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Policies and politics in urban forestry: involving citizens in municipal urban forestry initiatives

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Involving citizens in municipal urban forestry initiatives

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Abstract

There is a fair amount of discussion on urban forestry in the context of political science. Very little of that focuses on civic engagement in urban forestry initiatives of municipal governments. A lot of the literature on urban forestry (not in context of political science) that does focus on civic engagement, assumes that greater civic engagement in urban forestry programs is a desirable goal and focuses on the different ways that citizen involvement can be increased in these programs. There is no cost benefit analysis in the literature to examine if involving citizens in urban forestry programs is indeed good for urban forestry programs. In the absence of concrete estimates, it is very likely that the perceptions of municipal officials about the relative magnitude benefits and costs determine policy on engaging citizens in municipal initiatives on urban forestry.

This study examines the perceptions of municipal officials on the importance of engaging citizens in urban forestry programs and also on the possible sources of benefits and costs of such engagement. Using data collected from select cities in Iowa that employ urban forestry professionals, this study examines the opinions of three levels of municipal officials, *viz*., arborists, supervisors and mayors. It finds that in general municipal officials assign a great deal of importance to urban forestry for lowering pollution and improving the quality of life in cities. In general they think that the benefits of engaging citizens are likely to outweigh the costs. Except on select issues, opinions of municipal officials do not vary with their levels in the hierarchy. Further, the opinions of municipal officials are not divided along party lines in the sense that their opinions do not seem to be correlated with their political leanings.

Chapter One: Introduction

1.1 Background & Significance

Urban forestry is defined as "a specialized branch of forestry (that) has as its objective the cultivation and management of trees for their present and potential contributions to the physiological, sociological, and economic well-being of urban society" (Jorgensen, 1965; quoted in Gerhold, 2007). It takes into account the collective sum of all trees and vegetation in and around an urban area including public and private trees as part of the urban ecosystem. Urban and community forestry differ from traditional forestry in that trees in urban areas are typically a subordinate land cover as opposed to the predominant land cover (Rhode Island Urban and Community Forest Plan, 1999). Urban forestry has developed in response to some specific demands of local urban societies, which makes it structurally different from classic forestry (Konijnendijk, 2000). Besides, the economic value of forest resources (timber, pulp, etc.) is an integral part of traditional forestry, while urban forestry is more focused on the social, environmental, and aesthetic values of trees.

Benefits provided by urban forests include pollution control, energy savings, cleaner air, reduced storm water runoff, reduced levels of violence, higher property values, and aesthetic values (Anderson & Cordell, 1985; Kuo et al., 1998; McPherson & Rowntree, 1993). Extensive tree cover is known to improve a community's social, ecological, and economic well-being (Dwyer et al., 1992; Kaplan 1993; Ulrich, 1984, 1986). In addition to the general effect on environment and ambience, urban forests are also one of the important tools to manage the urban heat islands that result from large stretches of concrete that are common in cities.

In the 1950s, 30% of the world's population lived in cities. By 2030, the proportion of the world's population living in urban areas will go up to 60% (Golden & Kaloush, 2005).

Considering that the world's total population in 2030 will be significantly higher than that in the 1950s, this implies a vast increase in the land area under cities and in the absolute number of people living in cities. Thus urban forestry would affect the quality of environment enjoyed by a very large number of people in the near future.

A lot of the benefits of trees in urban settings are localized; they are reaped by individuals and businesses located in close proximity to the trees. One would expect this to create incentives for greater involvement by people in urban forestry initiatives of the local government. Further, the greater part of urban forests in North American cities grows on private property beyond municipal jurisdiction (Fraser & Kenney, 2002). It may, therefore, be advantageous for municipal governments, too, to engage the community in its initiatives to plant and maintain trees within its city (Brendler & Carey, 1998). Further, one might expect that community forestry and urban forestry would overlap in the literature.

The Cooperative Forestry Act of 1978 defined urban forestry to include the planning, establishment, protection, and management of trees and associated plants, individually, in small groups, or under forest conditions within cities, their suburbs, and towns. Community forestry is defined as the manipulation of forests to benefit the neighboring community, where residents have access to the land and its products (Brendler & Carey, 1998). While a lot of discussion in the literature refers to urban and community forestry interchangeably, the involvement of a community in urban forestry is not automatic or common in the U.S. This is in contrast with several other countries. Kittredge (2005), in a survey of 19 developed countries, found that in almost all cases governments had an important role to play in cooperation among non-industrial private forest owners even when the owners stood to benefit from such cooperation.

There seems to be a consensus among academics that involving citizens in planning and implementation of urban forestry initiatives is good and the extent of citizen involvement is not as high as it should be in most cases. This appears more as an underlying assumption in studies (McPherson et al., 2005; Thompson et al., 2005) than as a conclusion from data. It is usually viewed as a failure on the part of the municipal government to involve communities in community forestry initiatives. This view comes out in papers that discuss ways to involve the community successfully in such programs and those that talk about groups that are underrepresented (Elmendorf & Luloff, 2000; Smith & McDonough, 2001). Thompson et al. (2005), for instance, describe three essential components of participatory management in the context of urban land use decision making and community forestry initiatives. These include broadening constituencies involved in decision making, cultivating better dialogue, and using conflict resolution techniques. They recommend certain techniques to enthuse new participants: stakeholder mapping (to draw a map of people and organizations), key informant interviews (persons who know the area and its history well), snowball sampling (asking participants who else can be included), and establishing good relations with the local leaders, organization, and business communities. They present a case study from Union County, Pennsylvania. A process of sacred place mapping was used to broaden participation and engage the participants in dialogue. The process resulted in broad-based participation by stakeholders and a diversity of opinions made available to the group[1]. The idea that civic engagement in urban forestry may not be as high as one would expect or want is in line with the documented decline in civic engagement in many areas of American life (Putnam, 1995).

[1] "Sacred places are places that are collectively identified as precious by people in a community. Most are humble places that provide settings for a community's daily routine but combine to create uniqueness. Mapping of sacred places by residents can be used to identify and include valued landscapes and lifestyles when evaluating management, comprehensive, and other plans." Elmendorf and Luloff, 2001

To the best of my knowledge there is no systematic study in the literature that verifies the underlying assumption of these studies that citizen involvement is a desirable goal for urban forestry programs initiated by municipal governments. The benefits of civic engagement in municipal urban forestry programs are hard to measure because it is hard to put a dollar value on many of these benefits. However, most municipal officials involved in urban forestry programs have some idea of the relative costs and benefits of engaging citizens. In absence of concrete estimates of benefits and costs, the perceptions of municipal officials determine policy regarding civic engagement because such engagement involves costs incurred by the municipal administration in terms of time and resources.

1.2 Objectives

This study examines the perceptions of municipal officials about the benefits and costs of engaging citizens in urban forestry initiatives of the municipal government. It gets at this question by two different routes, viz. (i) directly asking municipal officials about their perceptions of the costs and benefits of involving citizens in urban forestry initiatives; and (ii) by asking municipal officials about their opinion on the importance of engaging citizens and the importance of various factors related to civic engagement in implementing a successful municipal initiative. As discussed earlier, in absence of concrete estimates, it is these perceptions that drive the direction and implementation of policy on civic engagement. This is the first such attempt to get at the opinions of municipal officials regarding the benefits and costs of civic engagement in urban forestry.

This study also seeks to correlate the responses of municipal officials with their political leanings. Two of the distinguishing features of this study are that this is the first study that (i)

looks at the responses of three different levels of municipal officials, viz. arborists, supervisors, and mayors separately; and (ii) correlates the political leanings of municipal officials with their opinions about the role of citizens in municipal initiatives on urban forestry. While the opinions of municipal officials as a group indicate the direction of policy overall, taken as a group this information is not particularly useful because officials at different levels of the government hierarchy affect policy regarding citizen involvement differently. Mayors, for instance, provide the general direction of policy. Arborists actually work with people if that is what policy requires. The supervisors provide the connection between the policy and its actual implementation. Since they deal with different aspects of policy, their opinions affect citizen engagement in different ways. It is, therefore, useful to look at the opinions of the three sub-groups separately.

Chapter Two: Survey of Literature

The literature on the political aspects of urban forestry is focused around the operation of municipal governments. Cities have the power under state administration codes to establish shade tree commissions or boards. These commissions, consisting of volunteers, members appointed by the municipal government, and elected officials, are responsible for overseeing management of trees beside streets and in municipally-owned parks. The commissions may have decision making authority or may act as advisory bodies for elected municipal legislatures (Elmendorf & Gerhold, 2000). Municipal tree commissions are not the only decision-making authorities for city forestry activities. Municipalities use park, forestry, and public works departments, park commissions, and code enforcement offices to manage and maintain urban forests. With greater integration of different kinds of policy decisions, municipal and county planning departments are becoming increasingly involved in decisions regarding urban forestry. Land conservancy and a number of other non-profit groups are also involved in maintaining and managing trees in cities (Elmendorf et al., 2003).

2.1 Urban Forestry and Municipal Governments

A number of survey articles document the existence and nature of urban forestry programs in municipal regions nationwide or in specific states (Kielbaso et al., 1988, 1990). Several articles also examine the attitude of government officials towards urban forestry (Reeder & Gerhold, 1993; Ricard, 1984). Kielbaso et al. (1988) undertook a nationwide survey of cities and estimated that 39% of respondents had some kind of tree maintenance programs and 68% had municipal tree ordinances. Kielbaso (1990) noted that 16% of cities responding to the survey

had urban forest management plans and 27% of the respondent cities had plans for managing disasters related to urban forests.

