Executive Summary and Recommendations from Survey Research:

Changing Homeowner's Lawn Care Behavior to Reduce Nutrient Losses in New England's Urbanizing Watersheds

Overall the results of the survey can be interpreted as very encouraging for the likelihood of success in outreach programs designed to affect lawn care practices to improve water quality. Questionnaires were sent to five purposively selected communities throughout New England: Hampden, Maine; East Lyme, Connecticut; Milton, New Hampshire; Brandon, Vermont; and East Kingstown, Rhode Island to learn about residents' perceptions of lawn care and water quality issues. The information was collected and to understand the potential audiences' perspectives, attitudes, and desires so the information can be incorporated in the design of an outreach campaign employing the principles of community based social marketing.

A total of 2150 questionnaires were mailed out and 302 addresses were returned as non-deliverable, which resulted in 1848 eligible questionnaire recipients. A total of 754 completed questionnaires were returned, for a final response rate of 40.8% (n=754). The response rate of 41% is good for this type of general community survey, and the magnitude of the effort has produced extensive and reliable data on lawn care and water quality issues. Responses were evenly distributed across study sites, with minimal demographic biases that are typical of survey effort, which in this case may actually result in information more accurately describing those residents actively engaged in lawn care.

Detailed results are available in several reports issued with this executive summary. Overall, respondents indicated that lawn care and the appearance of lawns are important to them, but also that they recognize some environmental concerns exist and that they are very willing to explore alternatives to address those issues. Several important results emerged in the analysis that are of use for designing outreach, and are highlighted in the recommendations below, which are the focus of this document.

Recommendations for the Design of Outreach

Specific Content of Messages

The following identify key information for inclusion in outreach messages as indicated by survey results:

- Using organics does not address water quality issues related to fertilizer use, but 49.8% of respondents believe that it does.
- Fertilizer impacts water quality (basic information, particularly on the dynamics of the processes, are still needed)
- 30.5% of respondents believe their work or business is economically dependent on the quality of their watershed
- Don't use it all: 41.2% of respondents reported they use all fertilizer purchased to avoid storage
- Protecting family and pet health is important or very important to 78.4% of respondents, so links between over-fertilization and these concerns could be a motivating element of outreach messages.

- Respondents are very accepting of several simple practices: 1) using fertilizers that expressly protect water quality; 2) cutting grass a higher height, and 3) leaving clippings on the lawn. Similarly, respondents indicate that it is not important that a lawn be clover-free (53.7% rated a clover-free lawn as a 1 or 2 on a 5 point scale of importance). These basic steps are the most widely acceptable alternatives, and therefore may be productive to recommend.

Framing Messages: Knowing the Audience and Using Social Norms

Understanding the intended audience in depth is a central feature of community based social marketing approaches, and important factors for consideration are highlighted below.

- *The Audience: Key Considerations*
  - Time considerations are not identified as a major factor in adopting environmentally friendly alternatives - two-thirds of respondents (65.2%) do not indicate a desire to spend less time on their lawn or have no preference for doing so.
  - Nearly half (47.9%) of respondents assert they enjoy spending time on lawn care.
    - "Spoon feeding" approaches may be a viable suggestion based on this information.
  - 76.9% of respondents assert that it is important that their lawn look the same as it currently does if they adopt environmentally friendly alternatives and only a small portion of respondents (9.7%) believe alternatives cannot achieve the type of lawn they desire. There appears to be debate among turf scientists on this issue, and it should be acknowledged and explicitly addressed to prevent unrealized expectations.
  - Linking the impacts of over-fertilization on water quality with a specific body of water is essential. 79.4% of respondents rated that framing as important or very important when considering their own actions, so tailoring messages to create such specific links should be undertaken whenever possible. It is worthy of note that this finding supports a long line of research on the importance of place attachment and identity on stimulating environmentally responsible behaviors.
  - The availability of information on alternatives is important to many respondents for them to consider adopting them (41.6%). Outreach should be succinct, but should clearly identify sources of additional information.
  - Concern about specific environmental issues varies across the region, so messages intending to incorporate claims about the severity of issues should be tailored to specific regions.
  - Most respondents are satisfied with their lawn's appearance, and only 40.2% agree or strongly agree that fertilization is important for achieving the lawn they desire. Only 53.3% of respondents state they use fertilizer on their lawn, and 65.4% of fertilizer users assert they apply product two times per year or less. 20.6% of respondents indicate they use fertilizer 4 or more times per year.

Extensive research, which is supported by findings from this study, concludes that messages using socially normative framings (rather than "scare tactics" or conscience appeals) are especially powerful for motivating environmentally responsible behavioral change.

- *Using Social Norms: Potential Messages*
  - "Fitting in" is important to most respondents: 69.7% agreed or strongly agreed that they want their lawn to look good enough to fit into their community; 46.1% agreed or strongly agreed with the assertion that community members have a responsibility to adhere to community standards of lawn care.
  - ***an important implication is that the data can be used to redefine the lawn care norms of a community to include considerations of water quality impacts***
  - 30.5% of respondents believe their work or business is economically dependent on the quality of their watershed
  - When asked about what features of a lawn are most important, the most common response was that lawns be safe for the environment. This could be framed as: "In a recent survey of neighbors in your community 77.1% believe that having a lawn that is safe for the environment is important. Your neighbors assert that environmental safety is just as important as a lawn's appearance."
  - Similarly, 73.3% of your neighbors responding to a recent survey agree or strongly agree that adopting environmentally friendly lawn care practices is important for improving water quality.

Message Delivery

- Results from both the survey and interviews indicate the timing of the messages is important, as this is not a topic that is frequently considered outside of the moments where lawn care decisions are made or activities undertaken.
- As expected, the most commonly used source of information on lawn care is product packaging. This reinforces that a point of purchase effort may be essential for success.
- Media sources are not widely used or trusted.
- Master gardeners and University Extension are considered the most trustworthy information sources by far, so being clear about affiliations and providing additional sources of information associated with these groups is useful and appropriate.

Summary and recommendations from:
Eisenhauer, B. W. and B. Gagnon. 2008. "Changing Homeowner¹s Lawn Care Behavior to Reduce Nutrient Losses in New England¹s Urbanizing Watersheds: The report of findings from social science research." USDA CSREES project # 2006-51130-03656.