

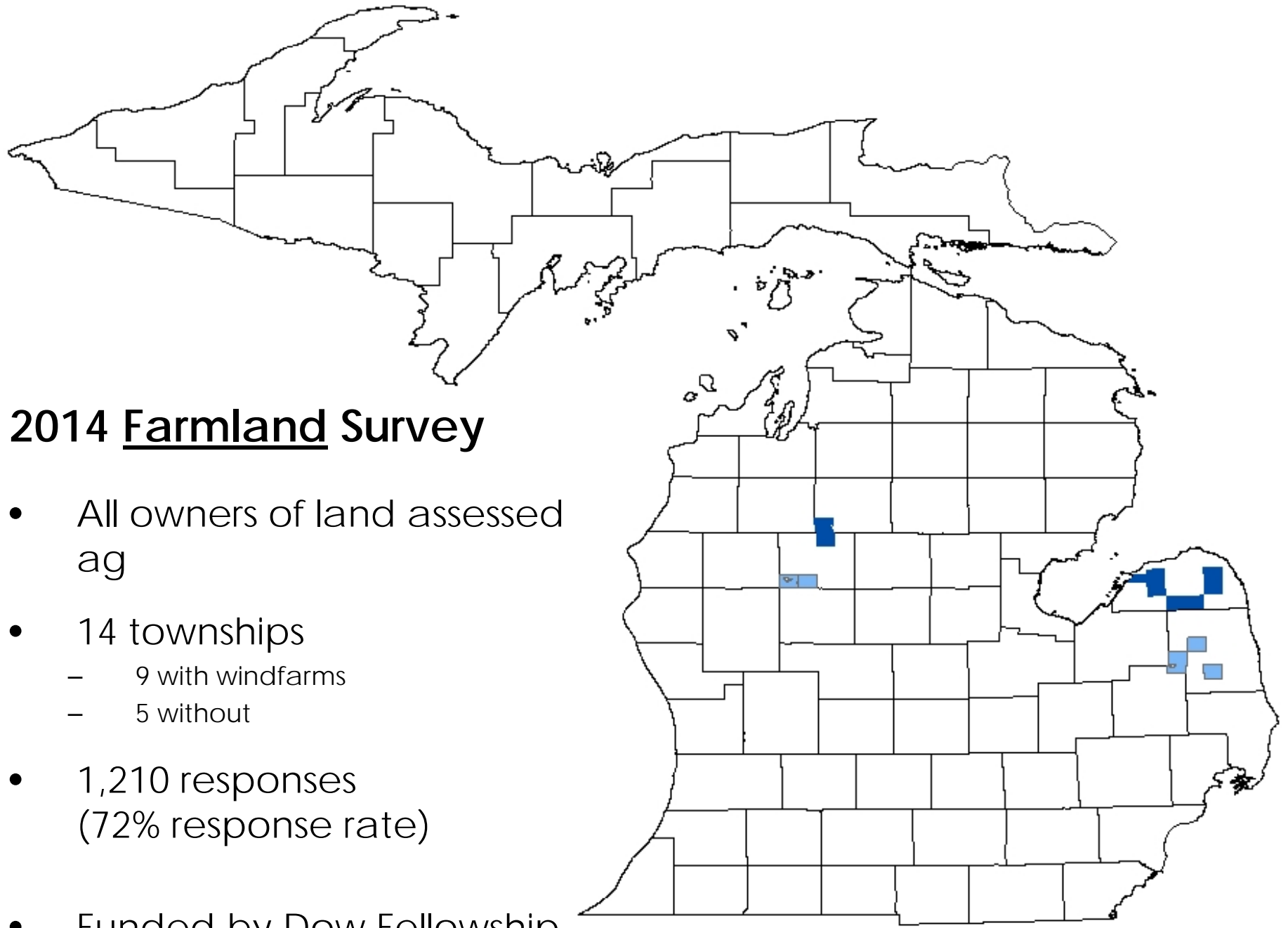
Lessons Learned from MI's Windfarms

MMEA Fall Conference
October 5, 2017

Sarah Mills, PhD

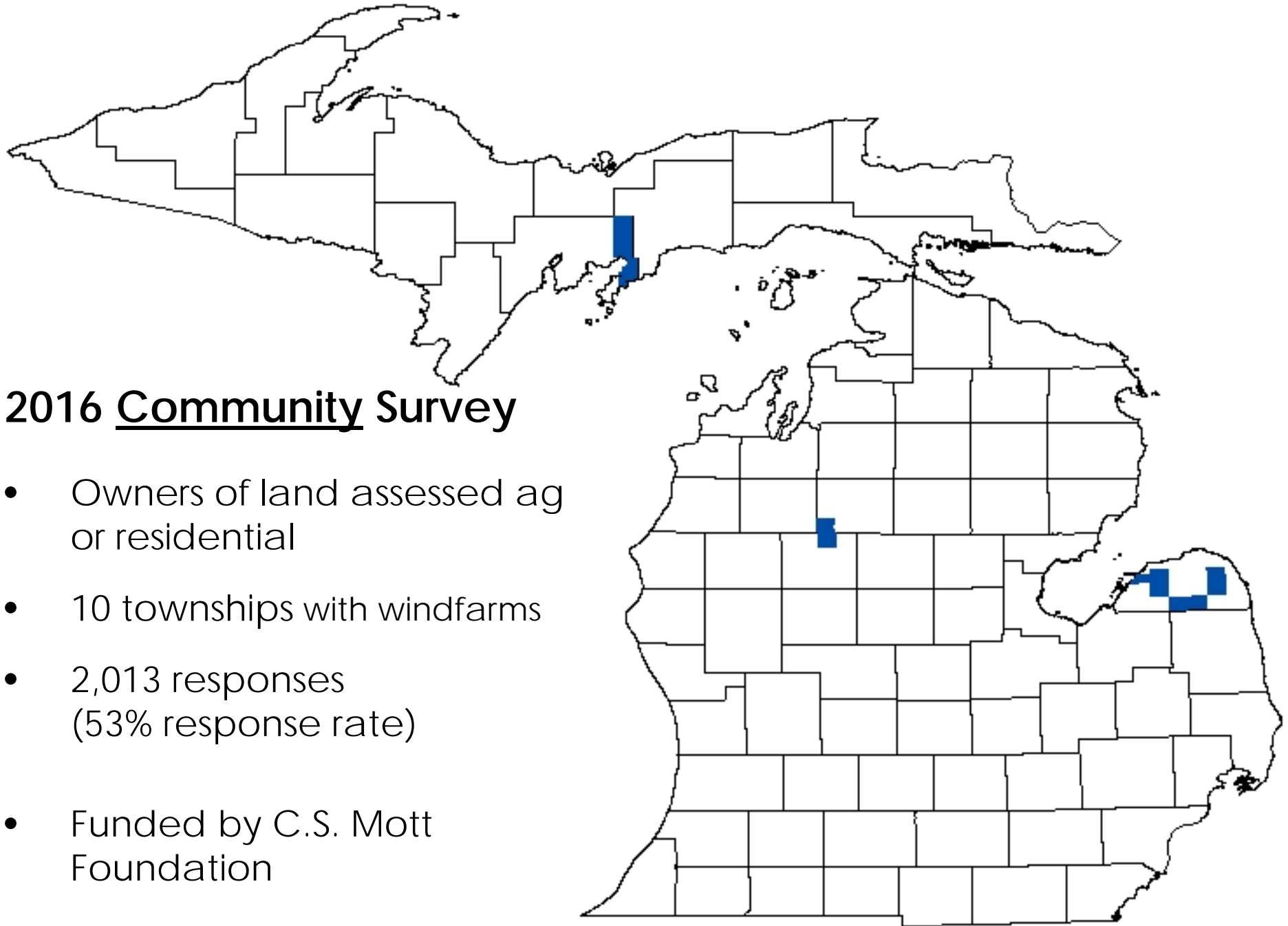
Why this research?

- Investigate Gratiot & Huron County claims of farmland preservation
- Understand why such different experiences



2014 Farmland Survey

- All owners of land assessed ag
- 14 townships
 - 9 with windfarms
 - 5 without
- 1,210 responses
(72% response rate)
- Funded by Dow Fellowship



2016 Community Survey

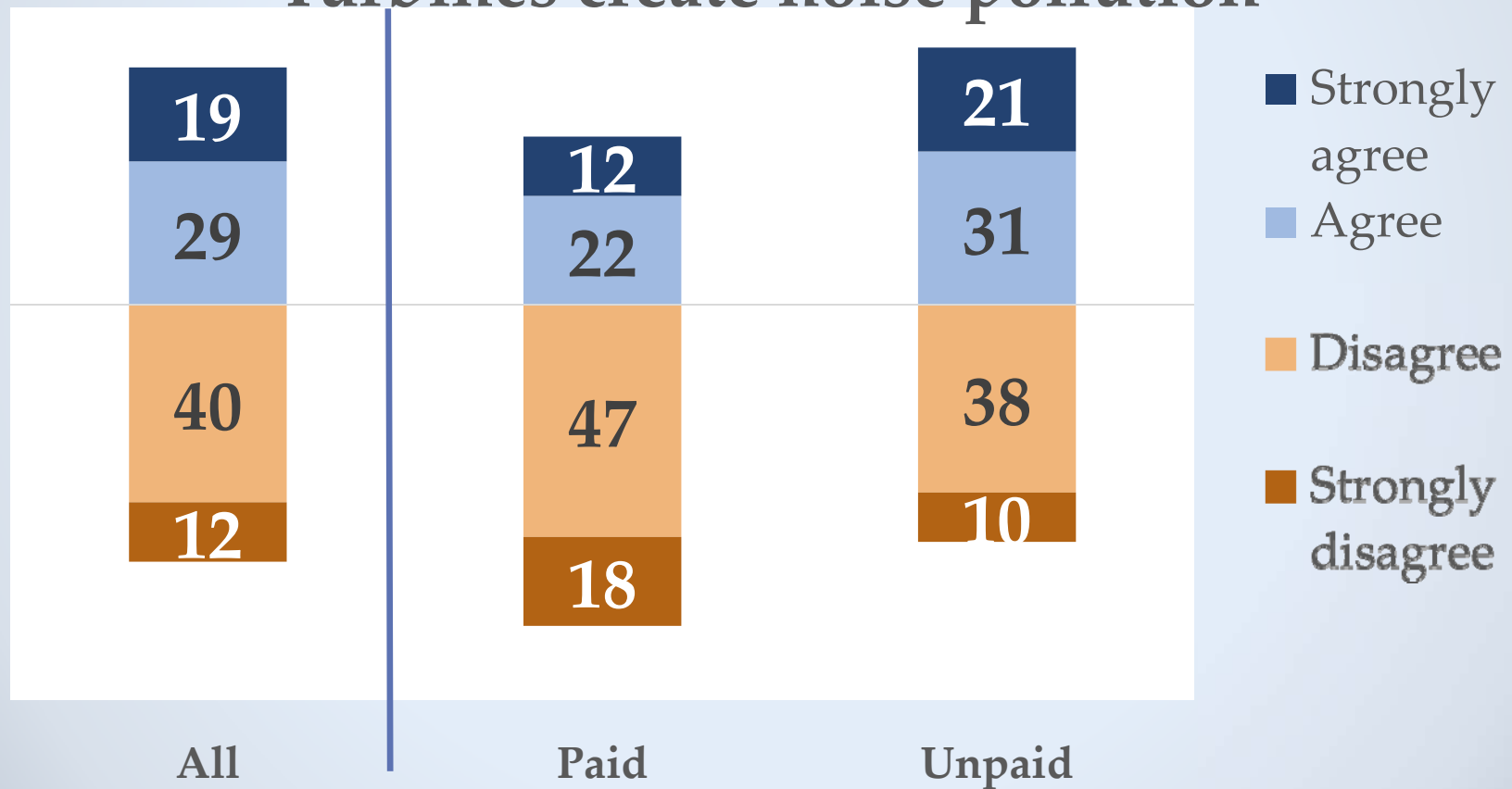
- Owners of land assessed ag or residential
- 10 townships with windfarms
- 2,013 responses (53% response rate)
- Funded by C.S. Mott Foundation

