

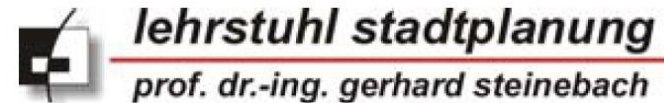


GEORGIA PLANNING ASSOCIATION 2012 FALL CONFERENCE

International Perspectives: Germany, Iraq, Russia

German Approaches to Brownfield Redevelopment: Insights for Georgia's Cities

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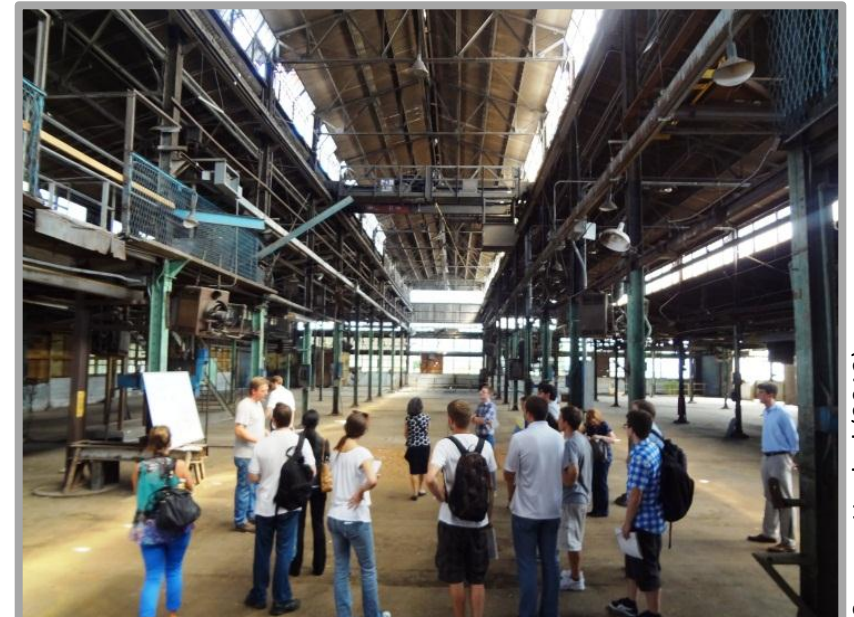
A nighttime photograph of a cityscape, likely Kaiserslautern, Germany. The image shows various buildings, some with lights on, and a prominent tall chimney stack emitting a plume of white smoke or steam. The sky is dark, and the overall scene is illuminated by city lights.

Outline

- Introductions
- Brownfields area-wide planning in Atlanta, GA
- International exchanges between planners
- Kaiserslautern and brownfields
- U.S. planning studio experience
- Brownfield redevelopment in Germany
- Insights for Georgia's cities
- Conclusion

Introductions

- Georgia Tech School of City and Regional Planning Fall Studio
- City of Atlanta U.S. EPA Brownfields Area-wide Planning Pilot Grant (2010-2012)
- 9 Georgia Tech Masters students
- 3 Technical University of Kaiserslautern Masters students in Urban and Regional Development
- International experience for German and U.S. planning students

