



**City of Santa Barbara
Integrated Pest Management Strategy**

DRAFT 2016 Annual Report

Prepared March 2017



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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 2016 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, James Dewey 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 2016 STRATEGY RESULTS

1. Citizen IPM Advisory Committee Actions

The Citizen IPM Advisory Committee met once (1) in 2016 to review three (3) requests for exemptions, review the materials list, and approve the 2015 IPM Annual Report. The Committee approved all three (3) requests and denied zero (0).

2. Pests Encountered

A variety of pests were encountered on City properties in 2016 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			*	*3	3	*	
	Disease	*		1 ¹	*4	*		
Tree Pests	Oak Worm				*	2	*	
	Psyllids				*			
	Various Pine Bark Beetle sp.				*			
Weeds	Invasives	*	*		1 ⁵			
	General weeds	3	*	*	1	1	*	3
	Perennial grasses	*	*	1	1 ⁶		*	*
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	*				*	*	

1. Golf reported these plant diseases (fungus): Dollar Spot, Pink Snow Mold, Anthracnose, *Rhizoctonia* Patch, *Waitea* 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 2016, including any increase or decrease in use from 2015. Use increased since 2015 for Green and Red material in gallons, up 51% and 16% respectively, but decreased for yellow material by 3%. All material applied in pounds increased, up 22% overall: 30% for Green material, 2.5% for Yellow, and 105% for Red. The spike in Red material is due to an increase in use of insecticides at the Airport for mosquito control. In addition, the Golf Division increased use of fungicides to control fungus on the greens.

Table 2. 2016 Pesticide Use Summary

	Material Use			
	Green	Yellow	Red	Total
Gallons	1.41	179.33	11.89	192.63
Pounds	541.65	638.45	208.56	1,388.66
Change in Gallons from 2015	51%	-3%	16%	-1.7%
Change in Pounds from 2015	30%	2.5%	105%	22%

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 2015, up 60% for material applied in gallons and 21% for material applied in pounds. The Golf Division increased its pesticide use by 35% from 2015, while the Parks Division decreased its pesticide use by 9%. Public Works Department decreased use of pesticides by 59% from 2015. Of the 4 pesticide type categories, insecticides were used in the largest quantities. Altosid XR, Vectobac G and Weevil-cide were among the most heavily used. Vectobac G was also the most applied pesticide, applied 39 times by the Airport Department and 38 times by Public Works Department. Round-up was also a frequently applied pesticide; 114 gallons was used during 27 applications by the Airport Department.

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	Amount of Pesticide Applied															
			Airport		Golf		Parks and Recreation		Public Works		Airport		Golf		Parks and Recreation		Public Works	
			Gallons	Pounds	Gallons	Pounds	Gallons	Pounds	Gallons	Pounds	Gallons	Pounds	Applications	Applications	Applications	Applications	Applications	Applications
Acelepryn	Chlorantraniliprole	Insecticide			0.5								2					
Primo Maxx	Trinexapac-ethyl	Regulator			0.77								9					
Safer	K salts of fatty acids	Insecticide					0.14							4				
Sluggo	Iron Phosphate	Molluscicide						30					3					
Vectobac G	Bti	Insecticide		282.91						228.74	39						38	
Green Totals			0	282.91	1.27	0	0.14	30	0	228.74	39	11	7	38				
Advion Gel	Indoxacarb	Insecticide	0.01									2						
Altosid XR	Methoprene	Insecticide		566.45								2						
Fore	Mancozeb	Fungicide				40						1						
Polaris	Imazapyr	Herbicide					1.33						9					
Round-up Custom	Glyphosate	Herbicide	114.59				1.4					27		23				
Surflan	Oryzalin	Herbicide	62									6						
Wilco	Diphacinone	Rodenticide		32								1						
Yellow Totals			176.6	598.45	0	40	2.73	0	0	0	38	1	32	0				
Daconil	Chlorothalonil	Fungicide			6.8							2						
Dorado	Propiconazole	Fungicide			1.72							2						
Heritage	Azoxystrobin	Fungicide			1.7							1						
Insignia	Pyraclostrobin	Fungicide			0.82							2						
Medallion	Fludioxonil	Fungicide			0.85							1						
Velista	Penthiopyrad	Fungicide				7.56						2						
Weevil-cide	Aluminum phosphide	Insecticide		151								3						
Zythor	Sulfuryl fluoride	Insecticide		50								1						
Red Totals			0	201	11.89	7.56	0	0	0	0	4	10	0	0				
Department Totals			176.6	1082.36	13.16	47.56	2.87	30	0	228.74	81	22	39	38				

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.

