

## Smarter Critical Systems and Built Environment: Infrastructure Solutions



Dr. David Salvesen  
University of North  
Carolina Chapel Hill

Dr. David Salvesen conducts research, mentors students, and provides planning and technical assistance to communities across North Carolina. Salvesen's research focuses on the impact of land use policies, issues, and trends on the quality and character of affected communities and the environment. He has taught graduate courses on land use, natural disasters, and dispute resolution, as well as undergraduate courses on sustainable development. Salvesen is interested in helping communities grow in ways that are sustainable and grounded in processes that are inclusive, equitable and collaborative.



UNC  
INSTITUTE FOR  
THE ENVIRONMENT



# Floodplain Buyouts: Promises & Pitfalls

David Salvesen, PhD - University of North Carolina

NC Coastal Resilience Summit

Havelock, NC

June 12, 2019

# A Primer on Floodplain Buyouts

- Purchase of flood-prone properties
- Program is voluntary
- Typically funded by FEMA grants (HMGP)
- Homeowners paid fair market value, pre-flood
- Acquired homes are relocated or demolished
- Property must remain undeveloped forever



# Uses of Acquired Lands





# Most Common Use: Vacant Lot



# Advantages of Buyouts

- Permanently reduces flood risks
- Returns land to floodplains
- Provides opportunity to create public amenities





# Avoided Losses

Operating emergency  
shelters

Evacuation

Search and rescue

Debris removal

Infrastructure repair

Staffing EOC



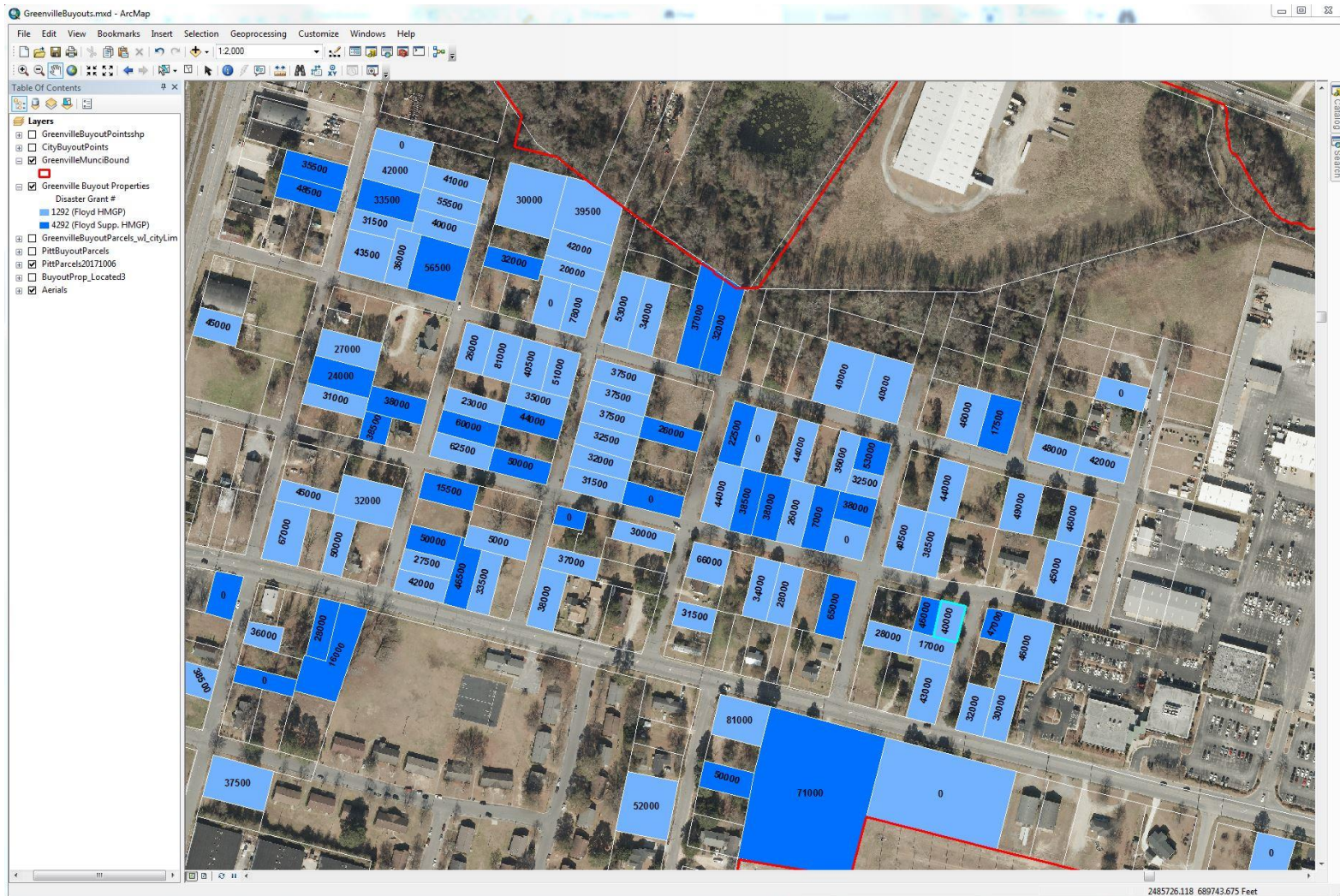
# Disadvantages of Buyouts

- Loss of tax base
- Maintenance of acquired properties
- Difficulty finding replacement housing
- Adverse impacts to neighborhood
- Patchwork pattern limits use
- Timing





# Patchwork Pattern



# Recommendations

- Reduce need for future buyouts (aggregate risks)
  - Map future flood hazard areas
- Identify homes for purchase in advance
- Be strategic with acquisitions
- Create incentives for participation
- Develop local and state funding sources
- Partner with land trusts to restore floodplains and manage open space

# Contact Information

David Salvesen, PhD

[salvesen@unc.edu](mailto:salvesen@unc.edu)

Link to case studies:

<https://www.eli.org/sustainable-use-land/floodplain-buyout-case-studies>



UNC  
INSTITUTE FOR  
THE ENVIRONMENT



# Austin, MN

