



Memorandum

TO: NEIGHBORHOOD SERVICES
AND EDUCATION COMMITTEE

FROM: Jon Cicirelli

SUBJECT: SUSTAINABLE PARK
MAINTENANCE

DATE: January 25, 2021

Approved

Date

02/03/21

RECOMMENDATION

Accept the Department of Parks, Recreation and Neighborhood Services report on city-wide sustainable park maintenance, including current service levels and areas of improvement.

OUTCOME

This report provides the Neighborhood Services and Education Committee with updates on park maintenance operations, including 2020 Park Condition Assessment results.

BACKGROUND

Since the founding of its first municipal park, Alum Rock Park in 1872, the City of San José has recognized the important role of parks. San José's park system is one of the community's greatest assets and contributes to the economic, environmental, social, emotional and physical well-being of residents. Parks can have a significant impact on the development of children and the happiness of everyone in the City's neighborhoods. As people across the globe cope with the COVID-19 pandemic, the value of parks is clearer than ever: Parks have become backyards, fitness centers, and places to safely connect for those who are otherwise isolated.

The City's park system has been expanded and improved many times since 1872, including with the voter-approved Measure P in 2000. It now encompasses more than 3,500 acres of developed and undeveloped land across more than 200 neighborhood and regional parks, more than 60 miles of trails, dozens of civic grounds, gardens, lakes, sports facilities, a farm, and an accredited amusement park and zoo. Maintaining this infrastructure so it remains accessible for years to come is a priority.

The stewardship of the City's park system lies with the Department of Parks, Recreation and Neighborhood Services (Department). ActivateSJ, the Department's 20-year strategic plan approved by the City Council in December 2019, defines a vision of Healthy Communities that

Inspire Belonging. To achieve this vision, the Department is guided by the principles of Stewardship, Nature, Equity & Access, Identity and Public Life. The Department's Parks Division maintains and operates the City's parks with a 2020-2021 Adopted Operating Budget of about \$30 million for park maintenance. The budget includes 186 full-time equivalent (FTE) staff in maintenance classifications ranging from Maintenance Assistant to Parks Facility Supervisor, who work 365 days a year towards a goal of safe and clean parks, with support from contractors, partners and volunteers. Park maintenance activities include:

- Grounds maintenance such as turf maintenance, tree maintenance, and landscaping;
- Custodial and janitorial services, including litter and refuse collection;
- Landscape rehabilitation;
- Repairs to equipment, such as irrigation systems and playgrounds; and
- Special event services, including preparation, event set-up, tear-down and clean-up.

In September 2020, the City Council accepted the City Auditor's Office's Audit of Park Maintenance. The audit concluded that the Department can improve the Park Condition Assessment process and its use of business intelligence to achieve efficiencies in service. These findings validated the aspirations and benchmarks in ActivateSJ.

ANALYSIS

The foundation of ActivateSJ is the guiding principle of Stewardship. The very first benchmark under this guiding principle is "Improve the condition of parks and trails." The Department is making improvements in the management of park maintenance that include:

- Establishing maintenance standards to ensure equity in care of park resources City-wide (ActivateSJ alignment: benchmark S1a)
- Collecting and monitoring useful data to ensure goals are achieved (ActivateSJ alignment: benchmarks S1b, S5a, and S6a)
- Ensuring the Department maximizes its use of available resources (ActivateSJ alignment: benchmarks S1c, S8a and S13b)
- Implementing a comprehensive Integrated Pest Management plan that considers climate and social concerns (ActivateSJ alignment: benchmarks S3c and S3d)
- Implementing efficient water management techniques that consider climate change and aging infrastructure (ActivateSJ alignment: Stewardship and Nature)

Establishing Maintenance Standards

Ensuring equitable park maintenance across the City's park system requires a system of quality standards and controls. In the 1990s, the City of San José implemented park maintenance standards, which fell out of use in or about 1999. In 2018 and again in 2020, staff researched and evaluated park maintenance standards from various sources as a guideline for the development of current San José park maintenance standards. Staff reviewed a seminal 1986

publication entitled Park Maintenance Standards by the National Recreation and Park Association (NRPA), the American Park and Recreation Society, and the National Society for Park Resources. This document, updated in 2001, included a set of recommended maintenance standards for park and recreation operations. Staff used this information to develop the standardized scheduled maintenance program implemented across all City parks in 2020.

