

# **The 2014 Supporting Statement A for OMB 0596-NEW** Environmental Justice and the Urban Forest in Atlanta, GA

## **A. Justification**

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

Environmental justice is defined by the Environmental Protection Agency (EPA) as the “fair treatment and meaningful involvement of *all people*...with respect to the development, implementation, and enforcement of environmental laws....” This information collection addresses environmental justice in urban settings. Cities are often (though not always) places of particular concern for environmental justice inquiries due to the greater concentration of environmental pollutants and human populations. Importantly, numerous studies indicate that within cities, minorities and lower income populations are more likely than other groups to be exposed to pollutants or to have less access to the environmental services of city parks and green spaces (Abel, 2008; Sadd, Pastor, Morello-Frosch, Scoggins, and Jesdale, 2011, Heynen, Perkins, and Roy, 2006; Escobedo, Kroeger, and Wagner, 2011).

Research examining environmental justice problems typically focus on efforts to account for environmental burdens, such as the disproportionate siting of hazardous waste facilities, noxious emissions, or other unwanted land uses proximal to poor and or minority communities. Recently, the National Academy of Sciences and the EPA have called for studies that account for the additive or cumulative effect of environmental burdens to communities, cities, counties, etc. (National Academy of Sciences, 2009, p.213). The EPA defines cumulative exposure as “the combination of risks posed by aggregate exposure to multiple agents or stressors in which *aggregate exposure* [original emphasis] is exposure by all routes and pathways and from all sources of each given agent or stressor.”

While accounting for the multiplicity of environmental risks is central to assessing environmental justice (or injustice as the case may be), such investigations provide an incomplete accounting of the environmental *justness* of a place because only risks or dis-amenities are counted (e.g., facility siting, emissions, unwanted land uses) (Sadd et al., 2011). A more complete accounting of environmental justice in a given place would include an assessment of the cumulative impact of both environmental burdens and *environmental services*. In cities, this would include counting both the number of hazardous facilities and the number of city parks and green spaces, for instance. (Urban green spaces are defined as places in cities with assemblies of trees or shrubs, parks, or other areas with significant vegetation.) As well, this more comprehensive assessment would also include a human dimension, in the

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form of resident *attitudes* and *actions* concerning urban trees. Resident engagement and concern for environmental conditions is crucial to the creation of environmental justice. Indeed, civic engagement has been the primary instrument by which residents call attention to environmental deficiencies and the means of improvement. If residents are aware of, concerned, and engaged with environmental conditions in their communities, there is a greater likelihood that environmental integrity would be enhanced rather than degraded. Elaborating on cumulative risk assessments, Callahan and Sexton (2007) emphasize that such analyses must move beyond only accounting for chemical risks to include psychosocial factors, among others, that are non-chemical in nature.

In large, urban areas such as Atlanta, GA there is an uneven distribution of environmental risks (Heynen and Roy, 2006; Abel, 2008; Sister, Wilson, and Wolch, 2008). A recent report by the environmental law firm, GreenLaw, found that in fourteen metropolitan Atlanta counties with very high minority populations, residents are more likely than residents elsewhere in the metro area to be situated near various forms of polluting sources.<sup>1</sup>

This information collection will contribute to the U.S. Forest Service and Morehouse College's larger study of environmental justice within the city boundaries of Atlanta, GA, that includes three key elements of environmental justice. This larger study represents an innovative way of assessing environmental justice by incorporating indicators of the environmental services of the Atlanta's urban forest.<sup>2</sup> The study also includes measures of human engagement and advocacy for Atlanta's urban forest as a way of gauging environmental justice. Accordingly, we will examine expected indicators of 1) cumulative hazard risk (e.g., community proximity to hazardous waste sites, refineries, estimated air pollution exposure; 2) estimates of environmental services provided by the urban forest (e.g., dry deposition, carbon sequestration, energy savings); and 3) *resident perception of, engagement, and advocacy for trees in the city*. The latter measure relates to the present request for information collection. Items one and two do not involve information collection from human populations.

The following statutes and regulations are relevant to this request for information collection:

1. Executive Order 12898: This order makes explicit the federal government's role and responsibility to examine the environmental justice implications of agency practices. As a federal agency, the U.S. Forest Service is obligated to assess environmental justice within its various

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1 GreenLaw. 2012. The patterns of pollution: a report on the demographics and pollution in metro Atlanta. Available online at <http://greenlaw.org/Files/GreenLaw/2012/PatternsofPollution,FINAL,GreenLaw3-26-2012.pdf>. Date accessed 11 May 2012.

