INDICATORS REPORT

LONG ISLAND INDEX

A PROJECT OF THE RAUCH FOUNDATION

LONG ISLAND INDEX

Working Together in New Ways for Long Island's Future

The Index is a status report on the Long Island region that aims to engage the larger Long Island community in thinking about the region's future and to be a catalyst for corrective action.

Ann Golob
Director, Long Island Index

Nancy Rauch Douzinas
Publisher, Long Island Index
President, Rauch Foundation

Report by *Regional Plan Association*

RPA

ADVISORY COMMITTEE

Names in **bold** are members who have been on the Advisory Committee since our inception in 2003.

Names marked with an *Asterisk have been on our Kitchen Cabinet.

Former Kitchen Cabinet members include: Sandy Feinberg, George Frank and Robert Scott.

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Laura Savini
Untamed Hair Productions

David Sabatino
Sip This! Coffeehouse

Howard Schneider
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Bruce Stillman
Cold Spring Harbor Laboratory

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Richard Amper
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Joe Scaduto

Good Information Presented in a Neutral Manner Can Move Policy

THE LONG ISLAND INDEX is a project that gathers and publishes data on the Long Island region. Our operating principle is: "Good information presented in a neutral manner can move policy."

The Index does not advocate specific policies. Instead, our goal is to be a catalyst for action, by engaging the community in thinking about our region and its future.

Specifically, the Index seeks to:

- Measure where we are and show trends over time
- Encourage regional thinking
- Compare our situation with other similar regions
- Increase awareness of issues and an understanding of their interrelatedness
- Inspire Long Islanders to work together in new ways to achieve shared goals

The governing board of the Long Island Index is the Advisory Committee, composed of leaders from Long Island's business, labor, academic and nonprofit sectors.

The Rauch Foundation acts as the convener of the Advisory Committee and the financial underwriter of the project. Initially funded for a three year period, the Foundation continued to fund the project. This is our fifteenth year.

WHAT ARE INDICATORS?

Indicators are facts that help show how a region is doing, the way the unemployment rate helps show the health of the economy. Measuring these kinds of data helps communities:

- Identify existing conditions
- Measure progress toward goals
- Mobilize action to improve the region

HOW TO USE THE INDEX

Each Long Island Index is centered on the following components:

1. We define 12 **goals** to measure the region. The goals span six major areas of investigation: economy, our communities, health, education, our environment, and governance.
2. There is a section at the beginning of each goal that lays out our **key findings.**
3. This is followed with our **indicators**, specific measures of how we are doing.
4. In addition to measuring how we are doing, we look at our **change historically**—where possible, over a ten year period.
5. We also **compare** ourselves to our neighboring suburban neighbors to see what we can learn from their experiences.

We have added two new features in this edition—a series of short essays called "Lessons Learned" written by our Advisory Committee members and other colleagues of the Index. These essays highlight some of the key take-aways about our indicator findings. We have also added a series of essays at the end of the book, again written by our Advisory Committee members, that reflect on some of the bigger challenges that continue to face the region and that are in need of creative solutions in order to ensure our future growth.

NANCY RAUCH DOUZINAS

The Challenge for Long Island

> Knowing is not enough, We must apply.
> Willing is not enough, We must do.
>
> -JOHANN WOLFGANG VON GOETHE

In 2003 a regional index seemed like a good idea for Long Island. It would report on how the region is doing, compare it to other suburban areas, and measure progress. The resulting Long Island Index emerged because a representative group of Long Island business, political, and civic leaders endorsed the idea, and the Rauch Foundation was willing to take a chance on funding this high-risk project.

In the 15 years since then, the Index has done all of that and, in the process, played a vital role in setting Long Island on a course of thinking and acting regionally. It has provided a formula that we must continue to follow if we are to maximize Long Island's extraordinary potential for economic growth and prosperity for all. That formula has four components: provide objective data that illuminates Long Island in a broader context; focus on regional assets and the potential for leveraging them; generate new models of working together; and realize progress through concerted advocacy and public engagement.

The data is the foundation. It shows us where we stand, how we compare to our competitors, and whether we are making headway or not. Interactive maps make the data readily available to the public for their own use. And public opinion surveys have added another layer of illumination, revealing most importantly that Long Islanders are more willing to embrace change than many political leaders would have once thought possible.

Our regional assets are what give us such enormous potential. They include world-class research institutions, a public transit system with over 100 rail stations, a renowned quality of life, and extraordinary natural beauty, among many other outstanding attributes.

Developing new ways of working together to leverage those assets is essential, because as the Index has long noted, Long Island has 665 government entities providing essential services. That fact is emphasized in several of the essays in this report, because it provides a major obstacle to our competitiveness. We compete economically as a region, yet the decisions that affect our ability to compete are made locally and spread across those hundreds of jurisdictions.

From the outset, the Index encouraged and stimulated Long Island leaders from different sectors to work together in new ways. The Index's Advisory Committee has been a model of collaboration, increasing interaction among the region's influencers and communities in both formal and informal ways.

That spirit of collaboration, combined with the data and assets available, has led to other prominent models of collaboration and partnership. The Energeia Partnership, created and managed by Molloy College, for instance, is dedicated to educating young Long Island leaders from all sectors, and the Index is used as the core of its curriculum. The Right Track for Long Island Coalition was created to champion the LIRR's Third Track, based on the Index's research on the importance of relieving the bottleneck on the 9.8-mile stretch of the Main Line between Floral Park and Hicksville. The MTA's recent approval of the Third Track, with the strong leadership of Governor Andrew Cuomo and the relentless action of the Coalition, proved that even the seemingly impossible can be achieved when we work together in new and compelling ways.

The challenge now is to implement this proven approach more broadly: drawing on objective data and regional assets to find new ways to work together to realize great progress. In a blog post for the Long Island Index, the late acclaimed journalist John Kominicki wrote of Long Island, "That this mammoth collection of excellence has not coalesced into one of the greatest innovation economies of all time remains a mystery." That's the extraordinary potential that Long Island possesses, but to achieve it we must make progress on many issues.

We are still suffering a brain drain, for example, as a shocking number of young Long Islanders plan to leave the area due to a lack of affordable housing. Segregation in schools and housing must be eliminated. Economic opportunities in biotech and related fields must be enhanced. And we still have those 665 government entities.

Yet we now have both extraordinary potential and a proven formula. In the months ahead, the research role of the Long Island Index will be continued by *Newsday* and its new research arm. It will provide the objective data that is so essential to understanding where we stand as a region and where we need to go.

But the challenge of working together in new ways and realizing progress falls to all of us. That's the greatest challenge facing the region, and we are all part of the solution.

We need to embrace new alliances, as we have with the Right Track for Long Island Coalition, recognizing that they may have even more potential than we imagine. We need to create new regional entities, as *Newsday* and the Rauch Foundation are doing. We need to explore innovative forms of regional leadership, as Bruce Stillman urges in his essay, and creative ways for municipalities to share services, as Dave Kapell urges in his. And we need to be bold, as we have been with the Third Track. These are exciting opportunities with great promise, and they are just a few examples, but that promise can only be realized if we are open to it, if we are willing to do things differently, if we are prepared to take some well-informed risks.

The Rauch Foundation will continue to support and advocate the formula proven by the Long Island Index. But it's time to move to a new stage in Long Island's advancement—one where Long Island consistently and innovatively thinks and acts like a region; one where we leverage our remarkable assets and engage in new forms of collaboration; one where we inspire the change that surveys show Long Islanders embrace. With that approach, we can maximize the region's remarkable potential and turn it into a great innovation economy.

Dr. Douzinas is President of the Rauch Foundation and Publisher of the Long Island Index.

LONG ISLAND SINCE THE TURN OF THE MILLENNIUM

Long Island in 2018 looks much as it did a generation ago. Its attractive neighborhoods of single-family homes were built mostly during Long Island's growth spurt from the 1940s to the 1970s. The island's beaches remain among the most beautiful on the East Coast. The network of highways was largely completed in the 1970s, and the rail lines decades earlier.