Staff also reviewed maintenance standards and assessment practices developed by San Francisco's Recreation and Park Department. These standards, prepared after San Francisco voters passed a proposition in November 2003 requiring the development of maintenance standards, have a product focus and identify the desired condition of park features. For example, maintenance standards for lawns include the following features for evaluation: cleanliness, color, density and spots, drainage/flooded areas, edged, height/mowed, and holes. These features each have a standard description and a unit of measure (e.g., under density and spots for lawns, the maintenance standard is "80% of the turf area is free of bare spots").

San Francisco's standards are the basis for draft Park Maintenance Standards that the Department shared for feedback at the February 3, 2021 meeting of the Parks and Recreation Commission. When finalized, these standards will be disseminated in training to park maintenance personnel. For other processes deemed critical to the maintenance of parks, documented procedures will be written, reviewed, approved and formally released. Having formal standards and procedures provides for better training and accountability. This will be done to ensure that staff meets the mission of serving residents with safe and clean parks in a sustainable fashion.

Measurement and Data Collection

With any quality standards, a system of quality assurance and regular assessment is necessary for continual improvement. To that end, the Department currently employs several tools to evaluate performance. The most significant tool is the completion of extensive, annual Park Condition Assessments (PCAs). The PCAs are a point-in-time evaluation of various park features, such as turf appearance, picnic areas, and playgrounds, which are assessed and assigned a point score based on the criteria defined in Attachment A. Compiled in the summer/fall, staff's PCA scores reflect the previous fiscal year's level of service (i.e., 2020 PCAs record the condition of a park in summer/fall of 2020, which is primarily the result of the service a park received during 2019-2020). Completing PCAs allows staff to inventory and identify trends in the wear and tear of amenities, and to make course corrections as needed.

In July and August of 2020, the Department assessed 268 existing Department sites including parks and civic grounds. This was carried out by 10 three-person teams who were trained on the existing standards and provided a practical scoring training at Bramhall Park. Staff aggregated the points assigned to individual features of a park to calculate an overall average PCA score for each park, which can be found in Attachment B. Attachment C includes PCA score average by Council District. The Department defines "acceptable" as a score of 3.0 or better on a scale of 1.0 - 5.0, with a perfect score of 5.0 reflecting a new or like-new park or park feature. In this

context, a park with a score of “acceptable” may adequately serve the community’s needs at present. A PCA score below 3.0 requires attention (either maintenance or capital).

Current (2020) PCA Results

Based on the 2020 assessment, the City’s parks are in “acceptable” condition, earning an average cumulative score of 3.5, an increase from 2019 of 0.1 from 3.4. On a “per-site” basis, 58 percent of site PCA scores increased from 2019, 39 percent of site PCA scores decreased and 3 percent did not change. Exhibits 1 and 2 are histograms of PCA scores for 2020 and the prior two years, totaled by park and by acreage:

Exhibit 1: Number of Parks and Civic Grounds by PCA Score

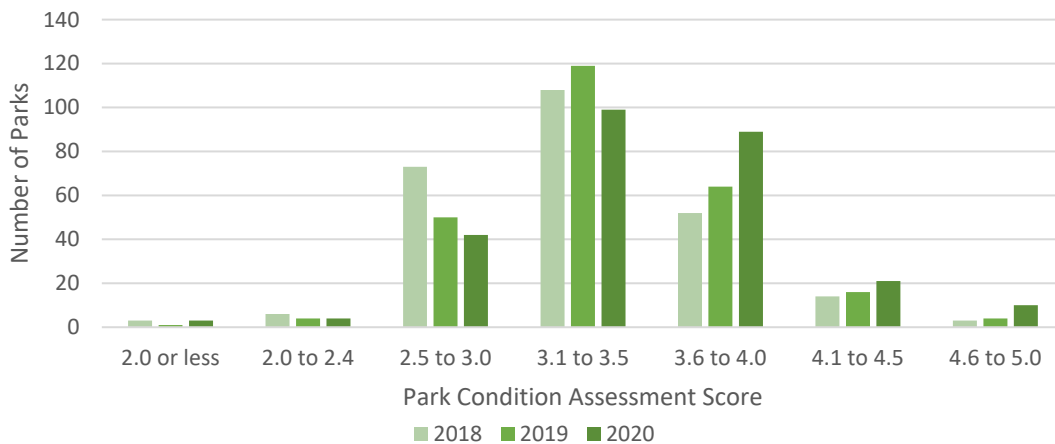
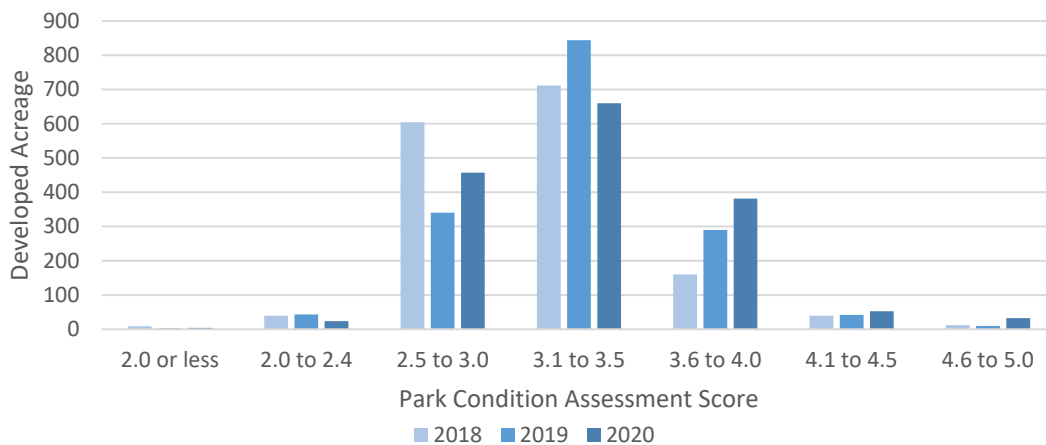


