W.86th Parkway to Indiana Street, increased traffic has made the safe access into the Lakeview site more difficult. When visitor facilities were relocated to the north shore, this area was closed to vehicular access and visitor parking.

Strengths

- Existing vehicular and pedestrian access from 88th Avenue to lake edge
- Excellent panoramic views to lake and Front Range
- Existing park look trails on north and south sides
- Previous role as primary park entrance has created flat, benched areas for additional program improvements
- Primary access point to the south side in emergencies

Weaknesses

- The former primary park entrance has been neglected and requires access improvements
- Northwesterly winds push waves to this corner of the park and has resulted in severe erosion of the lake edge
- Previous mulch pile and trench training areas are unsightly and unsafe
- Limited monitoring attracts local youth to this area after the park has closed



Figure 2-5. Lakeview Existing Facilities

Opportunities

- Potential to become the south gateway to the park
- Existing topography and access drive may support additional park programming
- Stabilization of lake edge is an opportunity to create a lake promenade or increase lake edge interaction

Threats

- Required improvements to infrastructure to improve access and stabilize the lake edge may be costly
- Increased traffic along 86th Parkway may limit access to this area
- Wave energy from prevailing winds may cause progressive shoreline erosion and threaten water quality

ACTIONS SYNTHESIS

1. Expand active use and visitor facilities to provide day use opportunities and trail access to the park;
2. Improve entry intersection traffic safety through entry drive and W. 86th Parkway upgrades;
3. Stabilize shoreline erosion while accommodating visitor access to the lake shoreline;
4. Provide connectivity to the Rocky Mountain Regional Greenway Trail and enhance the local trail network to improve access to adjacent open spaces and neighborhoods;
5. Incorporate landscape and buffer setbacks from Dam Keeper residence and storage facilities to accommodate operations and maintenance activities;
6. Consider potential future land acquisition to expand park programs and activities;
7. Maintain access and ability to operate and maintain water supply and water quality facilities.

Southshore District Existing Facilities



Figure 2-6. Southshore Existing Facilities

- The Southshore District (Figure 2-6) is anchored by a trailhead at the signalized intersection of W. 86th Parkway at Simms Street. Current trailhead facilities include parking, two (2) picnic pavilions and portable rest room facilities. Trails extend westward from the trailhead along the Church Ditch to the western edge of the park, where they connect to local street network and some (limited) on-street parking easements.
- Eastward from the trailhead, trails extend across the upper portions of the south side of the lake, with informal trails that lead down to the lake's shoreline.

Strengths

- Established trail network
- Neighborhood connectivity
- Views across lake and to Front Range
- Passive, pastoral character
- Existing pavilions in good condition
- Provides access to the west side of the lake from the south

- Relatively flat terrain provides unique lake-level experience of Standley Lake

Weaknesses

- Access across 86th Parkway from neighborhoods is not optimized for pedestrians
- Crossing of drainageways by trails is limited
- Poor drainage and limited large vehicle access in trailhead parking area

Opportunities

- Increased trail connections to neighborhoods
- Single-mode trail designations
- Increased access to edge of lake for hiking, fishing, picnics, etc.
- Trail intersections can be developed as “nodes” with seating, shade, water access, etc.
- Establish better defined access points with potential trail connections to Alkire Street and beyond
- Execute long range agreements for trail access loop

Threats

- Prairie dog habitat limitation
- Private ownership succession within residential area west of park could more severely restrict loop trail access
- Private ownership perceptions or use conflicts could diminish park access and activity
- Increasing Alkire Street traffic could create pedestrian/crossing safety issues
- Future 86th Parkway or Alkire Street expansion

ACTIONS SYNTHESIS

1. Retain passive, pastoral character of this district by focusing activity on day use enhanced by improved trailhead facilities;
2. Expand and improve parking facilities to provide expanded day use activities;
3. Expand and improve trail network and connections to the east and west to provide loop trail access around the lake;
4. Expand and improve shoreline picnic and day use facilities;
5. Institute shoreline protection and enhancement measures to stabilize the lake shoreline and enhance riparian edge conditions.

Conservation District Existing Facilities

- The Conservation District (Figure 2-7) comprises the northwest quadrant of the park and is home to a nesting pair of bald eagles. The nest is located in a large cottonwood tree near Church Ditch, overlooking upland prairie, wetlands, and riparian habitat. The eagles nesting activities are monitored on a solar-powered “Eagle Cam” mounted on a nearby utility pole and live-streamed on the City website
- Woman Creek enters the park from (approximately) the northwest corner of the site, supporting a riparian corridor and broad marshy wetlands area leading to the lake
- Drainages from the west leading to the lake under Alkire Street also support riparian growth and wetland corridors, as well as shallow wetland forebays where they enter the lake



Figure 2-7. Conservation District Existing Facilities

Strengths

- Existing nesting Bald eagle pair are unique, signature elements of Standley Lake Park
- Existing mature Cottonwoods along Church Ditch provide signature overstory canopy visible from south side of the Lake and from 100th Avenue to the north
- Natural Prairie and Cottonwood are signature elements of Colorado Plains ecosystem
- Open character preserves views to Rocky Mountain foothills and Flatirons to the northwest
- Conservation ‘Preserve’ associated with Bald Eagles demonstrates the diversification of the Standley Lake mission beyond camping, boating and recreation
- Observation of (other, non-eagle) wildlife in the area

Weaknesses

- The existing eagle nest and its associated 1/4 mile radius regulatory buffer limits recreational development within this district.
- Alkire Street and 100th Avenue are not pedestrian-oriented/multi-modal and create a barrier to the adjacent open spaces on the west side of the park
- Limited riparian vegetation and tree canopy
- Alkire Street and 100th Avenue are not pedestrian-oriented/multi-modal and create a barrier to the adjacent open spaces on the west side of the park
- Extent of conservation area prohibits additional use areas
- Limited riparian vegetation and tree canopy

Opportunities

- Establish ‘successional’ cottonwood canopy species to replace declining mature trees
- Extend trail system to complete circumferential looped trail around the lake which may include

trail and road networks outside of the park boundary

- Expand habitat opportunities to attract other observable wildlife
- Expand bird blind and other wildlife viewing stations
- Officially adopt the conservation district into the Open Space program as it is currently being managed as open space

Threats

- Decline of existing host-Cottonwood(s) could result in Eagles nesting elsewhere, off-site
- Encroachment of park users into this conservation area may impact existing wildlife and habitat
- Increased development of upstream basin may threaten lake water quality

ACTIONS SYNTHESIS

Given the environmental sensitivity of the Conservation District, minimal recreation facilities are proposed within this area of the park. The primary recreational priority for this district is the addition of a soft-surface trail that will extend from the west side of the Park Central District to the west side of the Southshore District. Trail alignment alternatives through this area should avoid habitat and wetland buffers and take advantage of existing topography and vegetation to minimize view to the trail from the eagle's nest. Given that the Conservation District is currently managed as Open Space versus a Park, further consideration should be given to re-designating this area as Open Space to further support the City's commitment to resource protection

2.3 Open House Community Preferecing

Several interactive Community Preferecing exercises were conducted in conjunction with the SWOT Analysis at Community Open House #1. The intent of these exercises was to gauge the community’s preference towards potential recreation uses at the park and to evaluate the types of improvement priorities that community members would like to see occur in the future.

Community Recreation Activity

The first was a Community Recreation Activity exercise which allowed participants to place stickers on top of images of recreation activities that they had participated in over the last 12 months. The images were selected based on recreation trends and preliminary outreach survey data that are discussed in more detail in the following section. Figures 2-8 through 2-10 summarize the Community Recreation Activity results.

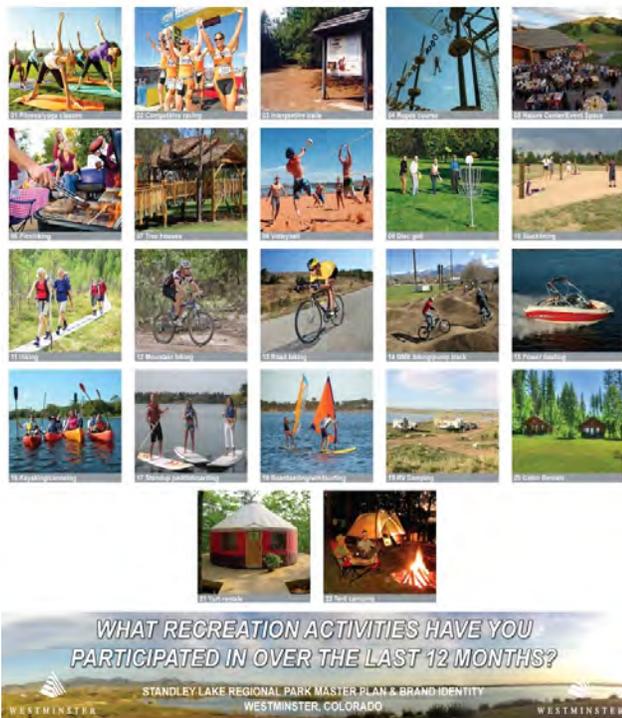


Figure 2-8. Recreation Activity Community Preference Exercise

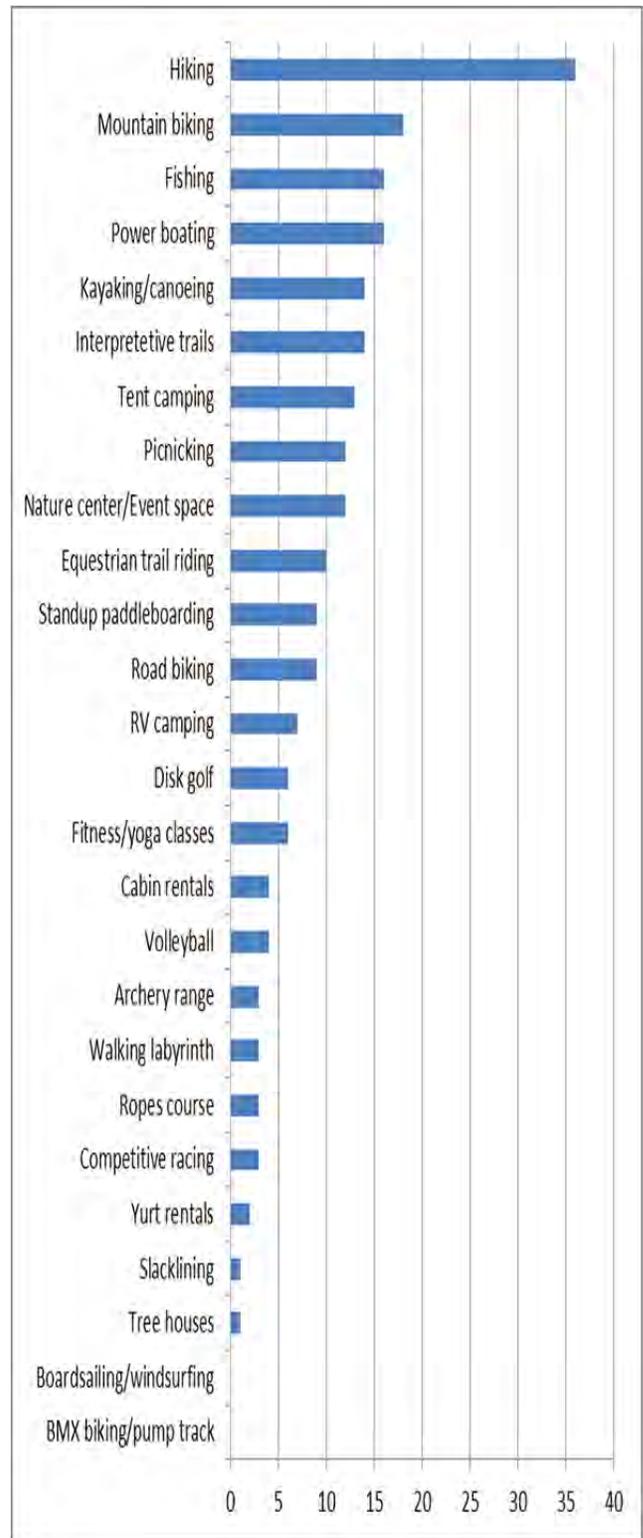


Figure 2-9. Recreation Activity Community Preference Summary

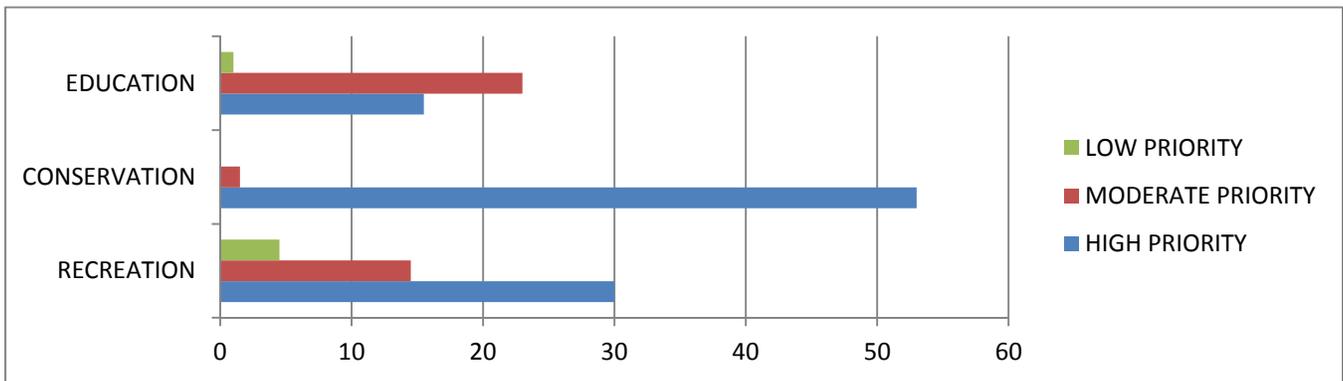


Figure 2-11. Park Improvement Prioritization Results

Future Park Improvement Prioritization

The second community preference exercise focused on Future Park Improvement Priorities in which participants located stickers on a “Conservation vs. Recreation vs. Education Bullseye” and could rank any or all of the three priorities as high, medium, or low.

The intent of this exercise is to determine the community’s general preference for the types of improvements that they would like to see occur at Standley Lake in the future.

The results of the Park Improvement Prioritization Community Preference exercise suggest a conservation-based approach to recreation improvements which is consistent with the protection of Standley Lake as a critical water resource.

2.4 Community Outreach Surveys

A series of online surveys were conducted to understand the recreation interests and desires of core users of Standley Lake Regional Park, local residents (both users and non-users of the park), and residents from the broader Front Range region. Current usage characteristics, community values with respect to open space, priorities for trails and other facilities, satisfaction with current facilities, importance of various facilities and services, communication, and decision-making factors were probed through the various survey efforts. Additionally, current recreation trends and demographics were evaluated for applicability within the park.

Survey data was obtained from the following three sources including a review of past surveys and the creation of new surveys developed for the master plan process:

1. Previous City Surveys

- 2013 Citizens Needs Survey
- 2012 Open Space Survey

2. Permit Holders Survey

- The previous permit holder survey was modified to investigate this user group’s recreational preferences
- Community Recreation Surveys
- Westminster “In-Area” Survey
- Denver Metro “Out-of-Area” Survey
- Key Findings of Community Surveys
- This summary of the Community Outreach Survey highlights some of the information that was collected and that will likely be relevant to future discussions concerning the planning and branding of Standley Lake Regional Park. Figures 2-12 and 2-13 summarize important key findings of the community survey including both the general

focus of future improvements at the park and for the current and future participation for a wide range of park users.

- As described above, this study included multiple surveys, and the design and implementation of the research was intended to build on past efforts by the City of Westminster to understand and track community opinion.

3. Community Recreation Surveys

- Westminster “In-Area” Survey
- Denver Metro “Out-of-Area” Survey

Key Findings of Community Surveys

This summary of the Community Outreach Survey highlights some of the information that was collected and that will likely be relevant to future discussions concerning the planning and branding of Standley Lake Regional Park. Figures 2-12 and 2-13 summarize important key findings of the community survey including both the general focus of future improvements at the park and for the current and future participation for a wide range of park users.

As described above, this study included multiple surveys, and the design and implementation of the research was intended to build on past efforts by the City of Westminster to understand and track community opinion.

Population Estimates | Colorado’s population is expected to grow. According to estimates, Colorado’s growth will likely outpace the U.S., with the fastest growth occurring in the Front Range. Demand for recreation activities at Standley Lake Regional Park are expected to increase, driven in part by increasing population in the Cities of Westminster and Arvada, and in Adams and Jefferson Counties.