Data about the negative impacts

- Views on noise, visual impact, property values roughly 50/50
 - Financial stake = rosier view
 - OR
 - no financial stake = more soured view
 - BUT STILL SPLIT OPINIONS**

Noise

Turbines create noise pollution



Data about the negative impacts

- Views on noise, visual impact, property values roughly 50/50
 - Financial stake = rosier view
 - OR
 - no financial stake = more soured view

BUT STILL SPLIT OPINIONS
- Most don't (72%) see health impacts, but some do
- Majority (70%) don't think it's divided the community
 - Even in some pretty contentious projects

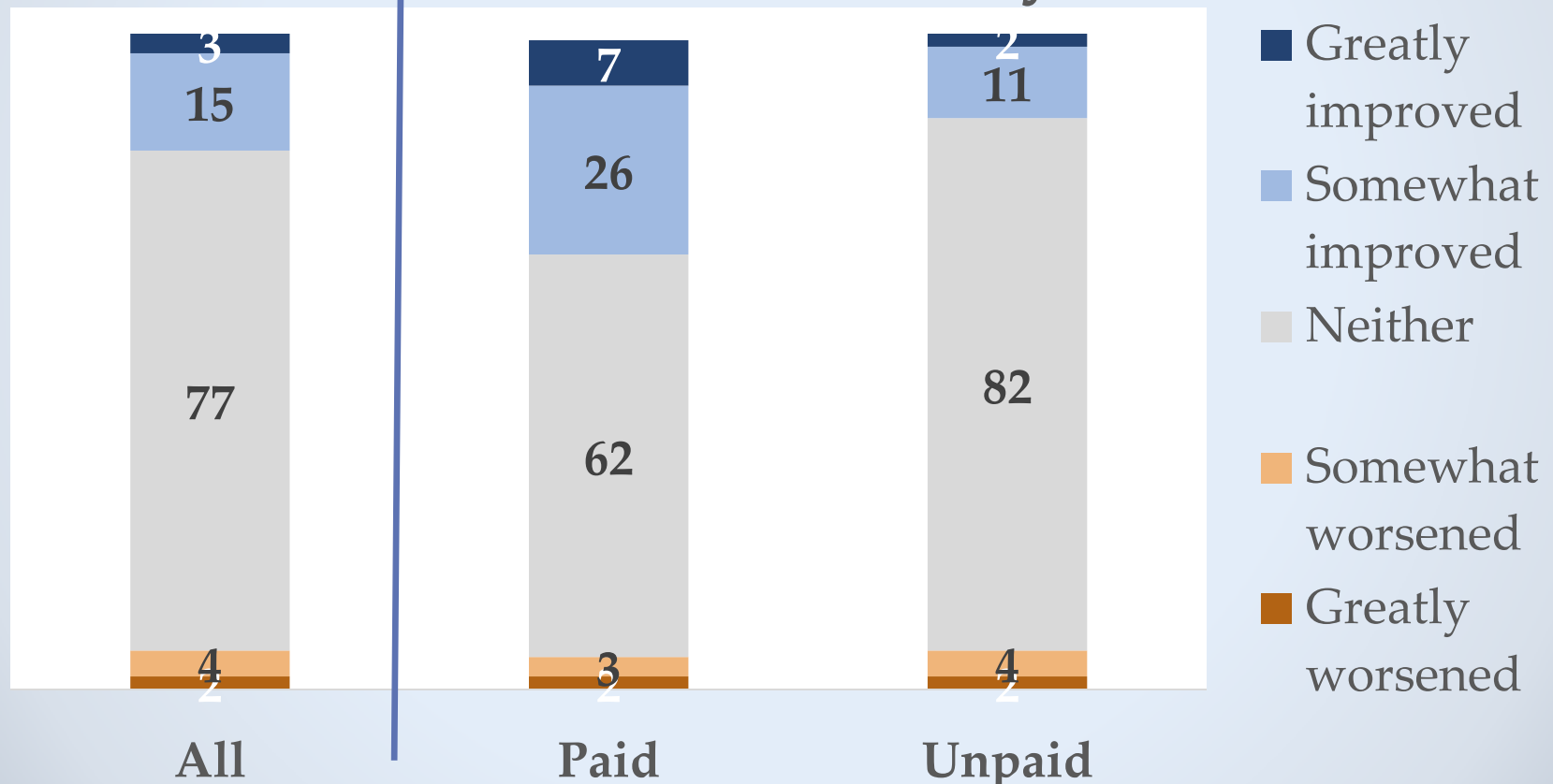
Data about the positive impacts

- Most (78%) see job creation with caveat about types of jobs
- Majority (60%+) haven't seen changes to roads, townships services, county services, or local schools
 - Despite pretty substantial payments
 - Likely because of how money being used: plug holes, do more of same

Tax Benefits

\$2.749 Million to
county gov't in
Huron County in 2015

Turbines' effect on county services

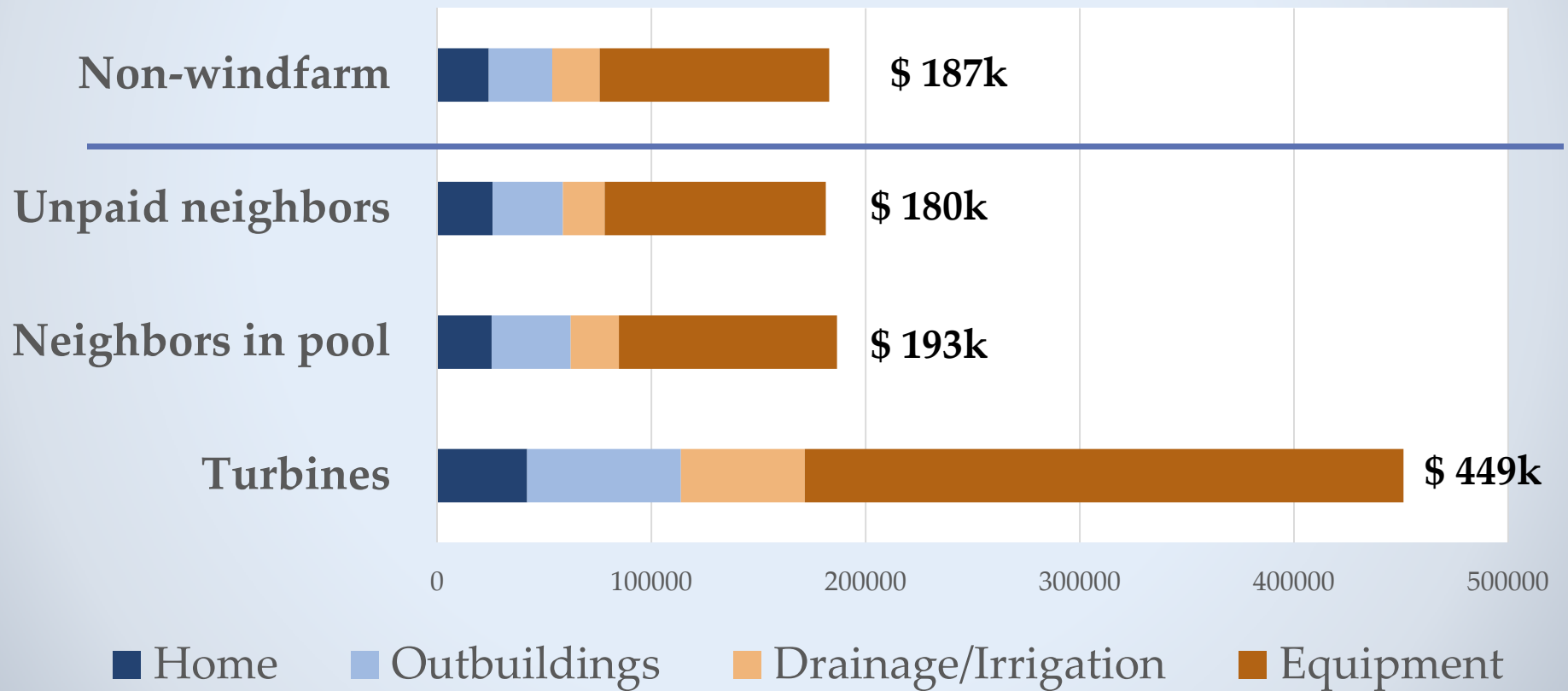


Data about the positive impacts

- Most (78%) see job creation with caveat about types of jobs
- Majority (60%+) haven't seen changes to roads, townships services, county services, or local schools
 - Despite pretty substantial payments
 - Likely because of how money being used: plug holes, do more of same
- Landowner payments linked to substantial increase in on-farm investment (2x neighbors, control) and increase in succession planning

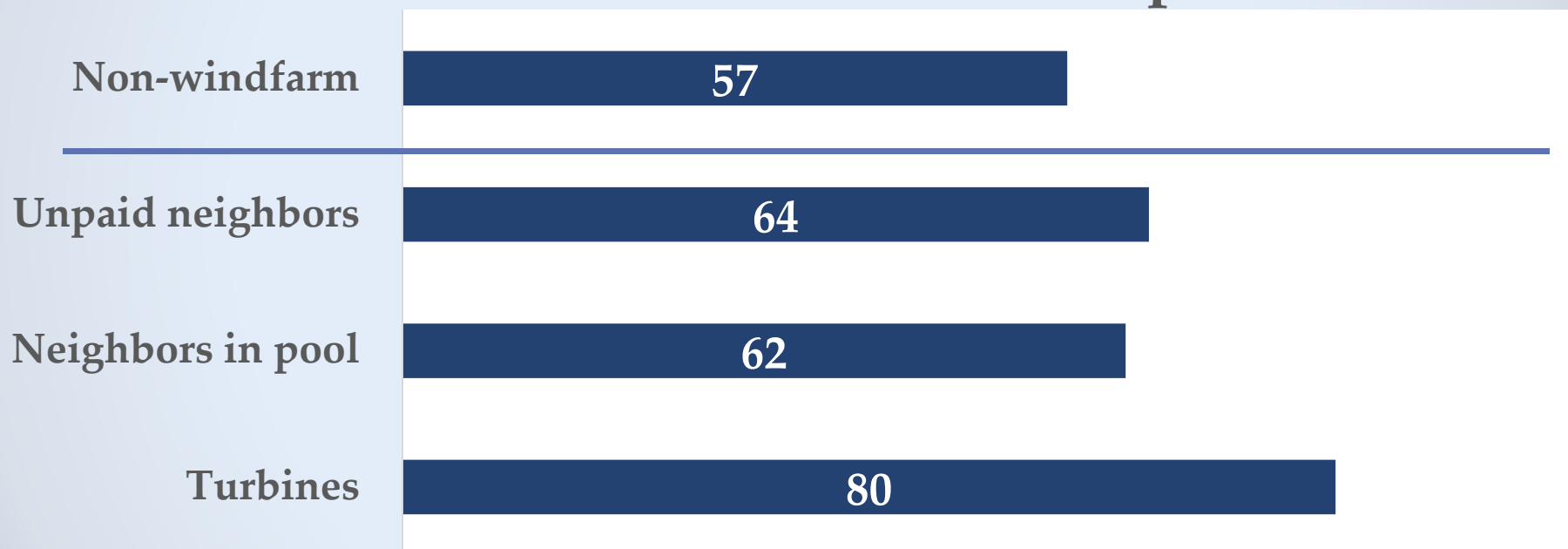
Farm Investment

Investments over 5 years: 2009-2013



Farm Succession

% that have farm succession plan



Overall drivers of attitudes

- Direct compensation
- Type of land owned
 - secondary vs. primary residence
 - farmland / rental property *only*
- Being within earshot of turbines
- Attitudes about process, wind developer

What Happened with Huron Wind?

- Previous experiences (some good, some bad)
 - Many different wind developers in Huron County
 - Tax table changes a huge concern
- Turbine fatigue: “we’ve done our part”
- County voting = lots of heterogeneity
 - Not all farmers/farming families
 - Yeas: 26% - 54%
 - Turnout: 9% - 61%
- Those who cared, voted

What's the Lesson?

