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# Research Report

## Maine Department of Environmental Protection Lawn Care Focus Groups

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## Key Findings

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### Focus Group Sessions

- Most participants seemed to be motivated to have an acceptable lawn rather a perfect lawn. For some participants acceptable just meant green– whether that was crabgrass, clover or grass. A lush lawn was only important to a handful. Others felt pressure from comparisons to neighbor’s lawns. Those with perfect lawns set the standard for others, especially in neighborhoods where lawns abut each other.
- Most participants would rather spend their time on other things than mowing or caring for their lawn. Lawn care was a low priority – almost a “must do.”
- Rather than a lush, green lawn, most participants were more likely to be concerned about excess amounts of weeds such as dandelions or crabgrass. They were also more concerned about grubs or beetles that would kill and brown a lawn. Thus use of fertilizers, pesticides, and herbicides was mostly about addressing these issues.
- For some, fertilizing was just a ritual, done in the summer and fall, for example.
- Many participants thought that the use of fertilizer simply made grass grow faster, requiring more mowing which was undesirable. Some participants thought that with ample rain, fertilizer was not at all necessary.
- Those that relied on lawn services liked the convenience and the assurance that professionals would make sure that their lawn looked nice.
- Most participants were inherently aware of the dangers of fertilizers/pesticides/herbicides. Those with children or pets tended to be more concerned about these treatments as poisons. Those near lakes or streams were more attuned to the impact of clean water and streams – and the use of rivers and streams.
- Participants saw the lawn flags that are placed on a lawn after a lawn treatment as evidence that the treatments were dangerous. They surmised that lawyers required these flags to limit liability.
- Even with proper use, fertilizers/pesticides/herbicides were seen as dangerous or damaging to the environment.
- Participants that were concerned about the environment, used fertilizers/pesticides/herbicides despite their dangers, but they attempted to minimize their use.
- Most participants were familiar with the danger of storm water runoff. This was at least partly due to the “Rubber Ducky” ad. Most participants had seen this ad and recalled specific details as well as the intended message. Many participants had also seen warnings near storm drains – reinforcing the connection of storm runoff to the nearest body of water.

- Most participants found the Washington ad “When you are fertilizing your lawn” to be humorous, eye-catching and clever. Still, some felt that the ad could be more instructive and could provide more educational information about fertilizing and the effect it has on the waterways.
- The majority of participants found the Texas “Psycho” ad to be disturbing and unsettling. While many agreed that it caught their attention, some expressed discomfort with the image of the dead fish and would not want their children to view the ad. Others found the background music to be annoying.
- Most participants found the Vermont ad to be informative and educational. While many appreciated the clear message of the ad, a few felt it was not catchy enough – that there was nothing special about the ad that would hold their attention.
- While storm runoff was seen as a source of pollution, most participants saw other environmental issues as being of greater concern.
- Most participants would turn to the Internet or government agencies first for information about fertilizers and lawn care. Others would go to nurseries and hardware stores for more information. Many participants would consider websites or advertisements sponsored by environmentally sensitive organizations in the state to be credible sources of information. Examples provided by participants include the Cooperative Extension Service, the Audubon society, the Bay Keepers Association and the DEP.
- A few participants felt the Maine Department of Environmental Protection may be biased and were not sure if the DEP would be considered a credible source of information about fertilizers and lawn care. A few participants did not feel that the DEP is accessible, or reliable.

## Pre Group Survey

Survey results among participants in the groups revealed the following:

- Participants thought of themselves as environmentally conscious and they generally want to do the right thing.

95% agreed or strongly agreed that “Keeping our rivers and lakes clean from pollution is important to me.”

62% agreed or strongly agreed that “I consider myself environmentally conscious.”

69.4% agreed or strongly agreed that “I would change the way I do things in order to protect the environment.”

56% disagreed or strongly disagreed with “I believe that dangers to the environment are often overstated.”

Only 8% agreed or strongly agreed that “Protecting people’s lifestyle is more important than protecting the environment.”

- But some were not taking as much action as they thought they could.

30.7% agreed or strongly agreed that “I’d like to change how I impact the environment, but it’s hard to do the right thing all the time.”

- Participants in these groups were not really dedicated to their lawns; they seemed to care for their lawns because they had to. Some admitted to feeling social pressure to keep up their lawns. Some preferred smaller lawns to minimize lawn care.

42% agreed or strongly agreed that “The smaller my lawn, the less work I do and the better I like it.”

33% agreed or strongly agreed that “I’d rather have more garden and less lawn.”

Only 23% agreed or strongly agreed that “A green, lush lawn is very important to me.”

Only 8% agreed or strongly agreed that “I have to fertilize or use a pesticide on my lawn because it is so heavily used.”

31% agreed or strongly agreed that “If one house in my neighborhood doesn’t take care of their lawn, it really stands out.”

28% agreed or strongly agreed that “If I don’t have a nice green lawn, my friends or family will think I’m lazy.”

- Participants were well aware of the dangers of fertilizers/pesticides/herbicides.

Only 21% agreed or strongly agreed that “As long as you follow the directions carefully, using pesticides or fertilizers won’t hurt the environment.”

51% agreed or strongly agreed that “I’m worried about the safety of fertilizers and pesticides.”

Only 13% agreed or strongly agreed that “If pesticides and fertilizers were bad for the environment, government would ban them.”

- They were generally thoughtful and conservative in their use of fertilizers/pesticides/herbicides.

Only 13% agreed or strongly agreed that “I fertilize or use a pesticide on my lawn as much as I need to so that it’s looking nice.”

49% agreed or strongly agreed that “I fertilize or use pesticide on my lawn only when it absolutely needs it.”

Only 10% agreed or strongly agreed that “I will just as well use up an entire bag of fertilizer or pesticide rather than store any extra.”

Only 8% agreed or strongly agreed that “I don’t have time to become an expert in lawn care; I use whatever fertilizer or pesticide is most convenient or the one I find in the store.”

- Many were interested in environmentally friendly alternatives to fertilizers/pesticides/herbicides.

69% agreed or strongly agreed that “I would switch to an organic fertilizer or pesticide to protect the health of people and pets.”

46% agreed or strongly agreed that “Even if it costs more, I would use organic fertilizers or pesticides in order to protect the environment.”

21% disagreed or strongly disagreed that “Organic fertilizers and pesticides don’t work as well as chemical fertilizers and pesticides.”

- Many participants appreciate the importance of their personal efforts to reduce storm water pollution from lawns and gardens – but are not taking the appropriate steps.

65% agreed or strongly agreed that “Storm water runoff from residential lawns and gardens is a major source of water pollution.”

61% disagreed or strongly disagreed that “There is little one person can do about water pollution.”

23% agreed or strongly agreed that “If you care about the water quality of lakes, you don’t fertilize or use pesticides on your lawn.”

## Segmentation (Cluster Analysis)

Cluster analysis identified three distinct groups among the focus groups participants.

### Lawn Naturalists

- Sixteen of the thirty nine participants.
- Less concerned with the appearance of their lawn and less willing to spend time on their lawn. A smaller lawn and a larger garden are preferred.
- Tends to fertilize less often.
- The most environmentally concerned of the groups.
- Very concerned about the safety and use of fertilizers and pesticides.
- Believe that one person can make a difference when it comes to the environment and puts this belief into practice.
- Already converted to the idea of reducing their impact on the environment as a personal priority.

### Lawn Committed

- Twenty of the thirty nine participants.
- Prefer larger lawns, want green lawns, and are willing to spend time on their lawns to achieve this.
- Fertilize their lawn more frequently.
- Concerned about the environment but less so than the “Lawn Naturalists.”
- Not really strongly opinioned. Perhaps looking to others for leadership?
- Willing to spend time to become informed.
- Will try environmentally friendly alternatives, perhaps even if they are slightly more labor intensive.

### Lawn Apathists

- Just three of the thirty nine participants.
- The least concerned about their lawn, preferring as little lawn and lawn care duties as possible.
- Low fertilizer use as they did not want to care for their lawn.
- Concerned about keeping rivers and lakes pollution free but did not think that protecting people’s lifestyle was more important than the environment.
- The least concerned about the effect of fertilizer on the environment. Did not appear to see the immediate dangers to the environment from fertilizer use.
- Not likely to be receptive to information about the environment or to be motivated to make any changes.

## Discussion and Recommendations

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The opportunity and requirements to effectively communicate environmentally friendly lawn care can be best understood by using a social marketing framework, more specifically the A-I-D-A Model, for Awareness, Interest, Desire/Decision, and Action.

### Awareness

It is likely that most citizens have moved beyond the awareness stage of our communications model. In the focus groups there was broad awareness of the dangers and impact of using fertilizers/pesticides/herbicides. Participants knew that these items end up in rivers, lakes, and streams. They also thought that they were inherently dangerous to children and pets. This awareness was fundamental in nature and broadly shared.

To a great extent, awareness of the connection between lawn, runoff and water quality, was due to the “Rubber Ducky” television ad. Participants mentioned this ad without prompting and correctly recounted the intended message of a pollutant becoming a duck and then concentrating with other ducks. While participants may have known that problem of storm water runoff was a problem prior to seeing the ad, this ad presented the issue in a way that made it “top of mind.”

*The “Rubber Ducky” has been effective well beyond what might be expected from an ad run with comparable frequency and reach. Awareness of the impact of fertilizers/pesticides/herbicides is very high and it might be tempting to end the series. We recommend against this. Repeating the ad each year with a modest media buy will remind citizens of the ad’s important message.*

*In addition, the image of a “Rubber Ducky” has become so memorable to citizens and so closely associated with the storm water runoff problem that it should be integrated into all storm water runoff communications. It should be used as a logo or brand to tie all the parts of communications together.*

### Interest

Interest is a function of the risk or benefit of a product, program, or idea to an individual. There was clear interest among participants in the groups in avoiding the use of pesticides and herbicides and for less work on lawn care, in general. The perceived risk of using fertilizers/pesticides/herbicides was quite high. Pet owners saw these as a danger to survival of their pet. Parents thought that their children were not safe around these items. The flags used by lawn services unwittingly reinforced safety concerns by advertising safety warnings. Concern about the safety of fertilizers/pesticides/herbicides is fundamental and deep seated.

The term pesticide has inherently negative connotations and the similarity of the word herbicide places it into this same class. There is no need to create interest to encourage consumers to avoid these items. The word “fertilizer,” however, is not as much a concern relative to safety of people and pets. Those that live near a river lake or the ocean were sensitized to the effect of the phosphates in fertilizer. While a concern, phosphates and fertilizers did not rise to the level of personal safety.

Participants were also interested in the positive effects of fertilizers/pesticides/herbicides. Many were particularly zealous about getting rid of crabgrass and dandelions and some were waging a war on grubs. Thus, the benefits of pesticides and herbicides were more important than the effects of fertilizer – which some thought simply lead to more frequent mowing rather than a better lawn. Unfortunately, few participants were aware of alternatives to pesticides/herbicides. In addition, fertilizers/pesticides/herbicides are readily available at hardware stores and home centers but alternatives are difficult to find.

Many participants were interested in avoiding lawn care and fertilizing. They saw lawn care as a bother and fertilizing as simply adding to the amount of time they needed to spend on lawn care. These participants appeared to routinely fertilize:

- As a matter of habit or ritual. Something that they do every spring and or fall.
- In the belief that it was necessary to do so to maintain a healthy lawn.
- Or to kill weeds or insects (grubs).

