Changes in Green Space

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Ellen Esch, Community Development

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Today’s overview

- Understanding green space and land use
- Describing how our region has changed in the past
- Variation in green space across land uses
- Intersection of green space and equity
- Leveraging green space to inform a more sustainable future

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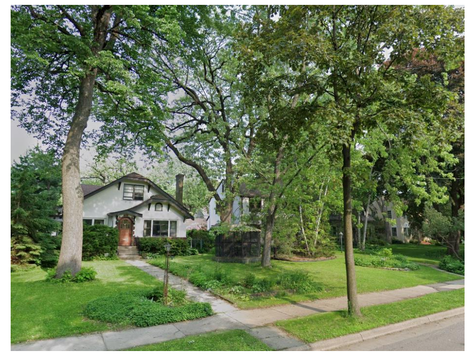
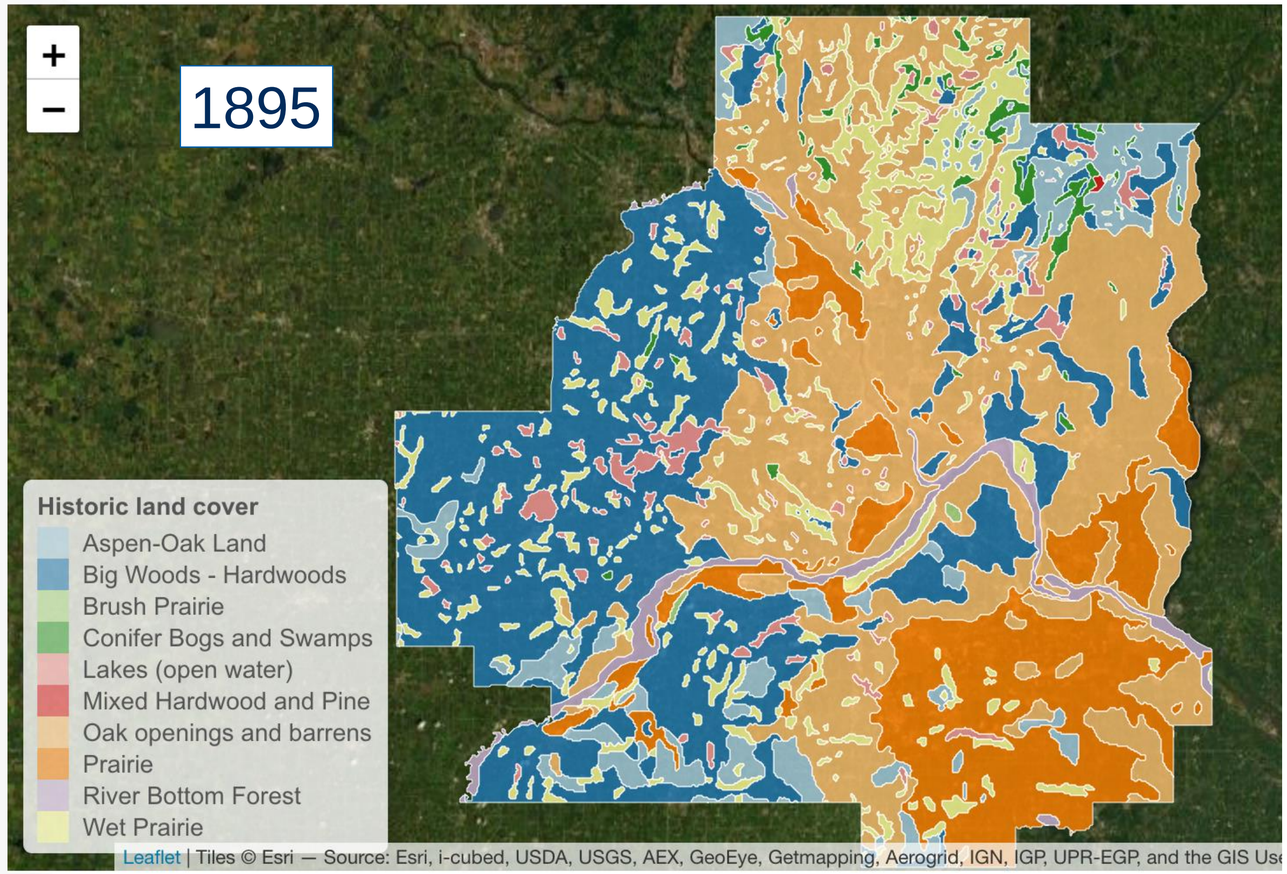
“Green Space” versus Land Use

