



# Integrated Pest Management

10 Points

Updated March 2018

**Updates include a new action approval period and new resubmission requirements**

**Pre-Requisite:** Grounds & Maintenance - Create a Policy

Integrated Pest Management (IPM) is a system of pest management that uses multiple approaches to pest control to minimize pesticide use, production costs, damage to the natural environment, and erosion of the natural landscape. IPM optimizes eco-friendly pest management techniques such as natural predators, improved sanitation, physical barriers, traps, and organic products. The primary goal is to significantly reduce or eliminate the use of pesticides.

**Adoption of a Green Grounds and Maintenance Policy is a pre-requisite** and must be completed before the town may earn points for this action. Once a policy has been adopted, 10 points can be awarded for implementing Integrated Pest Management.

## Who should lead and be involved with this action?

- Department of Parks & Recreation
- Facilities/Maintenance Manager
- Department of Public Works
- Environmental Department/Environmental Commission

## Timeframe

Integrated Pest Management (IPM) is an ongoing process that represents a change in current methods of maintaining municipal parks, gardens, and landscaped areas. Some reductions in pesticide use can be made immediately. However, a comprehensive strategy for IPM might take a few months to research and develop, and will likely take longer to train employees to implement.

## Project Costs and Resource Needs

Integrated Pest Management (IPM) is likely to provide long-term cost savings compared to conventional pesticide use. However, the program will entail startup costs, including staff time to establish new policies and procedures for implementing an IPM Strategy. For smaller communities, existing grounds and maintenance staff can implement the switch to IPM, but it may require additional training. Larger communities may want to hire a specific IPM coordinator to train employees and oversee program implementation.

Integrated Pest Management training courses are offered by the Rutgers Cooperative Extension for approximately \$400 per participant. For school officials and for grounds and maintenance staff working on school locations, free training is available through the New Jersey School IPM program. See the "Resources" section for links to these training resources.

## Why is it Important?

Integrated Pest Management (IPM) is important to sustainability because harmful pesticides are a danger to local wildlife, pollute streams and watersheds, and pose a threat to human health. Pollution from landscaped areas often washes into the gutters, down the storm drain, or ends up in the nearest stream, which may contaminate local drinking water supplies. Using an Integrated Pest Management plan minimizes the impact that pest management will have on the local ecosystem and contributes to a more environmentally friendly approach to municipal maintenance.

- **Reducing pesticides benefits human health.** - Beyond ecological damage, pesticide exposure is associated with cancers, nervous system disorders, respiratory problems, and learning disabilities. Pesticides enter drinking water systems and come into direct contact with adult residents and children in parks and schoolyards. Employees are also exposed when preparing and applying pesticides. Eliminating the use of these toxic chemicals reduces health risks to the community.
- **IPM can save money.** - Integrated Pest Management strategies reduce costs for pesticide purchases.
- **IPM can reduce a community's carbon footprint.** - Reducing chemical inputs of pesticides and fertilizers reduces the community's carbon footprint as these products require significant energy for production.
- **IPM increases biodiversity and protects wildlife.** - Toxic pesticides impact non-pests. By reducing chemical inputs, IPM strategies improve wildlife habitat and promote biodiversity among flora and fauna.
- **IPM improves water resources.** - IPM reduces the amount of pollutants entering storm drains, groundwater aquifers, and surface waters.

## WHAT IS IPM?\*

IPM is a thoughtful, holistic approach to controlling pests that uses a wide variety of tools such as sanitation, structural modifications and other management techniques rather than automatically turning to chemical control as a first option. In a typical program, pertinent information about a pest is combined with careful selection of suitable management techniques to eliminate the causes of pest outbreaks or to otherwise manage the pest in an economical manner that also represents the lowest possible hazard to people, property, and the environment. The legal definition for IPM from the state regulations at N.J.A.C. Title 7:30-1 is the following:

"Integrated pest management' or 'IPM' means a sustainable approach to managing pests by using all appropriate technology and management practices in a way that minimizes health, environmental and economic risks. IPM includes, but is not limited to, monitoring pest populations, consumer education, and when needed, cultivation practices, sanitation, solid waste management, structural maintenance, physical, mechanical, biological and chemical controls."

