

Pest Management Strategy Matrix for Schools

A. Strategies for Pests

1. Because the pest complex is so vast and the areas of management so diverse (kitchen pantry vs. class room vs. playing field) it might be best to list by 1) pest/IPM strategies and designate vulnerable areas and 2) construct management zones and strategies.
2. The IPM innovation requires diffusion in the school community. Thus, we need a matrix for implementation.

I. Pests in the school environment - structural

ARTHROPOD PESTS

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Infesting Cockroaches German Brownbanded	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Pheromone traps Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping Heat/Vacuum	Chemical – Preferred	Cool Humid
					Formulations: Encased Baits	Cool Arid
					C&C Gel Baits	Warm Humid
					C&C liquid Topical Soap	Warm Arid
Invading Cockroaches American Oriental Smokey brown Australian Turkistan	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Pheromone traps Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping Heat/Vacuum	Chemical – Preferred	Cool Humid
					Formulations: Encased Baits	Cool Arid
					C&C Gel Baits	Warm Humid
					C&C liquid Topical Soap	Warm Arid

ARTHROPOD PESTS - Ants

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Infesting Ants Carpenter Odorous Pharaoh	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Pheromone traps Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion	Chemical – Preferred	Cool Humid
					Formulations: Encased Baits	Cool Arid
					C&C Gel Baits	Warm Humid
					Granulars C&C liquid Topical Soap	Warm Arid

Invading Ants Argentine Pavement Acrobat Crazy Pyramid Imported Fire Ant Southern Fire Ant	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID (foragers/colony) Stations Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt Bribery	Exclusion Trapping	Chemical – Preferred Formulations: Encased Baits C&C Gel Baits Granulars Drench C&C liquid Topical Soap	Cool Humid Cool Arid Warm Humid Warm Arid
Stinging Ants Imported Fire Ant Southern Fire Ant Harvester Pavement Acrobat	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID (foragers/colony) Stations Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping	Chemical – Preferred Formulations: Encased Baits C&C Gel Baits Granulars Drench C&C liquid Topical Soap	Cool Humid Cool Arid Warm Humid Warm Arid

ARTHROPOD PESTS – Wasps and Bees

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Paper Wasps Yellow Jackets Hornets Polistes spp	Building Skin Kitchen Class Rooms Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID (foragers/colony) Stations Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping Vacuum Nest Removal	Chemical – Preferred Formulations: Dust Drench Topical Soap	Cool Humid Cool Arid Warm Humid Warm Arid
Bees Honey Africanized Bumble Solitary	Building Skin Kitchen Food Storage Class Rooms Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID (foragers/colony) Stations Other signs (damage, etc.) Noise	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping Colony Relocation	Chemical – Preferred Formulations: Dust Topical Soap	Cool Humid Cool Arid Warm Humid Warm Arid

PANTRY ARTHROPOD PESTS

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Grain Beetles Dermeestids Meal Moths	Kitchen Food Storage Class Rooms Teacher's Lounge Concession Areas	Visual ID Stations Pheromone traps Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping	Chemical – Preferred Formulations: CO2 DE	Stored products

ARTHROPOD PESTS - flies

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Flies House Bottle Flesh Cluster	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Pheromone traps Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping Swat	Chemical – Preferred Formulations: None	Cool Humid Cool Arid Warm Humid Warm Arid
Filth Flies Fruit Phorid Moth	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Pheromone traps Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping	Chemical – Preferred Formulations: None	Cool Humid Cool Arid Warm Humid Warm Arid

ARTHROPOD PESTS - Mosquitoes

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Mosquitoes	Building Skin Kitchen Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID traps Frass/Scat Other signs (damage, etc.)	Sanitation Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping Biological - Gambusia	Chemical – ULV Biological – BT Repellants	Cool Humid Cool Arid Warm Humid Warm Arid

ARTHROPOD PESTS - Termites

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Subterranean Termites	Building Skin Kitchen Food Storage Class Rooms Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Frass/Scat Other signs (damage, etc.)	Wood storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Construction Heat	Chemical - Baits Non-repellent partial perimeter drench	Cool Humid
						Cool Arid
						Warm Humid
						Warm Arid
Drywood Termites	Building Skin Kitchen Food Storage Class Rooms Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Frass/Scat Other signs (damage, etc.)	Wood storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Construction Wood Removal Heat	Chemical - Baits	Cool Humid
						Cool Arid
						Warm Humid
						Warm Arid

ARTHROPOD PESTS

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Spiders	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Webbing Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Vacuum Web Removal	Chemical - None	Cool Humid
						Cool Arid
						Warm Humid
						Warm Arid

