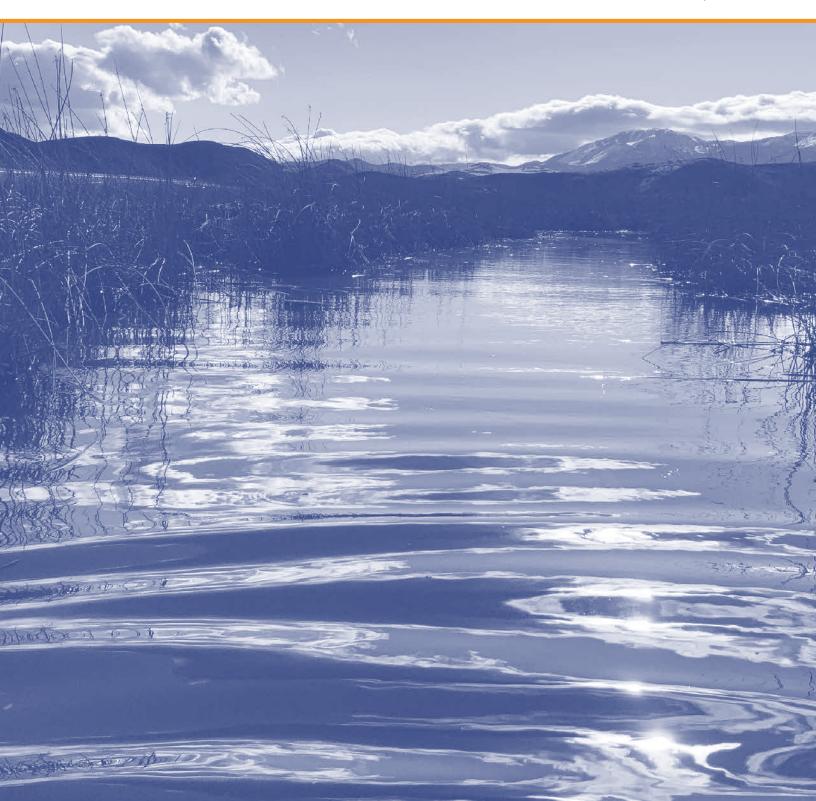


ROSEWOOD NATURE STUDY AREA

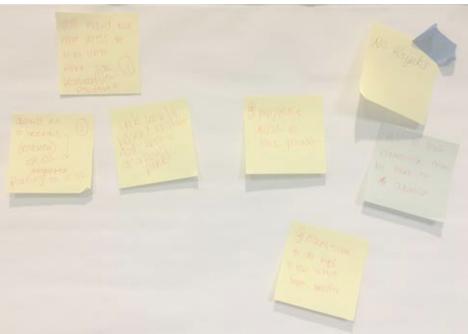
Truckee Meadows Parks Foundation | December 10, 2020

Concept Plan















The vision of the Rosewood Nature Study Area is to establish and steward a publicly accessible Great Basin wetland habitat where the community can come to learn about and appreciate the importance of our natural open spaces and local parks.











Acknowledgments

This planning document is the result of strong public and private partnerships working together on a common vision for the proposed Rosewood Nature Study Area.

Grantors:

National Park Service - Rivers, Trails, and Conservation Assistance Program
Truckee River Fund at the Community Foundation of Western Nevada
National Audubon Society - George Whittell Nevada Envronmental Fund
AmeriCorps State and National - Corporation for National and Community Service
REI

Partners:

City of Reno
Lahontan Audubon Society
Michael Baker International
Nevada Bugs and Butterflies
Nevada Department of Wildlife
REI
American Society of Landscape Architects
University of Nevada Cooperative Extension
University of Nevada, Reno
Walker Basin Conservancy
Washoe Storey Cooperative Weed Management Area

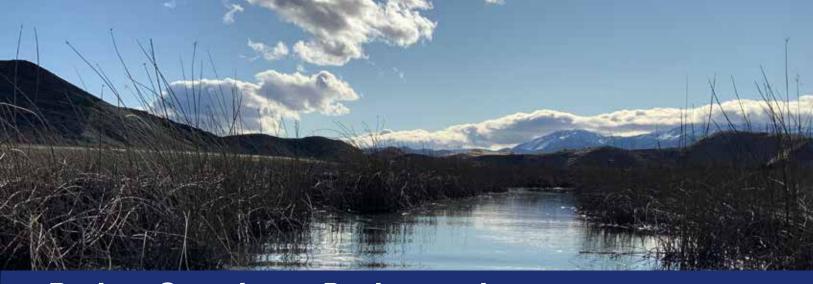
Thank you to all of the stakeholders, volunteers, and members of the public who participated in the public forums and workshops for this effort.