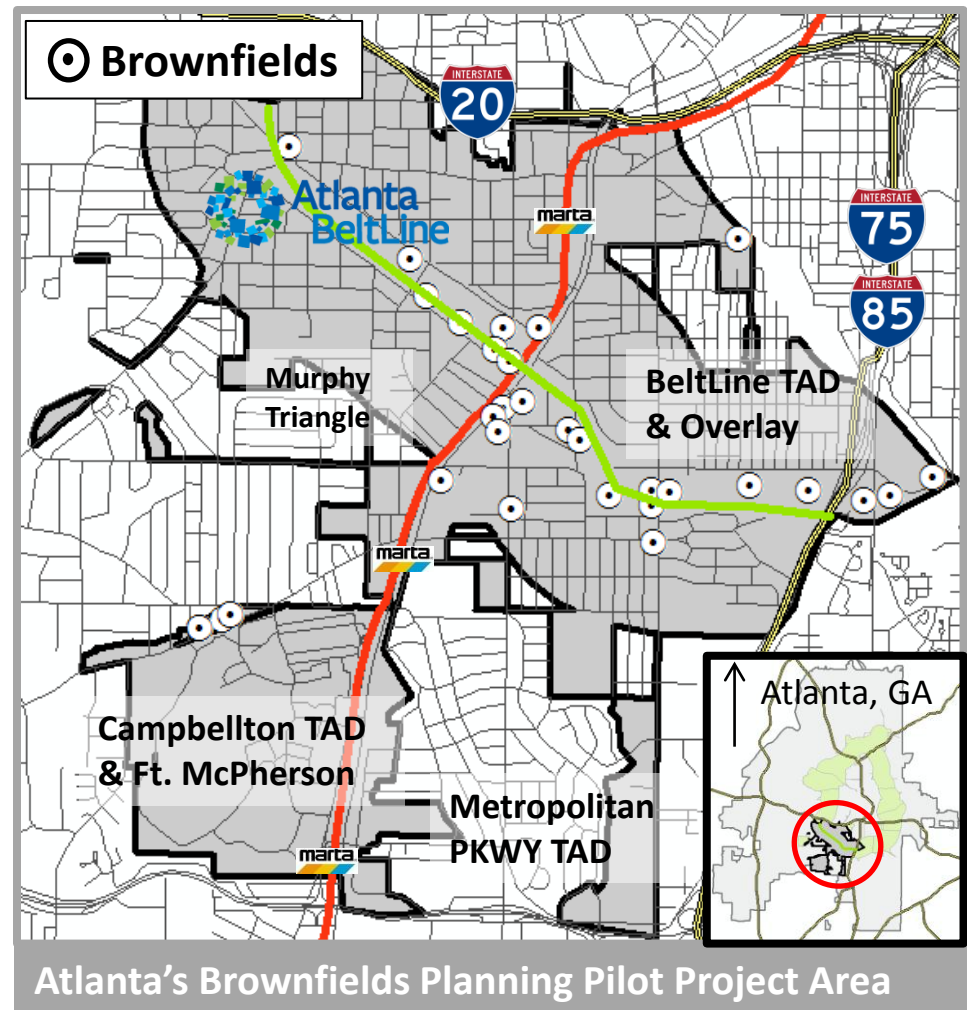


Studio class visiting a business in Atlanta's brownfields planning area

Source: Hoelzel (2012)

Brownfields Area-wide Planning Atlanta, GA

- New revitalization approach
 - Expands Atlanta's brownfield programs
 - Focuses on *brownfields-impacted neighborhoods* where revitalizing areas surrounding brownfields is critical to reuse
- Studio is comprehensive
 - Implementation strategy, background report and supporting information
 - Urban design, GIS and socioeconomic analysis to community and economic development
 - Public health and safety
 - Sustainability and environmental justice



Source: Hoelzel (2012)



International Exchanges between Planners

- Importance to the field of City and Regional Planning
 - Brownfield and neighborhood revitalization in a global economy and society
 - Exchanges of lessons learned, best practices, and challenges
 - Preparing future generation of planners