Occasional ARTHROPOD PESTS

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Scorpions Millipedes MALB Crickets (IHC & Field) Carpet Beetles Silverfish Firebrats	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping	Chemical – Preferred Formulations: Encased Baits C&C Gel Baits Granulars C&C liquid DE	Cool Humid
						Cool Arid
						Warm Humid
						Warm Arid

VERTEBRATE PESTS

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Mice House Deer	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Traps Stations Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting Moisture mgt	Exclusion Trapping	Chemical – Preferred Formulations: Encased Baits	Cool Humid Cool Arid Warm Humid Warm Arid
Rats Norway Roof	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Traps Stations Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste mgt Harborage Lighting	Exclusion Trapping	Chemical – Preferred Formulations: Encased Baits	Cool Humid Cool Arid Warm Humid Warm Arid

OCCATIONAL VEREBRATE PESTS

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Bats	Building Skin Kitchen Food Storage Class Rooms Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations Frass/Scat Batbugs Other signs (damage, etc.)	Sanitation Harborage Lighting Moisture mgt	Exclusion Trapping	none	Cool Humid Cool Arid Warm Humid Warm Arid
Cats/dogs	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Frass/Scat Fleas Other signs (damage, etc.)	Sanitation Food storage Waste management Harborage Moisture mgt	Exclusion Trapping	none	Cool Humid Cool Arid Warm Humid Warm Arid
Chipmunk/ squirrel/ Opossum/ Raccoon Voles	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge	Visual ID Stations traps Frass/Scat Other signs (damage, etc.)	Sanitation Food storage Waste management Harborage Lighting	Exclusion Trapping	none	Cool Humid Cool Arid Warm Humid

Moles	Bath and Locker Rooms Concession Areas Custodial & Equipment Areas		Moisture mgt			Warm Arid
Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Birds Starling Sparrow Dove Sea Gull	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID traps Frass/Scat Bird Mites Nests Other signs (damage, etc.)	Sanitation Food storage Waste management Harborage Lighting Moisture mgt	Exclusion Trapping Diversion – Netting Spikes Noise Dogs	Topical soaps	Cool Humid Cool Arid Warm Humid Warm Arid
Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Reptiles Snakes Lizards Alligators	Building Skin Kitchen Food Storage Class Rooms Pet habitation areas Teacher's Lounge Bath and Locker Rooms Concession Areas Custodial & Equipment Areas	Visual ID Stations traps Frass/Scat Shed skins Eggs Other signs (damage, etc.)	Sanitation Waste management Harborage Lighting Moisture mgt	Exclusion Trapping	none	Cool Humid Cool Arid Warm Humid Warm Arid

II. Parasitic Arthropod Pests of School Inhabitants

ARTHROPOD PESTS - Parasites

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
Lice	Student Other Building Inhabitants Families?	Visual ID - Head check – nits Frass/Scat Other signs (damage, etc.)	Sharing behavior Intimate behavior Harborage	Combs	oils	Cool Humid Cool Arid Warm Humid Warm Arid
Bed Bugs	Student Rest Areas Teacher's Lounge Furniture Baggage Family Homes	Visual ID Stations Blood spots Frass/Scat Other signs (bites, etc.)	Sharing behavior Intimate behavior Harborage	Steam	Chemical – Preferred Formulations: Dust DE	Cool Humid Cool Arid Warm Humid Warm Arid

Ticks and Mites	Student Other Building Inhabitants Families?	Visual ID Stations Frass/Scat Other signs (bites)	Sanitation Pet Food Bird Nest Removal Harborage	Exclusion	Chemical – Systemics Repellents	Cool Humid Cool Arid Warm Humid Warm Arid
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III. Pests around the school environment – Landscape and Turf

Landscape

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
ARTHROPOD	Landscape	Stations Pheromone traps Frass/Scat Honeydew/sooty mold Cast skins (flocculence) Dead or dying foliage Off colored foliage Webbing Other signs (damage, etc.)	Pest Resistant and/or Native Species Irrigation Aeration Pruning Fertility management Mulching	Exclusion Trapping Mulching	Chemical – Baits Systemic (soil drench) Insect growth regulators Insecticidal soaps Horticultural oils	Cool Humid Cool Arid Warm Humid Warm Arid

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
VERTEBRATE	Landscape	Stations Pheromone traps Frass/Scat Missing/chewed foliage Sudden death of plants Traps Other signs (damage, etc.)	Pest Resistant and/or Native Species Irrigation Aeration Trimming Fertilization	Exclusion Trapping Scare tactics Barriers	Chemical – Baits Repellent sprays/dusts?	Cool Humid Cool Arid Warm Humid Warm Arid