- Windfarms = economic development proposition
 - Compatible with ag
 - Not with residential growth, tourism
- Indirect economic benefits not felt by average landowner
- Business models that directly pay more landowners keep the peace
- Wind developers, local officials need to act transparently



Gerald R. Ford
School of Public Policy



The CLOSUP Wind Project

Sarah Mills, Project Manager

Phone: (734) 615-5315

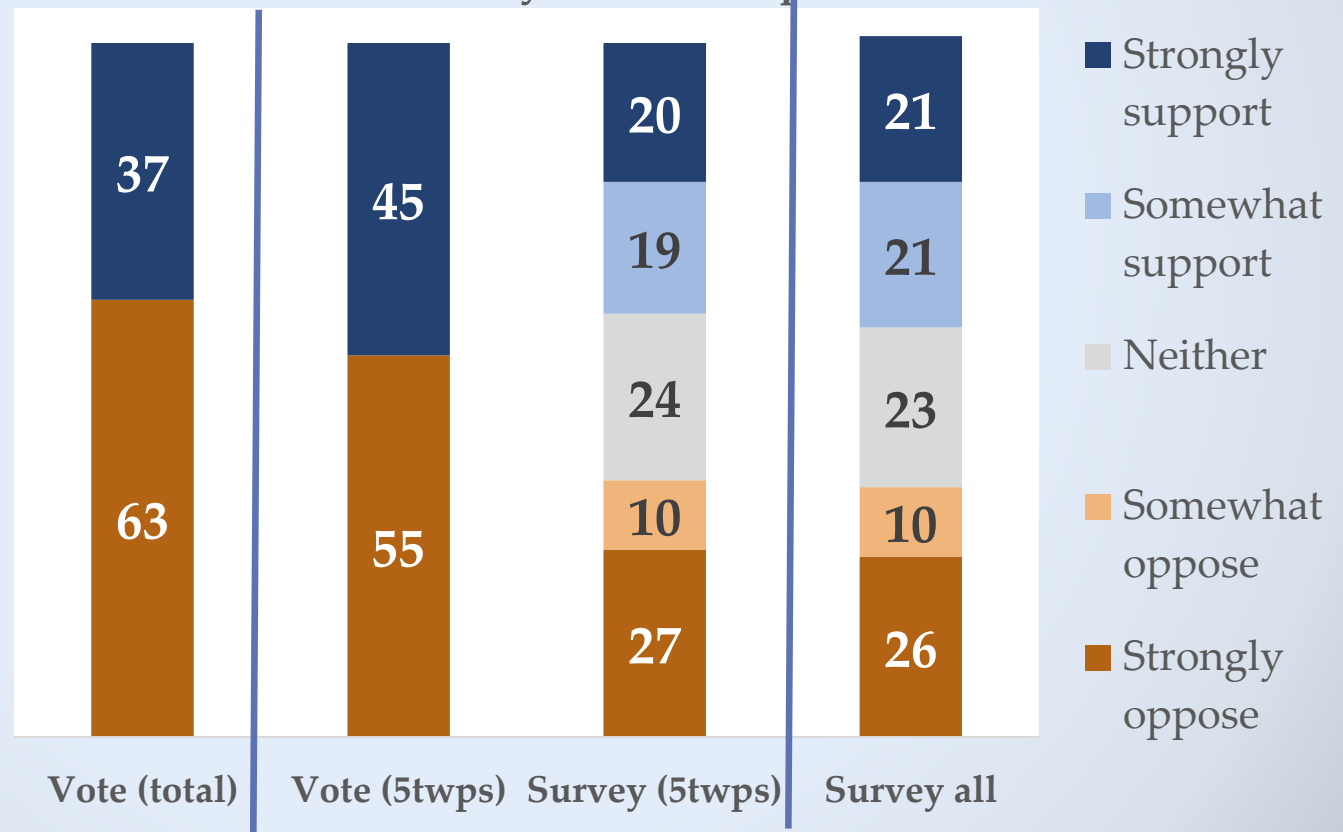
Email: sbmills@umich.edu

Web: www.closup.umich.edu/wind

May 2 Referendum vs. Survey

Willingness to host additional turbines
in your township

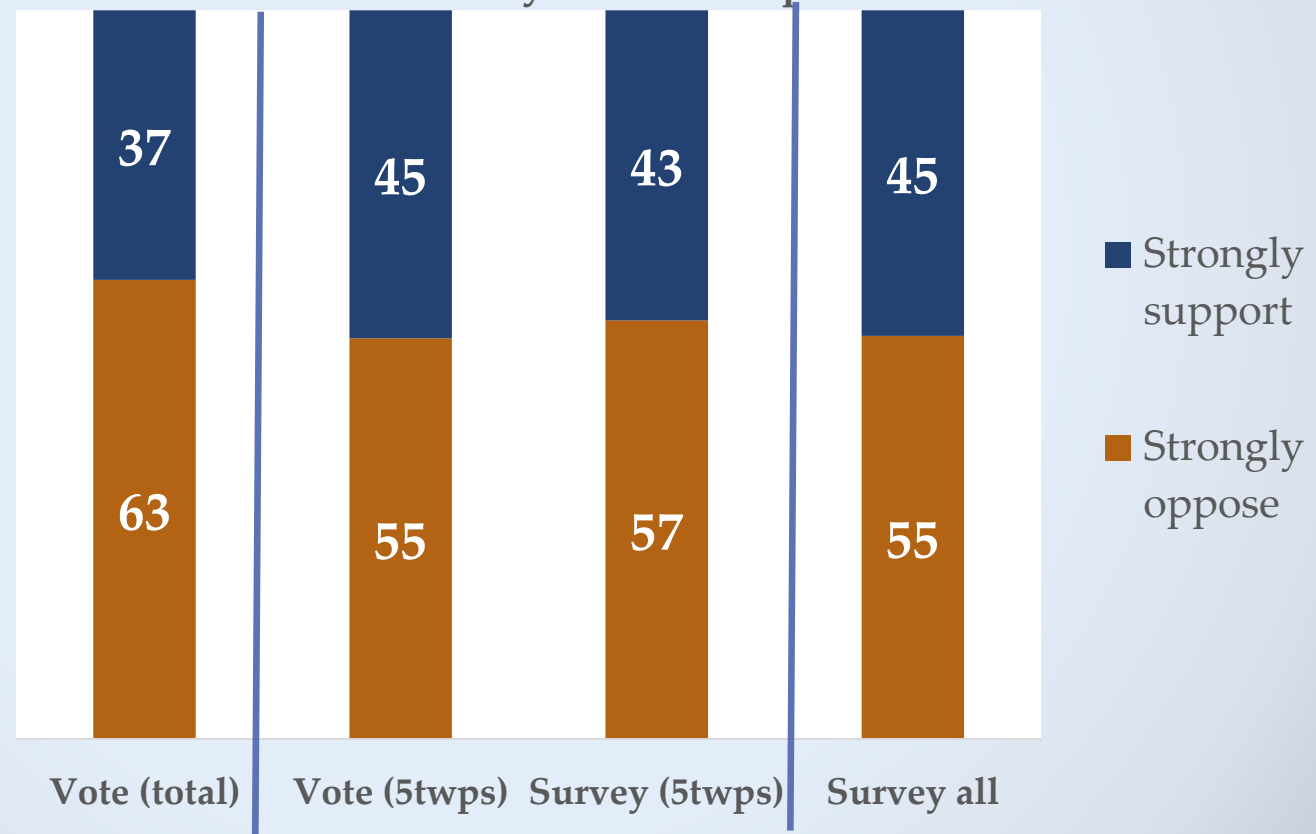
- 5 twps.
 - Bingham
 - Bloomfield
 - McKinley
 - Sheridan
 - Sigel