Yet the demographics, economy and outlook for Nassau and Suffolk are far different. The population is far more diverse. Health care has replaced manufacturing as the dominant industry. Growth has slowed to a crawl. Upward mobility is no longer a given.

There is no clear turning point in Long Island's transition from growing postwar suburb to the mature suburban region that it is today. Many changes have been underway for decades, from shrinking open space to a growing immigrant population to the loss of its defense-based manufacturing economy. But the transformation has been unmistakable in the first 18 years of the 21st century. While most of this is the accumulation of long-term trends, a number of seminal events crystalized these changes, and help define both the promise and problems that lie ahead.

The September 11, 2001 terrorist bombing of the World Trade Center changed the nation's relationship to the rest of the world. It was also a watershed moment for the New York region that illuminated Long Island's ties to New York City. Nearly 500 residents of Nassau and Suffolk died in the attack. Long Island workers and companies were part of the rebuilding efforts, and benefited from the recovery that ensued.

The bursting of the national housing bubble in 2007, and the deep financial crisis that followed, exposed weaknesses in Long Island's economy. While real estate prices had skyrocketed, incomes for the average household had stagnated. Long Island's slow recovery from the recession was in sharp contrast to the rapid economic expansion in New York City and other big cities. This reversal from the half century when Long Island's economy continually outpaced the city demonstrated the need to rethink how a suburban economy can thrive in a world where the pendulum was swinging back to urban centers.

In 2012, Superstorm Sandy brought home the realities of climate change. No longer something theoretical in the distant future, the storm exposed the vulnerabilities of an island defined by its coastline. Coastal communities and the recreation and maritime industries were left to prepare for an uncertain future without a roadmap or resources.

Technology had been reshaping Long Island along with the national economy, but the announcements in 2017 by Tesla, Ford and Uber/Volvo that they would soon begin mass production of driverless cars marked a turning point for a region that is defined by its relationship with the automobile. While the pace and impact of the transformation are unknown, the implications for Long Island's economy and way of life could be profound. Will it usher in a new age of suburban prosperity and mobility and free up acres of parking for more productive uses, or will it simply be an added convenience for those who can afford it and continue the trend toward job concentration in cities?

However the future unfolds, it is important to recognize that Long Island has already begun to adapt. Community by community, a growing number of places are starting to invigorate their downtowns with multifamily housing, commercial development and attractive public spaces. Major investments in the Long Island Rail Road will soon improve transit options. A new generation is bringing fresh perspectives, an ease with technological change and greater comfort with diversity.

So far, these changes on the ground have been slow to keep pace with the extent of the economic, social and environmental changes already underway. As shown in the following set of indicators, maintaining Long Island's high quality of life, and extending its benefits to more of its residents, will require accelerated responses and innovative approaches.

GOAL #1

Growth and Prosperity

Our economy grows at a rate which results in an improved quality of life for all.

Nassau and Suffolk's economy continues to expand, but not by enough or in the types of industries to raise standards of living for everyone.

Nearly every indicator charting Long Island's economy since the turn of the century tells a similar story. Nassau and Suffolk's economy continues to expand, but not by enough or in the types of industries to raise standards of living for everyone. Gross domestic product, the broadest measure of how much wealth and income the economy is producing, has expanded at a relatively modest pace, and less than the U.S. as a whole. Without robust growth in GDP, it is hard to raise incomes or pay for public services. The number of jobs on Long Island has similarly grown at a slow rate, limiting opportunities for both those entering the workforce and those seeking to advance their careers. Job growth is also an indicator of how much businesses are investing in Long Island, and how much they are contributing to the local tax base, an important factor in holding down residential property taxes.

One of Long Island's main challenges is to grow one or more export industries that can bring investment and high-wage jobs. It's telling that the three industry clusters that have provided most of Long Island's job growth in the last sixteen years—regional recreation, health services and construction—are driven more by spending from people who live on the island than goods or services that are sold to other parts of the world. To be sure, visitors and tourists contribute to growth in hotels, restaurants and recreation, hospitals and health care companies get some of their business from New York City and elsewhere, and construction includes buildings and infrastructure for new businesses and residents. They are also vital parts of a diverse economy that provide jobs and services necessary to maintain a high quality of life and keep the rest of the economy working.

But they do not grow the economy and incomes in the same way as export sectors like manufacturing, finance or technology that bring in new wealth to the island by selling goods and services to other regions. Sectors which show the most promise include biomedicine, finance, business services and research & development. Financial and business services are already relatively large

industries and continue to grow, although at a modest pace. Biomedicine is small in terms of employment, but has grown substantially over the last six years. Employment in research & development has been flat since 2010, but is a sizable industry cluster that can support growth in other industries. Other industry clusters, manufacturing and information & communication, are shrinking but are still important sources of high-wage jobs.

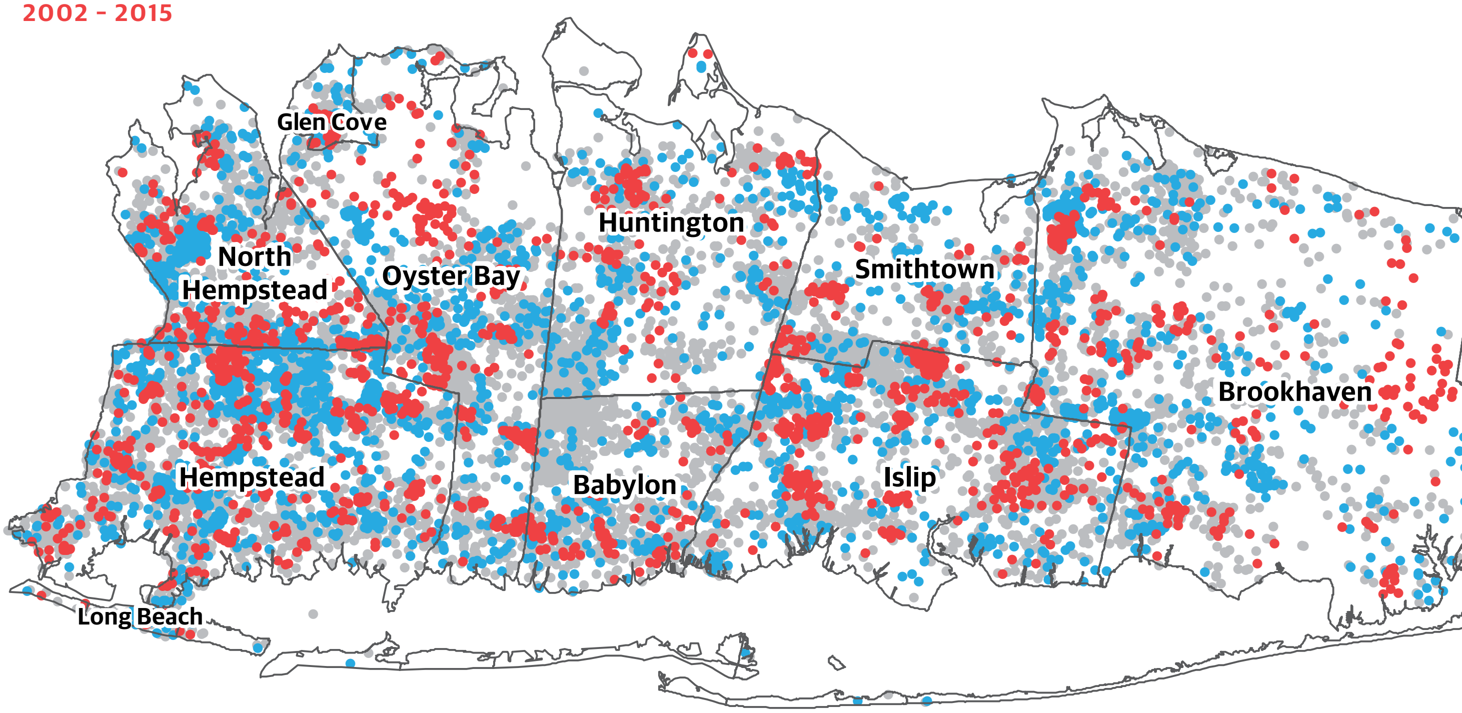
Slow wage growth is partly attributable to the industries where jobs have grown. The recreation industry cluster largely consists of low-wage jobs, and other growing industries are mixed. But wage growth has been slow nationally as well, and achieving a higher-wage economy is likely to require outperforming the U.S.

