

Land Use Planning for Environmental Management

- Evolution of Response to Sprawl
 - 19th and 20th century American communities were compact with mixed patterns of urban and land development
 - Governments played key role in commissioning urban design
 - After 1920's, development less directed by grand design and more by private development projects loosely guided by govt. regulation
 - Boomburbs name given to suburban communities outside central cities with 100,000 or more
 - 2000 census revealed 53 boomburbs in U.S.

Government Response to Sprawl

- Growth management
 - policies, plans investments, incentives and regulations to guide the type, amount, location, timing, and cost of development to achieve responsible balance between protection of natural environment and development to support growth
 - Smart Growth
 - Emphasize development in areas of existing infrastructure and de-emphasizes development in areas less suitable for development
 - New Urbanism
 - Compact, mixed-use, and ecological development
- Ending sprawl requires *regional* approach to planning

Development terminology

- Brownfields—vacant, potentially contaminated areas within urban centers that are difficult to develop because of potential liability issues
- Greenfields—open, natural, or agricultural lands that provide natural amenities, wildlife habitat, natural system benefits, resource production, and community character
- In-fields—like brownfields but do not impose environmental risk
- Greyfields—vacant or unprofitable older suburban commercial centers and parking lots that are prime for redevelopment

Land Use and Environmental Protection

- Environmental risks are increased by poor location or design of land developments
 - Weather-related—flooding, stormwater, snowfall, hurricanes, and tornado wind damage
 - Geologic hazards—earthquakes, landslides, avalanches, erosion, volcanic activity
 - Ecological-wildfire, pestilent, and disease carrying wildlife

Land Use Impacts on Environmental Health

- Air quality—ozone, particulates
- Drinking water quality—impervious surfaces, runoff pollution, groundwater contamination
- Fish and swimming advisories
- Toxic and hazardous wastes
- Toxic pollution releases
- Noise, congestion, and mental well-being

Land Use Impacts Various Systems

- Hydrologic systems
- Agriculture and other productive land
- Energy and material consumption
- Cultural heritage and community character
- Land use conflicts and “environmental justice” (LULUs)

A Framework for Land Use Planning

- Step 1. Gathering intelligence: Background data and Planning Analysis
- Step 2. Long-range general planning—20 to 50 years with updates every 5 years
- Step 3. District planning—smaller scale, neighborhood, business district, redevelopment areas
- Step 4. Functional planning—transportation, infrastructure, natural environment, parks and recreation
- Step 5. Implementation plans—detail actions necessary to realize the plan’s vision
- Step 6. Building community consensus—part of each step

Emerging Approaches for Environmental Land Use Planning

- Community-based environmental protection—focused on health of ecosystems and people living in definable, geographic place (EPA)
- Watershed management—focused on maintaining water quality (EPA)
- Ecosystem management—focused on maintaining ecological functions (Federal land management agencies)