

San Joaquin Parks and Recreation Site-Specific Strategic Plan

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Ida Araghieyan, Jessica Gastineau Romero

California Polytechnic State University
San Luis Obispo



San Joaquin Parks and Recreation Site-Specific Strategic Plan

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Ida Araghieyan

Jessica Gastineau Romero

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San Joaquin Parks and Recreation Site-Specific Strategic Plan

Mission

The San Joaquin Parks and Recreation Strategic Plan (SJPRSP) outlines a road to success for parks, open space, and recreational amenities. Areas of improvement are identified, and local assessments of opportunities and strengths of San Joaquin are examined to curate a site-specific plan of what could be implemented regarding local parks and recreation and open space.

Vision

Public open space can optimize safety, inclusive design, low impact design, sustainable groundwater recharge, and best stormwater runoff practices. The overall intention of the SJRPSP is to design parks to do more than one thing. The two example spaces bring resolution to bicycle transportation, equity in open space, and groundwater recharge in a resilient, strategic, and sustainable way. Design guidelines are provided to help support the community's vision for successful parks, open spaces, and recreation spaces. Financial pathways are provided as a starting point for funding these spaces.

Areas of Improvement

There are two areas of improvement that qualify for a park project improvement. There is an existing stormwater detention basin along eastbound Colorado Avenue that could serve as a park and playground. Additionally, along the railroad tracks on the westbound Colorado Avenue, underutilized land can be used for park and trail space.

Background

In 2020, the students of Cal Poly, San Luis Obispo, conducted a thorough background report on the existing conditions in San Joaquin. The report and the community feedback analysis suggest a need to develop open spaces that would benefit both the residents and the environment in multiple ways.

Figure 1 shows the current availability of park space in the City. There are three types of open space currently existing in the City; Peter Rusconi Park at Main Street and Colorado Avenue intersection and an open field adjacent to San Joaquin Elementary School.



Figure 1 Image of existing parks in San Joaquin from Google Earth taken in 2018.

Gathered from the 2020 report, the following sections briefly introduce and discuss the existing conditions which originate the emergence of the proposal for more open space.

Demographics

The City of San Joaquin is a small, incorporated city in Fresno County, California. The City covers 1.2 square miles and is surrounded by agriculture. According to the San Joaquin Background Report 2020, the City had an estimated 4,142 residents in 2020. This population is projected to grow to 5,075 by 2040. In the 2000 census, over 90 percent of those living in the City identified themselves as Hispanic and Latino of any race. Approximately 41 percent of San Joaquin's population was under the age of 18. Additionally, about 34 percent of the population was living under the poverty line at the census time (Cal Poly, 2020).

Parks and Recreation

There are two categories San Joaquin's open space falls into: recreational and agricultural. All open spaces within the city, not including vacant lots, are devoted to recreational uses. There are three significant open recreational spaces for residents; two are specifically dedicated as public park facilities, and the third is the elementary school's fields. The two main outdoor spaces for the city residents are the Peter Rusconi Park (1.2 acres) and the Sports Park Complex (3.5 acres). The Elementary Schoolyard (8.6 acres) is located in the town center, reserved for children and sports. Peter Rusconi Park consists of a basketball court, a skatepark, a play area, and a picnic area. The Sports Park Complex contains a play structure, a baseball diamond, benches, and a lawn (Cal Poly, 2020).

Poverty

The poverty indicator measures the percentage of people in the census tract who make less than twice the federal poverty level. Due to the high cost of living in California, twice the poverty level is used. The 2020 Background Report analyzes data from 2011 to 2015. It concludes that the City has received a percentile score of 97, indicating that the percent of people living below twice the poverty level is higher than 97% of the census tracts in California (American Community Survey, 2011-2015).

Health

Members of poor communities are more likely to be exposed to pollution and suffer from health effects. Individuals and families in poverty are less likely to participate in the civic engagement process because they may already struggle to meet basic needs such as healthy living and working conditions and access to nutritious, healthy foods and medical care. Due to their low-income status and the lack of access to healthcare facilities and needs, San Joaquin is at a relatively higher risk when

compared to other cities in the State of California for obesity, heart disease, asthma, cancer, and other illnesses

Active Transportation

Currently, San Joaquin has disconnected sidewalks, very few designated bike lanes, and this lack of connectivity makes it inconvenient and unsafe to walk and bike throughout many parts of town. Furthermore, this has led to lower rates of active transportation as means of getting from point A to point B. In San Joaquin people rely almost exclusively on a car for transportation.

Background Report (2020) describe Sidewalks in San Joaquin are mostly in fair condition throughout the residential areas in the north and south of San Joaquin. Alongside the main arterial Colorado Avenue the sidewalks need repair and better connectivity.

Increasing areas of San Joaquin that are bikeable and walkable will allow people in the community to use active transportation as a way to get around without relying on a car.

Additionally, creating more desirable space like a park playground close to bikeable and walkable spaces fosters active transportation, exercise, and connectivity. For the health and wellbeing of residential neighborhoods, it is also best to incorporate opportunities for active transportation by providing sidewalks, bike lanes, and open space nearby.