Contents

Project Overview	7
Vision + Goals Planning Process	
Site Plan + Recommendations	23
Project Phasing	26





Project Overview + Background

The proposed 219-acre Rosewood Nature Study Area (RNSA), located on the east side of Reno between the Reno-Tahoe International Airport and the Virginia Range, is proposed for the site of the former Rosewood Lakes Golf Course, owned by the City of Reno. Following construction of the Southeast Connector road (now Veterans Parkway), which transects the site, the City determined that operation of the site as a golf course was no longer feasible. Today, the unique property is one of the last vestiges of wetland habitat that used to define the Truckee Meadows before European-American settlement in the 19th century.

The Truckee Meadows Parks Foundation (TMFP) has been working with the City, stakeholders, and the community to explore the future of this site. Through a participatory process, recommendations were generated that focused on public access for passive recreation, interpretation, and educational programs, largely using the existing infrastructure from the former golf course. The purpose of this document is to provide a brief overview of the site and project history, summarize public input on the concept of a Rosewood Nature Study Area for this site, and propose a conceptual-level site plan and general recommendations.

Project Site Description

PROJECT AREA CONTEXT

The broader Truckee Meadows area encompasses the bowl-shaped Truckee River valley bound to the west by the Sierra Nevada Range, and to the east by the Virginia Range and Pine Nut Mountains. The Truckee River originates in the Sierras, with tributaries, including Steamboat Creek which borders the RNSA site, flowing northward to the main river corridor. Wetlands and meadows historically characterized the landscape of the Truckee River valley. The Truckee River terminates in Pyramid Lake, one of the largest natural lakes in Nevada. Pyramid Lake is a remnant of Lake Lahonton, a large ancient inland sea which covered most of the state. Today, wetlands cover less than one-percent of Nevada.

With the surge of white settlers beginning in the 1840s, and subsequent development of agriculture, mining, and settlements, the landscape was altered to meet the growing





The project is located around the confluence of Dry Creek/Boynton Slough and Steamboat Creek, a major tributary of the Truckee River (right). The area has been marked by alteration of the landscape and hydrological features, as shown in the historic aerial photo (left - Reno Sparks, Nov. 21,1956 - University of Nevada, Reno - Nevada Bureau of Mines and Geology Collection).

demands for water. Over a century and half, diversions, dams, canals, and ditches were developed to support these uses, altering the watershed and the natural ecological dynamics of the Truckee Meadows. Today, the relatively small Truckee River basin contains every form of water use and every type of water user that exist in the western United States. As a closed hydrological basin, each drop of water in the Truckee River Basin, from its headwaters at Lake Tahoe to its terminus at Pyramid Lake is claimed and serves important human uses and ecological functions. As a result, even small changes in future conditions (e.g., increases in demand or changes in climate) are perceptible and potentially contentious (US Bureau of Reclamation 2016).

Currently, the area around the project site includes a range of land uses. The property is surrounded by residential neighborhoods to the west, east, and south that include multifamily and single-family housing, as well as some nearby rural properties. The two primary neighborhoods are Rosewood Lakes to the west, and Hidden Valley to the east. The area is served by three elementary schools, which have significant Hispanic populations (36%, 46% and 50%) and each has more than 50% of students on free/reduced price lunch program. Approximately 65% of the housing units in the area are renter-occupied. To the north of the site are parcels along Pembroke Dr. owned by the City of Reno that are being considered for a future privately-developed sports park. Directly east of this site, University of Nevada, Reno is selling a parcel that will be zoned for commercial/industrial use.

Project Vision + Goals

The vision of the Rosewood Nature Study Area is to establish and steward a publicly accessible Great Basin wetland habitat where the community can come to learn about and appreciate the importance of our natural open spaces and local parks.



