

# Conservation Practice Adoption: Motivations and Constraints among Lake Nokomis Area Business Owners



**FINAL**

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September 19, 2013

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## Acknowledgements

This study would not be possible without the Lake Nokomis area business owners who shared their insights on their businesses, water resources and conservation practices. We are extremely grateful for their participation. Special thanks go to Laura Hurley and Rebecca Rice with Metro Blooms for their collaboration in data collection and data analysis. This study was supported by funding from Metro Blooms. The cover image was created by Metro Blooms.

## Background and Objectives

This report details the findings of an assessment of motivations for and constraints to conservation practices among Lake Nokomis area business owners in Minneapolis, Minnesota. The study was conducted by Metro Blooms in consultation with Mae Davenport, a social scientist and associate professor in the Department of Forest Resources, University of Minnesota. The overarching goal of the assessment is to better understand what motivates and constrains business owners in adoption of sustainable business practices. The study examined business owner perspectives on water resources and onsite stormwater management.

The study has four primary objectives:

1. To identify factors that influence business owner decision making including the opportunities and challenges they face in the community.
2. To explore business owner perceptions of water resources and water management practices.
3. To examine perspectives on sustainable business practices including what motivates and constrains conservation.
4. To inform conservation programming aimed at helping businesses reduce their impacts on water resources.

Lake Nokomis is a subwatershed of the Minnehaha Creek watershed. The lake is listed as impaired for excessive phosphorus (EPA 2013). Past research in the Lake Nokomis subwatershed has shown that residents are concerned about water quality in Lake Nokomis and they also believe that business owners should share in the responsibility of maintaining clean water in Lake Nokomis (Metro Blooms 2013). A recent report on business engagement in water resource conservation in Minnesota concluded that one primary barrier to corporate engagement is a lack of a clear return on investment in water conservation (Environmental Initiative 2012). Questions persist around how business owners perceive water resources and what influences their conservation decision making. Findings from this study will inform communication, education and outreach programs aimed at increasing sustainable business practices and reducing the impacts businesses have on water resources.

Data were gathered through in-depth key informant interviews with 9 business owners operating in the Lake Nokomis area, including the Lake Nokomis subwatershed (see map, Appendix A). Participants were asked general questions about their businesses and decision making and then more specific questions about water management on their property and conservation practices. Questions also focused on two financial incentive programs: a Cost Share Program administered by the Minnehaha Creek Watershed District (MCWD) and the Stormwater Credit Program administered by the City of Minneapolis. MCWD offers grants to assist property owners in installing best management practices including rain gardens and permeable pavers. MCWD provides up to 50% of the project funding. Minneapolis offers stormwater quality credits to Minneapolis businesses and residents that can reduce their monthly stormwater utility charge by up to 50%. The business or homeowner is required to

show that they are capturing runoff through rain gardens, pervious pavement, filter strips, green roofs, or other practices.

## Methods

A qualitative research approach was used in this study to document motivations for and constraints to conservation from the perspectives of Lake Nokomis area business owners. Metro Blooms personnel recruited participants, conducted interviews, and analyzed the qualitative data with assistance from Mae Davenport. Mae Davenport hosted two two-hour trainings with Metro Blooms staff on qualitative interviewing and data analysis and provided technical support throughout the data collection and analysis phases of the project. Davenport designed the interview guide with assistance from Metro Blooms staff. The interview guide was pre-tested and revised based on feedback from participants.

Study participants were selected to represent a range of business owners within the Lake Nokomis area. Participants were recruited by Metro Blooms staff at meetings and via the telephone. Interviews were conducted with six male and three female business owners. Ages ranged from 35 to 65 years old. Business owners reported being in business in the Lake Nokomis area from 6 to 29 years. A few participants were involved in business-related organizations including Nokomis East Business Association, Women-Owned Businesses, and Independent Business Owners Association.

Metro Blooms staff conducted each of the 9 interviews which lasted from 30 minutes to one and a half hours. The interviews were conducted from May through July 2013. A contact script was used (Appendix B) in participant recruitment to explain the purpose and procedures of the study. An informed consent process was completed (Appendix C) prior to each interview. Participation was voluntary and identities of individual participants remain confidential and are not linked to interview data in any publications. Interview questioning was semi-structured, meaning an interview guide (Appendix D) was followed with predetermined open-ended questions. However, interviewees had the freedom to respond to questions from their own points of view. The interviewer also had the freedom to ask probing questions for further clarity or explanation. Detailed notes were taken by the interviewer and in some instances, up to two assistants during each interview. A short background questionnaire (Appendix E) was administered to document business owner sociodemographic and business characteristics.

Metro Blooms personnel analyzed the data using standard thematic qualitative analysis techniques for identifying themes, patterns and relationships within the data. A range of themes including convergent and divergent themes associated with business management, definitions of environmental sustainability, and conservation adoption motivations and constraints emerged. Metro Blooms personnel developed a framework of business owner decision making that includes theme tables (i.e., categories, subcategories and descriptors) and concept map diagrams.

