Attachment 1

City of Santa Barbara
Integrated Pest Management Strategy

2017 Annual Report – DRAFT

Prepared February 2018

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I. BACKGROUND

In January 2004, the City of Santa Barbara (City) adopted a City–wide Integrated Pest Management (IPM) Strategy to reduce pesticide hazards on City property and promote effective pest management.

The IPM Strategy contains the mission and purpose, assigns responsibilities, and outlines pest management processes, among other things. In addition, The Strategy requires an annual report be prepared that addresses the following:

- Types of pest problems encountered by each Department
- Types and quantities of pesticides used by each Department
- Exemptions in place and granted during the past year
- Alternatives used for phased out pesticides
- Alternatives proposed for use within the next 12 months
- Effectiveness of any changes in practices implemented
- Planned changes to pest management practices

PHAER Zone System

The IPM Strategy required the development of a "Zone System" tied to the IPM Approved Materials List to limit pesticide use based on potential human exposure. In February 2006, the City Council approved the PHAER Zone system to be incorporated into the IPM Strategy.

The PHAER Zone system assigns a Green, Yellow, or Special Circumstance/Red Zone designation to each site, or portions of sites, based upon the potential for exposure by humans and sensitive habitat to hazardous pesticides, and allows the use of carefully screened materials by zone designation. For example, Green Zones are areas of high exposure potential, and only pesticides designated as "Green", which show very limited human and environmental impacts, may be used. Yellow Zones are areas with less potential for harm from exposure, and a broader range of "Yellow" materials are permitted under the PHAER Zone system.

Citizen and Staff IPM Advisory Committees

The City Council established the 5 member Citizen IPM Advisory Committee by Resolution No. 06-008. The members of the Committee are appointed by the Parks and Recreation Commission to serve two-year terms. The purpose of the Committee is to review and advise on the implementation of the City's Integrated Pest Management Strategy. The 2017 Citizen IPM Advisory Committee included the following representatives:

- Greg Chittick, Community at large
- Larry Saltzman, Pesticide Awareness and Alternative Coalition
- Kristen LaBonte, Community at large

The Citizen IPM Advisory Committee has had two positions that have remained unfilled for the past year due to a lack of applicants.

Department IPM Coordinators are representatives appointed by Department Directors to serve on the Staff IPM Committee**.** Department representatives include: Jeff McKee from the Airport, Sue Gray from Community Development, Joe Poire from Fire, Mike Wiltshire from Public Works, Karl Treiberg from the Waterfront, and Santos Escobar from Parks and Recreation. The Staff IPM Committee continued to work effectively with the Citizen IPM Advisory Committee to

administer the IPM Strategy and oversee pest management practices. The Parks and Recreation Department coordinates both the Citizen and Staff IPM Committees and oversees the implementation of the City's IPM Program.

II. IPM 2017 STRATEGY RESULTS

1. Citizen IPM Advisory Committee Actions

The Citizen IPM Advisory Committee met twice (2) in 2017 to review one (1) request for exemption, review the materials list, and approve the 2016 IPM Annual Report. The Committee approved the request.

2. Pests Encountered

A variety of pests were encountered on City properties in 2017 as outlined in Table 1. Departments ranked their top three pest problems with the numbers 1, 2 and 3. Other pest problems encountered are asterisked (*). Footnote annotations reference additional information including names of plant diseases, weeds, grasses, and specific insects. Due to the low rainfall, the overall abundance of these pests was down as compared to other years.

Table 1. Pest Problems Encountered by Department/Division

Pest Category	Specific Pest	Airport	Creeks	Golf	Parks	Parking	Public Works	Waterfront
Plant pests	Giant whitefly	*			*	*	*	
	Misc. plant insects			*	*[2]	3	*	
	Disease	*		1[1]	*[3]	*		
Tree Pests	Oak Worm				*	2	*	
	Psyllids				*[2]			
	Various Pine Bark Beetle sp.				*			
Weeds	Invasives	*	*		1[4]			
	General weeds	3	*	*	1	1	*	3
	Perennial grasses	*	*		1[5]		*	*
Vertebrates	Gopher	2		3	2		*	*
	Ground Squirrel	*		2	*			*
	Gulls/ nuisance birds	*			*	*		2
	Moles			*	*			
	Raccoons	*		*				
	Skunks	*		*				
Human Health	Poison Oak	*			*			
	Bees, yellow jackets, etc.	*		*	3	*	2	
	Rats/ mice	*		*	*	*	3	1
	Mosquitoes	1		*	*		1	
Other	Termites	*					*	
	Roaches						*	
	Ants	*				*	*	
	Pigeons			*				
	Crows			*				

1. Golf reported these plant diseases (fungus): Anthracnose, Summer Patch, Brown Patch, Take-All Patch, and Rapid Blight.
2. Parks reported these plant insects: Lerp Psyllids, Mites, Oak Moths, Thrips, Aphids, Snails, Slugs, and Ants.
3. Parks reported these plant diseases: Leaf Spot, Mildew, Blight, Pink Bud Rot, Sooty Mold, *Pythium*, *Armillaria*, and *Phytothora*.
4. Parks reported these invasive weeds: Arrundo, Nutgrass, Kikuyu Grass, Clover, *Oxalis*, Malva, Foxtail, Spurge, Dandelion, Milkweed, Sow Thistle, *Poa annua*, Puncture Vine, Johnson Grass, and Poison Oak.
5. Parks reported the following perennial grasses: Crab, and Bermuda.