The public was invited to share ideas for their vision of the future of the former Rosewood Lakes Golf Course at the first community forum. Their responses were compiled into a word cloud to illustrate the words and concepts that were most frequently mentioned.



Develop a sustainable plan to restore and conserve sensitive wetland and upland habitat for native plants, wildlife, and natural resource management.



Rehabilitate existing trails and develop additional non-motorized trails to establish the wetland as a node in the larger network of area parks and open spaces.



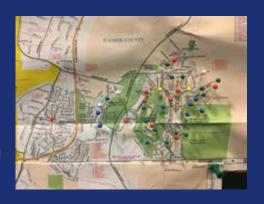
Offer a state of the art, environmentally conscious nature center with hands-on, interactive exhibits for both children and adults to provide parkbased programs, interpretive signage, and outdoor classroom spaces for families, community groups, and schools.



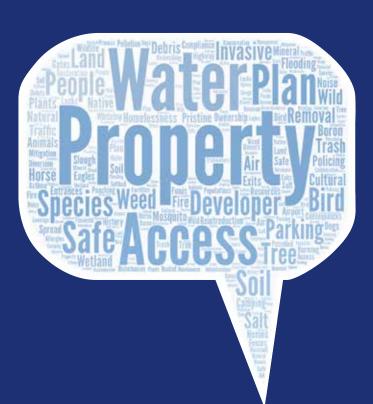
Inspire community members to take a proactive volunteer role in the preservation and improvement of our parks and open spaces in order to strengthen the bond between the community and their open spaces.

Planning Process

In 2018, TMPF established a Truckee Meadows Nature Study Area Advisory Board, which includes a variety of stakeholders and subject matter experts, to help guide planning for the future of the site. In late 2018, the National Park Service's Rivers, Trails, and Conservation Assistance Program granted technical assistance to TMPF to provide additional planning and design support. TMPF also secured grant funding through the Americorps program to support natural resource stewardship activities on the site.



The proposed project was formally introduced to the public in September 2019 through a community forum at the site, which drew approximately 100 participants, largely residents of the adjacent Hidden Valley and Rosewood Lakes communities. During that forum, participants were asked to provide input on their vision for the site, concerns about the project and site's future, and input on recommendations for access, site uses, amenities, and facilities (see word clouds below). In general, the concept of a nature study area for the site was well supported, and many suggestions were made regarding the types of amenities and passive recreation uses that would be consistent with the nature-oriented concept for the site. Concerns largely focused on broader floodplain



What concerns do you have about this site or project?



Access: How would you access the site, and where would you like to be able to access the site?

Workshop participants were asked a series of questions that were summarized using a word cloud tool, which graphically depicts the words that were most frequently mentioned. This information, as well as feedback on the project vision and goals, were used as the foundation for the more in-depth planning and design workshop.

management issues, neighbor concerns about the potential for people experiencing homelessness to camp at the site, and nuisances associated with loitering on the site outside of park hours.

This information was compiled with a draft vision and goals statement and a summary of public comments which became part of the foundation for a day-long, design workshop in October 2019 that included key stakeholders and subject matter experts. During the workshop, teams explored opportunities for natural and cultural resource stewardship, interpretation and education, and public access and recreation. Teams then generated four alternative site plans which included similar recommendations.

The four alternatives from the design workshop were presented to the public during a forum in January 2020 for input and feedback. Based on the input received, a proposed conceptual site plan was developed for presentation to the City.



Billings Education Activities in General Remineral Spines Education Activities in Gene

Trails Education Do Stations Tables - Trails Corridors

Trails Education Do Stations Tables - Trails Corridors

Trails Education Do Stations Tables - Trails Education Do Stations Trails - Trai

How do you envision using the site? What types of activities would you like to do there in the future?

What types of features or facilities/ amenities would you like to have available?