Reeder and Gerhold (1993) undertook a similar survey of municipalities for the state of Pennsylvania and found that of the respondents 81% of cities had tree programs. There was much interest among respondents in acquiring additional education and information. Ricard (1984) surveyed tree activists, members of the Chamber of Commerce, municipal officials, and other elected officials in 168 municipalities in the state of Connecticut. Ricard asked questions not just about the existence of forestry programs but also about the opinions of his respondents. He found that 11% of the responding municipalities had shade or street tree ordinances and 11% shade tree commissions; 37% of the respondents felt the need for tree ordinances and commissions, as opposed to 40% who felt that such ordinances (commissions) were not required. The respondents were keenly aware of the importance of urban and community forestry. This is one of the studies that indicate that municipal officials consider community forestry an important factor in urban forestry programs. This finding was indirectly supported by Green et al. (1998), who surveyed municipalities of population less than 25,000 in the state of Illinois. They found that municipal officials had a strong positive perception of community trees. This is not to suggest, however, that they had a positive perception of community involvement in the urban forestry program.

Allen (1995) surveyed municipal employees in 236 municipalities in Missouri on their attitudes toward urban forestry programs and tree program behavior. Of the respondents, 4% of the municipalities had tree management plans and 13% had tree ordinances. Allen found that most respondents, regardless of region, population group, or metropolitan or rural areas, were aware of the benefits of urban forests and had positive perceptions of urban forestry. As

compared with rural municipal employees, respondents from metropolitan areas were more in favor of increased funding and taxation to support urban forestry programs.

Clark and Matheny (1998) questioned officials of 25 large cities in the U.S. on their attitudes toward urban forests as part of their survey on the sustainability of urban forests. They found that officials in parks, forestry, and planning departments had positive attitudes toward urban forestry, while officials in other departments, such as public utility and public works, were comparatively less enthusiastic. Most (64%) of the cities had tree management plans.

Kuhns et al. (2005) surveyed citizens in the state of Utah on the facts and perceptions about urban forestry programs in the state. Respondents reported on program support, budget, management authority and practices, strengths and weaknesses, and training and information needs. The survey results showed that 25% of the towns have a tree board. They get assistance from nurseries and tree care businesses. Most (75%) communities have some sort of tree-related expenditure, with mean budget of US$44,000 and median budget of $3,000, averaging $258 per resident and $25.16 per tree. A majority of towns have enough expenditure to qualify them for Tree City USA's requirement of $2 per capita[2].

Schroeder et al. (2003) report the outcome of two surveys of Illinois communities regarding the status and needs of their community tree programs. The purpose of the surveys was to find ways for state and federal administration and private organizations to support more effectively the Illinois communities. They found that local municipal officials have strong positive attitudes toward community trees regardless of the size of their communities. However, small communities often lack essential requirements and trained personnel for carrying out these

[2] Tree City USA is a program sponsored by the Arbor Day Foundation in cooperation with the USDA Forest Service and the National Association of State Foresters. It provides, technical assistance, publicity and recognition for urban and community forestry programs in US cities.

programs. They concluded that state, federal, and private organizations should be aware of the differences in the requirements and opportunities of communities of different sizes.

Elmendorf et al. (2003) surveyed members of shade tree commissions in Northern Pennsylvania to measure the attitudes of the commissioners toward urban forests and urban forestry; and to gather data on the urban forestry practices of municipalities. They found a difference in the perceptions and outcomes on most issues. For instance, 93% of the respondents felt that street tree ordinances were important, but only 78% of the municipalities had such ordinances and 20% did not enforce them. Most (81%) respondents felt that tree preservation ordinances were important, while only 13% of the municipalities had them. Nearly all (90%) of the respondents felt tree plans were necessary, and 29% of the municipalities had completed such plans. This is a rare study that examined the attitudes of officials toward volunteers in urban forestry programs. Almost all respondents (91%) felt that it was important to use volunteers, while only 63% of the municipalities using volunteers.

Sievert (1994) studied the politics of urban forestry, and notes that in urban forestry, as in any other government function, the popular decision is not necessarily the right decision. The urban forester must, therefore, do a good job of communicating with the public, to gain popular support for the best program. Sievert notes that involving the community in urban forestry programs may be a way for the forester to build a relationship with the community and get their support in the short run and retain their help in maintaining trees in the longer run. In that sense, involving the public may be useful even when it is not inexpensive to do so. This is among the rare studies that acknowledge that involving the community in forestry efforts may not be inexpensive or efficient.

Willeke (1994) presents the citizen's side of the argument about community involvement in urban forestry. Willeke reiterates the fact that a large portion of urban trees are on private land. Further, in a democracy it is only fair that taxpayers have a say in the policy decisions that affect them. It is, therefore, necessary to include public opinion in decisionmaking about urban forests. Willeke also concedes that urban forestry must be planned rather than piecemeal, and because of that owners of private forests must also be willing to cooperate with other forest owners and the forester to implement the best possible plan.

Brody et al. (2003) also found that state participation requirements do not give much attention to the issue of providing citizens with information, and "despite the rhetoric on citizen's involvement in decision making, planners, for the most part, want to maintain control of the planning process and do not strongly emphasize genuine citizen involvement in drafting specific policies." Results of their analysis (Washington and Florida) indicate that as the percentage of staff time devoted to citizen involvement increased, so did the number of groups subsequently participating in the development of the comprehensive plan.

Many of the papers discussed above surveyed government officials on their attitude toward urban forestry. But only Elmendorf et al. (2003) explicitly ask government officials about their attitude toward involving volunteers in urban forestry programs. None of the surveys ask officials about their opinion on involving citizens in the decisionmaking on urban forests.

This study extends the work of Elmendorf et al. (2003) in eliciting information about the attitudes of municipal officials about involving citizens in the urban forestry initiatives of municipal officials. More broadly, it examines the perceptions of municipal government officials in some cities in Iowa about the costs and benefits of involving citizens in urban forestry

initiatives. Further, it asks if the perceptions of municipal officials about their role in urban forestry differ along party lines.

2.2 Civic engagement in other contexts

Outside the context of urban forestry, there is a fair amount of discussion on general civic engagement by government professionals. Nalbandian (2005) suggests that modern-day local government professionals work within administrative cultures that are driven by efficiency and technical know-how. These influences get in the way of encouraging civic engagement and citizen participation. The efficiency paradigm conflicts with the civic engagement paradigm so that local government professionals must make deliberate efforts to bridge the divide in order to enhance citizen participation in the decision making processes of local governments. This argument assumes that civic engagement is a good thing and should be encouraged. It also implies that greater citizen participation is not common because the nature of local administration makes such participation cumbersome. This study explores this issue indirectly by asking municipal officials how important rules and structure are in implementing a successful municipal program and if rules and structures get in the way of engaging the community.

Finally, it is useful to look at civic engagement in terms of the interactions between elected representatives, appointed officials and citizens. The natures of the interactions are summed up by Collie (1988) in terms of Lowi's (1964) typology as follows:

> "Theodore Lowi (1964) advanced the thesis that "policies determine politics." Using a tripartite classification of domestic policy as either "distributive", "redistributive" or "regulatory," he argued participants' perception of policy type would determine the process of decision making and the relative influence of political actors." (Collie, 1988)

Chapter Three: Data and Methods

3. 1 Data Collection

Data for this paper were collected from select cities in Iowa. Surveys were sent to 14 cities in Iowa that have professional forestry staff. To get better knowledge of the perception of municipal officials in the different levels of the hierarchy, separate internet surveys were sent to mayors, arborists, and the supervisors of arborists. Of about 950 municipalities in Iowa, only about 17 have urban foresters. Of these, surveys were sent to 14 municipalities. One reason was that urban foresters in some of the cities did not have access to email or even a computer at work. They did not have official email ids. Surveys were sent to only those municipalities where officials at all three levels could be contacted over email.

In larger cities, urban forestry is located in the Department of Parks and Recreation. Small towns do not necessarily have Parks and Recreation Departments. Some of the officials contacted are employed within the Department of Public Works. For the larger cities, the supervisors of the arborists had the designation Director of Parks and Recreation. Usually, the overall responsibilities for urban forestry initiatives rested with the supervisors. Links to the survey were sent by email to the respective officials and email reminders were sent after two weeks, as per the Dillman procedure (Dillman, Smyth, & Christian, 2009).

Mayors are the elected representatives of the people. They have the power to affect the direction of policy if they want to. In a majority of the cities surveyed, policy relating to urban forestry is determined by a tree board consisting of citizen volunteers and individuals with professional skills relevant to the management and maintenance of trees. Arborists undertake the actual work of planting and maintaining trees and have day-to-day interactions with people. They

have no say in the direction of policy. The supervisors act as a link between the arborists and other senior officials. They are in charge of implementing and operationalizing policy measures. Because mayors and the supervisors have some control over the forestry policies of their cities, they received surveys that were very similar. Surveys sent out to arborists were different and dealt more closely with the operational aspects of involving citizens[3].

3.2 Data

The response rates for mayors, supervisors, and arborists were 38.5%, 55%, and 71.4%, respectively, resulting in an overall response rate of 55.3%. Overall, we have 26 responses, 5 of which are from mayors, 11 from supervisors, and the remaining 10 from arborists. The mayors, supervisors and arborists are not necessarily from the same cities, which means that they do not represent the same administrative context.

The survey elicited information on the opinions of city officials on the importance of urban forestry initiatives for improving the quality of city life and the various components of the costs and benefits of involving citizens in urban forestry initiatives. Data were also collected on the demographic information for the respondents.

3.3 Methods

The main part of the surveys consisted of three components. The first set of questions dealt with the importance of urban forestry. The idea was to figure out how important urban forestry is in the general scheme of things for a municipality. If it is considered very important, then there might be scope for engaging citizens in a big way. However, if urban forestry is not

[3] Please see appendices 1, 2 and 3 for survey instruments.

accorded high priority in the first place, then civic engagement in urban forestry cannot be of high importance either.

