



## Bernards Township Department of Public Works

### **INTEGRATED PEST MANAGEMENT FOR THE TOWNSHIP OF BERNARDS PARKS SYSTEM AND MUNICIPAL GROUNDS INCLUDING ALL PUBLIC LANDS**

**What is Integrated Pest Management?** Integrated Pest Management (IPM) is a method of managing insects, undesired plants, and plant diseases with the tools that are least likely to impact human health or the environment. It involves developing a plan, such as this plan for the Township of Bernards Parks System and Municipal Grounds. Integrated Pest Management means that regular monitoring of the site must occur to ensure detection of a pest problem and to correctly identify the problem. It will include steps in the management, such as recognizing a threshold where a pest will require action or where no action is necessary. When some action is necessary, IPM dictates what the action should be, typically starting with manual or non-chemical management tools and resorting to more persistent or stronger pesticides if the problem reaches a threshold identified by a knowledgeable IPM coordinator. After an action is taken, effective IPM will evaluate the success of the action and follow-up as appropriate. The best IPM balances the action and economics of pest control with impacts to the environment and human health. Briefly stated, IPM plans actions, monitors pest levels, sets, action thresholds and evaluates success of a coordinated array of tools to control pests.

This document will provide a plan for integrated pest management within the Township of Bernards Parks System and Municipal Grounds. As a policy and operational procedure, the use of pesticides will be limited at all Bernards Township parks and municipal grounds including all public lands. This plan will delineate what types of pest management practices will be used and what areas of the Township of Bernards Parks System and Municipal Grounds will receive particular treatments. This plan makes clear the Township Committees' intention to protect our natural resources and to provide children with safe and healthy places to play. The plan may be updated as necessary to recognize new management tools or options.

Implementation of this management plan must recognize that to minimize use of pesticides in all areas of Township Parks and Municipal Grounds, a close watch must be maintained. Regular inspections should be scheduled to assure that pests or invasive species do not gain so much territory that rapid, intensive, pesticide treatment would be necessary to regain control of the pest.

Integrated Pest Management activities will consist principally of using native plant species and biological controls to encourage natural land management. Manual/mechanical controls, such as pulling weeds by hand or mowing, will be the first choice for management of invasive plant species when and where most feasible. Other low impact pest management tools (listed below) are also available for use when manual or mechanical controls are impractical.

Conversely, the use of pesticides should be reviewed and limited so that they are not applied unnecessarily or as a matter of routine. An IPM coordinator should be designated or, if a contractor is used, the contractor should be required to follow this Integrated Pest Management Plan. Under the direction of the Director of Public works the IPM coordinator will schedule inspections, select the pest management tool to be used for any particular problem, and work with the Director of Public Works to maintain adequate supplies and to integrate the appropriate management options into the Township of Bernards maintenance plan for each township property.

Where plant, fungal or insect pests become otherwise unmanageable by the various low impact pest management methods, pesticides may be used as a control method of “last resort”. When pesticide use is required, public notification shall be made as detailed below and in accordance with applicable NJDEP regulation.

When pesticide use is necessary in any of the Township of Bernards Parks and Municipal Grounds, notice of the application will be posted at the park information board. Notice will be provided 48 hours in advance of the application and will state the area in the park to be treated and the pesticide that will be used in the treatment. Subsequent to treatment, notice will be provided on the park information board for a minimum of 72 hours, stating where the pesticide was used and what pesticide was used.

## I. “Pesticide-Free Zones” (PFZ)

The following areas have been designated as “Pesticide-Free Zones” (PFZ):

### A. Family Areas

The PFZ includes and extends to a distance of 50 feet from each of the following areas:

- Playgrounds - this will include all areas of play equipment
- Picnic grounds - this will include areas established as picnic areas with picnic tables and/or grills
- Pavilions/rest areas

### B. Waterways

The PFZ includes and extends to a distance of 300 feet from any stream bank, pond, lake or natural wetland.

Low impact Pest Management tools for PFZ’s include: These will be one of two “pesticide-free zones” (PFZ) in the Township parks system and municipal grounds including all public lands. Management will consist principally of using native species to encourage the natural management. Manual control, such as pulling weeds by hand, will be the first choice for management of invasive plant species. Where plant, fungal or insect pests become otherwise unmanageable by manual methods, pesticides will be selected from the following list and used as a control method of “last resort”.