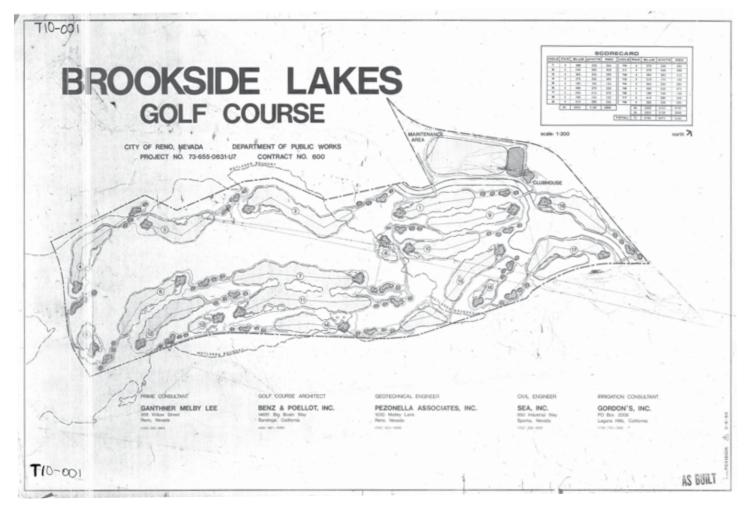


Site Conditions, Opportunities + Challenges

EXISTING SITE CONDITIONS

The project's 219-acre linear site is bordered to the south by Mira Loma Drive, Pembroke Drive to the north, and to the east by Steamboat Creek, the largest tributary to the Truckee River. Veteran's Parkway bisects the site from north to south and includes a parallel Class 1 bike path separated from the RNSA site by fencing. Boynton Slough, which is known as Dry Creek farther upstream, flows into the site from the west, eventually draining into Steamboat Creek at the northeastern corner of the site. A utility road along Boynton Slough runs behind adjacent residences, connecting the project site to Mira Loma Park to the west of Rosewood Lakes neighborhood. The primary vehicular access to the site is via Pembroke Drive, where an existing parking lot and former golf course clubhouse remain. The site is relatively flat and provides expansive views of the surrounding mountains.

As part of the broader Truckee River watershed system, the site contains approximately 60 acres of wetland in addition to Steamboat Creek and Boynton Slough. Golf course infrastructure was originally built to avoid the most sensitive wetland areas, as guided by environmental regulatory processes. Since closure of the golf course and construction of Veterans Parkway, invasive weed species have proliferated, including within the former turf grass areas. The spread of weeds has deteriorated native wildlife habitat and impacted site access for public use. Other golf course infrastructure remains on the site, some of which can be used as-is or repurposed for this project. Targeting visitor use of the site within the footprint of former golf course improvements will both take advantage of existing infrastructure while minimizing new impacts to natural resources.



The "as-built" drawings fo the Rosewood Lakes Golf Course, which shows site development conditions prior to construction of Veteran's Parkway, provides information about the location of upland areas and elevated patches that were former tee-boxes that could potentially be transformed into wildlife viewing locations (City of Reno).

Existing Site Infrastructure

Golf Cart Paths: A 4.5-mile network of paved golf cart paths traverses the site. Segments of this network were removed when Veterans Parkways was constructed, but three underpasses were constructed under the new road to facilitate connectivity for water, wildlife, and trail/vehicular access. This network of paths includes three bridges, that are in repairable condition, over wetland areas. Some stretches of the existing path network are periodically inundated with water.

Clubhouse: The existing clubhouse can be adaptively reused for offices (as currently used by TMPF), education programs, public gatherings, and other group uses. Amenities include restrooms, a drinking fountain, a kitchen, as well as a parking lot with approximately 185 spaces. A large, covered, outdoor patio that opens onto the site provides an additional space that can be used for group activities.

Tee Boxes + Amenities: Several of the tee boxes from the golf course are elevated, and some include remaining golf course map signs, and water dispenser stands.

Clubhouse Area





The existing covered patio area attached to the clubhouse provides views across the site, and flexible space for events, outdoor classroom uses, interpretation, and programs.

Boynton Slough



The existing golf cart path leading southwest from the clubhouse area parallels Boynton Slough. The former driving range is located on the other side of the slough.





A utility road runs between Boynton Slough and the Rosewood Lakes neighborhood (left). There is a drop structure along Boynton Slough (right).

Adjacent Residences





The existing golf cart path that could become part of the trail network, passes near adjacent residences in the Rosewood Lakes neighborhood.

