

# **Smart Growth and Land-use Changes in PIE-LTER Site**

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By

Rumika Chaudhry

[rchaudhry@clarku.edu](mailto:rchaudhry@clarku.edu)

**Clark University**

***Department of International Development, Community, and Environment, GISDE***

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# **Agenda**

## **Project Introduction**

- Smart Growth Definition**
- Massachusetts Smart Growth Policies and Programs Implementation Timeline**
- Community Preservation Act (CPA) and Agricultural Preservation Restrictions (APR) as two of the State's most widely implemented land-use related Smart Growth programs**
- Status of Smart Growth Policies in PIE-LTER study area**

## **Motivation for Research**

## **Research Objectives and Questions**

## **Proposed Methodology**

# Project Introduction

## The Smart Growth Movement

1. **Emerged**: Late 1990

2. **Driving Force**: Growing concern that prevailing development pattern is not in long term interest of the cities

3. **Definition**: There is no universally accepted concise definition of “Smart Growth”

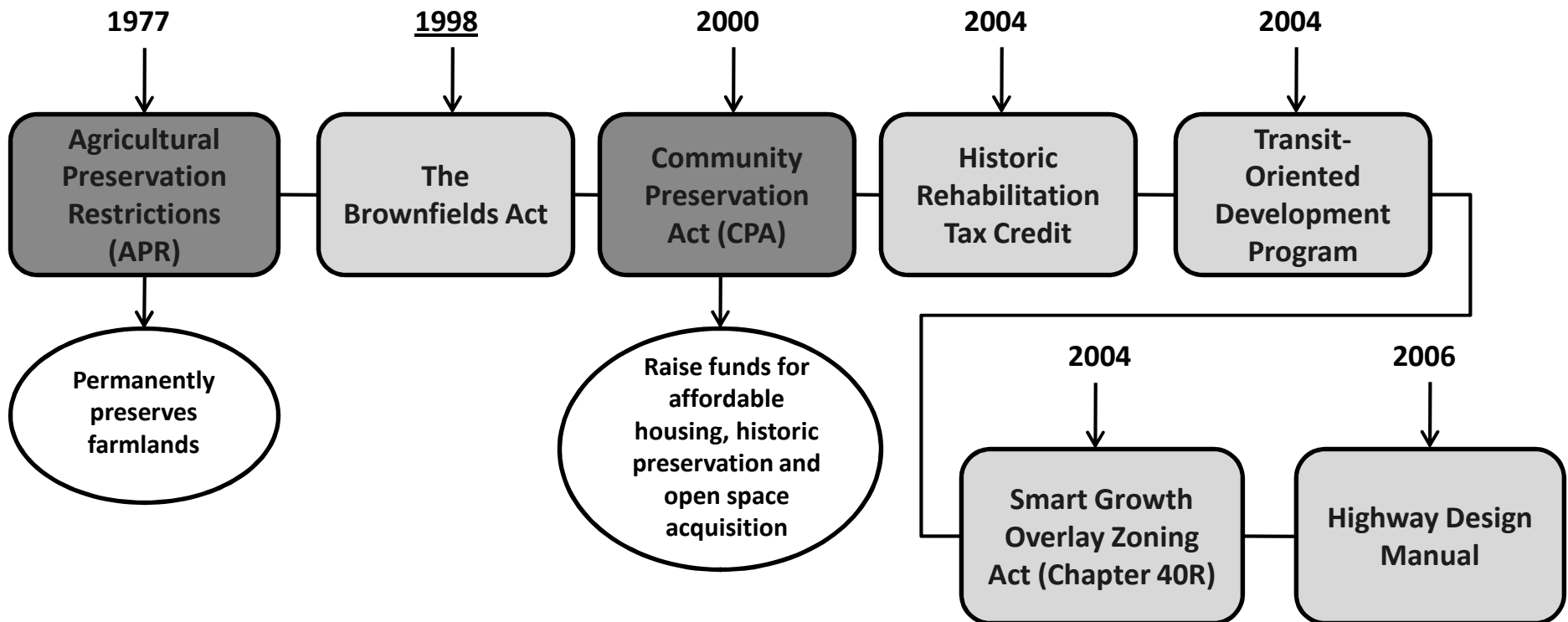
-- Set of proactive measures which guide future development against problems brought on by urban sprawl