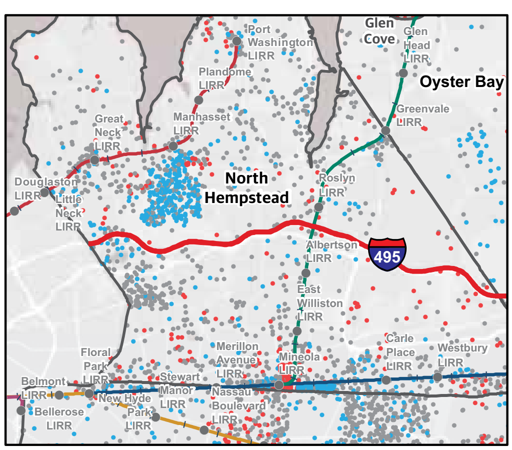
A large part of Long Island's economy is driven by its connection to New York City, and looking solely at businesses and jobs located in Nassau and Suffolk misses the contribution of wages from people who commute to jobs in Manhattan, Queens and other parts of the New York region. In 2011, 30% of Nassau's workforce and 11% of Suffolk's commuted to jobs in New York City. They accounted for 34% and 14%, respectively, of all income earned by residents of the two counties. Those shares have almost certainly gone up in the last five years as job growth in New York City has far outpaced growth on Long Island. And once East Side Access on the Long Island Rail Road is completed, those shares are likely to rise even further.

That connection to New York City is likely part of the reason that Long Island has done better than suburban New Jersey or Connecticut that have somewhat weaker ties. While sometimes viewed as a source of dependency, strengthening ties to New York City should be complementary to expanding jobs and businesses within Nassau and Suffolk. Career and business opportunities from the city can help support job growth on the island, and be an important source of income growth.

Collectively, these trends have resulted in relatively slow growth and widening disparities in household income. Like the nation and New York State, but to an even greater degree, income growth over the last decade has been almost entirely in high-income households.

CHANGE IN ALL JOBS ON LONG ISLAND, 2002 – 2015





1 dot ● = 100 jobs per Census block group

● = decline in number of jobs

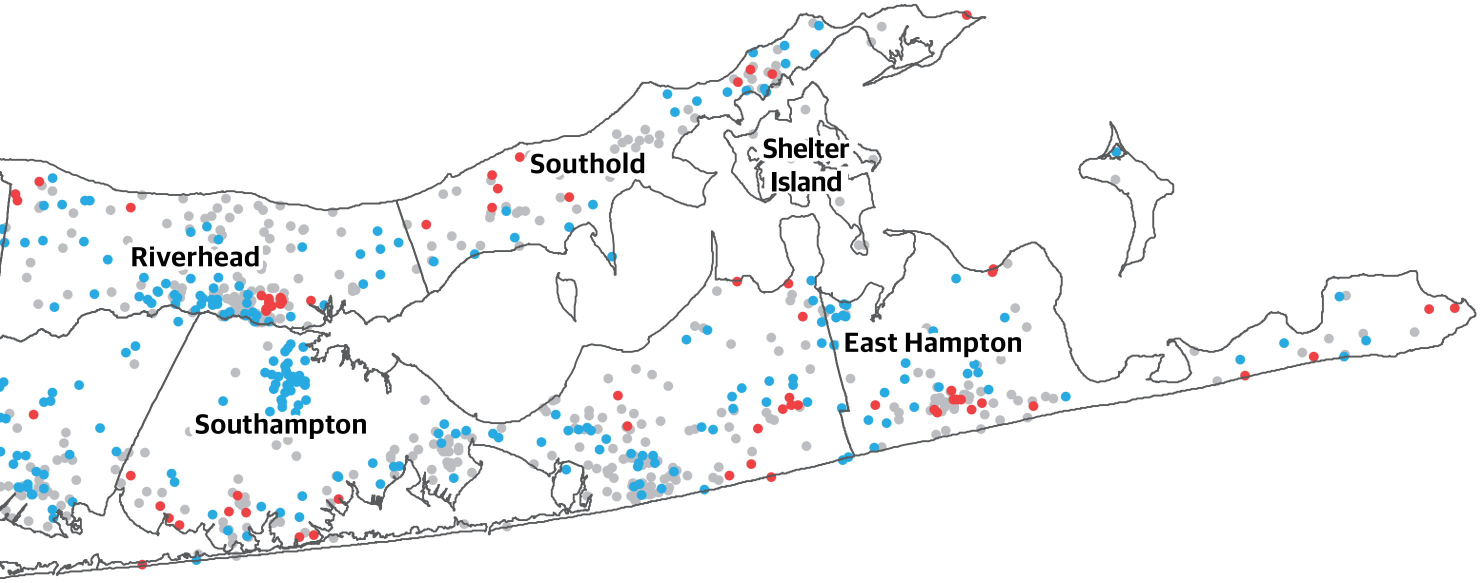
● = increase in number of jobs

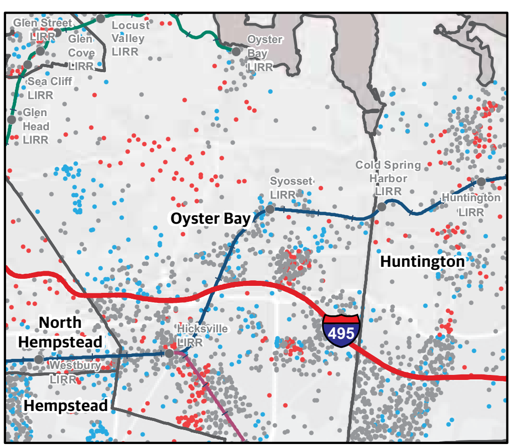
● = number of jobs that stayed the same

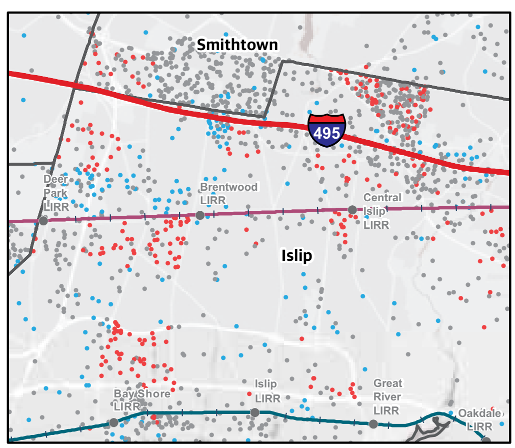
Data source: Longitudinal Employer-Household Dynamics, U.S. Census, via Regional Plan Association.
Map prepared by Center for Urban Research, CUNY Graduate Center.

Future growth and prosperity will depend on how well Long Island adapts to a global economy that favors diverse urban areas with walkable, mixed-use downtowns. Nassau and Suffolk have a number of assets to make that transition—a highly educated workforce, world-renowned research institutions, natural beauty and proximity to New York City. It also has latent potential in its network of town and village centers linked by an extensive commuter rail network. For example, a 2017 study by George Washington University and Regional Plan Association found 14 regionally significant, walkable centers ("WalkUps") that had the attributes for attracting high-value economic activity—places ranging from downtown Long Beach to Riverhead—as well as 12 emerging and potential centers.*

* Center for Real Estate and Urban Analysis, George Washington University, with Regional Plan Association, *The Wake Up WalkUp Call: New York*, April 2017





