Impact of the Water Supply Watershed Protection Act (WSWP) on Property Values in North Carolina

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- Implemented for a variety of reasons including retaining land for agricultural use and environmental protection.
- In theory, these land use restrictions can lead to increased property values from either a shortage of supply or an increased in demand if amenities in the area improve as a result.
Previous Literature

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- Decrease in price: Chressanthis, 1986; Netusil, 2005
Previous Literature

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- Unobserved neighborhood characteristics that affect housing prices may also affect a community's propensity to adopt land-use restriction policies
Research Question

What impact do down-zoning policies have on developed residential land-values?
A Natural Experiment: The North Carolina Water Supply Watershed Protection Act (WSWP)

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- Offers an exogenous policy change to consider the impact of down-zoning laws on local land-prices
The WSWP

Water Supply Watersheds
The WSWP
Data: Geospatial Data

- Census data at the census block-group level in 1990 and 2000
- Block-groups are the second smallest geographic unit with between 600 and 3,000 people
- The CensusCD 1990 Long Form in 2000 Boundaries from Geolytics
- Possible extension to using micro data at the block level
- Individual housing prices geo-referenced to the census block
- Minimize boundary problems

- Environmental Data
  - Water supply watershed from NCDENR, DWQ and NCCGIA
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Methodology

• Difference in Difference (DID) approach
Methodology

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- Change in property values between 1990 and 2000 for residential properties just inside and just outside of the watershed boundaries
  - Narrow spatial focus helps control for unobserved spatial confounders
Thank You!