*There is little need to develop interest in eliminating or reducing the use of fertilizers/pesticides/herbicides. Running the “Rubber Ducky” series triggers interest in doing the right thing.*

### Desire or Decision

The attitudes towards pesticides and herbicides reached an emotional level among the participants in the groups. One participant attributed the death of her pet to lawn treatments. Some fathers noted that their spouse forbid them from using fertilizers because of the children. Concern about lawn fertilizer has not reached this same level. There is concern, but it is more detached, with the exception of those who live near bodies of water, particularly lakes.

Countering the desire not to use fertilizers/pesticides/herbicides is the perceived need to eliminate lawn weeds and bugs. This was almost a passion among some participants in the groups, while others could not care less – so long as the weed is green.

*We suggest several strategies to reinforce the desire/decision not to use fertilizers/pesticides/herbicides.*

1. *Prove and communicate proof to citizens that it's not necessary to extensively fertilize lawns to maintain a healthy lawn. Broadcasting the message, “minimize the use of fertilizer,” will begin to affect the perception that it's necessary to fertilize every year. Remember, consumers want a reason to not spend time fertilizing and mowing – give it to them!*
2. *Connect fertilizer with pesticides and herbicides. These most often come as a package with pesticides. Since consumers actually fear the “cides,” whenever fertilizer is referred to, it should be referred to as fertilizer, pesticides, and herbicides. Thus, the message becomes “minimize the use of fertilizer, pesticides, and herbicides.” Images of bodies of water can be added to communications to make the connection to negative perceptions of pesticides and herbicides. Thus, the message “minimize the use of fertilizer, pesticides and herbicides” can be illustrated with a photo of a child on a lawn, a pet on a lawn and a photo of a pristine lake.*

3. *The flags used by lawn services to protect themselves from liabilities can be tuned to the cause of natural lawn care – by creating flags with a “no fertilizers/pesticides/herbicides” message.*

### Action

The communications model appears to stop at the Action stage. Some participants did go to the trouble of seeking out and using natural alternatives and others decided not to use any chemicals. While most participants were interested and desirous of doing the right thing, they did not take action. These participants were most like consumers that had been sold on a product but could not find it in a store. They didn't know:

- Where to find natural fertilizers/pesticides/herbicides
- What alternatives there are to conventional fertilizers/pesticides/herbicides
- That information on natural lawn care fertilizers/pesticides/herbicides is readily available

*Clearly, what is most needed is the infrastructure to provide information and products that consumers can use to care for their lawns.*

*To some extent, efforts to convince consumers that healthy lawns do not need these items (or at least not in the quantities that manufacturers recommend) can have some effect. That is, the message, “minimize the use of fertilizer, pesticides, and herbicides to protect our children, pets, and water” can be successful.*

*Consumers think they do not now have a source of information about natural lawn care. For most this means a website with specific and practical recommendations. Communications should include a website for more information or simply the recommendation to search under “Natural Lawn Care” for more information.*

*Thinking about the movement of ideas through a social hierarchy, it is important to enlist local organizations into the effort towards natural lawn care. Lake associations and garden clubs can be reached to provide the “early adopters” that provide leadership to the majority of consumers. Since lawn care is conducted at least partly to be socially acceptable to neighbors, making natural lawn care the most acceptable form of lawn care is important. Although the idea of lawn signs was not greeted enthusiastically in the groups, we suggest that lawn flags be developed to promote that “natural lawn care is practiced here.” These could be a creative contrast to the warning flags of lawn care companies.*

*Of course, consumers will need to be able to find products that are recommended at natural lawn care sites. At a minimum, this should include natural fertilizer, grass seed appropriate for Maine and most importantly, remedies for crabgrass and dandelions. In order to achieve this, garden centers and hardware stores should be informed about the ongoing state efforts to promote natural lawn care. This promotion will create demand that they can profit from and since big box retailers are likely to be slow to respond, they can also differentiate themselves. It may also be productive to hold workshops during the trade shows conducted yearly by hardware distributors such as Emery Waterhouse, Ace, and True Value.*

*Since natural lawn care also appears to require soil testing and treatment to maintain proper PH levels, convenient access to testing must be provided. This might mean encouraging hardware retailers to offer test kits or communicating that testing is available through the Cooperative Extension Service.*

*Among many respondents in these groups, the use of search engines has replaced the advice of experts as the preferred means of obtaining information. Therefore, choosing a credible spokesperson or organization is less critical than it once was. Still, we found that the Cooperative Extension Service was seen as the most credible organization for information on lawn care. Their support of the storm water pollution communications program, outreach, and soil testing can be very helpful.*

### Targeting Segments

The “Cluster Analysis” identified three distinct segments in the groups, “Lawn Naturalists” and “Lawn Committed” and “Lawn Apathists.” “Lawn Naturalists” are very environmentally conscious and are predisposed to minimizing lawn sizes and minimizing the amount of fertilizer. The “Lawn Committed” are less environmentally conscious and use more fertilizers/pesticides/herbicides. They would use alternatives if they were available and worked well. “Lawn Apathists” are not at all interested in lawn care.

We suggest that the primary target for communications be the “Lawn Committed” since this segment uses the most fertilizer. Since the group is not as environmentally conscious as the “Lawn Naturalists,” communications should include information on what to do (were to find fertilizers and seeds, how to use them, etc.) and why this should be done (the children, pets and water message). These folks use fertilizer because that’s what they have always done (habit) or to keep up with their neighbors (social pressure). To convert them, focusing on reversing these two motivating factors will be necessary.

Messages for the “Lawn Committed” will spill over to “Lawn Naturalists.” From these messages the “Lawn Naturalists” will get what they need, specific information and suggestions on what to do. They don’t need motivation (or desire); they just need access to information and alternatives.

Nothing needs to be done for the “Lawn Apathists.” They don’t care much about the damage that fertilizers/pesticides/herbicides can wreak, but they also are less likely to care about the appearance of their lawn so they are unlikely to use fertilizers/pesticides/herbicides.

## Background and Methodology

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### Background

The Maine DEP describes the objectives of the research as follows:

*“Building on past focus group data related to water quality and the environment, the Contactor will host focus groups to determine the target audience’s views, beliefs, and motivations regarding lawn care. Determine key factors to help persuade homeowners to practice environmentally friendly lawn care. (The contractor will design the script for the focus groups with DEP’s involvement. DEP and its partners will view the focus groups, when possible, and be involved in teasing out the implications, additional questions, etc.)*

*Test existing messages and outreach materials to determine the most effective.*

*Provide a report indicating findings and recommendations for most effective outreach strategies and materials.”*

Market Decisions proposed to conduct four focus groups in two locations, one set at the Market Decisions facility in Portland and a second set in Bangor. We find that responses in focus groups vary significantly between locations, especially between more the more suburban Portland area and blue-collar communities such as Bangor.

### Methodology

Four focus groups were conducted in total;

- Two groups were conducted at Market Decisions in Portland on October 17<sup>th</sup>, 2006. There were 9 participants in the first group and 9 participants in the second group.
- Two groups were conducted at the Ramada Inn in Bangor on October 18<sup>th</sup>, 2006. There were 11 participants in the first group and 10 participants in the second group.

A total of 39 individuals participated in the 4 groups.

Market Decisions used their database to recruit participants for the focus groups. The sample was cross-checked for duplicate numbers and was then sorted by location. Those records within forty-five minutes of Portland and within forty-five minutes Bangor were included in each of the final sample lists. The final sample lists were then randomized.

Findings of a focus group are representative of those who participate in the groups, not necessarily of all potential respondents. Group participants can be characterized as follows:

- Homeowners (not Condo owners)
- Have a lawn at their home

More specific qualifications included the following:

- Participants or anyone in their household could not be working for an advertising firm, a market research firm, an environmental protection agency, a fertilizing company or lawn care company.
- Participants either personally did their own lawn care or hired a company or individual to do lawn care.
- A majority of participants that treat or fertilize their lawn was sought; a few respondents that did not fertilize due to environmental reasons were also included.
- Participants that treat or fertilize their lawn either treated or fertilized their lawns at least once a year, two or three times a year or four or more times a year. A mix for each group was sought.
- A mix of ages for each group was sought (18-70).
- A mix of annual household incomes was sought for each group.
- Respondents that had participated in a focus group discussion within the past 6 months were excluded.
- Those who indicated that they were not very or not at all comfortable expressing their opinions freely in an informal group setting were excluded.

The discussion guide and screener were developed by Market Decisions in consultation with the client.

Groups were moderated by Curtis Mildner, a Riva Institute trained moderator.

## Limits of Qualitative Research

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Focus groups are considered qualitative research. They identify issues and types of responses, but they do not result in statistically meaningful allocations of responses by percentages, as would quantitative research. Focus groups can tell us how consumers may act, think or feel but they cannot tell us how many consumers think or feel a certain way.

Since focus groups allow for probing, in depth discussion and the use of special tools and techniques, they are much better than quantitative research in getting beyond the easy to get at surface or top of mind responses. This beneath the surface information is much more likely to reveal the underlying attitudes, preferences, and beliefs that ultimately drive thinking and behavior.

The findings reported from Market Decisions focus groups can be used with confidence. However, care should always be taken in interpreting or acting on individual participant comments. A single comment may not represent anything more than one individual instance – unless it can be shown to be indicative of a general theme or a pattern of beliefs, perceptions or behaviors.

Quantitative research should always be considered as a next step to qualitative research. Such research adds power to the findings of focus groups by more fully describing who the respondents are that think or act in a certain way, how many there are as well as where they can be found.

## Detailed Findings

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NOTE: Verbatim responses from participants are presented in italics, by group.

P1 – Portland 5:30pm group  
P2 – Portland 7:30pm group  
B1 – Bangor 5:30pm group  
B2 – Bangor 7:30pm group

Motivations for lawn care varied widely. There were those who only cared that the general appearance was green.

*My lawn is green and if it's green and it grows, it grows on my lawn. If I were to say, 'what's crab grass,' I don't know what crab grass is, it's probably green, right? B1*

*I've got about an acre and a half of land and about half of that is lawn. Like her, I don't care if its crab grass or clover or whatever, as long as, I mean, it looks good enough for me as long as it's growing good. B1*

*Honestly, when I think about it, if it starts looking bad I'll put something on it. B1*

*Mine's perfect, it's a good mix of wild strawberries on the sunny side and sphagnum on the shady side, a little bit of grass in between, there's almost no dandelions; I've hand-to-hand combated them. B2*

*Just keep them down and from a distance it looks nice. B2*

*I minimize herbicide use as much as I can get away with and, I mean, to me, crab grass is just as green as regular grass. B2*

One Portland group participant believes that one of the keys to keeping his lawn presentable and put together relates to his snow shoveling practices.

*A lot of people when they shovel the snow and stuff, they tend to shovel whatever is being plowed onto that lawn. I don't ever do that. Mine is always shoveled off into another specific area so it never gets any salt on it or anything like that. P2*

There were also those who felt pressure by neighbors to improve the quality of their lawns. Others envied the appearance of their neighbor's lawns and put pressure on themselves to get their lawn to look well kept. Most participants agreed that those residents who used a lawn service had the most plush, attractive and presentable lawns. Some participants also pointed out that lawn service companies also fertilize their customers' lawns at least four times a year, with many fertilizing five times a year.