A qualitative approach using key informant interviewing preserves richness and detail in the experiences, beliefs and attitudes of those interviewed but does not attempt to be statistically representative of the opinions of a broader population. Thus, this study represents the opinions of only those interviewed and may not be generalized to all business owners in the Lake Nokomis area. Still, we believe the individuals participating in this study are largely representative of the variety of small business owners in the Lake Nokomis area and can be generalized to similar business owners in other areas of comparable social, ecological and economic characteristics.

## Study Findings

The findings presented here are based on interviews conducted with 9 business owners operating in the Lake Nokomis area. Findings are presented as themes, direct quotes, theme tables and concept maps.

### **Business management**

#### *What do participants' businesses mean to them?*

Participants were asked what their business means to them, as well as what they like and what concerns them about being a business owner in the Lake Nokomis area. Most participants described their business as an investment and several individuals noted the community, its accessibility with biking and walking paths, Lake Nokomis, customer familiarity and loyalty, and improving economic trends as things they like about being a business owner in the Lake Nokomis area. One participant observed, "It's a really good business group and [there are] excellent neighbors. It's always been a really great place...." Another participant emphasized the significance of Lake Nokomis to the community: "If you come here at 6:30 in the morning, you'll watch hundreds of people come out of the neighborhood and go to the lake on their bikes, with their dogs, or just walking. So that's kind of a testament to the importance of the lake to the neighborhood."

Participants also acknowledged a few concerns they had about being a business owner in the area associated with economic trends, government bureaucracy and safety, especially concerns about crime in the local area. One participant explained business owner unease about crime: "Crime is sort of creeping. You know, bad guys like to go where good stuff is. I have heard that a number of businesses run by women have been robbed."

#### *What influences participants' business decisions?*

When asked about the most important considerations when making decisions about managing the business' property, several themes emerged. Participants described financial costs, time commitments and safety as important factors that drive decisions. One participant summarized the decision making process as, "Looking at the costs vs. benefits of [the decision] and how much maintenance we would have to do going forward, or if it's just something you can set in

place, and then it works on its own.” Participants also consider aesthetics including the image of their business among customers and within the local community. A participant explained, “I try to make it look as representable as I can.... I don’t have a bunch of junk lying around. I just do my job and serve my people.” Many business owners interviewed described wanting to maintain a “friendly and welcoming” atmosphere.

Participants also described the influence of local government on their property decision making, especially city requirements associated with licensing and other ordinances. Finally, a few participants described concerns for the natural environment as influencing their property management decisions. For example, one participant was aware of the ecological impacts of water runoff which shaped decisions to use sand over salt as a deicer on parking lots and sidewalks in the winter. Others described using organic pesticides and solar panels to reduce pollution or to conserve energy.

#### *What property renovations are they planning in the next 15 years?*

Most of the participants reported having no plans to renovate their properties in the next 15 years. A few described considering renovations if conditions changed. For example, one business owner said they may renovate if the City targets the neighborhood for the Great Streets program. Another participant explained, “No serious plans. I have a dream plan to attach the business to the garage and add a green roof, but unless I win the lottery, this is not in my budget.” A couple of participants seemed to be planning for changes including expanding rooftops or adding another story to their buildings. One participant said, “We will likely add another story or two to the building. Given the location and value of the land, this seems to make sense.”

#### *How do they currently manage water?*

Participants were asked several questions about water resource conservation practices. First, participants were asked if they are concerned about managing rain water and snow on their property. Then, they were asked if they currently do things and what they have considered doing to reduce their business’ impacts on water resources.

Participants described several strategies for managing water and snow with the intent to keep their property “clean” and “safe” for customers. These practices included sweeping sidewalks and parking lots, maintaining roof drainage downspouts, using sand on ice covered pavement and plowing snow. Most participants characterized these practices in terms of general upkeep and maintenance. Many appeared to be unaware that these practices also are conservation practices that help manage stormwater runoff and reduce pollution.

Other conservation practices mentioned include reducing water use, properly disposing of chemicals (e.g., automotive fluids), using environmentally friendly salt, landscaping with low maintenance plants, controlling erosion, and reducing the size of a parking lot. One participant described sharing knowledge about reducing water use with other business owners as a conservation practice. A few participants said they had been considering practices such as vertical gardens, stormwater gutters, and reducing or breaking up impervious surfaces (e.g.,



getting rid of a parking lot). A few participants acknowledged continuing to use salt on ice to ensure pedestrian safety and to avoid litigation if a customer is injured. Another participant expressed concern that using sand on ice-covered pavement would lead to sand being tracked into the store.