Source: Moglen, G. e. a. (2003)

-- What smart growth does is recognize the connections between development and the *quality* of life

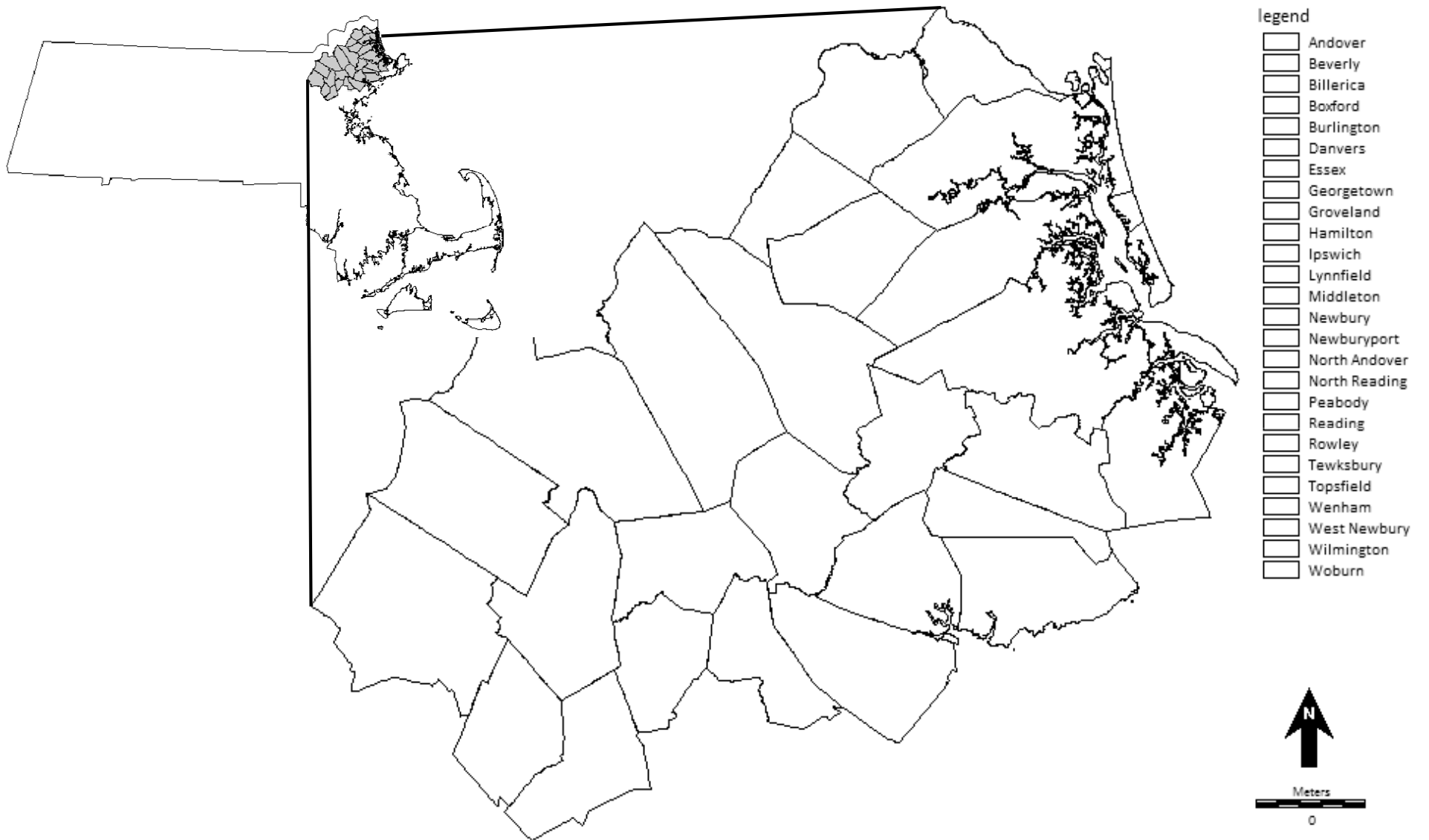
Source: [http://www.richmondfed.org/community\\_development/emerging\\_issues/reports/sprawl.cfm#tabview=tab3](http://www.richmondfed.org/community_development/emerging_issues/reports/sprawl.cfm#tabview=tab3)

