



# **A Holistic Approach to Achieving Sustainability: The Alexandria, Virginia Experience**

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And Exposition, August 18, 2010**

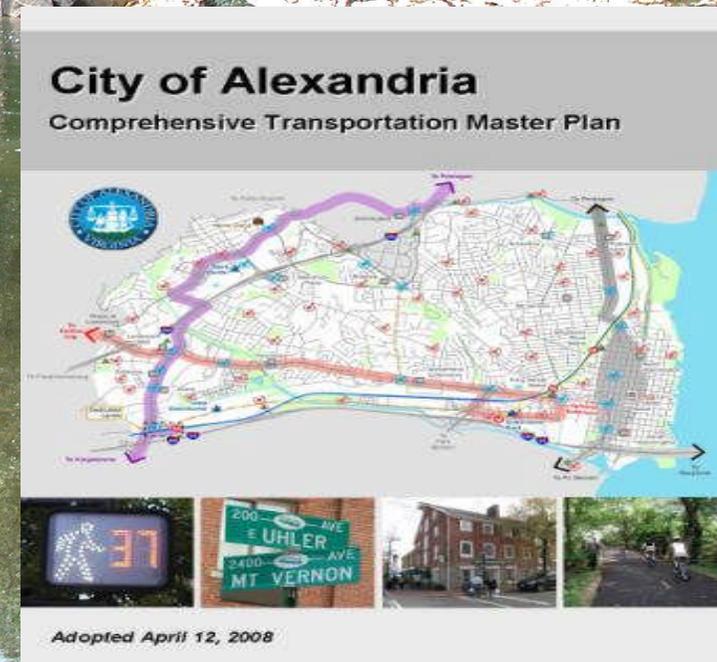
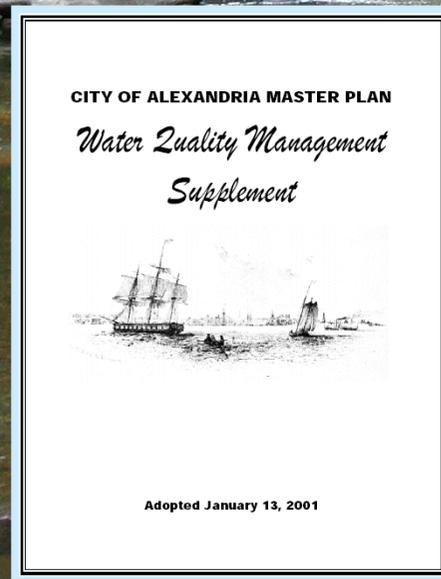
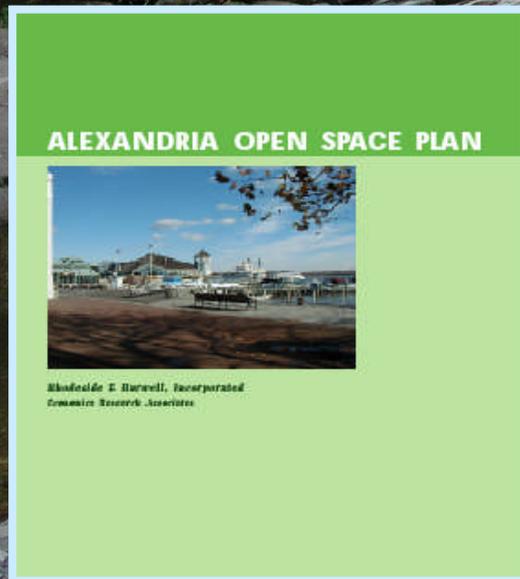


# The Alexandria Community

- Located just outside Washington D.C., inside the Capital beltway
  - 140,000 citizens (well educated citizenry)
  - Significant interest in environmental issues
  - Over 200 homeowner, civic and business associations
  - Mayor and six other City Council members with City Manager
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# 1998 Environmental/Quality of Life Summit Top Three Issues Identified

- Open space
- Water resources
- Transportation





# Eco-City Principles

- Places where people can live healthier & economically productive lives while...
  - Reducing their impact on the environment
  - Protecting natural resources
  - Restoring community assets
- Harmonize existing policies, regional realities, economic and business markets with natural resources and environmental assets
- Strive to engage all its diverse citizens in collaborative & transparent decision making