- “Green space” describes plant-dominated areas
  - Can exist within any “land use”
  - Provides critical ecosystem services including: clean air, clean water, biodiversity habitat
- Land use describes human activities
  - Provides an understanding of human activities and development patterns

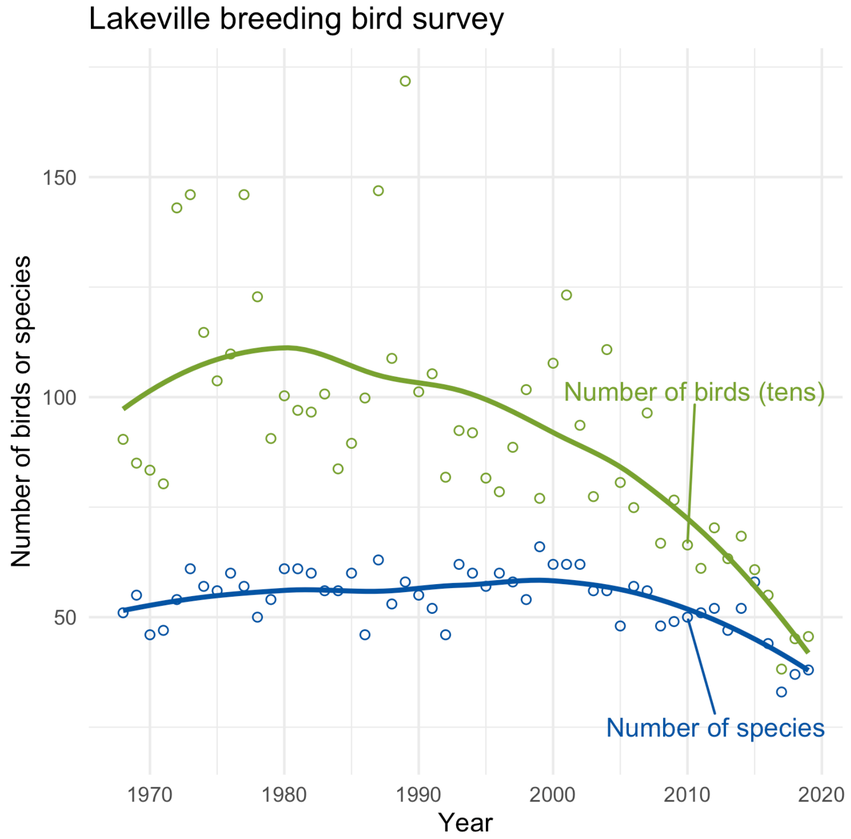
Profound land use and ecosystem changes over 100 years

- Complete vegetation turnover



Source: Public land survey of vegetation

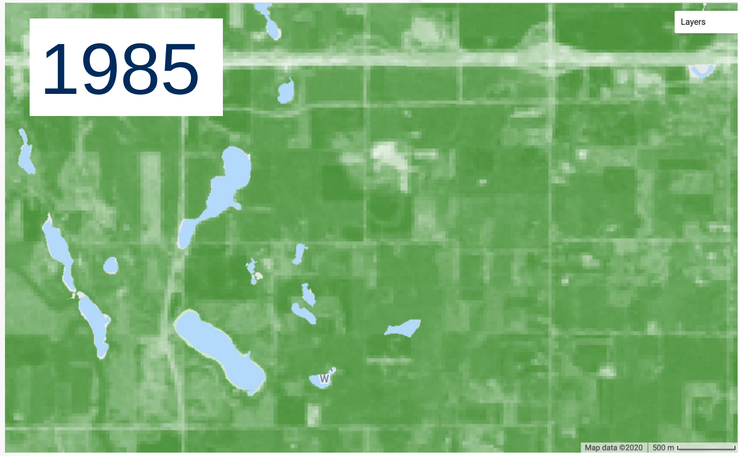
- Long-term declines in ecological function regionally and globally