### C. Use areas

- Playgrounds - this will include all areas of play equipment and within 50 feet of these areas
  - Picnic ground - this will include areas established as picnic areas with picnic tables and/or grills
  - Pavilions/rest areas
  - Dog Park/Runs
  - Pool Area
  - Ball fields
1. Native Plantings - Planting will be primarily native species to ensure the least need for fertilizers and pesticides.
  2. Only pest management tools from the following list will be used in these areas: manual control - hand weeding, cutting, mulching
  3. Vinegar or citric acid products

4. Burn-out
5. Corn gluten
6. Neem
7. Horticultural oil (dormant oil)
8. Potassium soaps of fatty acids
9. Boric acid
10. Diatomaceous earth
11. Microbe based insecticides (B.t)
12. Non-pesticide pest traps
13. Biological controls (predator species)

These tools may be used at the discretion of Bernards Township Department of Public Works as necessary to effectively manage the areas. Additional tools and products may be used as they become available, and meet the intent of this plan.

If the low impact tools listed above are shown to be ineffective, the following chemical pesticides may be used (with notification posting):

1. Various pyrethrins insecticides
2. Glyphosate (different formulations)

## II. Invasive Species Control Area

**Waterways:** These will be the second of two “pesticide free zones” in the Townships Parks System and Municipal Grounds. Management will consist principally of using native species to encourage the natural management. Manual control, such as pulling weeds by hand, will be the first choice for management of invasive plant species. Where plant, fungal or insect pests become otherwise unmanageable by manual methods, pesticides will be selected from the following list and used as a control method of “last resort”.

Use areas:

This will include all areas within 300 feet of any stream bank, pond, lake or natural wetlands.

**Pest Management Tools:**

Plantings will be primarily native species to ensure the least need for fertilizers and pesticides.

Only pest management tools from the following “low impact” list will be used in these areas.

Manual control - hand weeding, cutting, mulching, vinegar or citric acid products.

“Burn-out”

Corn gluten

Neem

Horticultural oil (dormant oil)

Potassium soaps of fatty acids

Boric acid

Diatomaceous earth

Microbe based insecticides (B.t.)

Non-pesticide pest traps

Biological controls (predator species)

These tools may be used at the discretion of Bernards Township Department of Public Works as necessary to effectively manage the areas. Additional tools and products maybe used as they become available, and meet the intent of this plan.

Some areas within the Township Parks System and Municipal Grounds may have existing or may develop disturbed and degraded areas with invasive species of vegetation or may be come

infested with invasive insect species. These special habitats may require more drastic, rapid, or pesticide intensive treatments to retain the native species and minimize damage to parklands. However, in any control event, pesticides will be the tool of last resort.

Primary pest management tools for Invasive Species Control Areas include any of the tools listed above for waterways or family use areas. However, if the low impact tools listed above are shown to be ineffective, the following chemical pesticides may be used.

1. Various pyrethrins insecticides
2. Glphosate (different formulations)

### III. Special Use Areas

- Exhibit gardens
- Amphitheater
- Historic structures

As with all areas of the Bernards Parks System and Municipal Grounds, the low impact tools listed above will be the first choice for pest control. However, if the IPM coordinator determines these methods to be ineffective, then methods listed below may be employed.

- Indoors - Insecticides may be used from the list below. Baits/gels will be the preferred option if sanitation/exclusionary measures fail to control a pest problem. Notice will be posted at the structure or bulletin board. Pyrethrin applications will be used only if baits/gels fail to control a pest problem.
  1. Hydramethylnon roach bait stations
  2. Fipronil roach bait stations
  3. Avermectin roach/ant bait stations
  4. Sulfluramin ant bait stations
  5. Bromodionlone rodent control
  6. S-hydroprene roach and insect control devices
  7. Various Pyrethrin insecticides
- Outdoors - If low impact tools listed in I and II above are ineffective, pesticides used at these specific sites may include the following:
  - A. Glphosate (different formulations)
  - B. Biefenazate acaricide
  - C. Imidacloprid (different formulations)
  - D. Pyrethrin

Bernards Township Parks and Municipal Grounds will be posted with a map designating the PFZ zones at the park information shelter, and/or at the PFZ site with an explanation that PFZ means no pesticides are used in the area in order to protect children, pets and the waterways of the township parks, municipal grounds including all public lands. Non-toxic methods may be used if needed, and if a pesticide is deemed necessary, a sign will be posted in advance letting people know of the application.