2 The urban forest includes urban parks and street trees, landscaped green spaces and public gardens, and greenways.

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functions, including the collection of information to make such assessments about environmental justice. Environmental services such as those provided by the urban forest contribute to the environmental “justness” of a place. Examining people’s attitudes about and engagement with this resource will enable the agency to measure the extent to which such attitudes and actions may lessen or mitigate human health risks associated with urban pollutants.

**Executive Order 12898--** Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations-- **3-302.** *Human Health and Environmental Data Collection and Analysis.* To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a): (a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

2. Memorandum of Understanding on Environmental Justice and Executive Order 12898: The Memorandum reiterates and expands the federal government’s commitment to examining the environmental justice consequences of its programs and policies. Though Executive Order 12898’s explicit focus is on risk assessment, by implication, the Order also directs agencies to develop protocols to reduce such burdens. By identifying a human role in environmental justice (through assessing attitudes and engagement), this information collection addresses this Order.

Purposes of the MOU—

- a. To declare the continued importance of identifying and addressing environmental justice considerations in agency programs, policies, and activities as provided in Executive Order 12898, including as to agencies not already covered by the Order.
- b. To renew the process under Executive Order 12898 for agencies to provide environmental justice strategies and implementation progress reports.
- c. To establish structures and procedures to ensure that the Interagency Working Group operates effectively and efficiently.
- d. To identify particular areas of focus to be included in agency environmental justice efforts.

Authority of the MOU—This Memorandum of Understanding on Environmental Justice and Executive Order 12898 (“Memorandum of Understanding” or “MOU”) is in furtherance of the Order, including the authorities cited therein. Federal agencies shall implement this Memorandum of Understanding in compliance with, and to the extent permitted by, applicable law.

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3. National Environmental Policy Act of 1969 (PL 91-190): This act is the nation's basic charter for protection of the environment. Section 102(2)(A) directs federal agencies to "utilize a systematic, interdisciplinary approach which will ensure the integrated use of the natural and social sciences...in decision making which may have an impact on man's environment." The proposed study provides an integrated approach to assessing residents' relationship to the urban forest.
4. Civil Rights Act of 1964 (PL 88-352): The Civil Rights Act of 1964 was enacted as a result of this country's de jure and de facto laws which resulted in unequal access to federally funded programs and institutions. Title six of the act explicitly states that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

## **2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.**

### **a. What information will be collected - reported or recorded? (If there are pieces of information that are especially burdensome in the collection, a specific explanation should be provided.)**

The survey contains questions about resident attitudes and engagement with Atlanta's urban forest. This includes information on people's support of tree planting by the city or by private residents and residents' involvement in community organizations promoting tree preservation and planting.

### **b. From whom will the information be collected? If there are different respondent categories (e.g., loan applicant versus a bank versus an appraiser), each should be described along with the type of collection activity that applies.**

Information will be collected from residents of both owned and rental properties across the city.

### **c. What will this information be used for - provide ALL uses?**

The information collected will serve multiple purposes. The first is to generate data that will be used to support the U.S. Forest Service Region 8's participation in the interagency, Green Infrastructure Community of Practice initiative (GI COP) in which the Forest Service is involved. GI COP is a

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collaboration of public agencies and others advocating for an increase in the amount of green space in cities across the country. Data collected on residents' attitudes and engagement with Atlanta's urban forest represents a specific project that Region 8's Regional Urban forester (Ed Macie) will use to help achieve the goals of the GI COP effort. As well, the GI COP addresses the U.S. Forest Service's Strategic Goal # 6 which directs the agency to "Engage urban America with Forest Service Programs." Specifically, this information collection represents one means of implementing action items related to Strategic Goal # 6, and that is "to develop partnerships with nontraditional partners to engage urban and underserved audiences."

Secondly, information will also be delivered to the U.S. Forest Service's newly created Environmental Justice Board, which oversees agency responses to environmental justice. In addition to the contribution to environmental justice analysis, this information collection will provide baseline data to gauge the level of engagement of all residents of the city. As well, Morehouse College is a nontraditional partner. Undergraduate students from the college will be trained in appropriate data collection techniques and be introduced to issues related to environmental justice throughout the city.

Thirdly, this information collection addresses President Obama's *America's Great Outdoors Initiative* (AGO), Recommendation 6.4, which stresses the need to connect urban residents with community green spaces (<http://americasgreatoutdoors.gov/files/2011/02/AGO-Report-With-All-Appendices-3-1-11.pdf>). The AGO recommendation calls on the federal government to find innovative ways of engaging urban residents with both public and private green space in cities by helping to eliminate barriers to engagement. One means of doing so is to understand better any constraints to citizen engagement that might be addressed by the federal government. The proposed information collection contains a number of questions related to this topic that address lack of neighborhood trees and costs of maintaining city trees. This baseline information will directly address the Administration's efforts to understand better what barriers may inhibit interaction with Atlanta's urban forest.