The second set of questions dealt with the importance of various factors associated with engaging citizens in urban forestry initiatives. These questions focused on the various ways that citizens can provide inputs into urban forestry initiatives. These included volunteer labor, regular feedback, new ideas and political support. Questions in this section also focused on the extent of influence that citizens might have on the trees planted on municipal land and the extent to which responsibility for urban forestry should be shared between citizens and the municipal government.

The third set of questions focused on the perceptions of municipal officials about the various sources of costs and benefits of involving citizens in urban forestry initiatives. The focus was on identifying what the different sources of costs and benefits are rather than monetizing them. Municipal officials were also asked if they thought the aggregate benefits of such involvement might outweigh their costs. The data for this study was analyzed using SPSS.

The first two sets of questions required respondents to assign scores between 1 and 5 to indicate the importance of the relevant factor or issue. A score of 1 implied that the issue or factor was not important at all. A score of 5 indicated that the issue or factor was extremely important. To analyze these data, we calculated the mean responses of each group and also computed the grand means for all municipal officials as a group. The summary responses (means and standard deviations) were used to examine the representative opinions for each group. To examine if the responses of the three groups of municipal officials were different from each other, a univariate analysis of variance test was conducted on SPSS. Levene's test of equality of error variances was conducted. This test was conducted for all questions where the respondents

were required to assign scores between 1 and 5. In the third set of questions, respondents were given a range of possible elements of costs and benefits associated with engaging citizens in urban forestry initiatives and they were asked to select the elements that were the most important. Further, respondents were asked if they thought engaging citizens in urban forestry initiatives was generally beneficial to the programs. Their answers to this last question were examined together with their answers to the previous questions to see if the answers correlated with the actual components of the benefits and costs. Similarly, the political leanings of respondents were examined along with their responses to the questions in this segment to see if the responses differed along party lines.

Chapter Four: Results and Discussion

One of the first questions in the survey dealt with the importance of urban forestry in reducing pollution and improving the quality of life. The respondents were asked to indicate how important they thought urban forestry was on a scale of one to five, with one standing for "not important at all" and five meaning "extremely important." Table 1 presents the mean scores assigned by each group to these two questions.

Table 4.1: Respondents Ranking of the Importance of Urban Forestry for Controlling Pollution and Improving the Quality of City Life[a]

	Arborists	Supervisors	Mayors	Overall mean
Importance of urban forestry for controlling pollution	4.10 (0.74)	4.09 (0.83)	4.20 (0.84)	4.12 (0.77)
Importance of urban forestry for improving the quality of city life	4.60 (0.70)	4.45 (0.69)	4.40 (0.55)	4.50 (0.65)

a Mean on a scale of one to five.
Figures in parentheses indicate standard deviations.

Table 4.1 indicates that all three groups considered urban forestry very important for controlling pollution and improving the quality of life (mean scores above 4). All three groups considered urban forestry more important for improving the quality of city life (grand mean score 4.5) than for controlling pollution (overall mean score 4.12). Among the three groups, mayors assigned a higher importance to urban forestry for controlling pollution (4.2 on average) than did the arborists or their supervisors. On average, arborists gave greater importance to urban forestry as a means for improving city life (mean 4.6) than did their supervisors or mayors.

Having established the importance of urban forestry, the next questions elicited the opinions of respondents about the role of citizens in the city government's urban forestry initiatives. The three groups of respondents were asked to indicate on a scale between one and

five the importance of various citizen inputs in implementing a successful municipal program to improve the environment in a city. Table 4.2 presents the mean scores assigned by arborists, supervisors, and mayors to the respective factors.

Table 4.2: Respondents ranking of the importance of various factors in a successful municipal program to improve the environment in a city

	Arborists	Supervisors	Mayors	Overall mean
Importance of engaging members of community in decision-making process	3.30 (0.68)	3.27 (0.79)	3.60 (0.89)	3.35 (0.75)
Importance of political support from the public	4.20 (0.63)	4.09 (0.83)	4.40 (0.89)	4.19 (0.75)
Importance of technical expertise of individuals responsible	4.70 (0.48)	4.40 (0.84)	3.80 (1.30)	4.40 (0.87)
Importance of well-defined rules	4.80 (0.42)	3.91 (0.83)	4.00 (1.23)	4.27 (0.87)
Importance of well-defined program structure	4.60 (0.70)	4.09 (0.70)	4.00 1.000	4.27 (0.78)
Importance of new ideas from public	3.10 (0.88)	3.18 (0.60)	4.40 (0.89)	3.38 (0.90)
Importance of regular feedback from public	3.30 (0.82)	3.09 (0.70)	3.60 (1.14)	3.27 (0.83)
Importance of volunteers who engage in relevant activities	3.30 (0.95)	3.36 (0.67)	5.00 (0.00)	3.65 (0.98)

Figures in parentheses indicate standard deviations.

A score of one indicates that the factor is not important at all and a score of five indicates that it is very important. The mean score assigned by all respondents to involving citizens in the decision making was 3.35, where a score of three indicates “somewhat important (Table 4.2).” Mayors, as elected representatives, assigned a higher score to this (3.60) than did arborists or their supervisors (3.30 and 3.27, respectively). The group as a whole assigned the highest importance to technical expertise of the individuals involved (4.40), followed by well-defined

rules (4.27); program structure (4.27) and political support from the public (4.19). It is interesting that mayors unanimously rated the importance of volunteers at 5 while arborists and supervisors, who deal more closely with volunteers, rated their importance below 4 (3.30 and 3.36, respectively)[4].

As stated before, the responses to the questions summarized in tables 4.1 and 4.2 are on a scale of 1 to 5. On this scale 3 is the neutral point standing for somewhat important which neither important nor unimportant. To check statistically if the responses of the three groups are significantly different from 3, the neutral point we conducted a one-sample test. Table 4.3 presents the t score for the importance ratings summarized in tables 4.1 and 4.2.

When asked if the city currently involved citizens in urban forestry initiatives, all five mayors said that citizens were involved in the urban forestry initiatives in their cities. One city involves citizens through the city board and the remaining four involve citizens in planting trees. Mayors were asked if they targeted specific demographic groups to involve in their urban forestry initiatives. Four answered that they did not make any special effort to target a specific group, while one answered that they did target schools. Arborists were asked if they were required and encouraged by their upper management to involve citizens in urban forestry-related work; 60% replied that they were not required to do so, while the remaining 40% replied that while they were not required to involve citizens in their work, they were encouraged to do so.

[4] Volunteers here refer to citizens who help with the planting and maintenance of trees under the supervision and direction of municipal officials. Volunteer labor is only one way that a community can provide inputs into urban forestry initiatives. Community involvement would include greater engagement in decision-making and planning in addition to providing volunteer labor.

Table 4.3: One-sample test to check if responses differ significantly from 3 on a scale of 1 to 5 (t-test)

Importance of	Arborists	Supervisors	Mayors
Urban forestry for controlling pollution	4.7	4.4	3.2
Urban forestry for improving quality of city life	7.2	7.0	5.7
Engaging community in decision-making for urban forest management	1.4	1.2	1.5
Political support from the public	6.0	4.4	3.5
Technical expertise of individuals responsible	11.1	5.3	1.4
Well-defined rules	13.5	3.6	1.8
Well-defined program structure	7.2	5.2	2.2
New ideas from the public	0.4	1.0	3.5
Regular feedback from the public	1.2	0.4	1.2
Volunteers	1.0	1.8	-

Table 4.3 indicates that the scores assigned to the importance of urban forestry for controlling pollution and improving the quality of city life are significantly higher than 3 for all three groups of municipal officials. The same is true for the scores assigned to political support from the public. The score assigned to engaging the community in decision-making for urban forest management is not significantly different from 3 for any of the three groups. The same is true for new ideas and regular feedback from the public. The scores assigned by arborists and supervisors to technical expertise of individuals responsible are significantly greater than 3 but those assigned by mayors are not.

Arborists, their supervisors, and mayors were asked their opinions on the stage of the municipality's urban forestry initiatives at which citizens are most productively involved (Table 4.4). The largest proportion of respondents (38.5%) felt that citizens are productively involved in all stages of urban forestry initiatives, while 23% each felt that citizens are most productively involved in planting and maintenance of trees and for political support. The majority (40%) of arborists as a sub-group felt that citizens are most productively engaged in planting and

maintenance of trees, while the majority (36.4%) of supervisors as a sub-group favored engaging citizens only to get their political support. Mayors were unanimous in suggesting that citizens are most productively engaged in all stages of urban forestry initiatives of the municipality. The unanimity among the mayors might be the result of their desire to appear people-friendly and willing to engage the community. Arborists and supervisors don't have those concerns, they were more specific in their opinion about the best use of citizen participation.

Table 4.4: Most productive stage to involve citizens in urban forestry initiatives

	Arborists	Supervisors	Mayors	Total
In all stages	2 (20%)	3 (27.3%)	5 (100%)	10 (38.5%)
Decision making and planning process	1 (10%)	2 (18.2%)	0 (0%)	3 (11.5%)
Planting and maintenance of trees	4 (40%)	2 (18.2%)	0 (0%)	6 (23%)
For political support only	2 (20%)	4 (36.4%)	0 (0%)	6 (23%)
Other	1 (10%)	0 (0%)	0 (0%)	1 (3.8%)
Total	10	11	5	26

Next, supervisors and mayors were asked their opinion on who should have the primary responsibility for maintenance of tree cover in cities. Table 4.5 presents the responses of the two groups. The majority of mayors and supervisors felt that the primary responsibility for maintaining tree cover in the city should be shared between citizens and the municipal government. Mayors were unanimous on this view. Two supervisors felt that the primary responsibility for maintaining tree cover in the city should rest with the municipal government. Only one respondent, a supervisor, felt that the primary responsibility should rest with citizens.

Table 4.5: Who should have the primary responsibility for maintaining tree cover in your city?