3. City-wide Pesticide Use

City Departments that applied pesticides, or contracted with pesticide applicators, also prepared monthly pesticide and alternative use reports, and participated in the preparation of this Annual Report. The monthly reports form the basis of the Annual Report and are available at the main offices of each Department.

Table 2 below provides a summary of total pesticide use (pesticides are reported in either pounds or gallons depending on whether they are dry or liquid) for 2017, including any increase or decrease in use from 2016. Use increased since 2016 for Green and Red material in gallons, up 128% and 38% respectively, but decreased for yellow material by 62%. All material applied in pounds decreased, down 5% overall: 98% for Yellow, and 69% for Red.

Table 2. 2017 Pesticide Use Summary

	Material Use			
	Green	**Yellow**	**Red**	**Total**
Gallons	**3.22**	**69.03**	**16.4**	**88.65**
Pounds	**1235.2**	**9.16**	**77.7**	**1322.06**
Change in Gallons from 2016	**128%**	**-62%**	**38%**	**-54%**
Change in Pounds from 2016	**128%**	**-98%**	**-69%**	**-5%**

Table 3 presents a more in-depth look at pesticide use by Department/Division, including: pesticide tier and name, active ingredient, class of pesticide, units and number of applications. At the Department level, the Airport Department increased use of pesticides overall since 2016, down 66% for material applied in gallons and up 14% for material applied in pounds. The Airport Department treated one building for termites using Zythor. Though the Goleta Slough was closed, drought conditions lead to diminishing water levels and a reduced need for mosquito treatment as compared to previous years. That said, the Mosquito and Vector Management District applied 587 lbs of Natular and 570 lbs of Vectobac on the Airport's behalf to control mosquito sources and prevent West Nile Virus and other disease transmission. During a 2017 FAA inspection, vegetation was noted as blocking airfield lights and signs. The Airport applied 61 gallons of Roundup to control weeds on the runway, in addition to manual weed control.

The Golf Division decreased its overall pesticide use by 53% from 2016, mainly because no Fore fungicide was applied in 2017.

The Parks and Recreation Department decreased its pesticide use by 67%. The Parks Division used 4 pounds of Sluggo, Iron Phosphate, at Alice Keck Park Memorial Gardens and the Mission Rose Garden to combat slugs and snails. The Creeks Division applied .71 gallons (1:16 dilution rate) of the herbicide Polaris at Arundo treatment sites along Arroyo Burro Creek, throughout 15 applications.

The Public Works Department decreased use of pesticides by 66% from 2016. Vectobac G was applied 40 times over the course of the year for the treatment of mosquitos. As is typical, the majority of the pesticide was applied at the Andrée Clark Bird Refuge, with additional sites including: Lighthouse Creek at La Mesa Park; Culvert at Dwight Murphy Field/Por La Mar; Ditch at 3015 Calle Noguera; creek, ditches and drains at Chase Palm Park; channel at Municipal Tennis Courts on Old Coast Highway, and the bioswale at the Honda Valley Preserve.

It is important to note that because pesticide use will vary from year to year, an increase or decrease from the previous year does not necessarily indicate a long-term trend. Many factors

affect the amount of pesticides applied in any one year. This topic is further discussed in Section 7.