Fourthly, data on resident engagement with Atlanta's urban forest will be delivered, via RWU-4952's Science Delivery Team, to the *Vibrant Cities & Urban Forests Task Force*. This task force is a collaboration between the U.S. Forest Service and the Sustainable Urban Forests Coalition. The goal of the Task Force is to "promote and improve urban forests and green infrastructure in our nation's cities and municipalities." The Forest Service, through its Urban and Community Forestry program is an integral partner in the *Vibrant Cities* initiative. The first recommendation from the Task Force is to "create a national education and awareness campaign exposing all Americans to the value of urban ecosystems...", the second is to foster urban forest stewardship, and the ninth is to help ensure equal access to urban forests across socio-demographic sectors. By soliciting information on perceptions and engagement with urban trees, this information collection directly addresses each of these important recommendations by providing baseline data on these issues from the largest, most influential, and one of the most

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diverse cities in the South. Again, research on southern, urban constituents' engagement with city trees and green spaces is lacking compared to work that has been conducted elsewhere in the U.S. This data collection will help to fill that void.

Finally, both basic and applied research will be generated to address two research problem areas assigned to Research Work Unit 4952 of the Southern Research Station (Integrating Human and Natural Resources). These are to:

1. assess human influences on ecosystems that affect human-derived benefits from those ecosystems; and
2. evaluate the complex relationships between different social groups and natural resource use and engagement along the urban to rural continuum. These problems address issues related to environmental justice, including human community exposure and response to environmental risk. The problems also address social group access to urban environmental services such as parks and green spaces. A great deal of research has been conducted on community engagement with urban forests in the Forest Service's Northern Region and in the Pacific Northwest, but relatively little research examines these questions in the South despite the fact that the South is the fastest growing region in the country and contains considerable racial and ethnic diversity. Research conducted in Chicago neighborhoods suggests that city trees have beneficial effects on the social well-being of poor residents contending daily with inner-city blight and volatility. Findings suggest that even minimal contact with nature in urban settings contributes significantly to well-being indicators like stress and mental fatigue reduction, mood enhancement, self-discipline for young girls, and even crime reduction (Kuo, Sullivan, Coley, and Brunson, 1998; Kuo, Sullivan, Coley, and Brunson, 2000).

**d. How will the information be collected (e.g., forms, non-forms, electronically, face-to-face, over the phone, over the Internet)? Does the respondent have multiple options for providing the information? If so, what are they?**

The survey will be conducted face-to-face at the household in the form of a verbal interview. Responses will be recorded by the survey administrator using electronic devices.

**e. How frequently will the information be collected?**

The survey will be conducted one time per address/respondent. We will ask that the person in the home who is 18 years old or older and who last had a birthday to respond to the survey. If the adult who last had a birthday is not home, we will ask that the adult who last had a birthday and is currently home to respond.

After this survey is complete, that particular address will be noted as complete in our sampling database, which insures that any given respondent responds only once to the survey. We wish to collect the survey in May, June, and July of 2014 when leaves are on trees to help people recollect and take

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notice of trees.

**f. Will the information be shared with any other organizations inside or outside USDA or the government?**

Data will be shared with the Forest Service's *Vibrant Cities & Urban Forests Task Force*, with the Forest Service's Region 8 Urban and Community Forestry Program, with the Forest Service's Urban and Community Forest staff in Washington, DC, with the Forest Service's Environmental Justice Board, and with Morehouse College in Atlanta, GA. Importantly, the Forest Service's Urban Research Program serves an instrumental role in disseminating research and information generated by agency scientists that address the various initiatives mentioned in this application—Vibrant Cities and America's Great Outdoors to the various sponsoring agencies or departments.

**g. If this is an ongoing collection, how have the collection requirements changed over time?**

This is a new information collection.

**3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

Data for the survey will be collected face-to-face at the household during an interview, and responses will be recorded by survey administrators using electronic tablets with Mobile Data Collection Software.

This technology reduces burdens on both the respondent and data collector by eliminating the need for cumbersome, physical storage requirements needed for data collected on paper. The respondent does not have to handle paper or other materials distributed by the data collector.

This technology also improves accuracy of data collection by reducing the number of times data has to be transferred from collection instrument to database storage.