*I would say out of the nine houses in our neighborhood, four of them have lawn services. And they are really nice looking lawns, flawless. They have lawn services and they are flawless.* P1

*I have Chem-Lawn come in and fertilize. They do it five times a year. They have grub control that they put down because this year in particular the neighborhood was ransacked by grubs. Anyone that didn't have a company come in, their lawn turned into a minefield of just 'dead' all of the place, so we didn't get affected by that.* P2

*We use True Green. They come five times a year.* P2

*(Houses are) pretty close together. I got a good lawn, it used to look pretty good but this year we just haven't been able to keep ahead of it, that and the dog trampling it down. It's better than some, some are better than ours.* B1

*As long as it's green and I, really, we do not live in a housing development, we live on a road and I would say what we mow is comparable to what our neighbors mow. When you drive by or walk by, you'd say, "oh nice, it looks nice." But as far as the lawn goes, we have not. If it's green we let it grow.* B1

*I live in the city so we have a really small lawn; right now it's pretty overgrown. We are trying to, unfortunately for the last month or so, the bane of the existence of the neighborhood because everyone has nice, neat lawns and we have the overgrown lawn that really needs some care.* B1

*The lady across the street spends every day in her garden and has like the most perfect house, the most perfect lawn. In my neighborhood I hear people say, "I don't care what my lawn looks like." I don't believe any of that, I really don't. There's a lot of pressure to have it look a certain way. I do use chemicals. I consider myself fairly environmentally conscious, but I think there's some pressure there.* B1

*I'm a son-in-law of a real jerk and a very successful jerk, who had the most gorgeous lawn on a lake in Manchester, right outside of Augusta. That sticks in your mind a little bit. But, not that I'm in his league, but I definitely relate to that very much. The thing is, he does a little bit, but most is professionally done.* B1

*I think my lawn could best be classified as from a distance it's green, but my lawn, I swear some people in our neighborhood that pay for the perfect lawn think that I get paid by the lawn maintenance people to have a lawn like mine, because I'm the one that infects everybody else and keeps them in business.* B2

There were many at war with special conditions such as weeds, insects, leaves, or pine needles.

*In the back I have a brook and that part of the lawn has been taken over by some kind of viney, little, round-leafed weed that grows up over the grass and has completely covered part of the lawn in the back. I was afraid of putting weed killer on it because I figured that would become all dirt too.* P1

*I also had this thing called gout weed that was taking over my yard. It's also called Bishop's Kemp because it's got this kind of lacy looking flower on it but it's very invasive. But they (lawn service company) do the broad leaf weed spraying thing, that takes care of it. I'd like to put in some more gardens, but I'm afraid that the gout weed will take over that. P1*

*When it comes to the grubs and stuff, I use milky spore or nematodes and they work really good. They eat the grubs. P2*

*I would have a great lawn if it wasn't for pine needles. I have like three pine trees that are probably 60 feet tall and I have literally an inch or two inches of pine needles on the lawn every time I go to rake. B1*

*I've been fighting with the crab grass in my lawn all summer; it's just gotten way ahead of me, driving us crazy. B1*

*But up front, there's some kind of viney weed that I can't place and it's always been there and it just circulates through the front part of it and I've tried everything I can to get rid of it, short of Roundup, which I won't go that route. B1*

*We have a lot of weeds. In the areas that we display our statues, there's railroad ties and then there's crushed stone, even with the weed block I can't get rid of the weeds. B1*

*The only problem we have is with Japanese beetle bugs, which I guess they're in the ground and when they hatch in the summertime they eat everything in sight. B1*

*It's just like it is getting weeded all of a sudden. I used to be able to afford to have someone come spray it for me and I can't do that anymore. B2*

*We found was it was grubs eating the lawn and all of our neighbors have their lawns sprayed, everybody does, but we don't, so the grubs have all gravitated to our lawn. B2*

Attacking dandelions was seen as a particular priority.

*They come out real early in the spring and they're easy to find because as soon as they pump up a flower, you know, you nail it, you just get down as deep as you can because they'll sprout up again if you don't get real deep. B2*

*Putting the stuff on only works, you know, you miss all those seeds and I doubt if the chemicals kill the seeds; it has to be present and active when they germinate. B2*

*My husband hates those dandelions so he goes after them with a vengeance I must say. Twice a year with Weed and Feed I think it is. B2*

*Every once in a while my wife will get upset about the dandelion crop or that it's not quite as green as it could be and the green lime will take care of the green and I will spot treat the dandelions with a herbicide. B2*

Some preferred smaller lawns and more garden or natural areas. A few were actively trying to reduce the size of their lawn.

*I don't care about having the most perfect lawn. In the front, I've made as large of beds as I can so that I have as little lawn as possible. I really love to garden. P1*

*I'm trying to shrink my lawn all the time so I keep adding more gardens to shrink it down. And the past few years I've been putting down some hard skate, like a patio and some paths out to the garden so I won't have so much yard to take care of. P2*

*I'm learning slowly that mulch looks really good and perennials fill in very nicely and you really don't need all that lawn. B2*

*I have two lawns; I have a camp by the house. I hate my lawns; they're the most useless thing. But I like my lawn at the camp because I have a lot of trees and I only have to mow it three times a season, but I really don't want to mow that more than three times a year because there's other things in life to do than mow your lawn. B2*

Some fertilized out of habit or because it was a ritual.

*I normally fertilize a day before it rains and watch the forecast and let it sink in and then we stay off of it for about two or three days and let it actually take hold. P2*

*I usually do twice a year and half what they recommend on the bag. And that works perfect. I try not to make too big of a deal about it. A couple times a year keeps it green. P2*

*We're not just going to do the blanket four times a year Scott's thing that we were doing before. B1*

*He uses some kind of weed and feed thing in the spring of the year and the fall. B2*

The need for fertilizer in Maine was unclear. A few mentioned that the amount of rain that has fallen this year has contributed to their lawn's growth and appearance. Others told that they would fertilize their lawn from time to time, only if they felt "it really needed it."

*I do fertilize it I feel it really needs something, and that's probably once a year in the spring. P1*

*But one thing I've noticed is the lawn's a lot better this year than it was ever and that's because of all the rain we got in the summertime I'm sure. Previous years, I mean it being so dry, my front lawn was, I would have to go three weeks without mowing it because it was so dry and nothing would grow. B1*

*My house is in town but we have a fairly big lawn and we don't put anything on it, and it really doesn't look bad, you mow it, it's all beautifully green, it looks just fine. B1*

*I did fertilize a little bit in the spring, that's it, just once a year, and really just to be honest, the rain kind of did the rest because of the abundance of moisture has really made the lawn what it is. B1*

Many participants thought that fertilizing just made the lawn grow faster. Some told of reducing the amount of fertilizer they put down, or eliminating it all together, in order to slow down the lawn's growth, and to minimize the amount of time they would need to spend maintaining the lawn.

*I started to use the fertilizer and I found that the lawn was growing fast, so I stopped using that. P1*

*It's a good-sized lawn; it takes probably two hours to mow by hand. We were having a fertilizer company come and we didn't this year, it doesn't grow quite as fast now. Well, (we used the service for) weeds also. I don't care about clover, I don't care about crab grass; I don't like dandelions. B1*

*If you start putting on gobs of fertilizer, you just got to mow it more often. We've got a double lot essentially and I have a tractor now with a four-foot deck and it still takes me two hours to mow the lawn. I can remember doing it with a 21-inch bush mower and that was an all-day affair, so it just comes down to as long as it's green, it doesn't look totally neglected, I got better things to do. B2*

*In town I have a spot on one side of my lot where the grass is exceptionally green, there's no weeds, and it's because it's slightly lower than my neighbor's lawn who fertilizes and has the people spray it constantly with all the chemicals and everything leaching from his soil into mine. The rest of my lawn, it's weeds, it's green, you keep it at a reasonable height and the neighbors don't get upset, but there's this one section and my wife sometimes complains about crab grass and dandelions. My neighbor who does all the fertilizing complains because he has to mow his lawn twice a week, like whose fault is that, and you're paying for this. B2*

The need for fertilizer only as opposed to fertilizer with pesticide/herbicide was unclear. Most participants appear to use combination fertilizer/pesticide/herbicide when they did fertilize.

*There was really a heavy weed concentration up front, and now if there are any weeds up front you wouldn't even notice ... because I did do a little chemical stuff. B1*

*I haven't fertilized in a while. I've used Weed-B-Gone once in the past year to kind of kill the dandelions and whatever else it would take care of as well. B1*

*I was more honestly concerned about the weeds than the fertilizing part of it. B1*

Most participants were very apprehensive about the use of fertilizer/pesticide/ herbicides. They were most concerned about exposure to fertilizer/pesticide/ herbicides and how it might affect the health of their children and pets.

*I used to be right out there and if there was a weed I would spritz it good. This year I wasn't going to do that, I was going to be really good about the environment... I have a cousin who works for the Bay Keepers and I feel guilty every time I look at a bag or a bottle of the stuff I'm going to put on. P1*

*During the years that there were little kids that were going to be in the yard a lot, I wouldn't put anything that had any bug stuff in it down. And I had sort of convinced myself that the other fertilizers, if you were careful about not using too much, that they wasn't as dangerous. It's probably not true, but I somehow convinced myself of that. P1*

*You know, I do have concerns about the dog. So, I've asked them particularly about the pesticide treatments that they put on and I take their word if it's extremely harmful or not. I know they could be lying to me or not. I assume they are being somewhat truthful when you tell that that you have kids and dogs and if it's going to be harmful or not, I assume they are going to be truthful with me. I assume they are professionals in their business. P2*

*I don't let anybody on the grass at all for two or three days afterwards until I'm sure its ok. P2*

*We sell bird baths and stuff so I don't use chemicals because I'm afraid if they get in the bird bath, I don't want anything certainly that's going to kill a bird. I'm very careful. B1*

*I won't put anything on it because I hate chemicals, and we used to have rabbits and I would pull the dandelions and feed them to the rabbits; they love dandelions. B1*

*I was much less likely to use stuff when my children were small. I have fruit trees, I mean, I have never eaten a piece of fruit from them or anything like that, I pick it up every fall but I've never sprayed them. B1*

*My wife didn't want to do it, the kids, they're five and nine. We had been fertilizing, we had one of the lawn services come and do it and she just decided it wasn't worth it with our two kids. She was a little nervous, I didn't care, but then there might be something to it, we have pets too. As far as I'm concerned, I'd just as soon as fertilize but as long as it stays green, maybe touch it up or whatever. B1*

*I had heard something about how if children play on these lawns that it can cause a lot of health problems for them, they're rolling on the grass like kids do and it pollutes the water. B1*

*I used to be really avid about my yard, kind of still am, sort of a landscaper, so I've done a lot of landscaping out front and I used to spend a lot of time and a lot of money putting a lot of stuff on the lawn to keep it weed-free. Then several years back, I had read some information that indicated that some of the products I was putting on my lawn, primarily herbicides, has been actually found to cause some cancers in animals and I have cats and dogs. So I started having second thoughts about the stuff that I was putting on my lawn and as time has gone by, I have just put on less and less. B2*

*Just individual plants, no broadcast spraying. I don't go broadcast because I'm a forester by profession, and when you put up with the outcry about us spraying herbicides in the woods that we may do one application every 50 to 100 years, and the same people are complaining about that herbicide application are doing two or three herbicide applications on their own lawns and they don't realize it. B2*

*The grubs have come to where there's sweet grass, where there's no treatment on the lawn because I didn't want to put anything on the lawn, especially because of my kids; they're 15 and 11. But I just don't want to treat the lawn with any chemicals. My husband is not happy about it, we have a lot of clover and everybody's lawn looks great, ours doesn't look so great but I'm working on it. I treated the grubs with milky spore this year and so I'm anxious to see after several treatments next year what it's going to look like. B2*

*My husband has battled for years seeding the front part and with all the ledge, it's a battle. And we have the dandelions. My lawn is probably an acre and a half, there's no way he's ever going to get them all. I have four kids; I don't want to broadcast crap all over my lawn either. B2*

Fertilizer/pesticide/herbicide mixes were seen as inherently unsafe.

