CITY OF SANTA BARBARA

PARKS AND RECREATION COMMISSION REPORT

AGENDA DATE: July 24, 2019

TO: Parks and Recreation Commission

FROM: Parks Division, Parks and Recreation Department

SUBJECT: Integrated Pest Management Plan and Pesticide Hazard and Exposure Reduction Zone Model Recommendations

RECOMMENDATION: That the Commission:

A. Receive a report on the Integrated Pest Management Plan (IPM) and Pesticide Hazard and Exposure Reduction (PHAER) Zone Model;

B. Receive and discuss recommendations to modify the PHAER Zone designation for City parks and parking lots; and

C. Approve and forward the PHAER Zone recommendations and 2018 Annual Report to City Council.

DISCUSSION:

Background

On January 26, 2004, the City of Santa Barbara adopted an Integrated Pest Management (IPM) Strategy for all City owned properties, including parks, the Santa Barbara Golf Club, and all Airport, Waterfront and Public Works building maintenance and facilities operations. The primary goals of the City's IPM program are to promote environmentally sensitive pest management while preserving assets and protecting the health and safety of the public and City employees. The use of pesticides is avoided wherever feasible and pesticides are utilized only as a last resort, employing the least toxic pesticides. To achieve the City's IPM goals, the City Council established an Integrated Pest Management (IPM) Advisory Committee appointed by the Parks and Recreation Commission. The IPM Advisory Committee is made up of community members with expertise in environmental research, pesticide and environmental awareness, and sustainable landscape maintenance. The IPM Advisory Committee meets with City staff on a quarterly or as needed basis to review and provide informed decisions on methods and practices for reducing or eliminating the use of pesticides in public areas. Additionally, the Committee is responsible for the review and approval of pesticide application exemptions, the approved materials list, proposed PHAER Zone changes, and the Annual Report.

The IPM Strategy called for the development of a Pesticide Hazard and Exposure Reduction (PHAER) Zone Model, a mapping and zone system tied to the IPM Approved Materials List to limit pesticide use based on potential human exposure. Adopted by the City Council on February 14, 2006, the PHAER Zone Model committed the City to moving forward as progressively as possible to achieve the goal of having all City parks managed in a "Green," or least toxic, manner.

The PHAER Zone Model assigns Green, Yellow, or Red/Special Circumstances Zone designations to sites, or portions of sites, based upon the potential for exposure by humans and sensitive habitat to hazardous pesticides, and allows use of carefully screened materials by zone designation. For example, Green Zones are areas of high human exposure potential and only pesticides designated as "Green," which show very limited human and environmental impacts, may be used. Safer Soap insecticide (potassium salts of fatty acids) and BurnOut 2 herbicide (clove oil) are examples of "Green" materials. Yellow Zones are areas with moderate human or environmental impacts. Safticide Oil insecticide (petroleum distillates) and Roundup Pro herbicide (Glyphosate) are examples of "Yellow" materials. "Red" Zones, or Special Circumstance Zones are areas where there is extremely low human exposure or environmental impacts. "Red" material is predominantly used for pest management control. As an example, Zyphor insecticide/fumigant (sulfuryl fluoride) may be used in these areas. Overall, the Zone Model provides for incremental and measurable expansion of risk-reduction efforts, along with communicating clearly to the public the general potential for pesticide exposure.

At the time that the City adopted its IPM Strategy and the PHAER Zone Model, the Council acknowledged the importance of enhanced resources for the increased labor requirements associated with the least toxic alternative methods as well as the need to improve City facilities to achieve more sustainable management practices. The City Council provided the Parks and Recreation Department with additional funds to make park infrastructure improvements as well as establish a "Green Team" dedicated to implementing the goals of the IPM program. Community members in support of the IPM strategy also committed to providing volunteer support to City efforts.

Program Achievements

Over the past 15 years, the City has made tremendous progress towards the reduction of pesticide use by developing and implementing alternative practices and incorporating the Green Gardener Program, a regional program offering education, training, certification and promotion of sustainable landscape practices. Additionally, each year the City provides mandatory professional training for all employees that are responsible for the application of pesticides to ensure consistency and compliance with the California State Department of Pesticide Regulation's requirements.

