

**CITY OF SANTA BARBARA
PARKS AND RECREATION DEPARTMENT
Integrated Pest Management Advisory Committee (IPMAC)**



Parks Division
Turf Management Policy
October 2022

Goal

Maintain healthy and stress-free turf that provides high quality and safe playing field for sports use throughout the year.

Description of Sports Fields

There are a total of 10 sports fields located within 5 parks, which total 40.6 acres. All of the sports fields in the city are “Green” as described in the City’s PHAER Zone Model.

Field	Park	Park Acres	Feet Above Sea Level	Approximate Feet from Ocean
Cabrillo Ballfield (Main)	Cabrillo Ballfield	5	8 to 10	450
Dwight Murphy Soccer Field (Main)	Dwight Murphy	10.5	10 to 12	770
Dwight Murphy Softball Field (Main)	Dwight Murphy	10.5	8 to 12	770
MacKenzie Park Bronco Baseball Field	MacKenzie Park	9.6	228 to 242	14,000
MacKenzie Park Mustang Baseball Field	MacKenzie Park	9.6	228 to 242	14,000
Ortega Park Softball Field	Ortega Park	9.5	10 to 12	4,600
Ortega Park Soccer Field Main	Ortega Park	9.5	10 to 12	4,600
Pershing Park Baseball Field	Pershing Park	6	10 to 12	910
Pershing Park Softball Field # 1	Pershing Park	6	10 to 12	910
Pershing Park Softball Field # 2	Pershing Park	6	10 to 12	910

The following chart shows annual play time in FY19 and FY22, as well as the percentage of use above the ideal play time on each field to maintain turf at a high quality level in FY22:

Field	FY19 Hours	FY22 Hours	FY22 % Play Above Ideal Use
Cabrillo Ballfield (Main)	666.75	839.75	5%
Dwight Murphy Soccer Field (Main)	804.50	2,243.50	180%
Dwight Murphy Softball Field (Main)	589.50	595.25	-26%
MacKenzie Park Bronco Baseball Field	802.00	2,340.50	193%
MacKenzie Park Mustang Baseball Field	781.75	2,115.00	164%
Ortega Park Softball Field	193.50	112.00	-86%
Ortega Park Soccer Field Main	1,010.50	1,268.75	59%
Pershing Park Baseball Field	1,791.50	2,053.00	157%
Pershing Park Softball Field # 1	875.00	670.00	-16%
Pershing Park Softball Field # 2	785.50	112.50	-86%
	8,300.50	12,350.25	54%

Challenges

The main challenges to maintaining high-quality and safe turf are overuse, salty and poor soils, and the restrictions on using herbicides to control noxious weeds.

The primary challenge that the Parks staff faces is overuse. The ideal play time for a sports field is 800 hours per year. The average annual play time in FY19 was 900 hours and FY22 was almost 1,360 hours. (This average excludes Ortega Park Softball Field as it has so much less scheduled play time than other fields.) Three fields were used more than 800 hours in FY19 and six in FY22. In FY22, four fields had an annual play time over 2,000 hours; these include Dwight Murphy Soccer Field, MacKenzie Park Bronco Baseball Field, MacKenzie Park Mustang Baseball Field, and Pershing Park Baseball Field. These numbers do not include unpermitted or unscheduled use of fields, which is a common occurrence especially in both Dwight Murphy fields, both Ortega fields, and Cabrillo Ballfield even though it is fenced. The unscheduled usage at the Ortega Park fields is likely double the amount of scheduled usage. Due to the limited amount of sports fields in the city, the turf is significantly overused to serve the needs of the community. We do not anticipate being able to significantly decrease the amount of play in the near future. In fact, we anticipate more demand for play time because some of the schools are limiting access to sports fields.