# Massachusetts Smart Growth Policies and Programs- A Timeline



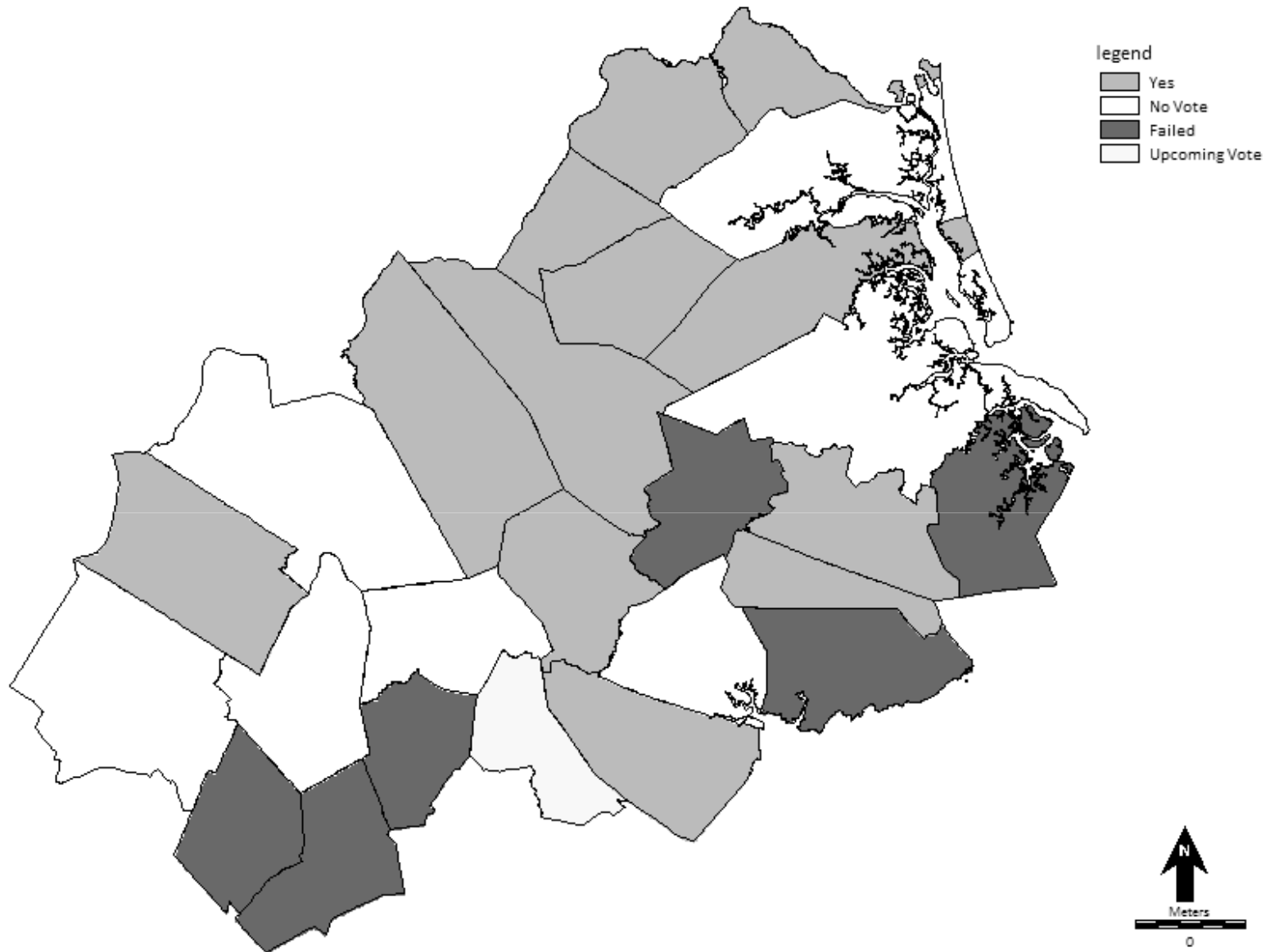
- Massachusetts started implementing Smart Growth policy and programs 1998 onwards after passing the Brownfields Act
- Agricultural Preservation Restrictions (APR) and Community Preservation Act (CPA) are two of the State's most widely implemented *land-use* related Smart Growth programs