### **Definitions of environmental sustainability**

Participants were asked what the term “environmentally sustainable” means to them as business owners. Responses varied. For some, sustainability means survival—sustaining their business over time. Others focused on ensuring that their business does not make existing environmental conditions worse. Participants described sustainability as having a small impact on the environment by reducing energy or water use and properly disposing of waste. One participant characterized an environmentally sustainable business as having a “clean property.” Several participants responded, “We do what we can” to be environmentally sustainable. Finding a balance was important to a few business owners. One participant explained, “To me it means the least impact to meet my needs. So how do I make my needs smaller, and then how do I find ways to counter that with what I do? How do I balance what I use with what I give back?”

### **Conservation practice adoption: motivations and constraints**

To generate discussion about conservation practices adoption and what motivates and constrains business owners in the Lake Nokomis area, participants were asked if they are concerned about water resources in the area, if clean water in the area is important to them and what role business owners should play in keeping water clean. Additionally, when participants were asked what they currently do to reduce their businesses’ impacts on water resources, several follow-up questions were asked. Among the follow-up questions was “what first motivated you to do this” and “do you plan to continue doing this over the next five years.” When asked what they have considered doing to reduce their businesses’ impacts on water resources, participants were asked what factors have kept them from doing those practices and would they do the practices if things were different. They were also asked a general question about the most important considerations when making decisions about environmentally sustainable practices. A series of tradeoff questions were asked that were framed by the lead-in question, “Would you be more likely to adopt or maintain practices that reduce the property’s impact on water if...” Benefits/conditions listed included helping keep local lakes and streams clean, having financial assistance, having technical assistance, having evidence that the practices were a good economic investment, reducing water use, providing native habitat for birds and butterflies, advertising or promoting the business as using sustainable practices, most businesses had adopted them and they could talk to other business owners about how to make the practices work.

Participants also were asked directly if they had heard of or were enrolled in the Cost Share Program or the Stormwater Credit Program. None of the business owners interviewed was enrolled in either program. Only one participant had heard of the Stormwater Credit Program, and none of the participants had heard of the Cost Share Program. Still, after hearing more details about the programs (see program descriptions in Interview Guide, Appendix D) eight of

nine participants expressed support for the program and interest in having a free consultation with Metro Blooms staff. When asked about the Stormwater Credit Program, one participant responded, "50% reduction [in the stormwater utility fee]? That's attractive. If it made sense, I would consider it. So what do I have to do to do that?" When asked if the program is a good idea, another participant said, "Yes, if there's something that would apply with our situation, [the programs would] be good for us." A third participant acknowledged, "that sounds pretty neat."

#### *What are motivations for conservation practices?*

Five primary themes associated with conservation practice motivations emerged including business image, environmental stewardship, economic incentives, technical assistance, and social norms (Table 1). Participants described business image and in particular, appearing clean and welcoming to customers, as a primary motivator to adopt or consider adopting conservation practices. Other motivators was environmental stewardship or ethics centered on protecting habitat and maintaining water quality. Economic incentives and technical assistance also appear to have an influence on conservation decision making. Participants emphasized the need for programs to make conservation a good investment and to help increase their customer-base. For some, seeing other business owners adopting practices and having success in outcomes would be an important prerequisite for conservation. A participant explained, "If others have shown [these practices] to work, we would be more willing. We don't want to do anything that is new. Seeing other people have done this and that it works, would help."

#### *What are constraints to conservation practices?*

Seven primary themes emerged as constraints to conservation practices (Table 2). First and foremost, most participants expressed limited awareness and understanding of stormwater runoff as a source of pollution or what they could do to reduce their businesses contribution to runoff and pollution. Participants attributed this lack of knowledge to a dearth of information on the problem, conservation practices to address the problem, associated costs, and available incentive programs. One business owner described the typical mentality of many business owners in the area and the lack of information available to counter these misconceptions:

You think about stormwater and you think well, it falls into the lake in the first place, what's the difference if it comes down here first. You don't think about things like pesticides and stuff washing down with it. We look at the water bill and see the runoff tax or whatever it is, and it just pisses you off, because you don't get it....You don't get anything in the mail about any type of programs, so you don't know what you can do about it besides just pay the bill.

For several participants, uncertainty about the practice installation and what the total cost will be including costs of additional requirements to meet City code was a chief constraint. For example, a participant suggested that conservation practices and associated costs are not clearly identified or communicated by the City:



The problem I have is that the solutions are too vague. I'd love to find an inexpensive way to rip out the parking lot. However, in the past when I've tried to make improvements, the City has approved my plans and then the code people came out with \$10,000 of stuff to do afterwards. They didn't know what they were doing and it was clear the city council didn't either.