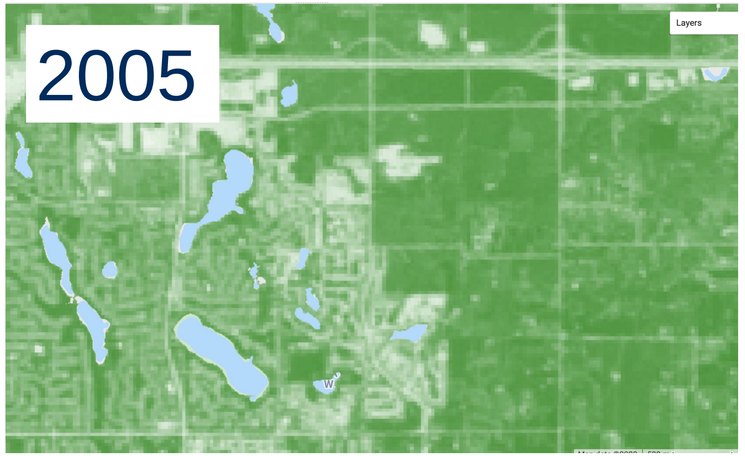


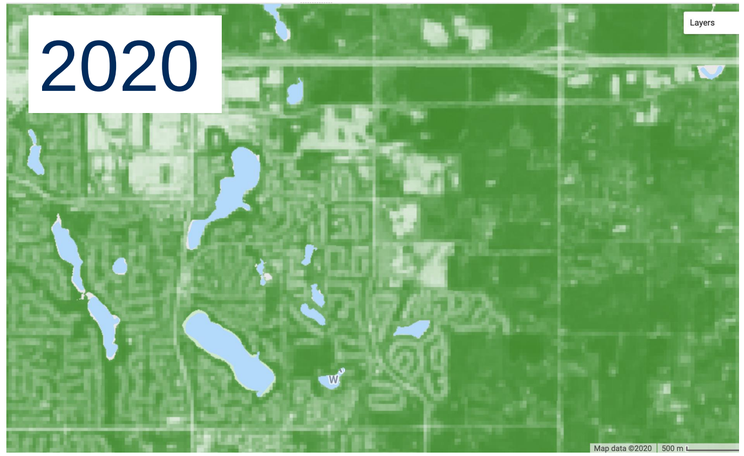
Source: Breeding Bird Survey

36 years of green space change from satellite imagery

- Satellite-derived Normalized Difference Vegetation Index (NDVI) measures “greenness” in real time
- Vegetation quantity ≠ vegetation quality
- Woodbury shows loss of green space with land consumption, but re-vegetation is occuring