Exhibit 2: 2020 PCA Scores Aggregated by Park Acreage



The overall rise in PCA scores was surprising given the challenges faced in the months leading up to the PCA process. In March 2020, park maintenance changed dramatically due to COVID-19 restrictions. On March 16, 2020, when the City suspended many services, staff duties were reduced to basic health and safety activities (trash pick-up and inspections) and posting and closing amenities in accordance with County and State health orders. As the duration of modified duties became clear, maintenance services were added back with safety precautions, starting with mowing in April; full park maintenance activities resumed in late May. The Department expected this reduced service level would be reflected in lowered annual PCA scores as staff was unable to take annual preventative measures in advance of weed growth and other landscape maintenance activities were paused for three months. Additionally, with few recreational options for residents to enjoy, park usage increased and placed a heightened demand on maintenance personnel who frequently reported full trashcans in parks.

Staff believes that the rise in PCA scores may not align with an actual improvement in park conditions, as evidenced by the 132 park concerns received about weeds and trash in parks throughout the spring and summer of 2020. With the support of an Encore Fellow, the Department conducted statistical analyses of the PCA results and determined that it is likely that method variability (evaluators rating parks and amenities differently) is the reason for PCA scores increasing in 2020. One example of method variability is that one evaluation team rated all parks and civic grounds in Council District 9, which had a lower overall PCA rating than other Council Districts. This evaluation team may have rated more critically than others, or others may have rated more leniently. Staff did not have a basis to smooth scores across evaluation teams as only one team evaluated each park, and so scores were left as reported.

PCA Process Improvements

The current PCA methodology is prone to variation and subjectivity, and less repeatable than it should be. For example, here are the criteria for assessing turf appearance:

Rating # 1: Unacceptable Condition	Rating # 2: Needs improvement	Rating # 3: Acceptable	Rating # 4: Good	Rating # 5: Excellent
75% or more weeds, bare spots or brown patches. May include extensive gopher or squirrel activity. Gopher and/or squirrel program abatement necessary.	50% or more weeds, bare spots, brown patches. May include extensive gopher or squirrel activity.	25% - 50% weeds, bare spots, brown patches. Good condition overall. Playable. May include some gopher or squirrel activity.	10% - 25% weeds, bare spots, brown patches. Very good condition. Turf is healthy. May include slight gopher or squirrel activity.	10% or fewer weeds, bare spots, brown patches. No gopher or squirrel activity.

Using these criteria, staff is tasked to record park conditions that are not always clear-cut. In the following pictures of turf conditions observed in parks, one can see improvement from left to right, but two reasonable evaluators could disagree on whether the left is a 1 or 2, and whether the middle is a 3 or 4.



Examples of various turf conditions.

The City Auditor's Office also found that the current PCA process can obscure whether a low-scoring park amenity requires additional maintenance or capital rehabilitation due to the Department's \$382.1 million deferred maintenance infrastructure backlog (as of 2019-2020). This limits the value of the current PCA process as a factor in allocating capital funds.