**4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

We used two principal means of identifying duplicate information. First, we conducted a review of the Office of Management and Budget website to

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determine whether any projects related to urban residents' perceptions of and interactions with urban trees had been submitted to the Office of Management and Budget. We searched by agency and sub-agencies that would most likely submit a request similar to the one proposed in this supporting documentation. These included the Forest Service, National Park Service, Bureau of Land Management, and Environmental Protection Agency. Below we list these by agency.

### USDA Forest Service:

1. National Woodland Owner Survey--This survey focuses on the management of woodlands and privately held forests.
2. National Visitor Use Monitoring Survey—This survey collects data from on-site visitors to national forests and grasslands throughout the country.
3. National Survey on Recreation and the Environment—Data collection focuses on outdoor recreation participation by members of American households. Data are collected at the household level via telephone. No data collected relate to perceptions and engagement with urban forests.
4. Outreach Opportunity Questionnaire—The data collection involves information collection from students attending career fairs to gauge the effectiveness of information on Forest Service careers provided by the Northern Research Station of the Forest Service.
5. Optional Ethnicity Questionnaire—Collects data on participants in various Forest Service-sponsored programs, including Youth Conservation Corps and Jobs Corps.
6. Extending the Forest Service Message to Diverse Urban Publics (0596-0221)--This data collection focuses on outdoor recreation and barriers to participation in outdoor recreation. It also includes the use of various media to reach underserved urban populations. Our project differs from this one in that we do not ask questions about recreation, barriers to recreation participation, or the respondents' access to media. We do not include any requests for data on people's need for information to help inform decisions about outdoor recreation participation. Specifically, project 0596-0221 is intended: "to examine information needs, interests, and media uses among diverse urban publics in large urban centers. Areas selected will be proximate to urban national forests in the Western United States" ([http://www.reginfo.gov/public/do/PRAViewDocument?ref\\_nbr=200812-0596-001](http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=200812-0596-001)).

USDI National Park Service: Project 1024-0216 relates to information collected on visitor satisfaction to U.S. national parks. A portion of the project's abstract follows:

The National Park Service (NPS) has used the Visitor Survey Card (VSC), a short customer satisfaction card, to conduct surveys at approximately 330 National Park System units annually since 1998. The purpose of the VSC is to measure visitors' opinions about park facilities, services, and recreational opportunities in each park unit and System wide."



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As indicated, this project relates to satisfaction with Park Service facilities and services. This effort does not duplicate our proposed data collection. We also found four additional projects that related to visitor surveys at specific Park Service sites—Cape Hatteras National Seashore, Assateague Island National Seashore, Alaskan Parks and Preserves, and the Dry Tortugas National Park and Biscayne National Park. Again, these collections are specific to the functioning of Park Service sites and do not relate to Atlanta city residents' engagement with the urban forest.

Bureau of Land Management: Project 1004-0202 relates to information collection for visitor use surveys at the Headwaters Forest Reserve and the King Range National Conservation Area.

Environmental Protection Agency: No related requests for information collections were found.

The second way that we sought information about what projects related to our topic

was to contact lead contacts for OMB approvals at each of the Research Stations of the

Forest Service. These individuals were:

1. Lynne Westphal--Northern Research Station
1. Jamie Barbour and Lee Cerveny --Pacific Northwest Research Station
2. Debbie Chavez --Pacific Southwest Research Station
3. Carol Raish--Rocky Mountain Research Station

There is no lead contact for the Southern Research Station. Except for Lee Cerveny, none of these individuals had projects or were aware of projects similar to ours. However, Lee Cerveny's project examines recreation patterns in King County, Washington. Project objectives are to: (a) identify factors influencing residential choices to live in communities along the Wildland Urban Interface; (b) measure resident satisfaction with community life and access to public lands; (c) identify outdoor recreation participation patterns of residents along the WUI corridor. Again, these objectives are distinct from our aim of identifying residents' opinions and engagement with city trees.

### **5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.**

No small businesses or other small entities will be involved with the study.

### **6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

If the information proposed herein is not collected, efforts at the federal level to evaluate environmental justice will remain limited to methodologies that reproduce incomplete assessments of environmental justice. As stated, such information is vital to efforts to address stipulations contained in Executive Order

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12898 and the 2011 Presidential MOU. The policies and programs of the U.S. Forest Service, with respect to urban and community forestry, would also be impaired. We have consulted with the Regional Urban Forester for U.S. Forest Service Region 8 (Edward Macie), who relayed that information from this data collection can be used by the Region's Urban and Community Forestry program to better develop outreach to residents in some of Atlanta's underserved communities. Mr. Macie iterated that much of the existing Urban and Community Forestry programming does not reach some inner city populations; and that there is a need to understand better how more segments of Atlanta's population engage with the urban forest.