Opportunities

The strengths and qualities that make San Joaquin a prime candidate for more public open space and parks and recreation include:

- There are several vacant lots in San Joaquin that could be redeveloped for positive uses.
- Through the health element of the general plan, the City supports and encourages green developments, which further improve the community's health and wellness.
- The City's block pattern is designed to keep the City in a compact form, resulting in increased accessibility and walkability in the City.
- Some open spaces within the City have multi-use potential.
- There are various types of grants available at regional, state, and federal levels to cities to satisfy the needs of residents regarding the same type of issues San Joaquin faces today.

- The City has historically increased its funding towards parks and recreation and supports creating more outdoor public open space.
- Current demographic characteristics make San Joaquin highly eligible for receiving grants and other funding.

Challenges

San Joaquin faces challenges in expanding its public open space. While the process may not be linear, it is still possible with an organized budget, consistent grant applications, and community support. Some of the obstacles that may occur would include:

- Most vacant parcels are concentrated along the Main thoroughfare Colorado Avenue, and the rest are designated for uses other than open space.
- The City lacks park spaces to accommodate recreational space for San Joaquin's current and future population.
- Providing land for recreational development and public open space is limited to existing parcels currently zoned to support these projects.
- Inconsistent pedestrian sidewalks and bicycle lanes hinder connectivity within San Joaquin.
- Due to many reasons, San Joaquin's budget is limited; therefore, a park plan would require careful assessment of project funding.
- Stakeholder priorities may not be consistent with building bike paths and parks.

Site Allocation

An efficient way to satisfy the recreational needs of San Joaquin is to repurpose existing land. Two sites are identified in San Joaquin that would be eligible for highly functional and much-needed public open spaces for the community.

The first site is an existing detention basin on Colorado Avenue that can be better utilized as a community park while still serving its purpose as a detention basin and groundwater recharge site. The second site is existing railroad lines that may be more purposeful with the addition of a Class-I bike path running alongside it.

San Joaquin faces stormwater runoff issues and a lack of connectivity and active transportation. These two sites and projects intend to maximize the lands to solve those problems and provide much-needed public open space and recreation space. Furthermore, the purpose of such designation is to solve multiple issues using the most sustainable ways possible.

Detention Basin on Colorado Avenue - Site One

Along Colorado Avenue, a detention basin sits ready for a 100-year flood event. Undoubtedly, this space could be used for something more interactive and better serving the community of San Joaquin. However, this space is currently performing an essential job for San Joaquin: groundwater recharge through the permeable surface. Stormwater runoff throughout the City is routed here. It slowly seeps through the plants and soils and back into the groundwater, which is crucial for this area being susceptible to subsidence.