An effective IPM program can manage the risks from both pesticide and pest, and protect human health by:

- Reducing staff exposure to pesticides
- Suppressing pests that may carry allergens or disease pathogens
- Reducing environmental pollution

Implementing IPM may provide cost savings and other economic benefits by:

- Reducing pest damage
- Reducing unnecessary pesticide applications
- Minimizing emergency repairs
- Improving maintenance and sanitation
- Reducing waste caused by infested food products

IPM begins with learning how to prevent both indoor and outdoor pests from becoming established. Regular communication with the pest control professional ... who must be knowledgeable in IPM is essential to success. With an

understanding of how pests live, problems can often be prevented simply by denying them food, shelter, or water - the resources they need to survive and reproduce. Good facilities management is essential to IPM. Preventing an indoor pest may be as simple as blocking the pest's access into buildings or paying extra attention to sanitation and maintenance. Promoting healthy turf on athletic fields may prevent the need for chemical weed or insect control. Buildings must be kept clean, uncluttered, and in good repair to ensure healthy indoor air, maintain structural integrity, and conserve costs and energy. This will also help keep pests below harmful levels. IPM can be a cost-effective way to provide a safe and healthy environment in which ... staff can learn and work.

\* Source: NJDEP:<http://www.nj.gov/dep/enforcement/pcp/ipm-intro.htm>

## What to do, and how to do it (“How to”)

Below we have listed the requirements for earning points for this action.

1) Create an IPM Policy **and** an IPM Implementation Plan for all municipally-owned land in your municipality\*. It is recommended that a pesticide-reduction or pesticide-elimination resolution be adopted. The Implementation Plan should specify the timeframe for phasing IPM into all municipally-owned land. The policy/plan should be active and enforced for the year in which you are applying for certification.

Note: New Jersey schools are already required to have an IPM policy that meets the requirements of the 2002 New Jersey School Integrated Pest Management Act. A copy of the school IPM policy is not enough to receive credit under this IPM tool. If desired, the existing school IPM policy can be extended to cover parks and other municipal lands, however it is not required that these policies be identical.

2) Train appropriate maintenance staff in the practice of IPM.

3) It is also recommended that materials be created that offer tips to residents on how they can practice IPM themselves.

\*It is advised that you begin implementation with Pesticide Free Zones in the municipality's playgrounds, ball fields, and dog parks. Then you can phase-in IPM to all municipally-owned land.

We have provided guidance and recommendations for implementing the action below. You do not need to follow this guidance exactly as long as your final product meets the requirements.

1) Designate an Integrated Pest Management (IPM) coordinator. Smaller localities can incorporate these responsibilities into an existing municipal staff position. A large municipality that manages extensive public grounds may wish to create a new position to oversee IPM. The IPM coordinator should have previous expertise with IPM strategies or should complete a relevant training program. The Rutgers Cooperative Extension offers a low-cost three-day course in Integrated Pest Management (see “Resources” section).

2) The IPM coordinator, along with the Green Team (or similar body), should assemble a committee of municipal landscape and grounds maintenance staff to develop a strategy for Integrated Pest Management. Principles of this strategy should be included in the overall green Grounds and Maintenance policy developed for the municipality.

3) Decide which IPM strategies are best for the municipality's needs by identifying pest problems requiring resolution.

Tips for IPM strategies:

When dealing with pest management, it is important to try to utilize natural deterrents, such as using natural predators and plants that are deterrents, as first attempts at pest management. It is also important to “pest-proof” municipally managed properties by keeping up to date with maintenance needs and basic pest prevention methods such as regularly disposing of garbage, keeping tree branches and shrubbery well trimmed and away from buildings, and making sure that roofs are frequently repaired, as some insects are attracted to deteriorating wood. In addition, it is important to concentrate on improving soil and grass health. After the natural deterrent and pest-proofing steps have been taken, then, if necessary, pest control products may be used. Again, look for organic controls, usually botanically derived from naturally occurring flower and fruit extracts. Be sure to follow the labels and instructions on any chemicals used to minimize health risks. In addition, it is better to spot treat areas rather than spray an entire area. Slow release and organic pest management materials are preferable over traditional pesticides.