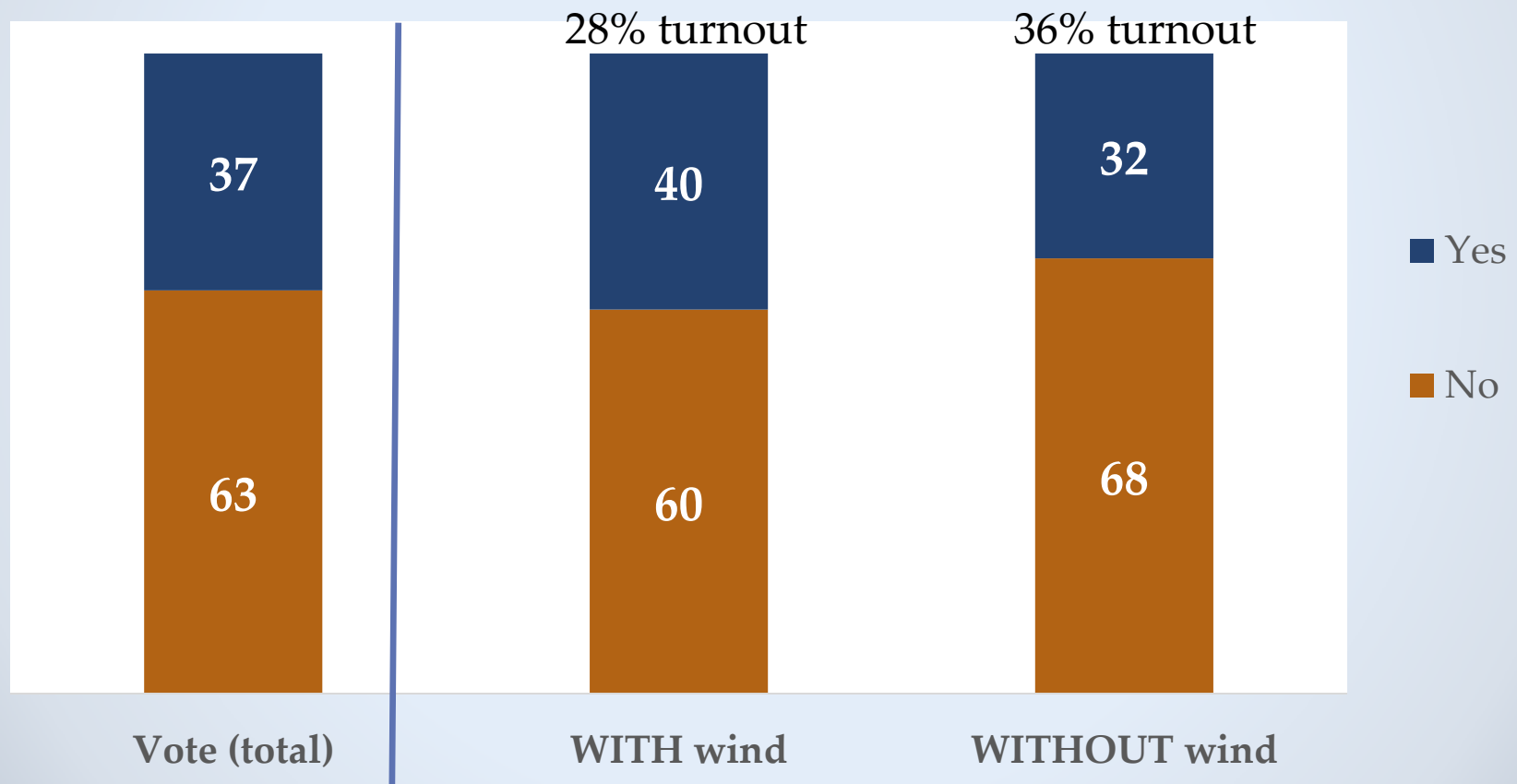
May 2 Referendum vs. Survey

Willingness to host additional turbines
in your township

- 5 twps.
 - Bingham
 - Bloomfield
 - McKinley
 - Sheridan
 - Sigel



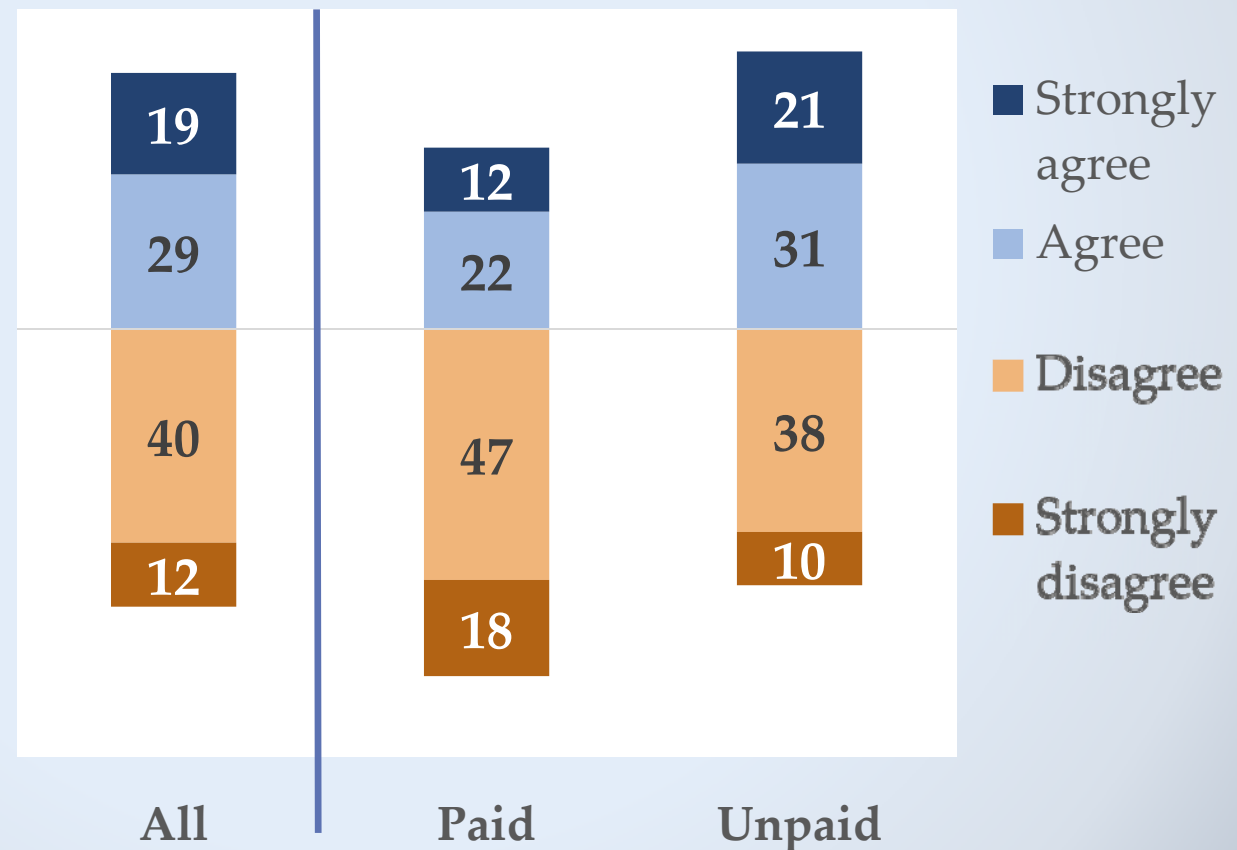
Huron County Vote Break-downs



Individual-level Impacts

- Noise
- Visual
- Health
- Property value
- Farm income
- Farm succession

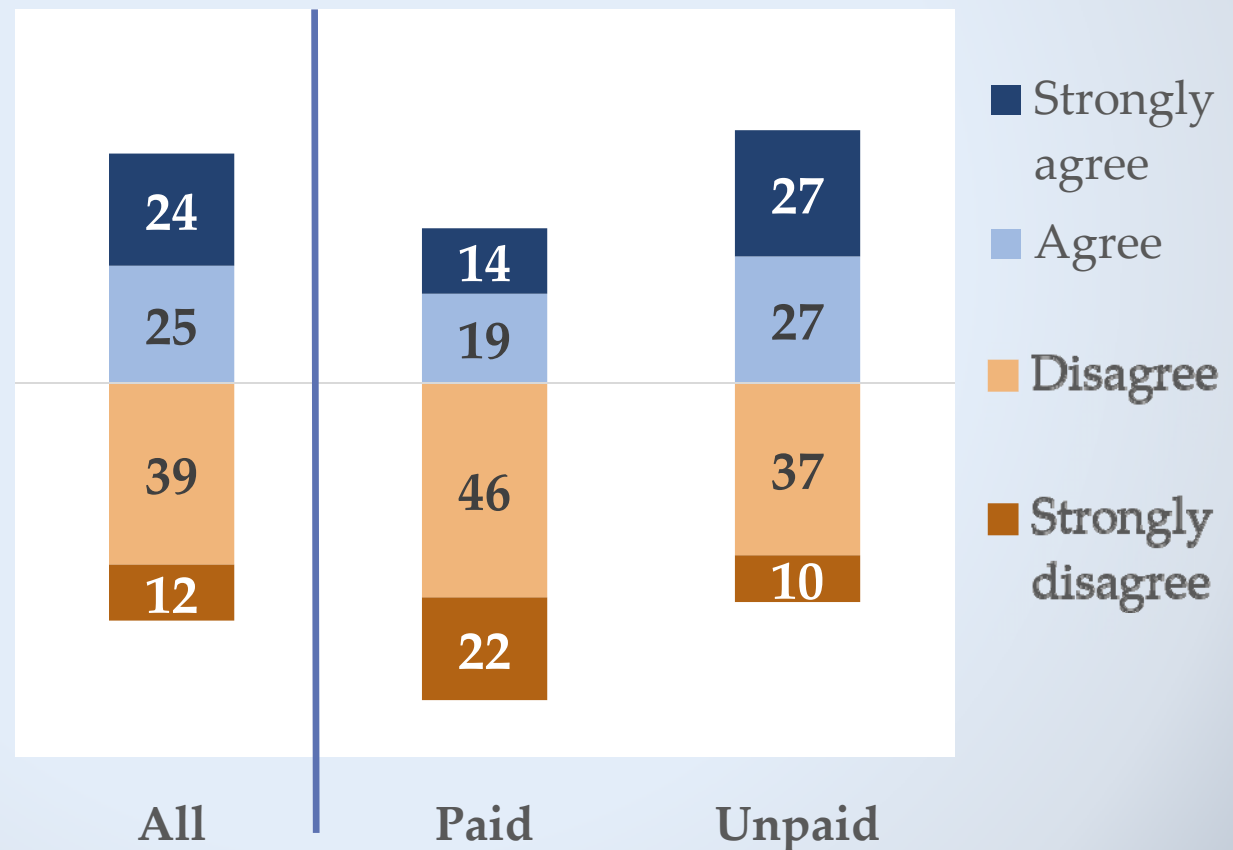
Turbines create noise pollution



Individual-level Impacts

- Noise
- **Visual**
- Health
- Property value
- Farm income
- Farm succession

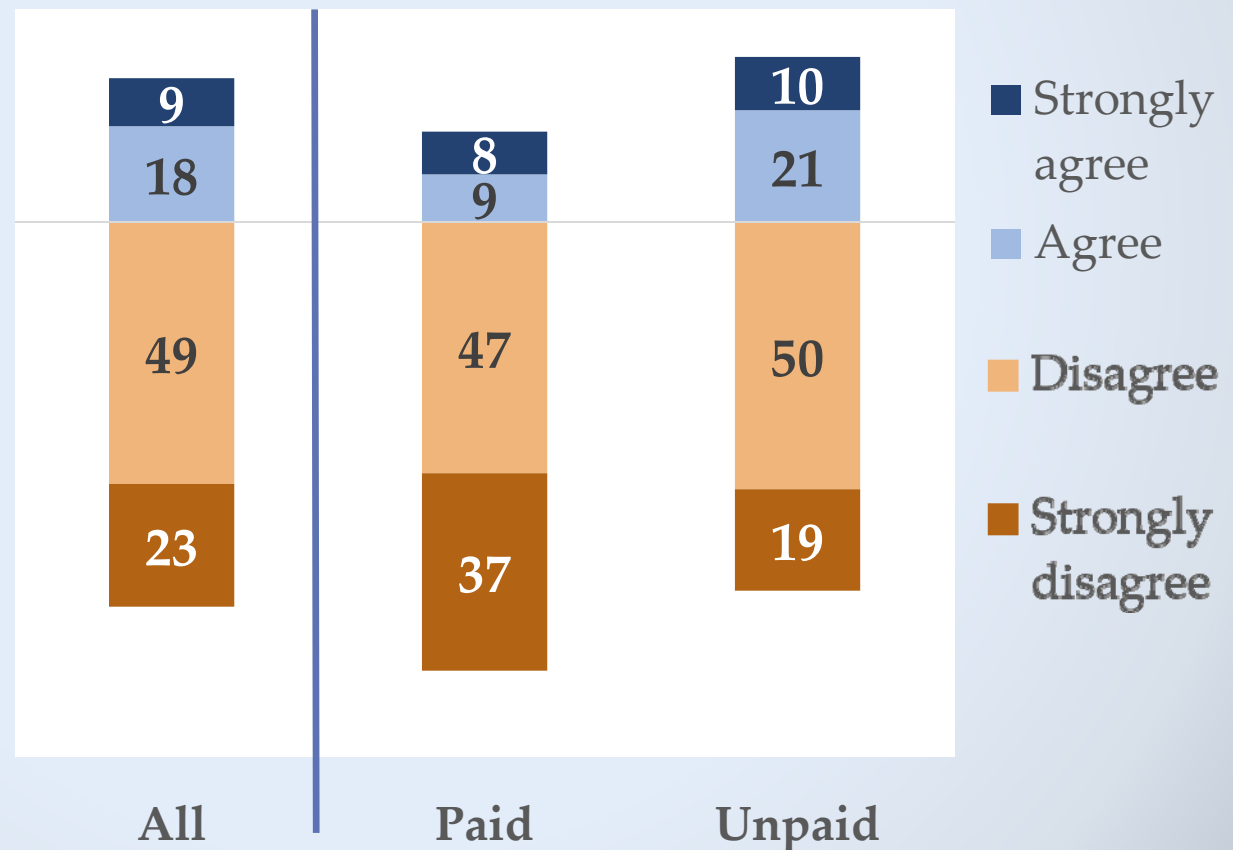
Turbines create visual/aesthetic problems