Table 3. Pesticide Use by Department/Division

	Pesticide Name	Active Ingredient	Type	Airport		Golf		Parks and Recreation		Public Works		Airport	Golf	Parks and Recreation	Public Works
				Amount of Pesticide Applied								Applications			
				Gallons	Pounds	Gallons	Pounds	Gallons	Pounds	Gallons	Pounds				
	Acelepryn	Chlorantraniliprole	Insecticide			0.3							1		
	BurnOut II	Citric Acid/Clove Oil	Herbicide					1.19						3	
	Natular	Spinisad	Insecticide		586.76							3			
	Primo Maxx	Trinexapac-ethyl	Regulator			1.7							20		
	Safer	K salts of fatty acids	Insecticide					0.03						1	
	Sluggo	Iron Phosphate	Molluscicide						4					2	
	Vectobac	Bti	Insecticide		570.25						74.19	37			40
	Green Totals			0	1157.01	2	0	1.22	4	0	74.19	40	21	6	40
	Advion Gel	Indoxacarb	Insecticide							0.06					5
	Advion Granules	Indoxacarb	Insecticide		0.03						4	1			1
	Affirm	Polyoxin	Fungicide				4.8						1		
	Arilon	Indoxacarb	Insecticide								0.33				5
	Polaris	Imazapyr	Herbicide					0.71						15	
	Round-up Custom	Glyphosate	Herbicide	60.69		2.5		2.63				12	2	22	
	Trilogy	Neem Oil	Fungicide					2.44						3	
	Yellow Totals			60.69	0.03	2.5	4.8	5.78	0	0.06	4.33	13	3	40	11
	Daconil	Chlorothalonil	Fungicide			5.4							2		
	Dorado	Propiconazole	Fungicide			2.7							2		
	Insignia	Pyraclostrobin	Fungicide			1.5							3		
	Proxy	Ethephon	Regulator			6.8							2		
	Velista	Penthiopyrad	Fungicide				2.7						1		
	Zythor	Sulfuryl fluoride	Insecticide		75							1			
	Red Totals			0	75	16.4	2.7	0	0	0	0	1	10	0	0
	Department Totals			**60.69**	**1232.04**	**20.9**	**7.5**	**7**	**4**	**0.06**	**78.52**	**54**	**34**	**46**	**51**
	City-wide Totals:			**Gallons 88.65**				**Pounds 1,322.060**				**Applications**			**185**

4. EXEMPTIONS

Under the IPM Strategy and PHAER Zone system, exemptions may be granted when a pest outbreak poses an immediate threat to public health, employee safety, or will result in significant economic or environmental damage. Exemption requests are often made in anticipation of a particular pest and may be requested for one-time application or as a programmatic exemption for a single year. The exemption process is outlined in the IPM Strategy.

One (1) exemption was requested in 2017. Table 4 provides a summary of the exemption requests by Department/Division. The request was approved. The Public Works Department, Facilities Management Division requested one exemption for Sulfuryl Floride for use in City buildings for the control of termites

Table 4. 2017 Exemption Summary

Exemptions	Airport	Creeks	Facilities	Golf	Parks	Public Works	Totals
Proposed	-	-	1	-	-	-	**1**
Passed	-	-	1		-	-	**1**
Denied	-	-	-	-	-	-	**0**
Applied	-	-	1	-	-	-	**1**
Not Applied	-	-	-	-	-	-	**0**
Emergency	-	-	-	-	-	-	**0**

Table 5 below provides a detailed look at pesticide exemption requests and includes only those that were requested and applied. No exemptions were requested and not applied. All exemptions were programmatic requests to use throughout the year. This can be due to an anticipation of a particular pest outbreak or because treatment of the pest requires multiple applications.

Table 5. Applied Exemptions Requests

Dept. / Div.	Material	Class	Type	Site
Public Works/Facilities	Sulfuryl Floride	Insecticide		Buildings

Fewer exemption requests were made in 2017 as compared to 2016 (Table 6).

Table 6. Comparison of Exemptions for 2016 and 2017

Exemptions	2016	2017
Number of Exemption Requests (total)	3	1
Number of Exemption Requests Approved	3	1
Number of Approved Exemption Requests Applied	3	1
Number of Approved Exemption Requests Not Applied	0	0

5. ALTERNATIVE PEST MANAGEMENT PRACTICES USED IN 2017

The use of non-chemical IPM alternatives are emphasized over pesticide applications. Hours reported for the total year are from the *Monthly Alternative Use Reports* prepared by each Department. Non-chemical pest management alternatives are presented in Table 7 and vary from year to year. A check (✓) indicates the alternative was used, but time was not tracked. City Departments track time using a variety of methods. Some Departments track Alternative Management Practices by issuing Work Orders, while some track time by having their staff fill out reports on their daily activities. Additionally, when time has been spent on Alternative Management Practices by contractors, they usually report the time spent to the Department that oversees the contract. Table 7 below present a combination of staff time and contractor time when reported.