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
PLANT	Landscape	Stations Pheromone traps Frass/Scat Visual inspection Other signs (damage, etc.)	Pest Resistant and/or Native Species Irrigation Aeration Trimming Fertilization Mulching Site selection	Exclusion Trapping Flame Hand pulling tilling	Chemical – Baits Herbicidal soaps?	Cool Humid Cool Arid Warm Humid Warm Arid

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
DISEASE	Landscape	Stations Pheromone traps Frass/Scat Off colored foliage Severe wilting or death of plants Visual inspection for disease Dying or dead foliage Other signs (damage, etc.) 'mushrooms' visible on trunk or stems	Pest Resistant and/or Native Species Irrigation Aeration Trimming Fertilization Mulching Site selection	Exclusion Trapping	Chemical – Baits	Cool Humid Cool Arid Warm Humid Warm Arid

Turf

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
ARTHROPOD	Primary Playing Fields Practice Fields Playgrounds	Stations Pheromone traps Frass/Scat Visual inspection for pest Dead or bare patches in turf Off color areas in turf Holes in turf 'Squishy' feeling turf when walked on Collateral dug up areas by vertebrates Other signs (damage, etc.)	Pest Resistant and/or Native Species Irrigation Aeration Trimming Fertilization Mowing height Timing management Cultural mgmt Overseeding Topdressing	Exclusion Trapping Mowing	Chemical - Baits	Cool Humid Cool Arid Warm Humid Warm Arid

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
VERTEBRATE	Primary Playing Fields Practice Fields Playgrounds	Stations Pheromone traps Frass/Scat Visual inspection Dug up areas Other signs (damage, etc.)	Pest Resistant and/or Native Species Irrigation Aeration Trimming Fertilization	Exclusion Trapping Border collie? Cat?	Chemical – Baits Repellent sprays/dusts?	Cool Humid Cool Arid Warm Humid Warm Arid

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
PLANT	Primary Playing Fields Practice Fields Playgrounds	Stations Pheromone traps Frass/Scat Visual inspection Other signs (damage, etc.)	Resistant – Indigenous Species Irrigation Aeration Trimming Mowing height Fertilization Weed free seed/sod Timing management Overseeding Cultural management topdressing	Exclusion Trapping Mowing Hand pulling	Chemical – Baits Herbicidal soaps?	Cool Humid Cool Arid Warm Humid Warm Arid

Pest	Management Zone	Monitoring	Cultural	Mechanical	Pesticide	Occurrence
DISEASE	Primary Playing Fields Practice Fields Playgrounds	Stations Pheromone traps Frass/Scat Visual inspection for pest Dead or bare patches in turf Off color areas in turf (darker or lighter) Mushrooms present Other signs (damage, etc.)	Resistant – Indigenous Species Irrigation Aeration Trimming Fertilization Mowing height Air flow Timing management Wetting agents	Exclusion Trapping Mowing	Chemical - Baits	Cool Humid Cool Arid Warm Humid Warm Arid

B. Strategies for Pest Management Zones

Pests are listed in the areas of schools in which they are present (structural, turf, landscape, medical). Structural pests and controls are listed specific to Pest Vulnerable Area (PVA).

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
<p>The “skin” of the structure</p> <p>Need an explanation?</p>	<p>Sanitation</p> <p>Waste management (including “Back filling”)</p> <p>Harborage</p> <p>Lighting</p> <p>Moisture mgt</p>	<p>Ecological Equivalents: Cracks & Crevasses Perches Hollows</p> <p>Entry ways: Doors Windows Foundation (weep holes, expansion joints, cracks, etc) Roof</p>	<p>Inspection Techniques:</p> <p>Monitoring Stations:</p> <p>Signs of infestation:</p>	<p>Sanitation</p> <p>Exclusion</p> <p>Maintenance</p>	<p>Vertebrate Pests: Rodents Wild mammals (Raccoon, etc) Bats Feral Mammals (Cats & Dogs) Birds Reptile/Amphibian</p> <p>Arthropod Pests Cockroaches Ants Wasps/Bees Flies Mosquitoes Termites Spiders Occasional</p> <p>Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive</p> <p>Vines</p> <p>Prickly Sticky Stinky Allergy causing</p>