Individual-level Impacts

- Noise
- Visual
- **Health**
- Property value
- Farm income
- Farm succession

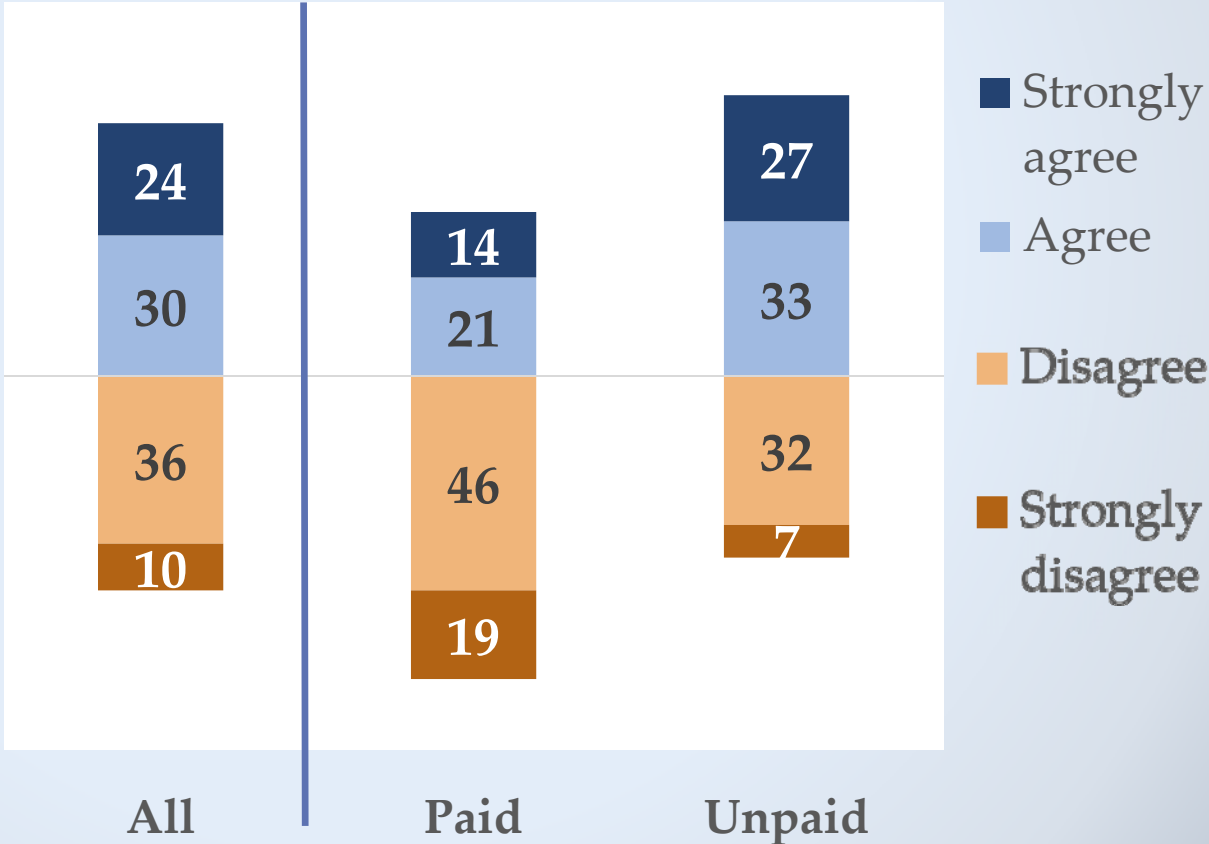
Turbines cause human health problems



Individual-level Impacts

- Noise
- Visual
- Health
- **Property value**
- Farm income
- Farm succession

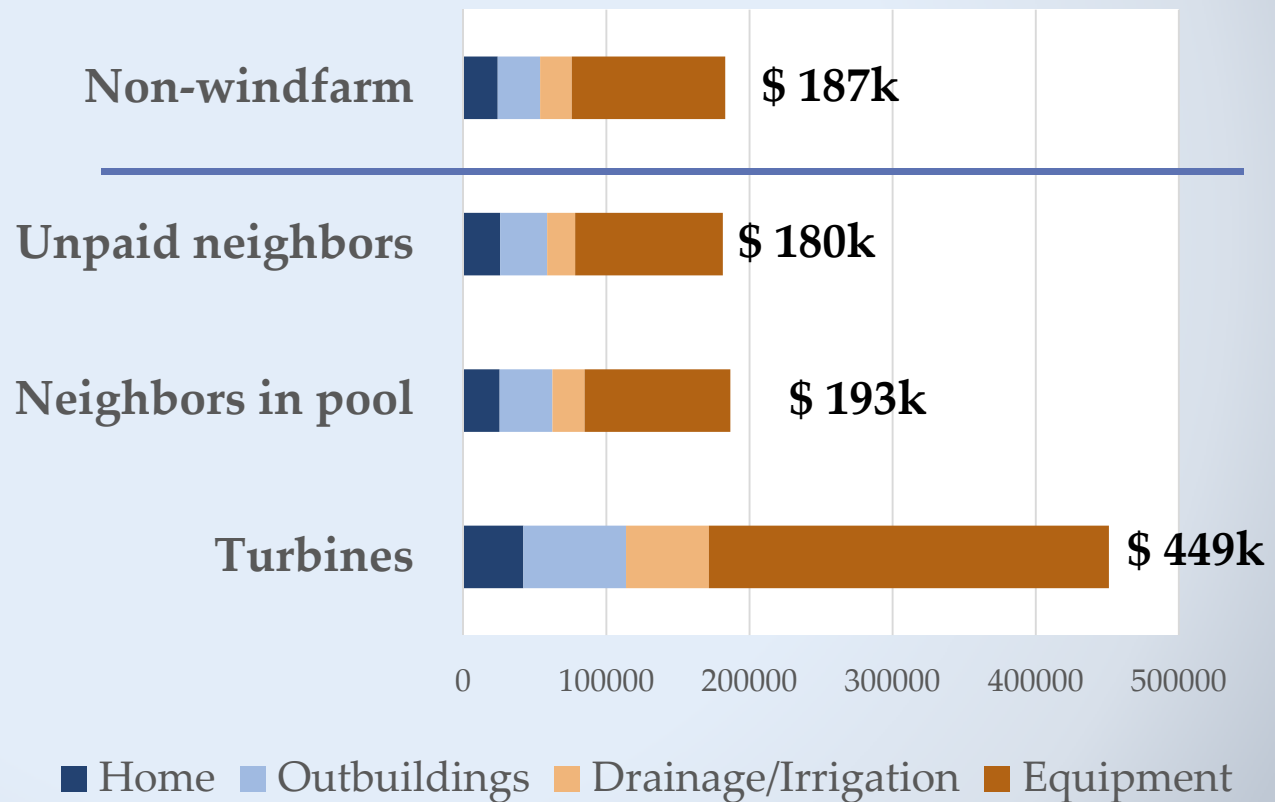
Turbines decrease nearby property values



Individual-level Impacts

Investments over 5 years: 2009-2013

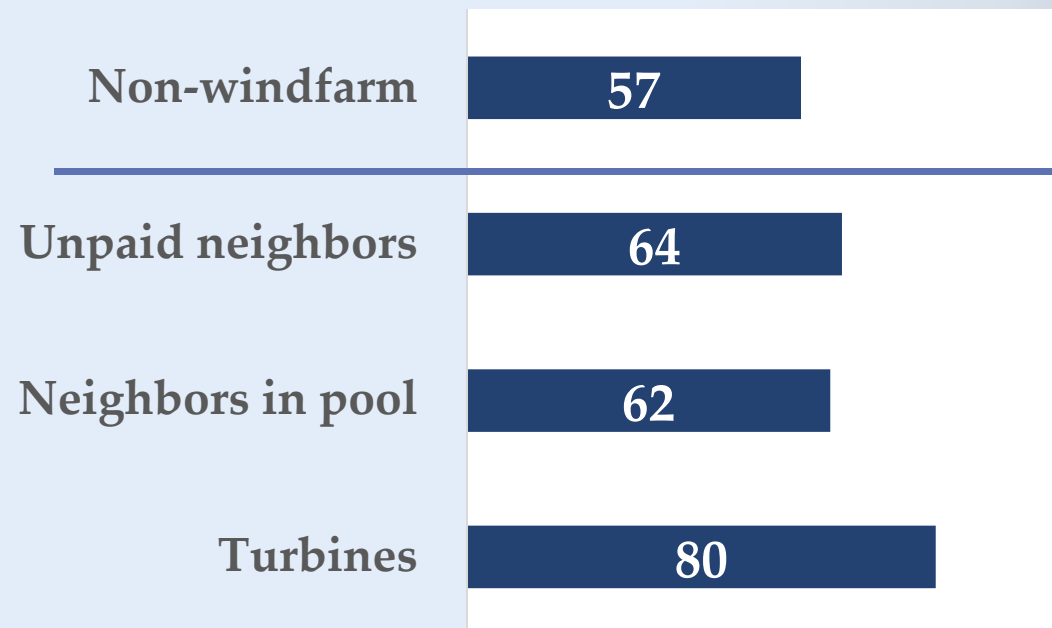
- Noise
- Visual
- Health
- Property value
- **Farm income**
- Farm succession



Individual-level Impacts

- Noise
- Visual
- Health
- Property value
- Farm income
- Farm succession

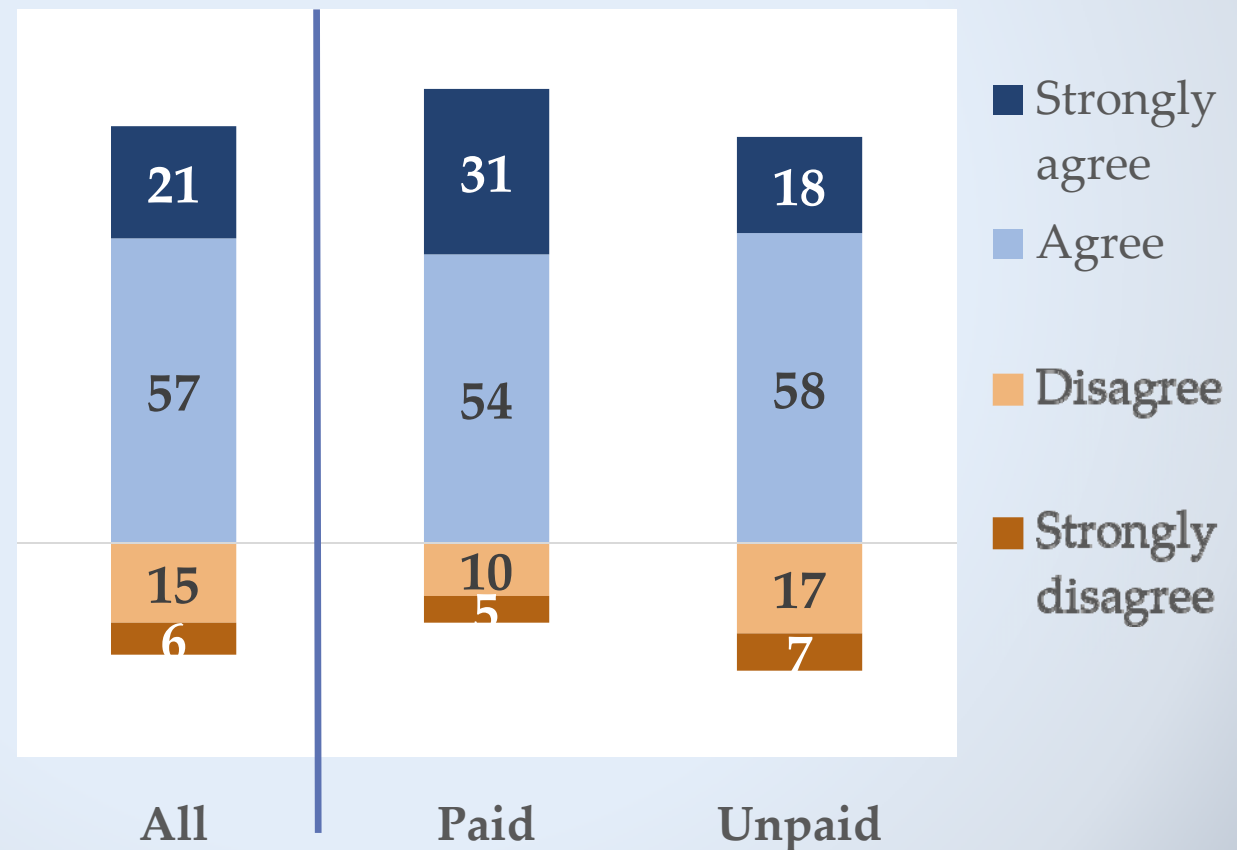
% that have farm succession plan



Community-level Impacts

- Job creation
- Roads
- Township services
- County services
- Schools
- Relationships with neighbors