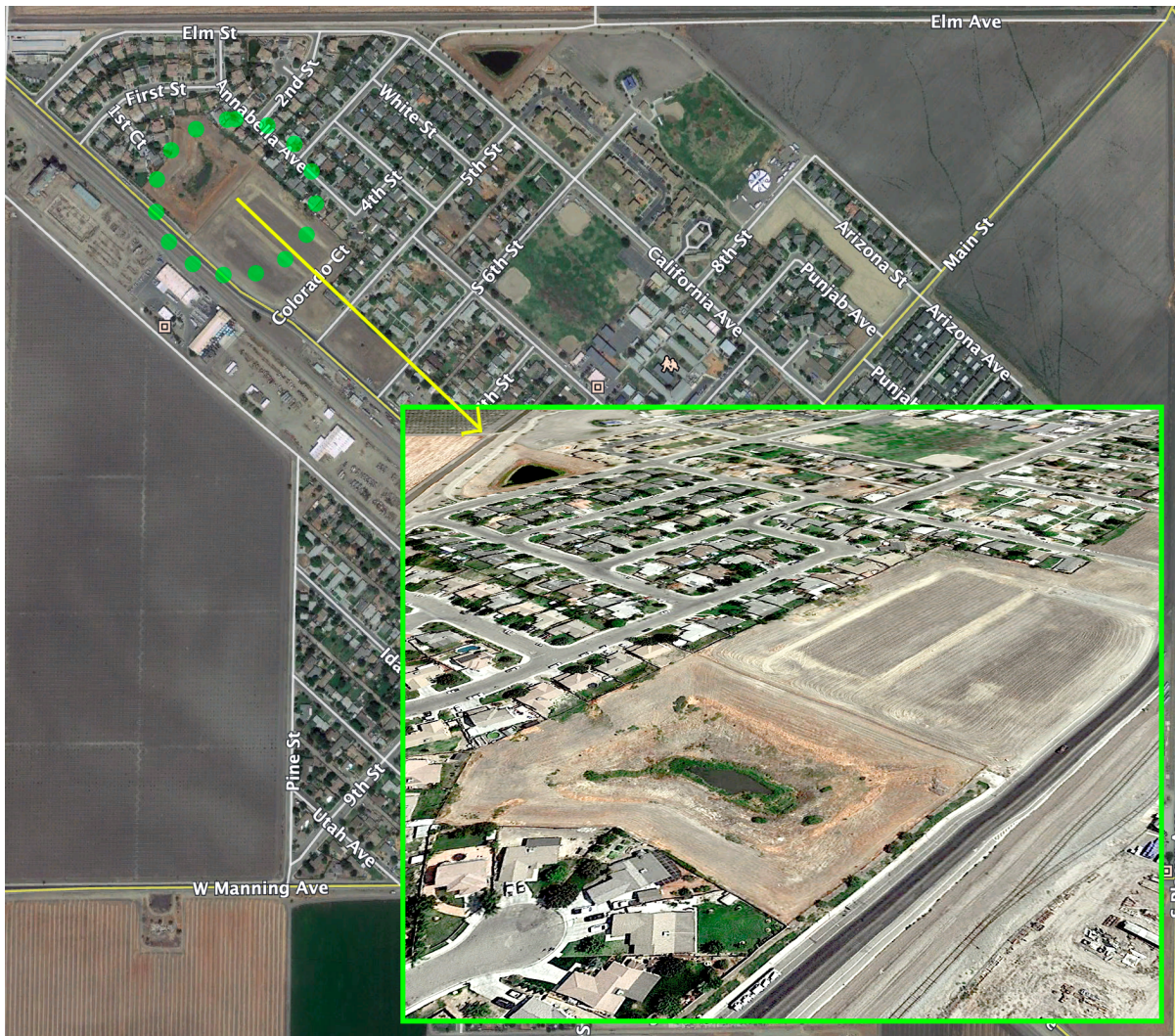


Figure 2 San Joaquin Detention Basin Site One

Class I Bike Path Along Colorado Avenue - Site Two

Acquired by Genesee and Wyoming Inc. in 2012, the railroad in the City is a short part of the San Joaquin Valley Railroad family. Due to the lack of sufficient information on the current state of the railroad's usage, this document assumes that the railroad is out of service or has as little use as one train per year.

This railroad field is estimated 1.1 miles long, laid parallel to Colorado Avenue's main thoroughfare separating Colorado and the commercial/ industrial uses adjacent to it from the residential area in the South. The gravel-filled offset from the rail track's centerline is approximately 7.5 feet on both sides. The total setback from the track's centerline is about 18 feet.



Figure 3 San Joaquin Railroad Site Two

Assessment and Outcomes

A proposed park and playground on Site One could potentially maximize this space as a detention basin, groundwater recharge, and public open space. Colorado Avenue is in the heart of the commercial district and having a quality open space nearby may add aesthetic value to the downtown core as well.

Preserving the space as a detention basin and area for groundwater recharge is essential when developing the site to serve as a park. If the site were to lose the qualities that allow it to collect stormwater runoff, this would compromise the effectiveness and quality of the land for San Joaquin. This site can become more effective through overall design, materials used, and landscaping, and a more significant asset to the community once converted to a park playground.

There are currently not enough parks and recreation open spaces for the community. The lack of adequate park space is a potential equity concern due to the lower quality of life for people living in San Joaquin. These parks may likely bring value to the community and increase their quality of life.

A trail development on Site Two would maximize the underutilized land surrounding the railroad tracks. This redevelopment would turn the field into a green belt accessible to all parts of the City, making this field a host for two alternative transportation modes and the City's central health hub.

This development would solve the lack of bicycle lanes and appropriate sidewalk issues. It provides enough safe passage space to bicyclists and pedestrians alike. Among the strengths of the rail field to become a trail is that it is one mile long, and passing throughout the City, it is a great connection belt.

Landscaping and the addition of vegetation to the site would make it a green belt that would help improve the air quality in the area and act as a buffer between the main arterial Colorado Ave. and the residents in the area Southern San Joaquin.

Case Studies and Best Practice

To better understand the possible solutions to San Joaquin's problems, this document reviews several different cities' methods of handling similar issues. The following precedent analysis includes El Centro's Multi-use Stormwater Detention and Retention Basin, San Luis Obispo's Class I bikeways, Sun Valley Park's Water

Infiltration and Groundwater Recharge, and Missoula's Inclusive & Accessible Playgrounds documents.

Multi-Use Stormwater Detention and Retention Basin plan of the City of El Centro, California

The Alternative Approaches to Stormwater Quality Control document published by the California Water Resources Control Board defines "stormwater" as the rain or snowmelt that does not infiltrate into the soil and runs off surfaces to other nearby waterways. Detention basins are a form of basin designed to hold stormwater runoff temporarily and release it into the ground after a short time (Alternative Approaches to Stormwater Quality Control, 2014).

The City of El Centro General Plan identifies a portion of the East's land as a 100-Year Flood Area. The City faces stormwater runoff issues due to poor drainage design. As a solution, the City uses detention and retention basins primarily to "reduce the maximum flow rate and load on the stormwater drainage collection system, which is currently operated and maintained by the Imperial Irrigation District." The City's second purpose is to "incorporate Post-Construction Best Management Practices (BMPs) where feasible, to help in compliance of the City's MS4 permit" (City of El Centro, March 2018).

In the Stormwater Detention and Retention Basin Guidelines, the City introduces multi-use detention basins to maximize land use and manage water-related matters. Depending on the type of the basin and the amount of water it receives, a detention basin could be used as an open space, wildlife habitat, or playgrounds and playfields. The City's guidelines on multi-use detention basins, such as park and recreational open space, include but are not limited to general allocation and types of required space for this use, soil treatment, fencing, and amenities.



Sample Tot Lot

Figure 4 and 5 Multi-Use detention basin. What a playground in San Joaquin could look like.

Railroad Class I Bike Path Plan of the City San Luis Obispo

Section 890.4 of the Streets and Highways Code describes a Class I Bike path as a type of path that provides a wholly separated facility designated for the exclusive use of bicycles and pedestrians with motorist cross-flows minimized (Stats. 1993).

