Health Impact Assessment of the Boone Boulevard Green Street Project in the Proctor Creek Watershed of Atlanta

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US EPA Office of Research and Development

Addressing Public Health Challenges
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Communities make decisions that often do not consider the trade-offs among human health, ecosystem services, economic vitality, and social equity.

- Growing awareness that factors outside the traditional health field affect public health
- Substantial improvements will occur only if health considerations are factored into community decisions.
What is Health?

**Health**

“A state of complete physical, mental, and social well-being; not merely the absence of disease and infirmity”

- Preamble to the Constitution of the World Health Organization

Health is an indicator of **quality of life**
Health Impact Assessment (HIA)

HIA is a process that uses scientific data, health expertise and public input to factor public health considerations into the decision-making process

- Conducted and communicated in advance of a decision
- Recommendations intended to shape the final proposal based on health protection and health promotion
  - Health Hazards
    - Exposures to pollutants
    - Air, water, soil
  - Health Benefits
    - Access to green space; walkability
    - Local job market
What is HIA?

In a nutshell, HIAs:

Evaluate how a proposed policy, plan, program, or project...

...may affect...

Social, Economic & Political Factors

Living & Working Conditions

Public Services & Infrastructure

Individual Behaviors

Individual Factors

HEALTH

...lead to health outcomes...

...and provide recommendations for impact management.
### Steps in the HIA Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>Screening</td>
<td>Determines the need and value of a HIA</td>
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<tr>
<td>Scoping</td>
<td>Determines which health impacts to evaluate, methods for analysis, and a work plan</td>
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<tr>
<td>Assessment</td>
<td>Provides</td>
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<tr>
<td></td>
<td>1) A profile of existing health conditions</td>
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<td>2) Evaluation of potential health impacts</td>
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<td>Recommendations</td>
<td>Provide strategies to manage identified adverse health impacts</td>
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<td>Reporting</td>
<td>Includes</td>
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<td>1) Development of the HIA report</td>
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<td>2) Communication of findings &amp; recommendations</td>
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<td>Monitoring</td>
<td>Tracks</td>
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<td>1) Impacts on decision-making processes and the decision</td>
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<td>2) Impacts of the decision on health determinants</td>
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Proctor Creek’s Boone Boulevard Green Street HIA

**Decision:** Implementation of a green infrastructure project along Joseph E. Boone Boulevard, NW (in concert with road diet project)

**Decision-Makers:** City of Atlanta, Georgia

**Role of HIA:** Evaluate potential positive and negative health impacts of the green street project design and inform stakeholder decisions

**HIA Lead:** Region 4 – Office of Environmental Justice

**Office of Research and Development**

**HIA Partners:**
Proctor Creek Communities: Challenges and Solutions

Issues Facing the Community:
- Pervasive flooding
- Impaired water quality
- Poverty
- Derelict properties
- Aging infrastructure

Potential Solution:
Boone Boulevard Green Street Project

- Planter box
- Bioretention cell
- Permeable pavement
Setting the Scope of the HIA

- Used community/stakeholder input to:
  - Identify issues of interest and areas of concern in the community; and
  - Prioritize issues where the HIA should focus
- Provided local knowledge, conducted data mining and literature review
- Developed causal pathways and work plan to study impacts
Setting the Scope of the HIA

Community Priorities

Advisory Group Priorities
# Health Determinants and Health Outcomes

<table>
<thead>
<tr>
<th>Sustainability</th>
<th>Health Determinant</th>
<th>Health Outcomes</th>
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<tbody>
<tr>
<td>Environment</td>
<td>Water Quality</td>
<td>Respiratory Disease (e.g., asthma, allergies, lung cancer)</td>
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<td>Flood Management (Exposure to Injury, Housing Quality, and Vector Control)</td>
<td>Heat-related Illness</td>
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<td>Climate and Temperature (Exposure to Extreme Heat Events)</td>
<td>High-Blood Pressure (i.e., hypertension)</td>
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<td>Air Quality</td>
<td>Cardiovascular Disease</td>
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<td>Traffic Safety</td>
<td>Cancer</td>
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<td>Exposure to Urban Noise</td>
<td>Water-borne Disease</td>
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<td></td>
<td>Exposure to Greenness</td>
<td>Vector-borne Disease (e.g., West Nile Virus)</td>
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<td>Overweight/Obesity</td>
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<td>Society</td>
<td>Access to Goods, Services, Greenspace, and Healthcare (Active Transport)</td>
<td>Hearing (noise-induced hearing threshold shifts)</td>
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<td>Crime</td>
<td>Motor-Vehicle-related Injury</td>
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<td>Social Capital</td>
<td>Crime-related Injury</td>
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<tr>
<td>Economy</td>
<td>Cost of Living</td>
<td>Mental and/or Behavioral Disorders (e.g., anxiety, depression)</td>
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<td>Employment</td>
<td>Stress (acute and chronic)</td>
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<td>Business Performance</td>
<td>Perceived Overall Health and Wellness</td>
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<td>Morbidity/Mortality Risk</td>
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HIA: Benefits and Outcomes for Proctor Creek

- Demonstration project to address flooding and stormwater issues in the Proctor Creek Watershed
- Extensive stakeholder and community engagement
- Assessed health determinants in environmental, social and economic sectors
- Recommendations were prioritized by pre-construction, during construction, post-construction and long term phases
- New Local State, Federal, and Community partnerships were developed
- Met with City of Atlanta to deliver final peer-reviewed HIA
- City decided to double the length of the green street
Co-Leads for BBGS HIA

- Tami Thomas-Burton – US EPA Region 4
- David Egetter – US EPA Region 4
- Lauren Adkins – Pegasus