Tee Box Areas _





The former tee box areas of the site provide elevated areas that could be used as small gathering or viewing areas.

Golf Cart Paths.





The golf cart paths are surfaced with asphalt; in some locations, there is periodic inundation with water resulting in sedimentation (left). Veteran's Parkway construction removed some paths, leaving "deadends" that could be removed and revegetated (right).

Mira Loma Drive Area





Mira Loma Drive, which borders the southern edge of the site, is elevated above the project area. Any access point from Mira Loma will likely require grading, particularly to comply with the Americans with Diasbilities Act (ADA). During public forums, there was significant interest in having access here.

Steamboat Creek



Residences on the east side of Steamboat Creek are visible from the existing path that parallels the creek (view looking northeast).





There are ponds west of Steamboat Creek in the northern area of the site (including seasonal) that can become focal points for educational and interpretive walks and programs (left). This area is a short distance from the clubhouse area. The surface of the main path along the creek is asphalt.

Bridges + Tunnels





The existing golf cart bridges could be used as part of a trail network with minimal repair. Some repair work has already been implemented.



This area near the clubhouse's outdoor patio provides a bridge traversing Boynton Slough and a tunnel under Veteran's Parkway.





The tunnel below Veteran's Parkway as seen looking west (left). A series of tunnels at the southern end of the site convey water, with one tunnel providing access via a paved pathway (right).



Natural + Cultural Resources Key Observations and Insights

During the planning and design workshop, a team of people focused on natural and cultural resources, focusing on goals, areas with sensitive resources that should be avoided, opportunities for the public to come into contact with important resources, and research and stewardship opportunities. Some key ideas included the following.

CULTURAL RESOURCES

• The Truckee Meadows area has thousands of years of indigenous cultural presence, including people of the Washoe, Paiute, and Shoshone Tribes, so there is potential for cultural items to be on-site, and also opportunities for cultural uses on the site

WATER + HYDROLOGY

- Understanding of water rights issues, as well as hydrological data and models will help inform design and management decisions
- · Water flows and flooding could be used as tool for invasive plant management
- Determine buffer area around wetlands if herbicides are used for invasive plant management
- Consider the hydrology of the site as part of vegetation and invasive species planning and management
- Bank stabilization of Boynton Slough is needed as erosion has been an issue
- Land use changes upstream could potentially affect water quality, sedimentation, and other characteristics of the site

VEGETATION + INVASIVE PLANT SPECIES

- Marshes and wetlands are healthy but overrun with invasive plant species
- Additional literature review and identification of reference sites may be needed to determine the historic vegetation of the site
- Colonization of cottonwoods should be encouraged
- Boot/ footwear washing may help reduce spread of invasive plants
- Monitoring of native vegetation, invasive species, and wildlife is recommended

WILDLIFE

- Given the broader urban context, this site could be important to sensitive bird species
- The site is suitable for native amphibian habitat and breeding areas
- The site provides opportunities for research of birds and species diversity relative to wetlands restoration and invasive species management
- Nest boxes, platforms, and bird blinds could enhance habitat for birds
- Elevated wildlife viewing platforms will help minimize ground disturbance



Access + Recreation Key Observations and Insights

During the planning and design workshop, a team of people focused on access to the site and recreation opportunities, focusing on access points, potential site users, types of recreational uses, trail network issues (particularly where Veteran's Parkway bisected paths), and areas that could be used for group programs. Some key ideas included the following.

VISITORS + EXPERIENCES

- A goal is to provide opportunities for visitors to experience a part of Truckee Meadows that resembles its historic, natural character
- Primary users will likely include elementary-aged students, university students, community members from Reno area, neighbors, and birders

ACCESS

- Most visitors will likely arrive at the site via private vehicle, public transit, school bus, or by non-motorized methods such as walking and biking
- The primary access point will likely be the clubhouse area. Access point(s) at Mira Loma Drive are possible, but might require grading
- Site control and management relative to access points is an important consideration
- Formal access along Boynton Slough connecting Mira Loma Park is possible, but there
 are concerns about safety from some neighbors in the Rosewood Lakes neighborhood