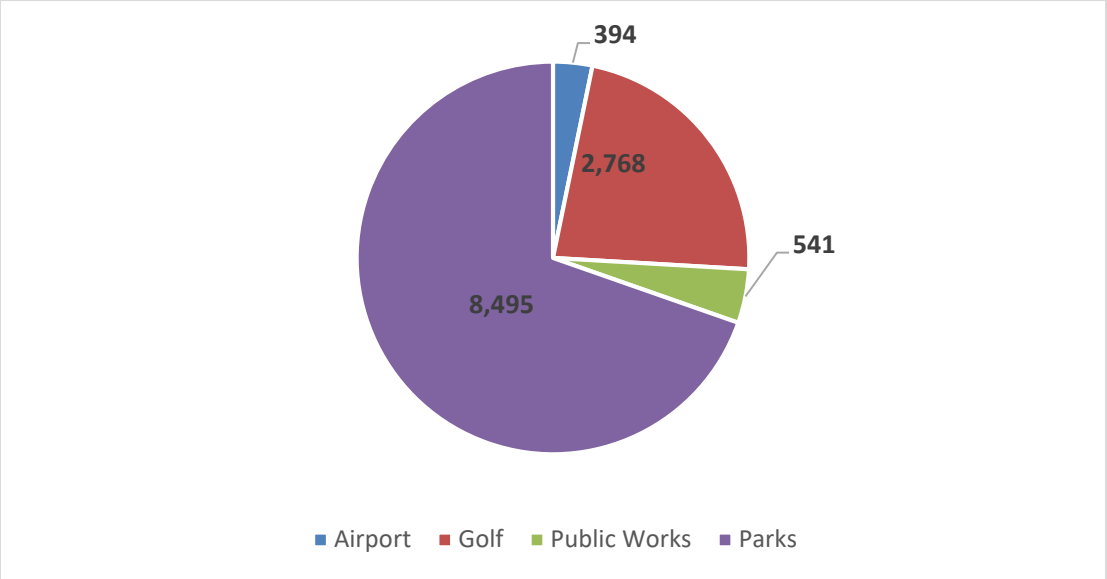
Of the tracked hours for City-wide alternative practices, there was an increase of 33% from 9,148 hours in 2016 to 12,198 hours in 2017. As a whole, maintaining weeds through mulching, hand weeding, weed whipping and other practices accounts for 10,801 hours, 89% of the total time tracked; mechanical traps for gopher, squirrels, rats and mice control accounted for 10% of total tracked time, or 1,226 hours, bee control accounted for 171 hours, or 1% of total time tracked. Much of the City's rodent trapping and bee control are done by contractor.

Table 7. Staff Time Using Alternative Management Practices (hours)

PEST	Alternative	Airport	Golf	Public Works	Parks	Creeks	Citywide Hours
,	Mulch & wood chips		44	✓	239	✓	**283**
	Weed fabric				✓		**0**
	Propane flame weeder				✓		**0**
	Hand weeding	197	38		2,604	✓	**2,839**
	Weed whip	174	1,987	✓	5,208	✓	**7,369**
	Habitat modification		✓		✓		**0**
	Irrigation Mgmt.		310		✓		**310**
	Host plants squeeze out				✓		**0**
PLANT PESTS	Irrigation Mgmt.		✓		✓		**0**
	Compost tea/microbial in.		✓				**0**
	Enhance plant health		✓		✓		**0**
	Worm castings				✓		**0**
	Effective micro-organisms		✓		✓		**0**
	Wash off plants				✓		**0**
	Remove plant/tree				✓		**0**
GOPHERS	Traps	23	260		444		**727**
SQUIRRELS	Traps		129				**129**
RATS & MICE	Mechanical traps			370	✓		**370**
	Cat						**0**
MOSQUITOES	Mosquito fish						**0**
	Remove stagnant water				✓		**0**
BEES	Bee Keepers			171	✓		**171**
OTHER	Glue traps/roaches			✓	✓		**0**
	Heat Treatment			✓			**0**
Total Hours		**394**	**2,768**	**541**	**8,495**	**0**	**12,198**

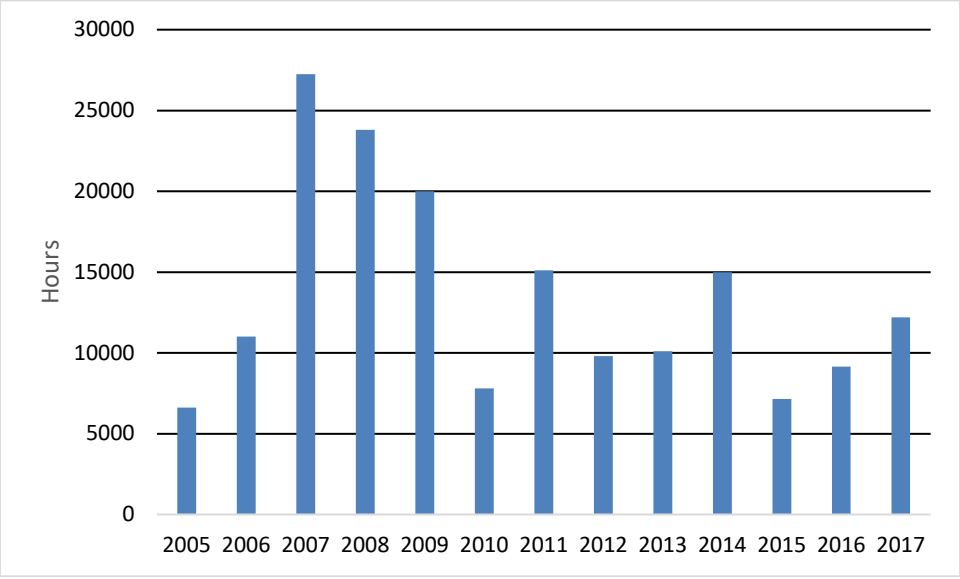
Figure 1 below compares the use of alternative methods (in hours) by Department/Division. Of the total 12,198 hours tracked using alternative methods the Parks Division accounted for 8,495 hours, or 70% of total time; the Golf Division accounted for 2,768 hours, or 23%; the Airport accounted for 394 hours, or 3% of total time; and Public Works accounted for 541 hours, or 4% of total time.