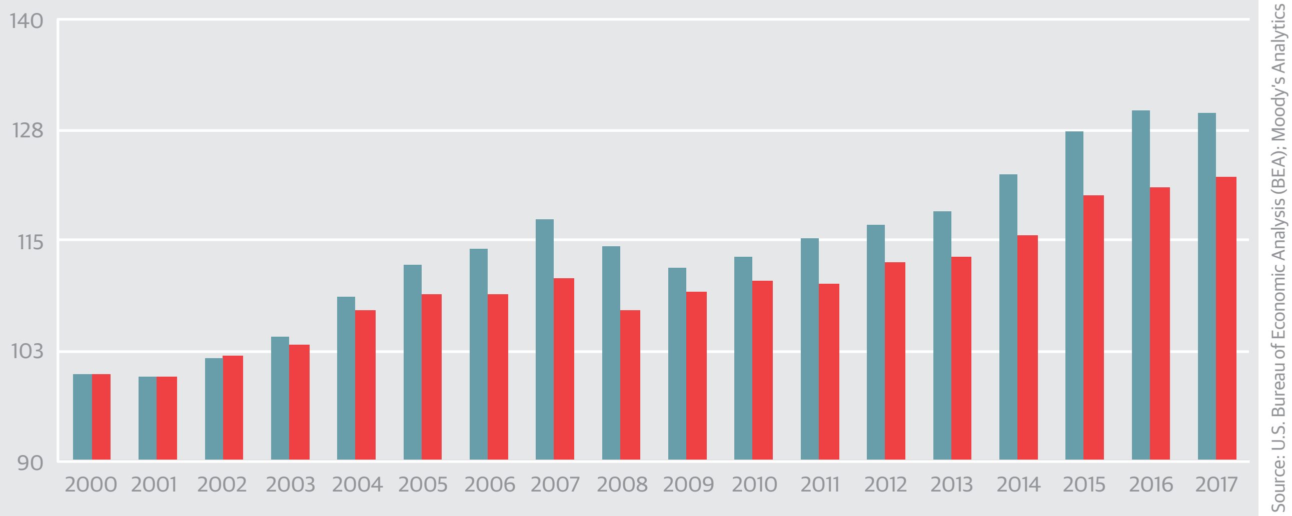


Long Island has underperformed the national economy in the first part of the 21st century.

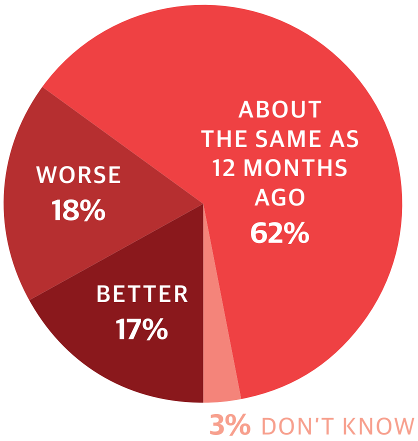
Long Island's $194 billion economy has been expanding by an average of 1.2% per year since 2000. That's slower than the national average of 1.6% per year, which itself is relatively slow by historical standards. The period included two recessions—the first after the dot.com bubble burst in 2001, and the second after the housing bubble burst in 2007. Long Island generally tracked the nation, but did not grow nearly as fast from 2004-2007 and from 2010-2014. Unlike the 1980s and 1990s, when there was a clear pattern of national economic growth moving to the south and west, recent growth patterns have been more complex with stronger growth in major metropolitan areas in the Northeast as well as the Sun Belt.

Long Island's gross domestic product also grew slightly slower than the GDP of the New York metropolitan region, which grew by 1.3% during this period, with the strength of New York City's economy balancing weakness in Connecticut and New Jersey.

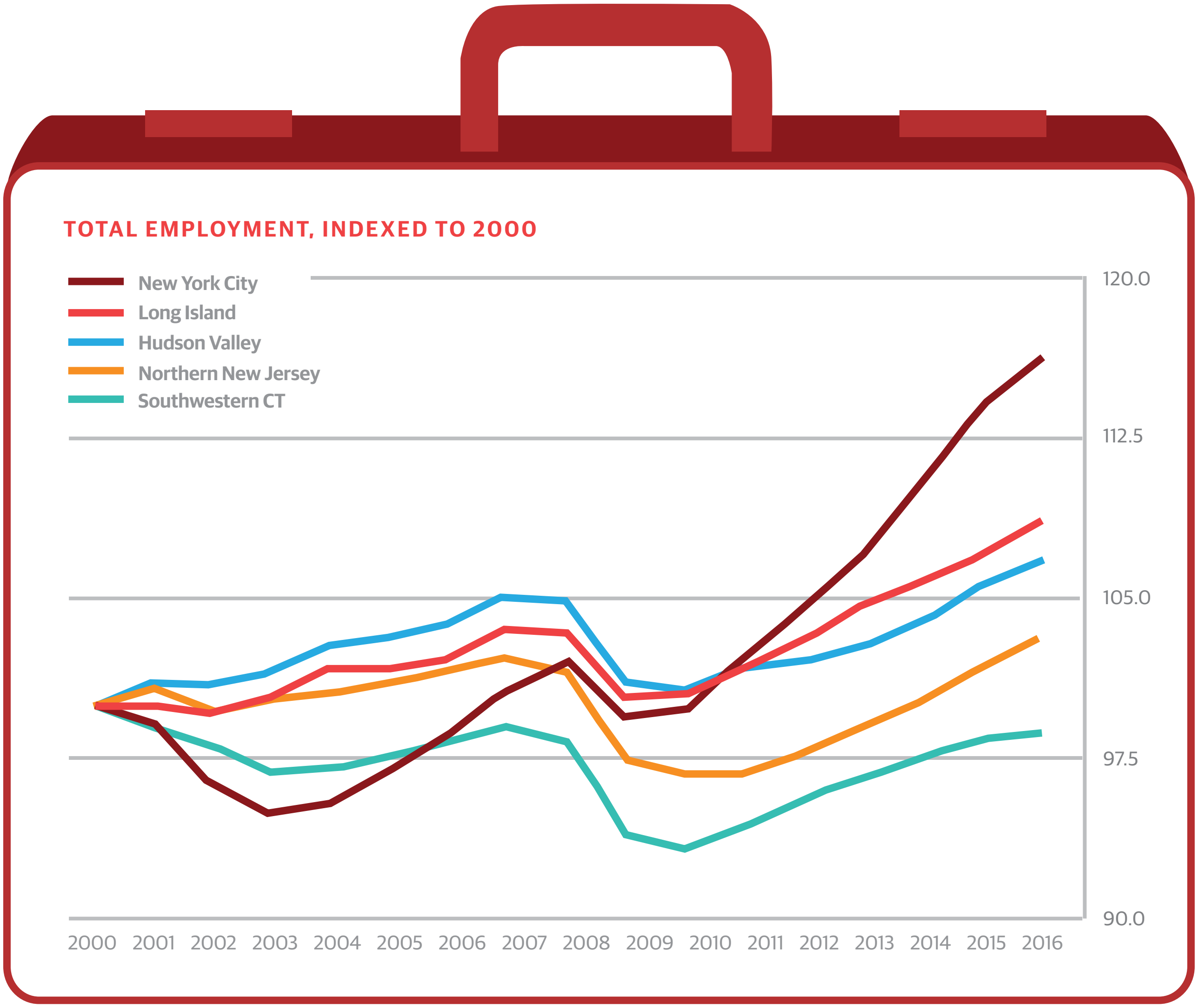
TOTAL GDP, INDEXED TO 2000



Would you say that the economy is better, worse, or about the same as it was 12 months ago?



Numbers may not add to 100% due to rounding.
Source: 2017 Long Island Index survey



Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages- Average Annual Employment

Jobs are growing slowly on Long Island compared to New York City, but faster than other suburbs

Job growth picked up steam on Long Island following the 2007-2009 recession. In the last seven years, Long Island has added 100,000 jobs, an increase of 8%. By contrast, jobs grew by only 4% in the seven years prior to the recession. Part of the reason for the stronger growth since 2009 was catching up to pent up demand. Another likely cause is increased income from Long Islanders who work in New York City, who earn more on average than people working in jobs located on Long Island and create jobs in restaurants, retail, real estate and other industries when they spend those earnings back home. Jobs in New York City barely grew at all from 2000-2007 but have expanded by 17% since 2009, more than twice as fast as Long Island jobs.

Over the full period from 2000-2016, the number of jobs in Long Island grew by 9%, a far cry from New York City's 16% growth but well above the other suburban parts of the New York region. Long Island's relative strength compared to other suburbs could be due to a number of factors—its educated workforce, its closer ties to NYC economy and its particular mix of industries. Jobs in Suffolk County grew by 12%, much faster than jobs in Nassau County, which grew by 5%.

