King Philip Middle School
OUTDOOR INTEGRATED PEST MANAGEMENT (IPM) PLAN

18 King St
Norfolk, MA 02056

IPM Coordinator
Joseph Zahner Jr

Primary Contact
Larry Azer, 508-520-7991, azerl@kingphilip.org

King Philip Middle School employs Joseph F Zahner Jr an on-site certified and/or licensed pesticide applicator (certification/license #: 42139) who may be called on to manage all or some of the necessary OUTDOOR pest problems that may arise.

In addition, this School also has a contract with

- Ben Leach of Sports Turf Specialties, 508-384-1084.

By signing the end of this outdoor IPM plan, the IPM coordinator, Joseph Zahner Jr, of this School and the Pest Management Professionals described above acknowledge, and agree to the terms of this OUTDOOR integrated pest management plan.

A. INTRODUCTION

In compliance with the Act Protecting Children and Families from Harmful Pesticides the King Philip Middle School on 9/3/2019 12:43:00 PM has prepared the following outdoor IPM plan about pest control and pesticide use.

This plan describes the pest management practices for outdoor areas of King Philip Middle School and clearly states it's pesticide use policies.

A copy of the plan has been filed with the Massachusetts Department of Agricultural Resources (MDAR), and at least one printed copy must be kept on site and made available to the public upon request.

By centralizing all of the information about this facility's pest management practices the plan serves as a guide to direct this facility's IPM coordinator, Joseph Zahner Jr

Objectives

The objectives of the integrated pest management program conducted at the King Philip Middle School are listed below.

- Reduce children's exposure to pesticides and pesticide residues whenever possible.
- Manage pests that may occur on facilities to prevent interference with the learning environment of the students.
- Provide the safest playing or athletic surfaces possible.

In light of these objectives, the King Philip Middle School has selected the following as it's IPM policy statement.

B.POLICY STATEMENT

Structural and landscape pests can pose significant problems for people and property. Pesticides can pose risks to people, property, and the environment. It is therefore the policy of this school to incorporate Integrated Pest Management (IPM) procedures for control of structural and landscape pests. The objective of this program is to provide necessary pest control while minimizing pesticide use.

C. IPM COMMITTEE

The tasks set before an IPM committee are to:

- Develop an IPM plan. The IPM plan is in essence, a document that describes the organization and implementation of IPM on school grounds.
- Evaluate progress of the IPM program.
- Communicate about IPM - Facilitate communication within the school about IPM practices.
- Assist in development of contract specifications.
- Provide notification to parents about pesticide use.

The OUTDOOR committee members selected for the King Philip Middle School are listed below:

1) Joseph Zahner Jr (Outdoor IPM Coordinator)
2) Larry Azer
3) Joe Zahner
4) Tom Lawler
5) Mark Belanger

D. COMMUNICATING IPM WITHIN THE FACILITY

Pest Management Personnel to Building Staff:

The Pest Management Professional communicates with the IPM coordinator of the facility. The IPM coordinator then posts this information in a common viewing area dedicated to the subject of integrated pest management. In addition, the IPM coordinator also communicates information to the staff supervisors who then distribute the information to all the staff and occupants concerned.

Staff/Students communicate in writing with an administrator who then passes the information onto the IPM coordinator when necessary.

E. EDUCATION AND TRAINING OF FACILITY OCCUPANTS & STAFF

The IPM coordinator and the Pest Management Professional will work together to create a handout regarding IPM and how King Philip Implements this plan throughout the district. Teachers and other staff members will educate students on our IPM policy.

F. OUTDOOR MONITORING

The IPM plan will follow a Annually evaluation schedule. When pests are present, King Philip Middle School has chosen an **OUTDOOR monitoring schedule that consists of Weekly inspections**. When pests are absent the **OUTDOOR monitoring schedule will consist of Monthly inspections**.

The following technique will be used to monitor for pests: The IPM coordinator would setup monitoring traps throughout the school and inspect them on a regularly scheduled interval (selected in the prior question).