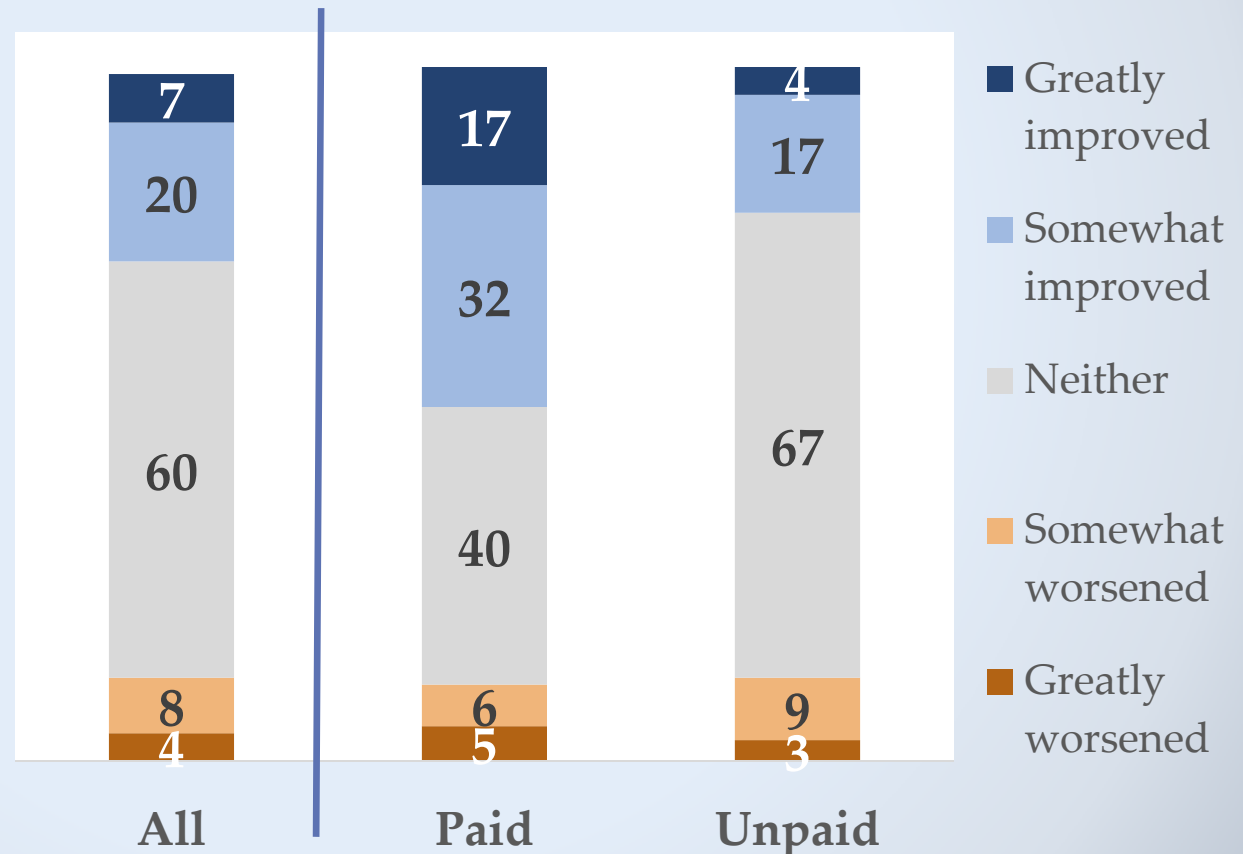
Turbines create jobs



Community-level Impacts

- Job creation
- **Roads**
- Township services
- County services
- Schools
- Relationships with neighbors