Also, goal number six of the Forest Service's Strategic Plan, 2007-2012 (USDA Objective 6.3) encourages agency employees to "engage urban America with Forest Service programs." According to the Plan, "Forest Service programs" include any meaningful and approved efforts to connect urban dwellers with conservation education, implementation of community 'greening,' and programs that provide residents with chances to plant trees. An important component of this objective is also to discover "*what urban residents think of and want from their local parks, nearby woodlands, and national forests to build productive relationships with urban neighbors*" [emphasis added]. This goal relates directly to our overall aim of assessing resident attitudes and engagement with Atlanta's urban forest and ties into the President's AGO initiative. Thus, this information collection addresses two crucial governmental efforts to encourage engagement and awareness of urban trees. Again, we are not aware of prior governmental efforts to examine Atlanta's urban forest or efforts to assess the environmental justice aspects of trees in the city. Again, one of the stated "means and strategies" for accomplishing Goal six is to "develop partnerships with nontraditional partners to engage urban and underserved audiences." Our partnership with Morehouse College (an Historically Black College and University, HBCU) will enable us to directly address this goal. Morehouse is not a land grant institution with an agricultural focus. Rather, its Liberal Arts and Planning programs, including a Department of Urban and Community Planning, will allow us to address Goal six by enlisting the partnership of a non-traditional partner at an HBCU (urban planning).

### **7. Explain any special circumstances that would cause an information collection to be conducted in a manner:**

- **Requiring respondents to report information to the agency more often than quarterly;**
- **Requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- **Requiring respondents to submit more than an original and two copies of any document;**
- **Requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than**

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**three years;**

- **In connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- **Requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
- **That includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
- **Requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

There are no special circumstances. The collection of information is conducted in a manner consistent with the guidelines in 5 CFR 1320.6.

**8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8 (d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.**

A 60-day Federal Register Notice requesting comments was published on December 19, 2013, Vol. 78, No. 244, page 76810. One comment was received and is presented verbatim below:

“unfortunately the green space in many cities like atlanta is already permeated with lead, sir particulates in profusion and no ecological evidence can be found of any regard for protection of that ecoogy. this appears to be a vain attempt. nothing of nature remains eept rats. this is new spending which i do not approve of spending. certainly there needs to be evidence of atlantas commitment to this effort because their zoning efforts can certainly wipe out any attempt to protect any nature in this city. where is the evidence of financial involvement of atlanta govt on this effort. i do not believe forest service mioney from national taxpayers should be used in this area. trees cant grow in concrete. if there was concern for environment, the trees would not have been

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logged in the first place. where is the evidence of atlantas financial invovement and effort here? where is evidence of atlanta environmental involvement in this effort. this comment is for the public record. this can all be accomplished entirely through an effort by atnalta residents. please acknowledge receipt  
jean public”

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From the Federal Register Online via the Government Printing Office

[<http://www.gpo.gov/>]

[FR Doc No: 2013-30152]

A summary of this comment follows: 1) there is concern that nature in cities has been destroyed and it is futile to try to protect urban ecology; 2) commenter does not approve of new spending; and 3) commenter believes Atlanta should bear the costs of collecting this data<sup>699</sup>. The agency’s response follows:

1) There is ecological evidence indicating that urban ecology can be remediated by promoting green space installations. The commenter is referred to the work by the following scientists:

Escobedo, F.J., Kroeger, T., and Wagner, J.E. 2011. Urban forests and pollution mitigation: analyzing ecosystem services and disservices. *Environmental Pollution*, 159(8-9):2078-2087.

Nowak, D.J. and Crane, D.E. 1998. The urban forest effects (UFORE) model: quantifying urban forest structure and functions. In: Hansen, M.; Burk, T., eds. *Integrated tools for natural resources inventories in the 21st century. General Technical Report. NC-212. St. Paul, MN: U.S. Dept. of Agriculture, Forest Service, North Central Forest Experiment Station. 714-720.*

Nowak, D.J., Crane, D.E., and Stevens, J.C. 2006. *Air pollution removal by urban trees and shrubs in the United States. Urban Forestry & Urban Greening, 4:115-123.*

Nowak, D.J. and J.F. Dwyer. 2000. Understanding the benefits and costs of urban forest ecosystems. In: Kuser, J. (ed.) *Handbook of Urban and Community Forestry in the Northeast. New York: Plenum Publishers, pp. 11-25.*

2) The funding to collect this information collection was obligated in fiscal year 2012, so the funds have already been spent.