Pesticides are reported in either pounds or gallons depending on whether they are dry or liquid. City-wide, since adopting the PHAER Zone Model, the use of "Green" materials has increased by 2,103%, while the use of "Yellow" and "Red" materials has decreased 59% and 89%, respectively. Additional information on pesticide use by each Department/Division is discussed below.

Material	2005	2018	Volume Change	% Change
Green	19	418.52	399.52	2103%
Yellow	1796.066	727.7	(1,068.37)	-59%
Red	241.186	26.32	(214.87)	-89%

Airport Department
The Airport Department (Airport) has significantly reduced the use of "Red" materials. At the same time, the Airport relies on the use of "Yellow" materials, including Glyphosate, for rodent and vegetation management of the runways, taxiways, and safety areas designated as Special Circumstance Zones to allow maintenance in accordance with Federal Aviation Administration (FAA) requirements. Rodent control is an important part of the Airport's efforts to minimize bird strikes to aircraft. Additionally, other "Yellow" materials are used within the 400 acres of the Goleta Slough Ecological Reserve for the management and control of mosquitos, to prevent West Nile Virus, and eliminate invasive vegetative species, for the purpose of habitat and ecological preservation.

Parks and Recreation Department
There are 1,810 acres of parkland in the City, of which only 36 acres (2%) are designated "Yellow." Since the adoption of the PHAER Zone Model, the number of "Green" parks has increased from 19 to 39. The Parks Division has eliminated the use of "Red" materials and has maintained a downward trend for the use of "Yellow" materials. The Parks Division uses "Yellow" materials sparingly to control periodic weed and rodent infestations, protect historic and natural resources, manage hazardous work environments, and reduce and eradicate poisonous and invasive vegetation. The proposed use of "Yellow" materials is reviewed by the IPM Advisory Committee.

Rodents such as ground squirrels and gophers in coastal bluff areas contribute to bluff erosion, and sport turf and field infestations create park user safety issues. Hazardous work environments include areas that require specialized climbing and rigging apparatuses (such as coastal bluffs), and parkway and park areas with poisonous and invasive vegetation, such as Poison Oak. In parks with historic resources, such as the Mission Ruins in Mission Historical Park, the use of mechanized equipment and manual labor to reduce weeds increases the likelihood for unintentional and irreparable damage. The primary rationale for the use of "Yellow" materials is to reduce risk to the public, staff,

and contractors. In all of these examples, proper safety protocols as outlined in the PHAER Zone Model are strictly followed to prevent public exposure.

When materials are used, they are used very sparingly. As an example, in 2018, the Department used applications of Roundup herbicide at a highly diluted rate of 2% concentrate per gallon of water within "Yellow" zoned Harbor and Park public parking lots, and also in other public Right of Ways, such as Loma Alta, to control Poison Oak from encroaching into the pedestrian walkway. The total amount used for the year was three gallons of concentrate.

The Santa Barbara Golf Club also significantly decreased its overall pesticide use from the program's inception. The use of "Yellow" and "Red" materials by exemption by the IPM Advisory Committee are still necessary for the management and control of turf grass fungus on the golf greens. The Golf Division operates as an Enterprise Fund and must generate revenue equal to the costs of operation. The challenge lies in reducing turf stress while maintaining a high quality golf experience. Stress comes from soil compaction and turf damage caused by 60,000 individual golfer rounds annually coupled with weather conditions.

The Creeks Division uses primarily a Glyphosate based herbicide, a "Yellow" material, to treat Arundo and manage other invasive vegetative species for the purpose of habitat and ecological preservation and rehabilitation. Herbicide applications are the only known effective method of eradicating some of these invasive plant species.

Public Works Department
The Public Works Department has largely eliminated the use of "Red" materials. The primary exception is for structural fumigation in City facilities. The Public Works Department relies on the use of "Yellow" materials for the management of ants in City facilities, and the control of mosquito and vector borne illnesses and disease transmission for locations where there is standing or stagnant water.