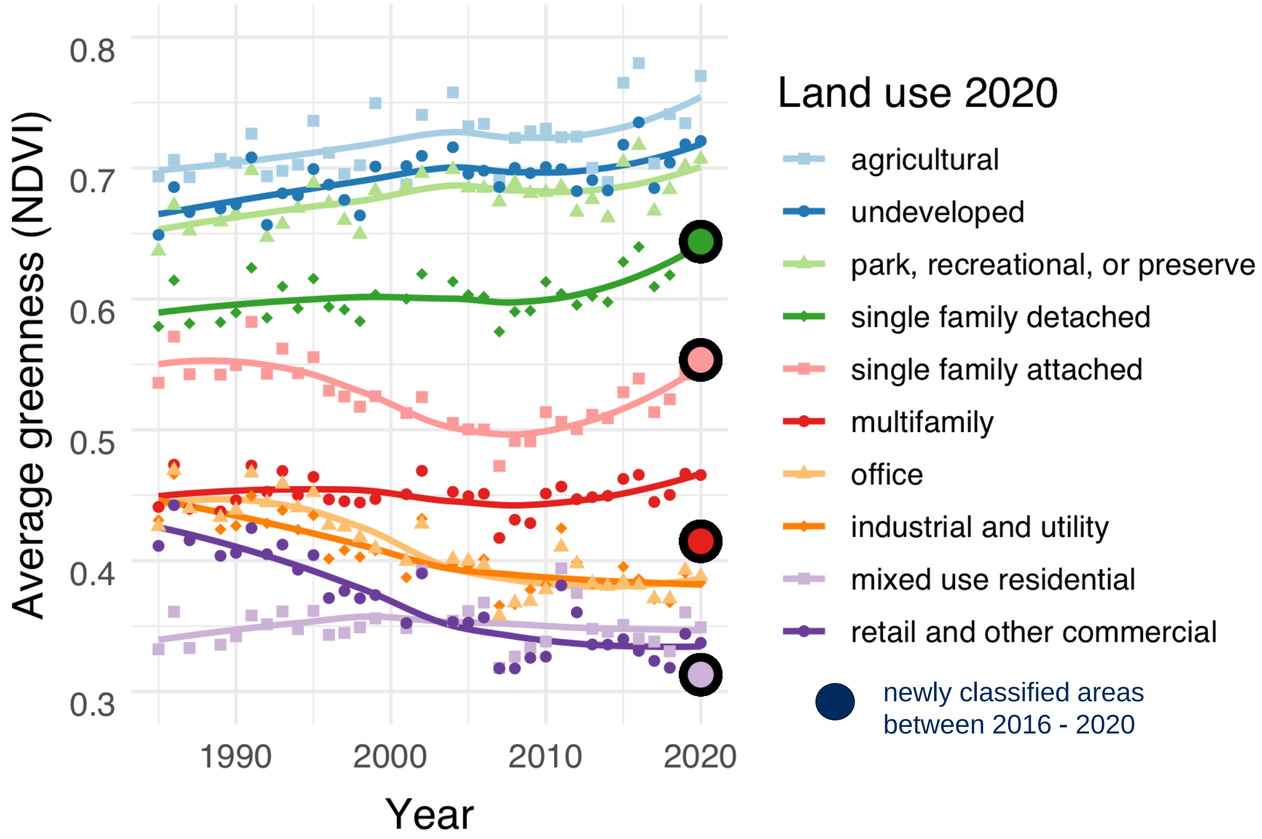




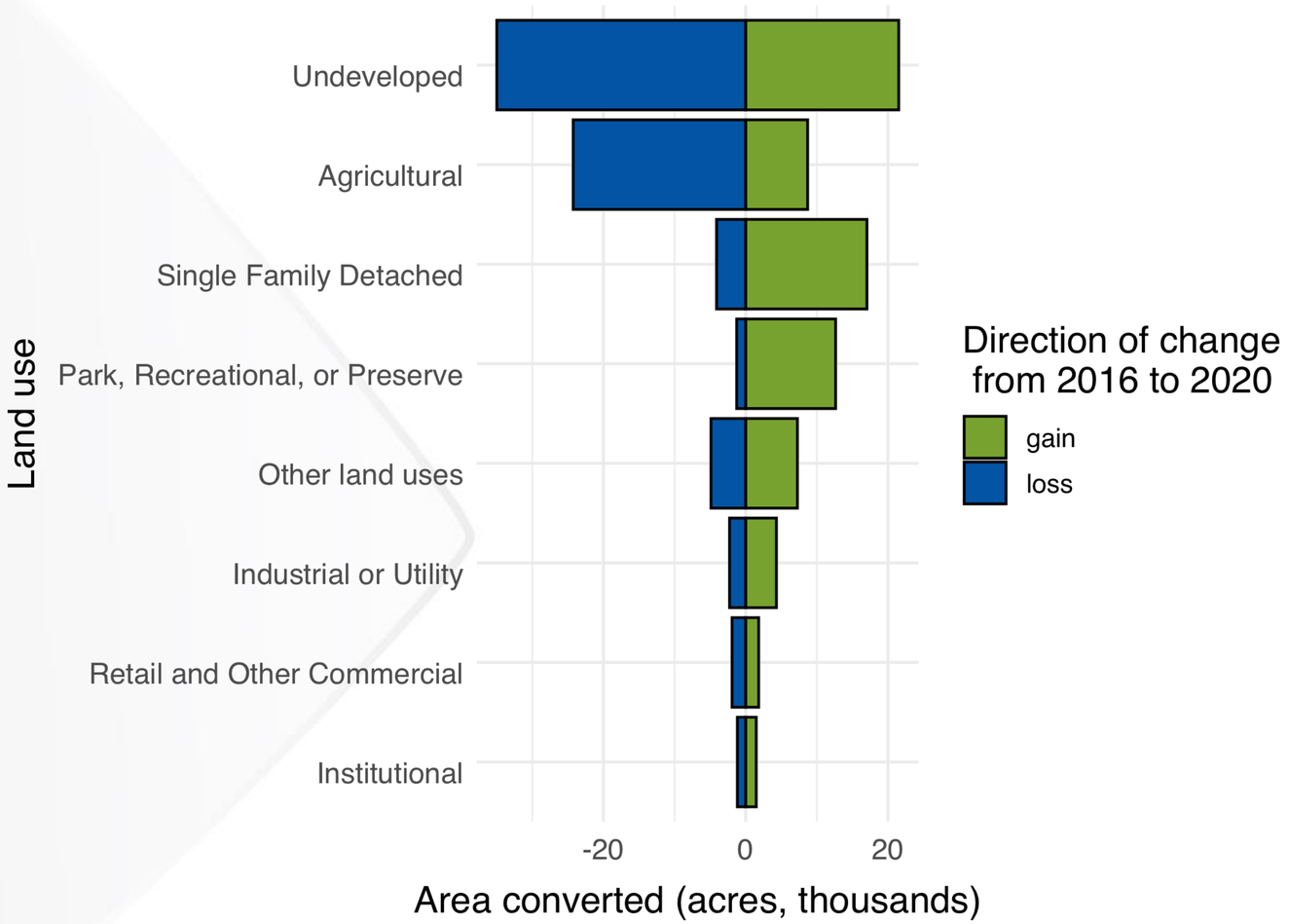


Contemporary land use is linked to differential patterns in green space change

- 1984 is not a “gold standard” for greenspace
- Agricultural, undeveloped, and park land uses are regionally important “green spaces”
- Evidence of re-vegetation patterns with residential development