3) In fiscal year 2012, Morehouse College responded to a competitive Call for Proposals from the Forest Service for research. The college was awarded roughly \$50,000 to investigate environmental equity in Atlanta, in partnership with the Forest Service. Morehouse did not consult with the City of Atlanta regarding this project but was in no way obligated to do so. Funding for this project supports the Forest Service’s long-standing engagement and cooperation with educational institutions. This kind of partnership helps to train students in various science areas and in this case will help the agency understand better

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how urban constituents engage with urban natural resources. The latter is a stated goal of the U.S. Department of Agriculture and of the President's America's Great Outdoors Initiative.

**Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.**

**Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.**

The proposed study has been reviewed and commented on by non-Forest Service researchers representing several disciplines, urban ecology, outdoor recreation and leisure studies, and natural resources tourism. Also included are comments from data compilers with the city of Atlanta, GA and Fulton County, GA, as well as community activists. Mr. Garry Harris is president of HTS Enterprise, a consulting firm that provides a range of energy engineering technical services and promotes efforts to create sustainable communities in metropolitan Atlanta. All comments and recommendations were taken into consideration and incorporated into the survey as appropriate. The following table lists individuals who have been consulted on various aspects of the study.

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<b>Efforts to consult with persons outside the agency</b>	
<b>Contact</b>	<b>Information Received</b>
Mr. Paul Thomas, GIS Manager City of Atlanta Planning and Community Development 404.330.6725	Mr. Thomas compiles property tax records, which are the universe for the data collection.
Mr. Chris Whatley, GIS Supervisor, Fulton County, GA—Department of Information Technology	Mr. Chris Whatley provided definitions of terms used in tax records and how multiple-family dwelling units were accounted for in the tax records. He advised where we could download 2012 tax parcels for Fulton County, GA.  Mr. Whatley compiles property tax records, which are the universe for the data collection.
Dr. Nina S. Roberts, Department of Recreation, Parks, and Tourism, San Francisco State University 415.338.7576	Dr. Roberts advised on the appropriate wording of questions and statements on the survey instrument.
Ms. Michelle Laskowski, M.S., Seed Collection Ecologist, Golden Gate National Parks Conservancy	Ms. Laskowski provided guidance on clarity of wording and instructions on the survey instrument.
Dr. Francisco Escobedo, University of Florida School of Forest Resources and Conservation 352.846.0856	Dr. Escobedo provided advice on clarification of statements included on the survey instrument.
Dr. Neelam C. Poudyal, Assistant Professor of Forest Recreation and Tourism, Warnell School of Forestry and Natural Resources, University of Georgia 706.583.8930	Dr. Poudyal provided advice on clarification of statements included on the survey instrument. He suggested we add questions related to tax funded programs to support green spaces and questions about specific tree species, but we advised that that sort of information was not what we aimed to collect with the data collection.
Mr. Garry Harris HTS Enterprise, LLC 241 Peachtree St., Suite 200 Atlanta, GA 30303 404.936.0620	Mr. Harris provided advice on clarification of statements included on the survey instrument.  Mr. Harris resides in Atlanta, GA and represents the community from whom data will be collected. .

**9. Explain any decision to provide any payment or gift to respondents, other than re-enumeration of contractors or**

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**grantees.**

No payments will be made to respondents for participation in the survey.

**10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.**

The questionnaire will clearly state that the information is voluntary and that all the information collected will be reported but responses are anonymous. Personal information such as names or specific addresses will not be associated with any given response.

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior or attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.**

There are no questions of a sensitive nature on the survey regarding sexual behavior or attitudes, religious beliefs, or other matters that are commonly considered sensitive or private. We do ask respondents to indicate their educational attainment by selecting an educational range. Respondents do, of course, have the option to decline responding to any question posed.

**12. Provide estimates of the hour burden of the collection of information. Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated.**

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If this request for approval covers more than one form, provide separate hour burden.**

Please see supplemental document entitled *0596-NEW 2014 Environmental Justice Burden-Cost Spreadsheet* for burden estimates and cost.

- **Explanation of How Burden was estimated.**

We estimate our sample size (SS) of 824 based on the desired SS of 700. The

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latter SS factors in an estimated 15% non-response rate. The per-response burden estimate was estimated based on an average adult reading the given collection activities. The total amount of time it takes to read and respond to each collection activity or item presented to the respondent is shown on the separate spreadsheet.

The first letter mailed to potential respondents which describes the survey. This letter will be sent to 824 potential respondents. We assume one-half of the sampled (412) will read the initial letter. A postage paid postcard sent with the first mailing will contain a statement acknowledging that an adult living in the household read the letter. We will ask that the respondent indicate the best time and date for an interview for adult household members. The respondent would be asked to choose a date and time falling within the timeframe surveyors will be in the respondent's quarter of the city.