Many of these fields also present the issue of salty and poor quality soils. All of the waterfront sports fields are only about 8 to 10 feet above sea level. All of the waterfront sports fields also use recycled water for irrigation, which has higher salt, sodium, and chlorine concentration than potable water. Additionally, in exchange for this low-cost water, Parks staff had to apply biosolids which were a byproduct from the Recycled Water Plant. These are also extremely high in salts, sodium, and chlorine, which all work to injure the turf and damage the soil structure. Starting in 2022, we no longer

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have access to the biosolids. The most salt-resistant turf, which is Bermuda, can tolerate amounts of 3,000 ppm of TDS but the low areas of the sports field soils can reach up to 15,000 ppm during summer months in the first 2-3 inches of the subsurface. Turf is not tolerant to these amounts of salts. Cabrillo Ballfield and Dwight Murphy fields are at a very low elevation and have large amounts of soccer play, therefore we are dealing with sodic and compacted fields.

Another significant challenge is the inability to control weeds with herbicides. Turf requires the use of selective herbicides in order to preserve the monocot turf species and control the dicot weed species. However, there are no selective green herbicides on the market that staff have found effective. The current weed coverage in sports fields ranges from approximately 40-60% depending on the time of year, except MacKenzie Park likely because it is at a higher elevation, farther from the ocean, and it is not used for soccer, which is the sport that compacts and wears down turf the most.

Policy

In order to allow turf to recover from high play, it is Parks Division policy to close sports fields for 6-9 weeks twice a year, usually in the summer and winter. (Dwight Murphy soccer field is also closed every Monday to rest and to do maintenance after weekend play.)

When a field is closed for the 6-8 week closure period, the following renovations occur:

- Verticutting for thatch removal
- Sweeping with large sweeper to pick up thatch
- Aerification – done in two directions to make sure all area is covered
- Slicing – done in two directions to make sure all area is covered
- Levelling – done in many directions
- Dragging – done in many directions
- Fertilizing with starter fertilizer
- Calcium sulfate application to break up sodium and to allow for leaching
- Spiker seeding – done in two directions to make sure all area is covered
- Top dressing
- Irrigation is scheduled to water three times per day to ensure proper germination

This policy requires Parks staff to use a number of cultural & mechanical practices to maintain the turf throughout the year:

- Staff shall check soil moisture levels and report to appropriate staff three times per week, ideally on Mondays, Wednesdays, and Fridays, and daily during overseeding periods. Staff who check soil moisture may include Senior GMWs, Crew Leads, Irrigation Technicians, Parks Supervisors, and the Parks Manager. Irrigation Technicians shall alter irrigation schedules as needed to stay within the water budget and any drought regulations. Under- and over-watering puts stress on turf. Irrigation will be altered to match weather patterns and seasonal changes.

- Staff shall aerify a minimum of 3x per year, slice a minimum of 4x per year, and deep tine 12" deep a minimum of 6x per year. This treatment creates conditions for proper oxygen exchange and water penetration.
- Staff shall apply fertilizer a minimum of 6x per year, calcium sulfate a minimum of 4x per year, and overseed as needed with seed that is drought-resistant, disease-resistant, wear & tear-resistant, and salt-tolerant. Parks staff would also like to apply soil penetrants but do not currently have the proper equipment to do so. This process would require a 100 to 200-gallon ride-on sprayer.

Because of the challenges presented above, each field is expected to decline into a weedy and patchy field over the course of the ~4 months the field is open for play before entering a closure period. However, if field decline occurs faster than expected, Parks Supervisors will report these findings to the Parks Manager who may request an IPM exemption to restore the field. Additionally, the Parks Manager may request exemptions to conduct herbicide trials to try to slow down the turf decline that is part of normal seasonal use.

When park renovations are in design, the Department will: 1) evaluate opportunities to replace natural turf with artificial turf fields, which can better withstand the challenges described above, and 2) evaluate parks for opportunities to add additional sports fields to better meet demand.

The Division shall code all turf management-related expenses to the Sports Field account 10006912-531300-60510 so that cost can be factored into decision-making about turf management.