TRAILS

- The existing golf cart paths can function as trail network that would provide a variety of loop trail opportunities with little modification
- To facilitate viewing of natural resources and wetlands, boardwalks, puncheons, or other elevated structures may be needed, but natural resource impacts and any regulatory issues associated with wetlands will need to be considered
- The ponds in the northeastern area of the site could provide shorter loop trail
 opportunities, as this is a good area for viewing wildlife
- Throughout the trail network, periodic shade and rest areas would be desirable

RECREATIONAL ACTIVITIES

- The issue of including bicycle use is challenging relative to the concept of a nature study area. There is an existing bike path along Veteran's Parkway
- People currently use the north end of the site near Steamboat Creek for fishing. This is a recreational activity some would like to continue there
- Dog walking on the site would likely be incompatible with a nature study area due to conflicts with wildlife such as birds
- Elevated areas will be needed for providing views across the site and into the wetlands, particularly as native vegetation will be taller in height than the invasive plants currently characteristic of the site
- Avoid group gathering areas near adjacent residences



Interpretation + Education Key Observations and Insights

During the planning and design workshop, a team of people focused on interpretation and education, focusing on key audiences and their characteristics, key natural and cultural resources, associated key stories and messages, and the best places on the site for connecting people to key resources. Some key ideas included the following.

AUDIENCES

- Key audiences include school groups, parents with their children, families, summer program groups, home-school groups, nature observation groups (native plants, birders, etc.), seniors. Consider different abilities, ages, language preferences, and other characteristics of diverse audiences.
- For each user category, there are specific implications for facilities, messaging, and types of interpretive and educational experiences and strategies (see appendices).

RESOURCES + STORIES

- Connect site, its resources and stories to the broader Truckee Meadows area
- Ensure that indigenous community members are engaged in writing about and sharing stories about traditional uses and history of the site and area
- Cultural resource stories include: the history of human settlement in the region and the
 relationship to the wetlands and water of the Truckee Meadows area; water supports
 life; how the resources of site are characteristic of resources that have supported
 human settlement for several thousand years; and how human settlement has altered
 the landscape, as evidenced on this site by altered hydrology and invasive plants
- Natural resource stories include: healthy wetlands and how this site represents part of the 1% of wetlands left in Nevada; the large range of bird species seen on the site and how this relates to the habitat of the site; migratory birds and the role of having a place to stop on their journey; the need for places to stop, rest, feed, and breed

SITE OPPORTUNITIES

- Transform the clubhouse into a visitor center with interpretive and educational amenities
- Cliff swallows nest at near the Veteran's Parkway bridges and tunnels
- Focus interpretation close to the clubhouse area to make these experiences more accessible
- Provide information about the experience beyond this area of concentration, focusing
 on the site beyond as being an opportunity for a quieter, more in-depth wildlife viewing
 experience. Include messages about how to maximize wildlife viewing opportunities in
 these areas. Provide shade and rest along the longer trail loops
- A larger, shaded area for medium and larger groups would be helpful, potentially at or near the clubhouse
- Site features such as interpretive carts and habitat enhancements such as pollinator gardens, bee boxes, bird houses, and bat houses can provide additional educational and wildlife viewing opportunities





Site Plan + Recommendations

As a nature study area, a key guiding principle for developing the site plan was to minimize new site disturbance and impacts to natural resources, while providing for public access and opportunities for education and interpretation. As such, the recommendations largely focus on utilizing existing infrastructure, and removing infrastructure that is redundant or no longer functional.

The anchor of the site's use is the former golf clubhouse, which will be transformed into a visitor center that provides for educational activities and interpretation, as well as office and administration space for management of the site. The existing parking lot has capacity for visitor use as well as school buses. The visitor center area could also be used for revenue generating activities such as private events, meetings, etc. The former putting green adjacent to the clubhouse would be transformed into a demonstration pollinator garden, and the outdoor patio would be used for outdoor classroom activities as well as other group activities and picnicking. The landscaping around the visitor center and parking area would feature native plant species. Long-term, the visitor center could be modified or replaced to enhance its sustainability.

The northern portion of the site is envisioned as a more intensively used area for group and educational programs, while the southern end of the site would be used less for group programs and more for people wanting a quieter, more solitary recreational experience. Long-term, an additional pedestrian access point on Mira Loma would facilitate access to the site from the south.