	Supervisors	Mayors	Overall
Citizens	1	0	1
Municipal government	2	0	2
Both	8	5	13
Total	11	5	16

Mayors and supervisors were asked to indicate on a scale between one and five how much influence they thought citizens should have on the kind of trees that are planted on municipal land. A score of one indicated that citizens should have no influence at all and a score of five indicated that they should have a lot of influence. The average score assigned by mayors was 2.6 (standard deviation 0.55), while the average score assigned by supervisors was lower, at 2.3 (standard deviation 0.82). Testing for the differences of the scores assigned from the neutral point (3), we find that the supervisors assigned scores that were significantly lower than 3 (t-value of -2.7). But the scores assigned by mayors were not significantly lower than 3 (t-value of -1.6). This again might be on account of the unwillingness of mayors to take a categorical stance that is likely to be perceived as

Most of the above questions capture the opinions of policymakers on the degree and nature of citizen involvement in urban forestry initiatives. Arborists, who actually work with the public directly, were asked about their opinions on the costs and benefits of involving citizens in their work. The purpose of these questions was to find out if involving citizens in the municipal government's urban forestry initiatives is ultimately beneficial. Table 4.6 presents the opinions of arborists about the most important challenges associated with involving citizens in their work. For each question, the table presents the percentage of arborists who assigned each score, the

mean score assigned by all arborists and the t-score to test if these scores are significantly different from 3.

Table 4.6: Arborists: How important are the following challenges for involving citizens in your work?

	Not at all (1)	Slightly (2)	Somewhat (3)	Quite (4)	Very (5)	Mean score	t-score
People don't fit into the organizational structure of municipal governments	0 (0%)	0 (0%)	5 (50%)	4 (40%)	1 (10%)	3.6	2.7
Unlike municipal employees, citizen volunteers are not accountable for the quality and quantity of work they do	1 (10%)	0 (0%)	1 (10%)	5 (50%)	3 (30%)	3.9	4.7
Citizen volunteers do not belong to the bureaucratic hierarchy so that municipal officials have no authority over them	2 (20%)	4 (40%)	2 (20%)	2 (20%)	0 (0%)	2.4	-1.8
Citizens do not have the level of technical knowledge and commitment that municipal employees have	0 (0%)	3 (30%)	5 (50%)	2 (20%)	0 (0%)	2.9	-0.4

As before, a score of one translates as "not important at all," while a score of five translates into "very important." Of the four likely challenges, as a group arborists assigned the highest score (3.9) to the fact that citizen volunteers are not accountable for the quality and quantity of the work they do. None of the four factors had mean score that was greater than or equal to four (quite important).

Finally, arborists and supervisors were asked if there are benefits of involving citizens in government-run urban forestry programs. They were also asked to indicate if, within their

specific city, the costs of involving citizens were likely to exceed the benefits of doing so or not. Table 4.7 presents the summaries of the responses to these questions.

Table 4.7: Sources of benefits and costs of involving citizens in municipal urban forestry programs

Are there benefits of involving citizens in government- run urban forestry programs?			
	Yes	No	Not sure
Arborists	8 (80%)	0	2 (2%)
Supervisors	7 (63.6%)	1 (9.1%)	3 (27.3%)
One a scale of 1-5 how often is it cost-effective to involve citizens in urban forestry initiatives?[a]			
	Mean score	t-score	
Arborists	3.70 (0.82)	2.7	
Supervisors	2.55 (0.93)	-1.8	
In your municipality do you expect the costs or benefits of involving citizens in urban forestry initiatives to be higher?			
	Costs	Benefits	Equal
Arborist	2 (20%)	7 (70%)	1 (10%)
Supervisors	4 (36.4%)	5 (45.5%)	2 (18.2%)

a: Figures in parentheses indicate standard deviations

The majority of arborists (80%) and supervisors (63.6%) felt that there are benefits to involving citizens in government-run urban forestry programs. Arborists and supervisors were asked to indicate, by a number between one and five, how often they thought it would be cost-effective to involve citizens in such initiatives in general. A score of one indicated “never,” while a score of five indicated “almost always.” Arborists assigned an average score of 3.7 to the likelihood of citizen participation being cost-effective, while their supervisors assigned a much lower average score of 2.6. The t-score for arborists at 2.7 showed that their responses were significantly higher than 3 while that for supervisors showed (-1.8) showed that their responses were not significantly different from 3. The two groups were then asked to assess whether the benefits or the costs of involving citizens will be higher for urban forestry programs in their

specific cities. Most (70%) arborists thought that the benefits would probably be higher than the costs.

Finally, we collected data on some demographic information for the three groups of respondents. Table 4.8 presents the summary statistics on age and gender for arborists, their supervisors, and mayors.

Table 4.8: Gender and Age of Arborists, supervisors, and Mayors

	Arborists	Supervisors	Mayors
Gender (% male)	100	91[b]	80
Mean age[a]	41.2	50.1[b]	54.4

a: Respondents were presented with four age groups and indicated which one they belong to. Each respondent was assigned the median age of that age group.
b: One respondent did not indicate his/her gender and age.

All but one respondent for this survey were male. The only female respondent is a mayor. As a group arborists were the youngest and mayors the oldest. The average age of arborists was 41.2 years, while that of mayors was 54.4 years. Table 4.9 presents summary information on the race and highest level of education for each of the three groups of respondents.

Table 4.9: Race and Education of Arborists, Supervisors, and Mayors: Frequency

		Arborists	Supervisors[a]	Mayors
Race	Caucasian	10	9	5
	African American	0	0	0
	Asian/Pacifica Islander	0	1	0
	Hispanic/Latino	0	0	0
	Native American/American Indian	0	0	0
	Other	0	0	0
Education	High School Diploma	1	0	1
	Associate Degree	3	0	1
	Bachelor's Degree	5	4	2
	Graduate or Professional Degree	1	6	1
	Advanced Degree	0	0	0

a: One respondent did not indicate his/her demographic information.

To elicit their political leanings, respondents were asked if they generally identified themselves as Democrats, Republicans, or Independents. Then they were asked about their political leanings, specifically in the context of government spending and social norms and traditions. Table 4.10 presents summary information on the general political leanings of the three groups of respondents.

Table 4.10: General Political Leanings of Respondents

	Democrat	Republican	Independent
Mayor	20%	20%	60%
Supervisors[a]	27.3%	0%	45.5%
Arborists	20%	30%	50%

a: Two respondents did not reveal their political leanings and one indicated “Other.”

As can be seen from Table 4.10, the majority of mayors, arborists, and supervisors identify themselves as independents. More mayors and supervisors identify themselves as Democrats than as Republicans. But, among arborists, more identify themselves with Republicans than with Democrats. To get more specific information on their political beliefs, they were asked where they stood on government spending and social norms and practices. Specifically, they were asked if they identified themselves as fiscal liberals, moderates, or conservatives and as social liberals, moderates, or conservatives. Table 4.11 presents the frequency distribution of the respondents identifying with each category.

Table 4.11: Political Leanings of Respondents with respect to Government Spending and Social Norms and Practices

		Liberal	Moderate	Conservative	Total
Mayors	Fiscal	0%	80%	20%	100%
	Social	0%	80%	20%	100%
Supervisors[a]	Fiscal	0%	54.5%	36.4%	90.9%
	Social	18.2%	54.5%	9.1%	81.8%
Arborists	Fiscal	0%	50%	50%	100%
	Social	20%	40%	40%	100%

a: One respondent did not reveal his position on government spending and two respondents did not reveal their positions on social norms and practices.

As can be seen from Table 4.11, the majority of mayors, arborists, and their supervisors were both fiscal and social moderates. The second largest groups were social and fiscal conservatives.

4.3 Analysis

To check if the responses of arborists, their supervisors, and mayors were significantly different from each other, we studied the correlations between the responses and the groups and tested the differences between the group effects. Table 4.12 presents the results of the tests for between subject effects for a range of questions.

The hypothesis here is that the group-effect for responses is similar for the three groups. If the significance level is below 0.05, it would indicate that the group effect is statistically different comparing across the three groups. As can be seen from Table 4.12, in all but two questions, the responses were similar across groups. In other words, the level of municipal government that a respondent belonged to did not have a material influence on his/her answer.

Table 4.12: Between subject effects for responses to select questions

Question	Significance (*p*-value)
How important is urban forestry for controlling pollution?	0.965
How important is urban forestry for improving the quality of city life?	0.826
Please indicate the importance of the following factors for implementing a successful municipal program to improve environment in a city:	
To engage members of the community in decision making for urban forest management	0.713
Political support from the public	0.761
Technical expertise of the individuals responsible	0.167
Well-defined rules	0.042*
Well-defined program structure	0.231
New ideas from the public	0.318
Regular feedback from the public	0.535
Volunteer labor	0.001*
How much influence should citizens have in the kind of trees that get planted on municipal land	0.478

The two questions for which the group-effect was different related to the importance of well-defined rules and volunteer labor in implementing a successful municipal program to improve environment in a city. It is a good sign that of the 12 questions asked, responses were similar across groups in case of 10 questions. This indicates that mayors, supervisors and arborists are on the same page on a range of different issues. This is a surprising finding. Mayors are elected representatives of the people while arborists and supervisors are appointed for their professional abilities. Mayors would like to appear environmentally conscious and gain political capital out of engaging communities in municipal initiatives. Arborists and supervisors do not have those incentives. They are more likely to be engaged in the work at hand and would prefer to get work done in the easiest way possible. Arborists are also more likely to be invested in the need for technical expertise among people working on urban forestry. So it bodes well for

management of urban forestry that despite these different points of interest, different levels of municipal officials largely agree on a large number of issues relating to urban forests.