Notice of the application will be posted at the park information shelter 48 hours in advance of the application and will remain in place for 72 hours after the treatment. The notice will state the area of the park to be treated, the pesticide to be applied with the EPA registration number, the precautionary statement from the label, and the reason the pesticide is being applied. The area will be flagged at the time of the treatment and the flagging will remain in place for 72 hours after the treatment.

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# **Bernards Township Declares Playgrounds and Athletic Fields “Pesticide Free Zones”**

*First of Many Ladybug Logos placed at Pleasant Valley Park*



**Bernards Twp., NJ**—The environmentally friendly ladybug is alive and well at Pleasant Valley Park, thanks to a new Bernards Township policy that declares key recreational areas as “Pesticide Free Zones.”

According to a resolution adopted on December 23, 2008, the Integrated Pest Management (IPM) policy for the township identifies key sensitive areas to be managed without harmful chemical pesticides. Integrated pest management calls for the management of insects, undesired plants, and plant diseases with methods that are least likely to impact human health or the environment. All Township owned lawns and property will be managed under the new policy which will utilize no pesticides within the designated Pesticide Free Zones, and pesticides only as a last resort after other methods have been tried in other areas.

The Township Committee adopted the IPM policy on December 23, 2008, at the recommendation of the Bernards Twp. Environmental Commission. Township volunteer and now Environmental Commission member Joe Speeney presented information on the benefits of reducing lawn care pesticides at the August 2008 Township Committee

meeting. The Township Committee subsequently asked Pat Monaco, Director of the Department of Public Works, to develop a plan and in just four short month's Monaco's plan was approved.

Bernards Township joins 26 other NJ communities which have designated Pesticide Free Zones in parks including Chatham, Clifton, Irvington, Newark, East and West Windsor, Ocean City, Dennis Twp, Colts Neck, Hazlet, Neptune, Raritan, Red Bank, Pine Beach and Wall Townships. It is the first township in Somerset County to do so.

“We need residents to do their part in reducing pesticides in our environment and keeping our air, water and land safe from toxic chemicals,” said Mayor Carolyn Kelly “We wanted to lead by example. Residents can participate by making their own lawn a Pesticide Free Zone.” Committeeperson Mary Pavilini added that the policy also “protects ground water and the aquatic life in streams that run through our town”.

According to **Jane Nogaki, Program Coordinator for the NJ Environmental Federation**, New Jersey uses about 4 million pounds of pesticides annually for lawn care, mosquito control, agricultural production and golf course maintenance.

“We especially want to protect children because they are closer to pesticide applications on the ground, and they are still developing and absorb more pesticides than adults,” Nogaki said.

Pesticides used to kill weeds and insects threaten the health of our children by increasing the risk of cancer, learning disabilities, asthma, birth defects, kidney disease and other ailments. These chemicals can also poison animals, pollute local streams and rivers and seep through the ground into our underground aquifers.

Fortunately, alternative processes exist that are cost effective and friendly to the environment: simple things like mulching areas properly to prevent weeds, planting native plants which are not subject to insect problems, and reducing or eliminating lawns to cut down on the need for watering, fertilizing and mowing. Lawn areas can be managed with an organic lawn care process which focuses on the soil to mitigate weeds by building a strong, healthy, lawn without pesticide and synthetic fertilizer dependency. According to township resident Speeney, “Organic lawn care methods save money in the long run while protecting children and the environment. I’m delighted the Township Committee has taken this step to “green Bernards Township” and protect public health and our waterways at the same time. We are very fortunate to have their outstanding stewardship.”

Township Public Works Director Pat Monaco designed the plan for Bernards Township’s public grounds using organic lawn care methods as a key element of the Integrated Pest Management approach. That policy/plan is available on the town’s website at

<http://www.bernards.org/Township%20Committee/Document/IntegratedPestManagementSystem08-12-31.pdf>

Under a NJ law passed in 2002, all schools public and private from K-12th grade are mandated to have an IPM plan and use low impact methods of pest control as the first option.

NJ Environmental Federation canvassers will be in Bernards Township this week signing up members and handing out literature that tells of the new “Pesticide Free Zone” policy the town has adopted.