The San Luis Obispo City Bicycle Transportation Plan was first established in 1985 and has been regularly updated. The plan includes objectives, policies, and implementation measures for various bicycle path projects throughout the City. The City's goal for the BTP is to provide adequate infrastructural amenities to support and encourage this alternative transportation mode. Under the BTP, the City takes advantage of the available land along the railroad to develop or expand Class I bike paths or Railroad Safety Trails, including a bike path segment connecting Foothill Blvd to CalPoly SLO campus. According to the City's official bicycle count reports, this segment is the most used bicycle path in the City. This path enables safe and exclusive bicycle and pedestrian passage, increasing accessibility in the area. The City uses various funding programs and a combination of various funding programs to accomplish the BTP objectives (City of San Luis Obispo BTP, 2013).

Similar to San Luis Obispo, a significant portion of land is dedicated to railroad right-of-way in San Joaquin. The addition of trails to the railroad field is a solution to put underutilized land into positive use. A study reported by Rails to Trails indicates more than 339 rails with trails located along active railroads in the United States. (America's Rails-With-Trails, 2013). The benefits of such development would include bringing about a more vibrant and healthier community, enhancing the City's assets, and improving the environment.

Water Infiltration and Groundwater Recharge - Sun Valley Park

Retaining stormwater runoff to aid in groundwater recharge is essential for the cities struggling with land subsidence and water scarcity. There are methods and techniques to maximize water retention during rainfall. Parks are a great chance to break up impervious surfaces and allow water to seep back into the soil. Implementing underground infiltration basins where water is naturally filtered and recharged into the groundwater aquifer and strategically placing native plants uses the land to its full potential when capturing stormwater.

Sun Valley Park in Los Angeles, California works "to solve the major flooding problem, while retaining all stormwater runoff from the watershed, increasing water

conservation, recreational opportunities, and wildlife habitat, and reducing stormwater pollution” (LA County Flood Control District, 2021). The park serves as a place for parks and recreation but also doubles up as a place for flood mitigation, water treatment, and water conservation. The multi-use space still functions as an entire park, but a few key components help maximize the project.

Furthermore, utilizing low-impact design and impervious surfaces in parking lots, sidewalks, and other areas can help redirect stormwater back into the soils. “Permeable pavement allows stormwater to pass through and percolate into the underlying soil. This technology consists of a hard but permeable surface with an underlying capacity to store water before infiltration. Excess water can be routed to a controlled drainage system. Examples include previous concrete, porous asphalt, or interlocking concrete pavers separated by spaces and joints. Typical site locations include parking lots, plazas, walkways/sidewalks, and playgrounds” (California Waterboard, 2014).

One of the proposed park sites is currently used as a stormwater detention basin for 100-year flood events. Converting this underutilized space into a park will continue to solve San Joaquin's flooding problems and create a much-needed recreation and open space for the community. San Joaquin also faces many challenges with inadequate groundwater supply, subsidence, and water scarcity, so converting this land into a park can only be made possible if the previous qualities of the land remain.

San Joaquin shares similar goals to what was accomplished at Sun Valley Park, and the community can take away crucial aspects to enact with their park. Low impact design and impervious surfaces must be incorporated into the park's design to ensure that stormwater goes back into the soils. Landscaping will play a primary role in ensuring that stormwater gets routed into permeable gravel, soils, pavers, and plants. New technologies with previous concrete and porous asphalts can be implemented whenever budget and supply allow.

Inclusive & Accessible Playgrounds - Missoula, Montana

Many parks choose an inclusive and accessible design when remodeling or creating a new space. Their successes can serve as a testament to what principles to follow when planning a park playground for all people. Silver Summit in Missoula Montana exemplifies an all-abilities inclusive playground that unified the community and their political leaders by working together to provide a place where all children and their families can play. Additionally, this project highlights how community engagement, donations, and grants can alleviate some of the financial burdens on the City or County

hosting the project. This project had a \$500,000 budget, and the City’s contribution was only 10% at \$50,000. All other contributions came from fundraisers, grants, and donations.

Sometimes the terms inclusive and accessible get used interchangeably, but it is essential to note the difference between them. “While the accessible design is focused on the needs of people with disabilities, the universal design considers the wide spectrum of human abilities. It aims to exceed minimum standards in meeting the needs of the greatest number of people” (Skulski, 2007). While some park playgrounds may be ADA compliant, that does not mean that the materials surrounding the playground are, and that does not mean that proper ramps and access points are suitable for all types of disabilities. That is why choosing an accessible and inclusive park is necessary to achieve an environment that welcomes everybody to play.

Incorporating inclusivity and accessibility in park playground design can create an environment that is safer, easier to use, more welcoming to all types of families, and the changes don’t have to be drastically different from traditional play structures. Ensuring access through location, design, and engagement helps disabled children and disabled family members interact with one another in a space designed specifically for them.

San Joaquin conservatively allocates funding towards their Parks and Recreation program, which supports general maintenance, minimal cleaning and trash services, and other necessities to keep a park running. Their budget does not support funding a new park, but that does not mean the community cannot find other ways. Similar to Silver Summit in Missoula, San Joaquin may be eligible to receive federal and state grants to bring this project into reality. San Joaquin is a community that desperately needs quality recreation space for its youth, and there are numerous grants that they can apply for. In 2004, San Joaquin allocated \$500,000 in their Capital Improvement Plan to build a new park that unfortunately never got built. However, this shows a need and a desire for a park, and with proper grant application and funding, it can be done.

