

October 30, 2006

To: The Committee of Pfizer, Beller & Binder

From: Ted Dejony

Subject: Earth friendly Grounds Policy proposal

I've compiled this report in order to provide the committee of Pfizer, Beller & Binder with a practical alternative earth-friendly approach regarding our current grounds-keeping policy. My report consists of a new approach concerning the issues with our current policies of land use. Several new policy options, and a lawn/land revision proposal would reduce the amount of lawn areas while providing recreational opportunities for our employees as well as the community and local wildlife.

I feel it is important to bring to the committee's attention that our current grounds policy features the use of lawn care products that contain certain questionable chemicals. These chemicals may have long term future effects that probably would not be beneficial to the company or the community at large. Contamination of a local water source has already been diagnosed in our immediate area and is a growing problem not only to us, but to our community, our environment and the local wildlife.

Therefore, I urge the committee to carefully study my entire report in order to gain a clearer understanding of the magnitude of this existing situation, and the responsible environmental solutions that would improve this matter.

A brief history:

As many of us know, our campus was only recently constructed in mid 2001. We have occupied this location now for nearly 5 years. I recently analyzed a soil & water sample which was taken 6 months ago. The analysis determined that the water sources and soil in this area were not within acceptable E.P.A. limits and not entirely free of contaminants.

Water & Soil analysis results and comparisons:

More recently, I ordered a second soil & water analysis because of recent complaints from the community. The results of this new analysis were very disturbing. The residents of the Jack Manor residential community complained of recent poor water quality, and an unusual amount of deceased wild life as well as a strange color and odor emanating from Kimberly creek, which runs past our property, throughout the residential area and into Sullivan Lake, contaminating it.

The above mentioned community concerns were strongly confirmed by my new analysis. Several autopsies were performed on recently deceased wild life native to this area. Deer, wild birds and fish, all contained possibly fatal levels of the following chemicals: **Glyphosate, Carbaryl** and **Fenarimol**. These chemicals are also manufactured for use in several types of pesticide, herbicide and insecticides and have had a long history of past lawsuits due to human, environmental, and wild life damage. This 2006 analysis confirms the presence of these lethal chemicals in Kimberly creek, Sullivan Lake and in the residential water source of Jack Manor.

These chemicals do not occur naturally and can only be present in water and soil if used in massive quantities, such as we use now. Pfizer, Beller & Binder currently uses **RoundUp, Land Master**, and **Septene** in large capacity, for weed and pest control.

- **RoundUp**, a weed control chemical, contains Glyphosate.
- **Land Master**, a weed control and lawn care chemical, contains Carbaryl.
- **Septene**, an insecticide used to exterminate Moles, contains Fenarimol.

Chemical Facts:

Glyphosate:

This chemical is acutely toxic to humans, wild birds, fish and other aquatic species. According to the Environmental Protection Agency, when exposed to levels above the Maximum Contaminant Level (MCL), Glyphosate can cause lung congestion, increased breathing rate, kidney damage and chronic reproductive effects in humans.

Carbaryl:

This chemical is toxic to humans, aquatic organisms and wild bird species. When exposed to levels above 524.5 Parts per million, Carbaryl can cause nausea, diarrhea, skin irritation, kidney, lung and liver failure and death. In some cases, Carbaryl has been known to cause molecular cell degeneration, resulting in gangrenous sores and lesions on the skin.

Analysis of our current situation:

By using these chemicals in our existing grounds keeping arsenal, we are in effect feeding our lawn "**junk food**". Aside from the obvious health and environmental hazards, these chemicals also "stress" the lawn by weakening its root systems, making it much more vulnerable to pests and more prone to damage by insects. This eventually results in increased usage of these chemicals to keep up with the pest problem. In doing so, we are "pouring more fuel on the fire"!

Therefore, in actuality we are creating a larger problem while trying to solve a smaller problem. I feel that this is an inefficient use of our company resources and believe that by using or existing policy, we are promoting an environmentally irresponsible climate which can only result in a number of lawsuits in times to come.