Three (3) exemptions were requested in 2016. Table 4 provides a summary of the exemption requests by Department/Division. All three (3) of the requests were approved. The Airport Department requested one exemption for Zythor for use in buildings for the control of termites. There were two (2) emergency exemption requests in 2016. The Airport Department had one emergency exemption for use of Weevil-cide for rodents on the airfields. The Golf Division had one emergency exemption for use of Velista for fungus on greens.

Table 4. 2016 Exemption Summary

Exemptions	Airport	Creeks	Facilities	Golf	Parks	Public Works	Totals
Proposed	2	-	-	1	-	-	3
Passed	2	-	-	1	-	-	3
Denied	-	-	-	-	-	-	0
Applied	2	-	-	1	-	-	3
Not Applied	-	-	-	-	-	-	0
Emergency	1	-	-	1	-	-	2

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
Golf	Velista	Fungicide		Greens
Airport	Weevil-cide	Rodenticide		Airfield
Airport	Zythor	Insecticide		Buildings

Far fewer exemption requests were made in 2016 as compared to 2015 (Table 6).

Table 6. Comparison of Exemptions for 2015 and 2016

Exemptions	2015	2016
Number of Exemption Requests (total)	7	3
Number of Exemption Requests Approved	7	3
Number of Approved Exemption Requests Applied	7	3
Number of Approved Exemption Requests Not Applied	0	0

5. ALTERNATIVE PEST MANAGEMENT PRACTICES USED IN 2016

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.

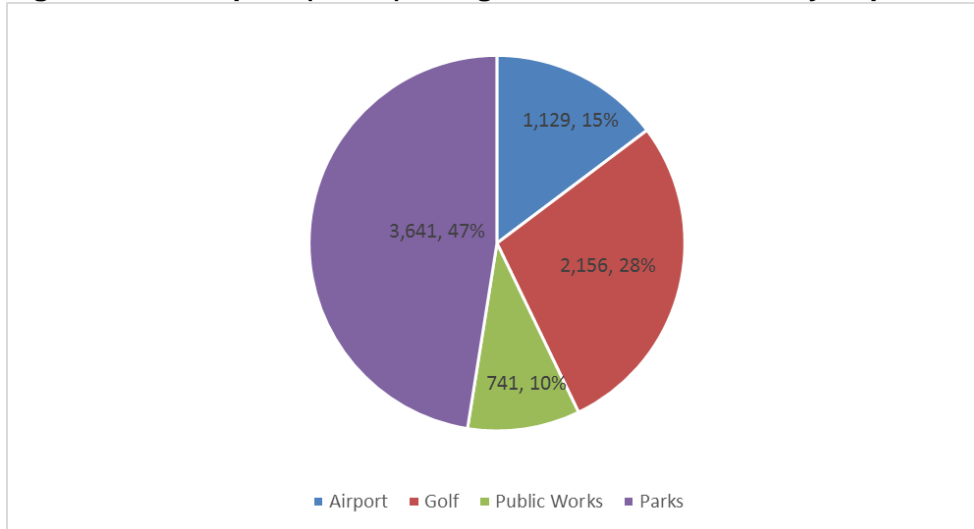
Of the tracked hours for City-wide alternative practices, there was an increase of 7% from 7,141 hours in 2015 to 7,667 hours in 2016. As a whole, maintaining weeds through mulching, hand weeding and weed whipping accounts for 6,025 hours, 79% of the total time tracked; mechanical traps for gopher, squirrels, rats and mice control accounted for 16% of total tracked time, or 1,227 hours; setting glue traps for roaches accounted for 261 hours, or 3.5% of total time tracked; and bee control accounted for 155 hours or 2% 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
WEEDS	Mulch & wood chips		53	231	230	✓	514
	Weed fabric				✓		0
	Propane flame weeder				✓		0
	Hand weeding	360	268		✓	✓	628
	Weed whip	544	1,461	✓	2,878	✓	4,883
	Habitat modification				✓		0
	Irrigation Mgmt.				✓		0
	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	167	208		✓		375
SQUIRRELS	Traps		166				166
RATS & MICE	Mechanical traps	58		355	273		686
	Cat		✓				0
MOSQUITOES	Mosquito fish						0
	Remove stagnant water				✓		0
BEES	Bee Keepers		✓	155	✓		155
OTHER	Glue traps/roaches				261		261
	Heat Treatment						0
Total Hours		1,129	2,156	741	3,641	0	7,667