Project budget: \$500,000	Cost
City funds (ADA Capital Improvement Project funds)	\$50,000
Cash raised by All Abilities Playground through Friends of Missoula Parks	\$341,516
In-kind donations (labor, materials, professional services)	\$92,550
Total funds available	\$484,066
Balance needed to complete project	\$15,934
All-Abilities Playground pending grant requests	\$41,500

Figure 6 Funding for Parks. The City only had to budget for 10% of new park costs.

Creating fun and usable space for everybody can transform the way kids play, and small design accommodations can make that happen. Budgetary concerns seemingly outweigh the reality of an inclusive and accessible park for San Joaquin, but this project can be done with grants and unique funding options. San Joaquin is a vulnerable community which makes them even more eligible for state and federal funding. Investing in underserved communities is essential to the people's overall health, safety, and general welfare.

Best Practices for San Joaquin

The City of San Joaquin needs to improve the existing open spaces for many reasons, including the citizens' need for recreation and air quality improvement in the area. Luckily, the City has portions of land that could be used positively to satisfy residents' needs.

Adjacent to an existing detention basin open space alongside the main thoroughfare Colorado Avenue there is a big piece of land that could host various activities similar to El Centro. Surrounded by residential dwelling units, this development could also work as a buffer between the noise generating source Colorado Avenue and the residential neighborhoods.

Given San Joaquin's physical conditions and community needs, repurposing the railroad field to a multi-use trail would benefit the community in many aspects. San Joaquin has shown great enthusiasm for improving the health and environmental setting by establishing guidelines covering various air quality, sustainability, and residents' wellness in the general plan. However, due to the limitation of available space for development, utilization of existing land is a necessity in bringing the City's visions to life.

Finance and Funding

Providing parks, playgrounds, bike baths, and amenities like trash cans, benches, and landscaping services comes with a cost that the City must be prepared to carry throughout the life of the open space or amenity. Allocating funds from the City Budget to pay for operation and maintenance is essential to keeping the site running properly. Capital Improvement Projects, Grants, and General Fund monies can all work together to alleviate some of the financial burden from this historically underserved community.

City Budget

San Joaquin County approved an \$8.0 million final budget for 2020-2021 which is a \$1.4 million increase from the 2019-2020 budget. An increased budget shows a desire for new parks, renovation of existing parks, more programs and youth engagement, and potential for the City of San Joaquin to receive a bigger piece of the new budget. The increased budget also exemplifies an overall interest in parks and recreation and support for site allocation, much like what could happen in San Joaquin.

Another area received an increased budget which could positively influence parks and recreation maintenance. The Capital Maintenance and Improvements budget is \$18.6 million for 2020-2021 which is a \$3.6 million increase from 2019-2020. Increased funding here shows that they are appropriately setting aside funding to adequately maintain any existing and new amenities that are in the care of San Joaquin County (San Joaquin County, 2020).

Grants

San Joaquin has explored ways to fund their parks and recreation's existing operations and maintenance and ways to fund new parks and programs. There are a variety of California State Grants and Federal Grants that San Joaquin could potentially be eligible for. Through The California Parks and Recreation Agency, a program established by Assembly Bill 209 titled The Outdoor Equity Grants Program (OEP) is targeted towards communities just like San Joaquin. "OEP grants will improve the health and wellness of Californians by connecting underserved communities to the natural world" (California Department of Parks and Recreation, 2021). There is a \$19.0 million total available budget, and being granted a small portion of this would be extremely beneficial for San Joaquin.

In addition, Parks California awards grants for certain communities that are looking to expand their open space and parks programs. These grants are reserved specifically for "traditionally underrepresented communities", and San Joaquin fits this criteria (2021).

There are many other grant funding options for a community like San Joaquin. They are historically underserved, a long line of farm workers and migrant workers, and they face inequity challenges as well. San Joaquin faces challenges of lack of parks and recreation, stormwater drainage, and active transportation so bringing parks and bike trails to the community will solve many of these problems with these specific proposed park sites. Much like Missoula, Montana case study, there are ways to go about

applying for grants and other funding to set the City up to only have to pay for 10% of the initial costs associated with allocating a new park for the community.

Design Guidelines

As the population grows in San Joaquin, so does the need to acquire more land. San Joaquin's 2014 general plan update envisions an alternative growth plan which helps San Joaquin become economically more significant in the region. Economic growth needs more housing and commercial development for the growing population, so the City must focus mainly on those issues. To balance the land uses within the City, San Joaquin has historically shown great attention to the importance of providing recreational open spaces, managing the City's groundwater and soil where needed, and improving environmental quality through proper landscaping and vegetation.

The following sections discuss the existing standards and proposed suggestions regarding how San Joaquin can achieve desirably balanced land use by developing multi-use open spaces.

The guidelines specifically build upon the City's existing documents San Joaquin Landscape Maintenance Manual, San Joaquin Groundwater Management Plan, the City's general plan, and State standards. Furthermore, the design guidelines for the proposed multi-use railroad development are inspired by the work of the United States' Rails-to-Trails Conservancy organization.

