Sussex County Land Use Model
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Presented By:
Richard Kautz, SC Land Use Planner
Bill McGowan, Extension Agent, Community Development
Carol Bason, UD, Community Viz Specialist
Goals for Today’s Presentation

- Demonstrate the use of ArcGIS & Community Viz in County land use and growth planning
- Review build-out analysis -- Comp Plan Future Land Use Map for Growth & Zoning
- Compare build-out & demographic impacts
- Discuss potential applications
Presentation

• Introduction – Why Community Viz?
• Key Concepts
• Sussex County GIS & Demographic Data
• Community Viz Land Use Model
• Build-Out Applications
  • Sussex County Growth Plan
  • Sussex County Growth with Zoning Plan
• Discussion
  • Use of County-wide Land Use Model
  • Other applications: Sub-area Planning
Key Concepts

- **Land Use**
  - Large scale level (100 A tile), Not Zoning for individual properties
  - Eleven pre-defined, custom land use designations with assigned assumptions (as “painted”)

- **Build-Out Parameters**
  - Mixed Use - ratio of residential to nonresidential land use
  - Efficiency Factors – % of area reserved for roads, open space, easements, SWM, etc.
  - Land Use Efficiency – summer vacancy rates

- **Constraints**
  - unbuildable areas
Sussex County GIS & Demographic Data

- Sussex County Boundary (938 Square Miles)
- 2008 Future Land Use Map
- Sussex County ‘911’ Address Grid
Community Viz Land Use Model

- Define land use “paint” tiles and designations
- Define land use assumptions and variables
- Define land use constraints
- “Paint” land uses
- Run Build-Out
- Analyze Results
SC Grid – 938 Square Miles
SC Land Use Designations

- **Low Density:**
  - T100-Rural *(1 DU/100A; Preserves & Critical Areas)*
  - T2-Sub-Urban *(2DU/A; Cluster SF residential)*

- **Growth Areas**
  - T4-Mixed Sub-Urban *(4DU/A; Village SF/MF, Low Dens. Retail)*
  - T6-Urban Mixed *(6DU/A; Village/Town; Neighborhood Business; MU)*
  - T8-Town Center *(8DU/A; HDR, Municipalities, Biz, Office Retail; MU)*

- **Zoning** *(per 2008 Future Land Use Plan)*
  - T4-Mixed Sub-Urban *(as above ; Mixed Residential Zoning)*
  - TM-Business *(Highway Commercial Zoning)*
  - T30K-Employment Center *(Planned Industrial Zoning)*
SC Land Use Designations

- **Other Designations**
  - T20-Rural *(1 DU/20A; Rural areas, AG, Recreation)*
  - T5-Rural *(1 DU/5A; Rural areas, AG, Recreation & Camping)*
  - T1-Rural Village *(1DU/A; Sussex rural villages)*
  - T200K – Commercial *(Large retail shopping centers)*
Land Use Model Assumptions

- **Focus:**
  - Residential Dwelling Units
  - Nonresidential Floor Area (Square Footage)

- **Impacts:**
  - Population Demographics
  - Residential & Nonresidential Taxes
  - Commercial Employee Statistics
  - Water and Wastewater Usage
  - Vehicle Trips
Land Use Model Variables

- Density
- Nonresidential Square Footage
- Mixed Use Percentage
- Build Efficiency Percentage
- Land Use Efficiency Percentage

Along with the tile area, the above land use variables generate the build-out values and County-wide summaries for number of dwelling units, nonresidential floor area, and number of buildings.
Land Use Constraint


- “Out-of-Play” lands are generally not available for development

- Examples: rights of way, agricultural easements, and publically-owned lands
Land Use “Paint”
Growth Plan

Land Use Designations

- T100A – Rural
- T2 – Suburban
- T4 – Suburban Mixed
- T6 – Urban Mixed
- T8 – Municipality
Growth Plan with Zoning

**Land Use Designations**

- **T100A** – Rural
- **T2** – Suburban
- **T4** – Suburban Mixed
- **T6** – Urban Mixed
- **T8** – Municipality
- **T30K** – Employment
- **TM** – Strip Mixed Use
County Build-Out Results

- Review handout – 4 Scenarios
  - Growth Plan
  - Growth Plan; Out-of-Play Constraint
  - Growth Plan with Zoning
  - Growth Plan with Zoning ; Out-of-Play Constraint
Discussion

- Use of County-wide Land Use Model
- Other Applications: Sub-Area Planning
Other Applications: Sub-Area Planning
Rural Example

- Gumboro Area
  - Existing Land Use
  - Current Zoning
  - Future Vision (Example)
Sussex Grid – Sub-Area Examples
Rural Scenario: ‘Existing Land Use’

“Paint”
Rural Scenario: ‘Current Zoning’

“Paint”
Rural Scenario: ‘Current Zoning’
Build-Out
Rural Scenario: ‘Current Zoning’
Build-Out (drill-down)
Rural Scenario: ‘Future Vision’

Build-Out
Potential Sub-area Planning Grid (example)
Questions?

Thank You

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