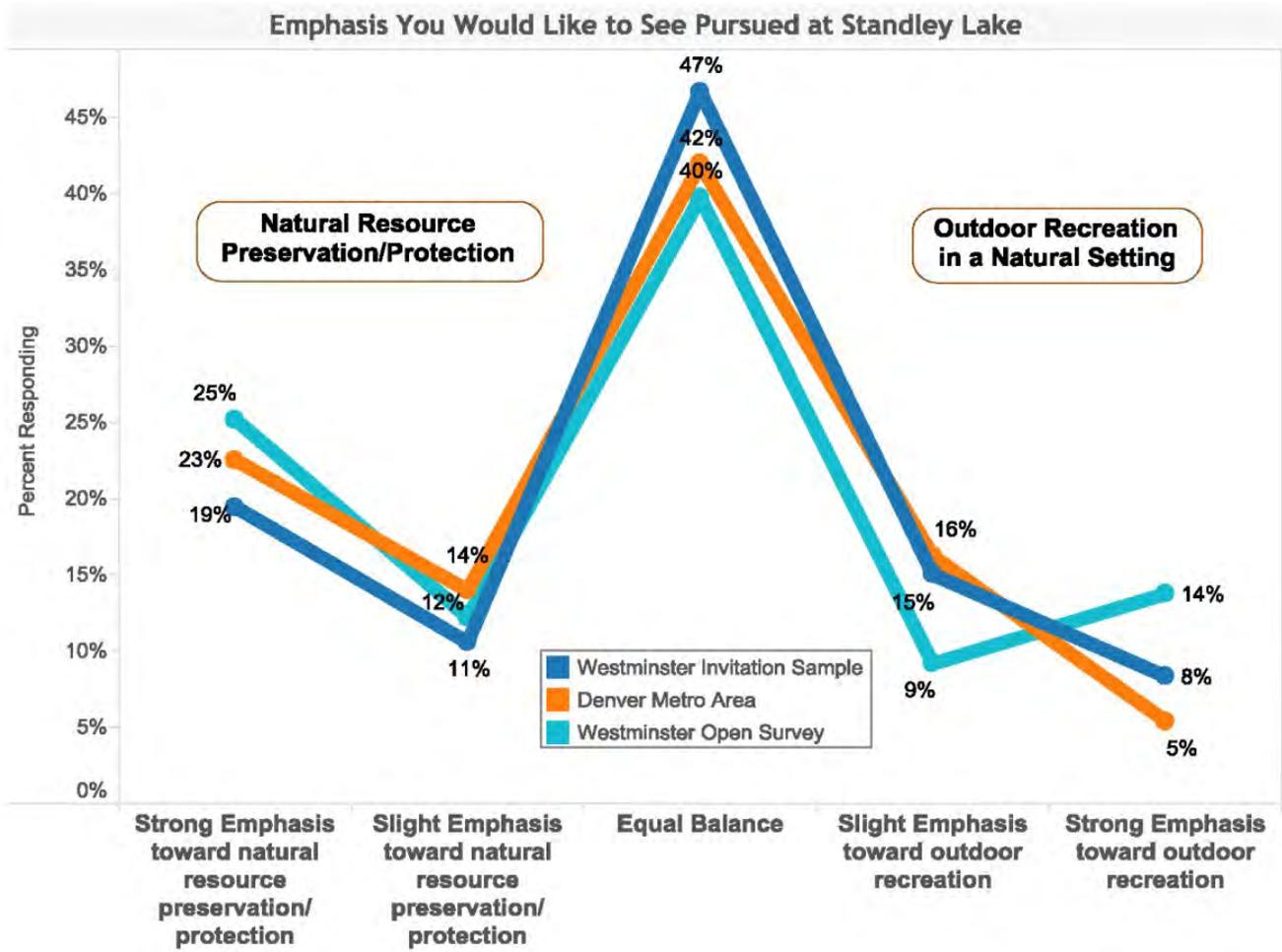
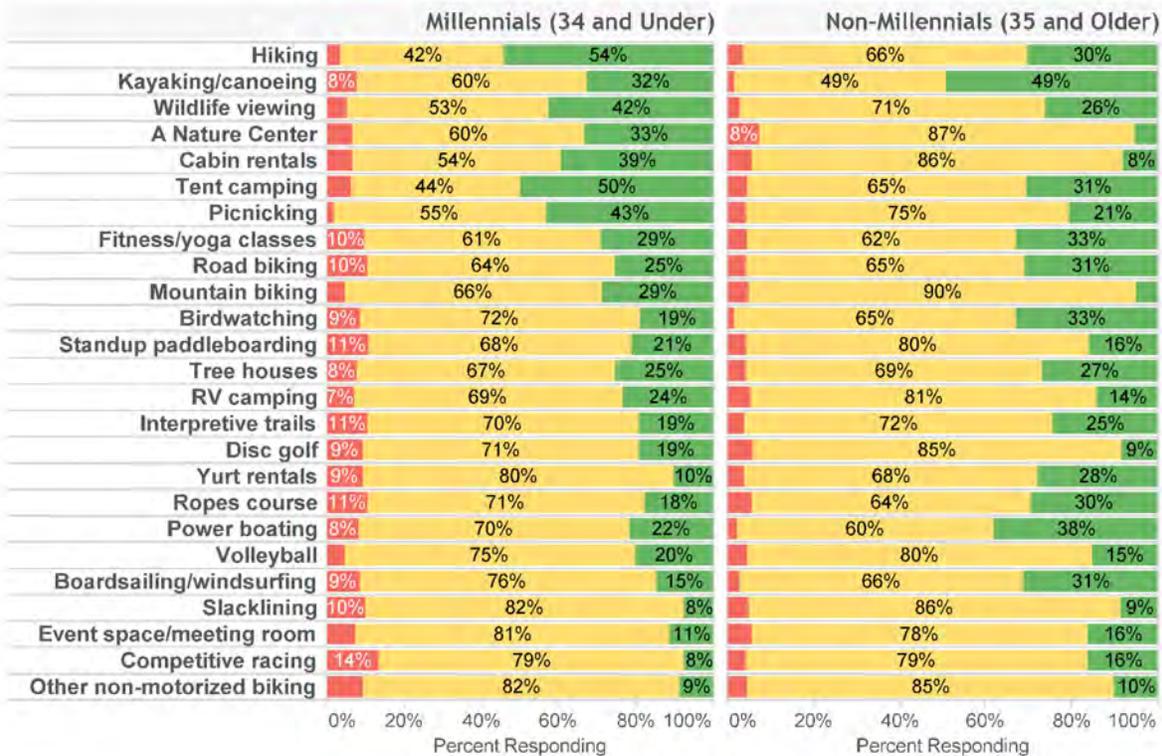
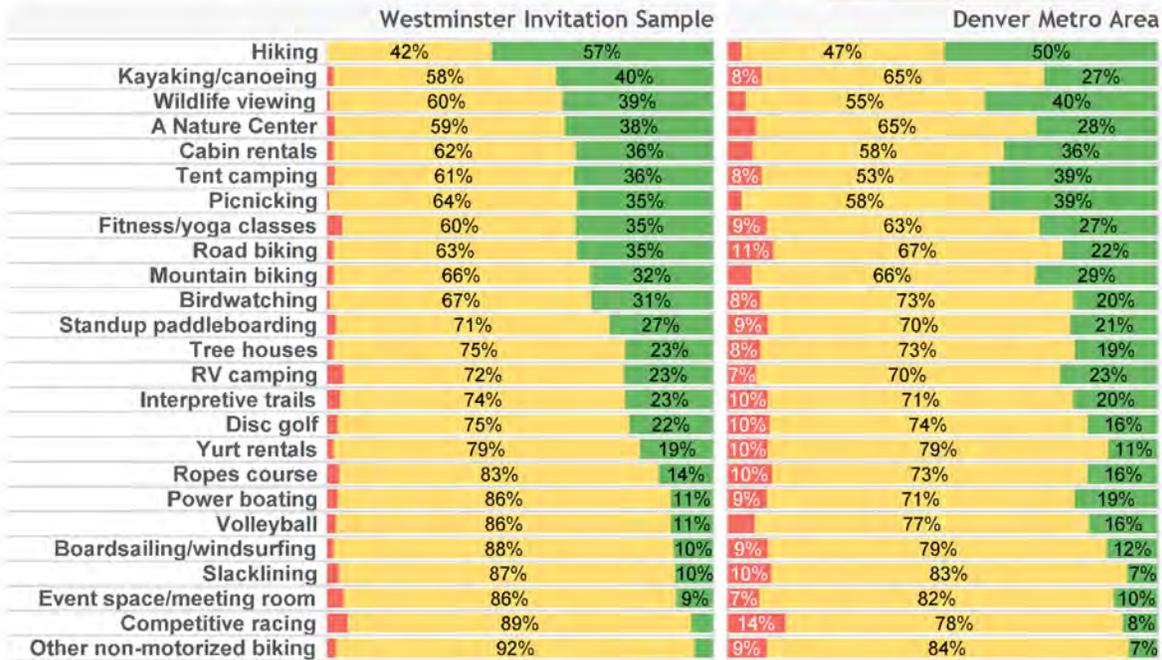


Figure 2-12. Emphasis to Pursue at Standley Lake Regional Park (Image Source: RRC)

Desired Future Participation

Please indicate whether you and your household will participate less, the same, or more in the future

Less Same More



Source: In-Area and Out-of-Area Surveys

Figure 2-13. Preferred Future Recreation Activities by Demographic

Race/Ethnic Diversity | In addition to an increase of residents overall, non-white residents are projected to become more represented in the population over time. In 2010, roughly 30 percent of Coloradoans were non-white. By 2040, that percentage is projected to be over 40 percent, according to the Colorado State Demography Office.

An Aging Population | Colorado, like most of the U.S. will be impacted by an aging population. According to the Colorado Department of Human Services, Colorado has one of the fastest growing aging populations in the U.S. Between 2011 and 2021 the number of older Coloradans is expected to increase 54 percent. Future planning should consider the needs and desires of this cohort of residents.

Millennials | Young adults aged 25 to 34, referred to as “millennials,” are increasingly migrating to urban centers and they deserve attention as the future of SLRP is considered. Of the top 51 metro areas evaluated, Denver ranked third on the list, with a 47 percent increase in the number of college graduates aged 25 to 34 moving to the area between the years from 2000 to 2012. This report identified particular opportunities that could be considered if planning specifically for the millennial age segment.

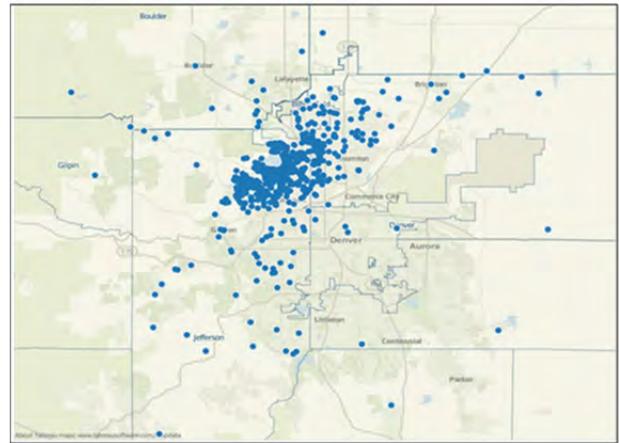
Population growth and these types of changes in subgroups within the population represent important considerations as Westminster looks to future outdoor recreation demand.

Trends in Outdoor Recreation | Recreation plays a significant role in the Colorado economy. With an active population, and frequent participation in a variety of activities - particularly including walking, hiking/backpacking, jogging/running, road biking and playground activities - Coloradans will continue to expect and demand access to recreation.

Survey results indicated that the most important factors in choosing a recreation area were condition of facilities, proximity and user fees. Most residents spend most of their outdoor recreation activity days within their own region, and a majority of these trips are day trips.

Several surveys, including one by Jefferson County Open Space, showed that a majority of respondents favor an “equal balance” between land “preservation / protection” and “outdoor recreation.” Standley Lake Regional Park has provided such a balance, with both types of considerations being met in current management and physical facilities. Future planning should consider these factors.

Permit Holder Survey. A survey of current holders of permits to use Standley Lake Regional Park resulted in a number of findings concerning this segment of active park users. Most permit holders live in Jefferson County, with over 25% residing within a few miles of Standley Lake, including the adjacent Westminster neighborhoods of Countryside, Walnut Grove, Westbrook, and Sunstream. Most permit holders report that the most important reason for purchasing a permit is boating access (63%), followed by water sports (14%), proximity (9%) and fishing (8%).



Standley Lake Boat Permit Holder Primary Residence

An important question for branding and planning concerned the “top three benefits” associated with SLRP. Results showed “Outdoor recreation in a natural setting close to home” (68%) was most often identified as the top benefit, and 90% of respondents called it one of the top three benefits. This was followed by “a place to socialize with family and friends, mountain views, assurance that open space will be there for future generations, and seeing and enjoying wildlife close to home.”

In-Area (Westminster and immediate vicinity) vs. Out of Area (the greater Denver Metro Area) Survey | These surveys explored trails in general and priorities for new trails. Interest in trails is high, particularly because walking/hiking are by far the most identified outdoor recreation (open space) activities of residents in all areas. The surveys showed that trails within natural areas, scenic/recreational bike routes, and walking trails were all frequently identified as priorities.

Respondents were asked to rate important factors when visiting a park or open space area in the Denver Metropolitan/Front Range region. Among Westminster respondents, availability of restrooms was most identified, followed by multi-use trails, enforcement of regulations, ease of parking, a smoke free environment and picnic shelters. Similar priorities were evaluated among boaters/campers, and cost/fees, scenic qualities, close proximity to home and lack of crowding were most identified.

Activity Participation | In an effort to understand current and future recreation interests, respondents were asked to note their annual frequency of use for 23 different activities, as well as their desired future participation (less, same, or more). The results were explored in detail in the report. Findings showed that the largest shares of respondents indicated they had hiked in the past year. Other important activities included wildlife viewing, followed by picnicking, road biking, fitness/yoga classes, mountain biking, and birdwatching. All of these activities are currently addressed at SLRP (to varying degrees), and all could be considered in the future.

Familiarity with Standley Lake Regional Park and Opportunities for Increased Utilization | Most Westminster residents are NOT familiar with the park (94%) with over 46% of Denver Metro area respondents aware of the park. Non-millennials had significantly higher familiarity than millennials, a finding that might be considered in future planning, branding and marketing.

The top three areas that, if addressed, would increase usage of Standley Lake Regional Park include: additional facilities and amenities, awareness of programs, and reduced pricing/user fees.

The survey also evaluated current and preferred methods of communication. Direct email is considered the best way to reach respondents; however, currently most are receiving their information at the park or on the Internet/websites. The data suggest that Facebook could be a source of communication, especially for younger respondents. There are some differences in these responses on increasing park usage between residents of Westminster and those in greater Denver Metro area; these differences could be considered in the future as target markets and messages are considered. The survey results suggest some opportunities for customizing messages and outreach.



3.1. Introduction

The master plan alternatives were developed via a collaborative and iterative planning process that involved a broad spectrum of public and private sector participants and utilized the following series of workshops:

- Stakeholder Workshops
- Advisory Committee Workshops
- Public Open House Events

3.2. Framework Plan

Based on the key findings of the SWOT Analysis and community outreach survey, an initial Framework Plan was developed for the park to identify existing and potential recreational uses and relationships; neighborhood connectivity and trail linkages; and resource conservation priorities. During the first Stakeholder Workshop, the Framework Plan evaluation revealed four potential recreation activity areas within the park:

- North Park
- Loon Lake
- Lakeview
- Southshore

The Framework Plan Alternatives (Figure 3-1) explored a variety of recreational “densities” within these activity areas including a new nature center and supporting operational facilities; existing recreational facility improvements; trail connections; shoreline improvements; restrooms and pavilions; parking; and supporting infrastructure.

Given that the east half of Loon Lake is outside of the park property, designated as open space, and partially surrounded by single-family residential homes that previously resisted recreational development, this potential activity area was eliminated from further study. The resource value of this area should be evaluated in a separate study to ensure its long-term

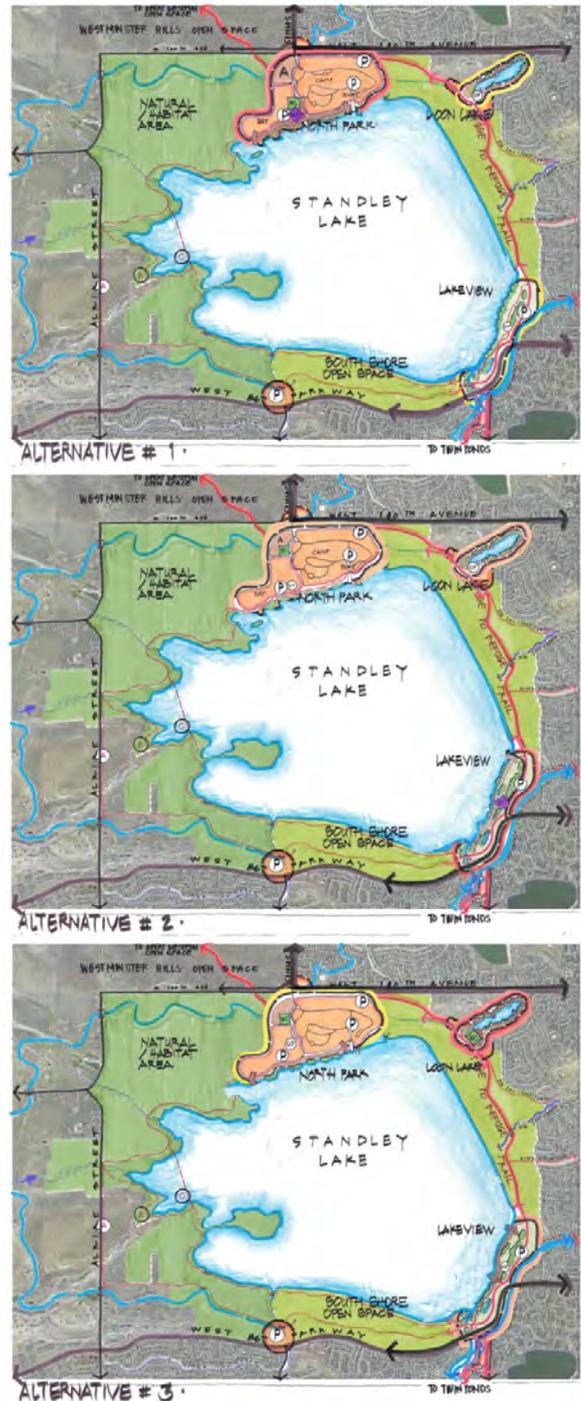


Figure 3-1. The Conceptual Framework Plan Alternatives explored various recreational relationships within the identified activity areas

protection and to further engage the surrounding residents regarding potential improvements. Similar to the Conservation District, further consideration should be given to converting the west side of Loon Lake to Open Space as it is currently managed as such and this land use designation would further protect this important resource.

Figure 3-2 identifies the proposed areas within the Conservation District and around Loon Lake that would be converted to open space to further protect these important park resource areas.

3.3. Loop Trail Alternatives

Based on public comments received during the Phase One: Inventory, Outreach, and Analysis process and the data generated in the Community Outreach Survey,

multi-use trails are a highly desired element of the outdoor recreation experience at Standley Lake. Additionally, many frequent park users inquired about providing a continuous trail connection around the lake as the current network does not provide access through the Conservation District to connect the west side of the Park Central District to the west side of the Southshore District.

The Conservation District includes wildlife habitat, wetlands, riparian transition zones, and upland prairie ecosystems and thus proposed loop trail alignments within this area should avoid or minimize disturbance to these resources to the greatest extent possible.