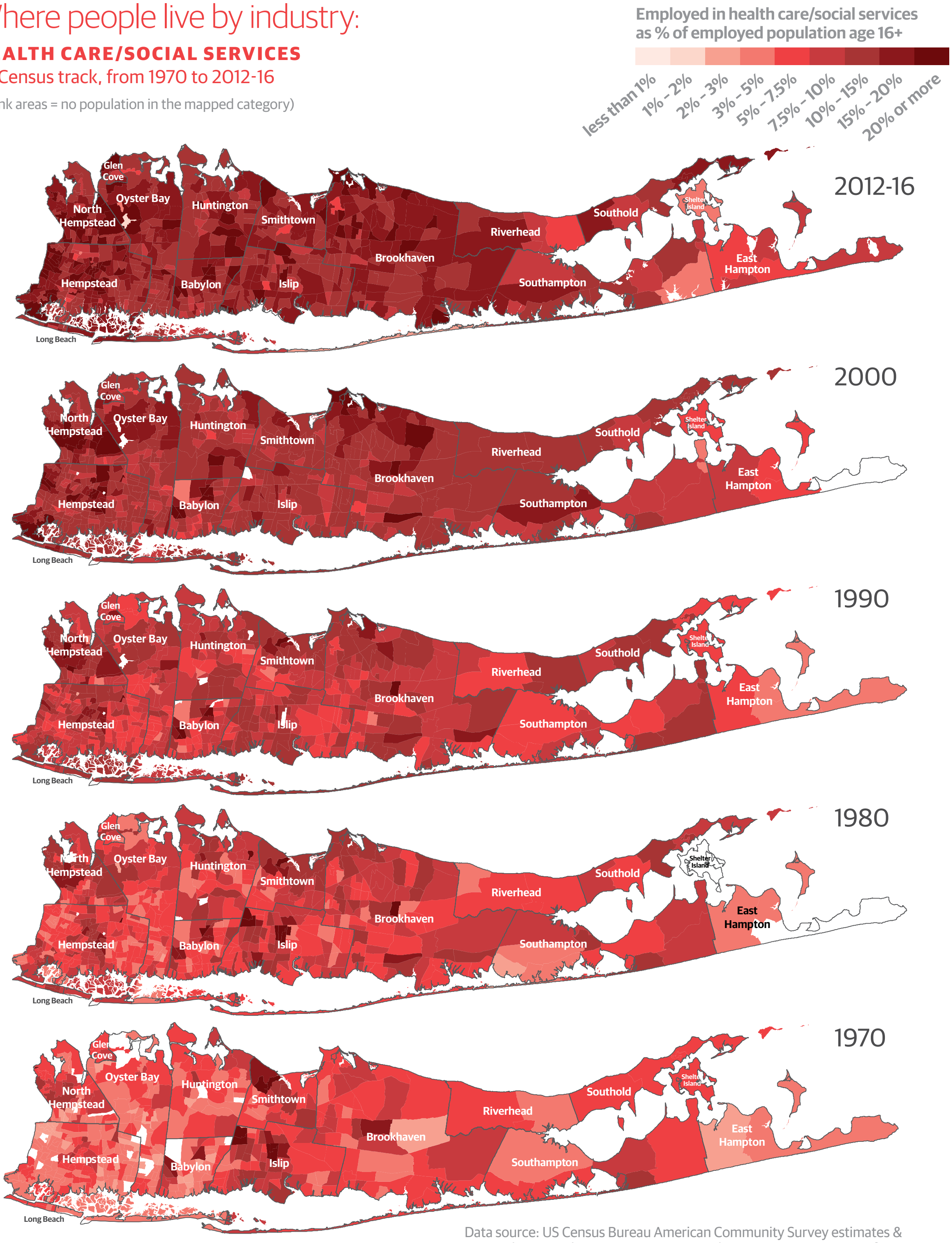
On an annual basis, jobs have grown by 0.5% per year since 2000, a slower rate than the 0.8% annual growth in the 1990s, a decade that began with an even deeper recession than the 2007-2009 downturn.

Where people live by industry:

HEALTH CARE/SOCIAL SERVICES

by Census track, from 1970 to 2012-16

(Blank areas = no population in the mapped category)



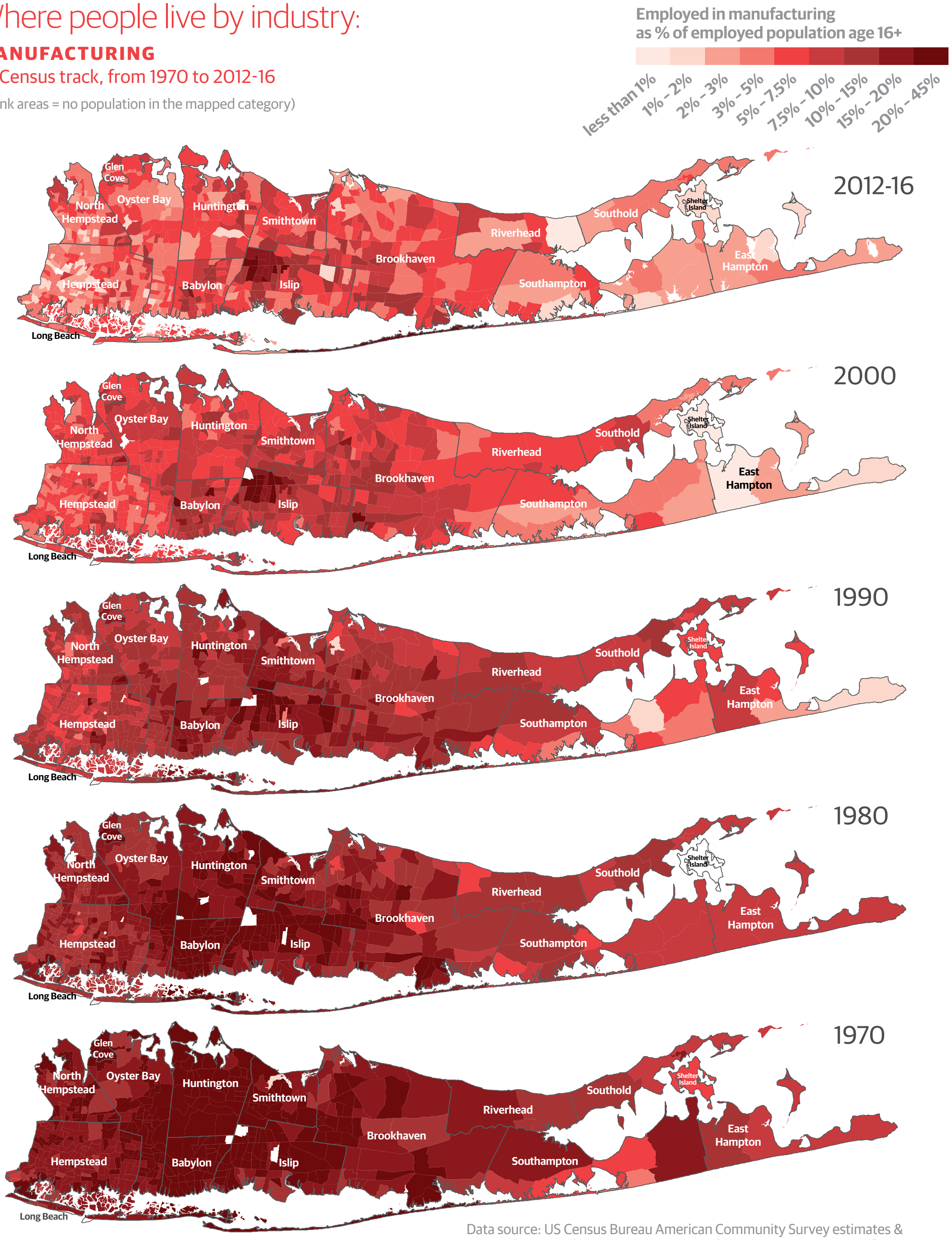
Data source: US Census Bureau American Community Survey estimates & National Historical GIS via Minnesota Population Center, University of Minnesota. Maps prepared by Center for Urban Research, CUNY Graduate Center.