## **Eco-City Alexandria – Partnership Between the City, Alexandria Environmental Policy Commission, Virginia Tech and the Community**

- Eco-City Alexandria project started in January 2007 following a request from City Council
- Green-Ventory and Compendium of Model Sustainability Practices – December 2007
- Eco-City Café and Eco-City Summit – Spring 2008
- Eco-City Charter Adoption – June 2008
- Phase I Environmental Action Plan Adoption – January 2009
- Environmental Action Plan 2030 Adoption - June 2009





# The City Government Stakeholders

- Mayor, City Council, and City Manager
- Environmental Policy Commission
- Five key City Departments
  - Transportation & Environmental Services
  - Planning and Zoning
  - Recreation, Parks and Cultural Services
  - General Services
  - Alexandria Health Department
- City's Environmental Coordination Group
- Eco-City Steering Committee





# Alexandria Environmental Policy Commission

- 13 citizen members having expertise and interest in environmental science and appointed by City Council
- EPC members selects a Chair, Vice-chair and secretary annually
- Two-year term membership can be reapplied
- Advises Council on all environmental issues and policy





# Virginia Tech Urban Affairs and Planning

- Graduate students
  - Full-time faculty & professors in practice
  - Metropolitan Institute ([www.mi.vt.edu](http://www.mi.vt.edu))
  - Alexandria Center ([www.nvc.vt.edu/uap](http://www.nvc.vt.edu/uap))
    - Architecture
    - Landscape Architecture
    - Government & Public Affairs
    - Natural Resources
- 



# Eco-City Project Management

- EPC spearheaded the project and organized into sub-groups
- T&ES Office of Environmental Quality provided overall project management
- Virginia Tech provided expertise and research
- Environmental Action Plan Steering Committee provided high-level policy guidance
- City's Environmental Coordination Group provided information and feedback from City's departments involved





# Green-Ventory Report



## ECO-CITY ALEXANDRIA

A Green-Ventory of City Environmental  
Policies, Plans, and Programs



- Water & Solid Waste
- Land Use
- Open Space & Parks
- Transportation & Air Quality
- Energy & Green Buildings
- Environmental Health

