Making Tradeoffs Among Quality-of-Life Attributes: Climate Change and Development as Vehicles of Change in Cape May County, New Jersey

Jennison Kipp

The Pennsylvania State University
Department of Agricultural Economics and Rural Sociology

311 Armsby Building
University Park, PA 16802
mjk23@psu.edu

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The better our understanding of how individuals perceive and respond to stressors that shape their environment, the better equipped we are to plan for and manage such changes. This multidimensional research elucidates the preferences that people hold for different dimensions of quality of life. It brings together elements of economics, climate science, risk, political science and planning to fill gaps in our understanding of environmental issues and change. Specifically, the study explores how residents of Cape May County, New Jersey make tradeoffs among quality-of-life features and tests whether results are dependent upon the vehicle through which changes occur (investigating development versus climate change stressors).

We used a clustered drop-off/pick-up survey methodology to reach permanent and seasonal residents of Cape May County. Respondents made judgments about the importance of and their satisfaction with various features that contribute to present quality of life. They also chose between quality-of-life scenarios that could exist thirty years from now. A key component of the survey is that half of the sample received an informational leaflet attributing impacts to global warming while the other half received one attributing changes to development. The tradeoffs that respondents revealed through their choices are indicators of how they perceive and respond to threats to quality of life. Because climate change is projected to induce changes similar to those from poorly planned development, this case study enables exploration of how different stressors influence perceived risk and willingness to pay to minimize such risk. Findings have particular relevance for local planning, yet they are applicable more broadly: the methodology and survey techniques can be tailored to suit the needs of diverse communities and decision-makers.
**Problem Statement**

The better our understanding of how individuals define, identify with, and react to changes in the world around them, the better equipped we are to make decisions that enhance rather than diminish quality-of-life. Because resources are limited and the pursuits of society are virtually unbounded, these decisions inevitably require tradeoffs. Some tradeoffs are observable owing to the existence of formal markets, while others are difficult to bring to light. Yet “invisible” tradeoffs also shape the landscape of our environment. Our ability to conceptualize and elucidate the perceptions of risk and decision-making processes that influence such tradeoffs might play a defining role in our success (or lack of success) at managing and protecting both natural resources and human well-being.

**Purpose of Paper**

The research described here is a multidimensional effort to gain insights about people’s preferences for different dimensions of quality of life. It brings together elements of geography, political science, economics, management and risk perception to fill gaps in our understanding of how individuals conceptualize threats to their future quality of life. Specific goals are to identify how residents of Cape May County, New Jersey make tradeoffs among quality-of-life features, and to test whether preferences depend on the vehicle through which changes in quality of life occur.

Primary data collected through a written questionnaire enable us to investigate whether respondents react differently to ‘development’ versus ‘global warming’ as mechanisms that induce change in Cape May County. Findings have particular relevance for understanding consumer preferences at a local level, yet they will be applicable more broadly to the decision-
making frameworks that exist among local, regional, state and federal authorities. The specific content of the survey instrument itself is valid only for application within Cape May County, but the methodology, survey development techniques and questionnaire framework can be tailored to suit the issues and needs of a wide range of community types (be they townships, watersheds, states or regions).

Why Cape May County, New Jersey?

Cape May County was chosen as the study area for three reasons. First, it is a coastal region distinguished by its ecologically-dependent and tourism-based economy\(^1\), accompanied by acute development pressures. The county is a popular destination for vacationers seeking bird-watching opportunities, pleasant beaches and a small-town atmosphere. The paradox is that while tourists are a significant source of revenue for the local economy, they bring with them demands upon the county’s infrastructure and services, stress to the ecological and physical environment, and expectations that the character of the area remain unchanged (or virtually so) from year to year. At the same time, residents of the county have vested interests in how and to what extent planners and regulatory decision-makers respond to these tourism pressures: decisions made at local and state levels affect residents’ quality of life in potentially irreversible ways.