- **Z** insights for Georgia's cities

Adapting Strategies

1. Interim use
2. Shrinking & greening cities

Community Development

3. Neighborhood management
4. Sustainable buildings

Economic Development

5. Public transit as economic development
6. Compatible uses and noise abatement
7. Innovative milieu



Kaiserslautern, Germany



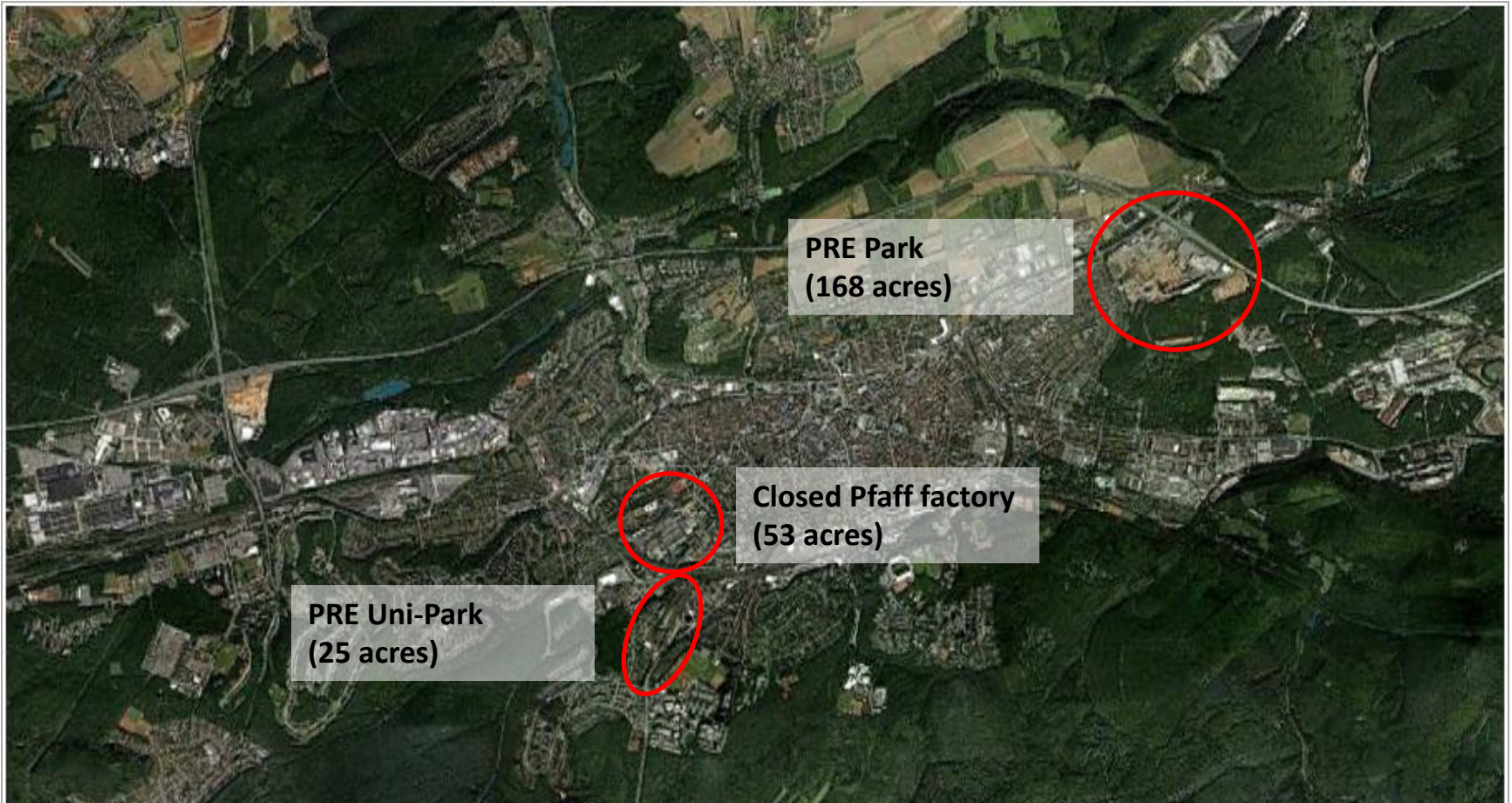
Europe, Germany and adjacent countries

- 100k residents + 50k Americans
- Ramstein Airbase
 - Largest American military community outside U.S.
- From manufacturing...
 - Pfaff (sewing machines)
 - Opel (automotive)
- ...To science and technology
 - John Deere European Technology and Innovation Center
 - Fraunhofer Institute (national system of applied research centers for sustainability and industry)

Source: National Geographic, Esri ArcGIS Explorer Online (2012)

Brownfields in Kaiserslautern, Germany

- Industrial and military brownfields



City of Kaiserslautern, Germany

U.S. Planning Studio Experience

- Learning experiences
 - U.S. EPA Region 4, 2012 Southeast Environmental Justice Conference
 - Brownfield site visits with local stakeholders
 - Discussions with businesses, city planners, and environmental professionals
 - Meetings with U.S. EPA officials
 - Attended City of Atlanta Zoning Review Board (ZRB) meeting
 - Examined other U.S. EPA Area-Wide Planning Projects
 - Working with U.S. planning students