Table 1. Motivations for adoption of conservation practices among business owners

| Category                  | Subcategory*          | Descriptor  |
|---------------------------|-----------------------|---|
| Business image            | Among customers       | <ul style="list-style-type: none"> <li>• <i>Cleanliness</i></li> <li>• <i>Aesthetics</i></li> <li>• <i>Welcoming and friendly</i></li> </ul>  |
|                           | In business community | <ul style="list-style-type: none"> <li>• <i>Having a sustainable business</i></li> <li>• <i>Being a leader in sustainability</i></li> <li>• <i>Collaborating with other businesses</i></li> <li>• <i>Protecting habitat</i></li> </ul>  |
|                           | In community          | <ul style="list-style-type: none"> <li>• <i>Aesthetics</i></li> <li>• <i>Showing interest in neighborhoods</i></li> <li>• <i>Benefiting the community</i></li> </ul>  |
| Environmental stewardship | Habitat protection    | <ul style="list-style-type: none"> <li>• <i>Wildlife protection</i></li> <li>• <i>Maintaining butterfly gardens</i></li> <li>• <i>Support of Monarch Festival</i></li> </ul>  |
|                           | Water quality         | <ul style="list-style-type: none"> <li>• <i>Water is a valued resource</i></li> <li>• <i>Protection of lakes and rivers (e.g., Minnehaha Creek)</i></li> <li>• <i>Importance of clean drinking water</i></li> </ul>   |
| Economic incentives       |                       | <ul style="list-style-type: none"> <li>• <i>Cost share program</i></li> <li>• <i>Stormwater credit program</i></li> <li>• <i>Conservation as "a good investment"</i></li> <li>• <i>Conservation as "increasing customer-base"</i></li> <li>• <i>Reducing water use</i></li> </ul> |
| Technical assistance      |                       | <ul style="list-style-type: none"> <li>• <i>Installation assistance</i></li> <li>• <i>Design assistance</i></li> <li>• <i>Improving property (e.g., enhancing parking lot)</i></li> </ul>   |
| Social norms              |                       | <ul style="list-style-type: none"> <li>• <i>Examples of successful practices from other businesses</i></li> </ul>   |

\*Some theme categories do not have subcategories

Not knowing the exact costs of conservation practices and the amount of assistance available prior to installation appeared to be a predominating constraint: “The question is how the assistance would relate to the difference in the cost. Everything is going to be bottom-line for a [business] owner so if you say to me ‘I’ve got this much area of impervious surface that I can change,’ I need to know exact costs.”

Other participants emphasized having technical assistance as being as important as financial assistance. A participant explained, “Finances [are a barrier] but also technical information. Because, what do you do with your property? Usually commercial [buildings] take up the whole space....so I think technical and financial.” Similarly, a participant admitted to not knowing much about permeable pavers and added that he would have used them for a new sidewalk, if he had known about incentive programs:

Time [is a barrier] and maybe some knowledge. I try to keep up on things, but I don’t know very much about the subject. I’ve heard of the permeable pavers. I mean, the City talks about them. When I paid \$4,000 for a new sidewalk, [the City] should have talked to me about pavers, I would’ve gladly done that.

Several participants expressed the sentiment that water pollution is not their responsibility and instead attributed the problem to other businesses, bigger businesses, and industry. One participant suggested that residential areas (i.e., lawns and fertilizers) are a bigger source of pollution than small businesses with mostly pavement.

Other constraints include perceived social norms of behavior. Two distinct social norms seemed to be a constraint. First, is the perception that “other businesses are worse” when it comes to stormwater management and pollution. The second is the perception that there are few examples of successful conservation practices in the business community.

A few participants emphasized institutional constraints primarily associated with a lack of trust in the City as administrators of City building codes, property taxes, and incentive programs. One participant intimated that the City has ulterior motives for their programs which include making money from and exerting power over businesses. Similarly, a few participants described what they believe to be an anti-business mentality among City officials. Some participants focused on the programs themselves and expressed unease over the code requirements and restrictions of programs. One participant lamented, “They make us jump through hoops.”

Some participants identified structural or physical characteristics of their business as a constraint to conservation practice adoption including the need for parking lots to accommodate high use or truck traffic and having structures without downspouts.

Table 2. Constraints to adoption of conservation practices among business owners

| Category                                | Subcategory*   | Descriptor  |
|---|--|---|
| Awareness and understanding of problem  | Linkages between stormwater, runoff and pollution        | <ul style="list-style-type: none"> <li>• <i>“Not on the radar”</i></li> <li>• <i>Misconceptions about rainwater and runoff</i></li> <li>• <i>“How could a business make a difference?”</i></li> </ul>   |
| Awareness and understanding of solution | Access to information about conservation practices       | <ul style="list-style-type: none"> <li>• <i>Limited knowledge of rain gardens</i></li> <li>• <i>Limited knowledge of permeable pavers</i></li> <li>• <i>Limited knowledge of downspout re-direction</i></li> <li>• <i>Uncertainty about costs</i></li> </ul>  |
|   | Access to information about financial incentive programs | <ul style="list-style-type: none"> <li>• <i>Unaware of cost share program</i></li> <li>• <i>Unaware of stormwater credit program</i></li> </ul>   |
| Economic investment and risk            |  | <ul style="list-style-type: none"> <li>• <i>Costs of BMP installation and maintenance</i></li> <li>• <i>Time (e.g., installation and maintenance)</i></li> <li>• <i>Loss of parking spaces</i></li> <li>• <i>Potential loss of “grandfathered” status in building codes with new construction</i></li> <li>• <i>Losing investment on previous landscaping</i></li> <li>• <i>Safety and risk of litigation (e.g., ice-covered pavement)</i></li> <li>• <i>Avoiding change and uncertainty</i></li> </ul> |
| Sense of responsibility                 |  | <ul style="list-style-type: none"> <li>• <i>“Small businesses don’t create pollution”</i></li> <li>• <i>People with yards pollute, pavement doesn’t</i></li> <li>• <i>Big businesses are the problem</i></li> <li>• <i>Industry is the problem</i></li> </ul>   |
| Perceived social norms                  |  | <ul style="list-style-type: none"> <li>• <i>“Other businesses are worse” in managing stormwater</i></li> <li>• <i>Few conservation leaders or examples of successful practices</i></li> </ul>   |