*Anytime you use chemicals it's unsafe. P1*

*It's all going to the same place. It's all going to evolve eventually and I think do the damage whether it be slow, time released or fast, it would just be more rapid damage. I think it will all have the same impact, the chemicals. P1*

*As much as we all around this table use that stuff, but if we knew that one of our children, or our spouse, were going to get sick in ten years from it, we'd never use it. We hedge our bets with this, but if we knew... P1*

*I'm also very aware of it in terms of kids and what happens to children and their development in utero from chemical substances. P2*

*I heard that pesticides are bad for the environment and I don't fertilize, I just lime a couple times of year. P2*

*It's designed to impact the environment in a way by either killing weeds or helping something grow, so that is in a sense impacting the environment. B1*

*If it kills weeds, it has to kill other things if it kills weeds. B1*

*And it's on the label too. The caution, you know can cause harm, can cause cancer, all these things. People with asthma, with allergies, breathing this stuff. When they go around and spray and if it's on a windy day, it's horrendous, they keep their kids inside, they don't even let the kids outside on the lawn. B2*

Some participants read the warning labels, with a few admitting that the information on the labels doesn't mean that much to them. Some participants told of reading the labels and looking for specific ingredients. Some were not sure what products were considered to be safe, or "good," and what products were unsafe, or "bad." A few found the labels hard to understand, and many didn't recognize the names of the chemicals listed on the labels.

*I don't know what it all is. I know that certain things were banned long ago, so I don't expect to see DDT in the stuff. They don't really mean a whole lot to me. I look for cautions or something like that. P1*

*There's one word I know from reading the labels, Pyrethrums, which is made from marigolds, so I think it's organic, but that's what they use to kill bugs organically, I believe. So I have looked for that. P1*

*Basically what I'll read is on the back of whatever I'm putting down, what's in it and like I said, I don't understand a lot of what's in it. They don't call it Diazinon anymore but almost every year they change it to something different so that leads me to believe that somebody's watching out for trying to make it not as dangerous to use. P1*

*I don't know what's good and what's bad, what's organic and what's not organic. I don't really read the labels that well. I just read what my problem is, what I need, grab it and go. I don't understand which is the good stuff, which is the bad stuff. How much phosphorous versus how long it takes nitrogen to release. I don't know what's good and what's bad. P1*

Even if used as directed, fertilizer/pesticide/herbicide mixes were seen as having an effect on the environment.

*If I lived on Sebago lake and I didn't have plantings that would absorb the water and stuff like that, you know, this buffer that you're supposed to have. I'd say using according to label... I mean that's not going to cover that. I don't know of any labels that say if you live near a body of water make sure you build this buffer zone of vegetation. P1*

*I think if you use it by the label it's probably most effective for what you're trying to do. I don't think it's particularly much safer for the environment. P1*

*Whenever I use anything I absolutely follow the directions. I think it probably is safe. However, anything near water, I'm just more cautious near water. The water is too precious and I don't want to do anything that would affect that. P1.*

*No (it's not safe for the environment). They're in the business of selling fertilizer. The more fertilizer you use, the more fertilizer you buy. It seems like a good sales pitch to me. P2*

*And even natural products... if you use too much cow manure, its still polluting. That's not a good thing either. P2*

*I think there's a lot of contributing factors. It depends on how much water you have, how close you are to other bodies of water, what your soil conditions are. If you have solid clay underneath, it's just going to run off and it's not going to soak in. I think if you use it according to the labels, you're probably going to minimize what damage is going to be caused. Organic or not organic... if you overuse anything, it's going to be harmful. P2*

*When it's saying use as directed, only to use a certain amount, but I don't think it really matters how much you use, it's going to affect the environment either way, whether it be in a bad way or a good way, in some way it will affect the environment. B1*

*My opinion is that if you're putting something unnatural, it doesn't just appear naturally, of course you're affecting it, and I mean you're changing it. B1*

*Everything that we do has an impact on the environment; it's just a matter of scale. If you do it according to the directions, as Bronco said, then you have met what some governing body has said is acceptable collateral damage, but there's still going to be some affect to the environment. B2*

*You're using chemicals, they're unnatural, they are not something that naturally occurs, and if they didn't have to they wouldn't put the warning signs and the flags on the lawns, but yeah basically it's an acceptable risk and you know you're taking a risk and I don't think that they'd try to say otherwise in their advertising. You read the small print, I think they say that it can be harmful in certain situations. B2*

*Going back to the labeling on the pesticides and fertilizers and whatnot, I think that's like for legal purposes and most of these regulations I think are written by lobbyists for the companies that manufacture this stuff anyway. So your chances of that being anywhere close to accurate and non-biased are just about zero. Plus you need a magnifying glass to read it anyway. B2*

Even those who thought of themselves as environmentalists sometimes used fertilizer/pesticide/herbicides.

*If I wasn't right next to the pond, I may use more fertilizer on my lawn. I consider myself pretty environmentally conscious and if it's not going directly under leaching it or a plume is developing where it's going into something, I'm not as concerned about it as maybe I should be. P1*

*I mean if you ask "are you an environmentalist," everybody says yes. You know, I do, but I use Roundup on my front walkway because it's got nice stonework and I don't want to see any weeds coming through it. I think certainly being concerned about your lawn is a good place to start but if you really believe we're killing this planet, it would make sense that we focus on those big things and try to work toward those. B1*

Participants noticed the flags that lawn service companies put on lawns and saw them as evidence that chemicals and fertilizers were unsafe. A few participants appreciated the fact that lawn service companies put flags on treated lawns so that they know which areas to avoid when walking their dog. Some participants that use lawn services were not sure what the companies put on their lawns, unable to tell the difference between organic and chemical fertilizer.

*They leave me, or mail me a paper that tells me what they did and what they used. But I don't know what that stuff is, whether it's organic or chemical. I tell them I want organic, but I don't know if that's what I get or not. P1*

*That's what really scares me is that they say "Its ok," but then they stick a sign on your lawn and tell you "Don't step on it for two weeks." P1*

*When they pesticide lawns in Portland, they have these little flags all over the place that say "Do not go in this yard- pesticide here." Makes you think you're in a toxic waste dump. P2*

*See I really appreciate that (the little flags) when I walk my dog. I purposely scoop right around there and not go anywhere near that yard. I appreciate that they do that, that they tell me it's on there. P2*

*If there's nothing wrong with all this stuff from all these companies like Tom Thumb or whatever it is, why do they need to put up the little warning that it's poisonous and those little warnings are all over town? Over all these beautiful, perfect lawns, there's a little warning that it's poisonous. B1*

*We don't overdo it I don't feel. I mean everybody else in the neighborhood is doing it five or six times a year and it's being sprayed everywhere, so I mean it's pretty heavy duty. When we first moved in, there were maybe two houses and now it's like, I think as I said, we're the only one in the whole subdivision that do not have that little sign on our front lawn warning, I don't know what it says, I haven't stopped to look, I haven't got that close, but do not step on their grass because it's poison. B1*

*Don't they have to put a little sign on the end of the lawn saying "caution?"  
Yeah, really. It makes you wonder. B2*

*It's just for the lawyers, that's all it's for. B2*

In addition to perceived health risks, many participants thought about the environmental effects of fertilizers and pesticides. Many expressed concern about runoff getting into ponds, lakes, streams and the ocean.

*Our house is probably 100 feet from the ocean and with the whole phosphorus thing. I use very little fertilizer and only fertilize maybe once a year. P1*

*But in front of my house, which is one of the reasons I don't fertilize a lot, but we have a large pond just in front of the house and everything is down hill from the pond and I don't want to change anything there. I'm pretty cautious about that. P1*

*I really do care about the health of the water shed, so I try to use things sparingly. P1*

*I am careful in my pond because I don't want to disturb the wildlife in there or any of the plants as well. I know what can happen if nitrogen gets into the water – it's going to create a bloom that will change the ecology of the pond. I wouldn't want to disturb that in any way. I'm pretty cautious about where water goes. P1*

*There's a ravine right behind my house that carries storm water right into the ocean. I became much more aware of all of this when the brown tail moth stuff happened. The town was spraying for them but they can't spray within 100 feet of the water and this set off bells for me. The reason is because the insecticide gets on the land and it washed into the water and it turns out the chemical they were using for the brown tails affects the lobsters. But that sort of opened my eyes, "Hey, I'm close enough that what I'm putting on the lawn here is ending up in the water." P1*

*You hear about the runoff and I live a stone's throw from Little Sebago so I'm a little concerned because the kids fish in there and swim in there and stuff. You don't want them turning green from eating the perch they caught in the lake. I try to be a little eco friendly about it, but not the point where I'm militant. P2*

*Today I got a Patagonia magazine in the mail and there was an article in there on sea turtles with tumors and they felt it was from the runoff from the chemicals and that a lot of animals are coming down with diseases and tumors. P2*

*If you put stuff on your lawn, it washes down with the rain into the rivers, into the lakes. B1*

*There's this surface water runoff but then the underground water runoff, that tends to go a lot farther and it has a larger impact on the entire area. B1*

*You know, I think the fact that its only the lawn, people don't think about that chain, this is one day going to hurt an eagle. What they're thinking about is, I think it's pretty immediate. B1*

*I have stream frontage in the back and it's a downhill grade to the stream, anything I pour on my lawn is sure enough going to go into my stream where I kayak and the kids play and swim and fish. I'm not against here and there, you know; if you got a bad spot take care of it. My lawn's too big to do that. My waste isn't going to go into a drain that's going to get treated; it's going to go right straight into the ground and into my well. B2*

*I know to some extent everything ends up in the ground and Mother Nature has a way of cleansing some. You know, I'm not a fanatic or anything but eventually it washes into the stream out back and I work next door to the Kenduskeag Stream and tell you what, it's pretty nasty looking most of the time, it looks like chocolate milk, I wouldn't eat the fish out of that. The back stream that goes behind my house eventually flows into that. B2*

*I use it occasionally; I think I fertilized my lawn once this year at the house. At camp, I won't use fertilizer, I won't even use lime because that's got phosphorous in it and if that gets into the lake, we're going to end up like China Lake. It makes me angry when I see other people around a camp or the lake who have turned their camps into houses and have these gorgeous lawns, I'm thinking to myself do you have any idea what you're risking here? B2*

*It causes algae bloom for one thing. Yeah, in lakes: the phosphorous and phosphates. B2*

Most participants were familiar with the “Rubber Ducky” ads and found them to be very effective. In the Portland groups, eight out of nine participants in the first group had seen the ad, as well as six out of nine in the second group. In the Bangor groups, eight out of eleven in the first group had seen the ads while seven out of ten in the second group had seen them. This ad was highly regarded and received numerous compliments. Practically all participants who had seen the ad felt that the use of the yellow duck was eye catching and creative, that the ad was appropriate for all ages, and that the message of the ad was very clear and caused viewers to be more aware that everyday things such as oil, pet waste and litter end up in our waterways. Even though the ducky ad was not shown during the focus groups, it was still coined as the most effective and informative ad they have seen.

