

Preliminary tasks for urbanization/land use change component of EPA Ensemble Analyses project



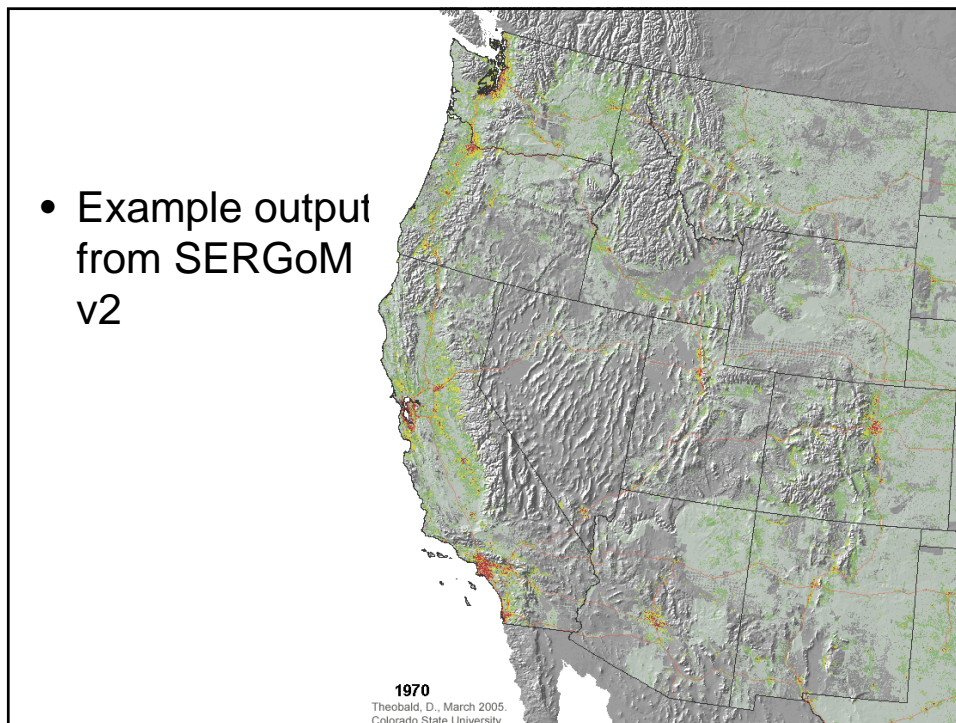
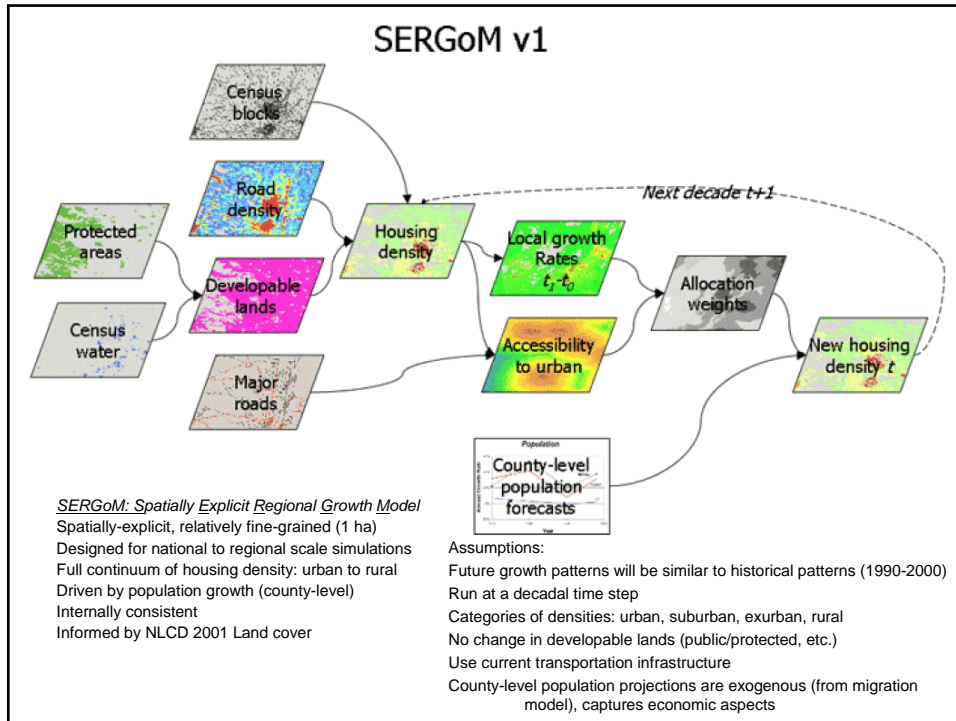
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Outline

- Brief description of SERGoM model, assumptions
- Current status of SERGoM & improvements for v3
- Proposed tasks for this project
- Questions for integration



Improvements to SERGoM model

<i>Data inputs</i>	<i>v2 (current)</i>	<i>v3 (completed ~12/2007)</i>
Housing units	Census 2000 blocks	Census 2000 blocks Groundwater well density for Western 11 states
Developable lands	Protected Areas Database v3 Water polygons Commercial from NLCD 1992	Protected Areas Database v4 +refinements Water polygons Commercial from NLCD 2001 Slope weights using 90 m DEM
Road infrastructure	GDT Streetmap 2003	GDT Streetmap 2006
County population projections	Woods & Poole projections	EPA ICLUS demographic projections State-demographers?

Tasks

1. Produce spatial datasets for coterminous US projections for 2000, 2010, 2020, 2030, 2040, 2050 for:
 - Housing density
 - Population density (reflecting permanent residents)
 - ?Commercial/industrial land uses (for 2000 only)
 - ?Agricultural land uses: irrigated cropland, dryland cropland, rangeland, CaFOs?
2. Aggregate (up-scale) from 1 ha to:
 - 12 km x 12 km resolution
 - 36 km x 36 km resolution
3. Summarize spatial datasets by county

My questions for project integration

- Should population projections reflect IPCC storylines – opportunity from EPA Integrated Climate & Land Use System outputs?
- Land cover – useful to compare NLCD 2001 (from 30 m to 16 km) vs. Global Land Cover Characteristics v2?