

Memorandum
City of Lawrence
Parks and Recreation Department



DRAFT

TO: Mike Wildgen, City Manager
FROM: Mark Hecker, Park & Maintenance Superintendent
CC: Fred DeVictor, Director, Park & Recreation
Date: 05-03-05
RE: Response – Commission Request for Pesticide Free Park Plan

Request:

The City Commission has directed city staff to develop an implementation plan to manage the City's park properties without the use of pesticides.

Response:

Starting Point

The professional horticulture and park management staff employed by the City of Lawrence are very familiar with the theories, practices and processes, like Integrated Pest Management (IPM) and the more current Plant Health Care Program (PHC). These programs identify the very basic components of good horticultural practices that have been used by the City of Lawrence for many years by department staff that are considered to be some of the leading professionals in the State of Kansas. If pesticide free can be achieved in this part of the country, we believe we can make it happen.

Over the past 3 to 4 weeks, staff have talked to a number of communities that have some type of pesticide reduction program. We have heard success stories and failures, but the one conclusion that we have come up with is - no two situations are the same and cultural practices vary dramatically depending on climate.

Attached is a USDA Plant Hardiness Zone Map <http://www.usna.usda.gov/Hardzone/ushzmap.html?>. This map is used nationwide to determine proper selection of plant materials and grasses for a particular climate. Since climate plays such an important role in the management of pests, it is important we consider established horticultural practices from an area that has the same hardiness rating as we do. Many of the cities that were listed in the citizen report were either in a much colder climate (Canada), have a much shorter growing season with fewer pest problems, or they have a much warmer climate with more varieties of plant materials, which gives you a wider variety of options in dealing with potential pest problems. As an example, Bermuda grass can be successful in Wichita, Kansas, but it often suffers from winter kill in Lawrence.

The differences brought us to the conclusion that we can get ideas from other communities, but we were going to have to custom design a program that will work in Lawrence, Kansas, and not try to copy something done in another part of the country.

Planned Timeline

2005

Attachment (A) shows all of the park properties maintained by the City of Lawrence Parks & Recreation Department. There are a number of these properties we feel can be converted to pesticide free in 2005 with very little budgetary impact. This is possible because there is very little application of pesticides taking place in these areas under our current management practices.

During the summer of 2005, we will purchase small quantities of a number of organic products to develop an understanding of how and when these products can be applied to achieve maximum control.

Note: *many of these products that have been recommended in the proposal have not been through the same EPA testing that is required for a pesticide to be put on the market, and may not carry labels identifying adverse effects, which will require professional judgment in our applications.*

2006

As we begin purchasing chemicals for the 2006 growing season, we will purchase only EPA Category III and IV pesticides and reduce our chemical applications down to the least toxic option for each control issue. This will eliminate the most toxic Category I and II pesticides from public parks. **Attachment B** shows the most highly used pesticides for each control area, and which pesticides attempt to use in 2006.

In our department's 2006 budget request, we will submit for City Commission consideration a budget enhancement for Park District #2. This enhancement would include the following items:

- Purchase of a Waipuna steam machine to replace the chemical product Round-Up in parks maintained by District #2
- Increase grass seed and fertilizer budget to allow for a spring, and a possibly a mid-season, overseeding of the parks in an attempt to eliminate the competition of broadleaf weeds and other undesirable weeds in turf areas.
- Increase part-time staff. These additional hours will be needed to perform additional overseeding and to operate the Waipuna machine. The Waipuna will require 2 to 4 treatments per year to maintain a dead-zone in desired areas (Round-Up requires 1 to 2 treatments per year).

If funded, this will move the parks in District #2 very close to being pesticide free. (Some parks located in this area are South Park, Watson Park, Centennial Park, Burcham Park, Broken Arrow Park) The main exception would be the landscaped areas and athletic fields in these parks, which will be addressed later in the plan.

2007

In our department's 2007 budget request, we will submit for City Commission consideration a budget enhancement to convert the parks in Park District #3 (including Cemeteries) to pesticide free.

If funded, this will move the parks in District #3 very close to being pesticide free. (Some parks located in this area are Edgewood Park, Hobbs Park, Lyons Park) The main exception would be the landscaped areas and athletic fields in these parks, which will be addressed later in the plan.

2008

In our department's 2008 budget request, we will submit for City Commission consideration a budget enhancement to convert the parks in Park District #1 to pesticide free. The cost would be similar to the costs associated with the other park districts mentioned above.

If funded, this will move the parks in District #1 very close to being pesticide free. (Some parks located in this area are Holcom Park, Dad Perry Park, leased property below Clinton Lake) The main exception would be the landscaped areas and athletic fields in these parks, which will be addressed later in the plan.

