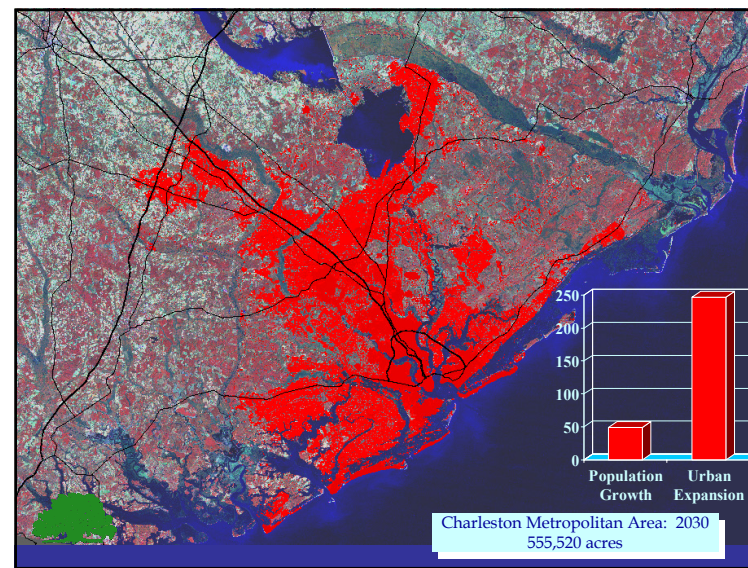
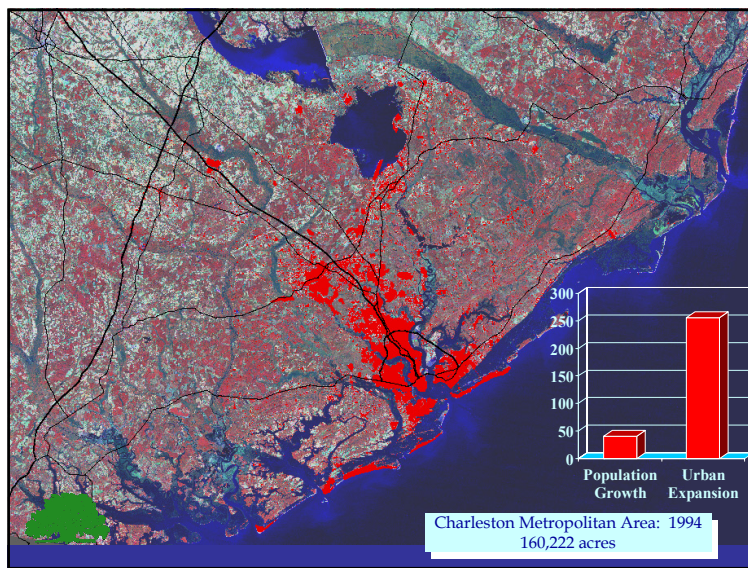
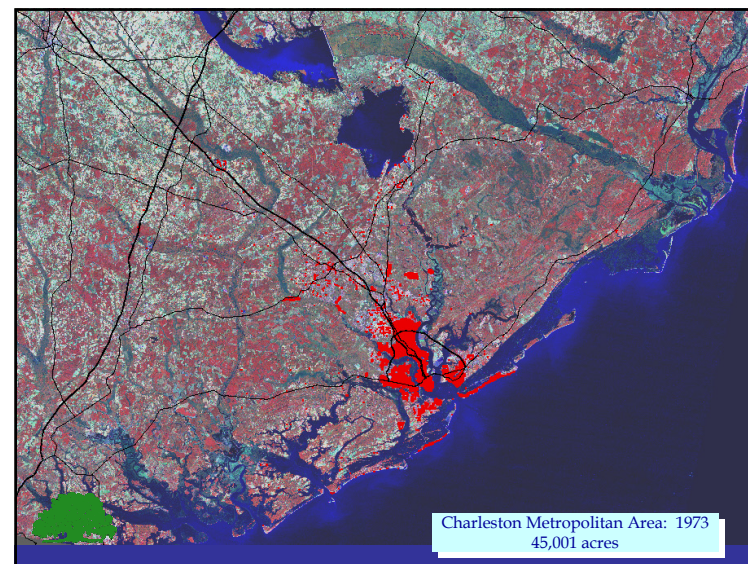


## Protecting Water Quality While Meeting Smart Growth Goals

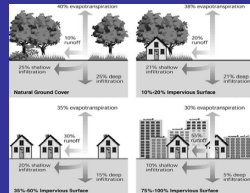


Geoffrey Anderson  
US EPA Smart Growth  
Program  
July 25, 2007

## Water Quality Impact from Development

- Impact of Trends
  - Watershed imperviousness thresholds
    - 10% signs of degradation
    - 25% serious deterioration
  - 1 acre parking lot has 16 times greater runoff
  - Water quality impairment due to development runoff:
    - Estuaries: 32 percent
    - Rivers: 13 percent
    - Lakes: 18 percent
    - Ocean shorelines: 56 percent



## Reasons for Change

- Traffic
- Budget and Taxes
- Environment and Open Space Preservation
- Workforce Housing
- Demographics
- Uniqueness of Place
- Getting it Right the First Time--Retaining Value
- The Market is There

## What is smart growth?



Smart growth is development that revitalizes neighborhoods, protects farmland and open space, keeps housing affordable, and provides more transportation choices.