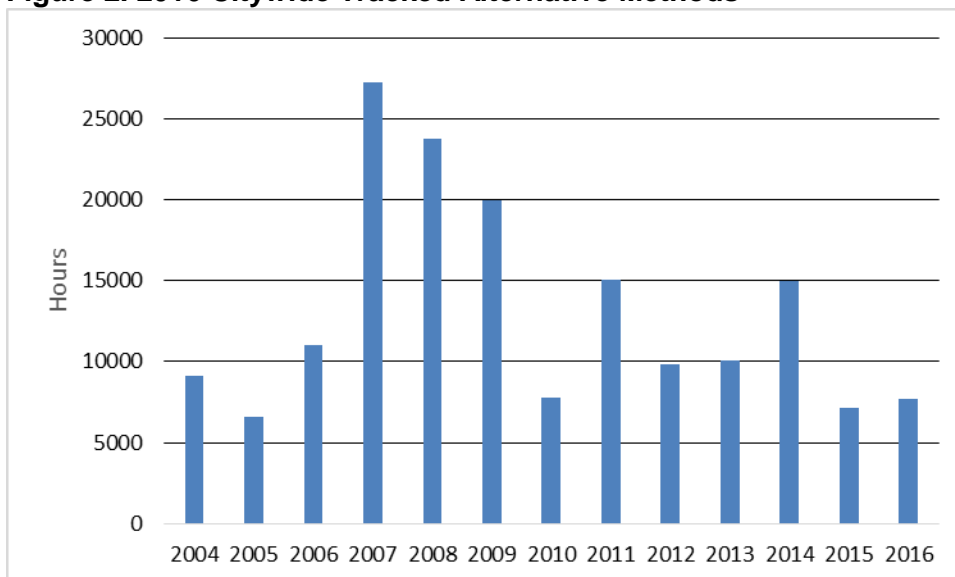
Figure 1 below compares the use of alternative methods (in hours) by Department/Division. Of the total 7,667 hours tracked using alternative methods the Parks Division accounted for 3,641 hours, or 47% of total time; the Golf Division accounted for 2,156 hours, or 28%; the Airport accounted for 1,129 hours, or 15% of total time; and Public Works accounted for 741 hours, or 9% 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. The dry conditions and conversion to drought tolerant landscaping have likely played a role in reducing the need to weed over the past two years.

Figure 2. 2016 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.

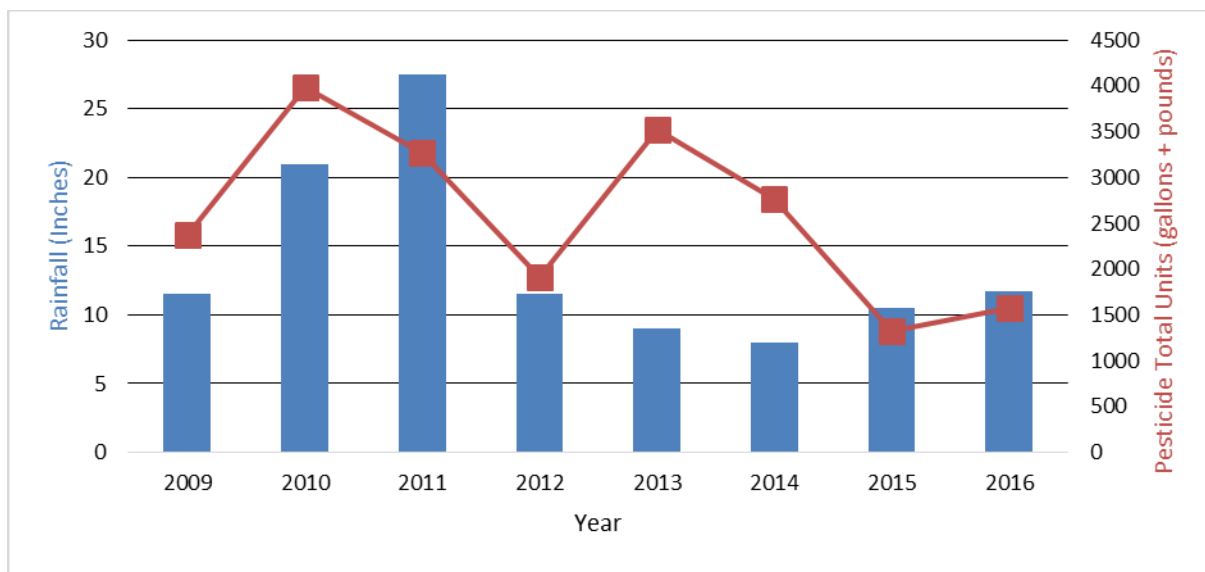
- **Weeds:** A variety of alternatives provide moderate effectiveness and control including: weeding, weed whipping, mulching, mowing, and a flame torch in designated safe areas. These alternatives are significantly more labor and cost intensive and not as effective as Yellow materials such as Glyphosate. 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 quantities¹.