| Category                     | Subcategory*         | Descriptor  |
|------------------------------|----------------------|---|
| Institutional constraints    | Trust in government  | <ul style="list-style-type: none"> <li>• <i>Skeptical of intentions (e.g., perception of hidden agenda associated with power/money)</i></li> <li>• <i>“They don’t know what they’re doing” (i.e., credibility, reliability of information/decision making)</i></li> <li>• <i>Perception of anti-business mentality in City</i></li> </ul> |
|                              | Fairness of programs | <ul style="list-style-type: none"> <li>• <i>“They make us jump through hoops” (i.e., City codes and restrictions on businesses)</i></li> <li>• <i>Licensing</i></li> <li>• <i>Increasing fees</i></li> </ul>  |
| Physical/structural barriers |                      | <ul style="list-style-type: none"> <li>• <i>No downspouts on structures</i></li> <li>• <i>Need parking lot capacity to withstand high use or truck traffic</i></li> </ul>   |

\*Some categories do not have subcategories

## Discussion and Recommendations

### Four worldviews on stormwater management

Analysis of the range of responses to multiple interview questions revealed four predominating worldviews on stormwater management and the role of businesses among the interviewees.

#### 1. “We’re conscious of our water use and runoff.”

A few participants described being very aware of how their business affects water resources both in terms of water use and stormwater management. Business owners with this perspective expressed great concern about water and impacts to local streams and lakes. They see themselves as playing a distinct role in minimizing water use and managing stormwater on their property. These participants described adopting strategies including sweeping, using environmentally friendly salt or sand, and landscaping with low maintenance/water use plants.

#### 2. “It’s not on the radar.”

A few participants expressed a limited concern for their impacts on water resources and very little understanding of how their business, or any business, could make a difference in water resource management. For instance, one participant asserted, “We don’t really put out any pollutants. [The City] hit us with a storm sewer fee, because they just wanted some more money. But, we’re not an industrial situation...so I don’t really think that we’ve got much to do with polluting. That’s my impression anyway.” The connection between stormwater, runoff, and stream or lake pollution generally was not understood by business owners with this worldview.

### 3. *“Other businesses are worse than we are.”*

Some participants aligned with this perspective acknowledged concern for impacts to lakes and streams and demonstrated at least some understanding of stormwater management principles. However, they assigned the responsibility to address the problem to others. Some participants suggested that big businesses and industry are the primary sources of water pollution and should be monitored more closely. For instance, one participant asserted, “Businesses should play a role as much as they can [to keep water clean] and I also think that goes for the really big business owners too who aren’t following the requirements and who don’t test the water or air quality around their business.” A few participants blamed lawns and fertilizer use: “There’s pollution from all of those people with their wonderfully beautiful yards who fertilize and anti-weed. ...I don’t do any of that. Almost every business parking lot is paved and we don’t have enough grass to do any of those bad things.” Some participants described other businesses in general as being “worse” than their own business in managing stormwater.

### 4. *“We do what we can.”*

This narrative reflects concern for water resources and understanding and even adoption of at least some basic stormwater management practices, but it also acknowledges several constraints to adopting conservation practices. For these participants, government bureaucracy and program restrictions impede business decision making and conservation practices. Participants expressed general frustration with City requirements, skepticism over City assessments, and distrust in the City’s agenda. Many of these frustrations were not directly tied to stormwater programs. Some participants expressed concerns over the misuse of power and the belief that the City was merely attempting to make money through restrictions on businesses. With respect to stormwater, and specifically the fee and credit program, a few participants voiced dismay over what they perceived as a lack of business owner involvement in program design. Participants also questioned their business’s contribution to stormwater runoff. Participants with this worldview were also likely to emphasize the economic constraints of conservation practices including their effects on parking space availability and maintenance requirements.

## **Strategies for increasing conservation practice adoption among business owners**

Calls for voluntary stormwater management action must clearly articulate what the problem is, why it is a problem, and how business owners individually and collectively can contribute to a solution. The recommendations provided here are tailored to the four worldviews on stormwater management expressed by business owners interviewed in this study.