A second introduction letter will be sent to the one-half of the sample that did not respond to the initial letter (412). Again, we assume one-half of the targeted individuals will read the first letter, but this is only an estimate. We can more accurately estimate the number having read this letter by responses to the postcard that will be included in the letter. While we assume one-half will respond to the initial mailing, the postcard responses will allow us to adjust the number of second letter mailings. We assume a total of 824 persons will read either the first or second letter introducing the survey.

A brief introduction and statement of project purpose will be read to the person beforehand. The time estimated for response to the survey is 15 minutes. This estimate is based on our administering the survey to a small sample of respondents. Response time was 15 minutes or less. Of the total 824 potential respondents, we expect 15% of the sample (non-respondents-124) will not participate in the survey. The time it takes to refuse the survey is expected to be one minute.

Assuming an 85% response rate (700), we expect to leave 700 principal investigator information sheets with respondents. The principal investigator information sheets contain contact information (telephone numbers and email addresses) for project PIs and other principals on the project and a brief summary of the project.

The cost per hour estimate per respondent for each information collection activity is based on the mean hourly wage rate for all occupations for the Atlanta-Sandy Springs-Marietta metropolitan area. The hourly wage rate was obtained from the Bureau of Labor Statistics at [http://www.bls.gov/oes/current/oes\\_12060.htm#00-0000](http://www.bls.gov/oes/current/oes_12060.htm#00-0000).

- **Record keeping burden:**

There is no record keeping burden placed upon the respondents.



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- 13. Provide estimates of the total annual cost burden to respondents or record keepers resulting from the collection of information, (do not include the cost of any hour burden shown in items 12 and 14). The cost estimates should be split into two components: (a) a total capital and start-up cost component annualized over its expected useful life; and (b) a total operation and maintenance and purchase of services component.**

There are no capital operation and maintenance costs.

- 14. Provide estimates of annualized cost to the Federal government. Provide a description of the method used to estimate cost and any other expense that would not have been incurred without this collection of information.**

**The response to this question covers the actual costs the agency will incur as a result of implementing the information collection. The estimate should cover the entire life cycle of the collection and include costs, if applicable, for:**

- **Employee labor and materials for developing, printing, storing forms**

20 days x 349.76= **\$6,995**

This cost relates to work time for a GS-14 Research Social Scientist to develop the questionnaire, letters to be mailed to respondents, and contact information sheets that will be left with the respondent. The \$349.76 is the employee's daily wage rate.

- **Employee labor to integrate information to assess environmental equity**

GS-14-3      15 days x 349.76= **\$ 5,246**

GS-15-6      15 days x 450.00= **\$ 6,750**

This cost includes daily salaries for a GS14 and GS15 working to review relevant literature and develop the appropriate NEE index.

- **Employee labor and materials for developing computer systems, screens, or reports to support the collection**

10 days x 349.76= **\$3,498.**

This cost relates to work time for a GS-14 Research Social Scientist to develop a survey on an electronic tablet that will store collect and store survey responses.

- **Employee costs related to submission of OMB application**

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Roughly 40 days of work time for a GS-14 Research Social scientist to develop and respond to comments on this information collection request: (60 days x 349.76=**\$20,986**.)

- **Employee travel costs**

Cost for Forest Service employee to travel to Atlanta, GA from Athens, GA to consult with Morehouse faculty member about data collection. Five day trips are estimated at 160 miles round trip for a total of 800 miles @\$0.17 per mile = **\$136.00**

- **Cost of contractor services or other reimbursements to individuals or organizations assisting in the collection of information**

Morehouse was awarded a grant from the U.S. Forest Service in 2012 to partner with Forest Service research to conduct this study. Morehouse College will collect the data at a cost of **\$39,224**.

- **Cost for Regional Urban Forester to report development of NEE index to GI COP initiative.**

GS-13-10 4 hours x \$45.09=**\$180.36**

This cost relates to work time for a GS-13 Regional Urban Forester to include the NEE index in a report to GI COP.

- **Cost for unit scientists to report development of NEE index to the Forest Service's Environmental Justice Board (which in turn reports to the Administration's AGO initiative).**

GS-14-3 1 hours x \$43.72=**\$43.72**

- **Cost for unit scientists to report development research papers describing the conceptual basis, methodology, and findings of the larger environmental equity study.**

GS-14-3 45 days x \$349.76=**\$15,739**

- **Cost for unit's science delivery team to report development of NEE index to Vibrant Cities & Urban Forests Task Force and to describe the methodology in a periodic newsletter that is distributed nationwide.**

GS-12-5 24 hours x \$33.06=**\$793.44**

This cost relates to work time for a GS-12 Science Delivery personnel to develop outreach material describing the NEE index and its usefulness in understanding environmental equity to lay audiences and state foresters.