A key part of managing the site's natural resources will be invasive weed management and enhancement and restoration of native habitat. Based on the cultural history of the Truckee Meadows area, the Reno-Sparks Indian Colony will be consulted about enhancement of native vegetation, education/ interpretation opportunities, as well as potential traditional uses of the site.

The proposed plan includes a 3.65-mile trail network, including several options for loop trail experiences. Closest to the clubhouse would be a 1.3-mile interpretive trail loop that long-term, would be transformed into a universally-accessible trail providing a broad range of interpretive experiences. Within the 1.3-mile loop are two shorter ¼-mile loops

This proposed conceptual site plan, recommendations, and suggestions are a starting point for what will be a more robust planning, design, and implementation process. As such, some of these ideas may not move forward or may be modified, while new ideas are integrated based on additional information, analyses, and input. However, the general concept and vision represents input from a wide range of stakeholders and sets a general direction for the future of the site.

Trails + Flooding

For Trails that regularly flood, evaluate and consider the pros, cons, costs, and maintenance requirements for the following options:

- Close trail segments when wet and add material such as gravel
- Reroute trails to avoid those areas (while avoiding disturbance to sensitive natural and cultural resources)
- Elevate those trail segments with structures such as puncheons or boardwalks

around ponds that would provide shorter trail experiences. In the southern end of the site, a 150-yard stretch of trail that would include elevated puncheons and boardwalks would traverse part of the wetland to provide for visitor access to a cross-section of wetland types for nature observation and educational purposes. Throughout the trail network, elevated areas, such as those used for golf tee boxes, would serve as rest stops with seating, interpretive materials, and wildlife viewing structures.

Because the focus of the site's use is natural resource stewardship, compatible recreation, and education/interpretation, the trail system would be limited to pedestrian use only, and exclude dogs, to minimize impact to wildlife. Other proposed recreational use includes fishing at the northeast corner of the site where Boynton Slough drains into Steamboat Creek, where informal fishing currently occurs. Educational materials about native and non-native fish as well as environmentally-friendly fishing practices will be included at that location. Hours of operation are proposed to be from dawn to dusk, consistent with the City's current park policies and regulations.

PLANNING + DESIGN WORKSHOP ADDITIONAL SUGGESTIONS

In addition to the concepts included in the conceptual site plan, some additional suggestions were generated during the planning and design workshop by participants (see appendices for complete notes).

Groups

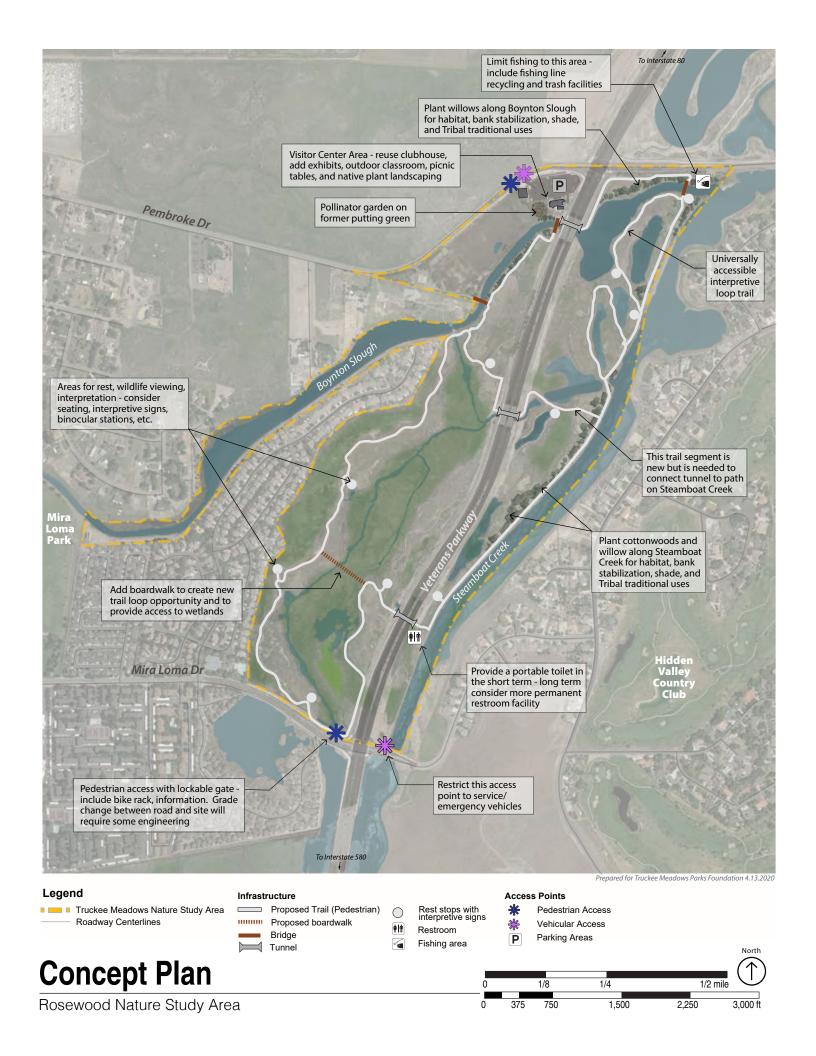
- In parking area, ensure there is adequate turn-around space for buses
- Consider where groups can eat lunch during visits
- Need staging and assembling areas for groups, preferable with some shade
- A place that can accommodate small groups and some storage for programs would be beneficial even if group activities are concentrated in the northern end of the site
- Locations for larger groups could have infrastructure such as footings for temporary tent or fabric shade structures