G. COURSE OF ACTION TAKEN FOR OUTDOOR PESTS

Outdoor property includes the turf, landscaping, and the outdoor grounds such as building exterior, playground equipment, etc.. King Philip Middle School has prepared maps of the outdoor facility and identified the following priority areas for maintenance:

Turf

Athletic fields on site are out behind the school and take priority for maintenance. Lawns around the building have less maintenance done and do not have irrigation.

Landscaping

Priority areas for landscaping are athletic fields, grounds around the building including trees and shrubs, and surrounding grassy areas that need to be maintained including storm water retention ponds.

OutdoorGrounds

Outdoor priority areas are within the doorways of the building, the front entrances, the two courtyards, and the property perimeter including stormwater drainage ponds and the athletic field.

The following pests have historically and/or currently been a problem at King Philip Middle School:

TURF PESTS	LANDSCAPING AND PLANT PESTS	OUTDOOR GROUNDS PESTS
Insects/pests under the soil or root zone	**Insects and Related Pests**	**Pests**
Grubs (Japanese Beetles, European Chafer, Asiatic Garden Beetles, Oriental Beetles, and other)	Gypsy Moth	Ants Mosquitoes & Flies Stinging Insects
Weeds	**Weeds**	**Weeds**
Crabgrass Dandelions, plaintains, ground ivy, cinquefoil	Crabgrass	**Noxious weeds noticed on the school grounds** Poison Ivy
Turfgrass diseases	**Other**	**Other**
Snow Mold	none	Bamboo at oil tank
Other		
Poa Annua		

TURF MANAGEMENT PLAN

The following areas are priority areas for maintenance: Athletic fields on site are out behind the school and take priority for maintenance. Lawns around the building have less maintenance done and do not have irrigation.

Cultural Practices

Mowing:
Mowing around the school building is done as needed and clippings are always collected. The season temperatures effect how frequent we cut. The athletic field is cut more frequent to promote healthy turf and is not bagged, unless overgrown and requires collection to maintain playing heights. The height of cut is based on what sports season but ranges from 1 1/2" to 2 1/2". Blades are sharpened as needed but not less than twice per month.

Aeration:
The athletic field gets aerated 4 times per year. Right after winter, after spring season (June), before fall sports, (Aug), and end of fall sports before winter. The landscaped lawns around the school get aeration twice per year, spring and fall before seeding.

Water Management:
The grounds around the building do not have irrigation and do not get watered. The middle school has a private well used only for a water wheel system to irrigate areas on the sports field as needed. The reel runs at 60psi and will cover a 120 foot span from side to side. It has a pump that reels the sprinkler cart back in when dragged across field 400 feet. It takes 4 days minimum to overlap coverage on this complex when run once per day.

Fertilization:
Soil testing is done once per year by our contracted turf company, Sports Turf Specialties. Fertilizer is applied every 6-8 weeks based on our fertility program. We apply 1 lb of Nitrogen per 1000 sq ft. A commercial lely spreader is used and calibrated based on the chart provided for speed and acreage.

Equipment Maintenance:
All mowing equipment is stored indoors and blown off after every use. When in shop for maintenance, everything is checked and washed when done.

Turfgrass diseases
Snow Mold

Describe the monitoring technique you used for the pests above.
plant identification with third party vendor

Provide information on how you diagnosed the pests above.
vendor experience

Provide details on the non-chemical control measures have you taken to manage the pests above.
use best cultural practices to minimize diseases in monitored areas

Describe any alternative management or biological strategies being used or planned to be used, if any.
none

If you use fungicides, describe your rationale for using them for the pests above.
none

- Fungicides are applied by a certified and/or licensed applicator.
- The disease was identified by a laboratory diagnostic test.
- Fungicide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

Insects/pests under the soil or root zone
Grubs (Japanese Beetles, European Chafer, Asiatic Garden Beetles, Oriental Beetles, and other)

Surface and/or thatch pests

Other Turf Pest Problems

Describe the monitoring technique you used for the pests above.
Weekly monitoring in areas where pests have been present

Provide information on how you identified the species of pests above.
Plant and insect identification by experience or a third party vendor

Provide details on the non-chemical control measures have you taken to manage the pests above.
Continuing our fertility program along with aeration and seeding twice per year to grow healthy grasses and minimize root zone damage

Describe any alternative management or biological strategies being used or planned to be used, if any.
none

If you use insecticides, describe your rationale for using them for the pests above.
When athlete safety is a concern based on root zone structure damage that exceeds threshold level.