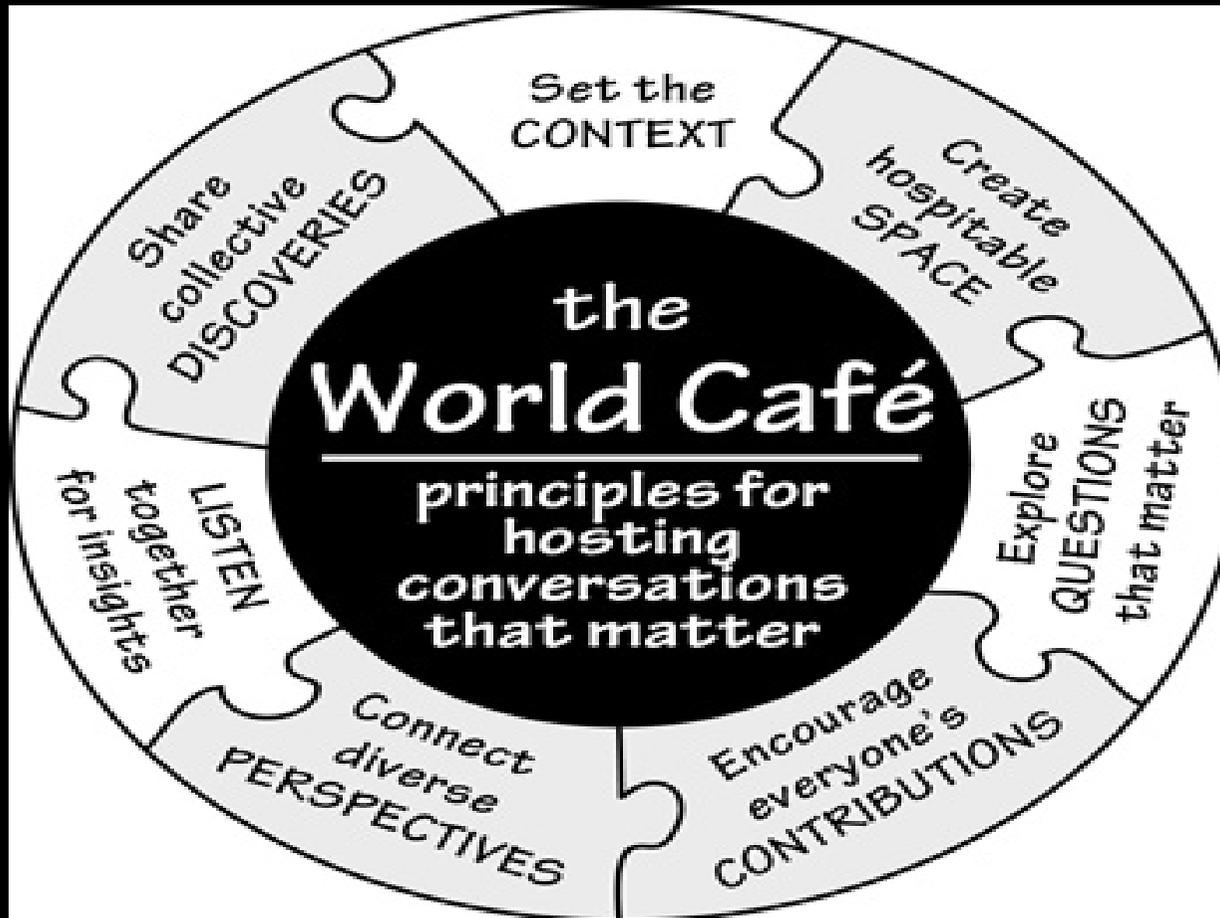




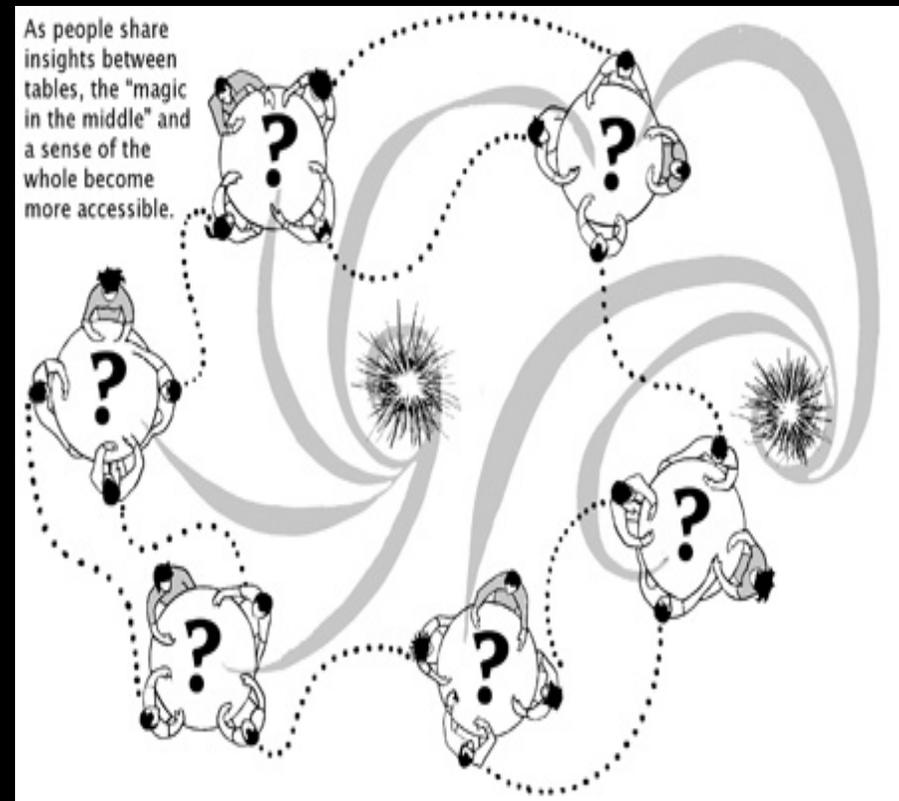
# Compendium of Model Practices

- Search for resources
    - articles, web sites, etc.
  - Focus on comparable communities
    - size, population, mid-Atlantic, etc.
  - Complete program and policy template
  - Select interviews w/ program staff
  - Compile model practices
  - Offer observations
  - **Working document for EPC & staff discussions**
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# World Café Model = Eco-City Café