Staff recommendation: Parks & Recreation staff feels that if the steps listed above are funded we have a pretty good chance of maintaining the current level of service in our parks. However, we have a great deal of concern with the steps listed below due to the high cost of the conversion and the possibility that there will be a noticeable decline in appearance of the facilities.

Also in our department's 2008 budget request, we will submit for City Commission consideration a budget enhancement to convert all park landscape areas in Park District #1 and Park District #3 to pesticide free. This will require the purchase of an additional tractor, topdresser and aerification unit. It will also require additional dollars to be spent in the areas of plant replacement, part-time staff for pulling weeds, and alternative product purchase.

2009

In our department's 2009 budget request, we will submit for City Commission consideration a budget enhancement to convert all park landscapes in Park District #2 to pesticide free. This conversion will be the most expensive on a yearly basis due to the high number of intensely landscaped parks in the area (South Park, Watson Park, Downtown parking lots and planters, Constant Park, Japanese Friendship Garden, City Hall, Centennial Park, etc.). Even with using best practices and alternate means of control, we feel labor cost will need to increase significantly in this area to keep up with weeding landscape beds and replacement of diseased plant materials. We will recommend the purchase of a mulch blowing machine, which will allow us to apply mulch 1-2 times a year to all beds for added weed control. Currently, most of our beds are being mulched once every 12-18 months.

In our department's 2009 budget request, we will submit for City Commission consideration a budget enhancement to convert all athletic fields to pesticide free.

If these two items are approved, all City parks would be pesticide free by the end of 2009.

Exceptions:

There are a number of things that would have to be treated even in the pesticide free parks if the need arose.

- 1) Infestation of noxious weeds that could not be mowed or controlled by other means.
- 2) Sprays to control wasp and hornet nests around restrooms and shelters

- 3) Treatment of stagnate water to control mosquito larva. (West Nile Virus).
- 4) Treatment of an over population of pests such as grubs, cutworms, ticks and bagworms when alternate means are not controlling the problem and further infestation will destroy a significant public assets.
- 5) Treatment of bodies of water contracted to the Kansas Department of Wildlife and Park for the purpose of fisheries management.

When these situations arise we will follow procedures established in the notification section of this report.

Other Non-Park Properties:

On **Attachment A**, you will see a number of non-park properties we manage. Most are street medians, right-of-ways and parkways situated along the major streets in Lawrence. Some are heavily landscaped over several miles. Due to the enormous scale of these areas and the ever-expanding number of these type areas (west 6th street will be added to our list next summer), we do not feel it is economically feasible to maintain these areas without the use of herbicides. To understand the scale of these areas, you need to walk north 2nd Street and try to estimate how long it would take to hand weed the landscape beds from Locust Street to the Turnpike on both sides of the street.

Anticipated Cost of Program

Over the past 3 to 4 years, the Parks & Recreation Department general fund accounts **have spent between \$8,000-\$10,000 per year on chemicals**. With the transition to non-pesticide products, we anticipate this number will need to increase dramatically. **Attachment C** illustrates some of the anticipated cost differentials from existing products to non-pesticide products. The chart below is a summary of anticipated costs for equipment, staff and materials.

	Equipment	Staff	Materials
	Purchase	(Annual expense)	(Annual expense)
2006			
Wapunia Machine for Park District #2	\$40,000		
Grass Seed & Fertilizer - District#2			\$ 5,000
Part-time Staff - District #2		\$12,000	
Alternative Products (increase chemical line)			\$ 7,000
2007			
Wapunia Machine for Park District #3	\$40,000		
Grass Seed & Fertilizer – District # 3			\$ 5,000
Part-time Staff - District # 3		\$12,000	
Alternative Products (increase chemical line)			\$ 7,000
2008			
Wapunia Machine for Park District #1	\$40,000		
Grass Seed & Fertilizer – District # 1			\$ 5,000
Part-time Staff - District # 1		\$12,000	
Alternative Products (increase chemical line)			\$ 7,000

2008			
Tractor, Topdresser and aerification machine for Landscape Division	\$43,000		
Plant material replacement			\$8,000
Part-time staff – Landscaping District #1 & #3		\$35,000	
Alternative Products (increase chemical line)			\$9,000
2009			
Mulch blowing machine	\$50,000		
Part-time landscape staff district #2		\$45,000	
Plant material – district #2			\$8,000
Alternative Products (increase chemical line)			\$9,000
Athletic Fields - Alternative Products			\$25,000
Total needed by the end of 2009	\$213,000	\$116,000 Annually	\$95,000 Annually

Eagle Bend Golf Course:

We do not feel it is feasible to manage Eagle Bend Golf Course without the use of pesticides. Facility appearance is the primary factor a player considers when selecting a course to play. If the facility is not comparable to other area facilities, golfers will not play it. We feel reducing or eliminating pesticides as a management tool will significantly decrease the quality of the facility and thus make it a less attractive option for the paying customer. In a time when every possible revenue dollar is needed to operate Eagle Bend, doing anything that will decrease revenue or increase operating expenses could be a devastating blow to the long-term success of the course. The Golf Course Superintendents Association concurs with this recommendation and supports our position.