### 1. *Support conservation leadership, recognize leaders and create peer learning networks.*

This recommendation is focused on existing leaders who hold the worldview “we’re conscious of our water use and runoff.” Partner with conservation leaders in the business community to further support their conservation stewardship and advocacy. Link conservation leaders with other businesses in the community and support peer learning and formal and informal dialogue about the benefits and constraints of conservation practices. A peer-to-peer network of information exchange, informed by practical experience as well as the latest science and technology, is likely to be the most trusted communication strategy among business owners.

*2. Build awareness of water resource impacts and understanding of the linkages between stormwater, runoff, pollution and conservation practices.*

This strategy will have the biggest impact on business owners who express an “it’s not on the radar” worldview. For some business owners a better understanding of unmanaged stormwater and consequences for water resources is needed. Perhaps a business owner-friendly visual model of stormwater, runoff and pollution, as well as specific monitoring data about the impacts of stormwater runoff to local water resources like Lake Nokomis would show the most promise. Many business owners have already adopted some basic stormwater management practices including sweeping sidewalks and parking lots and maintaining downspouts without being aware of their water resource benefits. While most business owners interviewed reported that they had not heard of the stormwater best management practice incentive programs available in the area, eight of nine businesses expressed interest once hearing about the programs and requested more information about site consultations with Metro Blooms staff. Thus, building awareness of available incentive programs through one-on-one personal communication is an effective strategy.

*3. Make conservation the social norm in the Lake Nokomis area business community.*

Several study participants expressed the belief that it is someone else’s responsibility to protect water resources or that “other businesses are worse.” To address this worldview, program managers and resource professionals should emphasize that water resources are everyone’s responsibility and tie conservation to business image in the Lake Nokomis area. Registration programs and branding opportunities for sustainable businesses, especially monikers reflecting water and Lake Nokomis may be an important selling point for business owners. Opportunities for voluntary public commitments to conservation (e.g., I promise to reduce my runoff by 50% in two years) are more likely to produce behavior change when paired with other interventions like information campaigns (Steg & Vlek 2009).

Goal-setting has also been an effective strategy for promoting behavior change and is frequently used in combination with providing feedback. For example, local resource professionals might set stormwater runoff reduction goals within the business community or in an entire subwatershed. Providing frequent feedback on the extent to which goals are being met to business owners or property owners creates a social norm in favor of buffer adoption and further connects business owners and residents to water resources and to each other. In similar studies of household energy conservation, combinations of strategies including encouraging commitments, setting goals, and providing feedback to households or groups was most effective at promoting behavior change (Abrahamse et al., 2007).

*4. Address economic constraints and reduce risk and uncertainty.*

Program managers and resource professionals should promote business sustainability as a good economic investment and as a way to increase the customer-base. An important first step is to identify what individual business owners’ needs are and what benefits they might desire from stormwater conservation practices, whether it’s increasing the aesthetic quality of their business, reducing costs, conserving resources, or enhancing their business image as a sustainable business. To increase a practice’s or program’s credibility and legitimacy in the eyes of business owners and to reduce risk and uncertainty, program managers or resource

professionals must be able to answer questions of primary concern to business owners upfront. Questions might include “How much will the practice cost me today and in the future?”; “How will the practice affect my business?”; “How will the practice improve water quality?”; “Will this practice work on my property?”; “How difficult is the practice to implement and maintain?” Of course, the answer to many of these questions may be “it depends.” Still, an open and honest dialogue with business owners that validates these concerns and begins to address them is important. The more risk and uncertainty removed from the conservation equation, the more likely business owners will see conservation as a safe and good investment. This strategy will resonate best with business owners holding the “we do what we can” worldview and showing business owners *how* they can do more will be most effective.

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## Appendices

## Appendix A. Study Area Map



### Lake Nokomis Project Boundary



## Appendix B. Contact Script

### Nokomis Business Owner Water Conservation Practices

#### Script for Initial Contact

“Hello, my name is \_\_\_\_\_. I work at Metro Blooms, and we’re conducting research on business owner decision making and water management practices. This study involves business owners in the Lake Nokomis watershed. We’ve talked with residents in the neighborhood about their perspective and now we want to get the business perspective on programs that encourage installation of stormwater management practices. We’re simply gathering information to better understand business owners’ needs in regards to these programs. It’s an opportunity for you to have a voice in the discussion and to help us create programs that are suited to your needs. I was hoping you’d be able to assist me by participating in the study and sharing your perspectives with me. The interview should take about an hour. Would you be willing to participate?”

**If yes:** “Thank you. I am available on \_\_\_\_\_ (days of week, times, have alternates ready) is there a time that would work best for you? [Set date, time, location]. I would like to send you a confirmation email with date, time and location information. The email will include all of my contact information, in case you have any questions or concerns. Do you have an email address I can send the confirmation to?”