*I think it's a very, very effective ad. It's a little silly; it doesn't try to gross you out with a dead fish and an eyeball or anything. It just lets you know that this is what happens with the storm drains and all the ducks. You get the idea. P1*

*The ducky ad, which I think is probably better than any of these by far, one of the reasons for that is everyone looks at that, whether you're young or old. It's describing and telling you what fecal matter is. There's no “bs” quite frankly. They're telling you what it is, what's going on, and its showing you exactly and its straight forward information. And that's what people need. They don't need vague. P1*

*They show it more often. Its probably money well spent as far as an ad goes. It's caught my... it's part of why I have subconscious around what I do. P1*

*Every time I see it, it makes me think... about pollution, trash on the side of the streets... I mean, where does it all go? Right where those ducks go. P2*

*It is very eye catching. I think the bright yellow ducks and the child factor. We all know what a rubber ducky is. P2*

*Little kids would look at that ad and they might get something out of that if they see it enough. I think that little rubber ducky that you play with in your tub when you're a little tiny kid; I think that grabs your attention. P2*

*Certainly the commercials with the rubber ducks that go into the rivers that go into the ocean. B1*

*I mean, obviously, to stay with me, it certainly was fairly effective. I mean that would make me think twice about just buying the strongest stuff I can get that's going to make me that beautiful lawn. I'm certainly more conscious of it because of that. B1*

*It's a great visual, drives the point home. These rubber duckies, what's all this, and it's eye-catching. B1*

*When I saw it, it really made me think. I was already environmentally aware, it was just reinforcing a decision I had already made about lawn care. B1*

*It's one of the new things that DEP has come out with for information, an infomercial, trying to get people not to consider storm drains a place to dump anything. It's designed for runoff water and that's it, and that's where the rubber duckies come. They start with a vehicle dripping oil and the oil drip turns into a duck and it flows into the storm drain and they show it all going out into the ocean where kids are playing. It's an ad that talks about water quality and the fact that one of the important things with Maine is that we have really good water quality and we have to take these steps to protect it. This particular ad, the vivid thing I remember is showing an oil drop come out of a vehicle and it pops up as a duck and when it rains it flushes down and you see all these little ducks going into the storm drain and obviously eventually at the end of the ad you see all these ducks floating out to the ocean. You see all the little kids swimming and the ducks floating around them. B2*

*I think it started to get a lot of people to think because I can remember years ago it wasn't very uncommon to see somebody changing their motor oil over the storm drain. B2*

*It points out that it's you who's doing it, not them, not big industry, it's you. B2*

Most participants liked the ad from Washington. They found the man in the black socks to be humorous, which ultimately caught their attention. Some felt that although the ad was clever and catchy, it wasn't informative enough and could provide more educational information about fertilizing and the effect it has on the waterways. Others said the ad was a nice reminder to be cautious when fertilizing your lawn and felt the ad's message was simple and to the point.

*I thought that the first one would be more likely to be noticed that the other ones are more like all the other messages that are out there, especially during this campaign season. But it wasn't specific enough about what it wanted you to do. If you could use that cleverness and then focus in more on the message, that would be the best. P1*

*The information piece as well, just to expand upon that. I mean it was creative and it was a little bit obscure, but if you could tack on the message in the third one (Vermont ad) with the educational piece of it, but with the creativity of the first one. P1*

*I thought it was a cute. It was a nice reminder about fertilizing and where it goes. P2*

*I think right off the bat the funniness factor kind of pulled you in and you actually wanted to read what it said. P2*

*I think there was a little bit of a comedy there that grabbed your attention and you wouldn't get up and go grab a beer out of the fridge. And it reminded me of my father mowing the lawn with the black socks. P2*

*Very well done, great visual, didn't bombard you with information but let the picture show exactly what it's doing, very clever, very well done. B1*

*And it didn't say not to use them, it said to use sparingly, so use when you need. B1*

*Simple message, good visual. B1*

*This one makes you want to watch it and not turn the channel. B1*

*It's one of those commercials where you're trying to figure out, "Well what's it about?" B1*

*The first one really doesn't tell you what to do after seeing it. Like I'm personally not going to read what's on the screen at the end. B1*

*It gets people's attention because it's not something you're supposed to see. You're not supposed to see somebody walking on water with the lawn mower so that catches your attention. B2*

*I think it's a well made point. B2*

Most participants found the Texas Psycho Runoff ad to be disturbing and unsettling. Some did not want their children to see the ad due to the graphics, and some found the back ground music to be annoying. Still, a few participants felt that the music was catchy and was the most likely to grab their attention.

*I thought that was gross with the fish. P1*

*The narrator came out and told you runoff, using fertilizers and whatever runs into the water and causes damage. The other one (Washington ad) didn't come out and say it. P1*

*I think this one was a lot clearer, it made more sense. It grabbed you more than the silliness of the guy fertilizing. P1*

*I didn't like the psycho part. But I thought it was informative other than that. P1*

*Shock and awe. P2*

*I didn't like that one as well. It was definitely psycho. P2*

*It was alarming. P2*

*I wouldn't want my kids to watch it. P2*

*I didn't like it because it would make me felt that if I did use any type of pesticide that I was some type of murderer. It may be that it's causing harm and some things are dying, but I would not associate myself with purposely killing animals with what I'm doing. P2*

*The sound effects are really annoying and I think a lot of people are really going to turn the channel on that. B1*

*It was saying you're really being bad using this stuff. B1*

*It seemed extreme to me. I think it's more fitting for Texas than it is for Maine. It just seemed really extreme. B1*

*I think people, I don't know, people with small children might find it a little too graphic or whatever. I was hit by the graphic by it, I was watching it, and I was like wow, really sticking in the knife. B2*

*I wouldn't want to see it with a three-year-old, having to explain all that. Maybe that's not appropriate. B2*

*Sadly only the psycho one is really going to grab my attention at all. The other two, one has a good point, the other one is kind of bland, but they're not grabbers, they're not memorable, except for the psycho thing and that's for a different reason. B2*

Most participants enjoyed the Vermont ad and found it to be informative and clear. A few found the ad to be far removed from 2006. A few more felt that the ad wasn't catchy enough, that there wasn't anything memorable about the ad that would hold their attention. Some liked how the ad's sponsor provided contact information, such as their website, at the end.

*It was very clear. The message was very clear. P1*

*The only hesitation I have over this is it's the kind of thing you tune out. It's very informative and I think if you were going to sit down and learn something you would watch this one, but the dead fish or the guy walking on the water catches your attention. P1*

*I think when you're not scolded, and when you bring up money, people are more apt to listen and do something. Money is motivating; no one wants to waste their money. P1*

*That's educational. P2*

*That's good. P2*

*It was educational in a very short period of time; you get a lot of information to think about. P2*

*I don't know. I found it to be a little too 8<sup>th</sup> grade slide show. It seemed very 70s to me. P2*

*It said this is who we are and this is who to contact. I like that at the end. This is who's presenting this. And so if you wanted more information, I thought that was nice. P2*

*This was more bombarded, I think the message got a little confused with all the talking, you're listening and paying attention, got it, but if you were in commercials, remember people are half tuning out during a commercial, that's not one that's going to necessarily going to grab you and cause you to get the message. B1*

*I thought the last one was better. It mentions the money issue and the runoff. In the first one it shows that yes it's getting into the water, but it's not really showing how. B1*

Some participants had seen warnings placed near storm drains and found them to be effective and noticeable.

*In my neighborhood, all the storm drains have labels with a lobster. It says “Do not dump,” or something there, and there’s a little lobster. P1*

*In the city of Bangor, someone has actually gone and near sprayed near all the drains with the rubber duck. B1*

*Orono doesn’t, they just go around and spray paint little “runs to river” signs. B2*

*The west side of Bangor, where I live, not far from here, the Boy Scouts went around by all the storm drains and they painted the little rubber ducky with the little sign that the storm drain goes directly to the river. B2*

*I bicycle a lot; I see them all the time. B2*

While storm water runoff is seen as problem, most participants thought that there are bigger environmental and health problems.

*I work with special needs children and there’s so much research yet to be done and that has been done and not revealed any information about children with autism and what the root cause is of that. I am very concerned about what types of damage we are doing to our environment and what types of impact not only is it having on the wildlife, but people. P1*

*We have a camp near a lake and I know what has happened to the lake in the time that I’ve been going there and a lot of it is due to the gradual encroachment and development around the lake and a lot of things going in from lawns and from septic systems. There’s been more and more algae growing, the lake is slowing down, there’s less flow through the lake. One element of that is definitely lawn care and the other is septic systems that leak and people washing in the lake. P2*

*I have a camp at the lake and I have concerns about it. People over-landscape their property – they bring in fill. A lot of people do away with their natural growth and put in lawns at a lake and it shouldn’t be done. We didn’t do it, but we’re about the only one around our area that still has it looking natural. By putting in a lawn...if you use fertilizer, you’re putting pollutants into the lake and you’re going to upset the ecosystem. And its more conducive to runoff, its a smoother surface, its not the natural crags and bogs and rocks of nature that might contain some of it, or even filter it some before it gets to the lake. P2*

*We’re starting to see a climate change which has allowed a shift in the case that I’m real aware of, of insect species that weren’t here to come further north. We’re seeing with the lack of cold winters, we’re seeing natural population levels of insects that are always there just bloom. B2*

*I think it's a major problem. I've been at the same lake since I was a kid, the changes I've seen, my children are amazed with the changes they've seen. But it goes back to what you said, of people buying a 600-square foot camp, level it, build a 4,000-square foot house with a big roof, pave the driveway, everything runs off, they've cut down all the trees, the water quality is, I mean you kayak around and you see the silt. You know Lucerne used to be considered a very clean, clear lake; it's not anymore. B2*

Most participants would turn to the Internet or government agencies first for information about fertilizers and lawn care. Others would go to nurseries and hardware stores for more information. Still, a few felt that nurseries and hardware stores would be more concerned about making their customers' lawns look nice and selling their product, as opposed to being concerned about the environment. Many participants would consider websites or advertisements sponsored by environmentally sensitive organizations in the state to be credible sources of information. Examples provided by participants include the Cooperative Extension Service, the Audubon society, the Bay Keepers Association and the DEP.

*I would go to Google and punch in lawn fertilizers or something like that. P1  
Environmental Protection Agencies. If you went to their website and there was a link that said lawn care and just clicked on it and there it was and it could tell you about stuff, that would be kind of convenient. Because you'd think if you wanted to look up something about the environment or for your lawn, you'd look up EPA first. P1*

*If I saw a commercial that had this beautiful lawn and it said, "Your lawn can look like this...www dot... or call..." and after the second or third time I'd be scribbling that stuff down. Like the rubber ducky commercial – right after it or during it, if it said, "You can do your part," and if there were different commercials with different segments and one of them was lawn care and it had a website and a phone number, you'd get a lot of people using that. P1*

*I went to the American folk festival and there was a DEP booth there – that's where I got my rubber ducky. I went up and asked them a question, it wasn't specifically about fertilizer, but it was about runoff and plantings and stuff and she told me about the website. P1*

*I would probably go down to my local nursery. I live near Skilling's up in Falmouth. That's where I would go to ask, they're very reliable. And they're not specifically in that business to sell fertilizer; they have a range of stuff. P1*

*If I were going to look for information, I probably would hit the hardware store, the internet; those would probably be my first two places. If I were serious about it, I probably would call the cooperative extension. I would Google lawn fertilizer, lawn maintenance, environmentally friendly lawn maintenance, and then I'd have to look for the region too – northeast – because that would be different than it would be in Louisiana, Florida, and California. P2*

*The things like the lake associations, Friends of Casco Bay and probably Maine Audubon put out bulletins on how to handle your lawn care and how to handle runoff and things like that. So it's really specific and local and it's a handy way to find out more about it. P2*

*I would use the internet a lot; I do use the extension service. And I go to places like a real nursery and I do use my hardware store. P2*

*I would consider anything (credible) but a chemical company and that's probably just without saying. The pesticide company is probably not the best guide as to the use of pesticide. Once again, they're not in the business to lose money. Their business is to sell the product, period. Its not about a clean world, it's about profits. P2*

*University, I meant that for the cooperative extension services. B1*

*Internet. B1*

*A nursery. B1*

*A cooperative extension service. B1*

*I'd just Google for environmental safety fertilizer and start from there and that would probably lead me to the cooperative extension. B1*

*I would go to the State of Maine website. Normally they have a lot of information on different things, maybe not the specifics I need but where to go to get the specifics I need. B1*

*Again, I think whether you go on the internet or go to a nursery, I don't know about the university, but you don't know what their tolerance is or what their balance point is for favoring environmental safety versus achieving the goal you have for your lawn. So a nursery, and I'm not picking on Sprague's in particular, but a nursery may not care what the environment effect is, they're trying to help people make their lawn look good. B1*

*I would say some farmer's association or something like that would have good information, like something the farmers in the state have to belong to, like she was saying how they're all regulated to know what mixtures to use. I would figure if you find some way to get in touch with an association like that, I think they'd be more credible than a lot of places, a lot of people. B1*

*I'd just use the extension service; I found their services to be good. B2*

*It depends on what I was looking for, but I'd probably do some searches and obviously you're talking about credibility and there's a lot of stuff online that's not credible and you got to pay attention to who is saying what and who owns the site, whether it's a company trying to push their product or if it's an independent Consumer Report type thing. B2*

A few participants felt the Maine Department of Environmental Protection may be biased and were not sure if the DEP would be considered a credible source of information about fertilizers and lawn care. A few participants did not feel that the DEP is accessible, or reliable.