Turbines' effect on local roads

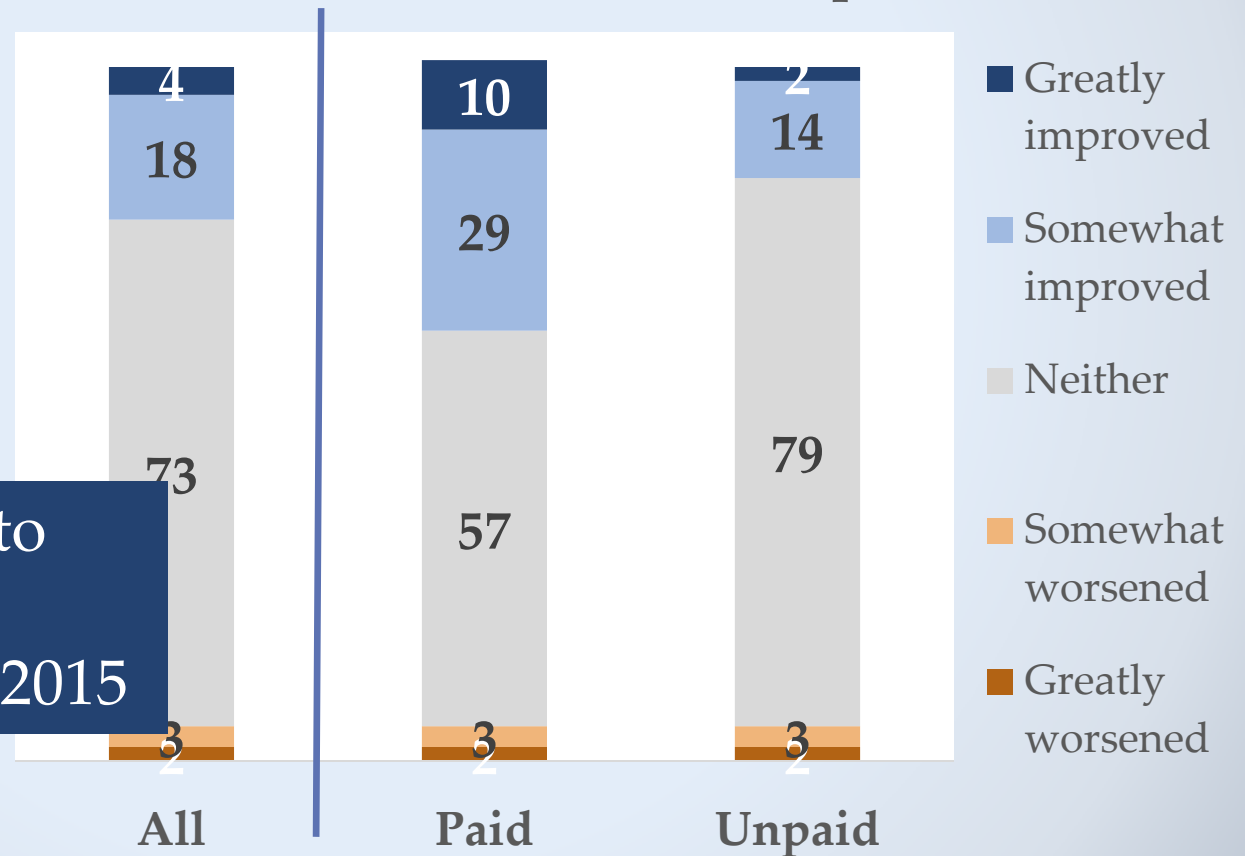


Community-level Impacts

Turbines' effect on township services

- Job creation
- Roads
- Township services
- County services

\$2.630 Million to townships in Huron County in 2015

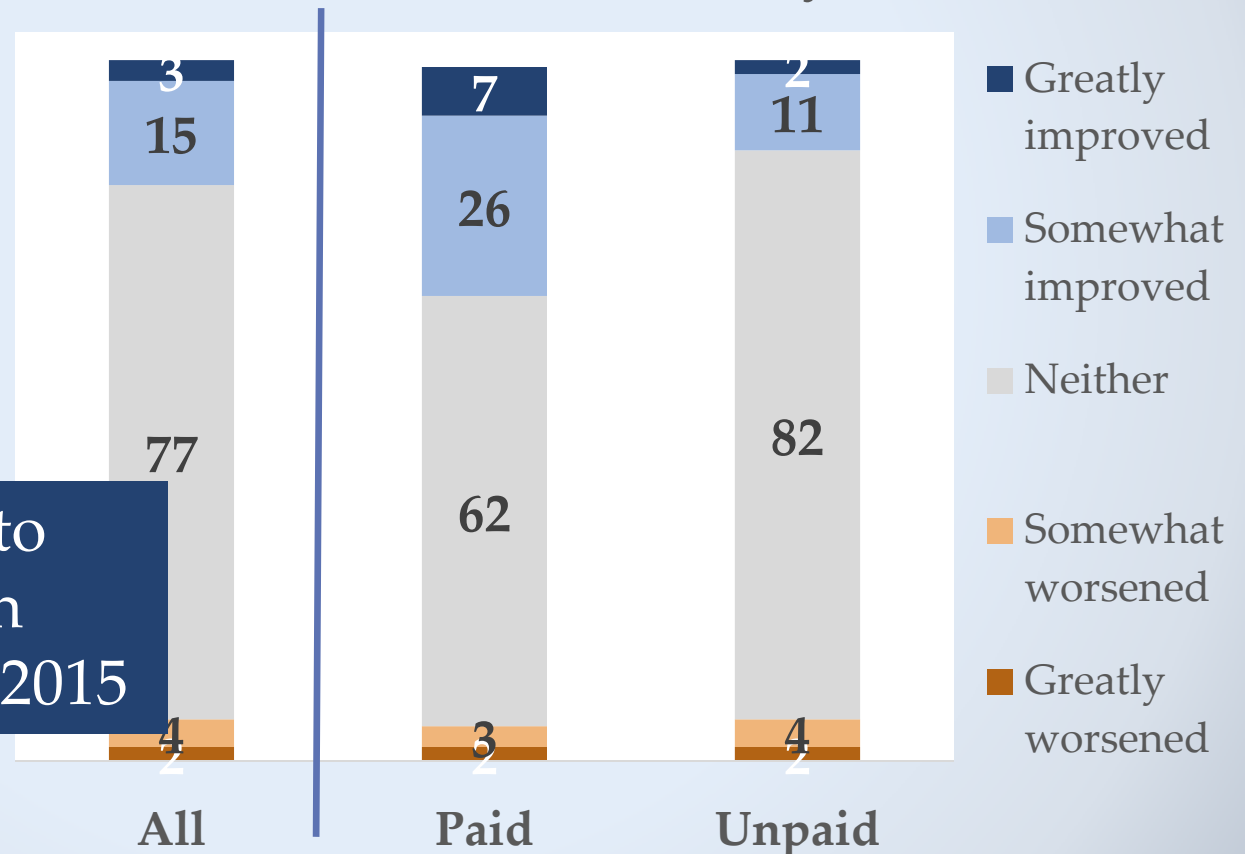


Community-level Impacts

Turbines' effect on county services

- Job creation
- Roads
- Township services
- **County services**

\$2.749 Million to county gov't in Huron County in 2015

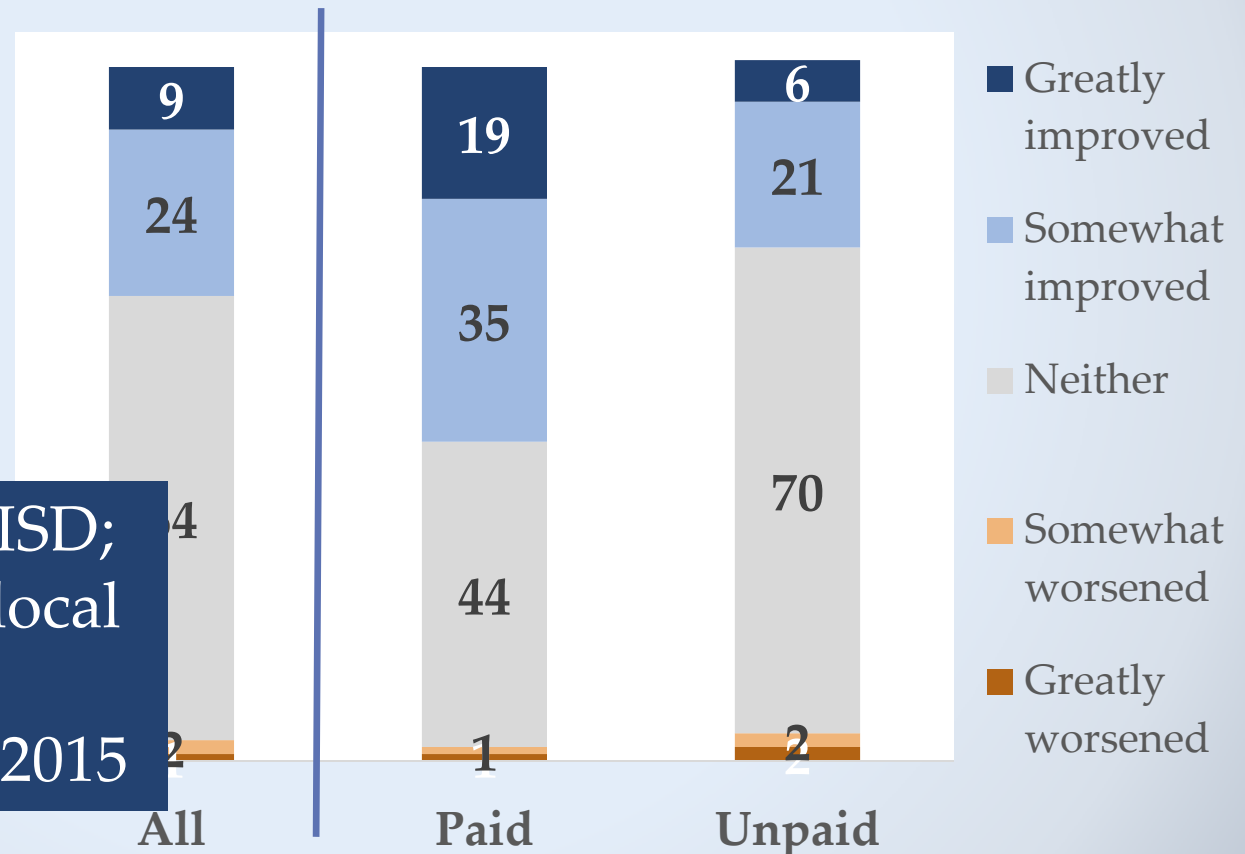


Community-level Impacts

- Job creation
- Roads
- Township services
- County services

**\$2.083 Million to ISD;
\$2.074 Million to local schools in Huron County in 2015**

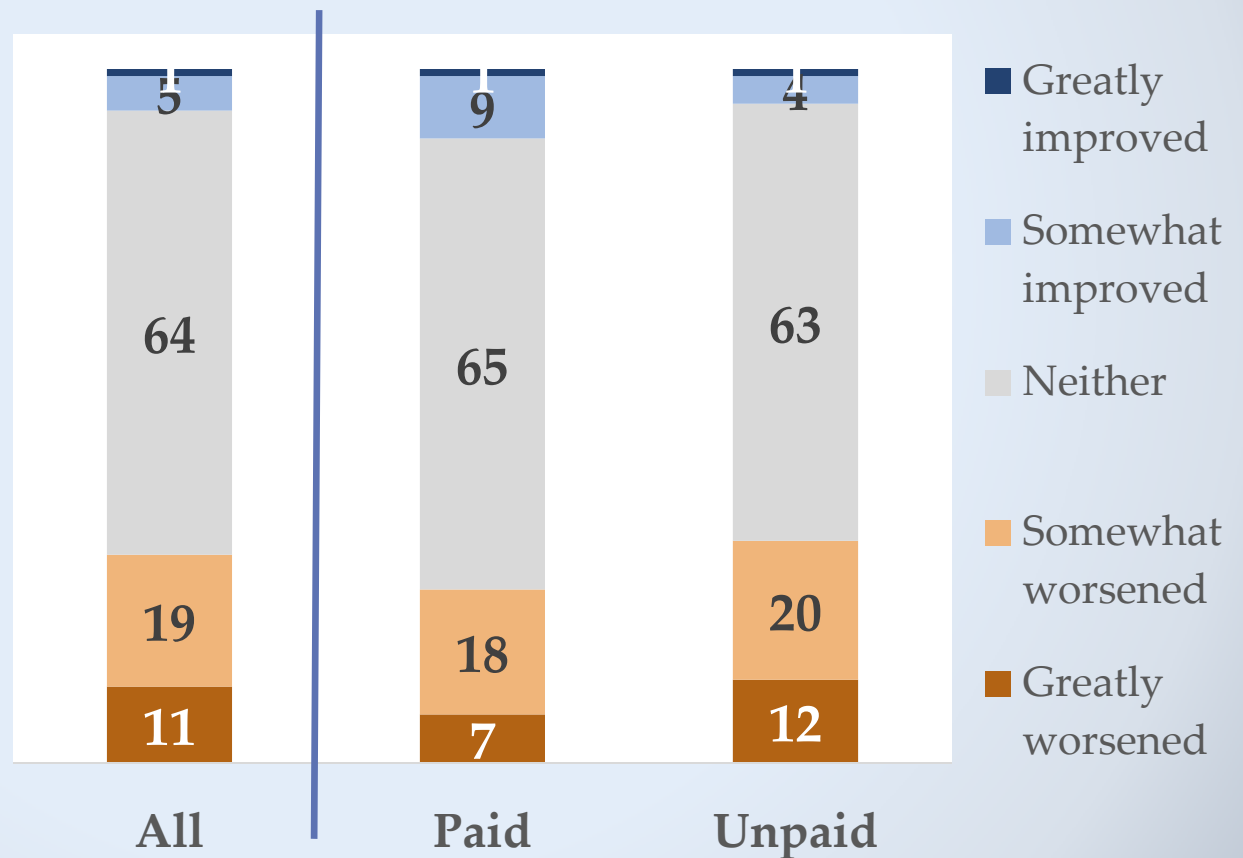
Turbines' effect on local schools



Community-level Impacts

Turbines' effect on relationships with neighbors

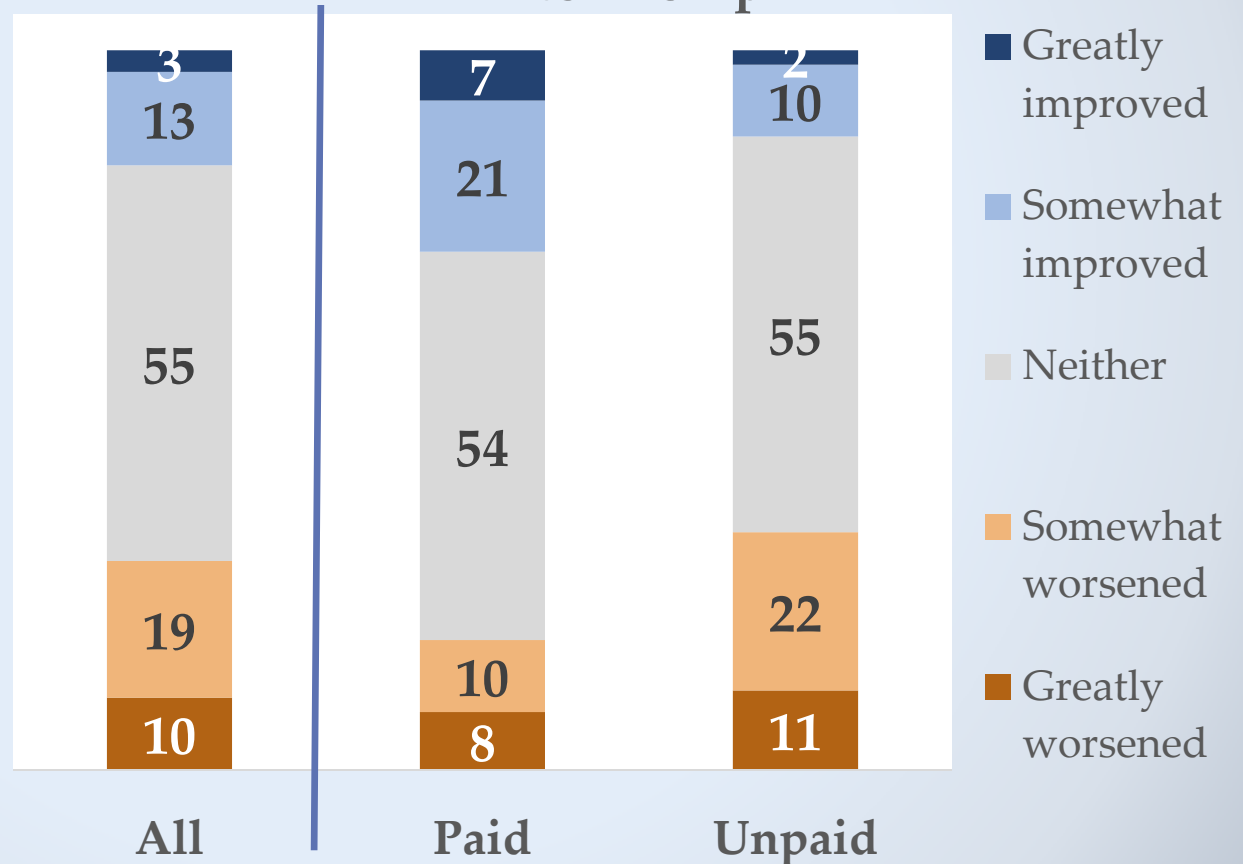
- Job creation
- Roads
- Township services
- County services
- Schools
- Relationships with neighbors



Would they welcome more wind development?

Turbines' effect on overall quality of life in township

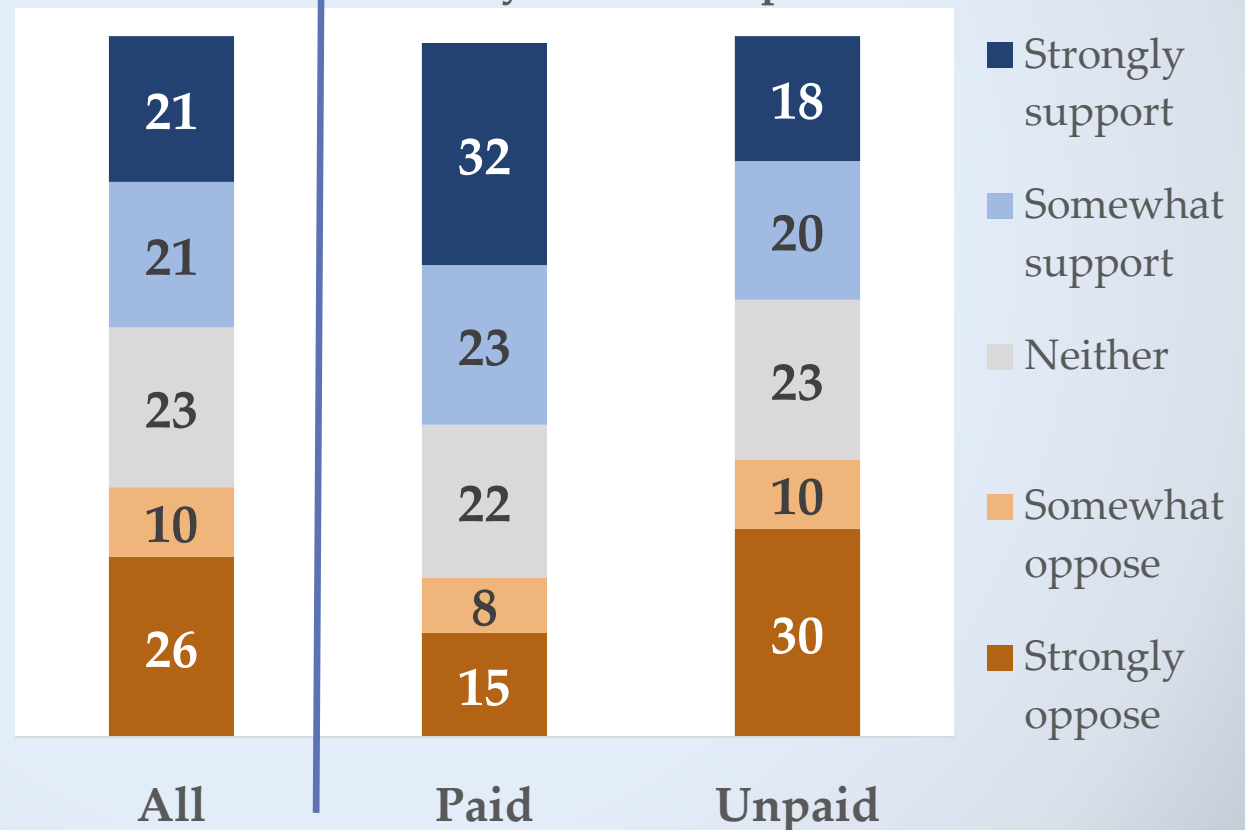
- Quality of life
- Willingness to accept new turbines



Would they welcome more wind development?

