## Land-793919 Supplementary

**Supplementary Materials:** Table S1 contains the classification results using per capita income as the measure of economic vulnerability and median home values as the measure of economic vulnerability. Cells in gray in the table highlight classification differences between the two versions of the typologies. Based on this shading, there are few differences in the classification of tracts using either of the economic metrics; 79% of tracts were classified similarly. In 2005-2010 and 2014-2018, only four tracts in each time period were classified differently. In the 2010-2014 time period only two tracts, one near Iosco and one near Oceana were classified differently. Thus, for this sample of data the choice of economic metric does not appear to alter dramatically the results. That said, studies using this typology in other regions may want to attempt to use both variables as a hybrid economic variable or conduct a similar sensitivity analysis to understand if there are differences in classification outcomes.

**Table S1.** Sensitivity Analysis of Typology Construction to the Specification of Economic Vulnerability.

2005-2010 Time Period			2010-2014 Time Period			2014-2018	2014-2018 Time Period		
	PCI Typol ogy Result	MHV Typol ogy Result		PCI Typol ogy Result	MHV Typol ogy Result		PCI Typol ogy Result	MHV Typol ogy Result	
	S	S		S	S		S	S	
Alger A5	1	1	Alger A5	1	1	Alger A5	1	1	
Allegan A2	3	3	Allegan A2	2	2	Allegan A2	2	2	
Allegan A5	4	3	Allegan A5	3	3	Allegan A5	1	2	
Antrim A1			Antrim A1			Antrim A1			
Banks	3	3	Banks	3	3	Banks	2	2	
Antrim A1	2	2	Antrim A1	2	2	Antrim A1	3	3	
Berrien L1	2	2	Berrien L1	2	2	Berrien L1	2	2	
Emmet C1	3	3	Emmet C1	3	3	Emmet C1	2	2	
Gogebic I1	2	1	Gogebic I1	1	1	Gogebic I1	3	4	
losco I1	3	4	losco I1	2	1	losco I1	1	1	
Leelanau A1	3	3	Leelanau A1	3	3	Leelanau A1	2	2	
Luce A1	1	1	Luce A1	1	1	Luce A1	4	4	
Manistee C1 and C2	4	3	Manistee C1 and C2	3	3	Manistee C1 and C2	1	1	
Menominee A1	4	4	Menominee A1	1	1	Menominee A1	1	1	
Oceana B1	3	3	Oceana B1	4	3	Oceana B1	2	2	
Ottawa C3	3	3	Ottawa C3	3	3	Ottawa C3	2	2	
Sanilac F1	4	4	Sanilac F1	4	4	Sanilac F1	1	2	
Sanilac J1	4	4	Sanilac J1	4	4	Sanilac J1	2	1	
Sanilac G2	4	4	Sanilac G2	4	4	Sanilac G2	4	4	
Van Buren A2	1	1	Van Buren A2	4	4	Van Buren A2	1	1	

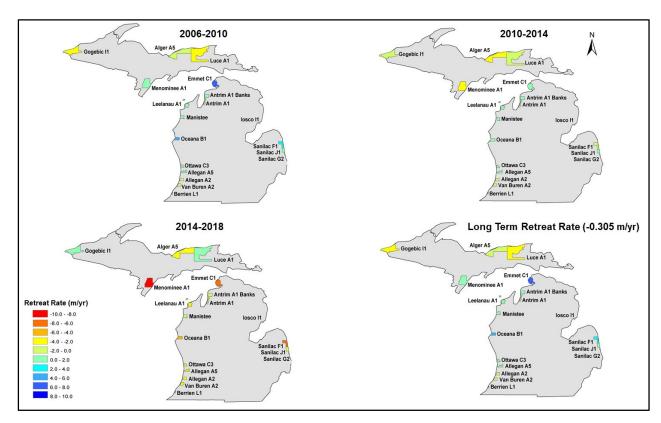


Figure S1: Erosion rate over time compared to the long-term mean.