From Table 4.2 we can see that arborists as a group assigned a mean score of 4.8, on a scale of 1 to 5, to the importance of well-defined rules while supervisors and mayors assigned mean scores that were lower by 19% and 16%, respectively. This probably reflects the fact that mayors and supervisors are closely involved in making the rules and hence more comfortable with making judgment calls in situations that are not covered by well-defined rules. Arborists, on the other hand, are more likely to fear overstepping rules and laws and hence prefer to have clearly-defined rules that are easily interpreted and applied in different situations. It is surprising that arborists and supervisors who are closely involved with implementing urban forestry programs assigned significantly lower scores to the importance of volunteer labor than the mayors did. This might be because mayors see volunteer labor as a means to save costs. Further, mayors are likely to want to be perceived as wanting to engage citizens. But arborists actually work with volunteers and they might feel that such labor cannot replace trained professional labor in the care and maintenance of trees.

To examine how political leanings of respondents are associated with their responses to the question on possible benefits of involving citizens in government-run urban forestry programs, the responses of arborists and supervisors to this question are compared across their political leanings in Table 4.13.

Table 4.13: Respondents' opinion on existence of benefits of involving citizens: Responses by party lines

	Are there benefits of involving citizens in govt. run urban forestry programs?						
		Arborists			Supervisors		
		No	Yes	Not sure	No	Yes	Not sure
	Total	0	8	2	1	7[a]	3[b]
Political Leanings	Democrats	0	1	1	0	2	1
	Republicans	0	3	0	0	0	0
	Independents	0	4	1	1	3	1
	Other	0	0	0	0	1	0

a: One person who responded "yes" did not provide information on political leanings.
b: The person who responded "not sure" did not provide information on political leanings.

Table 4.13 indicates that the responses of arborists and supervisors do not seem to be polarized by party lines. In other words, we have no evidence that political leanings affect the perceptions of municipal officials about the benefits of involving citizens in government-run urban forestry programs.

As discussed earlier, mayors and the supervisors were asked to assign a score between one and five to indicate their opinion on how much influence citizens should have on the kind of trees planted on municipal land. A score of 1 stands for no influence at all, while a score of 5 stands for a lot of influence. Table 4.14 presents the means scores assigned on this question by mayors and the supervisors by political affiliation.

Table 4.14: How much influence should citizens have on trees planted in municipal land? – Mean Score by party line[a]

	How much influence should citizens have on trees planted in municipal land?		
		Mayors	Supervisors[b]
Political Leanings	Democrats	3 (1)	3 (3)
	Republicans	3 (1)	0 (0)
	Independents	2.3 (3)	2.4 (5)
	Other	0 (0)	1 (1)

a: Scores are on a scale of one to five. Figures in brackets indicate the number belonging to each political group.
b: Two respondents did not provide information on political leanings.

Like Table 4.13, Table 4.14 also indicates that the responses of mayors and supervisors do not seem to break up cleanly along party lines, indicating that there is no evidence to suggest that political leanings affect the beliefs of municipal officials about how much influence citizens should have on trees planted in municipal land.

Table 4.8 summarizes the perceptions of arborists and supervisors on the sources of costs and benefits of citizen involvement in urban forestry. The respondents were also asked what they thought were the most significant elements of costs and benefits. Their responses are presented in Table 4.15.

The majority of arborists (80%) and supervisors (63.6%) felt that there are benefits to involving citizens in government-run urban forestry programs. Half of those arborists who felt that there were benefits to involving citizens also felt that the primary benefit of involving citizens was the increased citizen support for the forestry program; 62.5% of this group cited the time spent by municipal officials in engaging citizens as the primary cost of involving citizens. Over 71% of the supervisors who felt that involving citizens in urban forestry initiatives has benefits cited increased citizen support for these initiatives as the primary benefit; 85.7% of this group cited the time spent by municipal officials in engaging citizens as the primary cost of involving citizens.

There could be several possible components to the extra time required when citizens get involved. This survey focused on the additional time that must be given by arborists and supervisors in involving citizens and coordinating with citizens

Table 4.15: Respondents' perceptions of the sources of benefits and costs of involving Citizens in Municipal Urban Forestry Programs

	Are there benefits of involving citizens in government- run urban forestry programs?						
		Arborists			Supervisors		
		No	Yes	Not sure	No	Yes	Not sure
		0	8[b]	2[c]	1	7	3
Sources of Benefits	Access to privately owned land	0	1	0	0	1	0
	Reduced workload for municipal foresters	0	2	0	0	1	0
	Increased citizen support	0	4	1	0	5	3
	Other	0	1	0	0	0	0
Sources of Costs	Advertising to recruit participants	0	0	0	0	1	0
	Time spent by municipal officials	0	5	0	0	6	0
	Public conflicts could hinder/delay the program	0	1	1	1	0	2
	Less organized program	0	0	1	0	0	1
	Other	0	1	0	0	0	
One a scale of 1-5 how often is it cost effective to involve citizens in urban forestry initiatives?[a]		3.70 (0.82)			2.55 (0.93)		
In your municipality do you expect the costs or benefits of involving citizens in urban forestry initiatives to be higher?							
Probably costs will be higher		0	1	1	1	1	2
Probably benefits will be higher		0	7	0	0	4	1
They will probably be approximately equal		0	0	1	0	2	0

a 1: Never; 5: Almost always. The numbers provided are the means scores for arborists and supervisors. The figures in brackets are the corresponding standard deviations.
b: One person who responded "yes" did not provide primary cost.
c: The person who responded "not sure" did not provide the primary benefit.

But there could be two other ways that citizen involvement increases the time associated with any task. First, citizen volunteers will likely not have the professional skills of arborists. Therefore, using volunteer labor will make most things take longer. Additional time would also be required for coordinating the efforts of arborists and volunteers. Second, when a community gets involved in the decision-making process, there is a greater likelihood of conflicts emerging that will likely delay the decision-making or planning process. These two dimensions of time have not been addressed in this study. All three of these components run against the emphasis of public administration against efficiency.

Chapter Five: Conclusions

This study sought to examine the perceptions of municipal officials about the importance, costs, and benefits of involving citizens in municipal governments' urban forestry programs. It also examined if the responses of municipal officials differed by their levels in the hierarchy and their political leanings. These issues were explored using data from select cities in Iowa that had urban forestry programs.

5.1 Summary of Results

The evidence indicates that all three groups of municipal officials surveyed assigned high importance to urban forestry for reducing pollution and improving the quality of city life. The scores they assigned were significantly above 3, the neutral point. Asked to rate the importance of citizen inputs in the implementation of a successful municipal program to improve the environment, the group as a whole assigned the highest importance to technical expertise of individuals involved. Mayors as a group assigned the highest importance to volunteer labor while arborists and supervisors assigned lower scores. This difference may reflect that fact that mayors as elected representatives are keen to be seen as people-centric and inclusive, while arborists and supervisors do not have these concerns because they are appointed officials.

The majority of municipal officials think that the benefits of involving citizens in municipal governments' urban forestry initiatives outweigh the costs of the same. This was true both in general and in the case of the respondent's specific city. Breaking up the components of benefits and costs, we find that the majority of arborists and supervisors think that greater political support coming from more involved citizens is the primary benefit of citizen involvement. Time spent by municipal officials in involving citizens was viewed as the primary element of cost by both arborists and supervisors.

The responses of municipal officials were similar across hierarchical levels, in all but two questions. In other words, the level of municipal government that a respondent belonged to did not have a material influence on his/her answer. The two questions for which the group-effect was different related to the importance of well-defined rules and volunteer labor in implementing a successful municipal program to improve environment in a city. It bodes well for the management of urban forests that officials across different hierarchical levels hold similar views on a range of issues relating to urban forestry. It is unexpected that mayors and arborists at the two ends of the hierarchy would hold similar views and in 10 questions out of 12, it appears that they do. Political leanings, too, did not seem to have a material influence on the responses of municipal officials.

Given the responses of municipal officials about the payoffs from engaging citizens it appears that there might be greater scope for citizen involvement in urban forestry in Iowa. While it is hard to generalize about the likely outcomes without looking into the perceptions of citizens, it is possible that greater citizen involvement is likely if municipal officials wish to invite and engage communities in their initiatives.

5.2 Problems and Limitations

Data for this study was collected through an internet survey. This narrowed the sample for the survey since email ids were not available for arborists in several cities. Attempts to acquire the email ids by phone revealed that several arborists did not have work emails or even access to computers at work. Since response rates for arborists was very high (71%), expanding the sample that received the survey would have provided a bigger and richer dataset.

A further problem associated with conducting an internet survey was that all the questions regarding the elements of costs and benefits were close-ended. Municipal officials were asked to indicate their opinions about a set of given options. This might not have been the best way to elicit their opinions. Several questions had an option indicated as “Other” meaning an option other than the ones given. When this additional option was offered, officials were also asked to specify what they had in mind. Only one of the respondents chose this option, that too for one question only and did not specify what that other option was. This problem would have arisen in case of a mail survey too. If it was possible undertake personal interviews, open ended questions could have been used to elicit the opinions of municipal officials about the various aspects of urban forestry. This might have resulted in a better understanding of the most important factors associated with civic engagement in urban forestry. Alternatively, focus groups prior to the survey would have given us an idea of what issues and elements municipal officials consider important and that would have allowed us have a broader understanding of these issues.

As discussed earlier, there are no studies in the literature quantifying the costs and benefits of involving citizens in municipal urban forestry initiatives. This might be partly because these benefits and costs are hard to quantify. This study tried to get around that problem by studying the perceptions of municipal officials about the costs and benefits of involving citizens. But the degree of involvement of citizens in a municipal program is hard to measure. If the degree of involvement of citizens cannot be measured it is not possible to relate the perceptions of municipal officials to real outcomes. In other words, without being able to measure the degree of civic engagement in urban forestry programs we cannot study how the perceptions of municipal officials affect civic engagement.