Staff intends to update the PCA scoring methodology to assure reliable and repeatable scoring while taking into account audit findings. Staff has begun developing a new process for assessing the condition of capital assets, separate from maintenance assessments. Staff has also conducted limited testing of routine inspection and annual assessment forms based on the draft standards, so that the system of quality assurance can contribute to the achievement of maintenance standards. The future PCA procedure will be documented and disseminated for training of park personnel, assuring the sustainability and reliability of the method.

Other Data Collection and Measurement

In addition to the PCA process, the Department regularly monitors parks, trails, and facility conditions using various data sources, including basic maintenance inspections conducted by staff, resident reports submitted to the Park Concerns email and hotline, and reports submitted by other City departments.

Staff also records and retrieves service delivery data for each park in the Department's Business Intelligence database and analyzes them along with the park's rating. Data collected include:

- Inspections;
- Schedule maintenance;
- Hours spent at each park;
- Corrective Work Order on-time delivery;
- Equipment downtime; and
- Park Concerns.

For example, in calendar year 2020, the Department received 5,344 park concerns, spent 25,737 hours of direct maintenance time in parks for trash and litter pick up, spent 10,388 hours on irrigation repair, and delivered 80 percent of corrective work orders on time.

Data collection allows the Department to understand the time it takes to properly care for each amenity and allocate resources accordingly. The City Auditor's Office recommended that the Department reassess its data collection efforts by defining clear business goals and tying data collection to outcomes. Staff intends to reevaluate the data collection necessary to support achieving maintenance standards in the next year.

Maximizing Resource Utilization

With the upcoming implementation of updated Park Maintenance Standards, and to adhere to ActivateSJ guiding principles, the Department recognizes the necessity of efficiently utilizing every resource available to achieve success. The Department's park maintenance takes a multi-pronged approach including staff, partners, volunteers, contractors, supplies, and a fleet of vehicles and equipment that all need to be well supported and managed.

Investing in Staff Success

As a City service, the park maintenance workforce is the most critical factor for achieving maintenance standards. The park maintenance workforce is organized mainly into six districts responsible for the maintenance and operations of parks in their contiguous region, along with centralized teams described further below. In July 2020, the Parks Division reorganized to create maintenance teams dedicated to Happy Hollow Park & Zoo, Emma Prusch Farm Park, and Department sports facilities, including the Lake Cunningham Action Sports Park, Arcadia Ballpark, and the J.R. Blackmore Police Activities League Stadium Complex. The reorganization also shifted certain recreation program management functions away from park district supervisors, enabling them to focus and hone their craft of maintenance management.

Although the Department has a large staffing model for park maintenance, park maintenance has more employees than many City Departments, each and every vacancy presents a challenge. As of the writing of this report, the Department has a 17 percent vacancy rate in benefitted park maintenance classifications, up from 12 percent in June 2019. The Department continues to prioritize recruitment for park maintenance.

Simply hiring and deploying staff is not enough, however; staff must receive professional development and training to maximize their individual potential and collective impact. To ensure staff skills are in line with work expectations, the Department has defined competencies for staff to have and completed a gap analysis on what training may be required. Staff has crafted a training program focused on horticulture, safety, and administration. The Department is also empowering staff, such as Park Maintenance Repair Workers, to co-create specialized training for their own improvement and to share with others who aspire to grow. The

Department anticipates that up-to-date, applicable training will improve staff engagement and performance at work, and provide career development opportunities.

Even with a fully trained maintenance staff, the Department recognizes that some needs in parks require specialized and dedicated attention. To supplement the efforts of staff who provide general park maintenance, the Department has in recent years created the Parks Rehabilitation Strike Team, Integrated Pest Management Team, and Turf Renovation Team to focus on specific issues that were found to lower PCA scores and where larger scale improvements are needed. The Strike Team continues to tackle infrastructure backlog projects across the City, such as updating park furniture, and is funded to continue through June 30, 2022. The goal of the Integrated Pest Management Team is to ethically and humanely reduce pest populations in parks to manageable levels that can be maintained by park districts; once that is achieved, the team's sister program, the Turf Renovation Team, renovates fields that had been riddled with burrows. Funding for the Integrated Pest Management Team and Turf Renovation Team, a total of 8.0 FTE budgeted in the 2020-2021 Adopted Operating Budget and 3.0 FTE temporary overstrength positions, ends on June 30, 2021.