It has now become abundantly clear that since our occupation of this particular area, our lawn care efforts have had a somewhat devastating effect on the local environment. In our efforts to maintain a pristine, well-manicured lawn we have overlooked the possibility of environmental problems. If we continue along our current destructive path, without adapting a new grounds care policy, we will only knowingly be polluting and poisoning our property, its wild life and the surrounding communities. There are simply no other options. We must make these corrections as soon as possible

The effect we have had thus far on our environment warrants a prompt decision on the two policy proposals I have included in this report.

I believe it to be of the utmost importance that we now shift our focus from the outward appearance of our grounds, to inward reflection of the damages we have caused and what we can do to promote a healthier, more earth-friendly environment. These are the reasons behind my requested report.

Below you will find some of my suggestions which should take place immediately. I have created 2 separate policy options. First, you will find a new **Lawn care strategy** that when utilized will reduce maintenance costs and help our lawn become a natural, non-chemically dependant system. This new strategy will save valuable company resources. Because of its obvious advantages, it will be included in both options.

Lawn care strategy:

The following strategy will outline several necessary steps which will help transition our chemically dependant lawn system to a natural, non-chemical dependant system. Using the following techniques will result in a healthier, more pest resistant lawn with the added benefit of reduced maintenance costs.

1) Watering schedule:

Over watering can lead to excess blade growth, summer fungal diseases, and more frequent mowing. In addition, it wastes water and increases the risk of fertilizer and pesticide run-off, which can negatively impact local water quality.

Currently, we apply 2 inches of water twice a day, every other day.

Our species of grass requires only 1 inch of water applied between 5 and 7 a.m., every other morning.

Using the suggested watering cycle will reduce the amount of water used and will be financially beneficial for our company.

I suggest we implement this new watering strategy immediately.

2) Mowing schedule:

The average grass blade height of a well maintained, healthy lawn is between 2-1/2 to 3-1/2 inches in height.

Our current average grass blade height is 1-3/4 inches. All of our mowing equipment is set to cut at 1-3/4 inches in height.

By mowing our lawn shorter than necessary, we are in effect “scalping” it. This leads to thin, dying out grass, shallow root systems and a very poor pest resistance. Therein lays the cause of our situation.

We have been so focused on the visual appearance of our lawn, that we have overlooked the benefits of proper lawn care which would inherently eliminate the need for chemicals.

Given these observations, I understand why we have used large amounts of chemicals on our lawn system. What we must now understand is why we cannot continue along this path. The negative impact these chemicals have had on our environment is in no way beneficial.

I recommend that we modify our mowing equipment to cut at a height of no less than 3 inches. Doing so will result in a more healthy and pest resistant lawn system without the need for dangerous chemicals.

Additionally, I recommend to the committee that regardless which Policy Option is decided upon, we immediately implement this new Lawn Care Strategy. It could yield great benefits for our company, our budget, our community, our environment, and our lawn system.

Grounds Keeping Policy – Option 1:

This option involves the construction of several recreational areas for employee and community use which will eliminate several thousand square feet of lawn area. The result would be less maintenance and associated costs, and most importantly, less company resources wasted.

Recreational additions:

- A. Wild bird sanctuary
- B. Employee / community gardens
- C. Employee picnic area
- D. Walking path
- E. Water fountain
- F. Addition of certain species of trees and flower beds

Alternative Products: The following 2 products will help to improve the situation.

Corn Gluten – A natural weed killing herbicide used in the spring time only. Corn Gluten is an effective combatant for dandelions and other broadleaf and grass weeds.

Mole-Ex – A natural alternative to pesticide, this product is comprised of 100% organic, naturally occurring substances which repel the mole rather than kill it.

Lawn care cost comparison:

Current products	Yearly cost
Lawn Master (grass growth)	\$ 647.50
Round Up (weed killer)	\$ 287.49
Septene (mole killer)	\$ 589.34
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Current yearly total:	\$ 1524.33
5 Year Cost:	\$ 7621.65

As you can see by this comparison, in the past 5 years, we have spent approximately \$7621.65 on lawn care. When you compare that to a 5 year cost of the suggested products, \$1262.55, I believe the financial benefits speak for themselves.