Notification:

As we convert to a pesticide-free park system, there may still be times when a pesticide must be applied to safeguard a significant City asset. This will be done only after all other avenues of control have been exhausted. If these situation occur, the following steps will be taken to assure public health and safety concerns are met.

- The Director of Parks & Recreation must approve the application of a pesticide in a pesticide-free area. It is important that these decisions be made at the department head level to assure the timely application of product. Delaying to get City Commission approval could make the problem worse and require more product for control.
- Signs will be posted at least 1 hour prior to application of product to notify the public of our intent to treat the area.
- Signs will be left in place for a minimum of 24 hours after application unless the label specifies a longer reentry time.
- Signs will be posted at every entry point where the pesticide is applied, if the pesticide is applied in an enclosed area. If the pesticide is applied in an open area, signs will be posted in highly visible locations around the perimeter of the treated area.
- For high-use recreational areas, such as on or near picnic areas and playgrounds, signs will be posted at a minimum interval of every 50'.

- For linear applications in parks or other recreational areas, such as along sidewalks and paths, signs will be posted at the ends of the treated area and at trail intersections or other key crossings at a minimum of every 200’.
- Signs will be of standardized design, easily recognizable to the public and workers.
- Signs will be sturdy and able to sustain exposure to sun, wind and rain.
- Signs will contain the name and active ingredient of the pesticide product, the target pest, the date of pesticide use, the signal word indicating the toxicity category of the pesticide product and the name and contact number for the city department.
- Posting for pesticide use at the Eagle Bend Golf Course will consist of signs placed at the first and tenth tee, and in the Pro Shop.

Record Keeping:

In order to determine the effectiveness and cost of the program, city staff will keep an accurate record of all pest management activities. The record will include the following information:

- The target pest
- The kind of application—cultural, biological, or chemical
- The type and quantity of product used
- The specific location of the product application
- The date the product was used
- The name of the product applicator
- Experimental efforts
- Exemptions granted for the application
- Whether or not the product is registered as a pesticide with the EPA
- The EPA Toxicity Category of the product
- Weather conditions at time of application

City staff will make the pest management record readily available to the public and to interested institutions upon request.

Public Education:

LPRD will provide information via the Department’s website to keep the public informed on the progress of converting the parks to pesticide-free. This information will include such things as:

- LPRD list of Pesticide Free Parks, keeping updated as plan is implemented
- Information to explain to the public what the notification signage means when a pesticide is applied.
- LPRD best horticultural practices to reduce the use of pesticides. This will be a list of past and current practices for the reduction of pesticides.
- List of alternative products for household horticultural use
- Recognize volunteer groups that have adopted a park to assist in the pesticide free maintenance of the facility.

Other marketing items may include:

- The development of a logo for entry signs at pesticide-free parks.
- Develop signage to call attention to applications of non-pesticide controls. In other words, it will call attention to all the things we are doing right. The public often assumes that if they see us spraying, it is a toxic chemical being applied. In fact, we have been using a number of non-chemicals controls for years.

Conclusion:

We applaud the citizen group that submitted the initial report and their concern for public safety in our parks. As parks and recreation professionals, we share these concerns and are especially concerned for the safety of our staff. That is why we spend a great deal of time and money educating our staff to assure they are equipped with the latest technology and have the most current research available. We require that all of our applicators be licensed as commercial pesticide applicators by the State of Kansas and attend the required continuing education classes needed to hold those licenses. We stay current on which chemicals are approved, by law, as suitable for public use. We leave very little to chance when it comes to the health and safety of our staff or the general public. If we are not comfortable with the safety of the product, it will not be applied.

The 2000 Parks and Recreation Comprehensive Plan citizen survey indicated that public landscaping and flower gardens were one of the most important parks and recreation services they both desired and were satisfied with. It was a service that they ask us to continue to add to our park system, which tells us that this service is important to the community. It will be a major challenge for us to keep the same level of citizen satisfaction in the appearance of the parks with these new policies.

We feel this report outlines an appropriate strategic plan to create a pesticide free park system. However, it should be pointed out that most of our professional staff, and most of the horticultural industry, do not believe this is the most cost effective way to manage a park system. If requested, we could provide testimony from industry experts, articles and quotes from trade publications and research done by universities and professional organizations that would detail the proper and safe use of pesticides as a management tool. We have concerns that our inability to use pesticides may reduce the quality of our parks and could threaten the long-term health of the City's parks, trees, shrubs and flowers.

For this program to have any chance of success, **it must be fully funded** and monitored for needed changes in the future.