*I think they might be skewed. More natural, environmental, ecological kinds of stuff. P2*

*I think they would be perceived as, “What else are they going to say?” The DEP is obviously going to tow the line. P2*

*They’re not handy; they’re not a handy resource. You have to call long distance most of the time. They’re in Augusta. They’re not like your extension service where you can just call them – they’re in every county. You don’t see the DEP in every county having an office where you can reach them and ask questions. P2*

*I would say the cooperative extension service is miles ahead of DEP, EPA in terms of water quality protection and educating people as the proper way to provide barriers and whatnot. The state to me, it seems like 10-12 years ago, they just gutted the laws or whatever, but I have called the state and said there’s an excavator sitting in the water dripping hydraulic fluid moving rocks, and they’re like yeah we’ll get back to you. So I would definitely go local. B2*

*They used to be. There was a time. B2*

*I would say they’re more into education. It was DEP that’s come up with the storm water ads, that’s DEP. B2*

*....which is I would say one of the best things they’ve done in the last 20 years (storm water ads). B2*

*I’ve met with them several times and it took suggesting talking to a lawyer to get them to come down and look at something. B2*

Some Portland participants felt the same way about Friends of Casco Bay and Friends of the Marsh as they did about the DEP – that the information they provide is biased due to their position on fertilizing. However, it was mentioned that regardless of these organizations’ perception of fertilizing, they are still a good source of information as to what types of plants are safe for specific areas and which ones are invasive.

*I know Friends of the Marsh and they have done a lot of educating about the right types of plants and the ones that are invasive to the marsh and how people have planted the wrong things and that’s why we have all these fragmites in the marsh. I’m sure Friends of Casco Bay does that. So I’d give them a lot of credence. They may be dead, death on fertilizers, but they also have a lot of good information about things you can do to remediate too. P2*

One Portland participant said that she would not trust her lawn service company for information on testing the soil in her yard. Others stated that kits can be bought at hardware stores.

*I’ve had the people come out, the chemical companies that want to fertilize and test my lawn and I guess I don’t trust them because I think they’re going to tell me, “You need this, this and this.” So I would probably go to the Audubon Society or somebody not interested in fertilizing my lawn. P2*

*You can buy little kits at the hardware store. P2*

A few Portland participants also mentioned that they have followed the guidelines presented by Paul Tukey on the show “People, Places and Plants,” which appears on Channel 6.

*According to the TV show, there are three different things and they tell you at the beginning of each year that you have to have this amount, and this amount and this amount. P2*

*Yeah, nitrogen and phosphorous...there's like a three prong ratio as far as what those three elements are. P2*

*Yeah, on channel 6 that guy comes on every now and again and says “More of this at this time of year, more of this at this time of year....” Good, if you say so. P2*

*It's on channel 6, “People, Places and Plants.” I think its Paul Tukey. P2*

## Appendix 1. Moderator's Guide

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### Introduction

Hello everyone! Welcome, to Market Decisions, it's a pleasure to have you all here. My name is Curt Mildner and I will be the moderator for tonight's focus group discussion. We're going to be talking about lawn care.

Let's talk a little bit about focus groups. Focus groups are simply group discussions about a product, a service, or a program. You probably have participated in other types of research, such as mail surveys and phone surveys, but clients like focus groups because they allow us to hear directly from people like you about their opinions, attitudes, and beliefs.

Focus groups work best when you do the talking. Our client really doesn't want to hear what I have to say. I'm here to pose questions, to keep us on track, and to make sure that we hear from everyone.

I find that in group discussions, when one person speaks others are reminded of things they want to say – to add to the train of thought or to express another point of view. That's great; your job is to speak your mind. And we do want to hear from you especially if your ideas are different.

We don't expect that you'll all agree with one another and we do not need to come to a consensus on any topic. There are no right or wrong answers, we want to hear all your thoughts and opinions.

This room has been set up especially for market research groups like this one.

I'd like you to notice the microphones. We'll be audio taping and videotaping this group.

We do this so that I can review your remarks before I write my report and so that I don't have to try to write everything down while we're speaking together. I need to be engaged in the conversation and it is hard to follow what people say if I'm writing down everything you say, so the videos are basically for note-taking purposes.

But please, do not worry; none of you will be on the 11 o'clock news or on candid camera as a result of participating in this group. These tapes will be used for research purposes only. Also, behind me is a mirror through which people can observe groups like this one. We do have some observers tonight, and they are here because they're interested in your ideas and opinions.

To allow conversation to flow more smoothly, I'm going to offer the following ground rules so that we can all be moving in the same direction.

- 1.) Please speak one at a time and in a voice as loud as mine.
- 2.) This session is being taped so that I can write an accurate report, not of who said what, but of what got said. None of your names will be used in this report.
- 3.) I need to hear from everyone during the course of tonight's discussion, especially if you have a different point of view, but you do not have to answer every question that I ask.

- 4.) I may need to cut you off at some point to move onto a new topic because we do have a lot to cover tonight. I want to apologize in advance for this.
- 5.) You do not need to address all your comments to me to get them on the table. You can respond directly to what someone says, and I encourage you to respond to each other's comments, but please avoid having side conversations with your neighbors.
- 6.) There are no wrong answers in market research, just different opinions. We are looking for different points of view. Say what is true for you, even if you are the only one who feels that way. Don't let the group sway you and don't sell out to a strong talker or to group opinion.
- 7.) We will be observing the no smoking rule tonight.

Let's go around the room. And please introduce yourself using your first name and the town where you live.

Thank you, -----, and thanks for joining us tonight

Well let's get right into the topic now.

### **Use of Yards, Importance of Lawns and Lawn Care Behavior**

Let's begin by talking about your lawns and yards. What kinds of things do you like to do in your yards?

Let's talk about your lawns. How big is your lawn? What kind of condition is it typically in?

PROBE: Are you seeking the perfect lawn? What would be perfect to you?

Tell me about your lawn care – mowing, etc.

How often is your lawn fertilized?

How would you know if the lawn was fertilized too much?

Do you have any concerns about fertilizing?

### **Word Association**

Now I'd like to play a little game with you called word association. This game is simple. When you hear a word, just jot down the first word or idea that pops into your head.

OK, let's try it with a test.

What comes to mind when you hear "Red Sox?"

Now let's try it with some other words.

Chemical fertilizer  
Organic fertilizer

Now I'd like to show you a picture and I'd like to have you write down the first idea that comes to mind.  
SHOW PICTURE OF PERFECT LAWN.

### **Fertilizer/Pesticide Concerns**

What fertilizer or pesticides are used on your lawn?

Any concerns about pesticides?

PROBE: Is anyone more concerned about the safety of their family than impact on the environment?

Do you read the directions on the labels?

Do you read the warnings?

Let's pass out a warning label for a common product: Roundup? Or fertilizer? PASS OUT COPY OF LABELS. Any comments?

### **Environmental Impact of Over Fertilizing**

What, if any, impact can fertilizing and use of pesticides have on the environment?

What do you think the biggest environmental issue is today?

How would the use of fertilizers and pesticides on lawns compare to this?

### **Lawn Care Actions**

*Note: Need list of 6 -10 specific lawn care actions to take. Examples:*

1. *Mowing grass high and leaving clippings where they fall*
2. *Applying fertilizer only in the fall*
3. *Rain buffers???*
4. *Etc.*

I am going to pass out a list of actions you might take to reduce the impact of fertilizers. For each of these I'd like you to consider:

1. How effective this action might be. Do you think it could have a big impact or just a little?
2. How likely are you to take the action? – And please be honest!

Please rank these on a scale of 1-5 where 5 is most effective or most likely and 1 is least effective or least likely. OK, let's go through these one by one.

GO THROUGH RANKINGS ONE BY ONE.

### **Message Testing**

Now I'd like to show you some TV advertisements designed for other states.

SHOW ADS ONE AT A TIME AND THEN ASK: Comments?

1. Delicious (Chesapeake Bay)
2. When you are Fertilizing the Lawn (Washington)
3. Psycho Runoff (Texas)
4. Fertilizer PSA (Vermont)

*Note: These ads are from the EPA toolkit and represent a range of styles.*

Let me show these one more time.

Now I'm going to pass out a scoring sheet. I'd like you to rate each TV ad on three questions:

1. Does the ad grab and hold your interest? Would you pay attention?
2. Does the ad motivate you? Does it make you want to act?
3. Do you know what to do from the ad?

Score each of the ads, using a scale where 5 is very much and 1 is not at all.

OK, what ad did you rate highest for: Gaining your attention?

What is your thinking on this?

REPEAT FOR QUESTIONS #2 and #3.

### **Communications Ideas**

Let's talk a bit about successful ways to communicate to you.

Have you ever seen a sign about effective lawn care on someone's lawn? What do you think of this?

SHOW SIGN AND TRY AGAIN. Other thoughts?

What about signing a pledge? Would you be willing to sign a pledge for appropriate lawn care? Would this be effective?

When hearing advice about appropriate lawn care, who or what organizations are credible?

1. DEP staff?
2. State university Scientists
3. Extension Service Representatives?

**Final Question**

I have just one last question. I'd like you to think for a moment about your greatest concern about overuse of fertilizers and pesticides. What is the negative effect of fertilizers and pesticides that you are most concerned about?

## Appendix 2. Screener (Market Decisions)

### MARKET DECISIONS Lawn Care Screener

Name:	_____
Address:	_____ _____
Phone #:	_____
Email:	_____
Date/Recruiter:	_____

**Time of Group:**

- 5:30 - 7:30pm - Tuesday, October 17<sup>th</sup> - 2006
- 7:30 - 9:30pm - Tuesday, October 17<sup>th</sup> - 2006

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Hello, this is \_\_\_\_\_ from Market Decisions, a professional research firm and I'm calling on behalf of the Maine Department of Environmental Protection. We are conducting a focus group discussion with residents in your area to discuss lawns and lawn care. If you qualify, you will receive **\$50 in cash** for participating in the 2-hour session. Again, this is strictly research – may I ask you a few questions to see if you qualify?