4) Adopt a pesticide-reduction or pesticide-elimination municipal resolution. See a sample resolution here:

<http://cleanwateraction.org/files/publications/nj/pesticidepolicy.pdf>

5) Create an IPM Policy, and an IPM Implementation Plan, and create a procedure for the Department of Public Works to implement the policy.

Suggested procedure:

A. Inventory your current pesticides and fertilizers. Include in the inventory:

- The product Where the product is located
- Last date it was used
- MSDS sheets for all products

B. Decide on your Pesticide Free Zones (PFZ). Once the program is active, post signs stating that this is a pesticide free area. Keep track of starting dates so that you can report that it has been  $x$  months or  $x$  years since you have used pesticides (or certain pesticides). Ensure that all the parties that may apply pesticides are alerted when a location becomes designated as pesticide-free. For example, some sports teams treat the fields that they are allowed to use. Make sure all necessary Recreation Department members know about the new policy.

Also see Clean Water Action's Pesticide Free Zone brochure:

<http://www.cleanwateraction.org/files/publications/nj/pfzbrochure.general.pdf>

C. Decide on procedures for dealing with infestations that may require pesticide use in a PFZ. Make sure that your treatment is appropriate for the infestation. (Spraying is not the correct application for all pests, for example.) Research best practices for dealing with infestations. Remember that any pesticide applied on public property needs to be applied by a licensed applicator.

Follow procedures for flags when a pesticide *is* used. This includes labeling the flags with the pesticide used and the start and end times that the pesticide will be active. Flags must be removed promptly when that time is up (even if only 72 hours) so that residents do not start to disregard flags.

When planning an application to deal with infestation, it is important to know who the users of that space will be (a scout troop, for example). The group should either be moved to another location, or the pesticide use should be delayed until after their scheduled event.

6) Implement IPM practices. The IPM coordinator should provide necessary training and oversight of grounds and maintenance staff during the transition to IPM. Staff training with CEUs is available through Rutgers University (Office of Continuing Professional Education/ New Jersey Agricultural Experiment Station) and New Jersey Environmental Federation (see Resources).

7) Publicize the municipality's use of IPM and encourage the adoption of IPM practices by homeowners and businesses. Municipalities are strongly encouraged to leverage IPM efforts as an example for the larger community. Information about IPM and pesticide reduction can be distributed to residents and businesses online and in print materials. The IPM coordinator or other municipal staff might offer technical assistance to local businesses and homeowners interested in making the switch to IPM. Partnerships with local landscaping businesses could encourage increased use of IPM by the professional industry.

## What to submit to get credit/points

In order to earn points, your submission must meet the following standards:

1) Create an IPM Policy **and** an IPM Implementation Plan for all municipally-owned land in your municipality\*. It is recommended that a pesticide-reduction or pesticide-elimination resolution be adopted. The Implementation Plan should specify the timeframe for phasing IPM into all municipally-owned land. The policy/plan should be active and enforced for

the year in which you are applying for certification.

Note: New Jersey schools are already required to have an IPM policy that meets the requirements of the 2002 New Jersey School Integrated Pest Management Act. A copy of the school IPM policy is not enough to receive credit under this IPM tool. If desired, the existing school IPM policy can be extended to cover parks and other municipal lands, however it is not required that these policies be identical.

2) Train appropriate maintenance staff in the practice of IPM.

3) It is also recommended that materials be created that offer tips to residents on how they can practice IPM themselves.

\*It is advised that you begin implementation with Pesticide Free Zones in the municipality's playgrounds, ball fields, and dog parks. Then you can phase-in IPM to all municipally-owned land.