Figure 3-2. Proposed Open Space Conversion Area

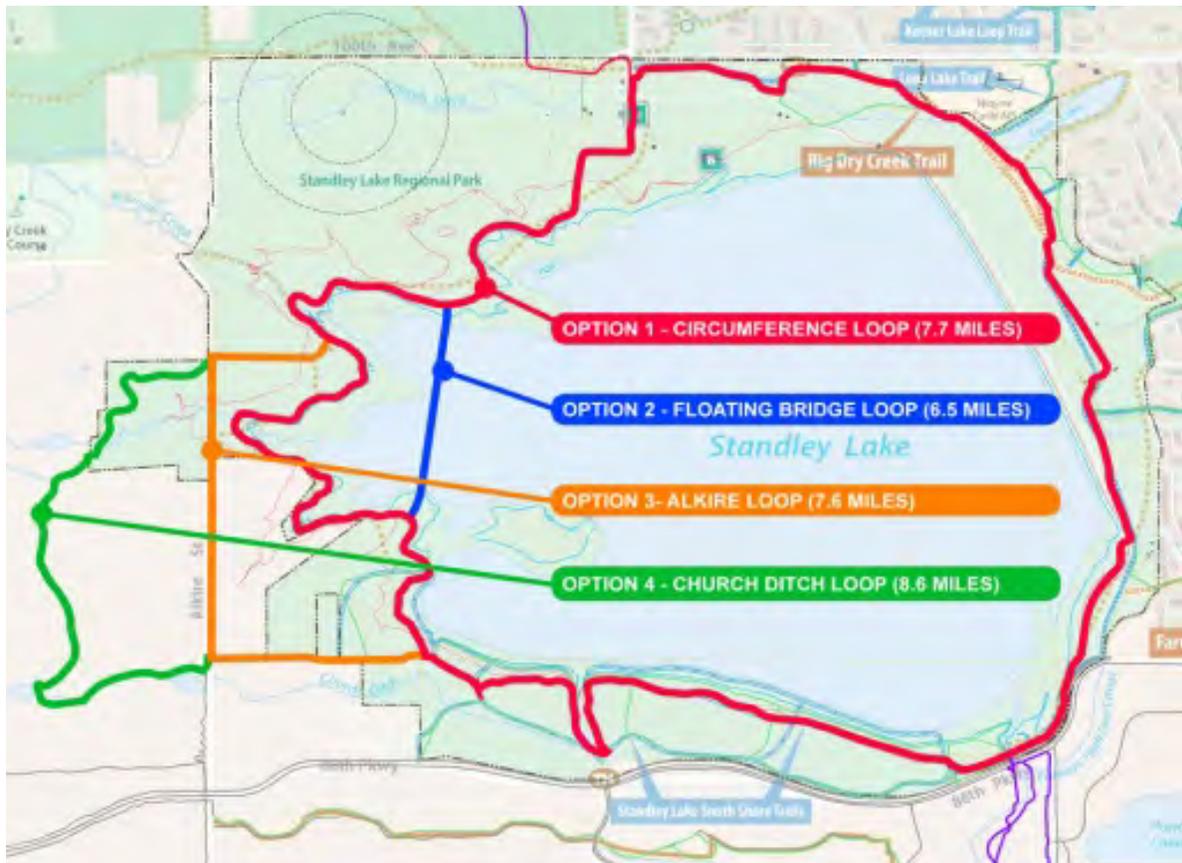


Figure 3-3. Conceptual Loop Trail Alignment Alternatives with Option 1 (red), Option 2 (blue), Option 3 (orange), and Option 4 (green)

Figure 3-3 illustrates the conceptual loop trail alignments through the western side of the park. All of the proposed options on the north, south, and east sides of the park utilize existing trail alignments as well as the Rocky Mountain Greenway Trail. The western trail alignment evaluated a range of options including the lake edge, Alkire Street, Church Ditch, and across the water and considered a range of trail structures to minimize impact to critical resources. Further environmental studies are required to determine the final trail alignment.

Loop Trail Option 1 evaluated a trail alignment along the lake edge and a survey verification of the west lake property extents indicated adequate width and topography to develop a continuous trail through this area that is entirely located within the Standley Lake Regional property and within conformance of Federal regulations related to the existing eagle nest buffer zones.

The segment of the proposed west loop trail between the eagle's nest and the lake should take advantage of topography (such as following the lower slope of the historic borrow pit) and vegetation (both existing and supplemental plantings) to screen the trail from the nest. Additionally, a split-rail fence along both the north and south sides of the trail would further prohibit trail users from straying into the 1/4-mile eagle buffer zone or sensitive wetland and habitat areas near the lake.

Boardwalks provide an excellent opportunity to access the lake edge by floating a deck structure over sensitive resources utilizing narrow piers in lieu of spread footings and allowing the adjacent vegetation to grow under and around the pathway (Figure 3-4). A boardwalk located along the north side of the lake adjacent to the high-demand day-use area would buffer the riparian planting zone from the beach by defining water access points and protecting re-vegetation zones. Additionally, a boardwalk may be employed in the

Conservation District trail alignment options to minimize disturbance to natural resources.

Loop Trail Option 2 evaluated a floating bridge option that would “short-circuit the conservation district and further define the current delineation of motorized and non-motorized boating areas on the lake. Floating bridges can accommodate both boat passage and water level fluctuation however the extent of that variability compared to the associated cost may be cost prohibitive.

A potential alternative to land-based trails through environmentally sensitive areas is a floating bridge system (Figure 3-5). A floating bridge that allows for water level variability could be extended across the west side of the lake at the shortest distance possible would avoid the Conservation District and provide a defined separation between the motorized and non-motorized sides of the lake.

Floating islands can be employed independently or in conjunction with bridges and boardwalks that utilize a combination of vegetative and synthetic material (Figure 3-6). These islands provide fish habitat and wave protection and have also been shown to increase water quality by reducing nutrient loading in the water via plant uptake.

Loop Trail Option 3 evaluated an off-park-property alignment along Alkire Street from West 86th Street to a park entry point located approximately 800 feet north of West 96th Avenue. This two-lane segment of Alkire Street lacks pedestrian facilities such as sidewalks and ADA ramps and is unsafe for pedestrian travel in its current condition. Additional right-of-way improvements and potential acquisitions will be required to accommodate this off-park loop trail alignment.

Loop Trail Option 4 evaluated a Church Ditch alignment that would utilize existing “ditch rider” trails and would require the most right-of-way and easement agreements to accomplish. This alignment alternative would also require access to the wetland conservation area west of Alkire Street.



Figure 3-4. Potential architectural styles for proposed boardwalk



Figure 3-5. Potential floating bridge options



Figure 3-6. Potential floating island options

Loop Trail Options Summary

The Loop Trail Options that were evaluated are conceptual in nature and for planning purposes only. Based on a separate Natural Resource Assessment and coordination with adjacent property owners, a combination of Loop Trail Options 1-3 are proposed in the following Section 4.0. Further environmental studies are required to determine the final trail alignment.

3.4. Park Facility Alternatives

The enhancement and expansion of recreational and educational opportunities at Standley Lake requires both new facilities and the renovation/expansion of existing facilities to accommodate current demand and future increased use.

Nature Center | An expanded Nature Center is needed to accommodate the current and future demand for the Standley Lake educational programs as well as to provide additional, compatible uses at this facility which include the following:

- Standley Lake Museum/Conservation Center
- Classrooms/conference space
- Special event venues
- Outdoor equipment rentals
- Nature playground & outdoor laboratories
- Small café/food & beverage sales
- Administrative offices
- Restrooms

Figure 3-7 illustrates potential architectural styles for the Nature Center that utilize natural materials such as wood, stone, weathering steel, and extensive glass to maximize views to the surrounding landscape. This facility could potentially utilize the latest in green building technology to serve as a demonstration facility for the City.

Event Pavilion | In addition to smaller park shelters that serve day-use activities at the park, a larger, enclosed pavilion would provide additional programming opportunities at the park including the following:

- Indoor/outdoor classrooms
- Special event venue
- Outdoor amphitheater
- Restrooms

The architectural style of the Event Pavilion should complement the proposed visitor center and utilize lighter, more transparent materials such as wood, steel, and glass (Figure 3-8).



Figure 3-7. Potential architectural styles for the proposed Nature Center

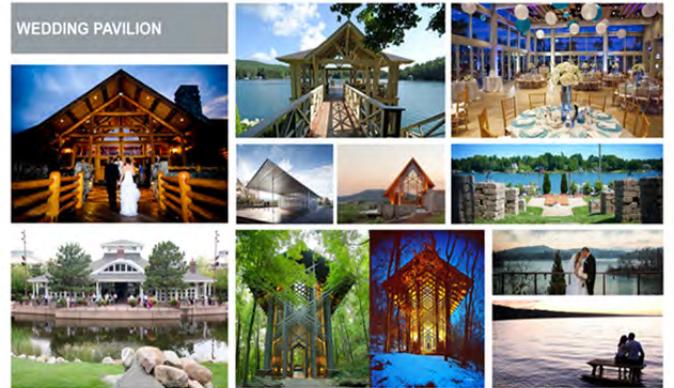


Figure 3-8. Potential architectural styles for the proposed Event Pavilion

3.5. Park Central District

Based on the comments received during the Stakeholder Workshop, the master plan alternatives (Figure 3-9) were further refined to include additional detail within the primary recreation development areas.

Conceptual Park Central Master Plan Alternatives

Alternative One | This alternative proposed a realigned 4-way intersection at 100th Avenue and Simms Street and the subsequent relocation/realignment of the Church/Mandalay Ditch diversion. The entry drive would be realigned to extend the entry station further to the south to provide additional traffic stacking clearance south of 100th Avenue.

A new Nature Center is located near the existing Nature/Visitor/Administration building which would be converted into a park operations center. The new Nature Center would take advantage of views to the lake and mountains and could potentially include a public “natural swimming pool” and an adjacent special event pavilion which are discussed further in this section.

A boardwalk and riparian re-vegetation zone is proposed along the lake edge and the existing campground area is renovated and expanded with additional parking located along the north and south sides of the main access road. Additional primitive campsites are proposed further west of the existing campground area near the lake and would be required to be at least 150’ from the edge of the lake per the 1994 Standley Lake Intergovernmental Agreement

Alternative Two | This alternative proposed a roundabout at the intersection of 100th Avenue and Simms Street and the subsequent relocation/realignment of the Church/Mandalay Ditch diversion. The entry drive would be realigned to extend the entry station further to the south to provide additional traffic stacking clearance south of 100th Avenue.

A new Nature Center is located further south towards the lake (outside of the 150’ buffer) and notched into the existing slope to create a green roof/event lawn above that minimizes the visual impact and stormwater runoff from this facility. The new Nature Center would

take advantage of views to the lake and mountains and would include a special event plaza that wraps the south and west building façade. The existing Nature/Visitor/Administration building would be converted into a park operations center and near the new entry station location.

A loop trail and riparian re-vegetation zone is proposed along the lake edge with boardwalk “fingers” that extend down to the lakeshore to control lake access, minimize disturbance, and improve water quality.

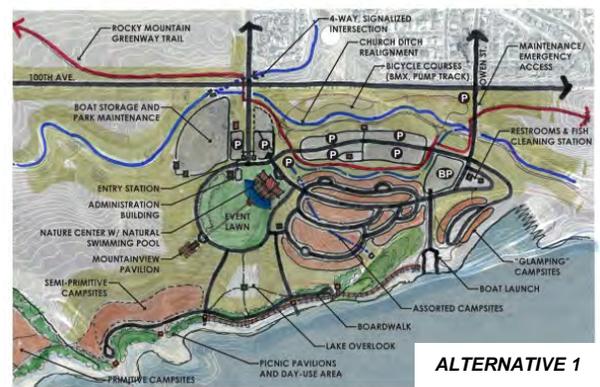
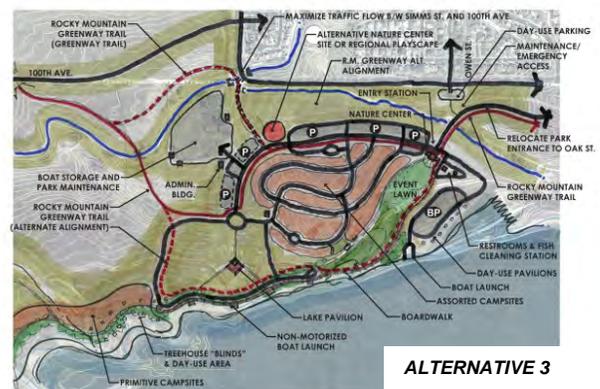
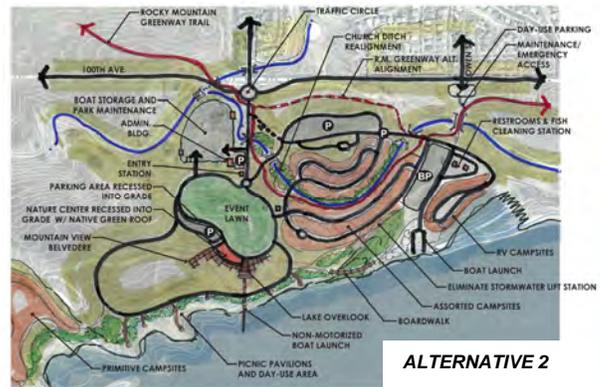


Figure 3-9. Conceptual Park Central Master Plan Alternatives

Mandalay Ditch is proposed to be re-aligned into the main campground area to create an open drainage channel that conveys stormwater runoff from new facilities to the spillway below, maintains downstream water supplies, and provides additional revegetation opportunities between the campsites. Primitive campsites are proposed further west of the existing campground area and near the lake and would be required to be at least 150' from the edge of the lake. Additional parking is provided north of the main entry road.

Alternative Three | This alternative relocates the park entry from 100th Avenue and Simms Street further east to Oak Street and realigns 100th Avenue west of Simms to align with 101st Avenue further to the north.

The proposed Oak Street entry would require park visitors to arrive at the park near the existing comfort station and boat ramp and thus a new Nature Center is proposed on the north side of the existing boat parking area which has been relocated to the lower campground. The existing Nature / Visitor/ Administration building would be converted into a park operations center and additional day-use parking provided nearby and along the main entry drive (an alternative Nature Center site is proposed northeast of the operations center).

A Lake Pavilion is proposed at an existing highpoint in the topography with direct connectivity to a lakefront boardwalk and riparian re-vegetation zone located along the lake edge. Vehicular access is provided to the lower day-use/boardwalk area however supporting parking is located further north along the main entry drive.

Shoreline Revegetation

All of the proposed Park Central Master Plan alternatives include a shoreline revegetation program to re-establish the native riparian plantings along the lake edge. The re-establishment of native plant communities along the lake edge will stabilize the shoreline; provide wildlife habitat and increased biodiversity; serve as a filter strip for stormwater runoff into the lake; and provide shade for day-use activities. Figure 3-10 illustrates the conceptual revegetation zones along the Park Central District lake edge with the final locations and improvement details subject to further review and approval. Native riparian plantings would be located near the lake edge to take advantage of the high water table below thereby reducing the need for long-term vegetation.

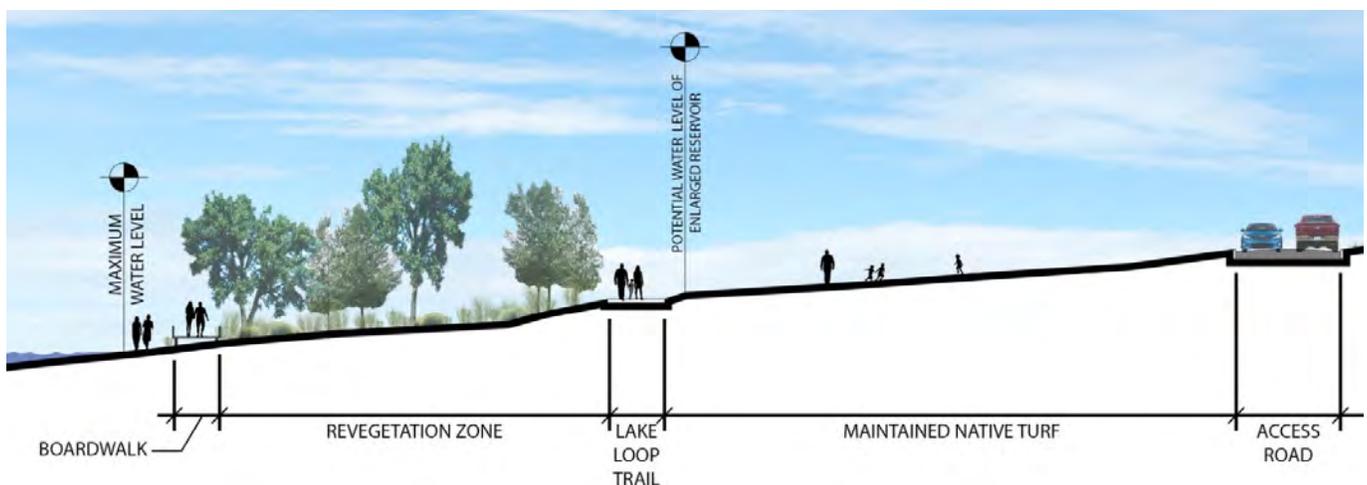


Figure 3-10. Proposed trail alignments and revegetation zone along lake edge in Park Central District

The 100th Avenue & Simms Street Intersection is poorly configured and has resulted in multiple vehicular accidents related to visual disorientation in the evenings and have damaged the Church Ditch diversion structure on multiple occasions. Additionally, traffic entering the park on busy summer weekends frequently stacks at the gate house and backs into this intersection.

The conceptual intersection configurations shown in Figure 3-8 compares the various options explored in the Park Central master plan alternatives, including re-aligning the adjacent ditches and diversion structure to create a four-way intersection (Alternative 1) or roundabout (Alternative 2) relocating the park entry further east to Oak Street and realigning 100th Avenue west of Simms Street further north to 101st Avenue (Alternative 3).



Figure 3-11. The Webber Park Natural Swimming Pool was completed in Minneapolis, MN in 2016
(Image Source: BioNova Natural Swimming Pools)

Natural Swimming Pool | A natural swimming pool, or NSP, is a chemical-free pool that utilizes wetland plants to naturally filter the water via a mechanical filtration system (Figure 3-11). A NSP may be a potential opportunity to alleviate the demand for in-water, full-contact, water recreation at Standley Lake while providing a natural, swimming environment in lieu of traditional public pool that would be out of context with the park context.