  - “Greening” new multifamily and mixed use residential land use may be of particular importance
- Current non-residential areas have lost greenness

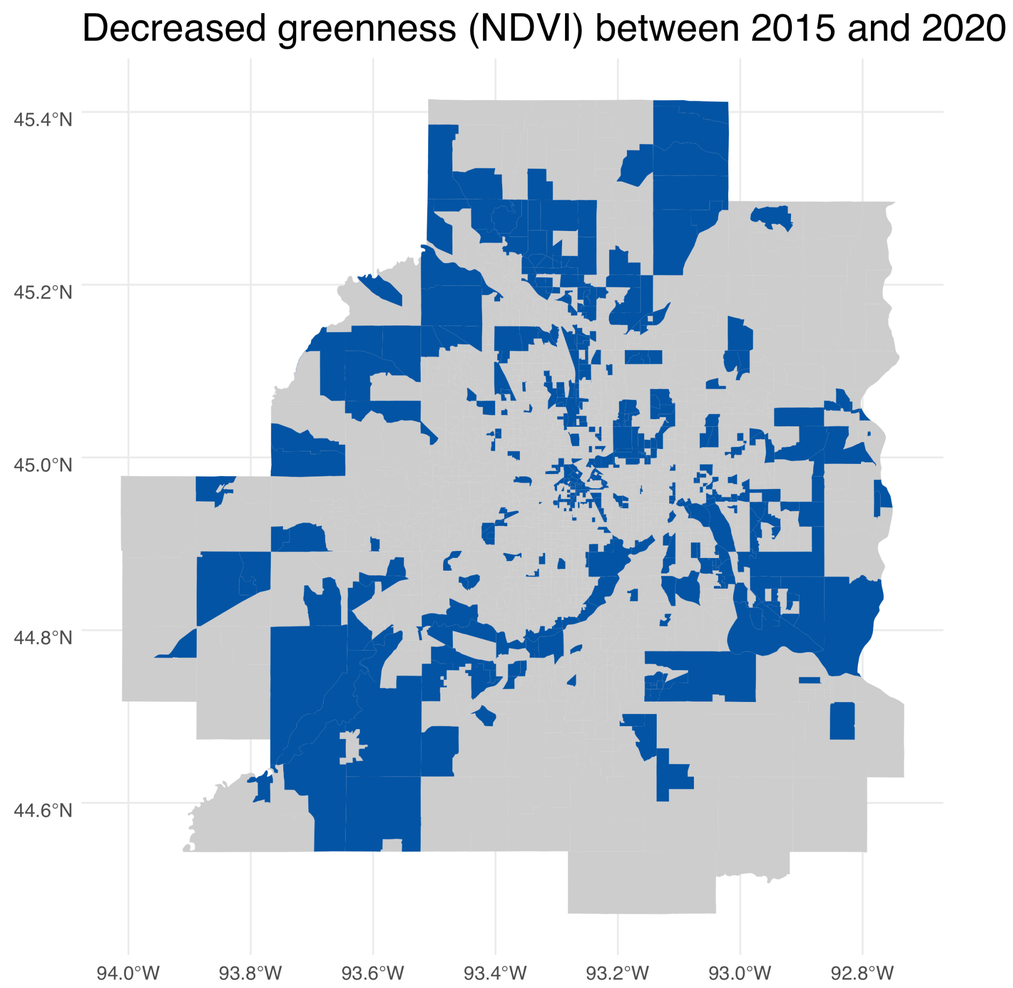


Land consumption occurs disproportionately over the greenest areas



- Net loss in Agricultural and Undeveloped land from 2016 linked to greenness declines
- Net gain in Park, Recreational, or Preserve land could represent an opportunity to offset green space loss