**RECORD GENDER – BY OBSERVATION ONLY**

MALE	<input type="checkbox"/>	<i>RECRUIT A MIX</i>
FEMALE	<input type="checkbox"/>	

1) First of all, do you own your own home, own a condo, or rent?

Own Home	<input type="checkbox"/>	<i>CONTINUE</i>
Own Condo	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>
Rent	<input type="checkbox"/>	
DK/REF	<input type="checkbox"/>	

2) Do you have a lawn at your home?

YES	<input type="checkbox"/>	<i>CONTINUE</i>
NO	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>
DK/REF	<input type="checkbox"/>	

3) Do you personally do your own lawn care, or do you hire a company or individual to do the lawn care at your home?

Personally do own lawn care	<input type="checkbox"/>	<i>RECRUIT 8</i>
Hire company or individual to do lawn care	<input type="checkbox"/>	<i>RECRUIT 4</i>
Combination of both	<input type="checkbox"/>	<i>CODE AS "HIRE"</i>
Do not do lawn care	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>
DK/REF	<input type="checkbox"/>	

4) Do you (company/individual that you hire) treat or fertilize your lawn?

YES	<input type="checkbox"/>	GO TO Q6
NO	<input type="checkbox"/>	GO TO Q5
DK/REF	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>

5) If no, do you (company/individual that you hire) not treat or fertilize your lawn for environmental reasons?

YES	<input type="checkbox"/>	GO TO Q7 (RECRUIT 1-2)
NO	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>
DK/REF	<input type="checkbox"/>	

6) Which of the following statements would you say best represents how often your lawn is treated or fertilized? READ RESPONSES

My lawn is treated or fertilized using chemical or organic fertilizer at least once a year	<input type="checkbox"/>	RECRUIT 3 – 4
My lawn is treated or fertilized using chemical or organic fertilizer 2 or 3 times a year	<input type="checkbox"/>	RECRUIT 3 – 4
My lawn is treated or fertilized using chemical or organic fertilizer 4 or more times a year	<input type="checkbox"/>	RECRUIT 3 – 4
DK/REF	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>

7) Which of the following categories includes your age? (READ LIST)

UNDER 18	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>
18 – 29	<input type="checkbox"/>	<i>RECRUIT A MIX</i>
30 – 39	<input type="checkbox"/>	
40 - 49	<input type="checkbox"/>	
50 - 59	<input type="checkbox"/>	
60 - 70	<input type="checkbox"/>	
71+	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>

8) Which of the following categories does your ANNUAL family income fall? READ LIST.

Under \$25,000	<input type="checkbox"/>	<i>MAX OF 2</i>
\$25,000 - \$50,000	<input type="checkbox"/>	<i>RECRUIT A MIX</i>
\$50,000 - \$75,000	<input type="checkbox"/>	
\$75,000 - \$100,000	<input type="checkbox"/>	
\$100,000+	<input type="checkbox"/>	
DK/REF	<input type="checkbox"/>	

9) Are you, or is anyone in your household employed by any of the following?  
 READ LIST AND PAUSE AFTER EACH ONE

An advertising, marketing or market research firm	<b>YES</b>	<b>NO</b>	<b>DK</b>	<b>REF</b>
An environmental protection agency	<b>YES</b>	<b>NO</b>	<b>DK</b>	<b>REF</b>
A fertilizing or lawn care company	<b>YES</b>	<b>NO</b>	<b>DK</b>	<b>REF</b>

**IF NO TO ALL, CONTINUE**

10) Have you participated in a focus group discussion within the past 6 months?

NO	<input type="checkbox"/>	
YES	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>
DK/REF	<input type="checkbox"/>	

11) And finally, since participants in focus groups are asked to express their thoughts and opinions freely in an informal group setting, we'd like to know how comfortable you are with such an exercise. Would you say you are...?

Very comfortable	<input type="checkbox"/>	<i>CONTINUE TO INVITATION</i>
Fairly comfortable	<input type="checkbox"/>	
Comfortable	<input type="checkbox"/>	
Not very comfortable	<input type="checkbox"/>	<b>THANK &amp; TERMINATE</b>
Not at all comfortable	<input type="checkbox"/>	

# INVITATION

## [IF MEET QUALIFICATIONS, CONTINUE]

We would like to invite you to participate in a focus group discussion concerning lawns and lawn care, which is being sponsored by the Maine Department of Environmental Protection. There will be 8-10 other homeowners attending the group and no preparation is required – we just want to hear your opinions. A professional moderator will lead the discussion and there will be no sales effort involved in any way.

**\*\* IF THEY WANT TO KNOW WHO IS SPONSORING THE FOCUS GROUP:**

The Maine Department of Environmental Protection is sponsoring this research.

The focus group will last for 2 hours and will be held on the night of **Tuesday, October 17<sup>th</sup>** at Market Decisions, which is located at 75 Washington Ave, Suite 206, in Portland. Our offices are in the old brick JJ. Nissen Bakery building.

**If you have attended a focus group in the past with Market Decisions, please make note of our new address – we are no longer in South Portland.**

The times that we have available are:

	<b>5:30 – 7:30 PM</b> – Tuesday, October 17 <sup>th</sup> , 2006
	<b>7:30 – 9:30 PM</b> – Tuesday, October 17 <sup>th</sup> , 2006

You will receive **\$50 in cash** at the end of the session and your name will not be used in any way. The discussion will be audio and videotaped – but this is just for research purposes and will only be used by the research team. Light refreshments will also be served.

Will you be able to take part in this research discussion?

- NO – Not available
- NO – Not interested
- YES – **READ BELOW**

As these are small groups and with even one person missing, the overall success of the group may be affected, I would ask that once you have decided to attend that you make every effort. If for any reason you are unable to attend, please give us a call. This will enable us to find a replacement. You can contact Jen MacBride at 1-800-293-1538 extension 100.

Please arrive 15 minutes early so that we can sign you in and so you can enjoy some food. So we can send you a confirmation letter and directions to Market Decisions, may I please get your name and address? Or, if you prefer, the information can be sent via email as well. **RECORD ON FRONT PAGE.**

We look forward to you participation. Again my name is \_\_\_\_\_. Thank you for your time, Good night.

## Appendix 3. Pre Group Survey Frequencies

### Frequencies

**Before I use a fertilizer or pesticide I ask an expert what to use**

	K	
	1.00	
	Count	%
Strongly Agree	9.0	23.1%
2	7.0	17.9%
3	4.0	10.3%
Neither Agree nor Disagree	8.0	20.5%
5	4.0	10.3%
6	5.0	12.8%
Strongly Disagree	2.0	5.1%
Total	39.0	100.0%

**If I don't have a nice green lawn, my friends or family will think I'm lazy**

	K	
	1.00	
	Count	%
2	1.0	2.6%
3	10.0	25.6%
Neither Agree nor Disagree	7.0	17.9%
5	8.0	20.5%
6	5.0	12.8%
Strongly Disagree	8.0	20.5%
Total	39.0	100.0%

**I'm too busy to fertilize or use a pesticide**

	K	
	1.00	
	Count	%
Strongly Agree	3.0	7.7%
2	2.0	5.1%
3	3.0	7.7%
Neither Agree nor Disagree	13.0	33.3%
5	5.0	12.8%
6	8.0	20.5%
Strongly Disagree	5.0	12.8%
Total	39.0	100.0%

**We use our lawn a lot for recreations or gatherings**

	K	
	1.00	
	Count	%
Strongly Agree	8.0	20.5%
2	7.0	17.9%
3	6.0	15.4%
Neither Agree nor Disagree	3.0	7.7%
5	9.0	23.1%
6	4.0	10.3%
Strongly Disagree	2.0	5.1%
Total	39.0	100.0%

**If there were good alternatives to chemical fertilizers and pesticides, I would try them**

	K	
	1.00	
	Count	%
Strongly Agree	20.0	51.3%
2	9.0	23.1%
3	7.0	17.9%
Neither Agree nor Disagree	3.0	7.7%
Total	39.0	100.0%

**Keeping our rivers and lakes clean from pollution is important to me**

	K	
	1.00	
	Count	%
Strongly Agree	28.0	71.8%
2	9.0	23.1%
3	2.0	5.1%
Total	39.0	100.0%

**As long as you follow the directions carefully, using pesticides or fertilizers won't hurt the environment**

	K	
	1.00	
	Count	%
2	3.0	7.7%
3	5.0	12.8%
Neither Agree nor Disagree	7.0	17.9%
5	10.0	25.6%
6	6.0	15.4%
Strongly Disagree	8.0	20.5%
Total	39.0	100.0%

**Organic fertilizers and pesticides don't work as well as chemical fertilizers**

	K	
	1.00	
	Count	%
Strongly Agree	1.0	2.6%
2	1.0	2.6%
3	7.0	17.9%
Neither Agree nor Disagree	16.0	41.0%
5	5.0	12.8%
6	4.0	10.3%
Strongly Disagree	5.0	12.8%
Total	39.0	100.0%

**Protecting people’s lifestyle is more important than protecting the environment**

	K	
	1.00	
	Count	%
Strongly Agree	2.0	5.1%
3	1.0	2.6%
Neither Agree nor Disagree	5.0	12.8%
5	8.0	20.5%
6	10.0	25.6%
Strongly Disagree	13.0	33.3%
Total	39.0	100.0%

**There is little one person can do about water pollution**

	K	
	1.00	
	Count	%
Strongly Agree	1.0	2.6%
3	3.0	7.7%
Neither Agree nor Disagree	2.0	5.1%
5	8.0	20.5%
6	10.0	25.6%
Strongly Disagree	15.0	38.5%
Total	39.0	100.0%

**I’m worried about the safety of fertilizers and pesticides**

	K	
	1.00	
	Count	%
Strongly Agree	11.0	28.2%
2	9.0	23.1%
3	11.0	28.2%
Neither Agree nor Disagree	2.0	5.1%
5	4.0	10.3%
6	1.0	2.6%
Strongly Disagree	1.0	2.6%
Total	39.0	100.0%

**The smaller my lawn, the less work I do and the better I like it**

	K	
	1.00	
	Count	%
Strongly Agree	6.0	15.8%
2	10.0	26.3%
3	8.0	21.1%
Neither Agree nor Disagree	8.0	21.1%
5	2.0	5.3%
6	3.0	7.9%
Strongly Disagree	1.0	2.6%
Total	38.0	100.0%

**I'd rather have more garden and less lawn**

	K	
	1.00	
	Count	%
Strongly Agree	5.0	12.8%
2	8.0	20.5%
3	4.0	10.3%
Neither Agree nor Disagree	10.0	25.6%
5	5.0	12.8%
6	2.0	5.1%
Strongly Disagree	5.0	12.8%
Total	39.0	100.0%

**If pesticides and fertilizers were bad for the environment, government would ban them**

	K	
	1.00	
	Count	%
2	2.0	5.3%
3	3.0	7.9%
Neither Agree nor Disagree	5.0	13.2%
5	5.0	13.2%
6	10.0	26.3%
Strongly Disagree	13.0	34.2%
Total	38.0	100.0%

**If one house in my neighborhood doesn't take care of their lawn, it really stands out**

	K	
	1.00	
	Count	%
Strongly Agree	6.0	15.4%
2	6.0	15.4%
3	7.0	17.9%
Neither Agree nor Disagree	9.0	23.1%
5	7.0	17.9%
Strongly Disagree	4.0	10.3%
Total	39.0	100.0%

**A green, lush lawn is very important to me**

	K	
	1.00	
	Count	%
Strongly Agree	3.0	7.7%
2	6.0	15.4%
3	10.0	25.6%
Neither Agree nor Disagree	5.0	12.8%
5	2.0	5.1%
6	7.0	17.9%
Strongly Disagree	6.0	15.4%
Total	39.0	100.0%