Natural Resources

- Continue mapping invasive species, areas that are treated for invasive species and restoration, native vegetation
- Develop a wildlife management plan, including information about how to handle wildlife encounters and record observations
- Develop citizen science opportunities for collecting data about the site
- Explore hydrologic restoration to increase water holding capacity of the site

Trails + Recreation

- Any boardwalk or elevated structures should be able to withstand periodic flooding and inundation
- For highly sensitive wetland and restoration areas, consider adding additional barriers to keep people on the trails. This could include dense, hardier vegetation
- Season closure of trail segments may be needed if nesting areas area established close to trails
- Consider how to integrate art into interpretive elements







Project Phasing

Phase 1

Phase 2

- Entrance/site identification signage
- Pollinator garden
- Basic informational signage at visitor center/ trail entrance
- Open the 1.3-mile loop trail and the two ¼-mile each pond loops
 - Construct 150 yds. of new trail to close gap from the tunnel to Steamboat Creek
 - Repair bridge in northeast corner of site
 - Provide directional trail signage
- Conduct additional siting and design of wildlife viewing and interpretive amenities for the trail system
- Identify trail segments throughout the site that are regularly inundated with water and identify measures to modify or avoid those segments.
- Treat and suppress invasive species throughout the wetland
- Plant competitive native grass species where invasive upland species have been removed
- Plant native species focusing on riparian and wet meadow habitats
- Explore nature center facilities options

- Open welcome center with minimal/basic information using existing facilities
- Develop an interpretive plan
- Plan and design visitor center facilities
- Open fishing area
- Conduct assessment of interpretive loop trail for accessibility; develop plan for enhancing loop trail for universal accessibility (include as part of interpretive planning)
- Develop rest/interpretative stops and related wildlife viewing amenities
- Continue invasive plant treatments and planting of competitive native species
- Planting more shrub and upland species where invasives have been removed
- Plant perimeter of property to prevent the introduction of new invasive weeds
- Install and monitor bird nest boxes







Phase 4

- Complete trail enhancements for the remainder of the proposed trails including any modification of areas that flood
- Enhance and open southern pedestrian entrance
- Develop remaining rest/interpretive stops and related wildlife viewing amenities
- Install portable toilet at southern end of site
- Continue management of natural resources
- Possible change to site topography to increase flood storage and create more wet meadow habitat
- Continue monitoring nest boxes and established native plant communities
- Focus on unplanted upland areas to increase shrub communities

- Construct boardwalk (potentially including with trail work in years three and four)
- Build outdoor classroom
- Event space, classroom, lab visitor center area improvements

Phases 1 and 2 are anticipated to each take one year to complete; Phases 3 and 4 are anticipated to each take two years to complete.