The **Suggested products** comparison to the right takes into account a new lawn care strategy which will effectively eliminate the need for “grass growth” products. These products enhance the physical appearance of grass, making it appear shinier. This is what is referred to as “Eye Candy”. My new lawn care strategy will result in the same effect, without the added risk to our environment.

Suggested products	Yearly cost
New lawn care strategy	\$ 0.00
Round Up (weed killer)	\$ 82.97
Septene (mole killer)	\$ 169.54
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Current yearly total:	\$ 252.51
5 Year cost:	\$ 1262.55

Recreational additions: Jay Fortier, president of Fortier Construction, has offered to build our project for thousands less than other bids we received. He will give us a rock bottom price, which will assist us in this costly endeavor. So then, why couldn't we reduce some of the lawn area and build a water fountain, community garden, employee picnic area, as well as a walking path. This would be beneficial to ourselves and the community, as well as reduce the amount of lawn area to be maintained, thusly reducing our lawn maintenance costs in the long run.

Refer to the topographic "**Campus layout - Option 1**" map on the next page for a visual representation of the following additions.

Walking path:

The walking path would provide beneficial exercise to our employees and the local residents. Construction costs alone can run upwards of \$ 40,000 per mile for a soft surface trail. However, my uncle will construct a 2 mile track for only \$ 16,000. It will be constructed of recycled tires, the same material used on hi-school running tracks. This allows for more give under the foot, and provides a more comfortable walking surface. Fortier Construction will also apply a newly created Natural Anti-Chemical Seep Shield (N.A.C.S.S.) designed to prevent any ground contamination from chemicals that may be present in the walkway surface. As the name implies, the N.A.C.S.S. is comprised of 100% earth friendly ingredients.

Wild bird sanctuary:

The wild bird sanctuary will be located in the North Western corner of our property, close by Kimberly creek, and would be approximately 1/2 acre in size. We received bids from a few prospective construction firms, the lowest was \$70,000. Fortier Construction will construct the sanctuary for only \$27,000. There will be plenty of tree coverage, providing homes for many different wild birds native to this area.

Water fountain:

The water fountain's water will be supplied using our existing watering system. Jay Fortier has now agreed to donate this fountain to us in return for mention of his company name engraved on it. The picture below serves as a visual representation of the type of fountain currently in use.



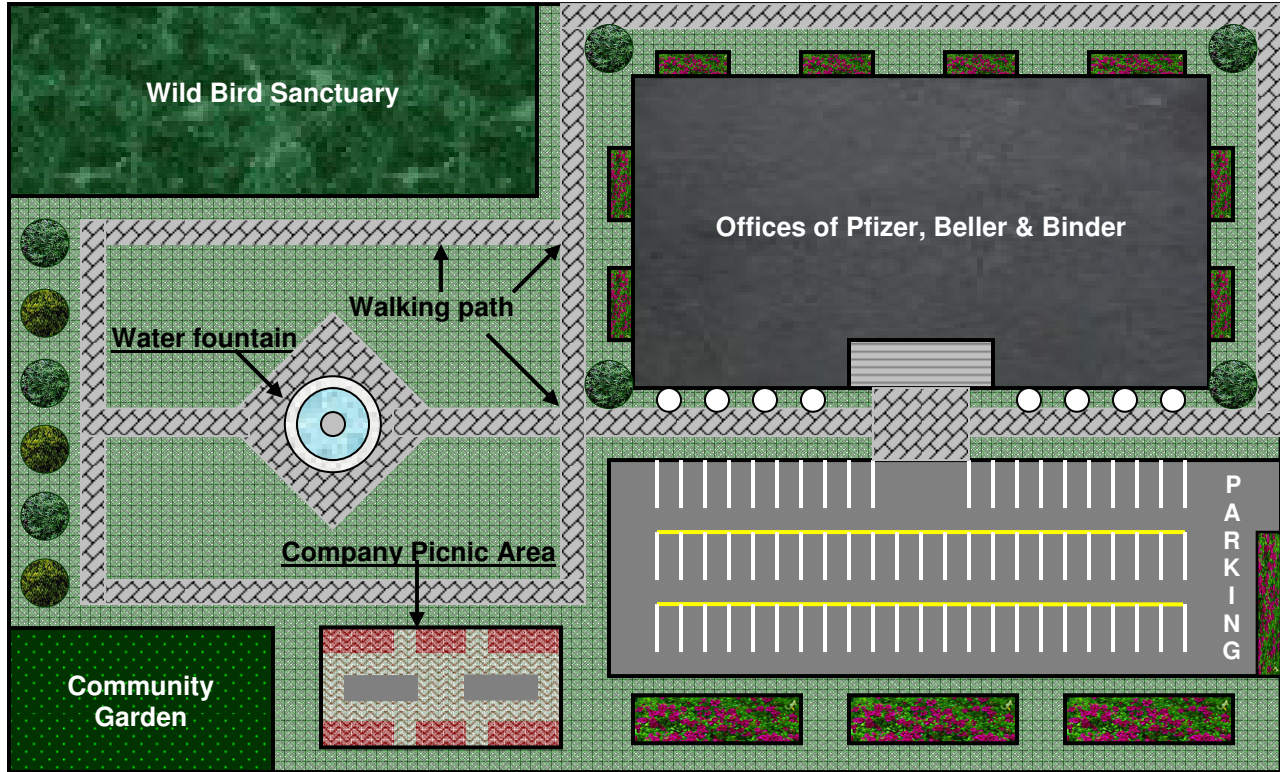
Company picnic area:

The covered picnic area will consist of 4 charcoal grills surrounded by 6 large wooden picnic tables. The construction cost for this area will total approx. \$ 8,000. In addition, to recoup some of our construction costs, we could rent it out to the general public for special occasions.

Trees and flowers:

I believe we should also add more foliage to our property. Aside from the visual benefits, the addition of insect repelling foliage could be very advantageous for our company. The total cost for this added foliage will be about \$3,500. The following species of trees and flowers would be quite beneficial because they each possess certain insect repelling qualities: Kentucky coffee tree, Chinaberry tree. In addition I suggest shrubbery surrounding and within the area such as, Lavender, Gopher Spurge, Chamomile, and Citriodora.

Campus Layout – Option 1:



Community Garden: The construction costs for the proposed community garden should be no more than \$1,500. Please see the community garden rules and liability contract set fourth for further details.

Due to the extent of damage we have already caused to the local environment, we expect to be fined \$20,000 by the County. The total amount of this fee will fund a project which will clean up Kimberly Creek and Sullivan Lake. This amount will also be added to the total initial cost of Policy Option 1.

Policy Option 1 total initial cost:

Wild Bird Sanctuary	\$ 27,000
State Fee	\$ 20,000
Walking path	\$ 16,000
Company picnic area	\$ 8,000
Trees and flower beds	\$ 3,500
Community Garden	\$ 1,500
<u>Water Fountain</u>	<u>\$ Free</u>
Total:	\$ 76,000

Total project time has been estimated at 8 months. If we begin construction immediately, it will be completed by April 2007. This would be in line for the plants, flowers and trees to fully develop in time for all summer activities.

Additional cost saving opportunity:

A good friend of mine is going to school at Clark College, a local community college. He told me the college offers a "State Work Study" program for its students. This program helps students pay for school through subsidized part-time employment. The state will reimburse us 65% of the students' gross wages. Here are the immediately obvious advantages of this program:

1. **Payroll reimbursement.** We would be responsible for only 35% of the students' gross payroll. The State will reimburse us for the rest.
2. **More Savings.** Utilizing this program will cut our costs down to \$50,000. Due to the students part time status, we will not be required to provide employee benefits.
3. **Public Relations (PR).** By participating in this program, our company will receive public recognition from the community as an establishment which promotes higher education and a jobs-training program.

I have brought together all of the necessary paperwork to apply for and begin this program as soon as possible. If this is a viable option that the committee wishes to pursue, please email me. I believe this can only be a "win win" situation for our company as we go forward into the future!

Additionally, I recommend hiring a community liaison. The community liaison will work directly with the local neighborhood association, county and city boards, and local interest groups who are concerned about the health and well being of this community and environment. The fore-mentioned employee would act as our representative for the varied associations and groups, keeping us constantly informed of outside concerns and/or changes in our communities and its concerns.