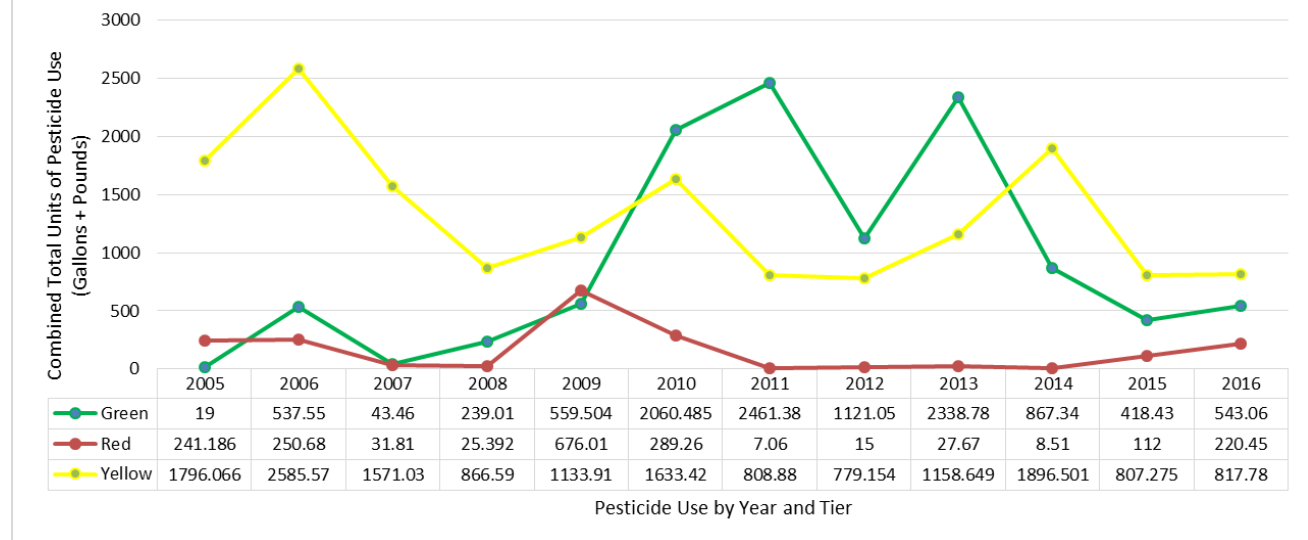
In addition, it should be noted that the amount of pesticides used and the number of applications are not necessarily accurate indicators of the extent of pesticide use or, conversely, the extent of use of reduced-risk pest management methods and alternative practices. For example, staff may apply several 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, while still using a significant amount of Green material. The *2010 Annual Report* indicates that

¹ Information based on staff and IPM Advisory Committee knowledge.

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



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 2017

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. Departments will also continue to monitor pest populations and adjust priorities as needed. 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
<i>Any brand name</i>	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 / Eugenol	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	petroleum oil	Yellow	Insecticide
Stylect Oil	Petroleum distillates	Yellow	Insecticide
Sulf-R-Spray	Parafin oil, sulfur	Yellow	Fungicide
Razerooter	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.