- a. **If yes,** take it down or confirm we have the correct email address for them. “Thank you. I look forward to meeting with you on \_\_\_\_\_(agreed upon date).”
- b. **If no,** “Is this phone # the best way for me to get a hold of you? In case you need to get a hold of me with questions or concerns, my phone number is \_\_\_\_\_.” I look forward to meeting with you on \_\_\_\_ (agreed upon date).

**If no:** “Ok, thank you for your time. Good bye.”

**If they seem unsure:** “Just to be clear, participation is voluntary. Your identity will remain confidential and we won’t include any information that would make it possible to identify you in the final report. We’re only talking to a limited number of key representatives, so capturing your perspective is important. Can I ask what your concerns about participating are?” [Try to address their concerns]

**If they want to know why they are being asked to participate:** “We’re interviewing a variety of business owners in the area to try to get diverse perspectives and a range of experiences. Since we are only able to conduct a limited number of interviews, capturing your perspective is important.”

**If they want to know how the information will be used:** “We are trying to better understand business owners’ perspectives on the challenges they face and the decisions associated with stormwater management practices. We’ll be putting together a final report that describes how business owners view these issues to share with community leaders, educators and resource professionals. Your information will be kept confidential and there will not be any identifying information in the report.”

**If they want to know what the study is for:** “This project is aimed at informing communication and outreach programs associated with water conservation. Business owner input is critical to making these programs work for both water resource protection and for businesses.”

**If they want to know who is supervising the research:** “Mae Davenport is the supervisor for this study. She is an Associate Professor in the Department of Forest Resources at the U of M. If you would like to contact her directly I can give you her phone number [612-624-2721] or email address [mdaven@umn.edu].”

## **Appendix C. Consent Form**

### **Business Owner Decision Making and Sustainable Practices Consent Form**

You are invited to participate in a study of business owners in the Nokomis neighborhood and their perspectives on water resources and sustainable business practices. We ask that you read this form and ask any questions you may have before agreeing to be in the study. This study is being conducted by Metro Blooms.

#### **Background Information**

The purpose of this study is to better understand what influences business owner decisions about sustainable practices and water resources.

#### **Procedures:**

If you agree to be in this study, we would ask you to participate in an interview lasting approximately 90 minutes.

#### **Risks and Benefits of being in the Study**

Risks associated with this study are minimal; responses are confidential and participants' names will not be linked to any information in any publications. There is no direct benefit to subjects who participate in this study. Indirect benefits of participation may include increased awareness of programs. Study results will be made available to the public and all participants will have access to them.

#### **Confidentiality:**

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject or his/her business. Research records will be stored securely and only researchers will have access to the records. Only those directly involved with the project will have access to the the interview notes.

#### **Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Metro Blooms. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

#### **Contacts and Questions:**

You may ask any questions you have now. If you have questions later, **you are encouraged** to contact Laura Hurley at Metro Blooms, 310 East 38th St., Minneapolis, MN 55409, phone: 218-230-4376, or e-mail: [laura@metroblooms.org](mailto:laura@metroblooms.org)

#### **Statement of Consent:**

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

"I agree\_\_\_\_\_ I disagree\_\_\_\_\_ that Metro Blooms may quote me anonymously in publications"

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix D. Interview Guide

### Metro Blooms Interview Guide

May 13, 2013

ID # \_\_\_\_\_

**First, I'd like to start with a few questions for you about being a business owner in this community.**

**1. Tell me about your business and what it means to you.**

- a. What do you like about being a business owner in the Nokomis neighborhood?
- b. What concerns you about being a business owner in the Nokomis neighborhood?

**Next, I would like to learn more about how decisions are made about the property.**

**2. Who makes decisions about how the property is managed?**

- a. Do you rent or own your property?

**3. What are the most important considerations when decisions are made [*when you make decisions*] about managing the property?**

- a. When decisions are made, do they take into account potential impacts on...
  - i. The local community?
  - ii. The natural environment?
  - iii. On local streams and lakes? Please explain.
- 4. Are others consulted [*Do you consult with others*] when making decisions about the property? Who do you consult?

**Now, I have a few questions about your perceptions of water in the area.**

- 5. Are you concerned about the management of rain water and snow on the property? Please explain.
- 6. Are you concerned about water resources in the Nokomis neighborhood? Please explain.
- 7. Is clean water in the Nokomis neighborhood important to you? Please explain.
- 8. What role should business owners play in keeping water clean?