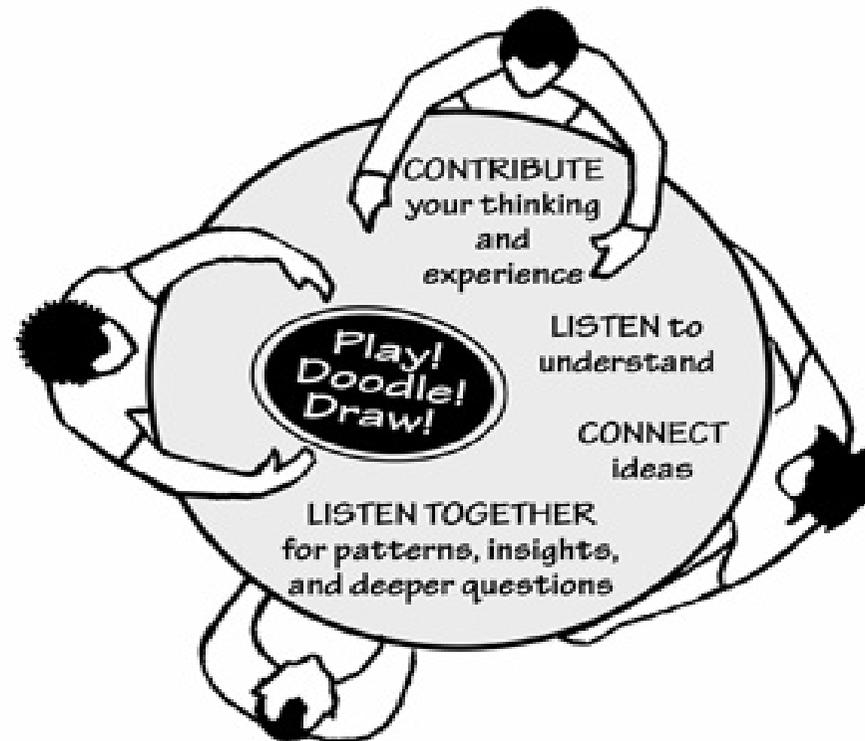
# The Process: How it Works



# Eco-City Café

## CAFÉ ETIQUETTE

FOCUS  
on what matters!