Pesticide Product Name	Active Ingredient	EPA Registration Number	Target Pest	Rationale for use
Arena	clothianidin	59639-157	turfgrass insects	athletic field disease control
Spectracide	prallelthrin, lambda cyhalothrin	9688-190-8845	wasps/hornets	public safety
Zenivex	Etofenprox	2724-791	mosquitoes	public safety
Mavrik perimeter	Tau-fluvalinate	2724-478	mosquitoes	public saftey

Duet dual Action	prallethrin, sumithrin	1021-1795-8329	mosquitoes	public saftey

- Insecticides are only applied by a certified and/or licensed applicator.
- Insecticides are used only when monitoring has shown that insects are present.
- Selective insecticides are used where possible instead of broad spectrum insecticides.
- Insecticide chemical classes are rotated.
- Insecticides that are applied preventatively are used only in areas where insects occurred and were documented the previous year and can be expected to occur in current season.
- Insecticide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

Weeds

Crabgrass

Dandelions, plaintains, ground ivy, cinquefoil

Describe the monitoring technique you used for the pests above.

Visual inspections of grounds and fields

Provide information on how you identified the species of pests above.

Plant identification experience or from vendor

Provide details on the non-chemical control measures have you taken to manage the pests above.

pulling weeds, line trimming and root digout, mulching in beds. Bagging grass clippings and quarterly aerating fields have minimized turfgrass weeds in addition to seeding bi annually with our fertility program.

Describe any alternative management or biological strategies being used or planned to be used, if any.

none

If you use herbicides, describe your rationale for using them for the pests above.

when non control measures are not effective to control the pest present.

Pesticide Product Name	Active Ingredient	EPA Registration Number	Target Pest	Rationale for use
prosecutor pro	glyphosate	524-536-10404	Industrial turf and nuisance weeds	maintaining appearance and preventing structural damage to sidewalk and asphalt
Drive	quinclorac	7969-272	broadleaf weeds	turfgrass broadleaf weed control
speedzone	carfentrazone-ethyl, 2,4-D, Mecopop-p acid, dicamba acid	2217-835	broadleaf weeds	boradleaf weed control on athletic fields

- Herbicides are only applied by a certified and/or licensed applicator.

- Herbicides are applied as a spot treatment when appropriate.
- Herbicides that are applied preventatively are used only in areas where weeds occurred and were documented the previous year and can be expected to occur in current season.
- The herbicide chemical classes are rotated.
- Selective insecticides are used where possible instead of broad spectrum insecticides.
- Herbicide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

LANDSCAPE MANAGEMENT PLAN

The following areas are priority areas for maintenance: Priority areas for landscaping are athletic fields, grounds around the building including trees and shrubs, and surrounding grassy areas that need to be maintained including storm water retention ponds.

Cultural Practices

Monitoring Program:
Landscaping is done by the groundskeepers. They mulch the planted areas and cut grass around the whole property. Any issues with plants, trees, or landscapes are looked into right away.

Soil Maintenance:
Soil is tested by our Sports field contractor once per year and changes to our program are based on results.

Fertilizer Use Practices:
Grounds around school buildings are fertilized twice per year: spring and fall, no pesticide use. Athletic fields are on a fertility program based on soil testing with roughly 5 applications per year.