The existing campground area is reconfigured, renovated and expanded to extend further towards the

main entry drive and the event lawn adjacent to the Nature Center. Additional primitive campsites are proposed further west of the existing campground area and near the lake and would be required to be at least 150' from the edge of the lake, per the requirements of the 1994 IGA with the Standley Lake Operations Committee (SLOC).

Preliminary Park Central Master Plan Alternatives

The Conceptual Park Central Master Plan Alternatives were further refined to reflect the comments received by the Project Advisory Committee for presentation at the Master Plan Alternatives Public Open House.

Two Preliminary Park Central Master Plan Alternatives were presented to the Open House participants and a survey form was circulated to accommodate additional public comment regarding the proposed recreation improvements (Figure 3-12).

Alternative 1 re-aligned Mandalay Ditch to follow the natural drainage patterns of the existing campground topography area and created a green spine through the Park Central District. A new Nature Center is proposed west of the existing Nature Center/Administration building where gravity service to 100th Avenue is available for sanitary sewer service. A loop road is proposed to connect the day-use areas with supporting park shelter and parking areas included.

Alternative 2 expanded the campground to the north and added additional shelters and playgrounds to this area. A new Nature Center is proposed south of the existing Nature Center/Administration building and at a natural high point in the topography to take advantage of lake views to the south and mountain views to the west. Access to the day use area is via two separate roads and parking areas which will allow for the shoreline and upland meadow to be restored between these two areas.

Alternative 2 was generally preferred; however, some elements from Alternative 1 were recommended to be included in the revised plan which is discussed in detail below and shown in Figure 3-13.



Figure 3-12. Preliminary Park Central Master Plan Alternatives

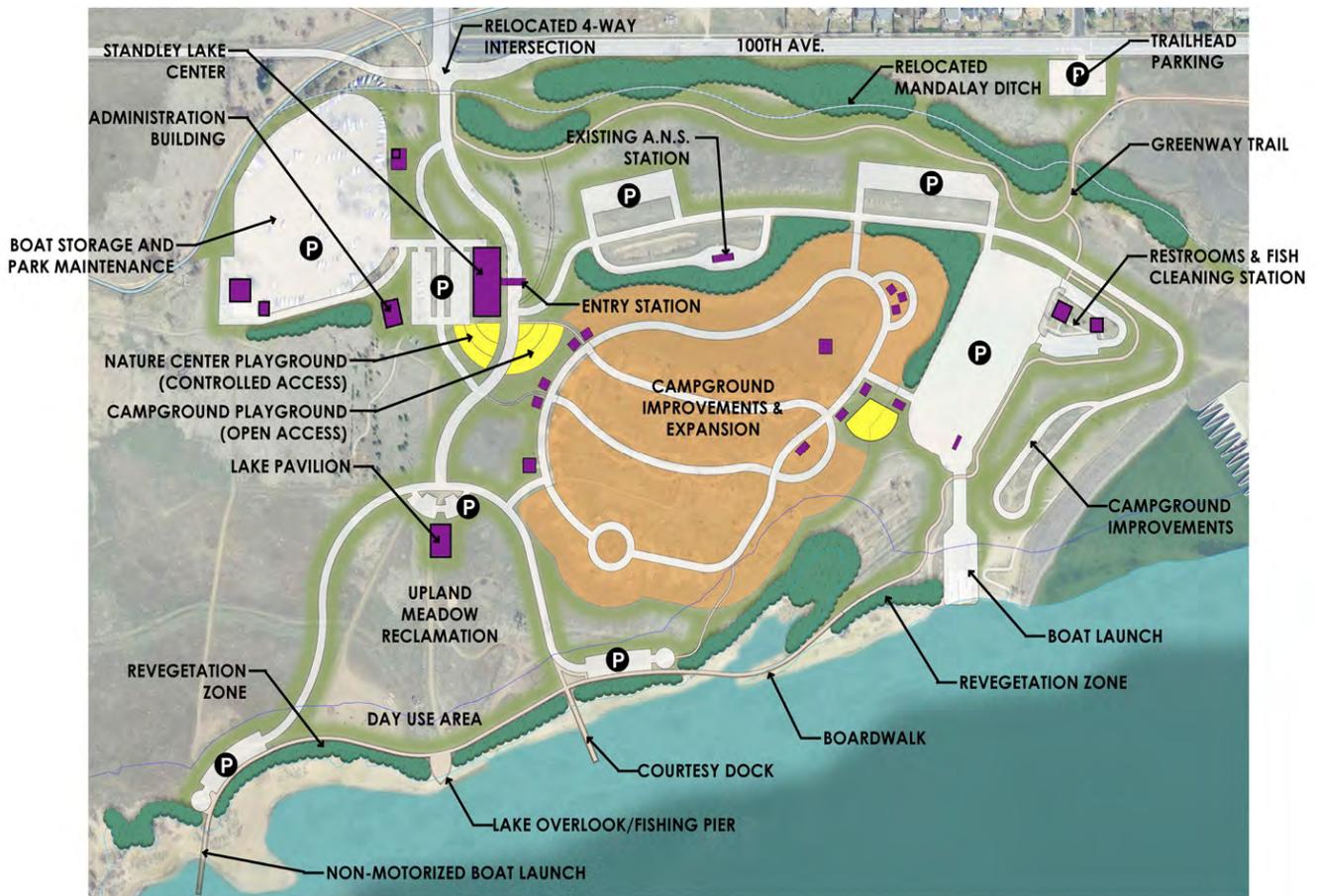


Figure 3-13. Park Central District Preferred Alternative

100th & Simms Intersection Improvements | Due to the potential for peak period vehicular queue lines at the entry gate to back into the roundabout and cause it to fail, a four-way intersection is preferred and consideration should be given to the horizontal alignment of the proposed intersection to avoid existing drainage infrastructure within this area. The Rocky Mountain Greenway Trail alignment should be considered at this intersection to provide a safe crossing from the park to the open space to the north.

The Nature Center | The Nature Center location shown in Alternative 1 is preferred as it is located near the existing administration building which creates a compact and shared park activity/operations center on the west side of this district and provides the ability to gravity drain sanitary sewer service to 100th Avenue without the use of lift stations that are required below this elevation. Consideration should be given to the building orientation and the entry sequence approach to improve efficiency, maximize views to the lake and mountains beyond, and provide a unique park entry experience. The existing nature center/administration building would be converted entirely to park operations staff use.

The Lake Pavilion | The location shown in Alternative 1 is preferred for the Lake Pavilion as this takes advantage of the natural topography to optimize panoramic views around the lake and create an iconic, multifunctional venue within the park. The nearby campsite restroom would support this facility during special events however it would be preferred to be plumbed for restrooms to maximize its use as an event venue, classroom, and exhibition space.

Lakefront Boardwalk and Day-Use Area | Vehicular access is limited to two day-use-only parking lots and provide a continuous boardwalk along the lake edge to protect a riparian revegetation zone between the boardwalk and the lake loop trail. Provide two courtesy docks to separate motorized and non-motorized boat operations. Drainage from the parking lot areas must be conveyed away from the lake to the existing detention pond area east of east day use parking area. Several project stakeholders noted the IGA-required, use-restricted 150' buffer from the lake edge and potential issues with the encroachment of proposed

day-use parking areas. Additional restrooms at the day use areas were not considered due to the 150' lake setback requirement and the potential impacts to water quality.

The Campgrounds | The existing campground should be renovated and expanded to offer additional amenities and an enhanced camping experience. Water and electrical service should be provided to a portion of the campsites and additional products such as tent-only, group/family rentals, tipis, and yurts should be incorporated to provide a diverse range of camping options. Amenities such as conservation-themed playgrounds, shade structures, and diverse native plantings including shade trees should be integrated into the campground renovations.

Parking | Parking for the Park Central District is provided at the Nature Center and Park Operations buildings; at the boat ramp; along the access drive north of the campgrounds; at the day-use areas along the lake shore; and one space at each designated campsite. The day-use parking areas will formalize two paved parking areas where current day-use parking is already occurring.

The existing/proposed day-use parking areas are located within the 150' lake buffer area and thus should employ additional stormwater management BMP's to eliminate contaminated run-off into the Standley Lake. Parking areas outside of the 150' buffer area were evaluated for the day-use activities however they would need to be located further up the slope from the existing parking areas that are adjacent to the lake shoreline and would require extensive grading/disturbance to native upland meadow areas and thus a renovation of the existing parking areas has been proposed to minimize the extent of the upland disturbance area.

Park Central Preferred Master Plan Alternative

The materials from the prior Open House were reviewed and the comments received by the participants were further evaluated to determine the preferred Master Plan direction and an Advisory Committee meeting was held to select a preferred alternative.

In addition to the Advisory Committee Review Meeting, meetings were held with park rangers, City staff, and with the Standley Lake Operations Committee to further determine the preferred master plan alternative. Figure 3-13 represents the preferred master plan alternative for the proposed recreation development districts.

3.6. Lakeview District

The Conceptual Lakeview District Master Plan (Figure 3-14) presented at the Stakeholder Workshop proposed the development of a day-use area, special event pavilion/amphitheater, and lakefront park shelters. Plumbed restrooms are a viable option for this area given the proposed increase in day-use activities and the potential for gravity sewer service to the residential neighborhood northeast of this area.

A seawall is utilized to protect the shoreline; maximize the useable, adjacent park area; and create lake overlooks, fishing piers and shelters along this edge that maximize views across the lake to the mountains beyond.

Vehicular access has been provided to a non-motorized boat launch however the access could be limited to the upper pavilion parking area and/or a small trailhead parking lot near 86th Parkway.

The Rocky Mountain Greenway Trail is routed through this area and thus consideration should be given to maximizing opportunities for trail users to diverge from the trail by attracting them to views of the lake or the convenience of a restroom/concession facility.

Access to the dam tender's home site and the functions associated with those operations needs to be maintained and/or improved in proposed master plan improvement within this area.

Based on comments received at the Stakeholder workshop, two Preliminary Master Plan Alternatives were developed for the Lakeview District (Figure 3-15). While both preliminary alternatives recommended the same facilities noted above, the primary difference between the two was the extent of vehicular access into this area. Option 1 proposed a small parking area near 86th Parkway with trail access to the restroom, shelters, and shoreline. Option 2 proposed vehicular access from 86th Parkway to the new restroom building and park shelters and included a small parking lot adjacent to these facilities and another near the shoreline.

Alternative 2 was generally preferred and was subsequently modified for the Preferred Lakeview

Master Plan (Figure 3-16). These modifications included the elimination of vehicular access beyond the main parking area; the replacement of the formal "event pavilion" with a more standard park shelter as this type of special event use is more appropriate in the Park Central District. Additionally, the non-motorized boat ramp should be eliminated from this area as it would be difficult for park staff to continuously manage and monitor this lake access point during peak use times.



Figure 3-14. Conceptual Lakeview District Master Plan

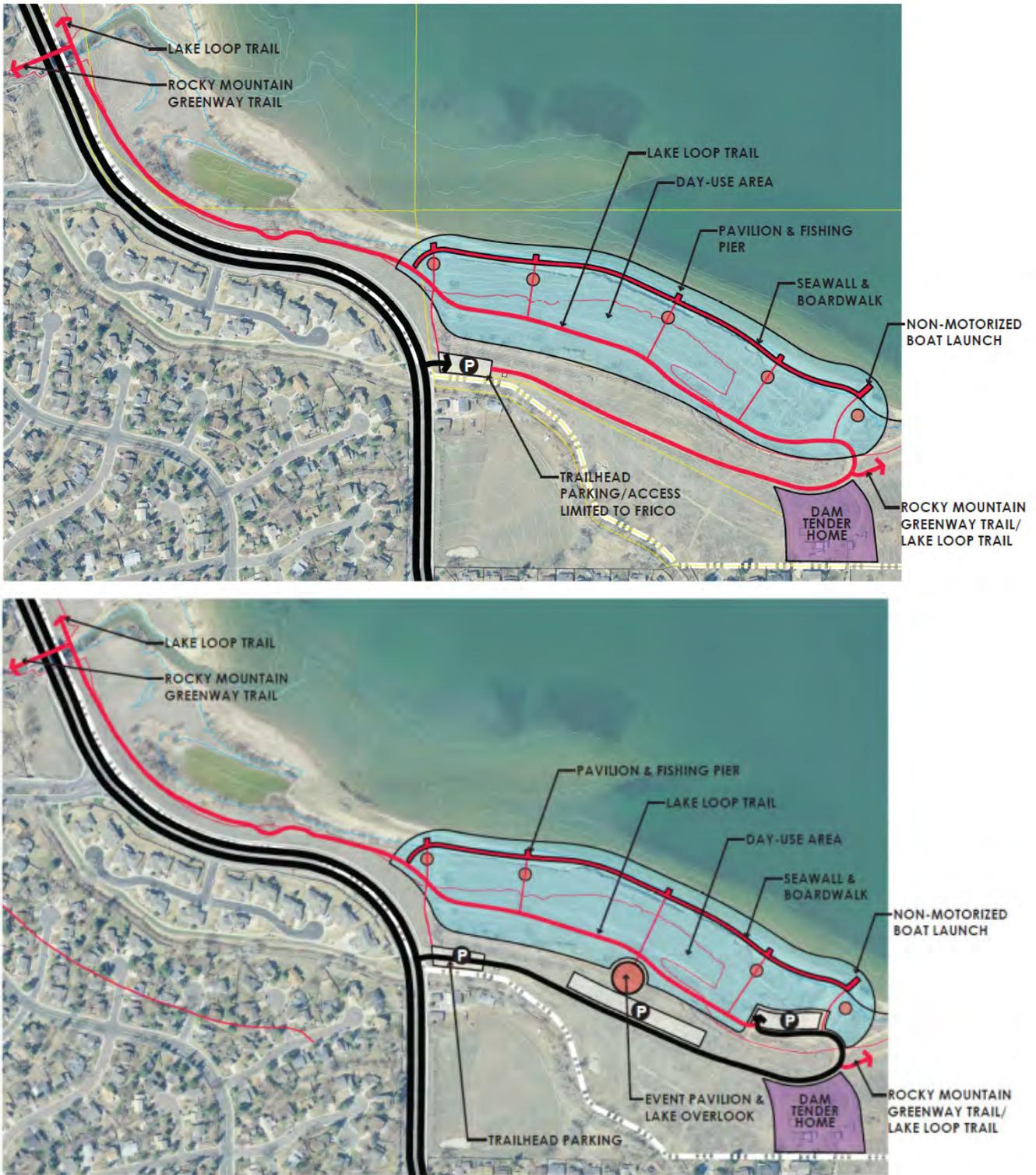


Figure 3-15. Preliminary Lakeview District Master Plan Alternatives



Figure 3-16. Lakeview District Preferred Alternative

3.7. Southshore District

Throughout the prior Inventory, Outreach, & Analysis phase, most stakeholders and public participants agreed that recreational uses within the Southshore District should be limited to day use activities, trailhead/parking improvements, trail access and connectivity; and shoreline stabilization. Figures 3-17 through 3-19 illustrates the proposed improvements from the Conceptual to the Preliminary to the Preferred Master Plan development stages.

Key improvements to this area include a reconfigured and expanded trailhead parking area and the addition of a new, re-oriented, vehicular-rated, pedestrian bridge that allows optimal emergency access to the Southshore area east of the inlet. Permanent, utility-served restrooms were not a high-priority however an enclosure for the existing port-o-let facility was strongly-recommended due to the high demand for day-use activities in this area. While port-o-lets are not currently permitted per IGA, consideration should be given to limited use of these within the park, along with plumbed restrooms, due to the frequent, extended, peak uses of the park and the subsequent impacts to water quality that may occur without these critical public facilities.

Bank stabilization such as buried rip-rap or soil lifts combined with the revegetation of riparian plant communities along the southern shoreline of Standley Lake would mitigate the impacts of erosion from wave energy generated by consistent northwestern winds. In addition to shoreline protection, the development of a vegetated, riparian zone along the lake edge would further enhance the day use activities in the Southshore District.

Early consensus amongst the stakeholders and public regarding the preferred recreational improvements for this area was achieved early in the planning process and did not necessitate extensive revisions to this area. The only significant revision to this alternative was the elimination of the proposed primitive amphitheater west of the inlet as this type of programmed use was not encouraged within this area. Several project stakeholders noted that any equestrian use of the trails around Standley Lake would require a management

plan to protect water quality and should be limited or prohibited.



Figure 3-17. Conceptual Southshore Master Plan

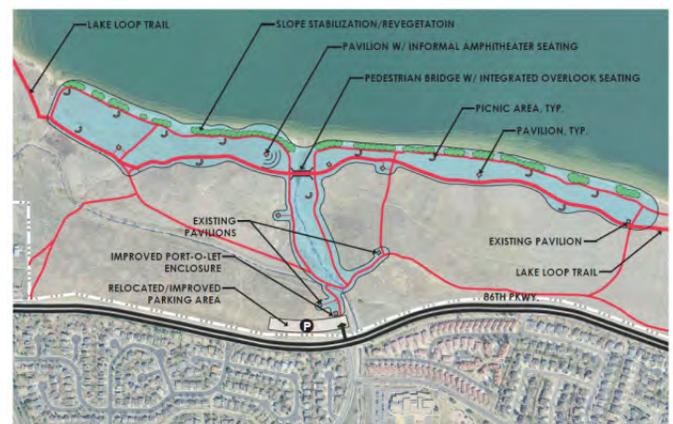


Figure 3-18. Preliminary Southshore Master Plan



Figure 3-19. Southshore District Preferred Alternative



Figure 4-1. Perspective rendering of proposed Park Central District improvements

4.1. Introduction

The primary priority for the Standley Lake Master Plan is to protect the water quality of this critical community drinking water supply while concurrently protecting wildlife habitat and providing a variety of sustainable, outdoor, recreation opportunities to a diverse spectrum of park user groups.

The park's geographic location at the confluence of urban development and the foothills of the Rocky Mountains combined with the park's terrestrial and aquatic natural resources creates a unique recreation destination that offers a wide range of recreational and educational activities. As the population grows in the communities around the park, demand for recreation activities at SLRP is expected to increase and the ability to adequately manage this increased use and the

potential impacts to the park's natural resources, particularly water quality, is critical.