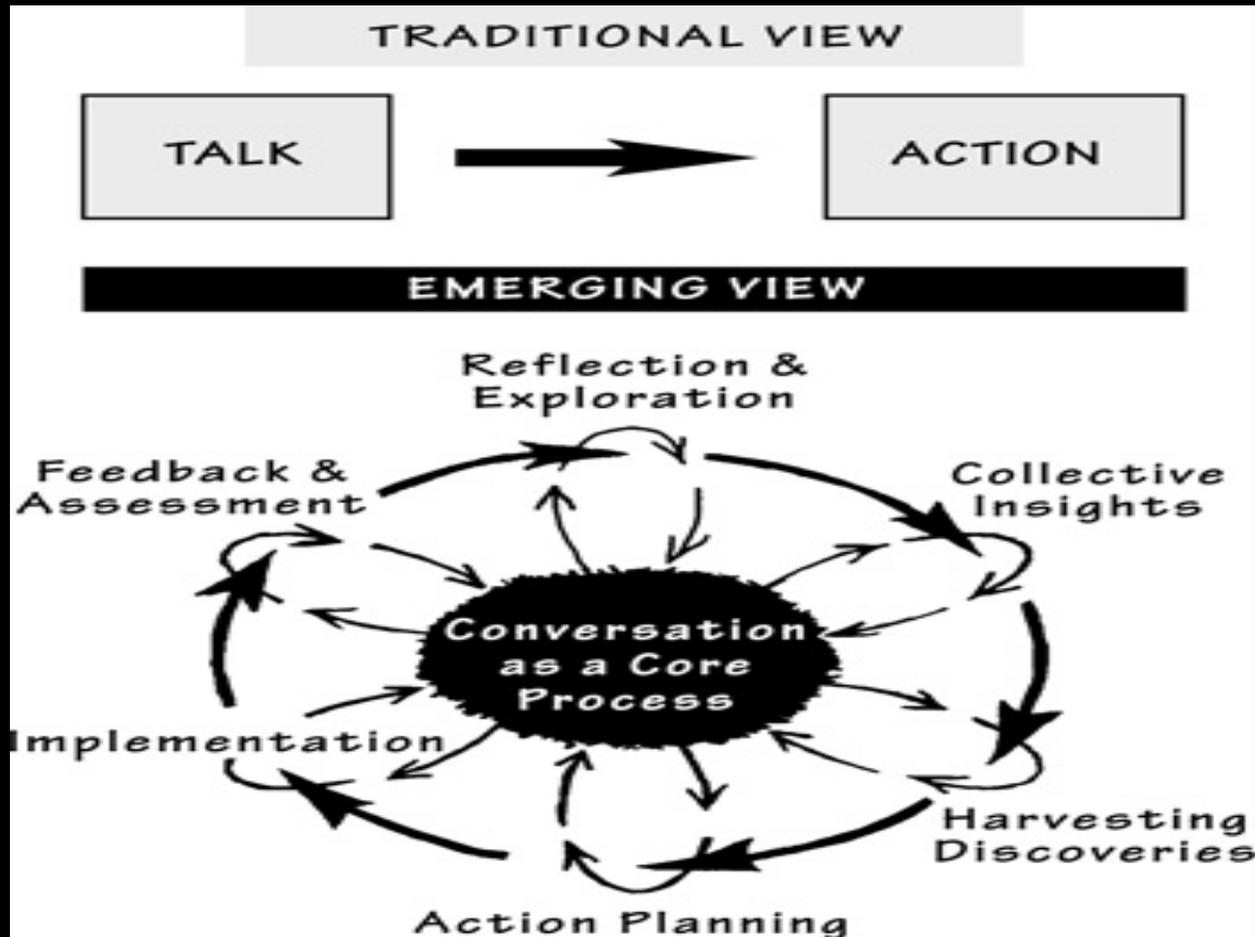


# World Café Essential Ingredients

- Round Tables with Table Hosts
- Graphic Recorder – one for the activity
- Floaters/Synthesizers – 2-5 depending on group size
- Announcer – 1 for the activity
- Presenters – 1 or more for the activity
- Drawing Tools and Supplies
- Process Guidelines
- Questions to Explore
- Festive Environment – Water, Coffee and Food