Figure 1. Time Spent (hours) Using Alternative Methods by Department/Division



A number of factors influence time spent on alternative practices including the number of staff available to perform alternative methods, department priorities, and severity of pest outbreak. Figure 2 reflects tracked hours by year since 2004, when reporting and tracking began. Though hours spent on alternative methods will vary from year to year, the City has averaged 13,000 hours on tracked alternative management practices. Weeding has historically been the category which most greatly affects time spent on alternative practices.

Figure 2. 2017 Citywide Tracked Alternative Methods



6. EFFECTIVENESS OF ALTERNATIVE PRACTICES IMPLEMENTED

In general, most alternative pest management practices are more labor intensive and costly, and not as effective as the use of Yellow and Red classified pesticides. While most Green materials and practices provide only moderate control of pest populations, there have been some successes.

The effectiveness of alternatives for the biggest pest problems encountered in an average year is reviewed below.

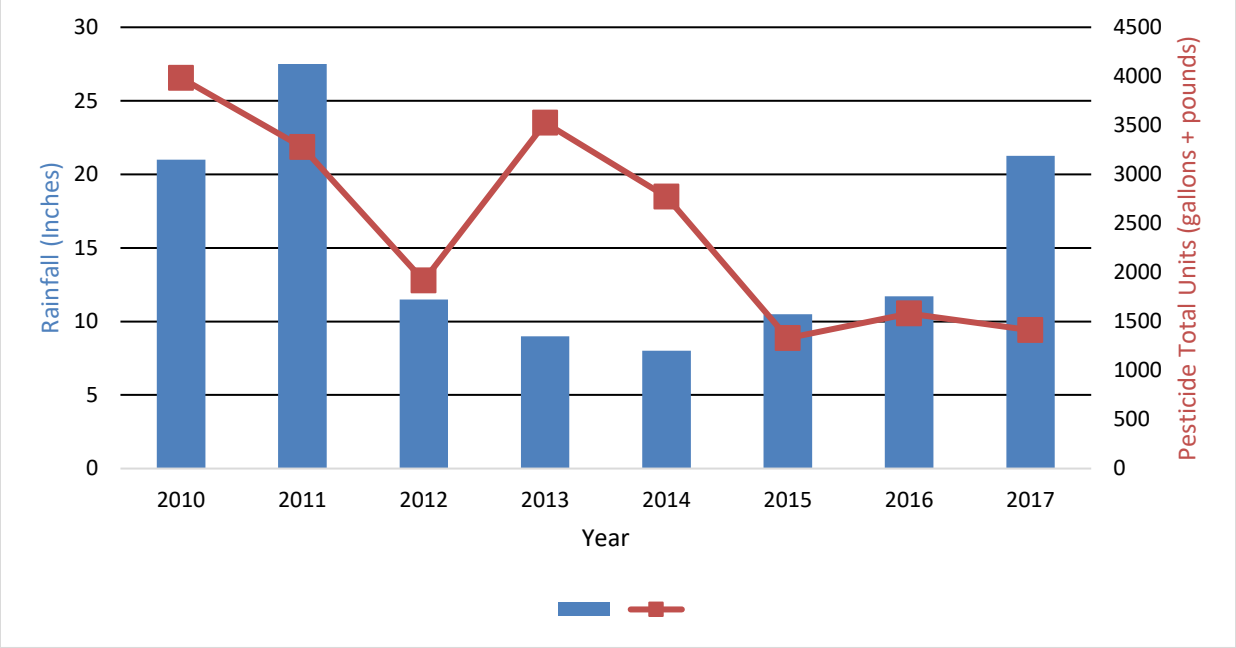
- **Weeds**: A variety of alternatives provide moderate effectiveness and control including: weeding, weed whipping, mulching, mowing, and using a flame torch in designated safe areas. These alternatives are significantly more labor and cost intensive and not as effective as Yellow materials such as Glyphosate. Alternative chemicals, such as clove oil or acid based herbicides, have not proven effective. This has resulted in a notable increase in weed populations, predominantly on parkland, that continues to have a negative effect on aesthetics and landscape health.
- **Insects / Mollusks:** Results are mixed for combating insects and mollusks. For some insects, there are no known effective alternatives. Some alternatives can be very effective but expensive, such as removing non-resistant plants and replacing them with resistant varieties. However, the following alternatives have proven successful against insects and mollusks:
    - Sluggo for snails and slugs
    - Worm castings for white fly
    - Insecticidal soap for aphids
    - Neem oil as a dormant spray
    - Bti for mosquitoes
    - Acelepryn for beetles
- **Disease:** No effective alternative has been found for most diseases. Where possible, staff focuses on preventative treatments to enhance plant health. Once disease strikes, a plant may be removed and replaced with a less susceptible plant. If a plant cannot be removed, pesticides are generally required to combat the disease.
- **Gophers:** For the most part, mechanical traps are being used City-wide. Traps have been found to be moderately effective and are more expensive than rodenticides due to higher costs of purchasing, installing, monitoring, and cleaning out traps.
- **Ground Squirrels:** Mechanical trapping, using snap traps, is the primary method of control at this time. This method is moderately effective at controlling populations. Both trapping and baiting have proven very labor intensive.
- **Mice / Rats:** At this time, traps are the primary way of controlling this population. Traps have been found to be effective depending on population size and location and available food sources. Positive public perception seems to far outweigh the costs of using traps. Traps are very effective in controlling rodents on downtown State Street and at Coast Village Road.
- **Termites:** Building Maintenance uses heat treatments to control drywood termites where appropriate. Heat was found to be equally effective as pesticides on smaller buildings with drywood termites. However, costs are 50% higher at this time, and heat is not effective on large structures or with subterranean termites.