U.S. EPA Region 4 EJ Conference (Atlanta, GA)

Source: GPA www.epa.gov (2012)

Brownfield Redevelopment in Germany: Challenges

Source: Süddeutsche Zeitung. www.sueddeutsche.com; Bing Maps (2012)



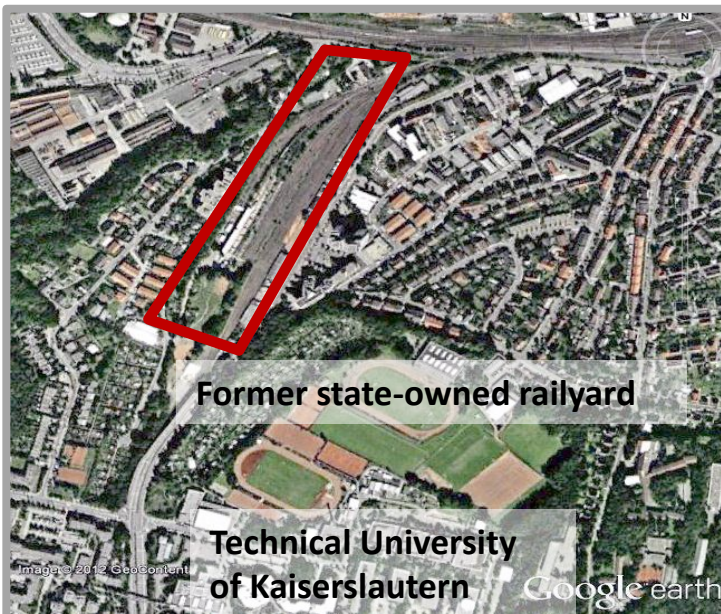
Brownfields in Kaiserslautern

- Legacy of East and West Germany
- Implications of reunification in 1990
 - Population shifts
 - Economic disparities
 - Sprawl and rapid loss of greenfields
 - Reforming planning institutions
 - Securing resources
 - Developing public-private partnerships
- Over 360,000 brownfields in Germany¹
 - Deindustrialization in Germany
- Large brownfields
 - Closed military bases
 - Idled government-owned industrial sites

¹ Oliver, L., ...Nathanail, P. (2005). *The scale and nature of European brownfields*. Retrieved September 2012 from www.cabernet.org.uk.

Brownfield Redevelopment in Germany: Approaches

- National brownfield framework (Federal Soil Protection Act adopted 1998)
 - Federal, state, and local funding to spur private investment
 - Polluter pays principle (Special focus on military base cleanups)
 - National and state risk-based clean-up standards
- Reusing brownfields under National Sustainability Strategy (2002)
 - Reduce sprawl: 30 ha/day (74 acres) greenfield conversion by 2020



2000-2010 Public-Private Redevelopment Project in Kaiserslautern

Insight 1. Interim Use

- Temporary, flexible use of buildings and sites with lower investment
- Potential benefits of interim use
 - Prevent vandalism
 - Maintain (and increase) property values
 - Keep redevelopment options open for eventual permanent use
 - Provide revenue stream for property owner
 - Create positive public perception and place branding