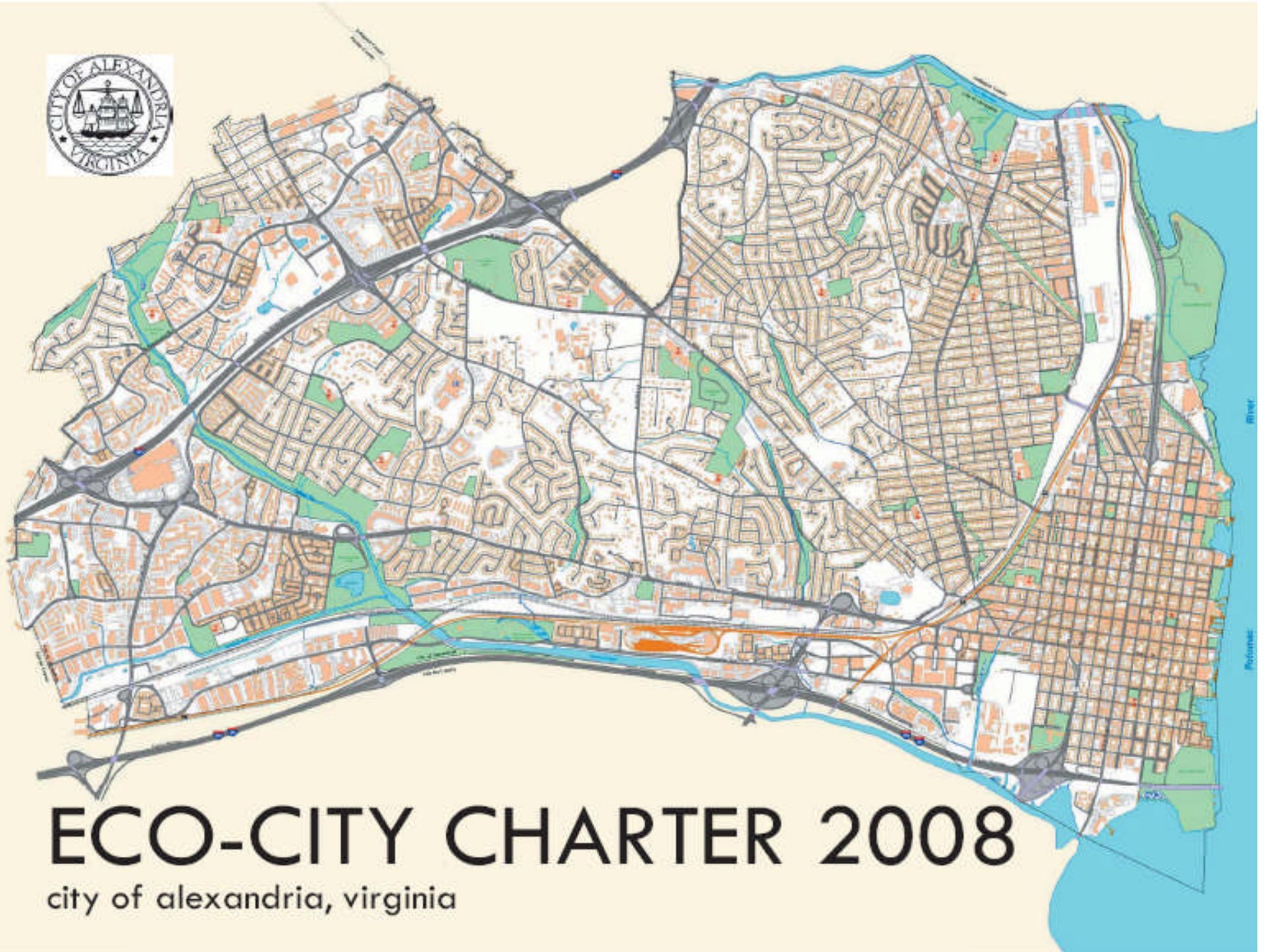


# An Emerging Process for Visioning



# Eco-City Café





# ECO-CITY CHARTER 2008

city of alexandria, virginia



# 10 Eco-City Charter Principles

- Land Use and Open Space
- Water Resources
- Air Quality
- Transportation
- Energy
- Building Green
- Solid Waste
- Environmental Health
- Emerging Threats & Climate Change
- Implementation





# Eco-City Summit

- Held at the newly-constructed TC Williams High School that achieved the LEED Gold standard
- Mayor Harvey from Waitakere, New Zealand, a pioneer in the Eco-City movement, served as the Summit's keynote speaker
- Over 200 participants including local elected officials, city businesses, and citizens
  - Offering strategies for sustainable future of the City as well as feedback on the draft Eco-City Charter





## Eco-City Summit

- The use of keypad voting technology enabled participants to vote for their preferred options and the results were displayed instantly
- 70-90% consensus was achieved on key principles
- Participants contributed to identifying priority for key principles and offered several ideas for actions



# Eco-City Summit



**Working Today For A Better Tomorrow**  
The City of Alexandria  
Department of Transportation & Environmental Services

ECO-CITY ALEXANDRIA

ECO-CITY CHARTER 2008

- Urban Affairs & Planning  
Virginia Tech
- Graduate students
  - Full-time faculty & professors in practice
  - Metropolitan Institute ([www.m-i.edu](http://www.m-i.edu))
  - Alexandria Center ([www.aci.state.vir](http://www.aci.state.vir))
  - Architecture
  - Landscape Architecture
  - Government & International Affairs
  - Other Resources

# Eco-City Summit





## **Development of the Environmental Action Plan**

### **Phase I focuses on short term actions for FY2009-2011**

- City Council pushed for some early actions to provide momentum for the project
- City staff contributed significantly to the development of the Phase I Environmental Action Plan

### **Phase II focuses on longer-term actions covering FY2012-2030 and Beyond**

- EPC was the main driving force and held several sessions with senior staff from all City departments involved
- Virginia Tech contributed model sustainability practices identified around the country and abroad





## Phase I (Short-term) Environmental Action Plan

- Ambitious plan having 41 goals and 132 action steps covering the ten guiding principles
  - *Focuses on short-term actions to be taken during FY2009 - 2011*
- Staff developed a spreadsheet version of the Phase I Environmental Action Plan to keep track of progress
  - *i.e., Short Term Environmental Action Plan Matrix*
- To date, 43 actions have been completed in addition to 26 actions being actively worked on using existing resources