The Standley Lake Regional Park Master Plan protects the park's natural resources while providing managed recreational access and environmental education opportunities for park visitors. This concept of "conservation based recreation" includes expanded park facilities and programs; increased trail connectivity; and additional recreation opportunities that would position the park as the geographic "hub" to a network of regional trail "spokes." This optimal location within the trail network coupled with enhanced recreational facilities and a diverse range of outdoor programs positions the park as an "outdoor recreation training ground" for both active and passive park uses and for both novice and experienced recreationists.

4.2. Overall Master Plan

The Standley Lake Regional Park Master Plan (Figure 4-2) includes park facility renovation and expansion; shoreline stabilization and re-vegetation; wildlife habitat conservation; and day-use area improvements. The master plan improvements are identified in the following:

- Overall Trails Master Plan (Figure 4-3)
- Park Central District (Figure 4-4, 4-5)
- Lakeview District (Figure 4-6)
- Southshore District (Figure 4-7)

The proposed renovation of the existing Park Central District day-use parking area, as well as the Lakeview and Southshore District shoreline stabilization improvements, are located within the 150' lake buffer zone as designated in the 1994 Standley Lake Intergovernmental Agreement (IGA) between the cities of Westminster, Thornton, Northglenn and the Farmers Reservoir and Irrigation Company (FRICO). The proposed improvements located within the buffer zone will implement shoreline stability and stormwater best management practices (BMPs) to ensure lake water quality compliance and sustainability. Future park improvements will be subject to additional environmental review by the City of Westminster and the Standley Lake Operations Committee (SLOC).





Figure 4-3. Overall Master Plan

4.3. Trails Master Plan

-  PARK BOUNDARY
-  10' ROCKY MTN. GREENWAY TRAIL
-  8' LOOP TRAIL -HARD SURFACE
-  6' LOOP TRAIL -SOFT SURFACE W/ FENCE
-  6' PARK TRAIL -HARD SURFACE
-  6' PARK TRAIL -SOFT SURFACE
-  WILDLIFE BLIND
-  LAKE OVERLOOK
-  PEDESTRIAN BRIDGE
-  CULVERT

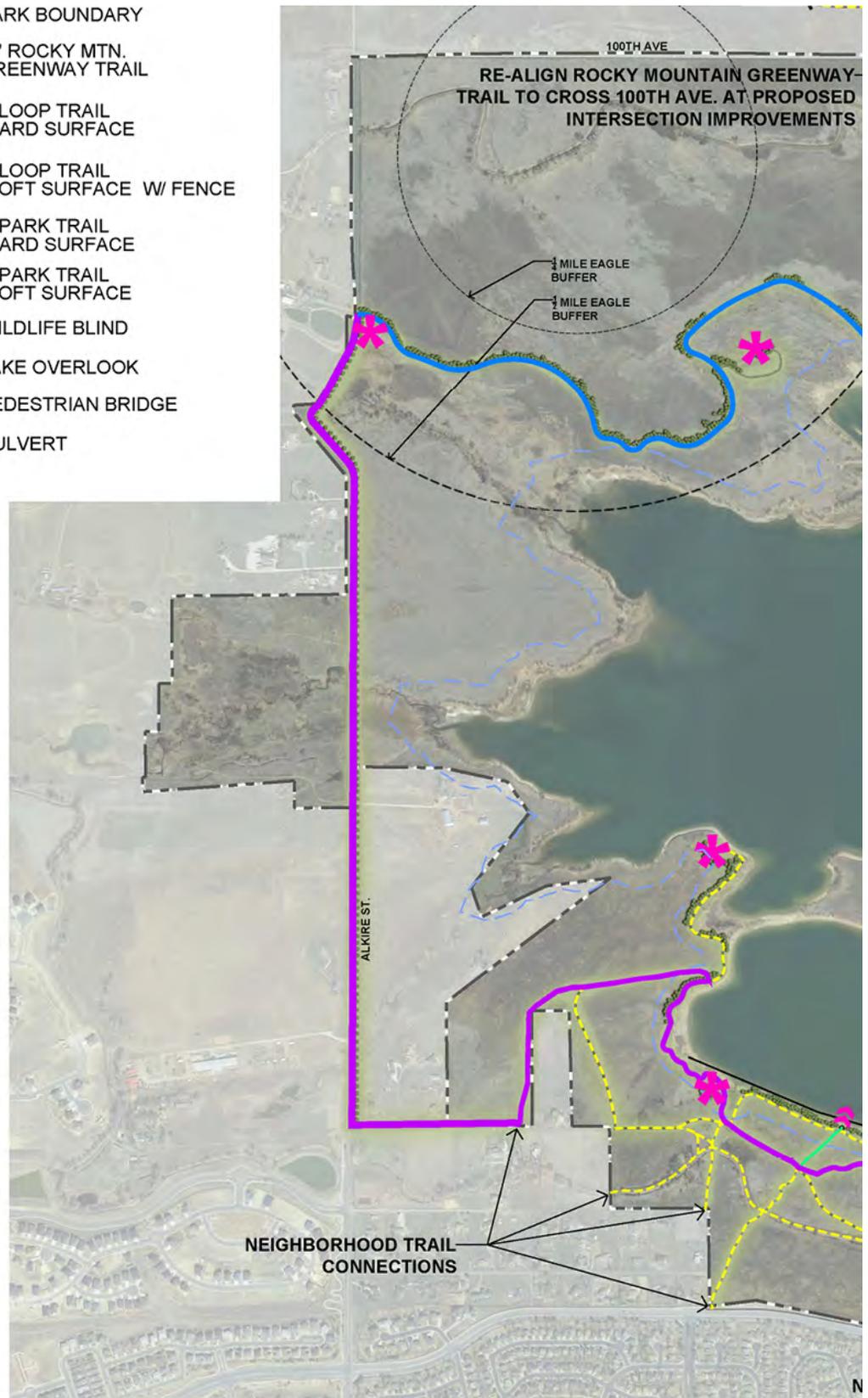




Figure 4-3. Overall Trail Program

4.4. Park Central District

- 1 NATURE CENTER & ENTRY GATE
- 2 PARK OPERATIONS OFFICE
- 3 INTERSECTION REALIGNMENT
- 4 NATURE CENTER PARKING
- 5 EVENT PLAZA / ENVIRONMENTAL PLAYGROUND / CLASSROOM
- 6 EXISTING BOAT STORAGE AREA
- 7 SEASONAL RANGER STATION & STORAGE GARAGE
- 8 LAKE PAVILION
- 9 EXISTING AMPHITHEATER
- 10 UPLAND MEADOW RECLAMATION ZONE
- 11 RIPARIAN RE-VEGETATION ZONE
- 12 OUTDOOR DEMONSTRATION AREA
- 13 RESTROOMS
- 14 BOARDWALK
- 15 COURTESY DOCK (NON-MOTORIZED)
- 16 COURTESY DOCK (MOTORIZED)
- 17 EXISTING ADA-ACCESSIBLE DOCK
- 18 EXISTING ADA-ACCESSIBLE CAMPSITES
- 19 LAKE OVERLOOK
- 20 DAY-USE PICNIC AREA
- 21 DAY-USE PARKING (STORMWATER BMP)
- 22 PARK SHELTER
- 23 RENOVATED CAMPSITES
- 24 EXPANDED CAMPSITES
- 25 TENT-ONLY CAMPSITES
- 26 YURT CAMPSITES
- 27 PLAYGROUND
- 28 RE-VEGETATION / WATER QUALITY
- 29 EXISTING ANS SPRAY STATION
- 30 EXISTING BOAT PARKING
- 31 EXISTING BOAT RAMP
- 32 EXISTING COMFORT STATION
- 33 ROCKY MOUNTAIN GREENWAY TRAIL
- 34 BIG DRY CREEK TRAIL
- 35 RE-LOCATED DIVERSION STRUCTURE / RE-ALIGNED MANDALAY DITCH
- 36 SUPPLEMENTAL VEGETATION TO SCREEN BOAT STORAGE AREA
- 37 DAY-USE PARKING (GRAVEL SURFACE)
- 38 OVERFLOW PARKING (TURF SURFACE)

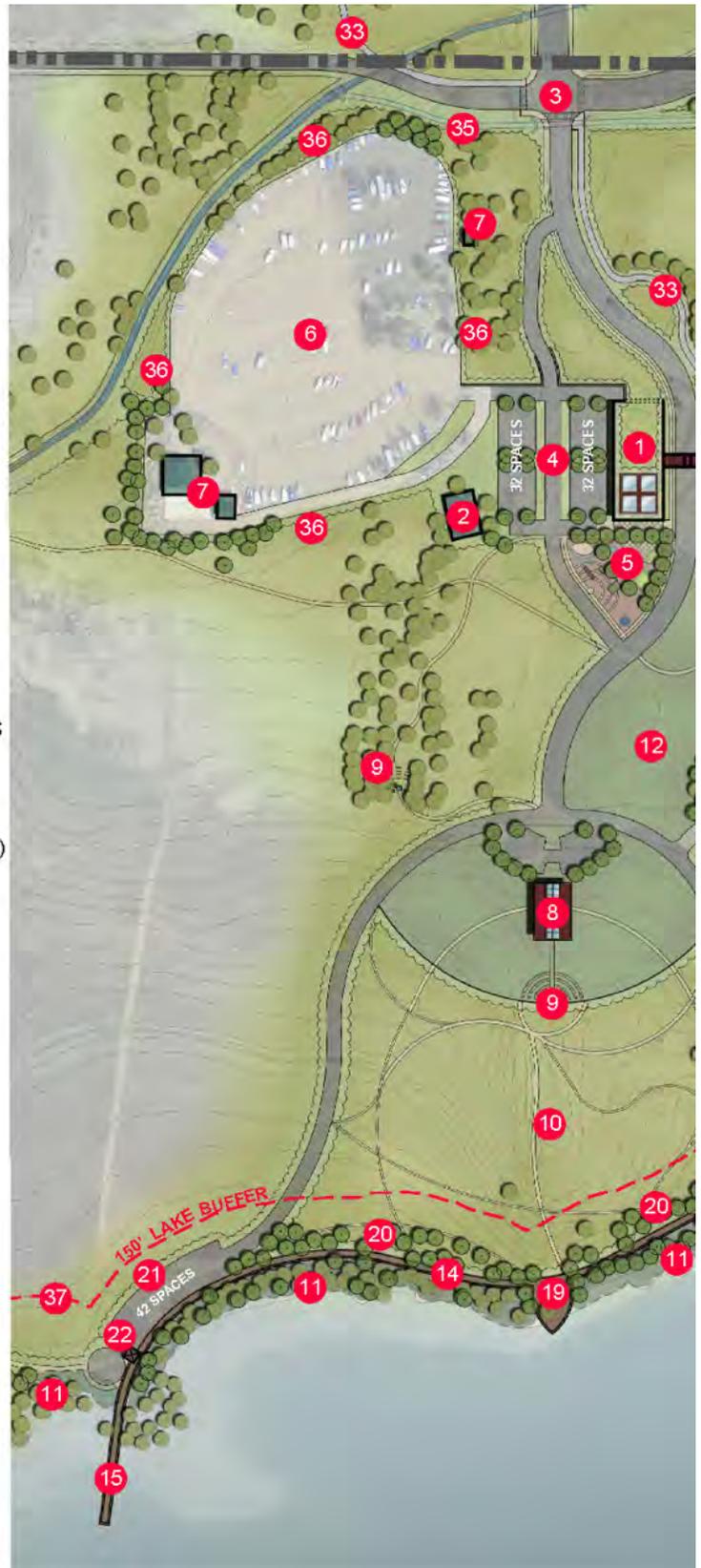




Figure 4-4. Park Central Master Plan



- | | |
|----------------------------------|-------------------------------------|
| 1 NATURE CENTER | 11 DAY-USE PICNIC AREA |
| 2 PARK OPERATIONS OFFICE | 12 RENOVATED CAMPSITES |
| 3 INTERSECTION REALIGNMENT | 13 EXPANDED CAMPSITES |
| 4 EXISTING BOAT STORAGE AREA | 14 TENT-ONLY CAMPSITES |
| 5 LAKE PAVILION & AMPHITHEATER | 15 YURT CAMPSITES |
| 6 UPLAND MEADOW RECLAMATION ZONE | 16 EXISTING ANS SPRAY STATION |
| 7 RIPARIAN RE-VEGETATION ZONE | 17 EXISTING BOAT PARKING |
| 8 BOARDWALK | 18 EXISTING BOAT RAMP |
| 9 COURTESY DOCK (MOTORIZED) | 19 DAY-USE PARKING (GRAVEL SURFACE) |
| 10 LAKE OVERLOOK | 20 OVERFLOW PARKING (TURF SURFACE) |



Figure 4-5. Perspective Rendering of Park Central District

4.5 Lakeview District



Figure 4-6. Lakeview District Master Plan

4.6. Southshore District



- 1 RECONFIGURED / EXPANDED DAY-USE PARKING
- 2 FUTURE PARKING EXPANSION AREA
- 3 RESTROOM ENCLOSURE
- 4 EXISTING PARK SHELTER
- 5 DAY-USE PICNIC AREA
- 6 PEDESTRIAN BRIDGE
- 7 "ICONIC" PEDESTRIAN BRIDGE
- 8 RIPARIAN RE-VEGETATION ZONE
- 9 BANK STABILIZATION / RE-VEGETATION
- 10 LAKE OVERLOOKS W/ SHELTERS
- 11 WLDLIFE BLIND

Figure 4-7. Southshore District Master Plan

4.7 Park Programs

Boating

The permitting and management of privately-owned motorized boats on Standley Lake is a sensitive issue given the risk to water quality that the invasive aquatic nuisance species pose coupled with a small but enthusiastic boat permit-holder community that utilizes the lake for this purpose. Due to increased quarantine times instituted under the Aquatic Nuisance Species Protection Program (currently 35 days), annual powerboat permit sales have declined at Standley Lake Regional Park, with many past permit holders expressing frustration with the longer quarantine times and the reduction in the boating season when their boats access other lakes and must be subsequently sprayed prior to re-entering Standley Lake.

Given that Standley Lake is the only drinking water source for the City of Westminster, as well as a supply source for the Cities of Thornton and Northglenn, the Aquatic Nuisance Species Protection Program should maintain its current quarantine requirements and potentially increase those requirements if the zebra mussel and other invasive species continue to progress into Colorado lakes and reservoirs. If the demand for annual boat permits on Standley Lake continues to decline, consideration should be given to responsively reducing the number of boat permits sold annually (currently at 550 permits) to minimize the threat of ANS contamination in this critical community drinking water supply.

The potential reduction in boat permits due to increased ANS spray requirements presents an opportunity to re-evaluate the current boat storage area north of the existing Visitor Center building including redeveloping this portion of the park into additional camping opportunities or rental cabins.

For the purpose of this Master Plan, it is assumed that the current motorized boating operations at Standley Lake will remain in place until further study into this recreational use is warranted. Continued evaluation of boating on Standley Lake is required to ensure that this program element does not negatively affect the park or lake. The following is a summary of the motorized and

non-motorized boating improvements that are proposed in the Standley Lake Master Plan.

Motorized Boating | The current boating facilities including the boat/RV storage yard, ANS spray station, and boat ramp will remain in place and will not require additional expansion or renovation. Proposed accommodations for powerboat users are focused primarily along the lake edge of the day-use area where a boardwalk is planned to buffer the riparian zone from lake activities. A 150' courtesy dock for motorized boats is proposed on the east side of the boardwalk to facilitate access to the campground and restrooms for boats that are utilizing the lake.

To mitigate the lost revenue from reduced boat permit sales while still providing public access to the water, a small marina could be developed at the Park Central District (located where the proposed day courtesy dock is currently proposed). The marina could offer a variety of boat rentals including powerboats, pontoons, and bass boats which would remain at Standley Lake under the management of park staff and without the threat of ANS contamination imported from other lakes. The marina should consider lake level fluctuations with the understanding that it would be closed when the lake levels are below the water surface elevation required for boat access to the dock(s).

Non-motorized Boating | The success of the recently-developed paddleboard rentals at SLRP combined with a growing national trend for this type of water-based recreation suggests a strong demand for increased non-motorized boat rentals at the lake. In addition to paddleboards, other non-motorized craft rentals such as kayaks, canoes, sailboats, rowboats, and hydrobikes should be increased with demand to allow park users to explore the lake. A 150' courtesy dock for non-motorized boats is proposed on the west side of the boardwalk to facilitate access to the non-motorized area of the lake. Additionally, a small shelter structure is located near this courtesy dock that includes a small storage area for smaller craft.

Camping

Camping at Standley Lake is a very popular activity with campsites completely booked during the peak season weekends. Currently, the existing campgrounds offer 70 tent/RV/trailer campsites and 6 tipis for reservation. The proposed Master Plan will reconfigure the campground to eliminate the “eyebrow” driveways that the campsites are located on which will increase the distance between campsites and provide more revegetation areas around them. The proposed campground improvements will enhance and expand the existing campground areas and provide additional campsite products described in detail below. A new loop road added to the north side of the existing campground increases the total number of campsites from 70 to 105 and provides an additional 8-tent-only campsites and 3 yurts that can accommodate 4-6 campers each.

Proposed campground improvements include increasing the amenities such as nature playgrounds, shelters for group camping, and increased native plantings to buffer campsites and provide additional shade and biodiversity. The native revegetation areas

between the campsites also provide a water quality function for the stormwater runoff from adjacent facilities such as buildings, roads, and parking areas.

RV Camping | The majority of the proposed campsites accommodate RV camping as well as non-RV camping. Figure 4-8 illustrates the layout of the proposed campsite renovations which will accommodate a greater variety and size of RVs and campers. A new loop road has been added to the Coyote Gulch campground and includes the extension of a potable water line from the park entry drive along the new road that provides water connections to the 34 campsites located along this new road. Electrical service to all of the RV campsites has been proposed to eliminate the need to run back-up generators and the noise pollution that they generate. The RV campsites will be renovated to eliminate the small “eyebrow” pull-offs that are located off of the main roads which allows the parking bays to be increased to accommodate a wider range of RV size without encroaching into adjacent campsites.