Interim use of brownfield: 4-acre urban farm along the BeltLine

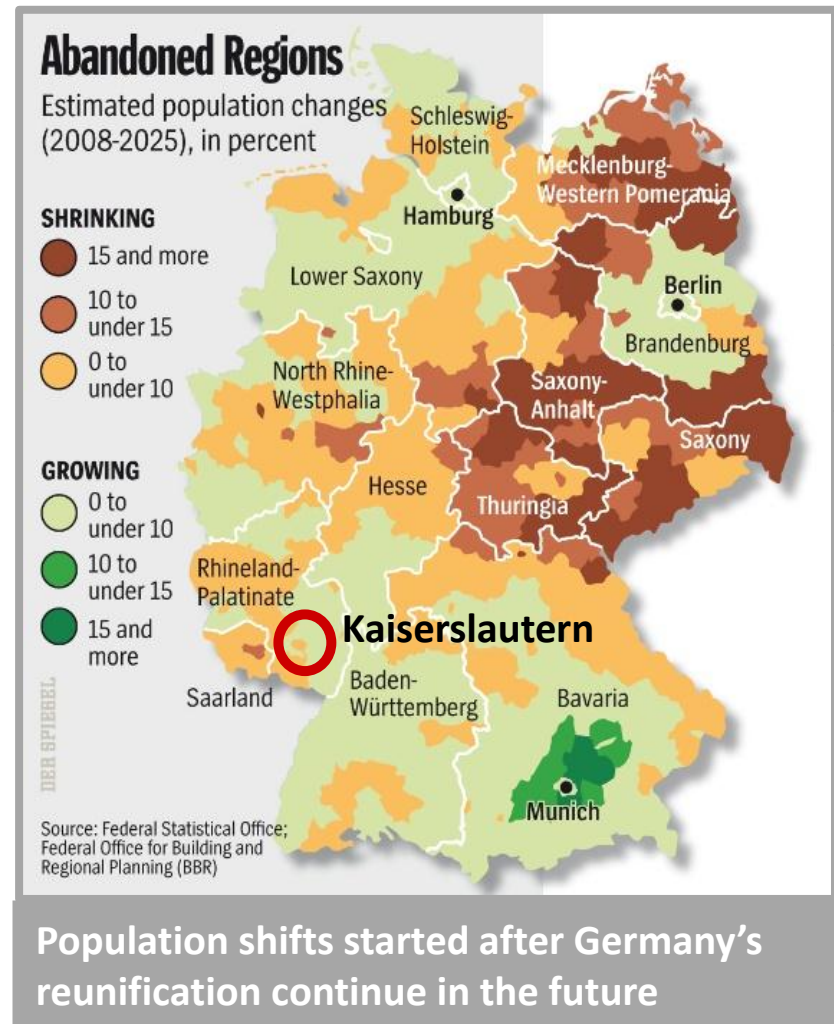


Interim use of vacant warehouse: Local art gallery in Atlanta

Source: Hoelzel (2011, 2012)

Insight 2. Shrinking Cities & Greening Cities

- Declining population creating vacancy
- “Shrinking cities” in eastern and rural Germany
- “Right-sizing” planning approaches
 - Adopt no/slow-growth development
 - Support compact urban centers
 - Strategically demolish (e.g., housing towers and large industrial complexes)
 - Reuse existing, viable housing stock
 - Update infrastructure and consider abandonment
 - Green vacant lots
 - Reintroduce nature to the city
 - Link public health with planning



Source: Spiegel Online. www.spiegel.de (2011)

Insight 3. Neighborhood (Quarter) Management (NM)



Vauban Quarter office at former military base (Freiburg, Germany)

- “Socially Integrated Cities” national initiative (started in Berlin in 1999)
- Bottom-up planning approach in “districts with special development needs”
- Response to gentrification and displacement after reunification
 - Private-led and government urban renewal
- Collaboration between residents, and public and private sector
 - Districts represent 4,000 to 25,000 residents
 - NM staff are trained, paid, and run offices
- Formal institution for residents to identify and express issues and ideas
 - Land use planning; Economic and workforce development; Social and human capital; Culture preservation; and Community integration and immigrant assimilation

Insight 4. Sustainable Buildings

- **Energy-efficient buildings**
- Why the lack of solar in Atlanta?
 - Suitable for Atlanta's climate
- German perspective
 - Rising energy costs
 - Cost-savings after 10 years
 - Reduce CO₂
 - Integrate passive, zero-energy, and plus-energy buildings
- **Reusing building materials**
- Embodied energy in building material
- Deconstruction alternatives
- Divert waste from landfills
- Cost savings in construction
- New businesses in building reuse



Solar-powered mixed-use in Vauban

Source: Hoelzel (2012)