Where people live by industry:

MANUFACTURING

by Census track, from 1970 to 2012-16

(Blank areas = no population in the mapped category)



Data source: US Census Bureau American Community Survey estimates & National Historical GISvia Minnesota Population Center, University of Minnesota. Maps prepared by Center for Urban Research, CUNY Graduate Center.

LESSONS LEARNED
BY KEVIN LAW

The Key to Growing our Economy

Long Island is cultivating a world-class research corridor that spans from Eastern Suffolk County into Manhattan. Institutions such as Brookhaven National Laboratory, Stony Brook University, Cold Spring Harbor Laboratory, Hofstra University and Northwell Health are at the forefront of scientific discovery and boast a highly-skilled, educated workforce galvanized to grow our economy to greater prosperity.

We all share the goal of our economy growing at a rate which results in an improved quality of life for everyone. Our region has a number of unique, enviable assets that provide us with a distinct advantage in developing an ecosystem of ideas and advanced technologies that will propel our 21st century economy forward.

Long Island is capable of becoming the East Coast capital of innovation. In order to achieve these heights, we need to continue investing public and private dollars into the physical and intellectual infrastructure essential to this vision while also taking additional steps to improve the region's business climate, keep and attract young professionals and support the universities and facilities sustaining our economic progress.

Mr. Law is the President and Chief Executive Officer of the Long Island Association.

Wages are growing on a par with the national economy.

The average wage for jobs located in Nassau or Suffolk grew by 9.5% from 2001 to 2016, about the same as the 9.6% recorded for the United States as a whole and slightly more than the 8.9% growth experienced in the 1990s. It is important to note that this mean average is computed by dividing all wages by all workers. The median wage, which shows how much a worker who is exactly in the middle of the wage distribution makes, is unattainable from available data and would likely show a much slower rate of growth. Both nationally and regionally, wage increases have been concentrated at the top of the wage scale and median wages have risen much more slowly than mean average wages.

Most of this wage growth occurred before the 2007-2009 recession, and it wasn't until 2015 that wages surpassed their 2007 peak. This mirrored the national pattern, which also surpassed its pre-recession peak in 2015.

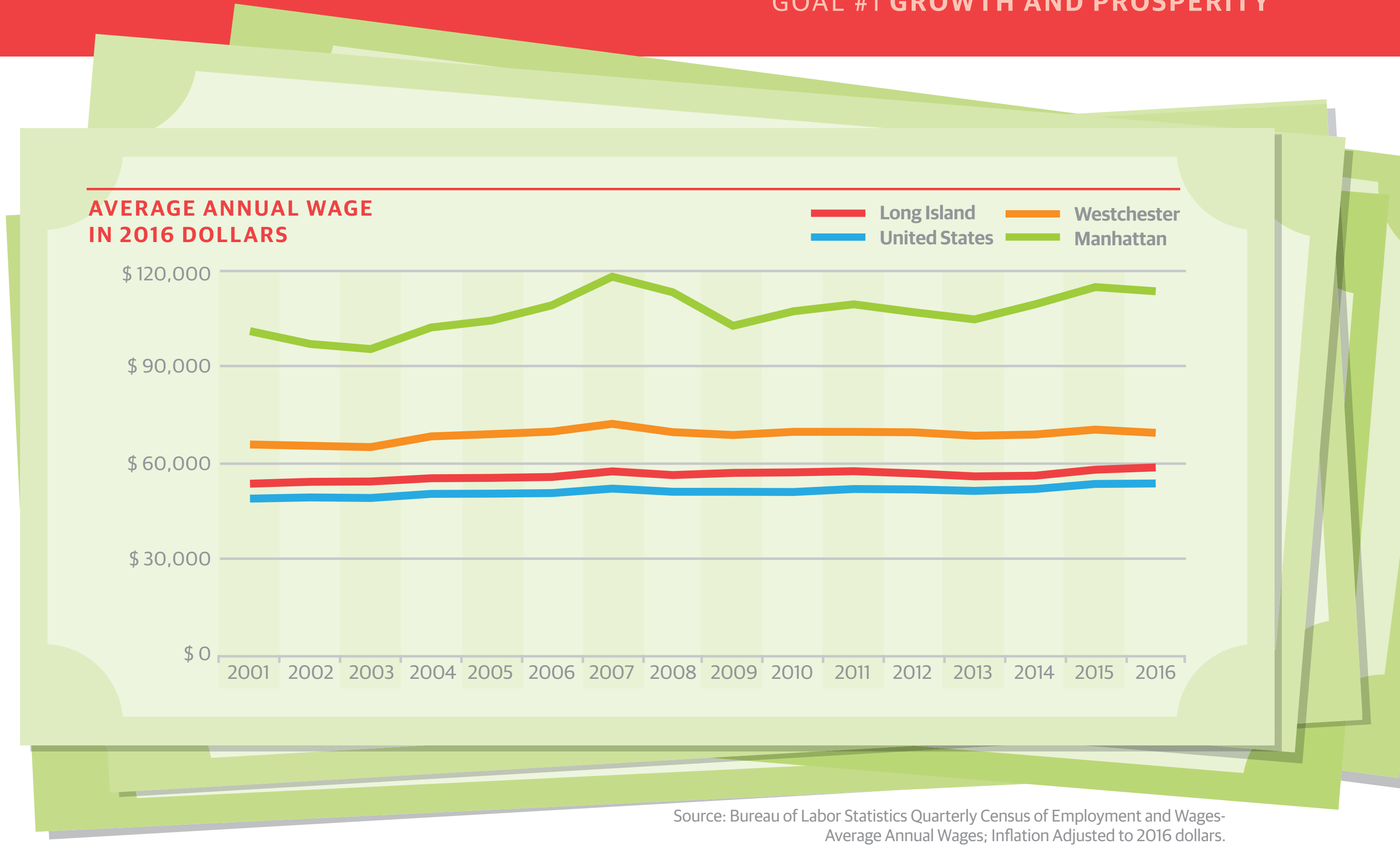
The divide in wages by type of job plays out geographically as well. Manhattan, where jobs have always paid much more than jobs on Long Island, grew by 12.3%, considerably faster than on Long Island. But Long Island did outpace Westchester County, which has a more similar job profile to Nassau and Suffolk than to Manhattan. Westchester wages grew by 5.5%, just more than half the rate as on Long Island.

Since 2010, the biggest job generators on Long Island have been recreation, construction and health services.