Option 1 Advantages & Disadvantages:

The advantages:

Positive community and public relations, a healthier, cleaner lawn system, along with greatly improved environmental programs. The construction costs would be discounted, and the results would be highly impressive. Our lawn maintenance costs would decrease, and the new additions to the lawn area will promote stress reduction and healthier living for our employees and the community..

Disadvantages:

\$ 20,000 fine for environmental clean up, construction cost, plus an employee / community garden liability, and the hiring of a community liaison (a disadvantage only because of the cost of his or her salary). These costs will diminish as time goes on because of our other savings.

Policy Option 1 Conclusion:

It would seem that the advantages of this policy strongly outweigh the disadvantages. I believe the long-term financial, environmental, and public relations benefits of this option are well worth its price.

Grounds Keeping Policy – Option 2:

This option is a less involved approach to the repair and improvement of our current environmental situation. By utilizing this option, improving our situation would cost the company far less than Option 1. However, we would not be investing as much into the environment which might have negative public relations effects. If we approved this option, we would preserve our lawn in its entirety, but in doing so, we will be doubling our new earth-friendly lawn care costs. Using option 2 would require more time and company resources spent on lawn maintenance in the future.

All of the Alternative Products and Lawn Care Strategies will still be utilized as they are in Option 1. However because of the increased lawn area in Option 2, these new products and strategies will ultimately cost our company more per month to maintain. Please pay close attention to the changes in monthly and yearly costs in the below cost comparison as they have changed.

Alternative Products:

Corn Gluten – A natural weed killing herbicide used in the spring time only. Corn Gluten is an effective combatant for dandelions and other broadleaf and grass weeds.

Mole-Ex – A natural alternative to pesticide, this product is comprised of 100% organic, naturally occurring substances which repel the mole rather than kill it.

Cost comparison:

Current products	Yearly cost
Lawn Master (grass growth)	\$ 647.50
Round Up (weed killer)	\$ 287.49
Septene (mole killer)	\$ 589.34
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Current yearly total:	\$ 1524.33
5 Year Cost:	\$ 7621.65

Notice in this comparison, our costs for the new products have doubled due to the increased lawn area to be maintained. A 5 year cost of the suggested products for Option 2 will be \$2903.86. Even though Option 2 is more expensive per month to maintain, I believe the financial benefits still speak for themselves.

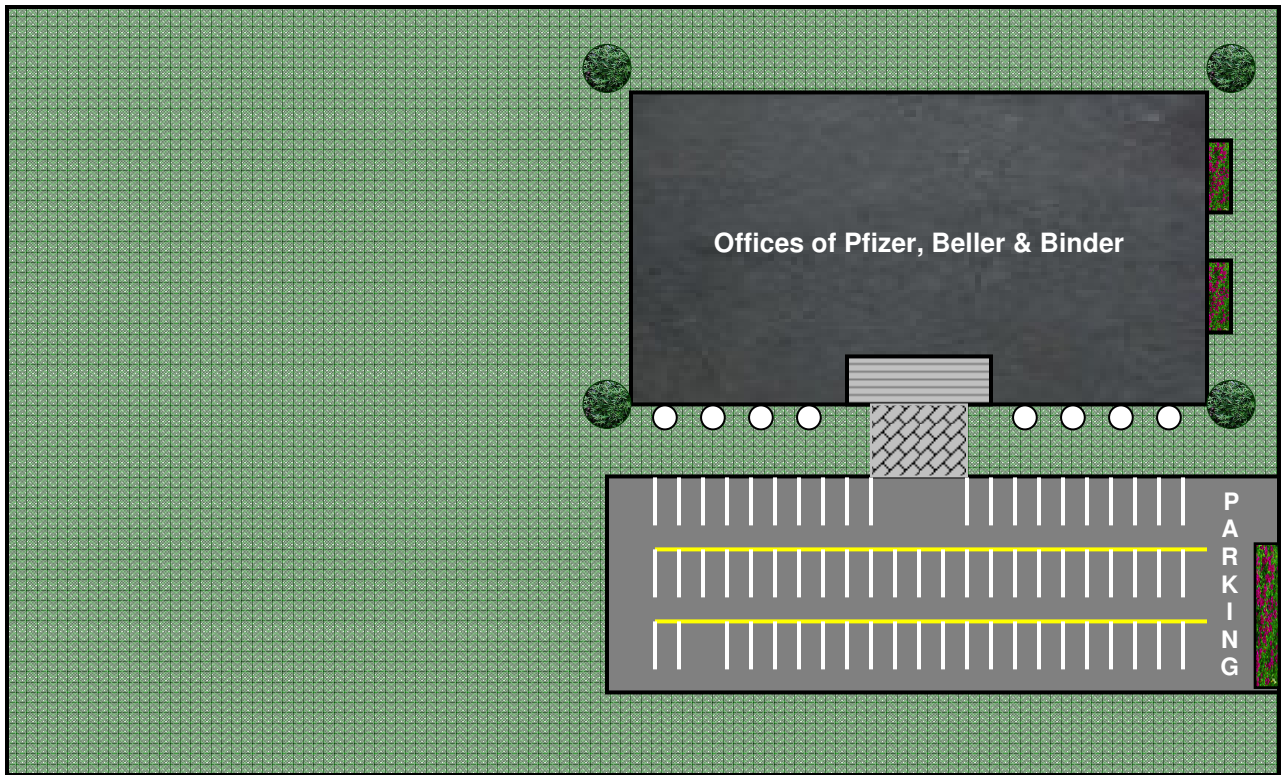
I have included my new lawn care strategy in Option 2 as well. I believe this new strategy should be a mandatory addition to either policy because of its obvious benefits. However, in Option 2, the long term yearly costs will be higher than Option 1, as noted in the graphic to the right.