5.3 Future Research Possibilities

The next steps in this could be to quantify the degree of citizen involvement in urban forestry. In this study mayors were asked if they were involving citizens in the urban forestry programs. All five mayors said that they were, four said that citizens were being involved in planting of trees and one said that citizens were being involved in the planning board. While this gives us some information about the involvement of citizens, it does not tell us much about the degree of involvement. An easily quantifiable measure of citizen involvement would allow us to extend this work by correlating perceptions of municipal officials with outcomes in terms of civic engagement.

This work focuses exclusively on municipal officials. As discussed earlier, citizens have high stakes in getting involved in local urban forestry initiatives, particularly because they reap the immediate benefits from trees in their locality. It would, therefore, be interesting to understand the factors that affect the interest and willingness of citizens to get involved in local urban forestry initiatives. Another extension of this work would be to undertake a similar survey of citizens in cities with urban forestry programs to understand their opinion about their role in the programs.

Finally, it would be interesting to see if cities with greater citizen involvement do better in their urban forestry programs than cities with less citizen involvement. All of these constitute possibilities for future research.

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Appendix 1

Survey Instrument 1: For Mayors

Section 1: Here we will ask a few questions about the urban forestry program in your city.

1. Is your community a "Tree City USA"? (Please check only one)

☐ Yes

☐ No

2. Do you have a tree board or committee? (Please check only one)

☐ Yes

☐ No

3. In what city department does your forestry program reside?

☐ Parks and recreation
☐ Public works
☐ Planning
☐ Other. Please specify _____

In the following set of questions please rate on a scale of 1 to 5, how important you consider some issues relating to urban forestry programs (please check only one).

		Not important at all	Slightly important	Somewhat important	Quite important	Very important
4.	In your opinion how important is urban forestry for controlling pollution?	1	2	3	4	5
5.	How important is urban forestry for improving the quality of city life?	1	2	3	4	5

Section 2: In this section we ask you some questions about your opinion on citizen participation in urban forestry initiatives.

On a scale of 1 to 5 please indicate your rating of the importance for the following factors in implementing a successful municipal program to improve environment in a city (please circle only one)

		Not	Slightly	Somewhat	Quite	Very

		important at all	important	important	important	important
6	To engage members of the community in decision-making for urban forest management	1	2	3	4	5
7	Political support from the public	1	2	3	4	5
8	Technical expertise of individuals responsible	1	2	3	4	5
9	Well-defined rules	1	2	3	4	5
10	A well-defined program structure	1	2	3	4	5
11	New ideas from the public	1	2	3	4	5
12	Regular feedback from the public	1	2	3	4	5
13	Volunteers who engage in relevant activities	1	2	3	4	5

14. Do you engage citizens in the program?

☐ Yes.
☐ No.

If yes, please go to question 15A, if no, please go to question 15.B.

15. A. If "Yes" to question 14, how do you engage citizens in your urban forestry program? Please check all that apply.

☐ Tree planting activities
☐ Tree inventory
☐ Tree board
☐ Other, please specify _____

15.B. If "No" to question 14, what are the main reasons for not engaging the community? Please check all that apply.

☐ It is time consuming
☐ It is expensive
☐ Citizen volunteers lack technical knowledge
☐ Volunteers are not accountable for their work like municipal employees are
☐ Other (please specify) _____

16. Do you target specific segments of the community to engage in urban forestry programs?

☐ Yes

☐ No

17. If "Yes" to question 16 above, which segments do you target? (Please check all that apply)

☐ Public agencies
☐ Businesses
☐ Landowners
☐ Schools
☐ Specific demographic groups (please specify) _____
☐ Other (please specify) _____

18. Please provide your reasons for targeting these segments

_____
_____

19. In your opinion, at what stage of an urban forestry program is it most productive to engage the community? (Please check all that apply)

☐ In all stages _

☐ The decision-making and planning processes

☐ In the process of planting and maintenance of trees

☐ For political support only

☐ Other, please specify _____

20. Who do you believe should have the *primary* responsibility for maintaining tree cover in your city? (Please circle one)

☐ Citizens

☐ The municipal government

☐ Both

21. How much say should citizens have in the kind of trees that are planted on municipally owned land and maintained by the government?

Section 3: In this last section we will ask you questions that will let us describe our aggregate responses. All of your answers are strictly confidential. The response we get from you will be used only for analyzing aggregate data.

22. What is your job title? _____

23. How long have you served in your current position? _____

24. What is your gender (please check one)? ☐ Male. ☐ Female

25. What is your age? (Please check only one)

☐ Under 25 ☐ 26-34 ☐ 35- 49 ☐ 50- 65

26. Highest level of formal education attained (Please circle only one)

☐ High School diploma
☐ Associate Degree
☐ Bachelor's Degree
☐ Graduate or professional degree (e.g. MA, MBA, MPA)
☐ Advanced degree (e.g. PhD, JD).

27. Race/ Ethnicity (Please circle all that apply)

☐ White / Caucasian
☐ African-American
☐ Asian/ Pacific Islander
☐ Hispanic/ Latino
☐ Native American/ American Indian
☐ Other (please specify)_____

28. Generally speaking, do you usually think of yourself as a Republican, Democrat or an Independent?

☐ Democrat

☐ Republican

☐ Independent

☐ Other (please specify) _____

29. When you think of government spending, which of the following groups would you most identify yourself with? Please check only one.

☐ Fiscal Conservative

- ☐ Fiscal moderate
- ☐ Fiscal liberal

30. When you think of societal norms and traditions which of the following groups would you most identify yourself with? Please check only one.

- ☐ Social Conservative
- ☐ Social moderate
- ☐ Social Liberal

Thank you for your responses to this survey.

Appendix 2

Survey Instrument 2: For Supervisors

Section 1: Here we will ask a few questions on your opinion on urban forestry and citizen participation.

In the following set of questions please rate on a scale of 1 to 5 how important you consider some issues relating to urban forestry programs (please circle only one).

		Not important at all	Slightly important	Somewhat important	Quite important	Very important
1.	In your opinion how important is urban forestry for controlling pollution?	1	2	3	4	5
2.	How important is urban forestry for improving the quality of city life?	1	2	3	4	5

On a scale of 1 to 5 please indicate your rating of the importance for the following factors in implementing a successful municipal program to improve environment in a city (please circle only one)

		Not important at all	Slightly important	Somewhat important	Quite important	Very important
33.	To engage members of the community in decision-making for urban forest management	1	2	3	4	5
44.	Political support from the public	1	2	3	4	5
5.	Technical expertise of individuals responsible	1	2	3	4	5
6.	Well-defined rules	1	2	3	4	5
7.	A well-defined program structure	1	2	3	4	5
8.	New ideas from the public	1	2	3	4	5
19.	Regular feedback from the public	1	2	3	4	5
110.	Volunteers who engage in relevant activities	1	2	3	4	5

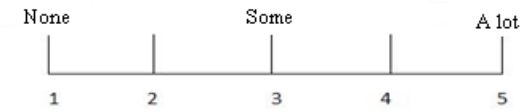
11. In your opinion, at what stage of an urban forestry program is it most productive to engage the community? (Please check all that apply)

- ☐ In all stages
- ☐ The decision-making and planning processes
- ☐ In the process of planting and maintenance of trees
- ☐ For political support only
- ☐ Other, please specify _____

12. Who do you believe should have the *primary* responsibility for maintaining tree cover in your city? (Please circle one)

- ☐ Citizens
- ☐ The municipal government
- ☐ Both

13. How much say should citizens have in the kind of trees that are planted on municipally owned land and maintained by the government?



Section 2: In this section we ask you some questions about the possible benefits and costs of involving citizens in urban forestry initiatives.

14. Do you think there are benefits of involving citizens in government-run urban forestry programs? (Please check one)

- ☐ Yes
- ☐ No
- ☐ Not sure

If yes or not sure, please go to question 15, if no, please go to question 16.

15. If you answered “Yes” or “Not sure” to the previous question, please indicate what you think are the benefits of citizen participation in government-run urban forestry programs (Please check all that apply)

- ☐ Access to privately owned land for forestry
- ☐ Reduced workload for municipal foresters to maintain and protect the trees
- ☐ Increased citizen support for the government’s forestry program

☐ Other (Please specify)

16. What do you think are the main elements of the costs of getting citizens involved in government-run urban forestry programs? Please include both monetary and non-monetary costs. (Please check all that apply)

☐ Advertising to recruit participants
☐ Time that municipal officials need to spend to educate and involve the community
☐ Public conflicts could delay and hinder the program
☐ It leads to less organized program
☐ Other (please specify) _____

17. Do you think involving citizens in the urban forestry initiatives is cost- effective? In other words, do you think the benefits outweigh the costs? (Please check one)

☐ Never
☐ Rarely
☐ Sometimes
☐ Often
☐ Almost always

18. Within your specific municipality do you expect the costs to exceed or be less than the benefits? (Please circle one)

☐ Costs will probably exceed benefits
☐ Benefits will probably exceed costs
☐ They will probably be approximately equal

Section3: In this last section we will ask you questions that will let us describe our aggregate responses. All of your answers are strictly confidential. The response we get from you will be used only for analyzing aggregate data.

19. What is your job title? _____

20. How long have you served in your current position? _____

21. What is your gender (please check one) ☐ Male. ☐ Female

22. What is your age? (Please check only one)

☐ Under 25 ☐ 26-34 ☐ 35- 49 ☐ 50- 65

23. Highest level of formal education attained (Please circle only one)

☐ High School diploma
☐ Associate Degree
☐

c. Bachelor's Degree
☐ Graduate or professional degree (e.g. MA, MBA, MPA)
☐ Advanced degree (e.g. PhD, JD).

24. Race/ Ethnicity (Please check all that apply)

☐ White / Caucasian
☐ African-American
☐ Asian/ Pacific Islander
☐ Hispanic/ Latino
☐ Native American/ American Indian
☐ Other (please specify)_____

25. Generally speaking, do you usually think of yourself as a Republican, Democrat or an Independent?

☐ Democrat
☐ Republican
☐ Independent
☐ Other (please specify) _____

26. When you think of government spending, which of the following groups would you most identify yourself most with? Please check only one.