The second reason that Cape May County is ideal for this study is the availability of comparative data from a 1989 survey of residents’ attitudes toward environmental protection and development (O’Connor et al., 1994). O’Connor and his colleagues tested the hypotheses that 1) environmentalism in Cape May is two-dimensional in character (with one segment of residents “concerned with development and growth and the other with environmental health and

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\(^1\) Tourism expenditures in the county grew annually by 15% between 1998 and 2001, and in 2000 these expenditures were in excess of $3 billion (Cape May County Office of Economic Resources and Capital Planning, 2001).
safety”) and 2) that opinions on these two dimensions arise from different origins (O’Connor et al., 1994, p.183). They found that opposition to development is linked to concern for loss of open spaces, population growth, and crowding. Demands for more comprehensive environmental regulation, on the other hand, are tied to concerns about maintaining the health of the ocean and bay and protecting wildlife, among others. The finding that is particularly evocative within the context of the current research is that “at the most basic level, citizens believe that their quality of life depends on controlling development” (O’Connor et al., 1994, p.191). Is development pressure the lone force threatening quality of life in Cape May or are there other more subtle stressors with the potential to incur an equivalent force of change? This question leads us to the third reason for studying Cape May County: its unique vulnerability to climate change and associated stressors.

Coastal areas are of particular concern when considering vulnerability to climate change impacts. Sea level rise, saltwater intrusion, increased frequency and intensity of extreme weather events, and rising average temperatures all pose potentially disproportionate threats to coastal communities like Cape May County. Secondary effects might lead to contamination of water supplies, increased flooding frequency, loss of wetland habitat, acute heat stress, and deleterious impacts to wildlife and fisheries.

A decade after O’Connor and his team conducted their attitudes survey of Cape May residents, Wu et al. (2002) investigated the vulnerability of Cape May County to climate variability and change2. Many previous assessments of climate change impacts de-emphasized or simply overlooked the fact that humans and ecosystems often adapt to change. In contrast, the

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2 The Wu et al. research was one element of a larger integrated assessment: the Mid-Atlantic Regional Assessment (MARA) funded through EPA’s Global Research Change Program. The MARA investigated potential impacts of climate change and assessed how communities in the Mid-Atlantic Region might be particularly vulnerable or resilient to these changes (Fisher et al., 2000).
Mid-Atlantic Regional Assessment explored not only vulnerabilities to climate change impacts, but opportunities to adapt to changes as well (Fisher et al., 2000). Thus Wu et al. (2001, p.263) defined vulnerability as “a function of both exposure and coping ability...both physically and socially constructed.” They employed a spatial model of potential changes in flood risk within Cape May County based on scenarios for future sea-level rise and population growth. Under the different scenarios, this model allowed the research team to identify where floodwaters inundate critical facilities, commercial areas and the natural landscape, also focusing on social groups affected by floods. An important implication of this analysis is the authors’ conclusion that “on the one hand, poorly managed development could increase the county’s vulnerability to flooding but, on the other hand, [decision-makers] could act to reduce vulnerability by making choices that steer development away from high risk areas” (Wu et al., 2001, p.268).

Thus, past research shows that Cape May County is particularly vulnerable, yet also potentially resilient to the impacts of climate change and development (Fisher et al., 2000; O’Connor et al., 1994; Wu et al., 2002). Climate change and development are two relatively independent stressors that give rise to similar changes in quality-of-life features. For example, increased impervious surface area (development impact) and sea-level rise (climate change impact) both increase localized flood risk. Increased demand for water as a result of population growth (development impact) and salt water intrusion into groundwater aquifers (climate change impact) both affect drinking water quality. But does it matter how residents perceive these vehicles of change? It could matter if perceptions of vulnerability influence decisions about the most appropriate ways to reduce actual (or in some cases perceived) risks. It could matter when attempting to communicate the projected impacts associated with climate variability and change.

It is possible that messages about climate change are communicated most effectively when the
forces of such change are described within the context of other more immediate and discernible stressors (e.g., land use).

**Hypothesis and Research Questions**

The core hypothesis of this research is that Cape May County residents are willing to pay more to avoid adverse changes in quality-of-life attributes when these changes are driven by development stressors than when they are driven by climate change impacts.

Specific objectives are to answer the following questions:

- What are the quality-of-life preferences that Cape May County residents\(^3\) hold, and do they value specific attributes or inputs to quality of life more than others?
- What kinds of tradeoffs among quality-of-life inputs will residents make to maximize their expected utility?
- When threats to quality of life are framed as a consequence of different stressors (i.e. development vs. climate change), do tradeoff decisions vary?
- Do socio-economic characteristics and spatial demographics influence the tradeoffs that Cape May County residents are willing to make to secure quality of life?
- What roles do experience with and perception of risk and vulnerability play in shaping preferences for quality-of-life attributes?
- Does the extent to which Cape May County residents interact with their natural and social environments influence the tradeoff decisions that they make (use-value effects)?