**As you may know, there is increasing concern about stormwater in the Nokomis neighborhood. In turn, the community is promoting sustainable practices to local property owners. Business owners have been encouraged to consider practices intended to reduce the impacts their property has on water. I have a few questions for you about your experiences with and opinions about environmentally sustainable practices.**



9. **First, a broad question: What does the term “environmentally sustainable” mean to you, as a business owner?**
10. **Do you do things that reduce your business’s impacts on water resources? Please describe those things for me. *[for each practice ask the following]***
- a. How long have you done this?
  - b. What first motivated you to do this?
  - c. Is it working? How do you know? Please explain.
  - d. Do you plan to continue doing this over the next five years? Please explain.
11. **Are there other things you have been considering? *[if yes, ask questions a-c for each, if no skip to 10]***
- a. What have you heard about this?
  - b. What factors have kept you from doing this?
  - c. Would you do this if things were different? Please explain.
12. **Overall, what are the most important considerations for you when making decisions about environmentally sustainable practices?**
13. **Would you be more likely to adopt or maintain practices that reduce the property’s impact on water if...**
- a. You knew they helped keep local lakes and streams clean?
  - b. You had financial assistance to implement the practices?
  - c. You had technical assistance to implement the practices?
  - d. You had evidence that the practices would be a good investment economically?
    - i. *[If yes]* How many years maximum would you be willing to wait before you see a return on your investment?
  - e. The practices also reduced your water use?
  - f. You could also provide native habitat for birds and butterflies?
  - g. You could advertise or promote your business as using sustainable practices?
    - i. *[If unsure]* For example, if you could promote your business at the Monarch Festival?

- h. Most business owners you knew had adopted the practices?
  - i. You could talk to other business owners about how to make the practices work in your business?
14. Do you talk to others about stormwater management? Who do you talk to?
15. Who do you consider to be the most trusted source of information about stormwater management?
- 16. Have you heard of the cost share and stormwater credit programs to help property owners reduce stormwater runoff from their land? *[If no or unsure, skip to 18]***
- 17. *[If yes,]* what have you heard about the programs?**
- a. **Are you participating in the programs? Which program?**
    - i. How did you first hear about the programs?
    - ii. What first motivated you to get involved with the programs?
    - iii. What value have you gotten out of the programs thus far? Please explain.
    - iv. In your opinion, what might improve the programs for you?
    - v. What do you think would improve the programs for other business owners?
  - b. *[If no,]* What has kept you from participating in the programs?
    - i. Would you participate in this program if things were different? Please explain.
- 18. *[if no to 16 or 17a read the following:]***
- a. The Cost Share Program is offered through the Minnehaha Creek Watershed District. They give out grants every year to help property owners install best management practices such as rain gardens and permeable pavers on their property to improve water quality of surrounding water bodies. Businesses are eligible for these grants and can apply to have up to 50% of their project funded by MCWD.
  - b. The Stormwater Credit Program is managed by the City of Minneapolis. The City offers stormwater quality credits to Minneapolis businesses and residents to cover up to 50% of monthly stormwater utility charges. The credits are meant to encourage property owners to manage rainwater runoff of their property to help deal with problems, such as polluted water, that arise from stormwater runoff in an urban area. You are eligible for the credit if you can show that you capture runoff on your property through rain gardens, pervious pavement, filter strips, green roofs, or other means.
19. Do you think the programs are a good idea? Please explain.

20. On a scale of 1-5, one being “not at all likely” and five being “extremely likely” how likely are you to [continue to] participate in the Cost Share Program in the future? Please explain. How likely are you to [continue to] participate in the Stormwater Credit Program in the future? Please explain.

**Finally, I have a few general questions for you about business owners in the neighborhood.**

21. What do you think are the 3 biggest obstacles in the way of getting business owners more involved in sustainable practices in the community?
22. Program organizers and partners would like to continue to get more participation from business owners like you in the program. What would you suggest they do to increase participation in the programs?
23. Is there anything you would like to add about your business, sustainable practices or water in general that we haven’t covered?

## Appendix E. Background Information Form

ID# \_\_\_\_\_

*Please do not put your name on this worksheet.*

To better document the types and range of business owners we talk to, we are asking participants to complete a short background information worksheet. This information will only be presented as a summary of study participant characteristics. All efforts will be made to maintain confidentiality and any information provided that may reveal your identity will be excluded from published documents. Your name will not be associated with the data collected and will not be referenced in any future publications.

1. How many years have you been in business in this community? \_\_\_\_\_.
2. Do you live in this community? \_\_\_\_\_.
3. How many years have you owned this business [property]? \_\_\_\_\_.
4. Have you had any water problems at this property? \_\_\_\_\_.
5. Are you planning to do any significant renovations to the property in the next 5 years?
6. Are you involved in any business-related organization/associations in your community (e.g., business associations, etc.)? Please specify:

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7. What is your gender?            Male                      Female
8. In what year were you born? \_\_\_\_\_.
9. What is the highest level of formal education you have completed?
  - a. Did not finish high school
  - b. Completed high school
  - c. Some college but no degree
  - d. Associate or vocational degree
  - e. College bachelor's degree
  - f. Some graduate work
  - g. Completed graduate degree (MS or PhD)

10. Do you pay a water bill for this property?

11. Do you pay a stormwater fee for this property?

12. Approximately how much do you pay for water service each month?