**Grand Total Cost to Government: \$99,592**

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**15. Explain the reasons for any program changes or adjustments reported in items 13 or 14 of OMB form 83-I.**

This is a new information collection.

**16. For collections of information whose results are planned to be published, outline plans for tabulation and publication.**

Responses will be entered into a survey form designed for mobile software and then transferred electronically to a Microsoft Excel spreadsheet. Data transfer will be verified for accuracy by project personnel. Analysis of responses will include summary and descriptive statistics, as well as means difference tests, Chi-square tests, and multivariate regression.

As discussed in the Justification section (p.2), data from this information collection will be used in conjunction with other two other indicators of environmental quality to produce a more complete assessment of environmental equity. We will produce a *net equity index* (NEE) for each household surveyed. The index includes three dimensions of equity: 1) cumulative hazard risk (e.g., community proximity to hazardous waste sites, refineries, estimated air pollution exposure; 2) estimates of environmental services provided by the urban forest (e.g., dry deposition, carbon sequestration, energy savings); and 3) *resident perception of, engagement, and advocacy for trees in the city*. Again, the present information collection addresses only the third dimension.

The index begins with an assessment of cumulative hazard risk. To do so, we follow Sadd et al.'s (2011) methodology. This involves creating a base map in ArcMap to estimate and show the proximity of hazardous facilities and land uses to our sample of residences. A Cumulative Impact (CI) score will be estimated for each residence; then CI scores will be classed into quintiles (1-5).

Estimates of the biophysical services of urban tree canopy will be made using the Urban Forest Effects (UFORE), also known as i-Tree Eco. Again, each residence will receive an i-Tree eco score, which will also be assigned to quintiles.

Civic engagement with Atlanta's urban forest will be assessed with a scale designed to elicit residents' articulation of "protective capacity" for Atlanta's urban forest (Ernstson, 2013). The scale contains four dimensions of protective capacity—activism, personal involvement in tree planting and maintenance, personal narratives related to the urban forest, and personal attachment to the urban forest ideal. We developed the scale. Since it is new, we will conduct exploratory factor analysis to verify the underlying dimensions of protective capacity. Analyses will include estimates of scale validity and reliability (Hatcher, 1994).

After confirming the scale's structure, scores for each of the twenty items will be summed and divided by the total number of scale items to produce a

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respondent's score. Each score will be assigned to a quintile.

The quintile score for each of the three dimensions will be combined to give a NEE score for each household surveyed. We will follow Zhou et al. (2006) to determine the optimal method of aggregating each dimension of environmental equity—cumulative risk, ecosystem services of the urban forest, and protective capacity—into NEE. Household level NEE scores will be aggregated to the Neighborhood Planning Unit level.

Statisticians with the National Agricultural Statistical Service have remarked that there is inherent error associated with both the i-Tree eco and protective capacity measures. The combination of such errors may obscure any statistically meaningful distinctions among NEE scores across NPUs. If this turns out to be the case, the data are nonetheless useful for their descriptive properties; and they can be displayed graphically.

The index will be provided to U.S. Forest Service Region 8's Regional Urban Forester to use as part of the Region's input in the Green Infrastructure Community of Practice and Vibrant Cities & Urban Forests Task Force involvement described earlier. Given that the method we propose passes peer review, we will also present our index to the Forest Service's Environmental Justice Board as an indicator of how the agency addressing U.S. Forest Service Strategic Goal # 6, directing the agency to "Engage urban America with Forest Service Programs." As well, project data can also be used to provide an indication of how the Atlanta's residents are engaging with President Obama's *America's Great Outdoors* Initiative, specifically the recommendation to connect urban residents with community green spaces.

Findings will also be used in one or more manuscripts for submission to peer reviewed outlets, for executive summary to natural resource management professionals, for summary in unit reports and summaries, and for presentation at professional conferences. Summaries will also be supplied to community based groups such as the various NPUs in Atlanta, to the Atlanta Beltline organization, and to interested City of Atlanta officials.

### **17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

The valid OMB control number and expiration date will be displayed on all information collection instruments.

### **18. Explain each exception to the certification statement identified in item 19, "Certification Requirement for Paperwork Reduction Act."**

The Agency is able to certify compliance with 5 CFR 1320.