Non-market valuation techniques can be used to investigate these questions.

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\(^3\) For the purposes of this survey, a ‘resident’ is defined as someone who lives in Cape May County at least four weeks per year.
Theory of Non-Market Valuation

Economists have developed extensive capacity and tools for measuring consumer willingness-to-pay (WTP) for goods traded in the market. The conceptual basis is the generally accepted notion that one’s market behavior is an unbiased representation of consumer preferences, and that the price one pays to obtain a good approximates the true value the marginal consumer holds for that item. Utility theory assumes that consumers act rationally and in ways that maximize their individual utility or satisfaction, given budget and other constraints. While the value of many goods can be observed directly through market exchanges, values for environmental or public goods must be inferred or elicited through techniques other than observation. This is where the application of social survey methods plays an essential role. Hanemann (1994) details the evolution of the survey as the instrument of choice for non-market valuation efforts. He highlights the power of a well-constructed and administered survey in deriving demand curves for public goods - something that market data alone cannot reveal. Hanley et al. (1997) offer a comprehensive description and evaluation of the theory, methods, and application of non-market valuation and measurement techniques.

The values derived for non-market goods have been used for purposes as diverse as policy, planning, and damage assessment (Alpizar, 2001). The validity and substance that underlie both WTP estimates and the methods through which they are obtained are subjects of ongoing contention: non-market valuation has received both enthusiastic support and harsh criticism (Smith, 1993 and Diamond et al., 1994 elaborate on this debate). However, relatively new techniques for eliciting WTP offer promise for appeasing the critics and bolstering the supporters. One such method applies multi-attribute utility theory (MAU) to stated-choice surveys (Adamowicz et al., 1998; Russell et al., 2001). Gregory et al. (1993) argue that in order
to construct utility functions that accurately reflect the way consumers make tradeoffs between goods (both market and non-market), MAU theory must play an integral role in survey development, administration and analysis.

In attribute-based stated preference surveys, researchers rely on MAU theory to construct a set of hypothetical choice scenarios describing the future. Each scenario is composed of specific attributes that make up a ‘larger’ good (e.g. health care, recreational fishing sites, or quality of life), and combinations of attribute levels vary from scenario to scenario. The choice questions ask respondents to weigh their preferences for each scenario and choose the one they prefer. Some also ask respondents to rate the strength of their preference or choice (e.g. using a Likert-type scale ranging from indifference/toss-up to strongly-prefer).

Because MAU stated-preference surveys include a series of choice questions with different combinations of attribute levels in each scenario, the data they generate can be very powerful statistically (Adamowicz et al., 1994). Heberling (2000) argues that one of the most valuable elements of the stated preference methodology is that it allows the researcher to estimate marginal WTP for individual components of a larger good (e.g. clean air as one aspect of quality of life) rather than valuing the good as a whole (e.g. quality of life in general). There are uncertainties about the number of choice sets respondents can handle, including concern that respondent fatigue and cognitive overload might affect response rates and internal validity. However, Heberling (2000) produced evidence that increasing the number of choice sets from 8 to 16 does not significantly affect choice decisions and survey response rates.

**Survey Development**

The survey described here asks Cape May County residents to choose between combinations of quality-of-life attribute levels that collectively illustrate future scenarios. The
results enable estimation of WTP for marginal changes in each attribute included in the quality-of-life scenarios. Attributes and their different levels were chosen after personal interviews with local officials and focus group discussions with community members from Cape May County. Table 1 identifies the quality-of-life attributes and attribute levels used to construct the choice scenario questions. The attributes are intended to represent elements of quality of life particularly salient to most Cape May County residents, and are consistent with elements previously identified as important to the study population (O’Connor et al., 1994). The Zwerina methodology and computer program (Zwerina et al., 1996) then were used to generate efficient paired-choice scenarios from different combinations of attribute levels.

