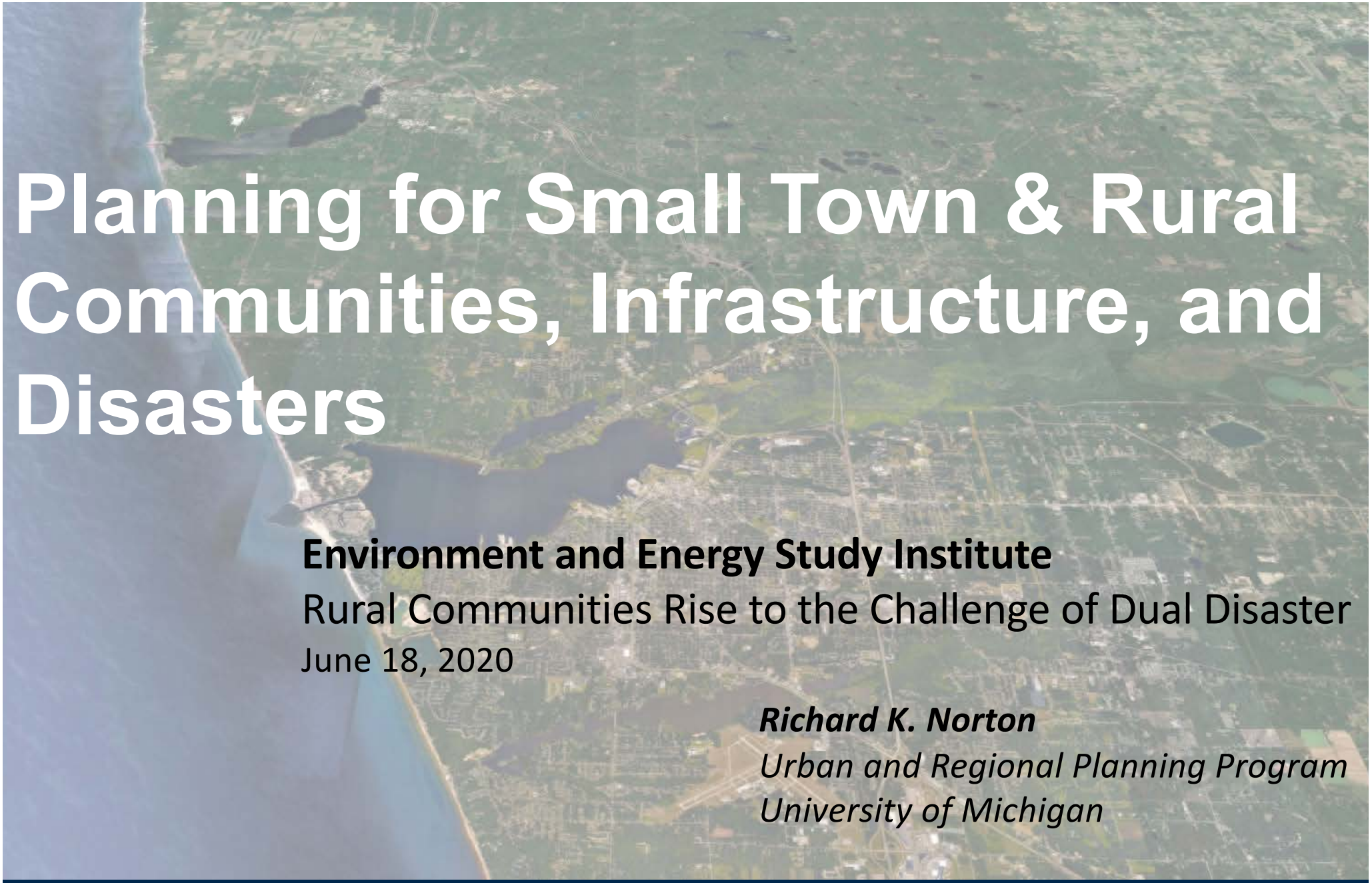

Planning for Small Town & Rural Communities, Infrastructure, and Disasters

Environment and Energy Study Institute

Rural Communities Rise to the Challenge of Dual Disaster

June 18, 2020

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Thumbnail History:

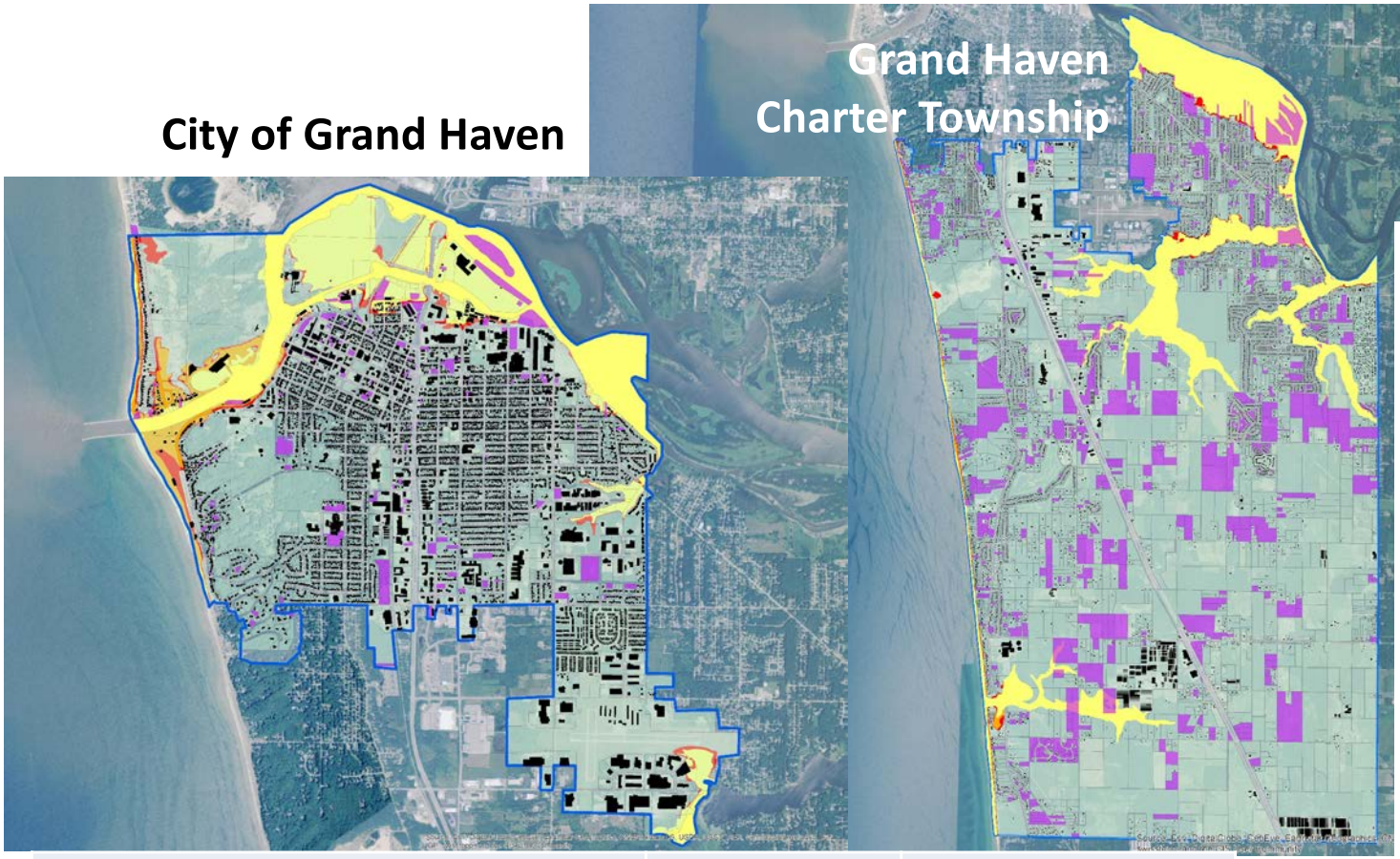
Rural → Rural / Urban → ~ Rural / Exurban / Suburban

	1860	~1920	~1950s	Today
Approx Pop (M)	31	106	165	332
% Pop 'Rural'	~ 80%	~ 50%	~ 33%	~ 20%
Rural Land (M ac)		~ 1,700	~ 1,500	~ 1,400
% Land Rural		~ 90%	~ 80%	~ 75%
	Many, smaller farms Market towns A few cities	Industrial cities Market cities Rural	Cities Suburbia Rural	Cities Edge cities / suburbs Exurbia Fewer, larger farms

Small Town & Rural Coastal Michigan Today

City of Grand Haven

Grand Haven Charter Township



Buildings

Buildable Parcels

Flooding / Coastal Hazard
(Frequency / Severity)

High / Low

Mod / Mod

Low / High

	Grand Haven City	Grand Haven Township
Approximate GL Shoreline (mi.)	2	7
Land Area (sq. mi.)	5.8	28.7
Approximate Total Population	10,000	15,000
Population Density	2.7 persons /acre	0.8 persons / acre
Total Parcels	5,656	6,599
Avg. Parcel Size (acre / parcel)	0.66	2.78
Moderate Storm - Parcels at Risk: # (%)	887 (16%)	924 (14%)

(Images Not on the Same Scale)

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Ongoing Challenges: Being Rural

- Business of farming / forestry
- Environmental
- Demographics
- Urbanization pressures
- Higher poverty, unemployment, disabilities
- Lower educational opportunities, diversity

Ongoing Challenges: Planning For Rural

Scale

- Per-capita cost of ~ *urban* infrastructure
  (Roads, water, wastewater, stormwater, broadband)
- Per-capita cost of services
  (Police, fire, EMS, hazard/emergency response)
- Governance *(administration, analysis, planning)*

Politics / Culture

- Government / regulation
- Property rights / individualism

Case Study: Midland Flood

Credits: MLive.com (photos by Neil Blake and Jake May) and Detroit Free Press – May 20, 2020

Case Study: Midland Flood

Credit: Detroit Free Press – May 20, 2020

Some Numbers:

- 2 dams failed
- 10,000 evacuated
- 3,700 properties damaged
- 2,300 homes damaged
  (only 14% had insurance)
- $190 M in losses
- $ 55 M response / infr costs

- 2,500 dams state-wide
- 1,061 regulated
- 2 state dam safety inspectors
- 5 dams in critical condition

Vision:

Sustainable & Adaptable Communities & Landscapes

Rural

- Rural: Working + Natural
- Physically Resilient: ↓ hazards
- Economically Resilient: Diverse/green/amenity

Small Town

- Small Town Compact
- Physically Resilient: ↓ hazards
- Economically Resilient: Local/CSAs

Urban (City)

- Urban Dense
- Physically Resilient: ↓ hazards
- Economically Resilient: More global

(Kind of) New Challenges

- New normal
- Disconnects, thousand cuts, & boiling frogs
- Political polarization
- On-size fits all silver bullets (landscape dumb)
- Under-investment in government
- Unfortunate (policy) expectations
- Loss aversion > prudence

New Directions

- Participation before, not after
- Good governance (government)
- Landscape-smart policies
- No-regrets policies
- Learn to live with nature (relocate / adapt, then engineer as last resort)
- Stewardship economics

Questions?