Plant Care:
Plant beds are weeded as necessary and mulched to keep visual appearance and plant health

Watering:
only the athletic fields are irrigated and on a manual effort via a water wheel

Tree and Shrub Diseases

Describe the monitoring technique you used for the pests above.
visual inspections

Provide information on how you diagnosed the pests above.
experience and knowledge of disease or vendor identification

Provide details on the non-chemical control measures have you taken to manage the pests above.
reduce irrigation, or increase irrigation dependant on issue; continue cultural program to strengthen grass conditions

If you use fungicides, describe your rationale for using them in for the pests above.
none

Describe or identify any alternative management or biological strategies being used or planned to be used
none

- Fungicides are applied by a certified and/or licensed applicator.
- The disease was identified by a laboratory diagnostic test.
- Fungicide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

Insects and Related Pests

Gypsy Moth

Describe the monitoring technique you used for the pests above.

visual inspection

Provide information on how you identified the species of the pests above.

previous experience and knowledge of pest. Also working with a third party vendor

Provide details on the non-chemical control measures you have taken to manage the pests above.

By using best known cultural methods for healthy grass growth to over populate the weed environment

If you use insecticides, describe your rationale for using them for the pests above.

Only if the threshold level warrants a treatment

Describe or identify any alternative management or biological strategies being used or planned to be used

none

Pesticide Product Name	Active Ingredient	EPA Registration Number	Target Pest	Rationale for use
zenivex	etofenprox 4%	2724-807	mosquitoes	product used by state for public safety
mavrik perimeter	tau-flavalinate	2724-478	mosquitoes	public safety
Duet dual action	prallethrin, sumithrin	1021-1795-8329	mosquitoes	public safety
advance dual choice	n-ethyl perfluorooctanesulfonamide .5%	499-459	ants	ant control past threshold limits/tamper free bait station
spectracide	prallethrin, lambda-cyalothrin	9688-19-8845	stinging insects	public saftey

- Insecticides are only applied by a certified and/or licensed applicator.
- Insecticides are used only when monitoring has shown that insects are present.
- Selective insecticides are used where possible instead of broad spectrum insecticides.
- Insecticides that are applied preventatively are used only in areas where insects occurred and were documented the previous year and can be expected to occur in current season.

- Insecticide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

Weeds

Crabgrass

Describe the monitoring technique you used for the pests above.

weekly visual inspection

Provide information on how you identified the species of the pests above.

experience and confirmation by vendor

Provide details on the non-chemical control measures have you taken to manage the pests above.

aeration, seeding, and watering to grow healthy grass which minimizes the compaction and weed growth

If you use herbicides, describe your rationale for using them for the pests above.

to keep athletic fields healthy and safe for student athletes and the public

Describe or identify any alternative management or biological strategies being used or planned to be used

Good cultural practices

Pesticide Product Name	Active Ingredient	EPA Registration Number	Target Pest	Rationale for use
Drive	quinclorac 15.93%	7969-272	broadleaf and grassy weeds	control of weeds in athletic fields
speedzone	carfentrazone-ethyl, 2-4D, mecopop-p acid, dicamba acid	2217-835	broadleaf weeds	post emergence control of broadleaf weeds in athletic fields
barricade	prodiamine .43%	961-362	crabgrass	broadleaf weed control
prosecutor pro	glyphosate	524-536-10404	industrial turf, and ornamental invasive weeds	structural prevention to sidewalks and to control invasive plant species

- Herbicides are only applied by a certified and/or licensed applicator.
- Herbicides are applied as a spot treatment when appropriate.
- Herbicides that are applied preventatively are used only in areas where weeds occurred and were documented the previous year and can be expected to occur in current season.
- Selective insecticides are used where possible instead of broad spectrum insecticides.
- Herbicide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

OUTDOOR MANAGEMENT PLAN

The following areas are priority areas for maintenance: Outdoor priority areas are within the doorways of the building, the front entrances, the two courtyards, and the property perimeter including stormwater drainage ponds and the athletic field.

Cultural Practices

OUTDOOR GROUNDS GENERAL MANAGEMENT PRACTICES

Waste Disposal (trash containers and dumpsters):
Waste removal occurs twice per weekin two locations on the property. Recycling containers are once per week. Waste Management owns and maintains the containers based on our communication.

Light Management:
Minimal lighting is used for security and condition of lighting is monitored by building managers.

Excess Water Prevention:
Surface water runs into catch basins and the storm water retention pond is up to date and on a PM schedule. Basins are cleaned by contract twice per year, spring and fall.