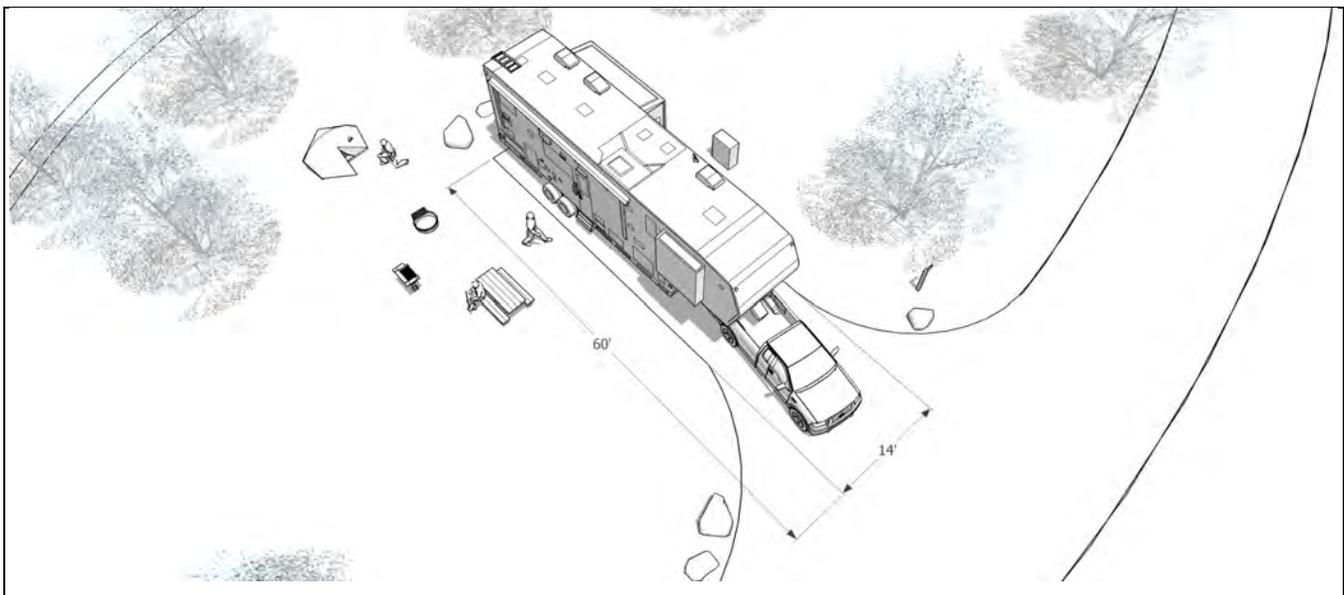


Figure 4.8 The proposed campsite renovations will accommodate a greater variety of Class A motorhomes and include picnic amenities and water/electrical hook-ups

Tent Camping | Eight tent-only campsites have been provided on the east side of the Coyote Gulch campground which prohibit the use of RV's in this area. The intent is to provide a more traditional camping experience near the existing wetland area that is not equipped with utility services such as power and water connections.

Yurt Camping | Adjacent to the tent camping area is an area for three 30' diameter yurts that can comfortably accommodate 10-16 people in beds. Yurts can be accessorized to feature insulation, operable doors/windows, wood-burning stoves, and attached decks. In addition to camping rentals, the yurts can be used as classrooms or for group events such as team-building exercises.

Tipis | In 2015, park staff installed six for-rent tipis near the existing Nature Center/administration building to provide another unique camping experience at the park. The tipi rentals have been very popular and an outdoor demonstration area has been provided near the proposed Nature Center building to display innovative or historic outdoor accommodations and equipment or travelling exhibitions.

Cabin Rentals | The Inventory, Outreach, and Analysis Phase suggests cabin rentals may provide another opportunity for overnight lodging at the park however the location, size, and style of these facilities should be carefully considered to evaluate the impact to the park character. Cabins have not been proposed within the existing campground area however the reduction or removal of the boat storage area near the park entry may create an opportunity to provide a small enclave of cabins that are isolated from the main campground area and take advantage of views to the lake and mountains.

Camping Equipment Rentals & Supplies | Given the proposed increase in camping accommodations, camping equipment rentals and provisions sales would accommodate park uses while creating additional revenue opportunities. This type of equipment could include a variety of tent types and styles, shade/rain canopies; sleeping cots/air mattresses; tables and chairs; grilling/cooking stoves; and outdoor games. In addition to equipment rentals, additional sales of items

like firewood, propane, rain gear, etc. could be offered to accommodate campers in need of these supplies.

Fishing

Fishing is a very popular activity at Standley Lake from both the shore and from boats. Increased access to the north and south lake shoreline provides additional fishing opportunities around the park. These shoreline improvements include boardwalks, seawalls, docks, re-vegetated riparian planting zones, and day-use picnic areas.

In addition to providing shoreline improvements to increase fishing access, fishing equipment rentals should be considered to accommodate novice anglers in need of a pole during their visit to the park or for experienced anglers who would like to demo new equipment.

Trails

The Inventory, Outreach, and Analysis Phase indicated a strong need for increased trail access around Standley Lake and for better connectivity to off-site trail networks. The Rocky Mountain Greenway Trail accesses the west and north portions of the park and thus park trail connections to this regional pedestrian thoroughfare should be maximized and signage provided to guide trail users and highlight key environmental and historic features within the park.

A diverse network of trail types and materials are proposed throughout the park that predominately use existing trail alignments within the park. These trail types range from 10' hard surface, multi-use paths to unimproved, primitive trails and will link important recreational assets located within the park. Consideration should be given to maximizing ADA accessibility to the park trail network to encourage adaptive recreation on both land and water.

A connected trail network with a variety of trail types and materials provides critical recreational infrastructure for a wide range of outdoor activities throughout the year including the following:

- Walking
- Hiking/backpacking

- Jogging/running
- Bicycling (mountain, road, tandem, etc.)
- Cross-county skiing
- Snowshoeing
- Wildlife viewing
- Geocaching

The trail –based recreation opportunities within (and radiating from) the park presents an opportunity to provide a broad range of equipment rentals that support hiking, cycling, and winter sports to provide seasonal community benefit throughout the year.

Hiking | Hiking consistently ranked highest in the community survey as the preferred recreation activity for a broad demographic of park users. Equipment rentals for backpacks, snowshoes, and cross-country skis would allow park users to demo this equipment prior purchasing from an outfitter and would also increase park visitation in the winter months.

Cycling | Cycling also ranked high in the community survey of preferred recreation activities and the proposed trail network within the park is capable of supporting a wide range of bicycle types as well as inline skates and rollerskis.

Winter Sports | Winter sports such as cross-county skiing and snowshoeing would increase the off-season recreational opportunities at the park. The proposed trail network would provide park users who may not travel to the mountains often with an opportunity to experience winter sports in a convenient location within the City.

Wildlife Viewing

The park wildlife and supporting habitat are an important natural resource at SLRP that should be preserved and enhanced with opportunities for the public to learn more about these the various park species. Given the diverse bird populations that frequent the park, additional viewing blinds are provided around the park to accommodate birdwatchers and wildlife enthusiasts. The design and materials for the proposed wildlife blinds offer an opportunity to create a unique recreational element

that further conveys the Standley Lake brand and the park’s commitments to resource conservation.

The desire to create better wildlife viewing opportunities within park should be carefully balanced with resource protection to limit the impacts to the natural resources that support these species. The popularity of the live-streaming eagle camera suggests additional webcam-based observation technology would further connect the outside world with the wildlife around Standley Lake. Additionally, equipment rentals for wildlife viewing such as binoculars, tripods, and portable bird blinds could also be offered to accommodate novice bird watchers at the park.

Conservation Education

The current educational programs offered at SLRP are very popular and thus frequently run out of space prior to the event. The classes typically focus on wildlife biology and outdoor recreation topics and they are limited by the available venues and instructors that support these programs. Below is a sampling of the various Standley Lake educational programs that were offered during the 2016 season:

The proposed master plan improvements offer additional indoor and outdoor venues around the park that can serve as classrooms/outdoor laboratories, presentation/exhibition spaces, special event rentals, or general day-use recreation activities. Additional educational course offerings should be considered relative to the proposed increased equipment rentals for boating, camping, fishing, and bicycling and the opportunity this presents to position SLRP as a premier destination for outdoor recreation training for beginner, intermediate, and advanced skill levels.

In addition to wildlife biology and outdoor recreation programs, environmental stewardship and conservation practices should be offered that integrate into the existing natural resources at SLRP. The combination of robust outdoor education/conservation programs at Standley Lake with sustainably-designed, “green” facilities such as the proposed Nature Center would further establish Standley Lake as a regional leader in sustainable outdoor recreation and environmental stewardship. The challenge of substantially increasing the educational programs at SLRP will be finding

qualified instructors to teach these programs; therefore, partnerships with allied organizations such as the Outdoor Foundation, Trout Unlimited, various recreational associations, and local school districts and youth groups may be beneficial to supplying content and instructors for these courses.

Listed below is a range of potential course topics that could increase depth and breadth of the Standley Lake Educational Programs:

Natural Sciences Courses

- Wildlife Biology
 - Birds
 - Mammals
 - Fish/amphibians
 - Insects
- Botany
 - Native plants
 - Edible landscapes
 - Xeriscape design
 - Gardening 101
- Ecology
 - Watershed protection
 - Aquatic/wetland/riparian ecosystems
 - Geology
 - Landscape biodiversity
- Astronomy

Outdoor Recreation Courses

- Wildlife viewing
- Fishing (spin vs. fly)
- Small boat sailing
- Backpacking/orienteering
- Primitive camping
- Wilderness survival
- Geocaching

Personal Fitness Courses

- Boot camp/group fitness
- Marathon/endurance training
- Trail running
- Rowing
- Yoga/Pilates

Arts and Crafts

- Painting/drawing
- Landscape photography
- Flower pressing
- Wood carving
- Early pioneer techniques

History and Culture

- Native American history
- Early Front Range settlers
- History of Standley Lake
- Front Range mineral mining



Figure 4-10. The Park Central improvements include a new Nature Center, pavilion, and park shelters that can host a wide variety of events

Special Events

The Standley Lake Master Plan proposes a variety of venues that can accommodate a diverse range of special events at the park which are outlined below. The proposed venues include indoor conference and classroom spaces and outdoor shelters, pavilions, and informal gathering spaces

- Races/marathons/endurance competitions
- Weddings/ceremonies
- Corporate/business events
- Professional association conferences
- Outdoor performances

4.8 Park Identity

In an effort to distinguish Standley Lake Regional Park as one of the best open space areas in the City, a comprehensive family of signs was developed exclusively for its use. This sign program is designed to promote, celebrate and make aware the Park, its venues, and activities and is attached as Appendix C of this master plan report. Branding and signage improvements at Standley Lake should be coordinated with the overall City brand and identity standards which were under development during the preparation of this master plan report.

The architectural components used in the proposed Standley Lake Master Plan improvements should utilize natural materials and finishes to reflect the native character of the surrounding landscape. One of the most visible elements of the park is signage which includes identification, informational, directional, and placemaking sign types. Figure 4-11 provides a variety of precedent images for signage that utilize natural materials that should be considered at Standley Lake Regional Park



Figure 4-11. Precedent images of signage that utilize natural materials and finishes

Materials and Finishes

Standley Lake is all about the landscape. It is a natural and untouched respite in the middle of an urban environment. The colors and finishes of the signage should appear to have emerged directly from the natural landscape (Figure 4-12).

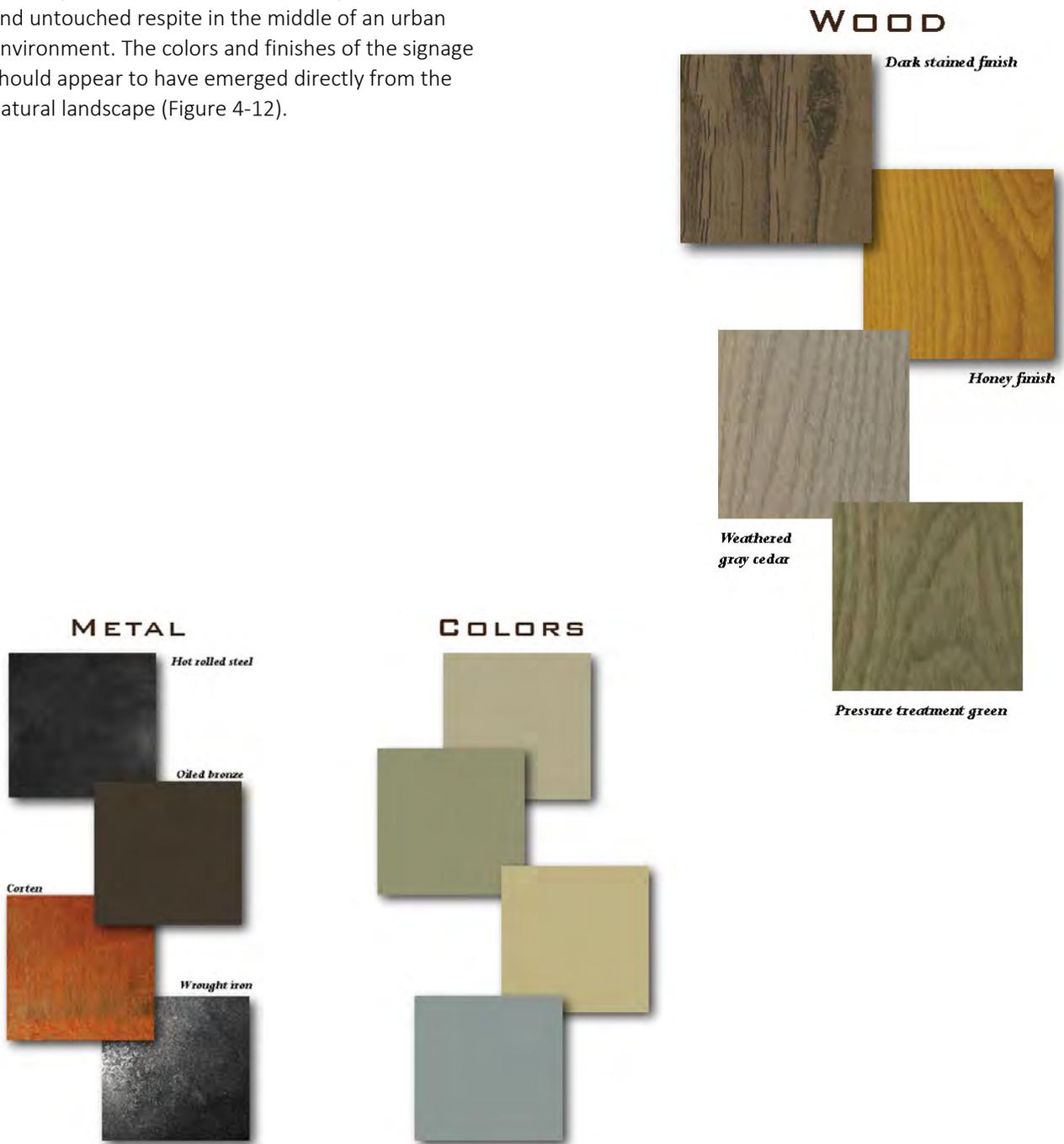


Figure 4-12. Proposed Standley Lake architectural materials and finishes

Informational Signage

Choosing a unique font family for the Park will help create a singular familiar voice in the handful of informational signs. This move also allows the Team an opportunity to rewrite, consolidate and make consistent the regulatory rules that are required to be posted.

The sign family will feel more cohesive with white messages, all in a consistent font family, on darker sign fields. Colors may vary, though palette should be restricted (Figure 4-13).

A combination of fonts might be desired- copy heavy messages should employ the most legible font choices in addition to using upper and lower case letters, instead of all CAPS, for increased legibility.



Figure 4-13. Examples of park informational signage

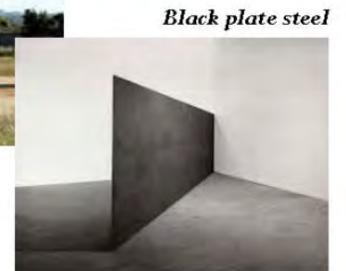
Park Signage Family

The various park sign types should utilize similar materials and styles to create a unified signage family within the park (Figure 4-14).

- Pick up on the warm tones of the stained woodwork found at some of the existing facilities.
- Small member wood structure with a honey finish stain and sealant. Provides a more contemporary, higher level of finish.
- Self-supporting plate hot rolled steel sign panels (or 1" thin profile fabricated frame and skin surfaces to achieve the same effect).
- Neutral paint palette gives the natural prairie environment center stage with its color.
- Neutral blackened steel cuffs and collars with expressed square head fasteners.



Assembled wood



Black plate steel

PALETTE

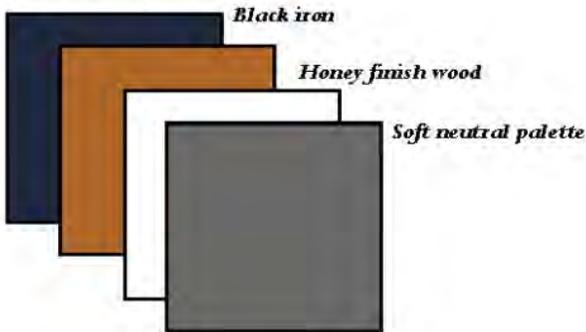


Figure 4-14. Park Signage Family

4.9 Infrastructure Improvements

For the purpose of the conceptual utility layout and costing provided within this Master Plan, it is assumed that the utilities that are being connected to off-site have sufficient capacity for the proposed buildings and other infrastructure being proposed. The sizing of the infrastructure is based on our experience and expertise on similar projects of this size.

The project has been broken into 2 distinct areas where new building and infrastructure are being proposed. The first area is the Lakeview District (Figure 4-15) near 88th Avenue where a 5,000 square foot restroom, storage area, and shade structure with 5 stalls, 1 urinal and 4 sinks is proposed. This will be supported by a sanitary sewer line from Independence Street along with a water services from the same location. There is a new driveway from 88th Avenue that will be paved and due to the increase in new impervious surface a water quality pond is proposed at the northwest corner of 88th Avenue and the new access drive. There are two new shelters proposed adjacent to the restroom building and neither are anticipated to have utility connections outside of an electric service.