Landscaping and Groundwater Management

The San Joaquin Landscape Maintenance Manual, published in 2009, establishes appropriate trees, shrubs, and native plants. The document also introduces guidelines on how to prune and maintain the vegetation in the existing city parks, which could be replicated for newly proposed open space projects.

San Joaquin and the James Irrigation District also published a Groundwater Management Plan in 2010, establishing thoroughly detailed guidelines on the City's standards regarding the appropriate methods to control and manage the City's water run-off, groundwater resources, and soil preservation.

Learned from the City's landscaping manual, Groundwater Management Plan, and environmental conditions discussed in the 2020 background report, this document introduces the possible landscape standards that may be applied to both allocated "multi-use" open space sites. This document introduces the following landscaping

methods as appropriate for the City. These low-impact design methods effectively let the stormwater turn back to the earth. At the same time, the vegetation choice discussed in the City's formal landscaping manual is deemed corresponding to the City's climate and precipitation levels. Inspired by the City of El Centro's Detention Basin Guidelines published in 2018, in addition to San Joaquin's Groundwater Management Plan's objectives, the following methods improve San Joaquin's stormwater management in the development of multi-use open spaces.

- **Rain gardens:** These shallow depressions in the ground are planted with various native plants to treat and capture stormwater runoff. They can be placed in areas visible to park visitors and would be enhanced with educational signage.
- **Porous pavement** (also known as pervious or permeable): unlike regular paving that allows water to quickly run off, porous pavement allows precipitation to soak into the ground. Storage cells or other structures may be placed under the pavement to add additional filtration benefits.
- **Vegetated swales:** these shallow channels are planted with various native plants and used instead of underground pipes and concrete channels to move stormwater from one location to another. They have the bonus of allowing for infiltration and cleaning of the runoff.
- **Naturalized infiltration basins:** these are depressions in the ground that provide temporary storage and infiltration of runoff. They are planted with myriad natives to provide wildlife habitat and to look aesthetically pleasing.
- **Streambank and/or floodplain restoration:** this best mimics the interaction of groundwater, stream flow, and plant roots to reduce flooding, filter out pollution, recharge groundwater, prevent erosion, and lessen stream flows. The restoration may include grading streambanks to make them less steep, planting trees and other native vegetation, creating pools and meandering channels in the stream, and restoring wetlands. Any park with a stream, river, pond, or lake may benefit from these restoration practices. Incorporating stream access for fishing and wildlife viewing will enhance the visitor experience.
- **Stormwater runoff capture and/or reuse:** this may consist of a simple rain barrel attached to the gutter downspout on a visitor center building to more complex underground storage tanks or cisterns. The water collected in these devices can be used to irrigate gardens, wash vehicles, etc.

Bicycle and Pedestrian Rail-Trail Safety and Liability Issues

According to Rails to Trails Conservancy (RTC), the rail trails are no less safe than stand-alone trails. Although some transportation agencies, such as CalTrans, have shown concerns regarding the safety and liability issues related to trails on their railroad land, they have agreed to have trails under specific conditions. Proper fencing and buffers from the rail track directly solve trespassers who may put themselves in danger and the administrative staff and trail manager under challenging positions. San Joaquin can use vegetation or fences to visually separate the rail tracks from the rest of the field. The RTC has reportedly supported this form of separation and claims the safety of rail trails has been proven in cities that used this method.

Liability

According to the RTC, under general concepts of liability, a landowner's liability depends on whether the injured party has the status of a customer or client ("invitee"), a guest ("licensee"), or trespasser. Each of these classes of persons entering the property is owed a different duty of care. Trespassers are owed the lowest duty of care and pose the lowest level of liability risk. The trail manager can only be held liable to a trespasser for actions that are either intended to cause harm to trespassers or are taken with reckless disregard for the consequences (America's Rails-With-Trails, 2013).

Dimension and Design

The California Highway Design Manual 2020 establishes standards for a Class I bikeway, according to figure 5 shown below. This design is appropriate for two-way bicycle passage. Adjacent to the marked bicycle path can be two three-foot-wide paths appropriate for pedestrians or one 6 foot wide path appropriate for shared-use paths for pedestrians, including wheelchair users. Luckily, in San Joaquin, adjacent to the rail tracks and proper buffering, there is enough land to develop a standardized two-way Class I Bikeway.