Noxious Weed Management:
Noxious weeds are identified and removed in winter months. Removal is done with tools and equipment instead of control products

Playgrounds (if applicable):
NA

Nuisance weeds in pavement:
Weekly monitored and weedwacked.

Storage Sheds (If applicable):
Monitoring and reporting to managers any pest activity.

Insects observed in and around outdoor grounds of school property.
Ants
Mosquitoes & Flies
Stinging Insects

Pests
Ants
Mosquitoes & Flies
Stinging Insects

Insects in playground area (if applicable)

Describe the monitoring technique you used for the pests above.
Monitoring and reporting to town for County or private spraying

Provide information on how you identified the species of the pests above.
Experience or third party vendor

Provide details on the non-chemical control measures you have taken to manage the pests above.
Weed wacking nuisance weeds. Making sure any standing water is removed for mosquitoes.

If you use insecticides, describe your rationale for using them for the pests above.
When target pest imposes a safety hazard

Pesticide Product Name	Active Ingredient	EPA Registration Number	Target Pest	Rationale for use
Spectracide	prallethrin .025% lambda cyhalothrin .010%	9688-19-8845	stinging insects	public saftey
Zenivex	etofenprox 4%	2724-791	mosquitoes	public saftey
Mavrik perimeter	Tau-fluvalinate	2724-478	mosquitoes	public safety
Duet dual action	Prallethrin, sumithrin	1021-1795-8329	mosquitoes	public saftey
Mosquito free	cedarwood oil, 2 phenethyl propionate	-	mosquitoes	Organic insect repellent
Bifenthrin I/T 7.9F	bifenthrin 7.9%	66222-190	structural insects/mosquitoes	to control pest population for public safety

- Insecticides are only applied by a certified and/or licensed applicator.
- Insecticides are used only when monitoring has shown that insects are present.
- Selective insecticides are used where possible instead of broad spectrum insecticides.
- Insecticide chemical classes are rotated.
- Insecticides that are applied preventatively are used only in areas where insects occurred and were documented the previous year and can be expected to occur in current season.
- Insecticide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

Weeds

Noxious weeds noticed on the school grounds
Poison Ivy

Describe the monitoring technique you used for the pests above.
areas where weeds have been seen in previous years

Provide information on how you identified the species of the pests above.
past experience or third party vendor plant identification

Provide details on the non-chemical control measures have you taken to manage the pests above.
weed wacking or line trimming

If you use herbicides, describe your rationale for using them for the pests above.
When target plant exceeds threshold for manual removal and only during summer months with school out of session

Pesticide Product Name	Active Ingredient	EPA Registration Number	Target Pest	Rationale for use
Arena	clothianidin .25%	59639-157	turfgrass insects	athletic field disease control
Drive	quinclorac 15.93%	7969-272	broadleaf weeds	athletic field weed control
Speedzone	carfentrazone-ethyl .54% 2,4-D 10.49% Mecopop-p acid 2.66% dicamba acid .67%	2217-835	broadleaf weeds	athletic field weed control
prosecutor pro	glyphosate 41%	524-536-10404	industrial turf, and ornamental weeds, nuisance weeds in asphalt	to maintain appearance and to control invasive weeds while preventing structural damage to sidewalks

- Herbicides are only applied by a certified and/or licensed applicator.
- Herbicides are applied as a spot treatment when appropriate.
- Selective insecticides are used where possible instead of broad spectrum insecticides.
- Herbicide Use is documented in the **STANDARD WRITTEN NOTIFICATION FORM.**

H. RECORD KEEPING

In the case of King Philip Middle School, OUTDOOR monitoring records will be maintained through: Outdoor monitoring records will be made as needed and list information as to what and where the pest was.

I. EVALUATING THE PROGRAM

The IPM plan will be evaluated on a Annually basis.

J. NOTIFICATION REQUIREMENTS & EXEMPTIONS

During the creation of this IPM plan, Larry Azer has assigned committee member Joe Zahner with the responsibility of assembling and issuing all the documents that accompany the standard written notification whenever pesticides are applied outdoors.