It is development that is good for the economy, community, and the environment.

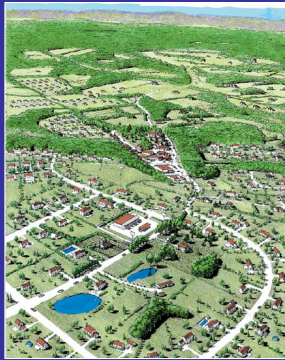


## Smart Growth Principles

- Mix land uses
- Take advantage of compact building design
- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Foster distinctive, attractive communities with a strong sense of place
- Preserve open space, farmland, natural beauty, and critical environmental areas
- Strengthen and direct development towards existing communities
- Provide a variety of transportation choices
- Make development decisions predictable, fair, and cost-effective
- Encourage community and stakeholder collaboration in development decisions



## Comparing Regional Development Patterns – Current



- Land is consumed at a faster rate
- Large lot zoning -- less efficient use of land
- Auto-dependent development -- more pollution and impervious surface per person

## Comparing Regional Development Patterns – Smart Growth



- Infill opportunities accommodate growth
- Concentrate development and leave more open space
- Mix uses to create transportation choices
- Minimize air and water pollution

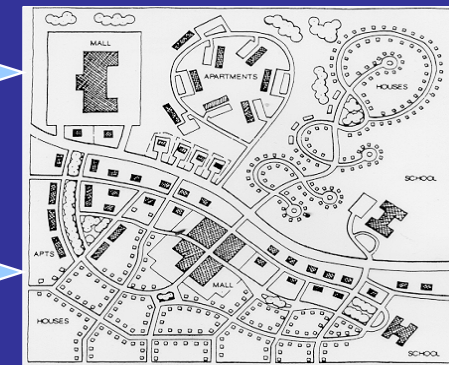
## Arlington, VA-- Smart growth at the corridor level



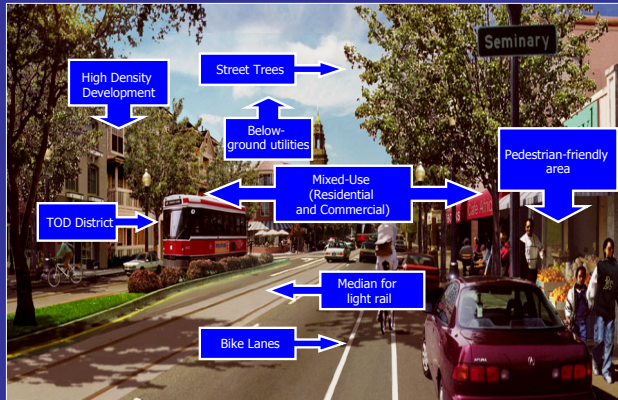
## Local Development Patterns

Status Quo

Smart Growth

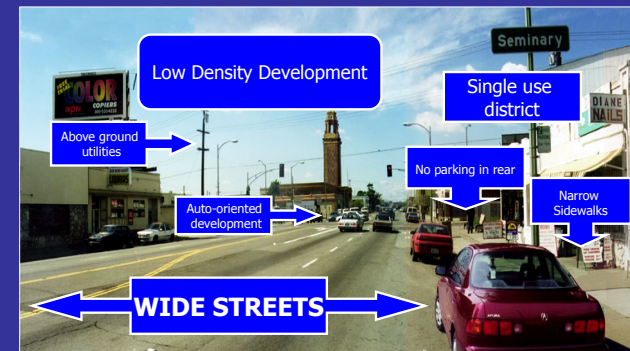


## Smart Growth at the Street Level



Source: [www.urban-advantage.com](http://www.urban-advantage.com)

## Conventional Street



Source: [www.urban-advantage.com](http://www.urban-advantage.com)

## Smart Growth Can Help Protect Water Resources

- Regional Level
  - Re-using imperviousness
  - Efficient use of developed land reduces pressure on undeveloped land
  - Preservation of key land
- Community Scale
  - Compact design in combination with useful open space
  - Reduced per-unit imperviousness
  - Transportation alternatives
- Site Level
  - LID practices to mitigate development intensity
  - Meaningful interaction with neighborhood stormwater mgt strategies