### Plum Island Ecosystems Towns



**Study Area- Twenty-six municipalities in Plum Island Ecosystem (PIE) - LTER site**

**Community Preservation Act (CPA) Status of Plum Island Ecosystem Towns**



**Community Preservation Act (CPA) status of municipalities in Plum Island Ecosystem (PIE) - LTER site**

## Community Preservation Act (CPA) in PIE- LTER Site

Municipality	CPA Status	Year Voted	Estimated Contribution to State CPA Trust Fund, FY 2002-2007	Total CPA State Matching Funds, FY 2002-2007
Andover	No vote	--	\$1,093,062	\$0
Beverly	failed	2001	\$1,125,224	\$0
Billerica	No vote	--	\$1,319,309	\$0
<b>Boxford</b>	Yes	2001	\$317,414	\$2,021,213
Burlington	failed	2002	\$657,850	\$0
Danvers	No vote	--	\$825,241	\$0
Essex	failed	2007	\$113,528	\$0
<b>Georgetown</b>	Yes	2001	\$302,807	\$1,018,163
<b>Groveland</b>	Yes	2004	\$232,354	\$363,342
<b>Hamilton</b>	Yes	2005	\$246,452	\$287,075
Ipswich	No vote	--	\$466,073	\$0
<b>Lynnfield</b>	Upcoming vote	2009	\$396,793	\$0
<b>Middleton</b>	Yes	2004	\$278,517	\$228,064
Newbury	No vote	--	\$274,608	\$0
<b>Newburyport</b>	Yes	2002	\$707,376	\$1,389,944
<b>North Andover</b>	Yes	2001	\$925,122	\$4,887,932
North Reading	No vote	--	\$536,843	\$0
<b>Peabody</b>	Yes	2001	\$1,370,740	\$2,383,340
Reading	Failed	2005	\$416,453	\$0
<b>Rowley</b>	Yes	2001	\$215,538	\$1,136,370
<b>Tewksbury</b>	Yes	2006	\$1,035,891	\$0
Topsfield	failed	2005	\$212,346	\$0
<b>Wenham</b>	Yes	2005	\$118,525	\$223,738
<b>West Newbury</b>	Yes	2006	\$167,908	\$0
Wilmington	No vote	--	\$744,773	\$0
Woburn	failed	2001	\$1,044,895	\$0
<b>Total</b>			<b>\$15,144,842</b>	<b>\$13,939,181</b>