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
Kitchen and Food Serving Areas	<p>Sanitation</p> <p>Food storage</p> <p>Waste management</p> <p>Harborage</p> <p>Lighting</p> <p>Moisture mgt</p>	<p>Ecological Equivalents: Cracks & Crevasses Perches Hollows</p> <p>Entry ways: Doors Windows Foundation Roof</p>	<p>Inspection Techniques:</p> <p>Monitoring Stations:</p> <p>Signs of infestation:</p>	<p>Sanitation</p> <p>Exclusion</p> <p>Maintenance</p>	<p>Vertebrate Pests: Rodents Wild mammals (Raccoon, etc) Bats Birds Reptile/Amphibian</p> <p>Arthropod Pests Cockroaches Ants Wasps/Bees Pantry Pests Flies Mosquitoes Termites Spiders Occasional Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive</p> <p>Vines</p> <p>Prickly Sticky Stinky Allergy causing</p>

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
Food Storage	<p>Sanitation</p> <p>Food storage</p> <p>Waste management</p> <p>Harborage</p> <p>Lighting</p> <p>Moisture mgt</p>	<p>Ecological Equivalents: Cracks & Crevasses Perches Hollows</p> <p>Entry ways: Doors Windows Foundation Roof</p>	<p>Inspection Techniques:</p> <p>Monitoring Stations:</p> <p>Signs of infestation:</p>	<p>Sanitation</p> <p>Exclusion</p> <p>Maintenance</p>	<p>Vertebrate Pests: Rodents Wild mammals (Raccoon, etc) Bats Birds Reptile/Amphibian</p> <p>Arthropod Pests Cockroaches Ants Wasps/Bees Pantry Pests Flies Mosquitoes Termites Spiders Occasional</p> <p>Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive</p> <p>Vines</p> <p>Prickly Sticky Stinky Allergy causing</p>

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
Teacher's Lounge	<p>Sanitation</p> <p>Food storage</p> <p>Pet Habitation Areas</p> <p>Waste management</p> <p>Harborage</p> <p>Lighting</p> <p>Moisture mgt</p>	<p>Ecological Equivalents: Cracks & Crevasses Perches Hollows</p> <p>Entry ways: Doors Windows Foundation Roof</p>	<p>Inspection Techniques:</p> <p>Monitoring Stations:</p> <p>Signs of infestation:</p>	<p>Sanitation</p> <p>Exclusion</p> <p>Maintenance</p>	<p>Vertebrate Pests: Rodents Wild mammals (Raccoon, etc) Bats Feral Mammals (Cats & Dogs) Birds Reptile/Amphibian</p> <p>Arthropod Pests Cockroaches Ants Wasps/Bees Pantry Pests Flies Mosquitoes Termites Spiders Occasional Parasites</p> <p>Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive</p> <p>Vines</p> <p>Prickly Sticky Stinky Allergy causing</p>

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
Bathrooms & Locker Rooms	<p>Sanitation</p> <p>Food storage</p> <p>Waste management</p> <p>Harborage</p> <p>Lighting</p> <p>Moisture mgt</p>	<p>Ecological Equivalents: Cracks & Crevasses Perches Hollows</p> <p>Entry ways: Doors Windows Foundation Roof</p>	<p>Inspection Techniques:</p> <p>Monitoring Stations:</p> <p>Signs of infestation:</p>	<p>Sanitation</p> <p>Exclusion</p> <p>Maintenance</p>	<p>Vertebrate Pests: Rodents Wild mammals (Raccoon, etc) Bats Feral Mammals (Cats & Dogs) Birds Reptile/Amphibian</p> <p>Arthropod Pests Cockroaches Ants Wasps/Bees Pantry Pests Flies Mosquitoes Termites Spiders Occasional Parasites Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive Vines Prickly Sticky Stinky Allergy causing</p>

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
Concession Areas	<p>Sanitation</p> <p>Food storage</p> <p>Waste management</p> <p>Harborage</p> <p>Lighting</p> <p>Moisture mgt</p>	<p>Ecological Equivalents: Cracks & Crevasses Perches Hollows</p> <p>Entry ways: Doors Windows Foundation Roof</p>	<p>Inspection Techniques:</p> <p>Monitoring Stations:</p> <p>Signs of infestation:</p>	<p>Sanitation</p> <p>Exclusion</p> <p>Maintenance</p>	<p>Vertebrate Pests: Rodents Wild mammals (Raccoon, etc) Bats Feral Mammals (Cats & Dogs) Birds Reptile/Amphibian</p> <p>Arthropod Pests Cockroaches Ants Wasps/Bees Pantry Pests Flies Mosquitoes Termites Spiders Occasional</p> <p>Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive</p> <p>Vines</p> <p>Prickly Sticky Stinky Allergy causing</p>