Building material reuse center in Atlanta's brownfields planning area

Source: Hoelzel (2012)



Insight 5. Public Transit as Economic Development

- Potential to improve transit options in southwest Atlanta
- German emphasis on transit-oriented development (TOD) and accessibility to entertainment, housing, and employment (w/industrial)
- Potential benefits of TOD
 - Affordable accessibility to and from work and stores
 - Shared space that attracts people to businesses
 - Safer and more appealing public space
 - Increase property values
 - Reduce air pollution and noise

Source: Hoelzel (2012)



Murphy Triangle offers TOD options with industry where MARTA and BeltLine intersect

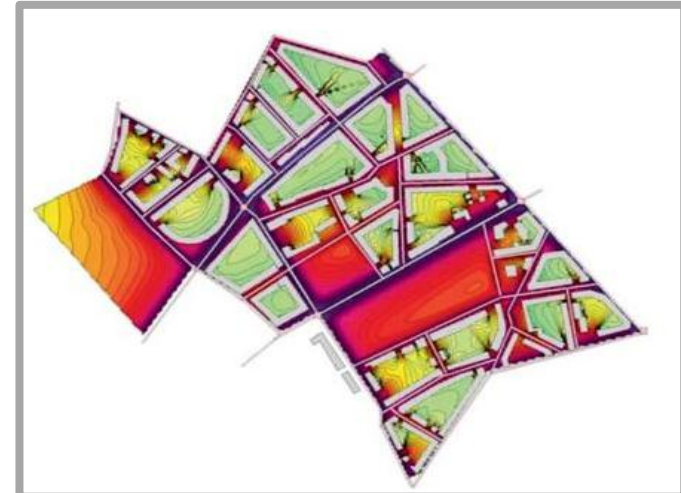


Shared space around transit in Freiburg

Source: Hoelzel (2012)

Insight 6. Compatible Uses and Noise Abatement

- Noise from MARTA, freight rail, industrial traffic, and highways in planning area
 - Nuisance and poses possible health risk
 - Consequence of incompatible uses
 - Reduces attractiveness for new businesses/residents
- **German tools and approaches**
 - Noise map (visualization of noise)
 - Noise limit values and action plans
 - Active approaches
 - Railway on grass-covered surface
 - Noise protection wall (planted)
 - Building position
 - Passive approaches
 - Room arrangement
 - Noise protective materials



Noise mapping in Kaiserslautern

Source: Steinebach, Guhathakurta, Hagen (2009)



Quiet rail on grass in Freiburg

Source: Hoelzel (2012)

Insight 7. Innovative Milieu



PORSCHE

SIEMENS



BOSCH

Invented for life



JOHN DEERE

 **Fraunhofer**

- Not many brownfields in Germany are reused for manufacturing
- Focus on creating new areas for innovation
 - Partner with universities and research centers
 - For example, Kaiserslautern's "Fraunhofer" include the institutes for technological and economic mathematics (ITWM) and experimental software engineering (IESE)
- Networks and clusters of related businesses and specializations, and shared process and research and development needs
- Connections for small and medium-sized businesses
- Business incubators for new businesses and spin-offs
- Link apprenticeships and workforce training
- Plan and support mixed-use development that offers amenities and improves work place quality



Example: Innovative Milieu



PRE-Park Kaiserslautern, Germany



Former Barracks



Today: Research Institutes



Aerial Photograph



UCI Cinema



John Deere - Building

Source: Pre-Park. www.pre-projekte.com (2012), www.justinpeach.de (2012)



Conclusion

How we contribute to Atlanta's Brownfields Area-wide Planning...

- European approaches, other perspectives, new influences
- Linking topics
- Conceptual framework
- Thinking in the long-term
- Importance of sustainability
- Relevance of enhancing natural areas

What will we take back to Germany?

- Greater recognition of private investors in public partnerships
- Public engagement and communication with experts
- Prioritizing brownfields with resident input
- Other ways of brownfield cleanup (no total cleanup)
- Industry as sustainable local economic development
- Greater attention to environmental justice



End – Thank You

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U.S. EPA and the City of Atlanta

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