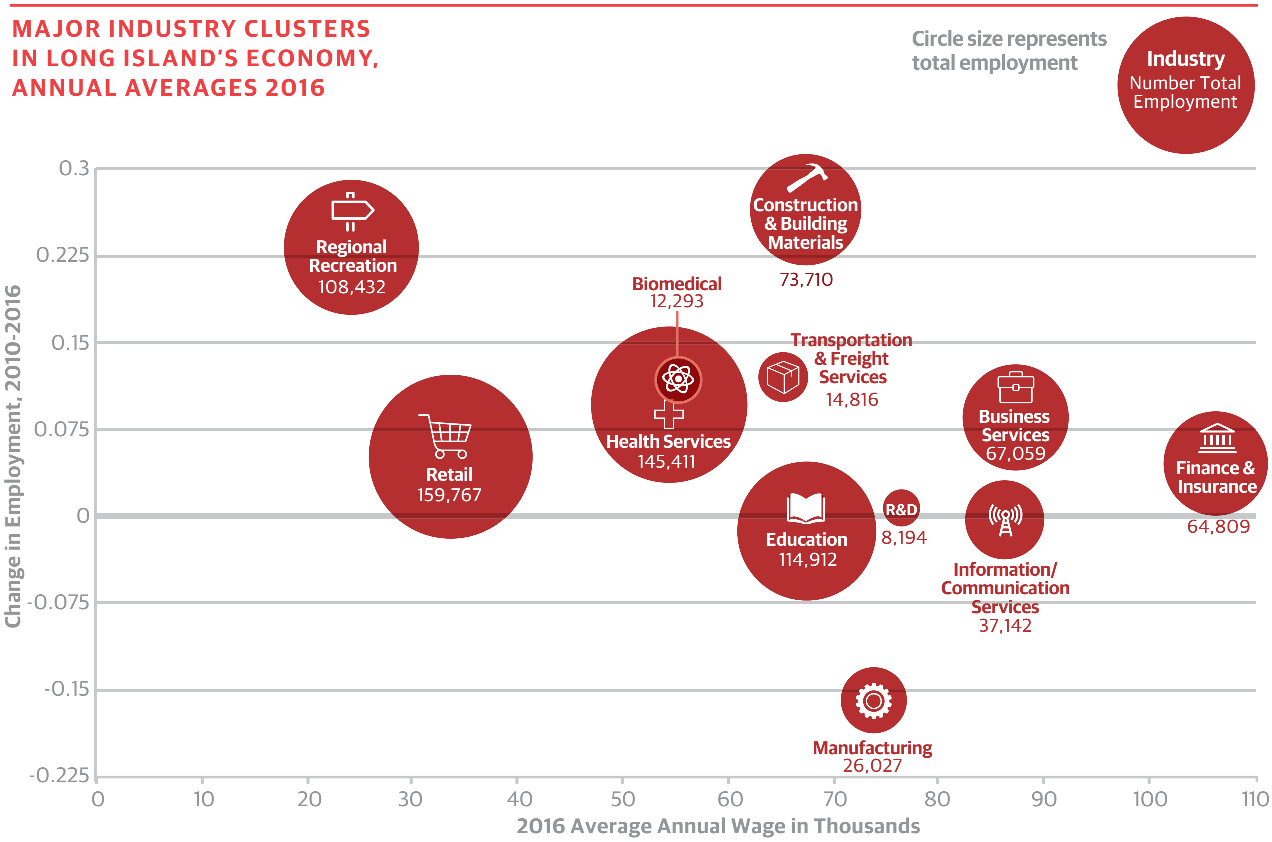
Since emerging from the recession, 80% of Long Island's job growth has been generated by three industry clusters—regional recreation, construction and health care. Recreation, which includes restaurants, hotels, arts and culture and leisure activities, added 25,200 jobs, growing by 23% in just six years. Construction grew by 19,500 jobs, or 26%, while health services added 14,000 jobs and grew by 10%. Recreation and health care have been growth sectors for some time. The economic recovery boosted restaurants and other leisure activities as people had more discretionary income to spend. Health services are driven by an aging population and growing demand. Construction is a cyclical industry that has been bolstered both by public infrastructure projects and private construction from home remodeling to major development projects.

While construction pays relatively high wages, regional recreation jobs are among some of the lowest paid. Health services jobs cover a wide range from low-paid home service occupations to highly paid doctors and specialists. Other growing industry clusters include highly paid sectors like biomedicine, business services and transportation & freight services, and low paid industries like retail.

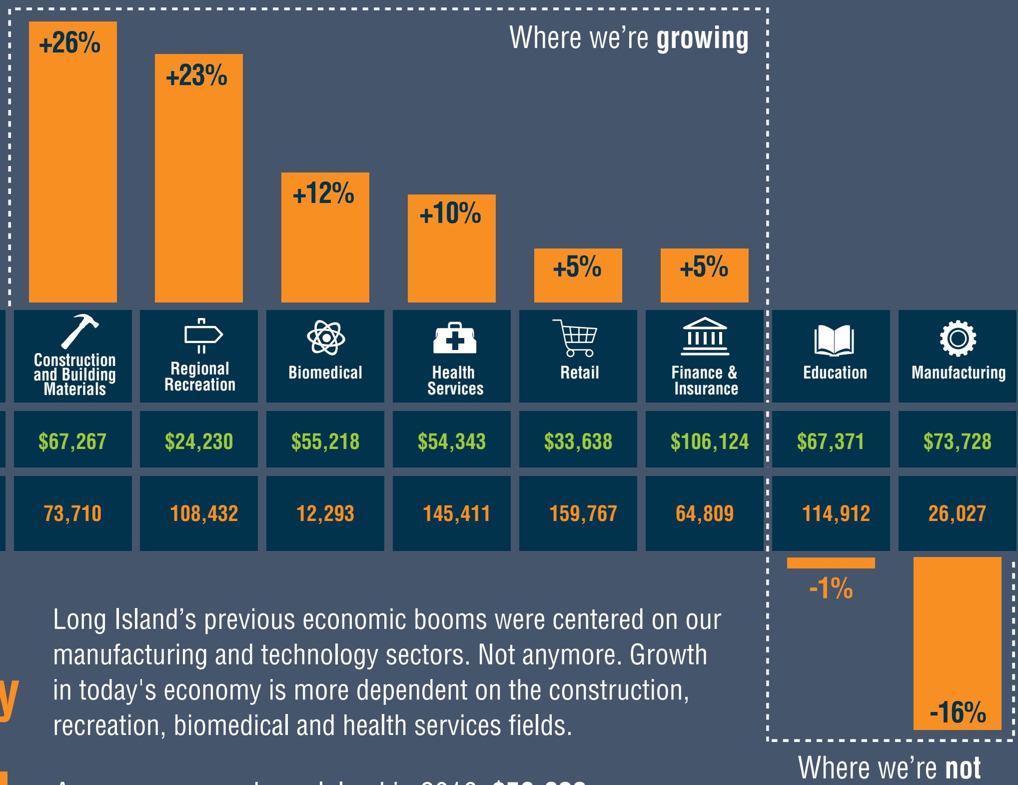
Compared to the national economy, Long Island's jobs are more concentrated in high-skill sectors like bio-medicine and research & development, and less in goods-related industries like manufacturing and transportation & freight services. Growth patterns since 2010 have reinforced that divergence.



Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages-Average Annual Wages; Inflation Adjusted to 2016 dollars.



Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages- Average Annual Employment



Industry	Construction and Building Materials	Regional Recreation	Biomedical	Health Services	Retail	Finance & Insurance	Education	Manufacturing
Annual Salary	$67,267	$24,230	$55,218	$54,343	$33,638	$106,124	$67,371	$73,728
Total Employment	73,710	108,432	12,293	145,411	159,767	64,809	114,912	26,027

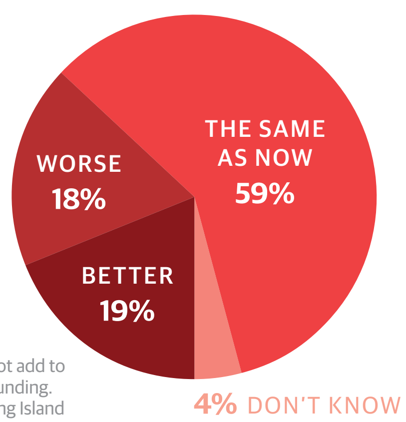
Long Island's Economy Today

% Change in employment measured from 2010–2016

Long Island's previous economic booms were centered on our manufacturing and technology sectors. Not anymore. Growth in today's economy is more dependent on the construction, recreation, biomedical and health services fields.

Average wage on Long Island in 2016: **$58,620**

Now, looking ahead, do you think that 12 months from now the economy will be better, worse or about the same as it is now?