Alternative Practices

Concurrent with the systematic reduction and elimination of many pesticides and other materials, the City has employed a variety of alternative practices. Methods for weed and invasive species management have included high temperature steam applications, flaming, soil removal, and sheet mulches and weed fabric (geotextile material) in conjunction with mulch. In 2018, alternative practices accounted for 9,574 hours city-wide. Maintaining weeds through mulching, hand weeding, weed whipping, and other practices accounted for 7,919 hours. Mechanical traps for gopher, squirrel, rat, and mice control accounted for 1,434 hours; and bee control accounted for 221 hours. While these methods often have short term success, they require ongoing management and maintenance, and therefore high levels of staff or contractor resources and funding.

Dedicated funding for IPM projects and staff was reduced and eliminated during the economic recession, including funding for two IPM dedicated staff (known as the Green Team) in 2013. Moreover, there has been limited interest among community members to volunteer for weed reduction projects.

PHAER Zone Model Recommendations

In response to recent public concerns involving the use of Glyphosate based herbicides ("Yellow" Material), the Citywide Staff team reviewed the City's IPM Strategy and PHAER Zone Model and evaluated opportunities to make changes while still managing City resources and infrastructure. These recommendations recognize that the City can continue to make great strides in the reduction of pesticide use, while continuing to strategically manage City resources with limited intervention when all other "Green" materials or alternative methods have been exhausted in order to protect public safety and preserve infrastructure. The City remains committed to continuing to reduce the use of "Yellow" and "Red" materials citywide.

Outlined below, the recommendations were reviewed by and unanimously supported by the IPM Advisory Committee at their meeting on July 11, 2019.

1. Modify the PHAER Zone designation for all City parks and designated parking lots to "Green." This would make the following parks and parking lots "Green": Cabrillo Ball Park, Dwight Murphy Ball Field, Franceschi Park, MacKenzie Park, Orpet Park, Pershing Park, San Roque Park, Sylvan Park, Hidden Valley Park, Chase Palm Park, East Beach, and the East Beach, Garden Street, Leadbetter, and Harbor parking lots.

2. Maintain a "Yellow" designation exception for the A.C. Postel Rose Garden in Mission Historical Park

   An exemption is necessary to protect this valuable City resource. The application of insecticidal soap "Green" material is used for light insect infestations, however an application of Neem oil "Yellow" material on a semi-annual basis is required to protect the roses from larger insect infestations and fungal pathogens. The use of Neem oil was selected as it is relatively safe and a natural material.

3. Provide the IPM Advisory Committee with an annual plan for the use of yellow or red materials for all City facilities.

   - Exemptions would be focused on the need to protect resources, address hazardous work environments, ensure safe maintenance of City facilities (such as Airport runways), protect public health (such as areas with mosquito infestations), achieve pest abatement objectives (coastal bluff areas), and

eliminate invasive and toxic species (primarily creek and open space habitats under restoration).

4. Continue to research specialized equipment and pesticide alternatives, and experiment with exempt materials to support efforts in reducing pesticide use.

5. Identify, and implement when feasible, landscape enhancement projects that will provide value and benefit to the community while addressing weed populations through creative design.

6. Further educate the public regarding the City's efforts in pesticide reduction through community outreach and establish an acceptable baseline for weeds in parks, parkways and street medians.

IPM Advisory Committee Recommendation

At a special meeting held March 20, 2019, the IPM Advisory Committee reviewed and approved the IPM 2018 Annual Report and recommended that the report be forwarded to the Parks and Recreation Commission, Airport Commission, and City Council for review and approval. A memo from Greg Chittick, Chair, on behalf of the IPM Advisory Committee, is attached (Attachment 2).

At a special meeting held July 11, 2019, the IPM Advisory Committee reviewed and unanimously approved the proposed changes to the PHAER Zone Model.

ATTACHMENTS: 1. IPM 2018 Annual Report
2. Memo from IPM Advisory Committee

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APPROVED BY: Jill E. Zachary, Parks and Recreation Director