Table 1: Quality-of-life attributes and attribute levels

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Attribute Levels</th>
</tr>
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<tbody>
<tr>
<td>Habitat for Birds</td>
<td>10% decrease, equals 12,000 fewer acres of habitat</td>
</tr>
<tr>
<td></td>
<td>50% decrease, equals 60,500 fewer acres of habitat</td>
</tr>
<tr>
<td>Summer Travel Time</td>
<td>An extra 5 minutes per day spent driving</td>
</tr>
<tr>
<td></td>
<td>An extra 30 minutes per day spent driving</td>
</tr>
<tr>
<td>Tap Water Quality</td>
<td>Adequate supply and safe, but bad taste</td>
</tr>
<tr>
<td></td>
<td>Adequate supply and safe, good taste</td>
</tr>
<tr>
<td>Flood Risk</td>
<td>20% less than now (flooding now happening about once in 10 years becomes once in 12 years)</td>
</tr>
<tr>
<td></td>
<td>20% more than now (flooding now happening about once in 10 years becomes once in 8 years)</td>
</tr>
<tr>
<td></td>
<td>50% more than now (flooding now happening about once in 10 years becomes once in 5 years)</td>
</tr>
<tr>
<td>Local Taxes, Fees, and Prices</td>
<td>$25 per month less than now ($300 savings annually)</td>
</tr>
<tr>
<td></td>
<td>$25 per month more than now ($300 expenditure annually)</td>
</tr>
<tr>
<td></td>
<td>$75 per month more than now ($900 expenditure annually)</td>
</tr>
</tbody>
</table>

Each stated choice question in the survey instrument asks respondents to choose between two scenarios describing quality of life in Cape May County 30 years from now. Changes in quality of life are described in words (and visually through graphics) as a function of the five core attributes listed in Table 1. Every respondent is asked a total of eight choice questions; each
has two future scenarios, and no two scenarios are identical in their combination of attribute levels. Before the scenario choice component, the respondent is asked to read an information leaflet on either 1) Global warming & Cape May County, or 2) Development & Cape May County. The sample was split so that half of the respondents received a global warming informational leaflet and the other half received a comparable development leaflet.

The survey instrument begins with questions about general quality-of-life features, use of the environment for recreational activities, attitudes toward land use and development, and experience with severe weather events. This was to get respondents thinking about factors related to the decisions they face in the scenario choice questions. Immediately following the choice experiment, respondents were asked to indicate which of the five quality-of-life attributes from the scenarios was the most important (and which was the least important) in motivating their choices. Parallel to the O’Connor et al. survey, the questionnaire ends with questions related to global warming ‘knowledge’ and civic ‘awareness’. These questions enrich the set of independent variables used to explain scenario choice responses. The questionnaire invites comments in a blank space provided for open-ended input, and reminds respondents that they may request a summary of findings by writing their name and address on the return envelope provided.

**Sampling Methods**

To obtain results representative of the Cape May County population (including both permanent and seasonal residents), our primary sampling goal was to collect at least 600 usable

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4 To maintain confidentiality of responses, we requested that survey participants not write their name, address, or other personal identifying information on the questionnaire itself.
surveys for analysis (300 for each information leaflet version)\(^5\). Because of the large seasonal-resident population\(^6\) and associated potential for non-coverage error using a standard mail-administered survey, we instead utilized a drop-off/pick-up sampling protocol to collect the data. This enabled reaching portions of the population most difficult to identify: the protocol increased the likelihood that year-round and seasonal residents would be represented proportionately in the final data set. The drop-off/pick-up approach has not been used widely for canvassing areas as densely populated as Cape May County, but has been employed more commonly for surveys of rural communities. A survey by Steel et al. (2001) in rural Pennsylvania achieved response rates of 58% to 69%. Our sampling team expected lower response rates in Cape May County, in part because of the seasonal nature of the resident population and in part because of uncertainties about expected reaction to the in-person data collection approach.

Households canvassed were randomly selected using U.S. Census data and maps in combination with a multi-stage, clustered sampling approach. The first stage involved drawing a random sample of census block groups within the county as the primary sampling units. Census blocks within each of these block groups were then randomly selected at the second stage. The final sample included 80 blocks within 40 different block groups (2 blocks per block group), but it was also necessary that we expand upon blocks with fewer than 35 households\(^7\) and sample

\(^5\) Achieving statistical significance in the stated-choice analysis (with a 95% confidence level and P<.05) requires data from approximately 600 surveys (300/300 split).

\(^6\) Fewer than 50% of existing housing units in the county are occupied by permanent residents (Cape May County Planning Department, 2002).

\(^7\) This was done by randomly numbering all blocks adjacent to the primary block on census maps and rolling a die to select an additional block for sampling. The process was repeated until each ‘target’ block included at least 35 households based on 2000 census data.
within blocks containing 45 or more households\textsuperscript{8}. The final result was that a portion of the 80 ‘target blocks’ in our sample were actually individual census blocks on the ground, with clearly delineated boundaries, while others included as many as 5 or 6 blocks with overlapping boundaries.