☐ Fiscal Conservative
☐ Fiscal moderate
☐ Fiscal liberal

27. When you think of societal norms and traditions which of the following groups would you most identify yourself with? Please check only one.

☐ Social Conservative
☐ Social moderate

☐ Social Liberal

Thank you for your responses to this survey.

Appendix 3

Survey Instrument 3: For Arborists

Section 1: Here we will ask a few questions on your opinion on urban forestry and citizen participation.

In the following set of questions please rate on a scale of 1 to 5 how important you consider some issues relating to urban forestry programs (please circle only one).

		Not important at all	Slightly important	Somewhat important	Quite important	Very important
1.	In your opinion how important is urban forestry for controlling pollution?	1	2	3	4	5
2.	How important is urban forestry for improving the quality of city life?	1	2	3	4	5

On a scale of 1 to 5 please indicate your rating of the importance for the following factors in implementing a successful municipal program to improve environment in a city (please circle only one)

		Not important at all	Slightly important	Somewhat important	Quite important	Very important
33.	To engage members of the community in decision-making for urban forest management	1	2	3	4	5
44.	Political support from the public	1	2	3	4	5
5.	Technical expertise of individuals responsible	1	2	3	4	5
6.	Well-defined rules	1	2	3	4	5
7.	A well-defined program structure	1	2	3	4	5
8.	New ideas from the public	1	2	3	4	5
19.	Regular feedback from the public	1	2	3	4	5
110.	Volunteers who engage in relevant activities	1	2	3	4	5

11. In your work, are you required by the upper management to involve citizens in the urban forestry-related work? (Please check one)

- ☐ Yes
- ☐ No
- ☐ I am not required to involve citizens but encouraged to do so

Involving the community in urban forestry typically involves some challenges. Please indicate on a scale of 1 to 5 how important each of these challenges is for involving the community.

		Not important at all	Slightly important	Somewhat important	Quite important	Very important
312.	People don't fit into the organizational structure of the municipal government	1	2	3	4	5
413.	Unlike municipal employees, citizen volunteers are not accountable for the quality and quantity of the work they do	1	2	3	4	5
14.	Citizen volunteers do not belong to the bureaucratic hierarchy so foresters or municipal officials do not have any authority over them	1	2	3	4	5
15.	Citizens do not have the level of technical knowledge and commitment that municipal employees have	1	2	3	4	5

16. In your opinion, at what stage of an urban forestry program is it most productive to engage the community? (Please check all that apply)

- ☐ In all stages
- ☐ The decision-making and planning processes
- ☐ In the process of planting and maintenance of trees
- ☐ For political support only

☐ Other, please specify _____

Section 2: In this section we ask you some questions about the possible benefits and costs of involving citizens in urban forestry.

17. Do you think there are benefits of involving citizens in government-run urban forestry programs? (Please check one)

☐ Yes

☐ No

☐ Not sure

If yes, please go to question 18, if no, please go to question 19.

18. If you answered "Yes" or "Not sure" to the previous question, please indicate what you think are the benefits of citizen participation in government-run urban forestry programs (Please check all that apply)

☐ Access to privately owned land for forestry
☐ Reduced workload for municipal foresters to maintain and protect the trees
☐ Increased citizen support for the government's forestry program
☐ Other (Please specify)

19. What do you think are the main elements of the costs of getting citizens involved in government-run urban forestry programs? Please include both monetary and non-monetary costs. (Please check all that apply)

☐ Advertising to recruit participants
☐ Time that municipal officials need to spend to educate and involve the community
☐ Public conflicts could delay and hinder the program
☐ It leads to a less organized environment
☐ Other (please specify) _____

20. Given the above costs and benefits, do you think involving citizens in the urban forestry initiatives is cost- effective? In other words, do you think the benefits outweigh the costs? (Please check one)

☐ Never
☐ Rarely
☐ Sometimes
☐ Often
☐ Almost always

21. Within your specific municipality do you expect the costs to exceed or be less than the benefits? (Please circle one)

☐ Costs will probably exceed benefits

- ☐ Benefits will probably exceed costs
- ☐ They will probably be approximately equal

Section3: In this last section we will ask you questions that will let us describe our aggregate responses. All of your answers are strictly confidential. The response we get from you will be used only for analyzing aggregate data.

22. What is your job title? _____

23. How long have you served in your current position? _____

24. What is your gender (please check one)? ☐ Male. ☐ Female

25. What is your age? (Please check only one)

☐ Under 25 ☐ 26-34 ☐ 35- 49 ☐ 50- 65

26. Highest level of formal education attained (Please check only one)

- ☐ High School diploma
- ☐ Associate Degree
- ☐ Bachelor's Degree
- ☐ Graduate or professional degree (e.g. MA, MBA, MPA)
- ☐ Advanced degree (e.g. PhD, JD).

27. Race/ Ethnicity (Please check all that apply)

- ☐ White / Caucasian
- ☐ African-American
- ☐ Asian/ Pacific Islander
- ☐ Hispanic/ Latino
- ☐ Native American/ American Indian
- ☐ Other (please specify)_____

28. Generally speaking, do you usually think of yourself as a Republican, Democrat or an Independent?

- ☐ Democrat
- ☐ Republican
- ☐ Independent
- ☐ Other (please specify) _____

29. When you think of government spending, which of the following groups would you most identify yourself most with? Please check only one.

- ☐ Fiscal Conservative
- ☐ Fiscal moderate
- ☐ Fiscal liberal

30. When you think of societal norms and traditions which of the following groups would you most identify yourself with? Please check only one.

- ☐ Social Conservative
- ☐ Social moderate
- ☐ Social Liberal

Thank you for your responses to this survey

Appendix 4
Approval of the Institutional Review Board

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Resear
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 5/27/2010

To: Kalapana Bhattacharjee
3406 Orion Dr #203
Ames, IA 50010

CC: Dr. Mack Shelley
1413 Snedecor Hall

From: Office for Responsible Research

Title: Politics and Policies in Urban Forestry

IRB Num: 10-088

Submission Type: Modification **Exemption Date:** 5/27/2010

The project referenced above has undergone review by the Institutional Review Board (IRB) and has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as proposed in the IRB application**, including obtaining and documenting informed consent if you have stated in your application that you will do so or if required by the IRB.
- **Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making <u>any</u> changes**, to determine if the project still meets the federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to **use only the approved study materials** in your research, including the **recruitment materials and informed consent documents that have the IRB approval stamp.**

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

For IRB Use Only	Modification Approval Date May 27, 2010 Continuing Review Approval Date Approval Expiration Date: n/a – exempt	IRB MAY 18 2010

ISU HUMAN SUBJECTS CONTINUING REVIEW AND/OR MODIFICATION FORM

TYPE OF SUBMISSION: ☐ Continuing Review ☒ (RB) Modification ☑ Continuing Review and Modification

Principal Investigator: Kalpana Bhattacharjee		Phone: 515-451-5233
Degree: MA	Correspondence Address: 3406 Orion Dr.	
Department: Political Science		E-mail Address: Kalpanab@iastate.edu.
Project Title: Politics & Policies in Urban Forestry.		
IRB ID: 10-088		Date of Last Continuing Review:
Alternate Contact: Mack Shelley		Phone: 294-1075
Correspondence Address: 539 Ross Hall		Email Address: mshelley@iastate.edu.
IF STUDENT PROJECT		
Name of Major Professor: M. Shelley		Phone: 294-1075 E-mail Address: mshelley@iastate.edu
Department: Political Science		Campus Address:

FUNDING INFORMATION:

☐ External Grant/Contract ☐ Internal Support (no specific funding source) or Internal Grant (indicate name below)	
Name of Funding Source:	OSPA Record ID on Gold Sheet:
☐ Part of Training, Center, Program Project Grant – Director:	Overall IRB ID No:
☑ Student Project—No funding or funding provided by student	

CONFLICT OF INTEREST

The proposed project or relationship with the sponsor requires the disclosure of significant financial interests that present an actual or potential conflict of interest for investigators involved with this project. By signing this form, all investigators certify that they have read and understand ISU's Conflict of Interest policy as addressed by the ISU Faculty Handbook (http://www.provost.iastate.edu/faculty) and made all disclosures required by it.)

Do you or any member of your research team have a conflict of interest? ☐ Yes ☑ No
If yes, has the appropriate disclosure form been completed? ☐ Yes ☐ No

ASSURANCE

I certify that the information provided in this application is complete and accurate and consistent with proposal(s) submitted to external funding agencies. I agree to provide proper surveillance of this project to insure that the rights and welfare of the human subjects are protected. I will report any adverse reactions to the IRB for review. I agree that modifications to the originally approved project will not take place without prior review and approval by the Institutional Review Board, and that all activities will be performed in accordance with state and federal regulations and the Iowa State University Federal Wide Assurance.

K. Bhattacharjee 5.17.2010.
Signature of Principal Investigator Date

Student Projects: Faculty signature indicates that this application has been reviewed and is recommended for IRB review.

Mack Shelley 5/17/10 — Signature of Supervising Faculty / Date
Mary A Spaniol May 27, 2010 — IRB Approval Signature / Date

For IRB Use Only	
	EXPEDITED per 45 CFR 46.110(b) X (W), Category _____, Letter _____
	STUDY REMAINS EXEMPT per 45 CFR 46.101(b) 2
	WAIVER of SIGNED CONSENT per 45 CFR 46.117(c) _____
	WAIVER of ELEMENTS of Consent per 45 CFR 46.116 _____
	VULNERABLE POPULATION per 45 CFR 46._____

DIRECTIONS: Section I: Key Personnel must be completed for all applications. Please complete Section II if this is an application for Continuing Review. If this is an application for continuing review and you will be modifying your project, please complete all sections of the form. **If this application is only to request approval for a modification or change to your study, please complete Section I: Key Personnel and Section III: Proposed Modifications or Changes.** Please answer each question. If the question does not pertain to this study, please type not applicable (N/A).