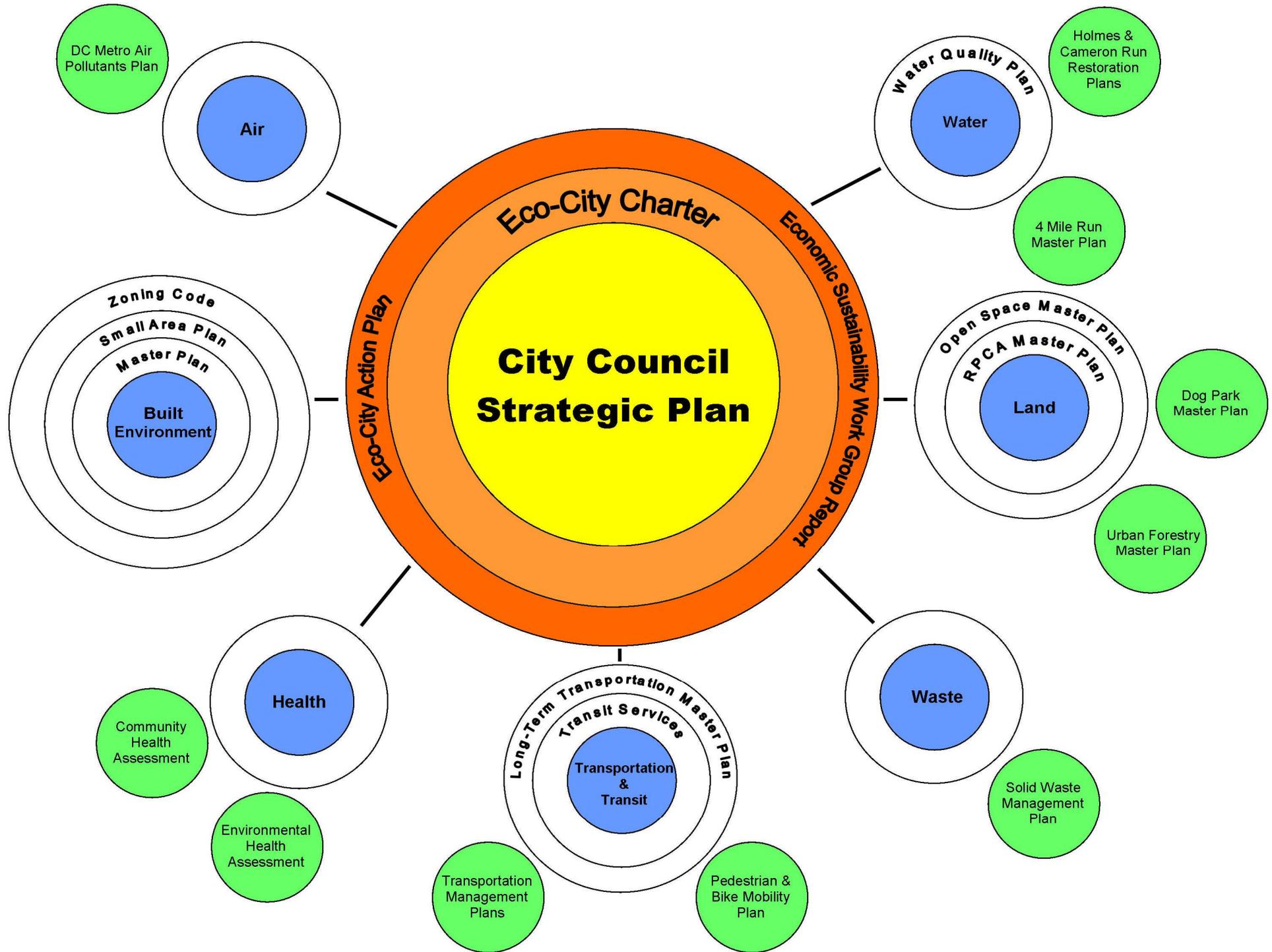




# Environmental Action Plan 2030

- Comprehensive plan and road map for sustainability for the next 20 years
- Implementation plan following the ten guiding principles of the Eco-City Charter
- Incorporates short term goals and actions from Phase I EAP with new mid and long term goals and actions
- Contains 48 goals, 50 preliminary targets and 353 actions covering the next 20 years and beyond