Submit the following documentation to verify the action was completed to the above standards. (Log in to the password protected webpage where you submit your online application for certification to write in the text box and upload documents).

In the text box, please provide a short narrative (300 word max) to summarize what was accomplished and the general steps taken to accomplish it.

Upload the following documentation to your town's online application:

- Upload: IPM policy (and/or resolution). The documentation should explain the methods being utilized in lieu of traditional pesticides and demonstrate that the municipality has taken an active role in reducing chemical pesticide use and is utilizing native plants and other eco-friendly approaches to pest management. The policy/plan should be active and enforced for the year in which you are applying for certification.

Note: New Jersey schools are already required to have an IPM policy that meets the requirements of the 2002 New Jersey School Integrated Pest Management Act. A copy of the school IPM policy is not enough to receive credit under this IPM tool. If desired, the existing school IPM policy can be extended to cover parks and other municipal lands, however it is not required that these policies be identical.

- Upload: IPM implementation plan.
- Upload: Names of staff that received training in IPM and document what training they received. Submit samples of any and all educational materials for residents. This could include press releases, brochures, fliers, and/or screen shots of websites that offer tips on how residents can practice IPM themselves.

### **Resubmission Requirements**

To resubmit for points under this action, please provide the names of the staff that received training in IPM and document what training they received, along with samples of any and all educational materials for residents for the year in which you are applying for certification.

### **Approved Action Expiration Date**

Approved actions will be set to expire at the end of the year certification is submitted.

**IMPORTANT NOTES:** You can upload up to six separate documents for each action. Please excerpt relevant information from large documents. Please remember that your submissions will be viewable by the public as part of your certified report.

## **Spotlight: What NJ towns are doing**

### **BERNARDS TOWNSHIP**

In 2008, Bernards Township, NJ adopted an Integrated Pest Management Policy covering all township owned property. The policy utilizes organic lawn care practices allowing for the elimination of synthetic pesticides and synthetic fertilizer on all sports fields and key lawn areas, and it designates all parks as Pesticide Free Zones. The Board of Health

supported the policy by passing **Resolution BH 10:09** and the Board of Education followed with their own decision declaring that school lawns and sports fields shall be managed without lawn care pesticides. The Mayor, the Township Committee, the Board of Health, the Green Team, the Board of Education, and the Environmental Commission encourage all citizens to participate in this endeavor on their own property.

The township also provides extensive information for the public on their website:

[http://www.bernards.org/boards\\_commissions/environmental/ec\\_organic\\_lawn\\_care.aspx/](http://www.bernards.org/boards_commissions/environmental/ec_organic_lawn_care.aspx/).

This site also has links to their brochure

([http://www.bernards.org/Environmental%20Commission/document/Organic\\_Brochure.pdf](http://www.bernards.org/Environmental%20Commission/document/Organic_Brochure.pdf))

and to videos, training resources, news updates and resources for locating an organic lawn care specialist.

## **Resources**

### **FUNDING RESOURCES**

#### **IPM Funding Opportunities from the Northeast and Around the Nation**

##### **Northeast IPM Center**

[http://northeastipm.org/news\\_funding.cfm](http://northeastipm.org/news_funding.cfm)

##### **New Jersey Coalition for Schoolyard Habitats**

See grant opportunities listing at

<http://www.state.nj.us/dep/seeds/syhart/index.htm>

##### **New Jersey Department of Environmental Protection**

<http://www.state.nj.us/dep/grantandloanprograms/>

### **EDUCATION/TRAINING RESOURCES**

#### **IPM World Textbook**

##### **University of Minnesota**

<http://ipmworld.umn.edu/>

##### **School IPM Program**

#### **New Jersey Department of Environmental Protection – School IPM Program**

The New Jersey School IPM Program assists schools in meeting the standards of the 2002 New Jersey School Integrated Pest Management Act.