Partners, Volunteers and Contractors

Caring for a park system as large as San José's requires a community effort. The Department relies heavily on partnerships. These partnerships include agreements with little leagues to maintain fields, groups such as Friends of the San José Rose Garden, and public-private partnerships with organizations including the Guadalupe River Park Conservancy.

Volunteers are another asset the Department is fortunate to have. In 2020, despite COVID-19, park volunteers worked both independently (as Adopt-a-Park volunteers) or in small groups to contribute over 11,166 labor hours into their parks, following safe practices and social distancing. Frequent projects that volunteers complete, which would otherwise be completed by staff, include refilling Fibar in playgrounds, litter pick-up, bench painting, weeding and selective planting. In past years, volunteers contributed upwards of 35,000 hours of support to their parks.



Volunteers play a key role in pruning efforts at the Municipal Rose Garden

The Department also utilizes traditional outsourcing to assist with high-skill tasks such as tree removal; large-scale weed abatement; park restroom cleaning; and small park maintenance (two acres or less). In addition, the Department partners with the San Jose Conservation Corps and Downtown Streets Team, which teach their participants job skills while providing semi-skilled park maintenance support. To ensure these contractors deliver the quality services that are expected, the Parks Division has a Contracts Team that centralizes management of the large contracts and routinely inspects for service delivery and quality.

Integrated Pest Management

Another integral part of meeting maintenance standards is proper pest management. Integrated Pest Management (IPM) is an ecosystem-based strategy that emphasizes the use of multiple pest control methods, prioritizing non- or low-chemical techniques to manage pests, including weeds. A fact sheet on IPM is included in Attachment D.

Over the past year, the Department has focused its IPM efforts on the management of two types of pests: the first, invasive plants or weeds, and the second, burrowing rodents. Weeds and burrowing rodents are a source of many park concerns from residents, and can have a major impact on overall PCA scores. Both pests are managed by utilizing a variety of controls that complement each other, as no one method is appropriate or effective all the time.

Weed Abatement

Invasive plants (weeds) are an ongoing issue in San José parks. In addition to detracting from the aesthetics of park land, weeds are the leading cause of native biodiversity loss. Invasive plant species spread quickly and can displace native plants, prevent native plant growth, and

create monocultures (the growth of a single organism on land that depletes the soil of nutrients, reduces organic matter, and can cause erosion). Changes in plant community diversity reduce the quality and quantity of wildlife habitat. Allowing weeds to get out of control can also increase the risk and frequency of wildfires.

The Department abates weeds through a variety of methods, including mechanical and chemical controls. This work is done by maintenance staff, outside contractors and volunteers. In 2020, Department staff spent 5,614 hours utilizing both chemical and mechanical controls to reduce invasive species in developed park land. The Department's weed abatement contractor mowed 600 acres of undeveloped parkland to reduce fire fuel loads. In some cases, the Department summons friends to combat weeds, as shown in the picture below:



Sheep utilized for vegetation management at Guadalupe Oak Grove Park

Burrowing Pests

Management of burrowing pests is also of utmost importance when trying to achieve standards. When left uncontrolled, burrowing pests damage infrastructure, such as irrigation and hardscapes, and create safety concerns. To address these issues, the Department has taken a proactive approach. Since its inception in 2019, the IPM team addressed this issue by utilizing a variety of methods including trapping, use of Gopher X (smoke machine), and chemical controls when necessary. In the first six months of 2020-2021, the team has worked at nine parks across an area of 40 acres to reduce the number of active gopher and ground squirrel burrows, and the Turf Renovation Team has worked at eight parks with a total of 19 acres of renovated turf that has been leveled, aerated and reseeded. The Department's current target for burrow reduction for the IPM team is 90 percent at treated sites. In 2020, due to redeployment of staff to COVID-19 related priorities, the team achieved a 50 percent reduction. It is anticipated that the team will make significant progress towards its target in 2021.

Whether considering weeds or burrowing rodents, the Department is intent on mitigating the environmental impacts of pest management. To this end, the Department continues to pursue

alternative solutions amid the community's growing concern over use of traditional chemical methods and their potential impacts on the population and environment.

Water Management

In addition to pest issues, climate change is also putting pressures on the City's park system. Temperatures in San José have increased by roughly 2 degrees Fahrenheit over the past 30 years and are forecasted to continue to rise. Water demands in City parks will rise with the increase in temperatures and droughts are projected to increase in frequency, duration and severity.

