

Municipal Pest Management: Best Practices

Thomas Green, Ph.D., President

Julian Cooper, Community IPM Manager

Whole Foods Market 2014 Supplier Award for Outstanding Quality Assurance
2012, 2009 US EPA Sustained Excellence in IPM Award

2009, 2008, 2005, 2004 National Champion, US EPA Pesticide Environmental Stewardship Program
2005 Children's Environmental Health Recognition Award, US EPA Office of Children's Health Protection

Reminder: Policy vs. plan

IPM Policy

- overarching commitment
- vision, mission, desired outcomes
- scope
- may include enforceable conditions/staff practices, e.g., sanitation, clutter control, maintenance, turf height to facilitate cooperation
- formal approval
- long-lived
- may be in the form of an ordinance/code

IPM Plan

- core purpose statement
- scope
- org chart
- strategic priorities
- overall goals and objectives
- timeline, milestones, responsible, accountable consulted, informed
- evaluation
- communications
- may include department/sector/site-specific plans/sections or separate plans
- Current; reviewed/updated regularly

1. Carlsbad: 12-page plan, very general
2. Dubuque: 87-page program doc, includes detailed site-specific stipulations
3. Green Shield Certified: Certification standards
4. Portland, ME: 15-page city ordinance
5. San Francisco: Seven-page city/county ordinance

Comparative analysis

Provision (key practices in bold)	Madison	Carlsbad	Dubuque	Green Shield	Portland ME	San Francisco
Regulatory compliance	x		x	x	x	x
Pest management ordinance					x	
Private use in scope					x	
Pesticide retailers in scope					x	
Policy	x	x	x	x	x	
Overall IPM/sustainability coordinator				x	x	
Department/site-specific IPM coordinators	x					x
Overall plan		x	x	x	x	
Department/site-specific plans	x		x			x
Design for pest prevention			x	x		x
Regular inspection for pest-conducive conditions			x	x		x
Monitoring	x		x	x		x
Pest complaint reporting				x		
Pesticide use complaint reporting	x					
Inspection/monitoring records				x		x
Action thresholds			x			
Issues prioritization			x		x	
Goal setting	x	x	x	x	x	
Non-chemical options first	x	x	x	x		x
Approved/prohibited pesticide list(s)	x	x	x	x	x	x
Site/emergency use/pilot exemptions	x		x	x	x	x
Pesticide risk tiers			x	x	x	x
Organic		x			x	
Pesticide-free zones			x			

Provision (key practices in bold)	Madison	Carlsbad	Dubuque	Green Shield	Portland ME	San Francisco
Evaluate results of interventions	x	x	x			x
Spot treatments		x				
Pesticide-use buffer zones					x	
Proper pesticide storage	x			x		
Pesticide drift mitigation			x	x		
Posting	x	x	x	x	x	x
Posting exemptions for low risk				x		x
Notification other than pre-posting			x	x		
Emergency response prep				x		
Staff education/training	x	x	x	x		x
Public education/training			x	x	x	
Contractor qualifications/oversight	x		x	x		x
Pesticide use data collection	x	x	x	x	x	x
Standardized electronic reporting						x
Ongoing committee	x		x	x	x	x
Public participation on committee	x				x	
Compliance monitoring	x			x	x	x
Program evaluation	x		x	x	x	x
Internal reporting	x		x	x	x	x
External reporting			x	x	x	x

- aquatic organisms
- cost control
- coyote control
- dandelion control
- glyphosate use reduction
- goose control
- healthy sports turf
- indoor air quality
- mosquito control
- neonicotinoid use reduction
- organic methods
- pesticide-free parks
- pesticide use reduction
- pollinators
- resistance management
- tick control

Prioritization example

citizen/ public priority/ Impacts	High	pollinators	aquatic ecosystems mosquitoes glyphosate use pesticide-free parks ticks
	Low	dandelions	pesticide resistance
		Low	High
		City/staff priority/impacts	

Example assumptions, could be verified by survey, interviews, research

- Aquatic ecosystems are a top city/staff concern, challenge to manage
- Pollinators are a top public concern, relatively easy for staff to manage
- Over-reliance on glyphosate in MWU a resistance concern for city
- Dandelions are not a hot issue for anyone

1. Current policy includes many best practices.
2. Shotgun approach, covers many bases, addresses some but not likely all citizen and staff priorities.
3. Short on follow through on specific provisions, e.g., expert involvement, approved pesticide list, participation/compliance by all departments.
4. Would benefit from improved overall coordination, planning, compliance monitoring, enforcement, evaluation, adaptive management.
5. Lack of consistent report format makes compilation/overall analysis difficult.

6. Based on reports provided, good level of compliance on pesticide use reduction.
7. May not be case with departments not participating in current review, providing reports, e.g., housing.
8. Some opportunities to address likely priorities, e.g., reduce aquatic risk applications (pyrethroids, fipronil, neonics) for ants, spiders, other nuisance pests in facilities by improving exclusion, using mechanical controls.

1. Update priorities, set goals based on citizen/staff input.
2. Establish overall plan, oversight, coordination, evaluation, compliance monitoring/enforcement; consistent reporting template.
3. Address priorities/priorities in updated policy, overall and department plans.
 - a. Identify strategies/tactics/action steps to address current priorities.
 - b. Set goals, timelines, responsibilities in plans.

Contact:
Julian Cooper
jcooper@ipminstitute.org

Whole Foods Market 2014 Supplier Award for Outstanding Quality Assurance
2012, 2009 US EPA Sustained Excellence in IPM Award

2009, 2008, 2005, 2004 National Champion, US EPA Pesticide Environmental Stewardship Program
2005 Children's Environmental Health Recognition Award, US EPA Office of Children's Health Protection