School IPM Training:

<http://www.nj.gov/dep/enforcement/pcp/ipm-training.htm>School

IPM Manual:

[http://www.nj.gov/dep/enforcement/pcp/bpc/ipm/How\\_to\\_Do\\_IPM.pdf](http://www.nj.gov/dep/enforcement/pcp/bpc/ipm/How_to_Do_IPM.pdf)

PPT:

<http://www.state.nj.us/dep/enforcement/pcp/ipm-powerpoint.htm>

#### **New Jersey Environmental Federation/ Clean Water Action - Pesticide Free Zone Program-**

<http://www.cleanwateraction.org/files/publications/nj/pfzbrochure.general.pdf>

## **Office of Continuing Professional Education**

### **Rutgers New Jersey Agricultural Experiment Station**

A three-day Integrated Pest Management training course is offered that would be suitable for municipal public works staff. Contact the Extension for program dates.

<http://www.cpe.rutgers.edu/>

<http://www.pestmanagement.rutgers.edu/IPM/schoolipm/tools.html>

## **CASE STUDIES**

### **New Jersey:**

#### **Dennis Township “Pesticide Free Zone”**

Many communities across New Jersey, including Brick, Hazlet, Chatham, Ocean City, Voorhees, Fair Lawn, Red Bank, East Windsor, Neptune, Clifton, Pine Beach, Burlington County, and Cape May County, have adopted Pesticide Free Zones. Following their lead, Dennis Township adopted a pest management program in January 2008 that requires the use of organic or least-toxic methods for pest control on public grounds. The Environmental Commission drafted the resolution based on findings that 40% of wells in the township contained pesticide residues which are harmful to human health and the ecosystem. Pamphlets have been distributed to citizens describing the township’s efforts and encouraging residents to take similar action to eliminate the use of harmful pesticides on private property.

<http://www.capemaycountyherald.com/article/20284-dennis-township-adopts-pesticide-free-zone-policy>

#### **Carrboro, NC**

Administered by the Public Works Department, Carrboro’s Least Toxic Integrated Pest Management Policy was enacted in 1999 and includes the designation of a town IPM coordinator.

<http://www.ci.carrboro.nc.us/PW/ipm.htm>

#### **Newton, MA**

In 1997, Newton became the first community in New England to comprehensively pursue an IPM program.

[http://greenpolicy360.net/index.php?title=Newton%2C\\_MA\\_Integrated\\_Pest\\_Management\\_Policy](http://greenpolicy360.net/index.php?title=Newton%2C_MA_Integrated_Pest_Management_Policy)

#### **Santa Monica, CA**

The City of Santa Monica’s Environmental Programs Division enacted a Toxics Use Reduction Program, including Integrated Pest Management, in 1996 and achieved a 30% reduction in the costs of pest control.

<http://www.aehf.com/IAQSch/IPM/IPM-CSM.htm>

#### **“Schools Save Money with Integrated Pest Management”**

This short fact sheet from the National Coalition against the Misuse of Pesticides outlines 12 examples of school or school districts that have saved money by implementing IPM.

[http://www.beyondpesticides.org/schools/publications/IPM\\_cost%20FS.pdf](http://www.beyondpesticides.org/schools/publications/IPM_cost%20FS.pdf)

#### **Seattle, WA**

Building on 20 years of experience with IPM, Seattle’s pesticide reduction program has eliminated the use of Tier 1 pesticides and reduced overall pesticide use on public lands.

<http://www.cityofseattle.net/environment/pesticides.htm>

## **GENERAL RESOURCES**

### **Clean Water Action**

#### **New Jersey Environmental Federation Pesticides Free Campaign**

<http://www.cleanwateraction.org/files/publications/nj/pfzbrochure.general.pdf>

### **PM Access**

<http://www.ipmaccess.com/index.html>

### **Cooperative Extension Pest Management Office**

#### **Rutgers New Jersey Agricultural Experiment Station**

<http://www.pestmanagement.rutgers.edu/index.htm>

### **The National Coalition against the Misuse of Pesticides**

<http://www.beyondpesticides.org/>

### **Northeastern IPM Center**

<http://nepmc.org/>