Willingness to host additional turbines in your township

- Quality of life
- Willingness to accept new turbines

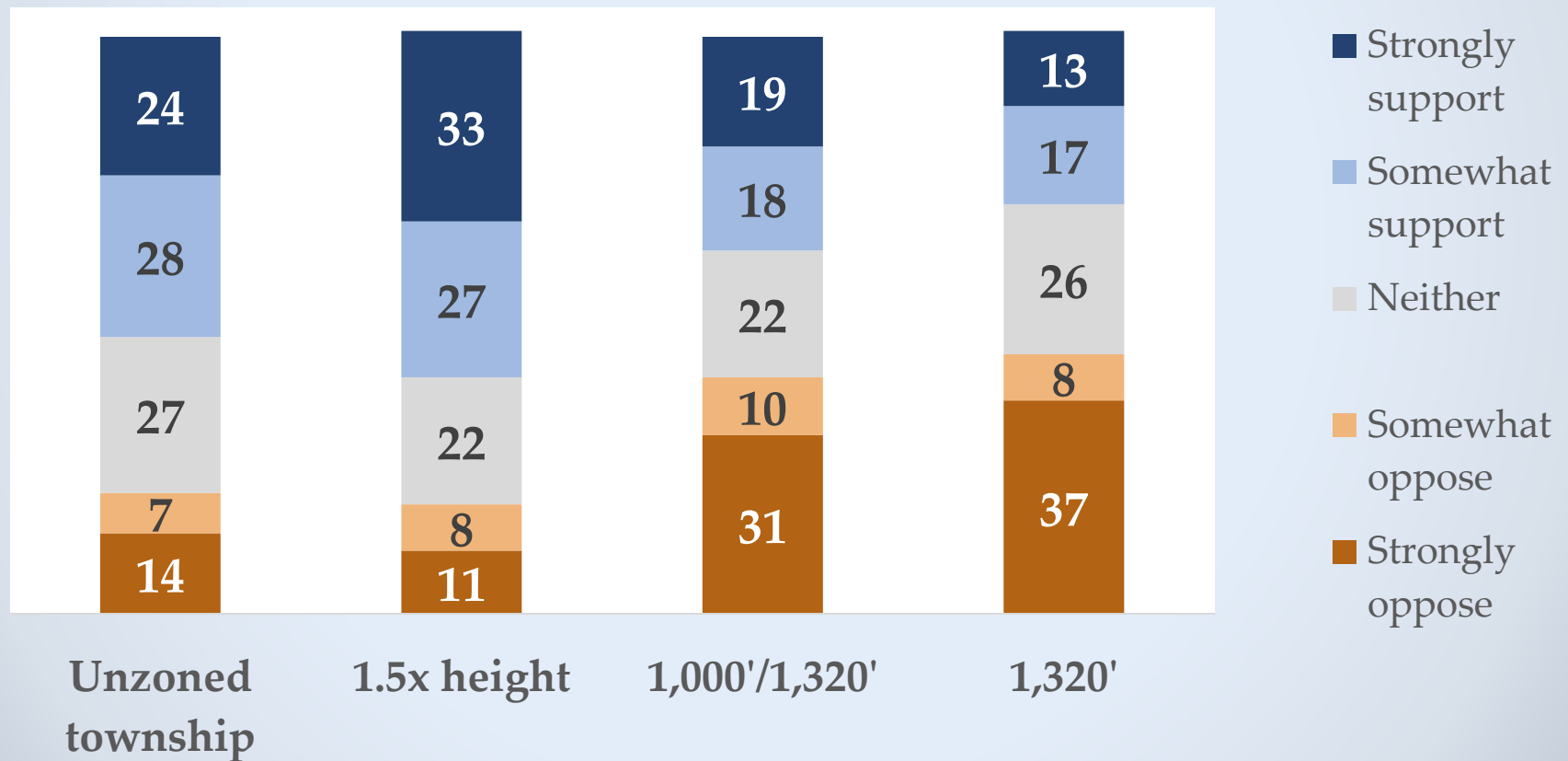


Example zoning ordinances

- MSU Extension
 - Sample Zoning for Wind Energy Systems (2017)
 - Michigan Land Use Guidelines for Siting Wind Energy Systems (2007)
- Dept. of Energy database
 - Look for similar types of communities
 - Includes places both with/without wind
 - <https://windexchange.energy.gov/policies-incentives>
- Shiawassee County Planning
 - Comparison charts on height, noise, setback
 - <https://www.shiawassee.net/Departments/Community-Development/Wind-Energy-Conversion-Systems>
- My website (www.closup.umich.edu/wind)
 - Just the communities which have existing windfarms in Michigan

The ideal zoning ordinance?

Support/oppose additional turbines in township,
by zoning setback distance

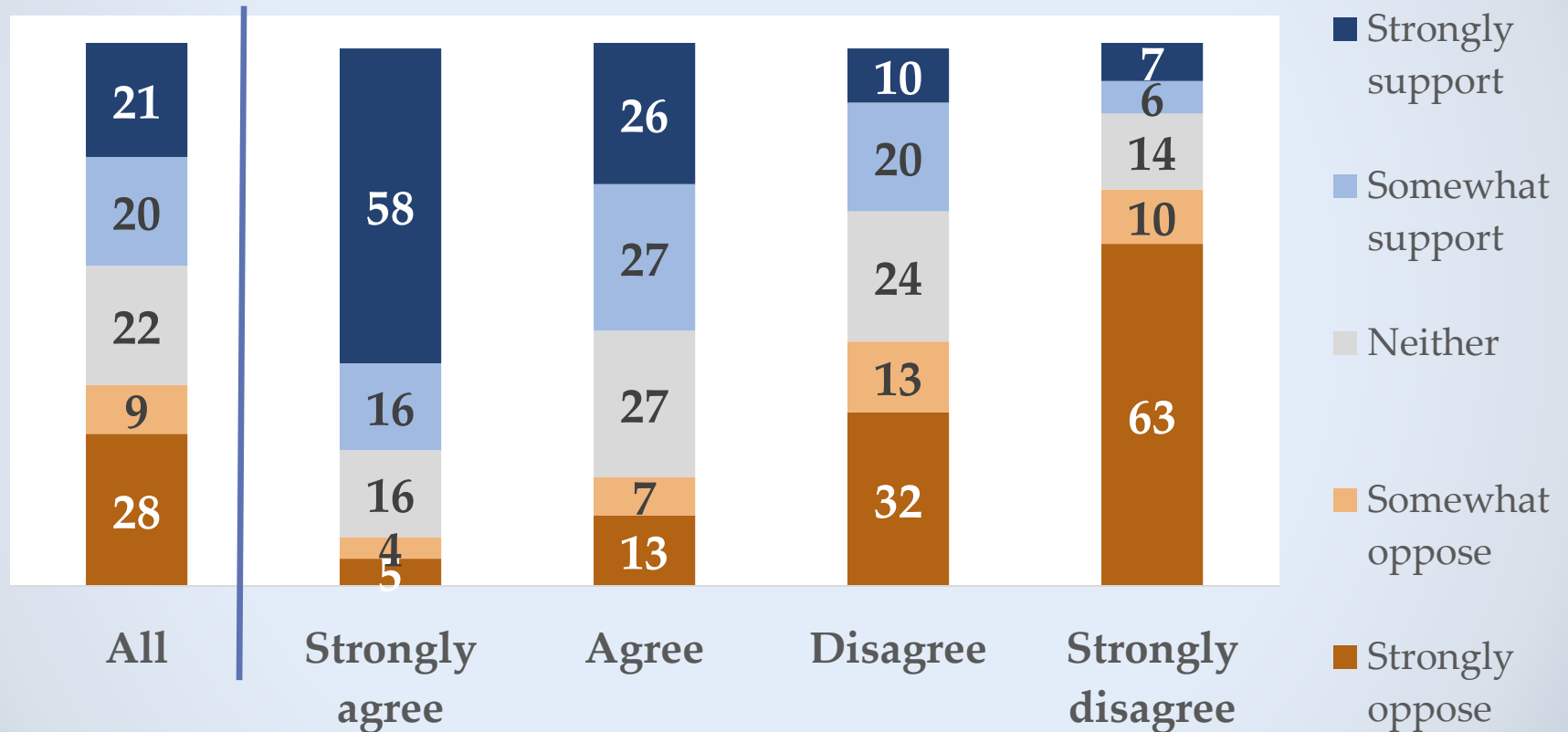


What my research suggests on zoning

- Participating vs. non-participating landowners
- Noise, flicker analysis
- Decommission plan/financial assurance
- Have an open & transparent process

The importance of process

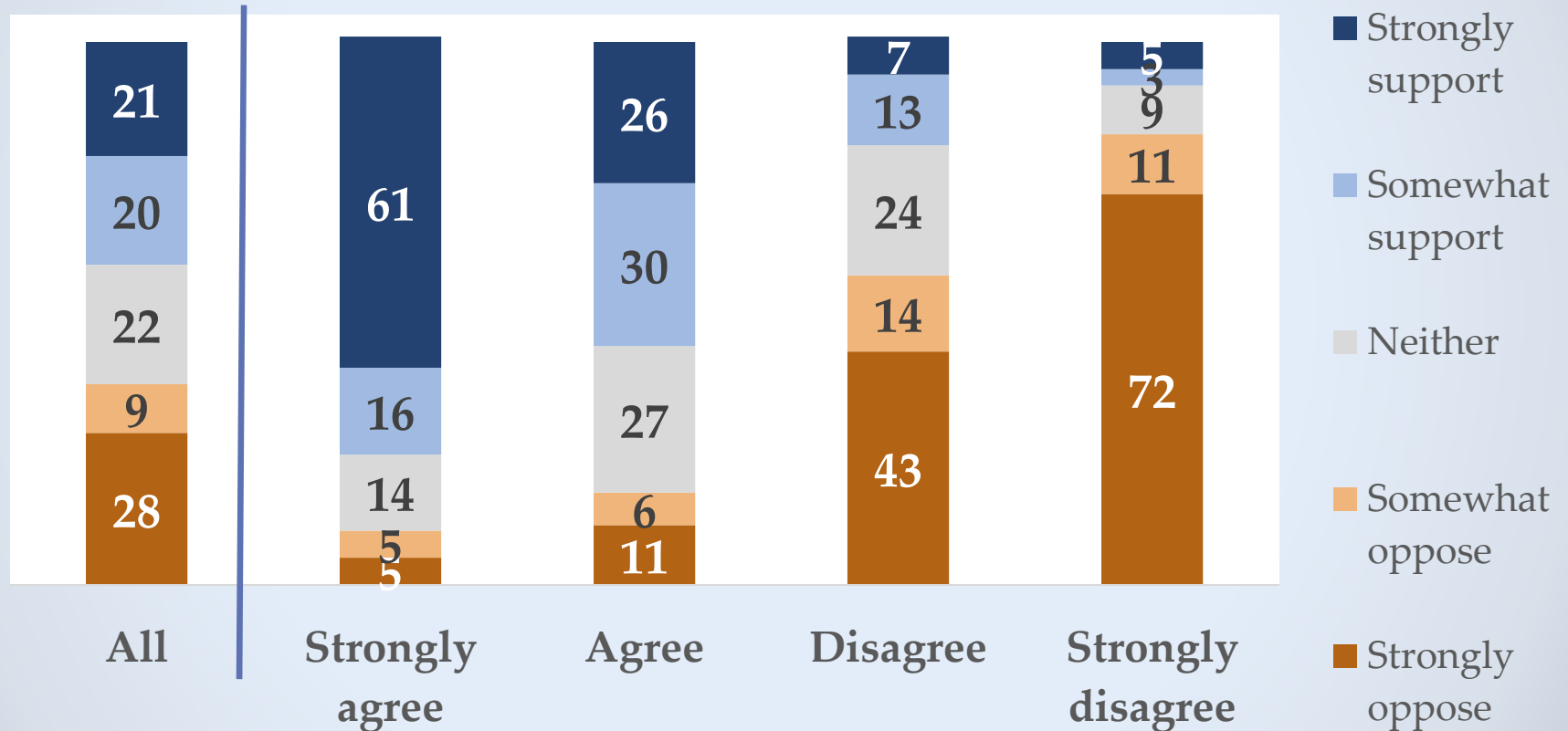
Support/oppose additional turbines in township,
by agree/disagree opportunity to participate in planning



“I had ample opportunity to provide input during the wind project planning stage.”

The importance of transparency

Support/oppose additional turbines in township,
by agree/disagree wind developer acted transparently



“The wind project developer acted openly and transparently throughout the planning process.”