GROUNDS

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
Landscape	<p>Sanitation Not removing infested plant materials</p> <p>Nutrients Too much Too little</p> <p>Aeration No aeration</p> <p>Harborage</p> <p>Lighting</p> <p>Moisture mgt</p>	<p>Ecological Equivalents: Cracks & Crevasses Perches Hollows</p> <p>Entry ways: Infested plant material purchased or brought onto grounds</p>	<p>Inspection Techniques:</p> <p>Visual Beat sample Sweep net Sticky traps White card test Pheromone traps Black light traps</p> <p>Monitoring Stations:</p> <p>Signs of infestation:</p>	<p>Sanitation</p> <p>Exclusion</p> <p>Maintenance</p>	<p>Vertebrate Pests: Rodents Wild mammals Feral Mammals (Cats & Dogs) Birds Reptile/Amphibian</p> <p>Arthropod Pests Cockroaches Ants Wasps/Bees Pantry Pests Flies Mosquitoes Termites Spiders Occasional</p> <p>Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive</p> <p>Vines</p> <p>Prickly Sticky Stinky Allergy causing</p>

TURF

Management Zone	Conducive Conditions - Cultural	Conducive Conditions - Mechanical	Monitoring Strategies	Remediation	Pests
Primary Playing Fields Practice Fields Playgrounds	Sanitation Nutrients Aeration Harborage Lighting Moisture mgt	Ecological Equivalents: Cracks & Crevasses Perches Hollows	Inspection Techniques: Visual Soap flush Flotation Monitoring Stations: Signs of infestation:	Sanitation Exclusion Maintenance	Vertebrate Pests: Rodents Wild mammals Feral Mammals (Cats & Dogs) Birds Reptile/Amphibian Arthropod Pests Ants Wasps/Bees Flies Mosquitoes Occasional Plant Pests Perennial Annual Biannual Woody Herbaceous Invasive Vines Prickly Sticky Stinky Allergy causing

C.Strategies for the Adoption of IPM in the school community

Implementing IPM in the school community dictates managing the process of adoption (diffusion of the IPM innovation). This process is the stepwise management by Change Agents to change the behavior of the school community.

Diffusion Stages/steps

Step/stage	contacts	Tools & Resources	Level of awareness	Level of IPM implementation
Awareness Where the change agents communicate the INNOVATION (IPM) that will match the community's need	School facility manager School environmental health mgr Principal Teachers Activist group Superintendent PMP	Asthma articles School IPM success stories Pest crisis publications Pesticide crisis publications	Minimum standards notification	Policy Minimum standards notification

Step/stage	contacts	Tools & Resources	Level of awareness	Level of IPM implementation
Persuasion Where the change agents communicate the EVIDENCE that the innovation will match the community's need	School facility manager School environmental health mgr Principal Teachers Activist group Superintendent PMP	Asthma articles School IPM success stories Pest crisis publications Pesticide crisis publications	Minimum standards notification	Policy Minimum standards notification

Step/stage	contacts	Tools & Resources	Level of awareness	Level of IPM implementation
Decision Where the community either accepts or rejects the IPM innovation	School facility manager School environmental health mgr Principal Teachers Activist group Superintendent PMP	Policy Contract Training opportunities Construction standards	Need for partnership Training commitment	PMP procurement Internal training Pest management analysis Economic analysis

Step/stage	contacts	Tools & Resources	Level of awareness	Level of IPM implementation
Implementation Where the change	School facility manager School environmental health mgr	Policy Contract	Need for partnership Training commitment	PMP procurement Record Keeping monitoring

<p>agents DEMONSTRATE that the innovation will match the community's need by communicating the process of matching the positive attributes and mitigating the negative attributes</p>	<p>Principal Teachers Activist group Superintendent Students PMP</p>	<p>Record Keeping Training opportunities Pest Press School assessment form Monitoring protocol Pest sighting log Least toxic product list IPM curriculum</p>	<p>Certification requirements Need for partnership Training commitment Certification requirements Possible further community participation – students?</p>	<p>Internal training Pest management analysis Economic analysis Pest Press dissemination Pest sighting log in use Student participation Construction Standards</p>
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Step/stage	contacts	Tools & Resources	Level of awareness	Level of IPM implementation
<p>Confirmation Where the change agents communicate that the decision to adopt the innovation was worthwhile</p>	<p>School facility manager School environmental health mgr Principal Teachers Activist group Superintendent Students PMP</p>	<p>IPM STAR USEPA OCE awards Mass media Plaques Funding</p>	<p>Awards are available Positive press is possible Positive recognition by community</p>	<p>Verifiable IPM Certification Mass media coverage Administrative support Funding</p>