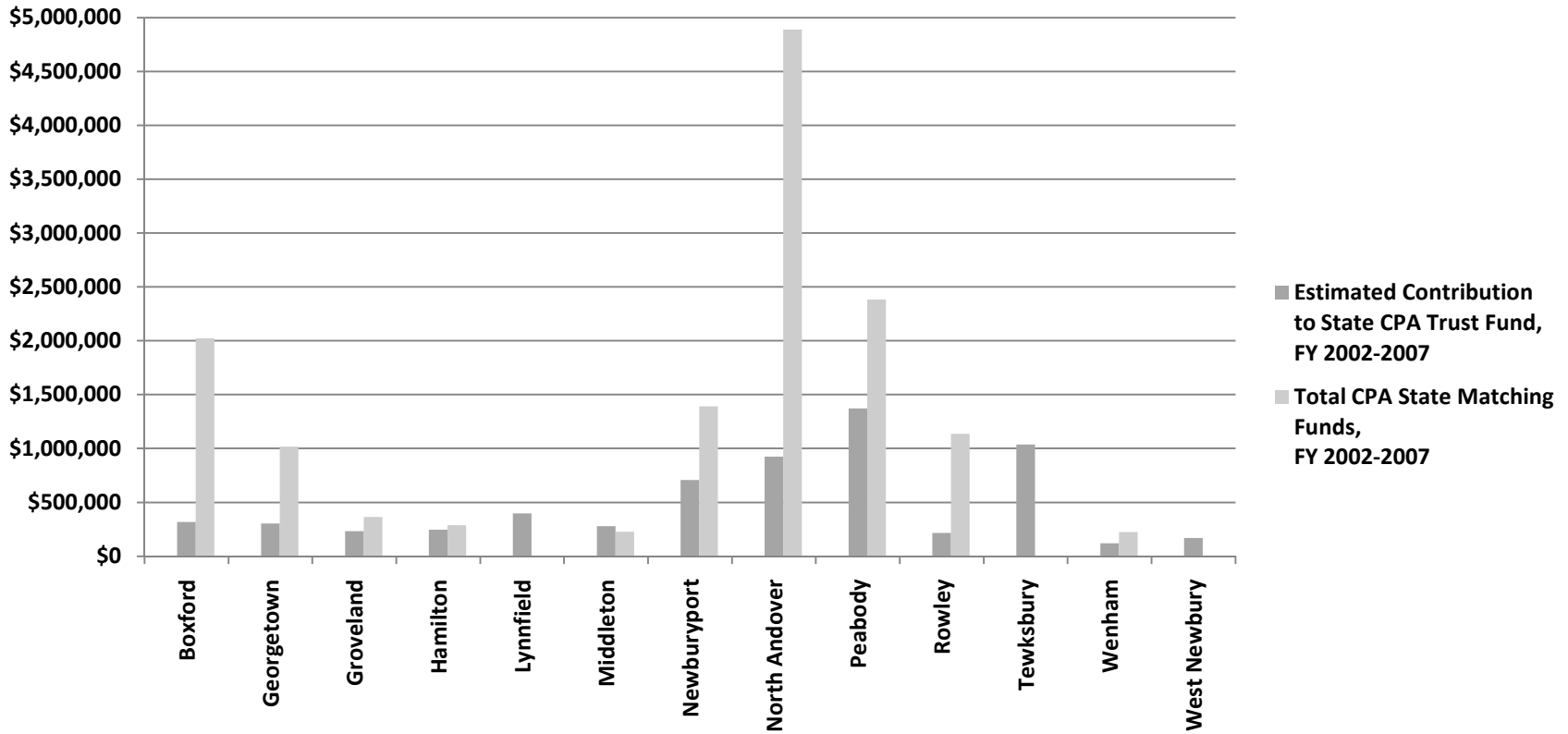
**12 - voted Yes**

**1- scheduled for voting this month**

**6 - voting failed**

	failed
	No vote

# Community Preservation Act (CPA) in PIE- LTER Site



Total estimated contribution to state CPA fund by PIE-LTER member communities

**\$6,315,437**

Total CPA State Matching Funds

**\$13,939,181**

Total percentage return of CPA Funds to PIE- LTER study area

**221%**

# Motivation for Research

**“Growth that is economically sound, environmentally friendly, and supportive of community livability- growth that enhances the quality of life”**

Source: O’ Neil (1999)

**-- Advocates of Smart Growth are unable to demonstrate or defend the assertion that a given development plan actually represents Smart Growth**

**--There is no methodology at present which will help quantify the future results of implementing Smart Growth policies and programs**