The second area is the Park Central District (Figure 4-16) where two new buildings, a Nature Center and Lake Pavilion, are proposed in this area and both require water and sanitary sewer services along with new hose bibs to the renovated camp sites. The existing waterline will be replaced with a larger size to ensure adequate pressure and flow to the hose bibs and is looped through the site. Due to the new utility service extension to the proposed Lake Pavilion, the existing campground restroom is proposed to be re-plumbed and connected to the force main from the pavilion building. Stormwater runoff from new buildings and roadways will be directed to a series of linear water quality ponds that are woven between the campsites and will be interconnected by pipes and conveyed to the existing spillway below the dam.

Water levels within the lake can fluctuate depending on the available supply and user demand. Low lake levels are anticipated routinely under future modeled scenarios. Furthermore, the Standley Lake IGA notes

that "...the users of Standley Lake shall have at all times the right to raise and lower the water levels in Standley Lake without restriction or liability...and that there shall be no minimum water level for Standley Lake..." Given the historic and projected fluctuations of the lake water level, consideration should be given to the impacts on park recreation when the water levels are low.

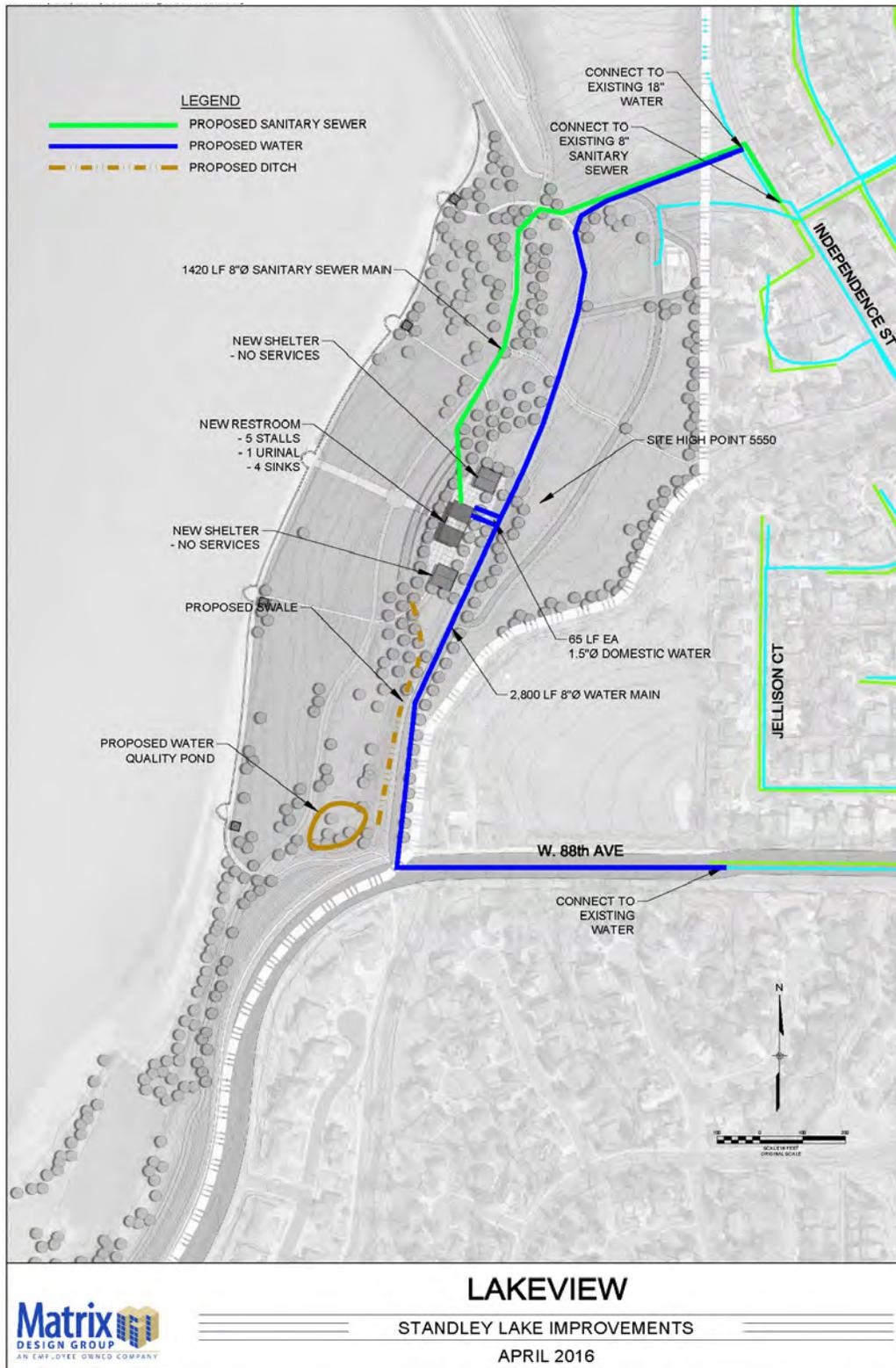
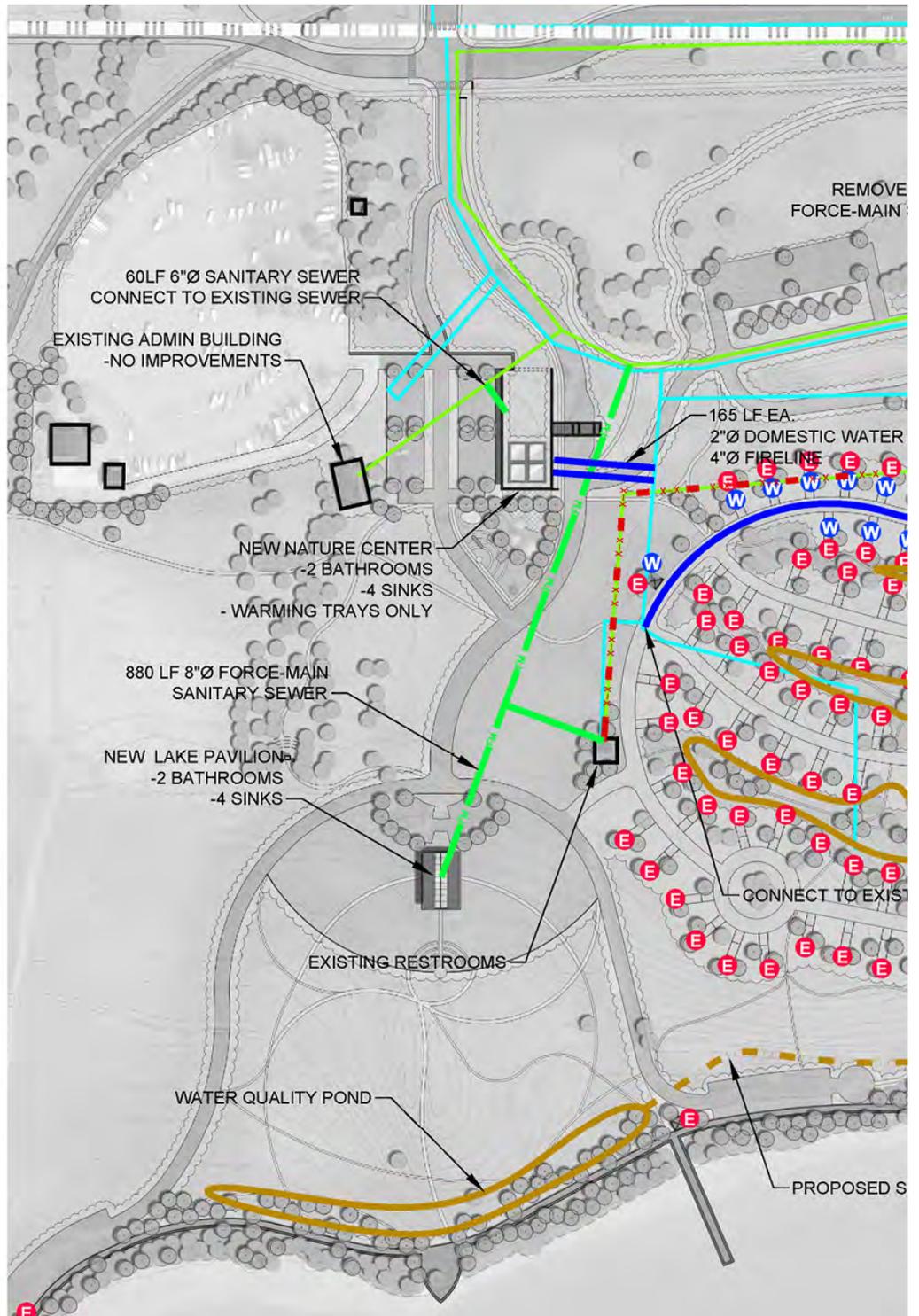


Figure 4-15. Lakeview District Conceptual Infrastructure Plan



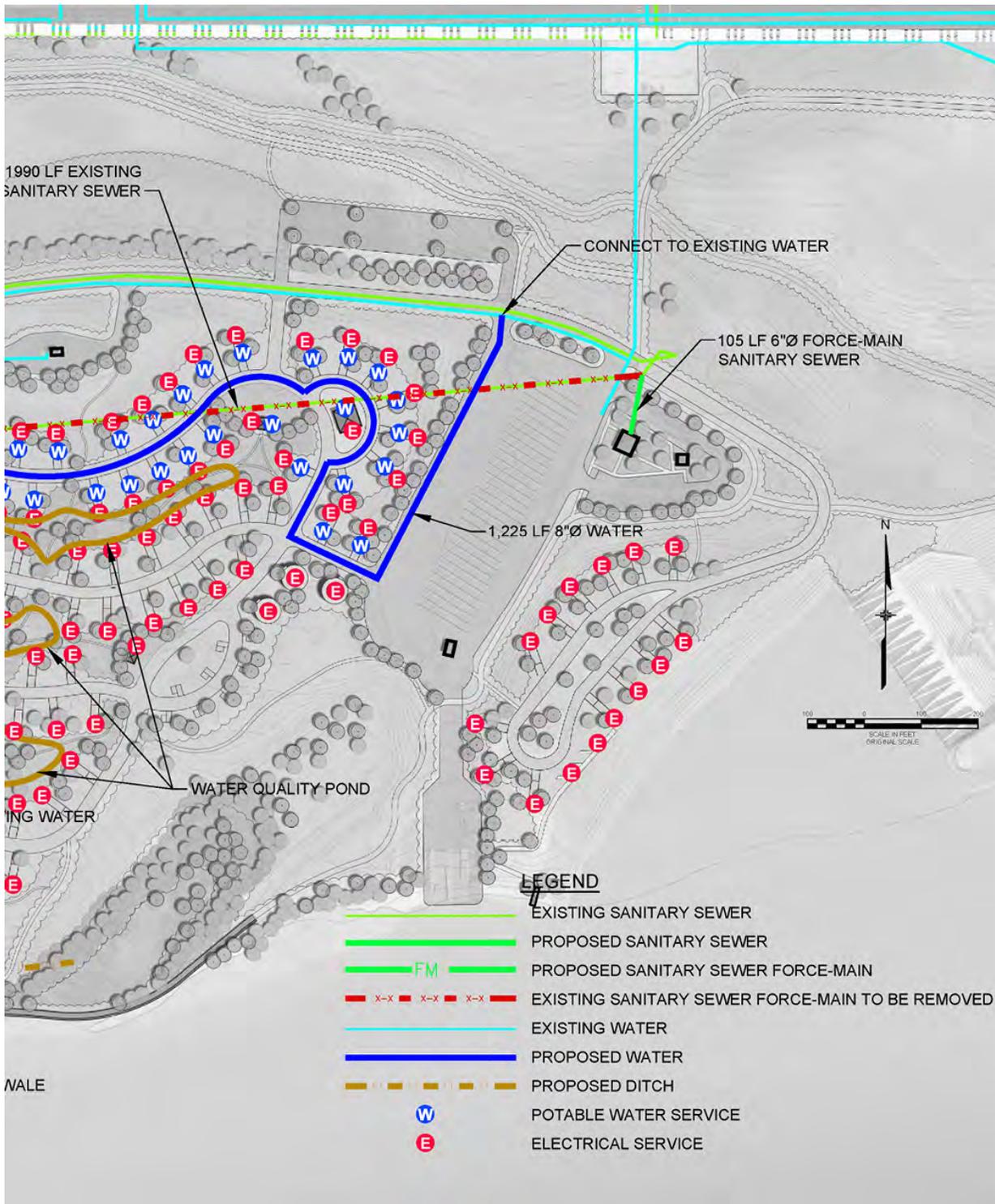


Figure 4-16. Park Central District Conceptual Infrastructure Plan

4.10. Estimate of Probable Construction Cost

STANDLEY LAKE MASTER PLAN CIP BY PHASE/PRIORITY				6/9/2017
# DESCRIPTION	QTY.	UNIT	UNIT COST	COST
PHASE 1 IMPROVEMENTS (HIGH PRIORITY)				
LOOP TRAIL COMPLETION (ALKIRE ST. ALIGNMENT)				
RIGHT-OF-WAY ACQUISITION (2,300 LF X 30' W ON EAST ALKIRE, NORTH OF 88TH AVE)	1.60	AC	50,000.00	\$80,000
EARTHWORK (INCLUDES GRADING ALONG ALKIRE ST. SHOULDER @ 0.8 CY/LF)	8,986.00	CY	4.00	\$35,944
LOOP TRAIL (PARK CENTRAL TO NORTH ALKIRE), 8' WIDE CRUSHED FINES	52,356.00	SF	2.00	\$104,712
LOOP TRAIL (NORTH ALKIRE TO WEST 86TH AVE), 8' WIDE CONCRETE	71,888.00	SF	4.00	\$287,552
TRAIL CROSSING IMPROVEMENTS @ ALKIRE & BIG DRY CREEK	1.00	LS	75,000.00	\$75,000
TRAIL CROSSING IMPROVEMENTS @ ALKIRE & WOMAN CREEK	1.00	LS	75,000.00	\$75,000
WILDLIFE BLINDS	3.00	EA	35,000.00	\$105,000
FENCE (OPEN SPACE FENCE, BOTH SIDES OF TRAIL FROM PARK CENTRAL TO ALKIRE)	13,094.00	LF	20.00	\$261,880
NATIVE SEEDING	27,000.00	SF	0.10	\$2,700
MISC. REVEGETATION	1.00	LS	100,000.00	\$100,000
SITE FURNISHINGS	1.00	LS	15,000.00	\$15,000
PARK SIGNAGE	1.00	LS	30,000.00	\$30,000
LOOP TRAIL EXTENSION (ALKIRE ST. ALIGNMENT) SUBTOTAL				\$1,172,788
			25% Design/Construction Contingency	\$293,197
LOOP TRAIL EXTENSION (ALKIRE ST. ALIGNMENT) TOTAL				\$1,465,985
PARK CENTRAL DISTRICT: DAY-USE AREA IMPROVEMENTS				
ROADWAY - ASPHALT	41,623.00	SF	7.22	\$300,611
(2) PARKING AREAS - PERMEABLE PAVERS	30,883.00	SF	25.00	\$772,075
(2) PARKING AREAS - CURB AND GUTTER	1,345.00	LF	16.00	\$21,520
PARKING AREA STORMWATER BMPs	1.00	LS	75,000.00	\$75,000
SHELTER #1 (30'X30' W/ ENCLOSED STORAGE AREA)	1.00	EA	45,000.00	\$45,000
SHELTER #2 (30'X30')	1.00	EA	35,000.00	\$35,000
CONCRETE SIDEWALKS (6' WIDE, 4" DEPTH)	63,000.00	SF	4.00	\$252,000
CRUSHED FINES TRAILS (4' WIDE, 4" DEPTH)	27,200.00	SF	2.00	\$54,400
RIPARIAN REVEGETATION (TREES, SHRUBS, SEEDING)	130,000.00	SF	5.00	\$650,000
UPLAND MEADOW RECLAMATION/RE-SEEDING	306,405.00	SF	0.50	\$153,203
SITE FURNISHINGS	1.00	LS	150,000.00	\$150,000
PARK SIGNAGE	1.00	LS	50,000.00	\$50,000
PARK CENTRAL DISTRICT: DAY-USE AREA IMPROVEMENTS SUBTOTAL				\$2,558,808
			25% Design/Construction Contingency	\$639,702
PARK CENTRAL DISTRICT: DAY-USE AREA IMPROVEMENTS TOTAL				\$3,198,510
PARK CENTRAL DISTRICT: CAMPGROUND EXPANSION/RENOVATION				
RV CAMPSITE RENOVATIONS	105.00	EA	1,500.00	\$157,500
TENT CAMPSITES	8.00	EA	1,000.00	\$8,000
YURT CAMPSITES (30' DIA.)	3.00	EA	15,000.00	\$45,000
ROADWAY (RESURFACE/BLADE EXISTING GRAVEL IN CAMPGROUNDS)	48,000.00	SF	1.00	\$48,000
ELEC - TRANSFORMER	1.00	EA	8,500.00	\$8,500
ELEC - DISTRIB. PANEL	3.00	EA	1,200.00	\$3,600
ELEC - RV PEDESTAL	105.00	EA	1,200.00	\$126,000
NATURE PLAY AREA #1	7,000.00	SF	15.00	\$105,000
NATURE PLAY AREA #2	3,500.00	SF	15.00	\$52,500
NATURE PLAY AREA #3	9,000.00	SF	15.00	\$135,000
CAMPGROUND SHELTER #1 (30'X30')	1.00	EA	35,000.00	\$35,000
CAMPGROUND SHELTER #2 (30'X30')	1.00	EA	35,000.00	\$35,000
CAMPGROUND SHELTER #3 (30'X30')	1.00	EA	35,000.00	\$35,000
CAMPGROUND SHELTER #4 (50'X50')	1.00	EA	60,000.00	\$60,000
CRUSHED FINES TRAILS (4' WIDE, 4" DEPTH)	27,500.00	SF	2.00	\$55,000
CAMPGROUND REVEGETATION (SHRUBS, TREES, GROUNDCOVER B/W CAMPSITES)	182,150.00	SF	5.00	\$910,750
RE-SEEDING	566,236.00	SF	0.10	\$56,624
IRRIGATION	182,150.00	SF	1.50	\$273,225
SITE FURNISHINGS	1.00	LS	125,000.00	\$125,000
PARK SIGNAGE	1.00	LS	50,000.00	\$50,000
PARK CENTRAL DISTRICT: CAMPGROUND EXPANSION/RENOVATION SUBTOTAL				\$2,324,699
			25% Design/Construction Contingency	\$581,175
PARK CENTRAL DISTRICT: CAMPGROUND EXPANSION/RENOVATION TOTAL				\$2,905,873