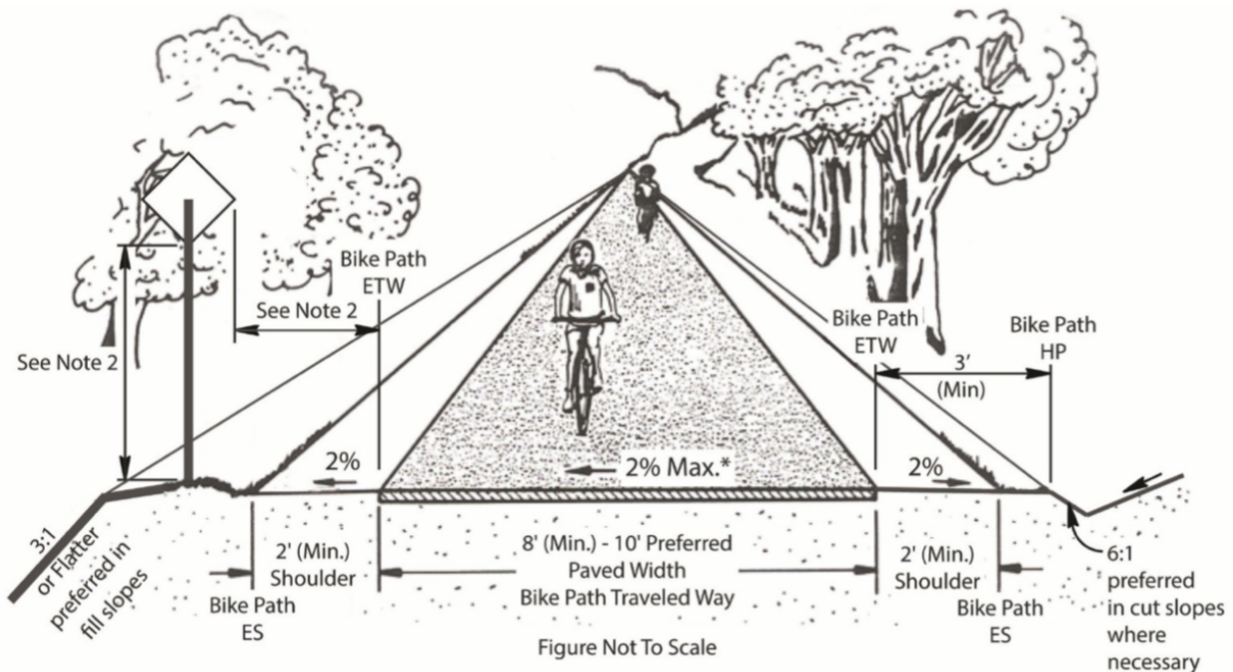


Figure 7 Two Way Class I Bikeway Standards according to California Highway Design Manual (2020)

Amenities

The San Joaquin Recreational Rail-Trail is designed for the public to walk, bike, or sit. Therefore, the use of the following design components may help improve the user experience. For safety, sufficient lighting should be installed throughout the trail route and at the entrance or exit access points. Designated seating areas may be accompanied by wheelchair-accessible areas, benches, small tables, and trash cans. Benches should face the trail and be installed near lamp posts if feasible. Where the trail intersects streets, curb ramps, appropriate signage, crosswalk lines, and pedestrian signal lines are necessary. Bike lane markings should follow through the intersections. Trail pavement can be asphalt to ensure accessibility to bicycles, wheelchairs, and pedestrians alike.

San Joaquin parks can be used for recreational purposes, communal gatherings, or may be rented out to residents/ visitors. The detention basin site proposed as the appropriate field can be used to install playground equipment, seating amenities, trash cans, sufficient lighting, restroom(s), and signage. Seating areas may include tables, shade structures, and ADA-compliant seating space. Playground flooring material can be foam, safe for the users, and letting water into the ground.

Maintenance Schedule

This section aims to provide safe, functional, and aesthetically pleasant park and recreational spaces to the residents. The suggestive maintenance schedules for trails and parks shown on the tables below can be used by the administrative staff, employees, and volunteers during the operation of the facilities.

Rail-Trail may be maintained by the schedule table shown as figure 8.

Maintanance Task	Frequency
General	
Safety inspection	1/week year round
General debris and trash pickup	1/week year round
Vandalism inspection	1/week year round
Enroachments	ongoing
Pavement	
Pavement survey	Spring
Crack sealing, patching, fog seal, sealcoat, slurry seal, and overlay	Reactionary/ as needed
Reconstruct	As needed
Inspect pavement markings	Annually
Repaint pavement markings	As needed
Vegetation and Landscaping	
Mowing, pruning, removal, seeding, trimming, and root cutting	In accordance with San Joaquin Landscaping Manual
Drainage	
Erosion repair	Quarterly, spring, and after heavy raining
Culvert/ catch basin cearing	Quarterly and after heavy raining
Ditch Maintanance	Annually and after heavy raining
Standing water repair	Annually and after heavy raining
Structures	
Railroad crossing and buffer inspection	Annually
Amenities	
Restroom maintanance (portable toilets)	1/ week
Information kiosk inspection	Annually
Update information kiosk graphics/ maps	As needed
Bench, bike rack, picnic table, trash can inspections	Quarterly
Signage inspection	Annually
Lighting inspection	Quarterly
Fence/ bollard inspection	Annually

Figure 8. Rail-trail maintenance suggested schedule

City park(s) may be maintained according to the schedule shown as figure 9.

Maintanance Task	Frequency
Overall	Park inspection completed monthly
Sport courts	
Sweep/ blow as needed	1/week in season
Pressure wash	1/year Soing
Net inspection	1/month year round
Drinking fountains	
Clean (remove debris, wipe)	1/ week year round
Grills	
Inspect	1/week in season
Clean (remove debris, wipe)	1/week in season
Irrigation	
Park turf watering up to 1"/week as needed	During hot season
Landcaping maintanance	
Prune	According to San Joaquin Landscape Manual
Inspect for disease/ insects	According to San Joaquin Landscape Manual
Weed	According to San Joaquin Landscape Manual
Litter	
Police entire area/ collect litter	3-5/ week in season 2/week off season (winter)
Empty trash cans/ replace liners	1/day in season 1/week off season (winter)
Park benches/ tables	
Inspect	1/week in season
Clean/wipe/disinfect	1/week in season
Pressure wash	2/season in season, as needed otherwise
Paint/ stain/ sand	1/year
Playgrounds	
Inspect all playgrounds monthly	year round
Restrooms	
Clean	1/day in season 3-5/week off season