K. IN THE EVENT OF A HEALTH EMERGENCY

During the creation of this IPM plan, Larry Azer has assigned committee member Joe Zahner with the responsibility of applying for an emergency waiver.

L. LIST OF PESTICIDES TO BE USED OUTSIDE THE FACILITY

The following list includes all the pesticides that will be used outside King Philip Middle School. This list includes all herbicides, fungicides, and insecticides that will be used in the event that chemical is required.

Pesticide Product Name	Active Ingredient	EPA Registration Number	Target Pest	Rationale for use
zenivex	etofenprox 4%	2724-807	mosquitoes	product used by state for public safety
advance dual choice	n-ethyl perfluorooctanesulfonamide .5%	499-459	ants	ant control past threshold limits/tamper free bait station
barricade	prodiamine .43%	961-362	crabgrass	broadleaf weed control
Spectracide	prallethrin .025% lambda cyhalothrin .010%	9688-19-8845	stinging insects	public saftey
Duet dual action	Prallethrin, sumithrin	1021-1795-8329	mosquitoes	public saftey
Arena	clothianidin .25%	59639-157	turfgrass insects	athletic field disease control
prosecutor pro	glyphosate 41%	524-536-10404	industrial turf, and ornamental weeds, nuisance weeds in asphalt	to maintain appearance and to control

				invasive weeds while preventing structural damage to sidewalks
prosecutor pro	glyphosate	524-536-10404	industrial turf, and ornamental invasive weeds	structural prevention to sidewalks and to control invasive plant species
Mosquito free	cedarwood oil, 2 phenethyl propionate	-	mosquitoes	Organic insect repellent
mavrik perimeter	tau-flavalinate	2724-478	mosquitoes	public safety
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Zenivex	etofenprox 4%	2724-791	mosquitoes	public saftey
Drive	quinclorac 15.93%	7969-272	broadleaf weeds	athletic field weed control
Speedzone	carfentrazone-ethyl .54% 2,4-D 10.49% Mecopop-p acid 2.66% dicamba acid .67%	2217-835	broadleaf weeds	athletic field weed control
Bifenthrin I/T 7.9F	bifenthrin 7.9%	66222-190	structural insects/mosquitoes	to control pest population for public safety
spectracide	prallethrin, lambda-cyalothrin	9688-19-8845	stinging insects	public saftey
Drive	quinclorac 15.93%	7969-272	broadleaf and grassy weeds	control of weeds in athletic fields
Arena	clothianidin	59639-157	turfgrass insects	athletic field disease control
Spectracide	prallelthrin, lambda cyhalothrin	9688-190-8845	wasps/hornets	public safety
Zenivex	Etofenprox	2724-791	mosquitoes	public safety
Mavrik perimeter	Tau-fluvalinate	2724-478	mosquitoes	public saftey
Duet dual Action	prallethrin, sumithrin	1021-1795-8329	mosquitoes	public saftey
prosecutor pro	glyphosate	524-536-10404	industrial turf and nuisance weeds	maintaining appearance

				and preventing structural damage to sidewalk and asphalt
Drive	quinclorac	7969-272	broadleaf weeds	turfgrass broadleaf weed control
speedzone	carfentrazone-ethyl , 2,4-D, Mecopop-p acid, dicamba acid	2217-835	broadleaf weeds	boradleaf weed control on athletic fields
speedzone	carfentrazone-ethyl, 2-4D, mecopop-p acid, dicamba acid	2217-835	broadleaf weeds	post emergence control of broadleaf weeds in athletic fields
Mavrik perimeter	Tau-fluvalinate	2724-478	mosquitoes	public safety

M. WELL WATER SYSTEM

The school has an on site well water system. No pesticide or fertilizer applications will take place within the Zone I of the well.

I attest, to the best of my knowledge, that the above information is complete, accurate and true

IPM Coordinator Signature — Date: 9/5/2019

Administrator, Director, or Principal — Date: 9/9/19

Outdoor IPM Plan originally submitted on: 9/3/2019 11:42:00 AM

Plan updated by Joseph Zahner Jr on: 9/3/2019 12:43:00 PM