Organic lawn care guidance and a list of NJ organic lawn care professional landscapers can be found on the Bernards Township Environmental Commission website at [www.bernards.org/boards\\_commissions/environmental/ec\\_organic\\_lawn\\_care.aspx](http://www.bernards.org/boards_commissions/environmental/ec_organic_lawn_care.aspx)

“Pesticide Free Zone” ladybug logo yard signs are available from [www.cleanwateraction.org/NJEF](http://www.cleanwateraction.org/NJEF) or contact Jane Nogaki, 856-767-1110; email [Janogaki@cleanwater.org](mailto:Janogaki@cleanwater.org). Natural methods of pest control are also available from Master Gardeners of Somerset County at 908-526-6293.

Good Morning, Madam Chairwoman, members of the committee:

My name is John Malay and I appreciate the opportunity to comment on the Child Safe Playing Field Act.

I am the mayor of Bernards Township in Somerset County, a municipality with almost 28,000 people. In Spring 2009 we instituted an Integrated Pest Management Plan with zero chemical pesticides and we also converted to organic fertilizers. Since then we have gone through two growing seasons and are about to embark upon a third. I thought you might be interested in our experiences with these programs.

For background, Bernards has approximately 2,000 acres of public land, all of it subject to the IPM program. This includes all township properties, parks and passive recreation space; also 428 acres of active recreation areas and 50 acres of playing fields. The latter is especially important since we had heard that fields subject to intensive use during the growing season were especially difficult to manage under an IPM program. Fortunately, we have **not** found this to be the case.

As with most communities in New Jersey our residents make considerable use of our recreational facilities. We have organized youth and adult sports programs that include baseball, softball, football, soccer and lacrosse, to name just a few. In addition, private sports leagues also use our facilities and we have shared service agreements with the Board of Education for field use. Our playing fields are in constant demand.

To date, and despite a hot dry summer in 2010, we have not had to vary our field rotation schedule. We take fields out of use for a season at regular intervals in order to allow them to recover and reseed. We did that before IPM and we do it now. There has been no change.

From a cost standpoint, we budgeted an additional \$20,000 in 2009 as compared to 2008, reduced to an additional \$11,000 in 2010 compared to 2008 for field maintenance as a result of the IPM program. This represents roughly a 2.2% increase of our total grounds budget. This includes the cost of additional labor, since we have found organic maintenance to be somewhat more labor intensive. However, since we are also reducing field mowing in our parks as a water quality measure, our labor costs have remained basically flat.

Also on the plus side, water consumption on our fields has decreased and this reduced utility charge is leading us towards a zero net cost to the taxpayer for IPM. The elimination of pesticides from our playing fields has directly benefited our children as they use our facilities and the use of organic fertilizers has minimized the run-off issues and salt levels of our soil.

Our combined program of using organic fertilizers, eliminating chemical pesticides, migrating toward ryegrass and fescues which require less fertilizers and water,



aggressive slit seeding, and extensive turf aeration has shown real promise. Our 32 fields have held up considerably well since our change over to IPM.

Our residents seem to appreciate our efforts to go organic and remove pesticide use. To date we have heard no increase in complaints about field conditions. Most people don't seem to mind a few additional weeds on a soccer field when they realize they and their children are not being exposed to chemicals that might be harmful. The majority don't even notice.

Not only that, but we seem to be leading by example. Our Board of Education fields are now being maintained using the protocols of our IPM plan and a number of large private landowners in town, including the 72 acre Fellowship Village retirement facility and our 20 acre Ridge Oak senior housing are going organic and pesticide-free. We are spreading the word to our condominium associations and corporate office parks as well.

My message to you here today, based on the real world experience of Bernards Township, is that municipalities in New Jersey **can** go to an IPM program and integrate organic turf care products into their maintenance programs without going broke, breaking their 2% spending cap or watching their fields turn to dust. At the same time they can offer their residents the peace of mind that comes with reduced exposure to chemicals and increased enjoyment of their recreation facilities.

I would add that our IPM program is a part of a larger township green initiative that has earned us certification from Sustainable Jersey and, more importantly, saved our tax payers tens of thousands of dollars.

I have included with this statement contact information for our Director of Public Works, our Director of Parks & Recreation and our Township Administrator. I have also appended the original township committee resolution that inaugurated our IPM program, as well as a progress report in detail from autumn 2010.

Thank you for your time this morning.

John Malay, Mayor, Bernards Twp.

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