# Research Objectives

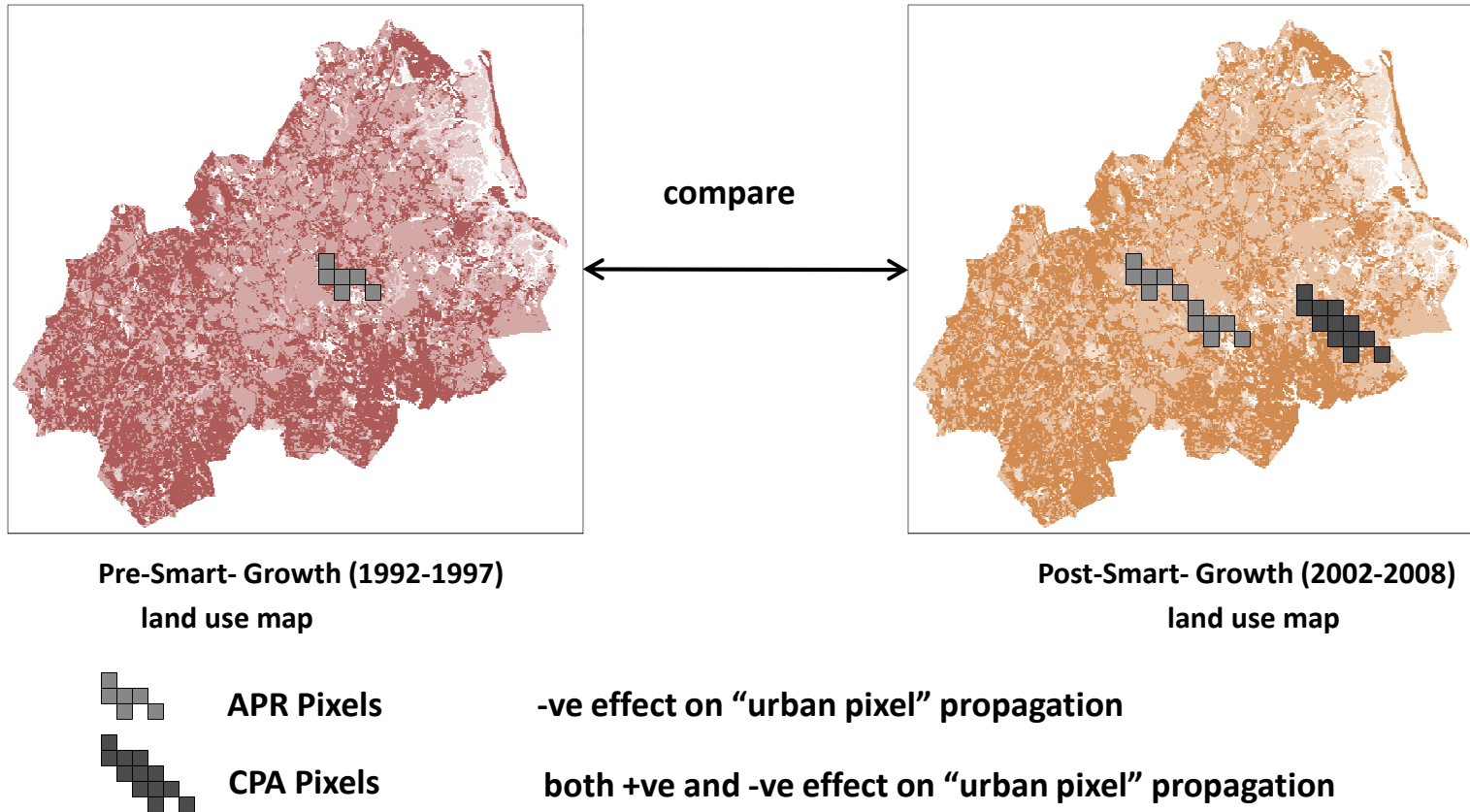
- To quantify land use change in PIE-LTER site from Pre-Smart-Growth Period (1992- 1997) to Post-Smart-Growth Period (2002-2008)**
- To assess how Agricultural Preservation Restrictions (APR) and Community Preservation Act (CPA) have influenced land-use patterns in the PIE-LTER site**

# Research Questions

- 1. Does Community Preservation Act (CPA) and Agricultural Preservation Restrictions (APR) designation decrease “urban land development” probability?**
- 2. How are the CPA funds being distributed amongst the law’s three primary purposes: affordable housing, open space, and historic preservation**
- 3. What has been the trend of “farmland protection” under APR in the PIE-LTER site?**
- 4. Given the result of the analysis is it feasible for communities in the PIE-LTER site to consider opting for Smart Growth policies and programs?**

# Proposed Methodology

Analyze land conversion in the PIE-LTER study area



Estimate land-use changes from nonurban to urban and vice versa

## Data Sources

MassGIS

<http://www.mass.gov/mgis/massgis.htm>

HERO Program- Clark University

<http://www.clarku.edu/departments/hero/data.cfm>

Department of Revenue, Municipal Data Bank, Community Preservation Act

<http://www.mass.gov/Ador/docs/dls/mdmstuf/CPA/CPAAcceptance.xls>

<http://www.mass.gov/Ador/docs/dls/mdmstuf/Socioeconomic/ComparisonReport.xls>

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