Questionnaires were delivered to and retrieved from targeted households by hand, but respondents were also given the option of returning their questionnaire by mail. The mail-back option was incorporated in the sampling protocol to create a familiar, flexible, and confidential environment for respondents to share their views. In practice, it also helped to ensure that fewer completed surveys were left on kitchen tables or in the trash never to be returned. To minimize homemaker bias, we asked that the adult member of the household celebrating a birthday most recently be the one to complete the questionnaire. This request was made both in-person and in a written cover letter accompanying the survey instrument. As a means of encouraging resident participation, field investigators attempted to make face-to-face contact with potential respondents during \textit{at least} one stage of questionnaire delivery and/or retrieval.

\textbf{Response Rates and Preliminary Insights}

During the summer of 2003, four staff from Rutgers Cooperative Extension of Cape May County spent five 40-hour weeks traveling in pairs to distribute and retrieve questionnaires to and from residents\textsuperscript{9}. Over that time period, the sampling teams canvassed a total of 60 ‘target blocks’ and delivered surveys to approximately 1,800 households. Figure 1 illustrates a simplified version of the sampling ‘roadmap’ followed by researchers in the field. By mid-

\textsuperscript{8} Sampling within larger blocks meant assigning a specified sampling rule \textit{before} going into the field (e.g. ‘sample 3, skip 1’ for blocks with 45-50 households). These rules combined with random starting points in the field ensured that each household within a block had the same likelihood of being invited to participate in the survey.

\textsuperscript{9} To get a feel for problems encountered in the field, a fellow graduate student and I also spent one week delivering and retrieving questionnaires and making necessary adjustments to the sampling plan before training the four full-time staff.
August, 696 questionnaires were returned, 43% by pick-up and 57% by mail. Ultimately, we received a total of 719 questionnaires for inclusion in our data set. Fifty-one percent of the respondents had received the ‘global warming’ information leaflet and 49% had received the ‘development’ leaflet. Of the 719 respondents, sixteen returned blank questionnaires, which were cataloged as protest responses. Seven of the protest responses were for the ‘development’ version and twelve were for the ‘global warming’ version.

![Figure 1: Cape May County Drop-off / Pick-up Sampling Protocol](image)

The estimate that 1,800 households were invited to participate in this survey is based on information recorded in field logs. Using this estimate (N=1800), the response rate including all returned surveys is 719/1800, or 40%. Due to the difficulty of determining whether seasonal housing units are vacant or occupied, this response rate might understate the actual response rate from the target population (i.e. we know how many surveys we delivered to housing units, but because many questionnaires were distributed without any personal contact between the field researcher and potential respondent, we cannot know for certain how many surveys were actually delivered to occupied households).
A wide range of tools and various approaches may be used to explore this extensive data set, but the bulk of the analysis has yet to be conducted. LIMDEP and SAS software will be used to estimate respondents’ indirect utility functions and marginal WTP for each attribute included in the scenario choice questions. Comparing responses across the split (development versus global warming) sample will allow us to test our hypothesis that the nature of the quality-of-life stressor influences tradeoffs. Using SAS and SPSS, regression analysis will also be applied to elucidate relationships between independent variables (such as gender, time of residence and physical location within the county) and marginal WTP estimates. Recognizing that we are in the early stages of analysis, and to avoid reporting erroneous or premature results, discussion of findings is limited to a brief overview of selected descriptive statistics at an aggregate level.

**Respondent Demographics**

Survey respondents average thirty years of experience living in Cape May County; the mode for time of residency equals twenty years. Based on the criteria that one stays in the county at least four weeks per year, 98% of respondents qualify as ‘residents’. Of these residents, 50% spend more than nine months per year in the county (classified as permanent residents), and 35% spend less than six months (seasonal). Fifty-seven percent of respondents are female, and 34% are over the age of 65. Forty-seven percent reported household incomes last year of between $40,000 and $100,000 while 32% reported annual income exceeding $100,000.