7. CONCLUSION

Many factors contribute to the use of pesticides as well as the tier of pesticides used. These include weather patterns (unseasonably dry or wet weather), introduction of new, or changes to existing pest populations, effectiveness of alternative methods, as well as the effectiveness and availability of certain pesticide materials. Such variances are, and will continue to be, a normal occurrence.

One of the main factors that determine pest populations is rainfall. More rain generally amounts to a greater population of insects and weeds, thus more pesticide use. Figure 3 compares annual rainfall with total pesticide use. With the exception of 2013 and 2014, the data indicates a greater use of pesticides during wetter years. 2013 pesticide use was influenced by the Goleta Slough being closed to the ocean, leading to an increased mosquito population around the Airport.

Figure 3. Comparison of Annual Rainfall with Total Pesticide Use



Because the number of factors that affect pesticide use can vary greatly from year to year, it is difficult to look at past pest management practices to predict future pesticide use. In addition, prior to implementing IPM and the PHAER Zone, pesticide use was analyzed only by the Parks Division and used at higher frequencies and in larger quantities[1].

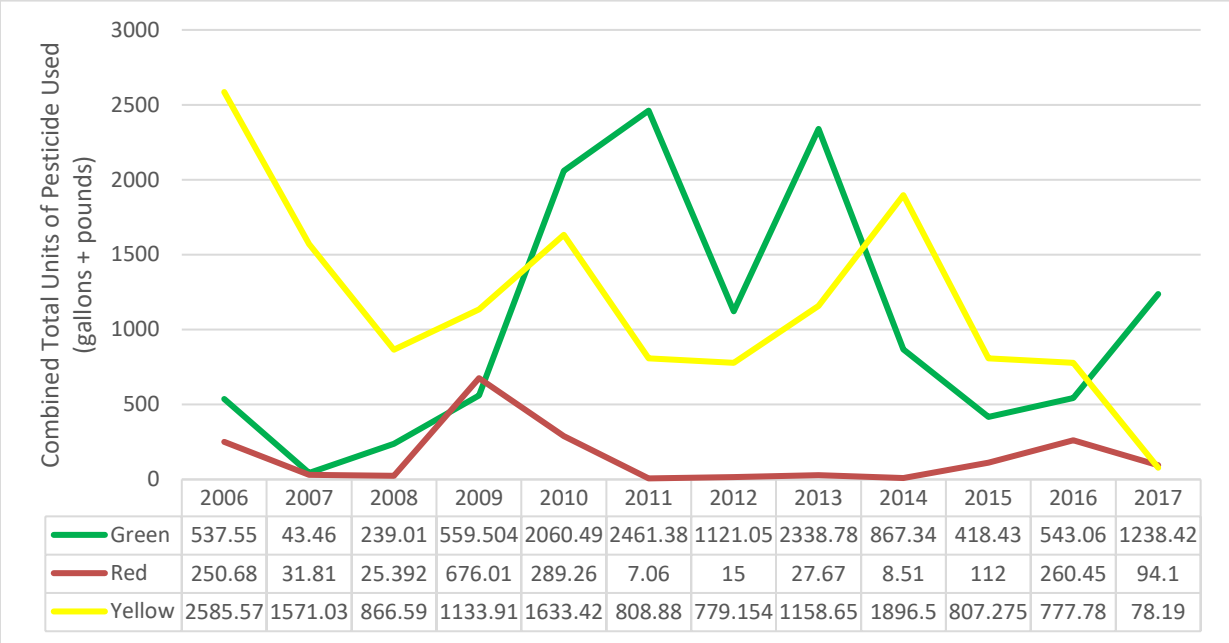
In addition, it should be noted that the amount of pesticides used and the number of applications are not necessarily accurate indicators of the extent of pesticide use or, conversely, the extent of use of reduced-risk pest management methods and alternative practices. For example, staff may apply several hundred small-scale "spot" applications targeted at problem areas rather than a few treatments of a large area. Further, staff may replace a more toxic pesticide used at a smaller quantity with a less hazardous compound that must be applied at a much larger quantity.