SECTION I: KEY PERSONNEL

List all current members of the project personnel, including any additions and excluding any deletions as described in Section III. This information is intended to inform the committee of the training and background of the investigators and key personnel.

NAME & DEGREE(S)	POSITION AT ISU & ROLE ON PROJECT	TRAINING & DATE OF TRAINING
Mack Shelley	Professor. Advise on analysis	NIH online 9/16/00
Janette Thompson	Professor. Advise on preparation of application	NIH. online 7/20/00
Kalpana Bhattacharya	Student.	Ethics NIH. online 12/20/09.

SECTION II: CONTINUING REVIEW

Part A: Enrollment Status

1. ☑ Yes ☑ No Is the research **permanently** closed to the enrollment of new participants?
2. ☐ Yes ☐ No Have **all** participants completed all research-related interventions?
3. ☐ Yes ☐ No Does research remain active only for long-term follow-up of participants?
4. ☐ Yes ☐ No Are the remaining research activities limited to data analysis? OR
5. ☐ Yes ☐ No Participant enrollment has not begun and no additional risks have been identified.

For definitions and guidance on how to determine enrollment, please see the document entitled **Enrollment and Accrual of Study Participants** on the IRB website.

Number of Participants Approved for Enrollment by IRB:	
Total Number of Participants Enrolled in the Study to Date: 1 Males: 3 Females:	
Number of Screen Failures (participants who were screened and deemed ineligible) to date:	
Check if any enrolled participants are: ☐ Minors (under 18). Age Range of Minors: _ ☐ Pregnant Women/Fetuses ☐ Cognitively Impaired ☐ Prisoners	Check below if this project involves: ☐ Existing Data/Records ☐ Secondary Analysis ☐ Pathology/Diagnostic Specimens
List Below the Estimated Percent of the Total Enrolled That Are Minorities	
American Indians:	Alaskan Native:
Asian or Pacific Islander:	African American:
Black (Not of Hispanic Origin):	Hispanic:

1. ☐ Yes ☑ No Have any participants withdrawn or have you asked any participants to withdraw from the study?

List number for each and reason for withdrawal:

Part B: Protocol Summary – Please use the amount of space needed to adequately address the questions.

1. Please provide a concise summary of the purpose and main procedures of the study.

To understand the perception of the municipal officials about involving citizens in urban zoning

2. Please provide a summary of how the study is progressing (e.g., progress to date in terms of the overall study plan, success or problems encountered, reasons enrollment has not begun, etc.)

I have sent out the first round of survey. I plan to send two or three reminders in the coming weeks.

3. Is there any new information (positive or negative) from this study (e.g., interim analysis) or elsewhere (e.g., current literature) that might affect someone's willingness to enroll or continue in the study? It is especially important for the investigator to notify the IRB of literature or information that's relevant to the risks to participants in the study.

N/A

4. Please provide a summary of amendments or modifications since last IRB review.

There are no changes in the original survey, this is just to add two reminders

Part C: Adverse Events and Unforeseen Problems

1. ☐ Yes ☑ No Have there been any adverse events or unanticipated problems involving risks to participants or other people?

If yes, please describe the event(s).

If yes, was it reported to the IRB? Date reported

If report was not submitted, please explain why.

2. ☐ Yes ☐ No Have there been any participant complaints?

If yes, please describe.

Attach any reports submitted to NIH or a Data and Safety Monitoring Board. ☐ Attached ☑ N/A

Part D: Informed Consent

1. ☐ Yes ☐ No If a signed Informed Consent Form was required, was Informed Consent obtained from all participants?

If no, please explain.

2. ☐ Yes ☐ No Are all signed Informed Consent Forms on file with the PI?

If no, please explain.

3.

☐ Attached
☑ N/A

Submit a copy of the currently approved Informed Consent Document or informational letter and an original unstamped copy so a current IRB approval stamp can be added. If changes have been made, please submit the original, a copy with the changes highlighted, and a copy to be stamped with IRB approval.

☐ Attached
☑ N/A

Submit an unstamped copy of all survey instruments, interview questions, recruitment materials, instructions, and all other material participants will see or hear during their participation so that a current IRB approval stamp can be added. Any changes to materials should be described in Section III. Please also submit the original, a copy with the changes highlighted, and a copy to be stamped with IRB approval.

- SECTION III: PROPOSED MODIFICATIONS OR CHANGES

If this application is to request approval for modification or changes to your project, please complete Section I: Key Personnel and Section III.

The submission of a modification form is required whenever any changes are made to an approved project. This includes, but is not limited to, a title change, changes in investigators, resubmission of a grant proposal involving changes to the original proposal, changes in the funding source, changes to data collection materials and informed consent documents, advertisements, confidentiality measures, inclusion/exclusion criteria, reports from a data safety and monitoring board, addition of a test instrument, etc. **NOTE: All changes must be submitted and approved by the IRB prior to their implementation unless the change is necessary to protect the safety of participants.**

1. ☐ Yes ☑ No Does your project now require approval from another institution?

   If yes, please attach letters of approval.

2. The following modification(s) are being made (check all that apply):

   ☐ Change in protocol/procedures.
   ☐ Change in type or total number of participants. New anticipated total:
   ☐ Change in informed consent document.
   ☐ Change in co-investigator(s). New co-PI name:

   Signature of new Co-PI: _____

   ☐ Change in funding source/sponsor. **If federally funded**, please attach copy of grant proposal.
   ☐ Other (e.g., change in project title, adding new materials, adding advertisement, etc.)

   ☐ Personnel/staff changes since the last IRB approval was granted? Please complete the following table as appropriate. **NOTE**: If the change involves a new Principal Investigator, a new Human Subjects Review form must be submitted.

Add	Delete	Last Name	First Name

3. Describe the modification(s) indicated above in sufficient detail for evaluation independent of any other documents. Be sure to describe all changes in detail and provide a rationale for the changes. When submitting revised documents please submit one clean copy of the new document and a copy with the changes highlighted.

Addition of reminder letter to encourage participants to complete the survey. per page 3. Confirmed by PI via personal communication. 5/27/10 (KA)

ISU IRB # 1 10-088
EXEMPT DATE: 27 May 2010

Iowa State University

College of Liberal Arts and Sciences
Department of Political Science
508 Ross Hall
Ames, Iowa 50011-1204
515-294-7256
FAX 515-294-1003

[Date of survey]
[First name, Last name]
[Address, city, state , zip]
Dear __Full name_____

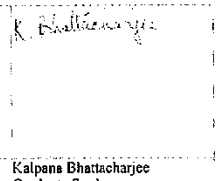
Last week we invited you to participate in an important survey about urban forestry initiatives in your municipality.

Since your municipality conducts urban forestry activities it is important for us to know your opinion about urban forestry and community participation in municipal forestry initiatives. **We are specifically interested in your perspectives as the mayor of your municipality because of your important leadership role and influence on the direction of policy. We are particularly interested in your viewpoint as distinct from that of your municipal forester.**

If you have not responded to the survey yet, we request you to do so. If you have already responded, there is no need for you to fill out the survey a second time. Please accept our thanks for doing so.

Thank you for considering participating in this important study.

Mack Shelley



Dr. Mack Shelley	Dr. Janette Thompson	Kalpana Bhattacharjee
University Professor	Associate Professor	Graduate Student
Iowa State University	Iowa State University	Iowa State University

For further information about this study or if you have any questions regarding the study, contact Dr. Mack Shelley, mshelley@iastate.edu or Kalpana Bhattacharjee, kalpanab@iastate.edu

Please access the survey at:

ISU IRB # 1	10-088
EXEMPT DATE:	27 May 2010

Iowa State University

College of Liberal Arts and Sciences
Department of Political Science
503 Ross Hall
Ames, Iowa 50011-1204
515-294-7256
FAX 515-294-1003

[Date of survey]
[First name, Last name]
[Address, city, state , zip]

Dear __Full name_____

Last week we invited you to participate in an important survey about urban forestry initiatives in your municipality.

Since you are directly involved in urban forestry activities in your city and also have direct interactions with the community, it is important for us to know your opinion about urban forestry and community participation in municipal initiatives. **We need your perspective as an individual who oversees and directs urban forestry activities in your municipality. We are particularly interested in your viewpoint separate from that of the forester or the arborist on your staff.**

If you have not responded to the survey yet, we request you to do so. If you have already responded, there is no need for you to fill out the survey a second time. Please accept our thanks for doing so.

Thank you for considering participating in this important study.

Mack Shelley

Dr. Mack Shelley	Dr. Janette Thompson	Kalpana Bhattacharjee
University Professor	Associate Professor	Graduate Student
Iowa State University	Iowa State University	Iowa State University

For further information about this study or if you have any questions regarding the study, contact Dr. Mack Shelley, mshelley@iastate.edu or Kalpana Bhattacharjee, kalpanab@iastate.edu

Please access the survey at:

ISU IRB # 1 10-088
EXEMPT DATE: 27 May 2010

Iowa State University

College of Liberal Arts and Sciences
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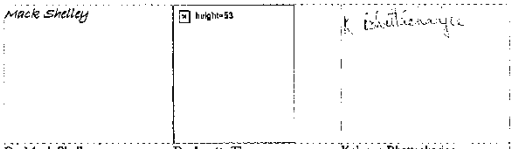
Dear __Full name_____,

Last week we invited you to participate in an important survey about urban forestry initiatives in your municipality.

Since you are directly involved in urban forestry activities in your city and also have direct interactions with the community in conducting those activities, it is important for us to know your opinion about community participation in those municipal initiatives.

If you have not responded to the survey yet, we request you to do so. If you have already responded, there is no need for you to fill out the survey a second time.

Thank you for considering participating in this important study.



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