Suggested products	Yearly cost
New lawn care strategy	\$ 0.00
Round Up (weed killer)	\$ 190.83
Septene (mole killer)	\$ 389.94
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Current yearly total:	\$ 580.77
5 Year cost:	\$ 2903.86

Policy Option 2 total initial cost:

State Fee	\$ 20,000
Trees and flower beds	\$ 3,500
Water Fountain	\$ Free
Total:	\$ 23,500

Campus layout - Option 2:



Option 2 Advantages & Disadvantages:

Advantages:

A healthier, cleaner lawn system, environmental improvements, inexpensive lawn maintenance.

Disadvantages:

\$20,000 fine for environmental clean up.

P,B&B Employee / community garden rules and liability contract:

The following is a notice of rules and a waiver of liability which must be read, understood and signed by any persons using the employee / community garden of Pfizer, Beller and Binder. This includes any employee, community member, guest, visitor or any persons wishing to use the garden.

By signing below, I agree to the following rules:

1. I understand that the Pfizer, Beller and Binder Employee / Community Garden is providing me a plot for a period of 6 months from today. At the end of this 6 months, I will have the opportunity to renew if I have followed the rules below.
2. I will have something planted in the garden within 1 month and keep it planted all summer long, otherwise I will forfeit my right to the plot.
3. If I must abandon my plot for any reason, I will notify the P,B&B garden manager.
4. If my plot becomes unkempt with weeds or trash, I understand I will be given notice to clean it up. If it is not cleaned up, I will forfeit my right to the plot.
5. I will pick only my own crops unless given permission by the plot user.
6. I will not use fertilizers, insecticides or weed repellents that will in any way negatively affect our environment or other plots.
7. I will not bring pets to the garden.
8. I will not share the fence lock combination with others not associated with the garden.
9. I will use the garden tools only as intended and share with other gardeners as necessary.
10. I understand that neither Pfizer, Beller and Binder, nor owners of the land are responsible for my actions. I THEREFORE AGREE TO HOLD HARMLESS PFIZER, BELLER AND BINDER AND OWNERS OF THE LAND FOR ANY LIABILITY, DAMAGE, LOSS OR CLAIM THAT OCCURS IN CONNECTION WITH THE USE OF THE GARDEN BY ME OR ANY OF MY GUESTS.

Signature

Date

Printed Name

Most lawn care techniques quoted from Marion Moses, M.D. of the Pesticide Education Center.
Additional lawn care tips quoted from Donnan.com – lawn, garden and landscaping specialists.