Figure 4 looks at the City's pesticide use by tier since 2005. The data indicates that an increase in Yellow and Red materials generally amounts to less Green material, though this is not always the case. 2010, for example, saw a higher than average use of both Red and Yellow material,

[1] Information based on staff and IPM Advisory Committee knowledge.

while still using a significant amount of Green material. The *2010 Annual Report* indicates that 80% of all pesticide use in 2010 was for mosquito control. In fact, mosquito control accounts for the majority of pesticide use in any given year.

Figure 4. Citywide Pesticide Use by Tier



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Green	537.55	43.46	239.01	559.504	2060.49	2461.38	1121.05	2338.78	867.34	418.43	543.06	1238.42
Red	250.68	31.81	25.392	676.01	289.26	7.06	15	27.67	8.51	112	260.45	94.1
Yellow	2585.57	1571.03	866.59	1133.91	1633.42	808.88	779.154	1158.65	1896.5	807.275	777.78	78.19

It is always important for City staff to find cost effective, low risk, viable alternatives to reduce pesticide hazards and to increase the overall efficiency of IPM practices. Additionally, changes in maintenance standards and expectations may be necessary if more Green materials are employed.

Also critical to reducing pesticide hazards in the City of Santa Barbara is the continuation of community outreach and public education. It is anticipated that with greater community outreach, the public will become more aware of low risk alternatives that they can employ at home, thus adding to the overall health of the community.

III. PLAN FOR 2018

The Parks and Recreation Department will continue to administrate and refine the IPM Strategy.

All departments will continue to test any promising new materials or methods of integrated pest management as they are introduced.

On September, 19, 2017, the City Council adopted Resolution 17-097 designating Santa Barbara as a BEE CITY USA affiliate. The Parks and Recreation Department is the designated BEE CITY USA sponsor assigned to facilitate the program. The Department is authorized to conduct a celebration of National Pollinator Week, including publicity through signage and creation of a webpage containing BEE CITY USA and local affiliate contact information; develop and implement a program to create or expand pollinator-friendly habitat; establish and annually review a policy in the IPM Strategy relating to pollinator conservation, identifying locations for pollinator-friendly plantings; and beginning in January 2019, annually apply for renewal of the City of Santa Barbara's BEE CITY USA designation.

Staff and the IPM Advisory Committee will continue to monitor research regarding impacts of pesticides on humans, wildlife and native habitats as well as begin a discussion on funding and staffing options for community education and outreach to reduce pesticide use on private property.

ATTACHMENTS

ATTACHMENT A: APPROVED MATERIALS LIST

The pesticides listed on the Approved Materials List are categorized according to the pesticide screening protocol in the PHAER Zone system.

Product Name	Active Ingredient	ZONE	Type
Advance Ant Bait	Orthoboric Acid	Green	Insecticide
Advion Roach Stations (enclosed)	Indoxacarb	Green*	Insecticide
AllDown	citric acid, acetic acid, garlic	Green	Herbicide
Any brand name	Orthoboric Acid ant bait station	Green	Insecticide
Avert Cockroach Bait Station	Abamectin B1 0.05%	Green*	Insecticide
Avert Cockroach Gel Bait	Abamectin B1 0.05%	Green*	Insecticide
Bactimos Pellets	Bt	Green	Insecticide
Bactimos Wettable	Bt	Green	Insecticide
Bio-Weed	corn gluten	Green	Herbicide
Borid Turbo	Orthoboric Acid	Green	Insecticide
BurnOut 2	clove oil	Green	Herbicide
Cease Biofungicide	B. subtilis	Green	Fungicide
Cinnamite	cinnamaldehyde	Green	Insect/Fung
Conserve	spinosad	Green	Insecticide
Dipel Flowable	Bt	Green	Insecticide
Drax Ant Kill PF	Orthoboric Acid	Green	Insecticide
EcoExempt	Wintergreen Oil	Green	Herbicide
EcoExempt D	2-Phenethyl propionate / Euginol	Green	Insecticide
Embark	mefluidide	Green	Growth Regulator
GreenErgy	Citric, Acetic Acid	Green	Herbicide
Kaligreen	potassium bicarbonate	Green	Fungicide
Matran (EPA Registration Exempt)	clove oil	Green	Herbicide
Natura Weed-A-Tak	clove oil	Green	Herbicide
Niban	Isoboric Acid 5%	Green	Insecticide
Primo-Maxx	Trinexapac-Ethyl	Green	Growth Regulator
Safer Soap	potassium salts of fatty acids	Green	Insecticide
Sluggo	iron phosphate	Green	Other
Summit BTI Briquets	Bt	Green	Insecticide
Teknar HP-D	Bti	Green	Insecticide
Terro II	Orthoboric Acid	Green	Insecticide
Vectobac G	Btk	Green	Insecticide
VectoLex CG	bacillus sphaericus	Green	Insecticide
Victor Wasp and Hornet Killer	Mint Oil 8% & Sodium Lauryl Sulfate 1%	Green	Insecticide
Acelepryn	Chlorantraniliprole	Yellow	Insecticide