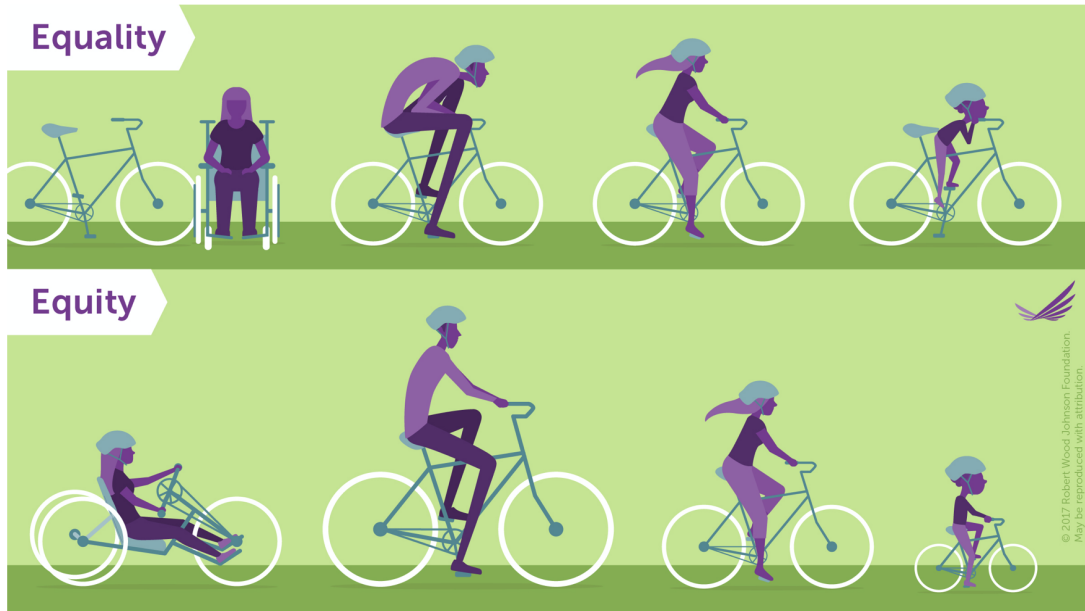
Figure 9. Park(s) maintenance suggested schedule table.

Inclusivity

As of 2012, all state and local governments are required by the United States Department of Justice to assure development compatibility with the ADA (Americans with Disabilities Act of 1990) guidelines. The ADA sets minimum requirements for new, constructed, or altered state or local government facilities, public accommodations, or

commercial facilities accessible and usable for people with disabilities. The following ADA compatible methods and tools are heavily encouraged for any open space or park space developed for public use.

- All recreational spaces need to have at least one accessible point of entrance from one passenger accessible route: parking lots, sidewalks, passenger loading zone, public transportation stop, and public streets (206.2.1, ADA manual 2010).
- At least one continuous and unobstructed route throughout the site is needed to assure safe and easy passage and exit (206.2.2, ADA manual 2010)
- Curb ramps ensure accessibility to a continuous route. Curb ramps should not be steeper than 1:20 (406, ADA manual 2010).
- Play areas need to have at least two ground level accessible play components. The ground level components may be dispersed throughout the play field and integrated with the rest of the components. Ground level play components include but are not limited to spring rockers, swings, diggers, and stand-alone slides. When three or more play components are provided, at least one accessible entry and exit point is needed (206.2.17.1,206.2.17.2, 240 ADA manual 2010).
- Where parking spaces are required, a minimum of one ADA compliant parking space per every one to twenty five parking spots is needed (208.2, ADA manual 2010).
- A minimum of two drinking fountains is needed. One should be compliant with ADA guidelines 602.1 through 602.6, and one should comply with 602.7 (211.2, ADA manual 2010).
- Where toilet rooms are provided, wheelchair accessible toilets/ urinals should be provided, too (603, ADA manual 2010).
- Where public telephone is provided, one wheelchair accessible phone per booth should be provided (217.2, ADA manual 2010).
- Per 1 to 25 seating areas, one wheelchair accompanied by a companion seat and designated aisle seat is needed (221.2, ADA manual 2010). Lawn seating areas where fixed chairs are not provided need to be connected to an accessible route (221.5, ADA manual 2010).
- Signs are encouraged for permanent public areas. Pictograms may be included, and must accompany written description. Signs and pictograms need to comply with ADA standard 703. (206.1 and 2, ADA manual 2010).



Visualizing Health Equity: One Size Does Not Fit All (Source: [Robert Wood Johnson Foundation](#))

Figure 10 Park(s) All people are accommodated

Conclusion

San Joaquin is fortunate to have two ideal locations for Parks and Recreation that can serve to alleviate the lack of open space in this community. Following through with these projects will require community support, stakeholder interest, and avid grant research. Funding and pursuit of equity are the main drivers that will bring success to the bike path and playground projects.

Feedback from the community shows support and desire for these projects already, San Joaquin is highly eligible for many different types of state and federal grants, and stakeholder interest can be obtained once funding is settled. Providing these amenities to this area will increase active transportation, maintain the current detention basin, provide an inclusive playground, and bring equity to this underserved community.

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