PARK CENTRAL DISTRICT: INTERSECTION RE-ALIGNMENT				
DEMOLITION-ASPHALT ROAD	8,000.00	SY	4.00	\$32,000
RELOCATE CHURCH MADALAY DITCH DIVERSION STRUCTURE	1.00	LS	85,000.00	\$85,000
CHURCH DITCH REALIGNMENT (4' DEEP X 10' WIDE)	430.00	LF	200.00	\$86,000
BOX CULVERT (4'x10' BOX UNDER 100TH AVE. REALIGNMENT)	85.00	LF	1,000.00	\$85,000
MANDALAY DITCH HEADWALL (EAST OF SIMMS ST.)	1.00	LS	5,000.00	\$5,000
REALIGNMENT OF 100TH/SIMMS INTERSECTION	1.00	LS	75,000.00	\$75,000
TRAFFIC SIGNALIZATION	1.00	LS	300,000.00	\$300,000
CONCRETE SIDEWALKS (6' WIDE, 4" DEPTH)	12,000.00	SF	4.00	\$48,000
RE-SEEDING/RE-VEGETATION	1.00	LS	50,000.00	\$50,000
PARK SIGNAGE	1.00	LS	35,000.00	\$35,000
PARK CENTRAL DISTRICT: INTERSECTION RE-ALIGNMENT SUBTOTAL				\$801,000
			25% Design/Construction Contingency	\$200,250
*PARK CENTRAL DISTRICT: INTERSECTION RE-ALIGNMENT TOTAL				\$1,001,250
*DOES NOT INCLUDE UTILITY RELOCATIONS				
LAKEVIEW DISTRICT: SHORELINE STABILIZATION				
SEAWALL (12' HT., CIP CONCRETE)	1,924.00	CY	1,500.00	\$2,886,000
ORAMENTAL GUARDRAIL	2,165.00	LF	100.00	\$216,500
CONCRETE PAVEMENT	20,568.00	SF	4.00	\$82,272
NATIVE SEEDING	215,000.00	SF	0.10	\$21,500
LAKEVIEW DISTRICT: SHORELINE STABILIZATION SUBTOTAL				\$3,206,272
			25% Design/Construction Contingency	\$801,568
LAKEVIEW DISTRICT: SHORELINE STABILIZATION TOTAL				\$4,007,840
SOUTHSHORE DISTRICT: VEHICULAR BRIDGE REPLACEMENT				
VEHICULAR/PEDESTRIAN BRIDGE (10'x50')	500.00	SF	150.00	\$75,000
NATIVE SEEDING/RE-VEGETATION	20,000.00	SF	0.50	\$10,000
SOUTHSHORE DISTRICT: VEHICULAR BRIDGE REPLACEMENT SUBTOTAL				\$75,000
			25% Design/Construction Contingency	\$18,750
SOUTHSHORE DISTRICT: VEHICULAR BRIDGE REPLACEMENT TOTAL				\$93,750
PHASE 1 IMPROVEMENTS (HIGH PRIORITY) TOTAL				\$12,673,208

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PHASE 2 IMPROVEMENTS (MODERATE PRIORITY)				
PARK CENTRAL DISTRICT: BOARDWALK & DOCK IMPROVEMENTS				
BOARDWALK	20,800.00	SF	25.00	\$520,000
COURTESY DOCK #1 (150 LF, MOTORIZED)	1.00	LS	60,000.00	\$60,000
COURTESY DOCK #2 (150 LF, NON-MOTORIZED)	1.00	LS	60,000.00	\$60,000
SITE FURNISHINGS	1.00	LS	25,000.00	\$25,000
SITE LIGHTING (MINIMAL/LOW-LEVEL AT NEW SHELTERS AND BOARDWALK)	1.00	LS	200,000.00	\$200,000
PARK CENTRAL DISTRICT: BOARDWALK & DOCK IMPROVEMENTS SUBTOTAL				\$865,000
			25% Design/Construction Contingency	\$216,250
PARK CENTRAL DISTRICT: BOARDWALK & DOCK IMPROVEMENTS TOTAL				\$1,081,250
PARK CENTRAL DISTRICT: ADDITIONAL CAMPGROUND PARKING AREAS				
(1) 50-CAR LOT, (1) 70-CAR LOT, GRAVEL SURFACE	58,626.00	SF	1.00	\$58,626
WATER QUALITY (POND, OUTLET STRUCTURE AND CONVEYANCE)	1.00	LS	40,000.00	\$40,000
PARK CENTRAL DISTRICT: ADDITIONAL CAMPGROUND PARKING AREAS SUBTOTAL				\$98,626
			25% Design/Construction Contingency	\$24,657
PARK CENTRAL DISTRICT: ADDITIONAL CAMPGROUND PARKING AREAS TOTAL				\$123,283
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS				
RESTROOM/SHELTER/STORAGE BUILDING	3,500.00	SF	100.00	\$350,000
ASPHALT ROAD AND PARKING (FROM 88TH TO NEW PAVILLION - 370' W/ C&G)	1.00	LS	190,268.64	\$190,269
WATER QUALITY (POND, OUTLET STRUCTURE AND CONVEYANCE)	1.00	LS	140,000.00	\$140,000
DRY UTILITIES (GAS, ELECTRIC)	1.00	LS	100,000.00	\$100,000
SECURITY SURVEILLANCE	1.00	LS	75,000.00	\$75,000
PARK SHELTER (50'X50')	2.00	LS	60,000.00	\$120,000
PARK SHELTER #3 (30'X30')	3.00	LS	35,000.00	\$105,000
CONCRETE PAVEMENT - PLAZA (DECORATIVE)	12,000.00	SF	6.00	\$72,000
CONCRETE PAVEMENT - SIDEWALKS	3,962.00	SF	4.00	\$15,848
CONCRETE STAIRS	300.00	LFR	45.00	\$13,500
RETAINING WALLS	2,400.00	FF	50.00	\$120,000
LIGHTING	1.00	LS	150,000.00	\$150,000
IRRIGATION	323,355.00	SF	1.00	\$323,355
REVEGETATION/SEEDING	260,000.00	SF	0.10	\$26,000
TREES	235.00	EA	350.00	\$82,250
PARK SIGNAGE	1.00	LS	50,000.00	\$50,000
SITE FURNISHINGS	1.00	LS	75,000.00	\$75,000
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS SUBTOTAL				\$2,008,222
			25% Design/Construction Contingency	\$502,055
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS SUBTOTAL + CONTINGENCY				\$2,510,277
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (UTILITIES ONLY)				
WATER LINE (8-INCH SERVICE LINE FROM INDEPENDENCE ST)	1,200.00	LF	150.00	\$180,000
WATER SERVICE LINE (FROM 3-INCH TO BUILDING) WITH 1.5-INCH METER	1.00	LS	8,000.00	\$8,000
SEWER LINE (8-INCH MAIN FROM PAVILLION TO INDEPENDENCE ST)	1.00	LS	101,400.00	\$101,400
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (UTILITIES ONLY) SUBTOTAL				\$289,400
			40% Soft Costs (Contingency, Contractor's GC's, CM fees, Maintenance, Survey, etc)	\$115,760
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (UTILITIES ONLY) SUBTOTAL + CONTINGENCY				\$405,160
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (W/ UTILITIES) TOTAL				\$2,915,437
SOUTHSHORE DISTRICT: TRAILHEAD & PARKING AREA IMPROVEMENTS				
PARKING AREA AND ENTRANCE ROAD (6-INCH FULL DEPTH ASPHALT W/ C&G)	1.00	LS	76,885.20	\$76,885
WATER QUALITY (POND, OUTLET STRUCTURE AND CONVEYANCE)	1.00	LS	85,000.00	\$85,000
ELECTRICAL SERVICE	1.00	LS	10,000.00	\$20,000
CONCRETE WALK - 6' WIDE	12,000.00	SF	4.00	\$48,000
RESTROOM ENCLOSURE	1.00	LS	12,000.00	\$12,000
RIPARIAN REVEGETATION	3,800.00	LS	5.00	\$19,000
SEEDING	34,353.00	SF	0.10	\$3,435
TREES	155.00	LS	250.00	\$38,750
SITE FURNISHINGS	1.00	LS	100,000.00	\$25,000
LIGHTING	1.00	LS	50,000.00	\$50,000
PARK SIGNAGE	1.00	LS	35,000.00	\$35,000
SOUTHSHORE DISTRICT: TRAILHEAD & PARKING AREA IMPROVEMENTS SUBTOTAL				\$413,071

SOUTHSHORE DISTRICT: TRAILHEAD & PARKING AREA IMPROVEMENTS SUBTOTAL					\$413,071
				25% Design/Construction Contingency	\$103,268
SOUTHSHORE DISTRICT: TRAILHEAD & PARKING AREA IMPROVEMENTS TOTAL					\$516,338
SOUTHSHORE DISTRICT: DAY-USE AREA IMPROVEMENTS					
PEDESTRIAN BRIDGE (10'x80', "ICONIC" DESIGN, PREMIUM FINISH)	800.00	SF	350.00		\$280,000
CONCRETE WALK - 8' WIDE	61,300.00	SF	4.00		\$245,200
WILDLIFE BLIND	1.00	LS	35,000.00		\$35,000
LAKE OVERLOOK W/ SHADE STRUCTURE	5.00	EA	75,000.00		\$375,000
PICNIC/SEATING AREAS	20.00	EA	3,500.00		\$70,000
SITE FURNISHINGS	1.00	LS	100,000.00		\$75,000
PARK SIGNAGE	1.00	LS	50,000.00		\$50,000
SOUTHSHORE DISTRICT: DAY-USE AREA IMPROVEMENTS SUBTOTAL					\$1,130,200
				25% Design/Construction Contingency	\$282,550
SOUTHSHORE DISTRICT: DAY-USE AREA IMPROVEMENTS TOTAL					\$1,412,750
SOUTHSHORE DISTRICT: SHORELINE STABILIZATION					
HIGH STABILIZATION (ASSUMED FOR 30% OF 9,000 LF OF SHORELINE)					
EARTHWORK (SLOPES LAID BACK 30' FROM LAKE, 4 CY/LF)	3,000.00	LF	45.00		\$135,000
BURIED RIPRAP (1' DEPTH x 20' WIDTH, 4 CY/FT)	3,000.00	LF	200.00		\$600,000
REVEGETATION	3,000.00	LF	5.00		\$15,000
TREES	1,000.00	LF	20.00		\$20,000
HIGH STABILIZATION SUBTOTAL					\$770,000
MODERATE STABILIZATION (ASSUMED FOR 30% OF 9,000 LF OF SHORELINE)					
EARTHWORK	3,000.00	LF	35.00		\$105,000
SOIL LIFTS	3,000.00	LF	24.00		\$72,000
TREES	3,000.00	LF	20.00		\$60,000
REVEGETATION	3,000.00	LF	5.00		\$15,000
MODERATE STABILIZATION SUBTOTAL					\$252,000
LOW STABILIZATION (ASSUMED FOR 30% OF 9,000 LF OF SHORELINE)					
EARTHWORK	3,000.00	LF	25.00		\$75,000
REVEGETATION	3,000.00	LF	5.00		\$15,000
TREES	3,000.00	LF	20.00		\$60,000
LOW STABILIZATION SUBTOTAL					\$150,000
SOUTHSHORE DISTRICT: SHORELINE STABILIZATION SUBTOTAL					\$1,172,000
				25% Design/Construction Contingency	\$293,000
SOUTHSHORE DISTRICT: DAY-USE AREA IMPROVEMENTS TOTAL					\$1,465,000
PHASE 2 IMPROVEMENTS (MODERATE PRIORITY) TOTAL					\$7,430,058

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PHASE 3 IMPROVEMENTS (LOW PRIORITY)				
PARK CENTRAL DISTRICT: NATURE CENTER & PARK OPERATIONS OFFICE				
NATURE CENTER BUILDING (LEED CERTIFIED)	15,000.00	SF	350.00	\$5,250,000
NATURE CENTER PLAYGROUND	15,000.00	SF	20.00	\$300,000
EXISTING NATURE CENTER/ADMIN BLDG. RENOVATION TO PARK OPS. FACILITY	2,000.00	SF	50.00	\$100,000
RETAINING WALLS	1,110.00	FF	50.00	\$55,500
WATER QUALITY PONDS (MULTIPLE OUTLET STRUCTURES & CONVEYANCE ELEMENTS)	1.00	LS	160,000.00	\$160,000
ROADWAY/PARKING PAVEMENT (6" DEPTH ASPHALT)	43,000.00	SF	2.50	\$107,500
CURB AND GUTTER (NEW PARKING AREAS ONLY)	2,900.00	LF	16.00	\$46,400
DECORATIVE CONCRETE	4,000.00	SF	10.00	\$40,000
CONCRETE WALK - 6' WIDE	11,000.00	SF	4.00	\$44,000
SITE FURNISHINGS	1.00	LS	100,000.00	\$100,000
LIGHTING	1.00	LS	250,000.00	\$250,000
PARK SIGNAGE	1.00	LS	35,000.00	\$35,000
PARK CENTRAL DISTRICT: NATURE CENTER SUBTOTAL				\$6,488,400
			25% Design/Construction Contingency	\$1,622,100
SOUTHSHORE DISTRICT: DAY-USE AREA IMPROVEMENTS TOTAL + CONTINGENCY				\$8,110,500
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (UTILITIES ONLY)				
WATER LINE - NEW MAIN FOR HOSE BIBS AND SERVICE TO NEW BUILDING	1.00	LS	125,875.00	\$125,875
NEW SERVICE TO BUILDING (2-INCH TAP, AND 4-INCH FIRELINE ASSUMED)	1.00	LS	16,850.00	\$16,850
SEWER SERVICE TO PAVILION - FORCE MAIN AND GRINDER PUMP IN MANHOLE, REALIGN				
SERVICE FROM EXST RESTROOM. PUMPING TO EXST. LIFT STATION	1.00	LS	100,000.00	\$100,000
SEWER SERVICE - FROM PROPOSED BUILDING - GRAVITY TO EXISTING PIPE	1.00	LS	3,900.00	\$3,900
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (UTILITIES ONLY)				\$246,625
			40% Soft Costs (Contingency, Contractor's GC's, CM fees, Maintenance, Survey, etc)	\$98,650
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (UTILITIES ONLY) SUBTOTAL + CONTINGENCY				\$345,275
LAKEVIEW DISTRICT: DAY-USE IMPROVEMENTS (W/ UTILITIES) TOTAL				\$8,455,775
PARK CENTRAL DISTRICT: LAKE PAVILION				
PAVILION BUILDING	5,000.00	SF	350.00	\$1,750,000
PAVILION AMPHITHEATER	50,000.00	LS	1.00	\$50,000
PARKING AREA - ASPHALT	9,121.00	SF	3.00	\$27,363
PARKING AREA - CURB/GUTTER	549.00	LF	16.00	\$8,784
DECORATIVE CONCRETE	3,000.00	SF	10.00	\$30,000
CONCRETE WALK - 6' WIDE	2,400.00	SF	4.00	\$9,600
SITE FURNISHINGS	25,000.00	LS	1.00	\$25,000
PARK SIGNAGE	1.00	LS	15,000.00	\$15,000
LANDSCAPE RE-SEEDING/RE-VEGETATION	99,708.00	SF	0.50	\$49,854
PARK CENTRAL DISTRICT: LAKE PAVILION SUBTOTAL				\$1,965,601
			25% Design/Construction Contingency	\$491,400
SOUTHSHORE DISTRICT: DAY-USE AREA IMPROVEMENTS TOTAL + CONTINGENCY				\$2,457,001
PHASE 3 IMPROVEMENTS (LOW PRIORITY) TOTAL				\$19,023,276
STANDLEY LAKE MASTER PLAN CIP IMPROVEMENTS SUMMARY BY PHASE				
PHASE 1 IMPROVEMENTS (HIGH PRIORITY)				12,673,208
PHASE 2 IMPROVEMENTS (MODERATE PRIORITY)				7,430,058
PHASE 3 IMPROVEMENTS (LOW PRIORITY)				19,023,276
				\$39,126,542
NOTES:				
1. TAP FEES ARE NOT INCLUDED IN THE COSTS ABOVE				
2. REALIGNMENT OF 100TH AND SIMMS DOES NOT INCLUDE ROW ACQUISITION OR UTILITY RELOCATION				
3. COSTS NOTED ABOVE ARE 2017 MONIES AND DO NOT REFLECT ESCALATION				

4.11. Next Steps

The Standley Lake Master Plan is a compilation of public meetings, advisory and stakeholder input, and surveys. Pressures from surrounding businesses and residential development, water resource needs, and public access will continue to impact the site in the future. As Parks, Recreation and Libraries moves forward with any of the proposed opportunities within the 2017 Standley Lake Master Plan, water quality will remain the City's top priority in the development of Standley Lake.

Moving forward, Parks, Recreation and Libraries will use this 2017 Standley Lake Master Plan to guide Operating and Capital Budget requests through the City's biannual budget process. This plan will also influence which grant funding opportunities are pursued in future years.

This proposed master plan and its projected costs are best preliminary estimates as of 2017 and are meant to guide staff in planning for future improvements and additional service offerings at Standley Lake. At the time staff chooses to move forward with any of the proposed amenities, a site specific design will be developed and will include detailed costs, staffing, and a reassessment of water quality impacts. Any proposed development will be reviewed by the appropriate City entities and the Standley Lake Operation Committee to assure that any development minimizes impacts to both the surrounding areas and water quality.

Standley Lake is an important resource to the City of Westminster and surrounding communities as both a water resource and a destination for recreational activities. The goal of the 2017 master plan is to provide a balance between protection of this water resource and future recreational opportunities to our community and region.



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