Product Name	Active Ingredient	ZONE	Type
Advion Ant Arena	Indoxacarb	Yellow	Insecticide
Advion Roach Gel	Indoxacarb	Yellow	Insecticide
Advion Insect Granules	Indoxacarb	Yellow	Insecticide
Affirm	Polyoxin D zinc salt	Yellow	Fungicide
Agnique MMF	POE Isoocatadecanol	Yellow	Insecticide
Aliette	fosetyl aluminum	Yellow	Fungicide
Altosid Briquettes	methoprene	Yellow	Other
Altosid Liquid	methoprene	Yellow	Other
Altosid Pellets	methoprene	Yellow	Other
Altosid XR-B	methoprene	Yellow	Other
Aquamaster-Rodeo	glyphosate	Yellow	Herbicide
Avid	abamectin	Yellow	Miticide/Insecticide
Ditrac	Diphacinone	Yellow	Rodenticide
Dormant	petroleum oil	Yellow	Insecticide
Green Light	Neem oil	Yellow	Insecticide/Fungicide
Kop-R-Spray	Copper Oil	Yellow	Fungicide
M-PEDE	potassium salts of fatty acids	Yellow	Insecticide
Omni Oil	Mineral Oil	Yellow	Fungicide
Polaris	Imazapyr	Yellow	Herbicide
Prostar 70 WP	flutolanil	Yellow	Fungicide
Rose Defense	Neem oil	Yellow	Insect/Fung
Roundup Pro	glyphosate	Yellow	Herbicide
Roundup PROMAX	glyphosate	Yellow	Herbicide
Safticide Oil	petroluem oil	Yellow	Insecticide
Stylet Oil	Petroleum distillates	Yellow	Insecticide
Sulf-R-Spray	Parafin oil, sulfur	Yellow	Fungicide
Razorooter	Diquat	Yellow	Herbicide
Superior Spray Oil	petroleum distillates	Yellow	Insecticide
Surflan	oryzalin	Yellow	Herbicide
Surflan AS	oryzalin	Yellow	Herbicide
Termidor SC	Fipronil	Yellow	Insecticide
Triact	Neem oil	Yellow	Insecticide/Fungicide
Trilogy	Neem oil	Yellow	Insecticide/Fungicide
Wasp-Freeze	allethrin	Yellow	Insecticide
Wilco Ground Squirrel Bait	diphacinone	Yellow	Other
XL 2G	benefin; oryzalin	Yellow	Herbicide
Banner-maxx	Propiconazole	S.C.	Fungicide
Bayleton	triadimafon triazole	S. C.	Fungicide
Daconil	Chlorothalonil	S.C.	Fungicide
Fumitoxin	Aluminum phosphide	S. C.	Rodenticide
Insignia	Pyraclostrobin	S.C.	Fungicide

Product Name	Active Ingredient	ZONE	Type
Heritage	Azoxystrobin	S.C.	Fungicide
Manage	halosulfuron methyl	S. C.	Herbicide
Medallion	fludioxonil	S. C.	Fungicide
Quick Pro	glyphosate/diquat	S. C.	Herbicide
Proxy	Ethephon	Red	Growth Regulator
Reward	diquat dibromide	S. C.	Herbicide
Rubigan	fenarimol	S. C.	Fungicide
Rubigan EC	fenarimol	S. C.	Fungicide
Subdue	metalaxyl	S. C.	Fungicide
Trimmit 2SC	Paclobutrazol	Yellow	Growth Regulator
Turflon	Triclopyr	S.C.	Herbicide
Velista	Penthiopyrad		Fungicide
Zp Rode	Zinc phosphide	S. C.	Rodenticide
Zythor	Sulfuryl flouride	S. C.	Insecticide

* By decision of the Citizen IPM Advisory Committee, chemicals that may be classified normally as Yellow materials may be classified as Green materials if they are entirely enclosed in factory sealed bait stations.