The Department strives to responsibly steward water in the spaces it maintains. To improve the resiliency of the City's park system, staff is documenting a water management standard operating procedure. Staff is preparing for future water shortages by establishing standards for new and retrofitted parks and making commitments to install new technologies. By documenting standard procedures and training staff, the Department can ensure proper irrigation. All Park Maintenance Repair Workers have already received training and a series on proper irrigation is planned for March 2021 to ensure staff understand the Department goals before warm weather arrives in summer months. Staff has already taken steps for centralized control of all irrigation clocks.

Since last February 2020, staff has installed 129 Calsense controllers, for a total of 206 installations to date, and 28 more are scheduled by for installation by June 2021. Continued progress with installing these controllers and connecting them to the Calsense smart irrigation system has enabled the Department to achieve the savings necessary to weather a \$1.25 million (18 percent) reduction to its water budget in the 2020-2021 Adopted Operating Budget with minimal impact to landscapes. In 2020-2021, there have been no unexplained irrigation water overages for parks with Calsense irrigation controllers. It is anticipated that, as additional irrigation clocks are converted to the Calsense system (less than 100 remaining), the Department will reduce water loss from improper irrigation by 90 percent.

Challenges Persist

Staff has faced many challenges while working on the program improvements described above. Adapting to COVID-19 for the protection of the community and staff has been a primary focus since March 2020. Staff has adapted to new workplace rules and precautions. The Department has prioritized retaining parks, trails, and open spaces for resident physical and mental health and wellness while also following all State and County health orders, which meant staff had to close over 1,000 park amenities in April and May 2020 and regularly re-secure past closures with new signage and caution tape or snow fencing. Staff time was diverted to these efforts that otherwise would have been invested in landscape maintenance.

The Department's infrastructure backlog has continued to grow (due to aging) to \$382.1 million in 2019-2020, which strains the ability of park maintenance to keep park amenities in safe conditions. In addition, the impact of unhoused individuals living in parks has grown during the

pandemic as the City, following CDC recommendations, has suspended encampment abatement in most situations. The BeautifySJ program's encampment trash clean-up program has mitigated some of these impacts, but park maintenance resources are still diverted away from standard maintenance. Park maintenance through the core of the City is particularly difficult to sustain as there is a constant demand to meet even basic daily needs for trash service and bathroom cleanliness. Standard parks maintenance resources are inadequate in these situations.

CONCLUSION

The Department maintains and operates the City's park system to connect people to healthy lifestyles and nature, offer equitable access to public life, and contribute to San José's identity with unique destinations and events. The city-wide average Park Condition Assessment increased in 2020, which staff believes is the result of an unreliable methodology that is being re-imagined. The Department is undertaking program improvements recommended by the City Auditor's Office and defined in ActivateSJ, the Department's 20-year strategic plan, by establishing product-focused maintenance standards as the basis for a quality assurance system and adapting the Park Condition Assessment process to the new standards. By making efficient use of park maintenance resources, implementing a comprehensive Integrated Pest Management plan, and implementing efficient water management, the Department is a responsible steward of public funds and lands. Challenges remain and are in some cases greater than before, and the Department continues to seek near-term solutions where possible.

EVALUATION AND FOLLOW-UP

The Department will submit an annual report in the winter of 2022 evaluating 2021 Park Condition Assessment results and park maintenance highlights and challenges.

CLIMATE SMART SAN JOSÉ

The recommendation in this memorandum aligns with one or more Climate Smart San José energy, water, or mobility goals.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the February 11, 2021 Neighborhood Services and Education Committee meeting.

January 25, 2021

Subject: Sustainable Park Maintenance

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COORDINATION

This memorandum was coordinated with the City Attorney's Office and the City Manager's Budget Office.

COMMISSION RECOMMENDATION/INPUT

This memorandum will be heard at the Parks and Recreation Commission meeting on February 3, 2021, and Commission feedback will be provided to the Committee.

CEQA

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action.

/s/

JON CICIRELLI
Director of Parks, Recreation
and Neighborhood Services

For questions, please contact Avi Yotam, Interim Deputy Director, at avi.yotam@sanjoseca.gov.

Attachments:

- A. Park Condition Assessment methodology
- B. 2020 Park Condition Assessment Score by Park
- C. 2020 Park Condition Assessment Average Score by district
- D. Fact Sheet on Integrated Pest Management