## **Key Actions on EAP 2030**

### **Green Building**

- Establish and promote green building standards for new commercial and residential development (LEED)
- Develop a policy encouraging retrofitting existing buildings, including residences and historic buildings
- Require all new construction by 2030 to be carbon neutral
- All new construction and renovation of City buildings, will meet a LEED Silver rating as a minimum
- Develop incentives for energy conservation through tax policy, fees, and green funding





## Key Actions on EAP 2030

### Energy

- Hire an Energy Manager
- Conduct energy audits of major City buildings
- Conduct a feasibility study to establish a carbon tax designed to reduce energy consumption and GHG emissions
- Require that all property owners provide full energy audits at time of sale or legal transfer of the property
- At least 50% of the City's energy portfolio will come from renewable and clean energy sources by 2020, and raise that percentage to at least 80% by 2030





## Key Actions on EAP 2030

### Transportation

- Pass a resolution adopting the principles of Complete Streets and Low Impact Development in road projects wherever practicable
- Retrofit all existing DASH buses with bike racks
- Develop a DASH policy that requires all new buses to be low emission, hybrid, or CNG vehicles
- Establish one rapid transit route in operation by 2012 and two additional routes by 2017
- Add a Metrorail station to the Potomac Yard development by the time occupancy of the development reaches 70%





## Key Actions on EAP 2030

### Water Resources

- Establish long-term dedicated funding mechanisms such as storm water utility fees or other taxes to improve and maintain stormwater infrastructure
- Retrofit all City facilities with stormwater BMPs
- Reduce impacts from combined sewer system
- Maintain and improve key infrastructure, sanitary and storm sewer systems





## Key Actions on EAP 2030

### Land Use and Open Space

- Include sustainability principles in all land use plans
- Finalize and release the Urban Forestry Master Plan. Develop a funding plan to implement Plan recommendations, including achieving a 40% crown coverage by 2020
- Continue progress on protecting the 35 remaining acres, through acquisitions, easements, and dedications, to achieve the City's 100-acre open space goal





## **Key Actions on EAP 2030**

### **Air Quality**

- Continue efforts to comply with all NAAQS to reduce exposure to ambient air pollution
- Reduce emissions from point sources
- Encourage development of a Green Taxi fleet by setting tight miles per gallon standards for new vehicles

### **Solid Waste**

- Go to single stream recycling
  - Expand household and electronics waste program
  - Exceed the City's goal of 35% diversion through increased waste reduction and reuse by 2020
- 



## **Key Actions on EAP 2030**

### **Global Climate Change and Other Emerging Threats**

- Adopt the proposed GHG emission reduction targets outlined in the MWCOCG's July 2008 draft Climate Change report
- Continue to inventory GHG emissions within the City
- Establish City Climate Action Plan

### **Environment and Health**

- By 2010, create a Smoke-free Alexandria program that encourages restaurants and work places in the City to go completely smoke-free and recognizes those that do





## Key Lessons Learned

- Strong support from City Council from the start is key success factor
  - Eco-City Steering Committee chaired by two Council members provided important feedback and guidance
- Unique collaboration with Virginia Tech and the EPC allows for a professional yet cost-effective approach
- The need for coordination between all City departments increased the role for the Environmental Coordination Group





## Key Lessons Learned

- Short-term (low-hanging-fruit) successes build momentum required for long-term success
- Community involvement from the start helps build and maintain support from City Council and management
- CAFÉ process became a model for outreach in the City  
Real time voting technology was useful tool
- Increased marketing and outreach efforts are essential for maintaining the momentum of Eco-City going forward





## Benefits of Eco-City

- Eco-City integrates environmental issues with all existing plans, policies and projects, creating a holistic governance of City affairs toward sustainability
  - Eco-City allows the City to brand all environmentally-related activities under the Eco-City “umbrella”
  - Funding for Environmental programs has been sustained and has been significant asset when pursuing grants
  - Enabled the City to market itself towards green businesses
  - Alexandria is viewed by many as a leader in environmental sustainability, creating value and pride for Alexandrians
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**Thank You**  
**[www.alexandriava.gov/Eco-City](http://www.alexandriava.gov/Eco-City)**

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