Spatial relationships exist in green space change

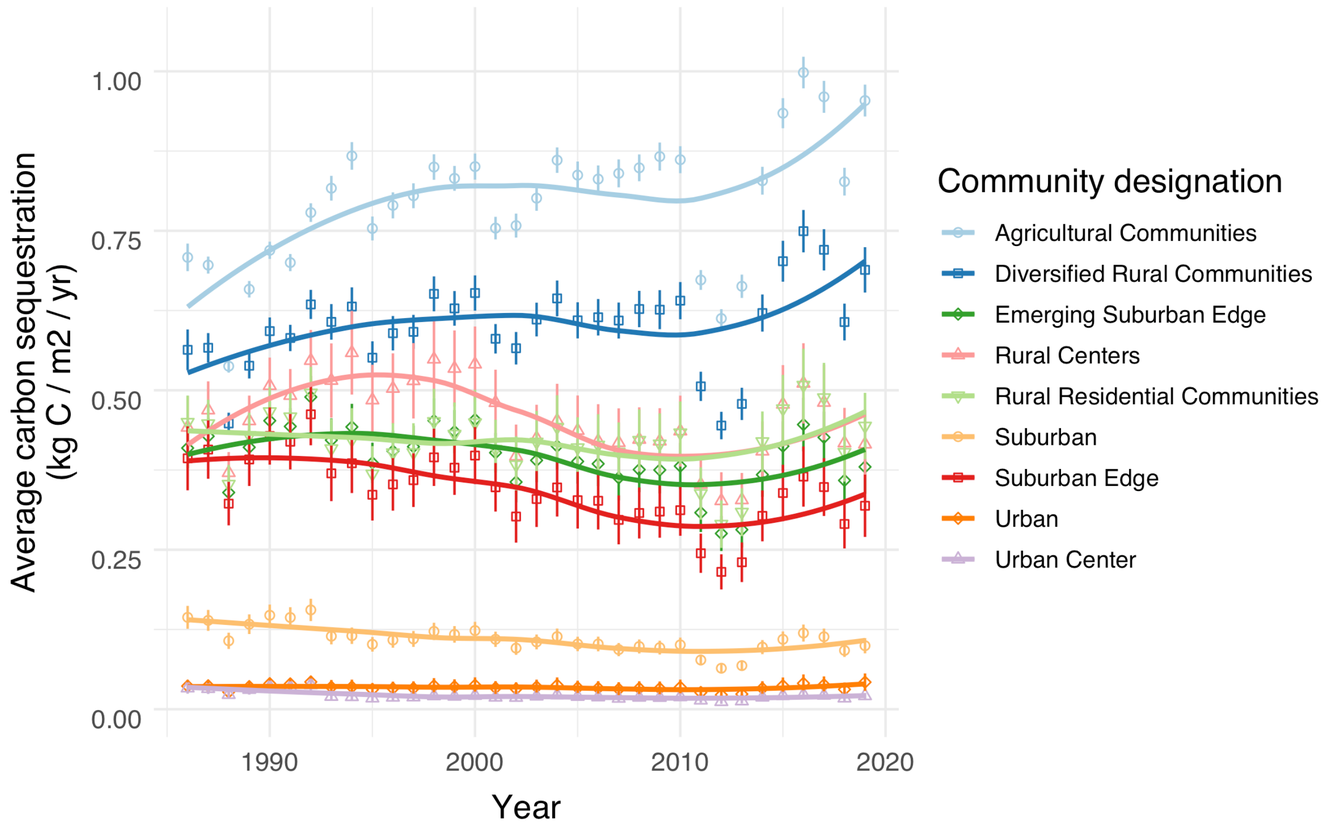


- ~500 block groups have seen greenness declines since 2015

BIPOC and low income residents have less green space

- Block groups have less green space when:
  - More than 25% people of color
  - Median household incomes are below $100,000

Agricultural communities are important for natural climate solutions



Agricultural areas have the largest existing carbon pools ('greenness') *and* the highest carbon sequestration rates

Evolving agricultural technologies and markets could contribute to natural climate solutions

Managing existing carbon stocks and future sequestration rates could be critical to reaching climate goals

Contact Us

Name: Ellen Esch
Email: ellen.esch@metc.state.mn.us

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