**I have to fertilize or use a pesticide on my lawn because it is so heavily used**

	K	
	1.00	
	Count	%
2	1.0	2.6%
3	2.0	5.1%
Neither Agree nor Disagree	7.0	17.9%
5	9.0	23.1%
6	7.0	17.9%
Strongly Disagree	13.0	33.3%
Total	39.0	100.0%

**The streams and lakes in Maine are more polluted today than they were 10 years ago**

	K	
	1.00	
	Count	%
Strongly Agree	5.0	12.8%
2	3.0	7.7%
3	11.0	28.2%
Neither Agree nor Disagree	7.0	17.9%
5	7.0	17.9%
6	3.0	7.7%
Strongly Disagree	3.0	7.7%
Total	39.0	100.0%

**Big companies cause most water pollution**

	K	
	1.00	
	Count	%
Strongly Agree	3.0	7.7%
2	5.0	12.8%
3	7.0	17.9%
Neither Agree nor Disagree	11.0	28.2%
5	5.0	12.8%
6	6.0	15.4%
Strongly Disagree	2.0	5.1%
Total	39.0	100.0%

**I'd like to change how I impact the environment, but it's hard to do the right thing all the time**

	K	
	1.00	
	Count	%
Strongly Agree	7.0	17.9%
2	5.0	12.8%
3	16.0	41.0%
Neither Agree nor Disagree	6.0	15.4%
6	4.0	10.3%
Strongly Disagree	1.0	2.6%
Total	39.0	100.0%

**If there were good alternatives to chemical fertilizers and pesticides, I would try them**

	K	
	1.00	
	Count	%
Strongly Agree	19.0	48.7%
2	9.0	23.1%
3	6.0	15.4%
Neither Agree nor Disagree	2.0	5.1%
5	2.0	5.1%
6	1.0	2.6%
Total	39.0	100.0%

**I fertilize or use pesticide on my lawn only when it absolutely needs it**

	K	
	1.00	
	Count	%
Strongly Agree	7.0	17.9%
2	12.0	30.8%
3	6.0	15.4%
Neither Agree nor Disagree	4.0	10.3%
5	6.0	15.4%
6	2.0	5.1%
Strongly Disagree	2.0	5.1%
Total	39.0	100.0%

**If you care about the water quality of lakes, you don't fertilize or use pesticides on your lawn**

	K	
	1.00	
	Count	%
Strongly Agree	6.0	15.4%
2	3.0	7.7%
3	6.0	15.4%
Neither Agree nor Disagree	7.0	17.9%
5	8.0	20.5%
6	6.0	15.4%
Strongly Disagree	3.0	7.7%
Total	39.0	100.0%

**Even if it costs more, I would use organic fertilizers or pesticides in order to protect the environment**

	K	
	1.00	
	Count	%
Strongly Agree	8.0	20.5%
2	10.0	25.6%
3	7.0	17.9%
Neither Agree nor Disagree	10.0	25.6%
5	1.0	2.6%
6	1.0	2.6%
Strongly Disagree	2.0	5.1%
Total	39.0	100.0%

**I don't have time to become an expert in lawn care, I use whatever fertilizer or pesticide is most convenient or the one I find in the store**

	K	
	1.00	
	Count	%
Strongly Agree	1.0	2.6%
2	2.0	5.1%
3	8.0	20.5%
Neither Agree nor Disagree	8.0	20.5%
5	5.0	12.8%
6	8.0	20.5%
Strongly Disagree	7.0	17.9%
Total	39.0	100.0%

**Organic fertilizers and pesticides don't work as well as chemical fertilizers and pesticides**

	K	
	1.00	
	Count	%
2	2.0	5.1%
3	8.0	20.5%
Neither Agree nor Disagree	16.0	41.0%
5	5.0	12.8%
6	4.0	10.3%
Strongly Disagree	4.0	10.3%
Total	39.0	100.0%

**I consider myself environmentally conscious**

	K	
	1.00	
	Count	%
Strongly Agree	7.0	17.9%
2	17.0	43.6%
3	9.0	23.1%
Neither Agree nor Disagree	5.0	12.8%
6	1.0	2.6%
Total	39.0	100.0%

**I would switch to an organic fertilizer or pesticide to protect the health of people and pets**

	K	
	1.00	
	Count	%
Strongly Agree	13.0	33.3%
2	14.0	35.9%
3	8.0	20.5%
Neither Agree nor Disagree	3.0	7.7%
Strongly Disagree	1.0	2.6%
Total	39.0	100.0%

**I would change the way I do things in order to protect the environment**

	K	
	1.00	
	Count	%
Strongly Agree	12.0	30.8%
2	15.0	38.5%
3	7.0	17.9%
Neither Agree nor Disagree	3.0	7.7%
5	1.0	2.6%
Strongly Disagree	1.0	2.6%
Total	39.0	100.0%

**I will just as well use up an entire bag of fertilizer or pesticide rather than store any extra**

	K	
	1.00	
	Count	%
Strongly Agree	1.0	2.6%
2	3.0	7.7%
3	8.0	20.5%
Neither Agree nor Disagree	3.0	7.7%
5	6.0	15.4%
6	5.0	12.8%
Strongly Disagree	13.0	33.3%
Total	39.0	100.0%

**I fertilize or use a pesticide on my lawn as much as I need to so that it's looking nice**

	K	
	1.00	
	Count	%
Strongly Agree	1.0	2.6%
2	4.0	10.3%
3	8.0	20.5%
Neither Agree nor Disagree	6.0	15.4%
5	7.0	17.9%
6	5.0	12.8%
Strongly Disagree	8.0	20.5%
Total	39.0	100.0%

**I believe that dangers to the environment are often overstated**

	K	
	1.00	
	Count	%
Strongly Agree	1.0	2.6%
3	2.0	5.1%
Neither Agree nor Disagree	8.0	20.5%
5	6.0	15.4%
6	10.0	25.6%
Strongly Disagree	12.0	30.8%
Total	39.0	100.0%

**Storm water runoff from residential lawns and gardens is a major source of water pollution**

	K	
	1.00	
	Count	%
Strongly Agree	14.0	35.9%
2	8.0	20.5%
3	8.0	20.5%
Neither Agree nor Disagree	6.0	15.4%
5	1.0	2.6%
6	1.0	2.6%
Strongly Disagree	1.0	2.6%
Total	39.0	100.0%

## Appendix 4. Exercise Sheets

### ACTIONS RATING SHEET:

Your First Name \_\_\_\_\_

Date \_\_\_\_\_

Please read the action then decide whether this action makes sense – can you see how it would reduce the environmental impact of fertilizer or pesticide? Mark the box – either yes or no. Then decide if it is likely that you would do this – that you would take this action. Again mark the box, yes or no.

	Makes Sense		Likely to Do	
	Yes	No	Yes	No
1. Only apply fertilizer in the fall. (Feed the grass not the weeds).				
2. Test soil to determine fertilizer needs and match fertilizer to needs.				
3. Use phosphorous free fertilizer (p-free).				
4. Use time released or slow release nitrogen fertilizers				
5. Instead of chemical fertilizers, top dress lawn with fine compost.				
6. Never apply pesticides or fertilizers just before heavy rain is forecasted.				
7. Pick up spilled or accidentally applied lawn care products from impervious surfaces like sidewalks or driveways.				
8. Mow grass high - 3 inches.				
9. Leave grass clippings on lawn after mowing.				
10. Use spot treatments to control weeds or insects instead of broadcasting treatments over all the lawn.				

## **TV SPOT RANKING**

Your First Name \_\_\_\_\_

Date \_\_\_\_\_

Think about each TV spot and then answer the question.

	Did it catch your attention?		Did it motivate you to act?		Do you know what to do after seeing it?	
	Yes	No	Yes	No	Yes	No
#1 "When you are Fertilizing the Lawn"						
#2 "Psycho Runoff"						
#3 "Fertilizer Public Service Announcement"						

## Appendix 5. Worksheet Results

### WORD ASSOCIATION

CHEMICAL FERTILIZER	<p><b><u>MD GR.1</u></b>                      Bad                      Bugs                      Bugs                      Chemicals                      Danger                      Kill                      Killer                      Poison                      Yuck</p>	<p><b><u>MD GR.2</u></b>                      Bugs                      Bugs                      Bugs                      Chemical                      Dangerous                      Fertilizer                      Kill                      Weeds  <i>Missing</i></p>
ORGANIC FERTILIZER	<p><b><u>MD GR.1</u></b>                      Chemical                      Chemicals                      Danger                      Kill                      Kills                      Kills vegetation                      Weed killer                      Weeds                      What?</p>	<p><b><u>MD GR.2</u></b>                      Chemical                      Chemical                      Dandelions                      Fertilizer                      Killer                      Plant killer                      Weed                      Weeds  <i>Missing</i></p>
PESTICIDE	<p><b><u>MD GR.1</u></b>                      Farm                      Kills weeds                      Lawn                      Lawn &amp; garden food                      Liquid Bad                      Not good                      Rip-off                      Runoff                      Unnatural</p>	<p><b><u>MD GR.2</u></b>                      Green                      Green                      Lawn                      Most used                      Not good                      Spreader                      Unhealthy                      White powder  <i>Missing</i></p>
HERBICIDE	<p><b><u>MD GR.1</u></b>                      Better                      Better                      Cow manure                      Expensive                      Grows grass                      Lawn                      Natural - good                      Organic Farm                      Safer</p>	<p><b><u>MD GR.2</u></b>                      Better                      Clean                      Ecological                      Expense                      Healthy                      Nature                      Not sure about it                      Safer  <i>Missing</i></p>

**ACTION - MAKES SENSE/LIKELY TO DO IT?**

	PORTLAND				BANGOR			
	ACTION MAKES SENSE	ACTION DOES NOT MAKE SENSE	LIKELY TO DO	NOT LIKELY TO DO	ACTION MAKES SENSE	ACTION DOES NOT MAKE SENSE	LIKELY TO DO	NOT LIKELY TO DO
Only apply fertilizer in the fall	10	7	4	13	5	16	4	17
Test soil to determine fertilizer needs and match fertilizer to needs	17		5	12	19	1	5	15
Use phosphorous free fertilizer	15	2	10	6	19	2	14	7
Use time released or slow release nitrogen fertilizers	14	3	11	5	17	4	12	8
Instead of chemical fertilizers, top dress lawn with fine compost	12	5	7	10	20		9	11
Never apply pesticides or fertilizers just before heavy rain is forecasted	16	1	14	3	19	2	13	8
Pick up spilled or accidentally applied lawn care products from impervious surfaces like sidewalks or driveways	17		16		21		20	1
Mow grass high - 3 inches	14	3	14	2	15	6	9	12
Leave grass clippings on lawn after mowing	16	1	14	3	18	3	16	5
Use spot treatments to control weeds or insects instead of broadcasting treatments over all the lawn	14	3	11	6	20	1	16	5

**TV SPOTS**

	PORTLAND						BANGOR					
	CATCH YOUR ATTENTION?		MOTIVATE YOU TO ACT?		UNDERSTAND WHAT TO DO AFTER SEEING IT?		CATCH YOUR ATTENTION?		MOTIVATE YOU TO ACT?		UNDERSTAND WHAT TO DO AFTER SEEING IT?	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
# 1 - When You are Fertilizing the Lawn	17	1	11	7	16	2	19	2	15	6	16	5
#2 - Psycho Runoff	16	2	6	12	16	2	20	1	7	14	11	10
#3 - Fertilizer Public Service Announcement	14	4	17	1	18		10	11	14	7	18	3