**Quality-of-Life Judgments**

We asked respondents to rate the importance of various features in creating a desirable quality of life in Cape May County. Of the twelve features we listed, a low crime rate, adequate
water supply for residents and safe tap water were identified as being the most important at an aggregate level. Small town atmosphere, good quality jobs and good outdoor recreation were rated as ‘important’, but on average these were the least important features relative to others. *All things considered*, 58% of respondents gave quality of life in Cape May County a ‘very good’ or ‘excellent’ rating and less than 5% rated the quality of life as ‘fair’ or ‘poor’. As a whole, residents indicated that increasing local taxes, maintaining the supply of clean drinking water, and maintaining the health of the ocean and bay are ‘very serious’ problems that affect the quality of life in Cape May County. Garbage disposal, and seasonal crowds were rated as ‘somewhat serious’ problems, and the least serious *relative to all others*.

**Attribute Ratings**

Prior to the scenario choice section of the questionnaire, respondents were asked to indicate how concerned they are about specific *threats* to quality of life in Cape May County. They could respond that they are ‘not concerned at all’, ‘somewhat concerned’, or ‘very concerned’. The threats listed in this question include the five attributes used in the choice scenario questions plus two more broadly defined stressors: global warming and development. The responses to this question are summarized in Table 2.

<table>
<thead>
<tr>
<th>Aggregate Level of Concern</th>
<th>Feature</th>
<th>Very Concerned</th>
<th>Somewhat Concerned</th>
<th>Not Concerned at all</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Very Concerned</em></td>
<td>Development</td>
<td>54%</td>
<td>36%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Increased cost of living</td>
<td>49%</td>
<td>43%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Drinking water quality</td>
<td>50%</td>
<td>41%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Seasonal traffic congestion</td>
<td>45%</td>
<td>43%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Loss of bird habitat</td>
<td>29%</td>
<td>49%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Floods</td>
<td>20%</td>
<td>54%</td>
<td>26%</td>
</tr>
<tr>
<td><em>Somewhat Concerned</em></td>
<td>Global Warming</td>
<td>23%</td>
<td>46%</td>
<td>31%</td>
</tr>
</tbody>
</table>
If degree of concern is tied to preferences for quality-of-life attributes at an aggregate level, these results suggest that a majority of respondents will identify local taxes, fees and prices as the most important - and flood risk the least important - when making their decisions about the scenario choice questions. Questions 35 and 36 immediately following the scenario choice experiment address this possibility directly. Local taxes, fees and prices were named by the largest share of respondents (29%) as the most important attribute in their decision-making followed by tap water quality (28%) and habitat for birds (20%). Sixty-four percent of respondents named either summer travel time or habitat for birds (33% and 31%, respectively) as the least important in making their choices.

**Next Steps**

Once the data analysis is complete, I plan to return to Cape May County to share detailed findings with local stakeholders and decision-makers, including the Planning Department and Office of Economic Resources and Capital Planning. In addition to providing respondents with a summary of results by mail, I will also continue to work with Russell Blair (Cape May County Agricultural and Resource Management Agent) and his staff to disseminate and report findings to the larger Cape May County community.

**Acknowledgements**

This research would not have been possible without the expertise, energy, and commitment of dozens of individuals. First, I would like to acknowledge the financial support provided by Penn State Institutes for the Environment, Rutgers Cooperative Extension of Cape May County, and the Teresa Heinz Foundation. Dr. Ann Fisher, Dr. Richard Ready, Dr. Brent Yarnal and Dr. Richard Stedman (Penn State University) and Dr. Robert O’Connor (National...
Science Foundation) have been instrumental in all stages of this work, from formulation of research questions to development of the questionnaire to survey implementation. Russell Blair and Helen Meier (Rutgers Cooperative Extension of Cape May County) coordinated the data collection effort, and their knowledge of the local community was extremely valuable in making the process efficient and effective. Gigi Vandernoot, Richard Viglianese, Jennifer Taylor and Jack Henry devoted five weeks of their summer to knocking on doors and ‘selling’ the questionnaire, and throughout those five weeks they were conscientious in their work and dedicated to reaching as many residents as possible. I owe each of them a special thank you for all of their hard work. David Johnson and Mindy Anderson-Knott of the Penn State Survey Research Center played key roles in drawing the sample of census blocks and getting the survey instrument into a machine-readable format, and Claudio Frumento (Penn State IT Support Group) helped with printing the hundreds of census maps necessary to locate targeted blocks and households. Finally, but certainly not of least importance, I would like to thank the hundreds of residents who took the time to share their views with us. Their voices are what make the findings of this research so meaningful.
References