Numbers may not add to 100% due to rounding. Source: 2017 Long Island Index survey

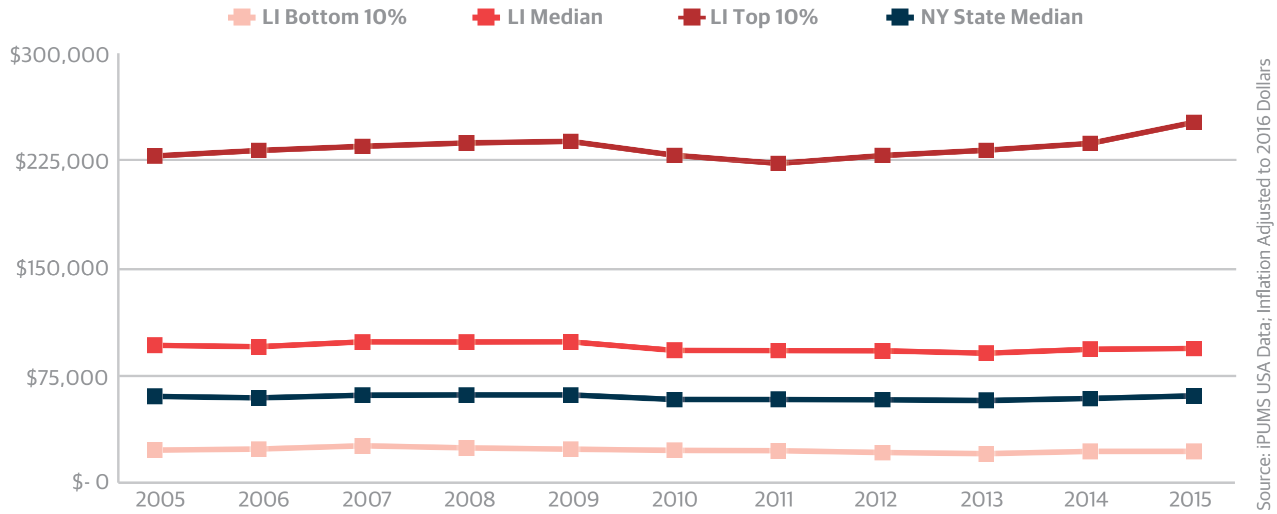
Income disparities are growing, with wealthier Long Islanders seeing the largest gains in income.

The median Long Island household had an income of $94,000 in 2015, lower than the inflation-adjusted $96,300 median income in 2005. This reflects relatively slow growth in wages generally, a decline in real wages in lower-paid sectors, and declining participation in the workforce. In many ways, the trajectory for that average household masks a more complex picture of how well Long Island families and individuals have done economically over the last decade.

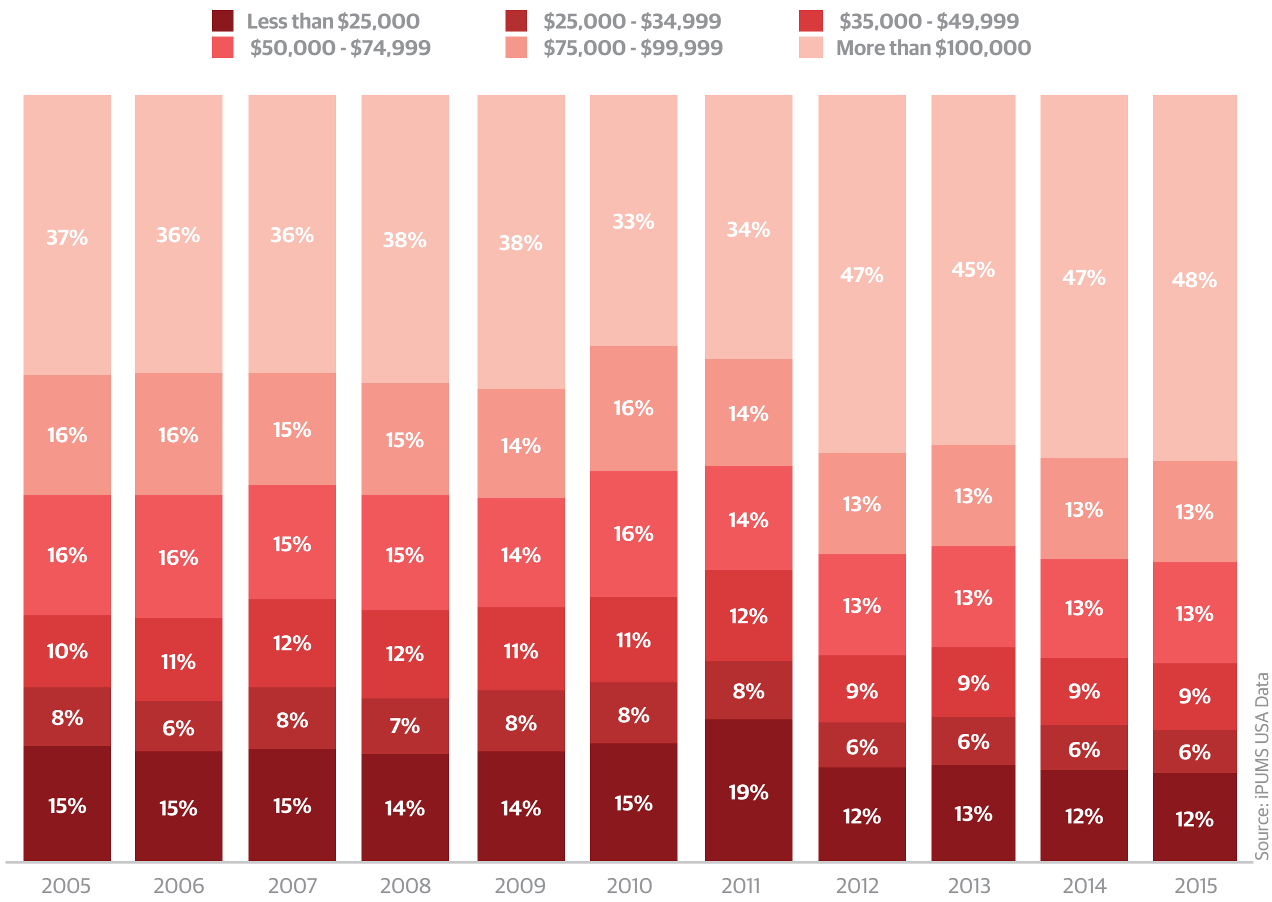
Incomes rose slowly before dropping sharply in 2010, and only started rising appreciably in 2014. Income can often lag job growth in economic recoveries, and wages were particularly slow to rise following the last downturn.

The average income for the bottom 10% of households, $22,200, declined by 4% since 2005. By contrast, the average income for the top 10% of households increased by 10% to $252,100. A similar trend occurred nationally and for New York State as a whole, but it was more pronounced on Long Island. For New York State, incomes declined by 2% for the bottom 10% of households and increased by 7% for the top 10%.

HOUSEHOLD INCOME, 2016 DOLLARS



HOUSEHOLD INCOME DISTRIBUTION



GOAL #2

Supportive Business Environment

Long Island provides a business friendly environment for companies to grow.

Business formation and expansion are essential to a healthy economy. New and growing businesses are the engines of job growth, and evidence of an entrepreneurial culture that can respond to and capitalize on changes in technology, consumer tastes, business cycles and structural economic changes. A supportive business environment includes tax and regulatory policies that allow firms to flourish, but also requires a skilled workforce, reliable infrastructure and effective governance.

Data on firm births, deaths and expansion are sparse, but two indicators provide a window into how well Long Island's business environment is supporting entrepreneurship and growth. The change in the number of businesses from County Business Patterns shows whether the number of new firms exceeds the number of firms that go out of business. A small change in the numbers of businesses does not necessarily indicate a poor business environment since a dynamic economy will have a large number of firms going both in and out of business. On balance, however, a strong business environment is likely to see robust growth in the number of businesses. Further insights can be gained from looking at the retail sector, for which information is available on changes in inventory, rents and vacancy rates. While these are primarily driven by changes in demand for retail goods, the number of vacant stores, whether the amount of space is expanding or not, and how much rents are can also be influenced by land use policies, business regulations, the attractiveness of streets and downtowns, and other aspects of the business environment.

> These two indicators create a mixed picture of Long Island's business environment, but one that is consistent with an economy that is not reaching its full potential.

These two indicators create a mixed picture of Long Island's business environment, but one that is consistent with an economy that is not reaching its full potential. There was almost no growth in the number of businesses from 2005-2015, a period that included a deep recession. Retail space expanded and vacancy rates declined, indicating a healthy retail market, even though the number of retail businesses declined over this decade. It's likely that these changes were driven primarily by weak economic demand over this period, but high property taxes, regulations that limit new commercial or mixed-use development, traffic congestion and a limited number of vibrant downtowns are also likely to have contributed.

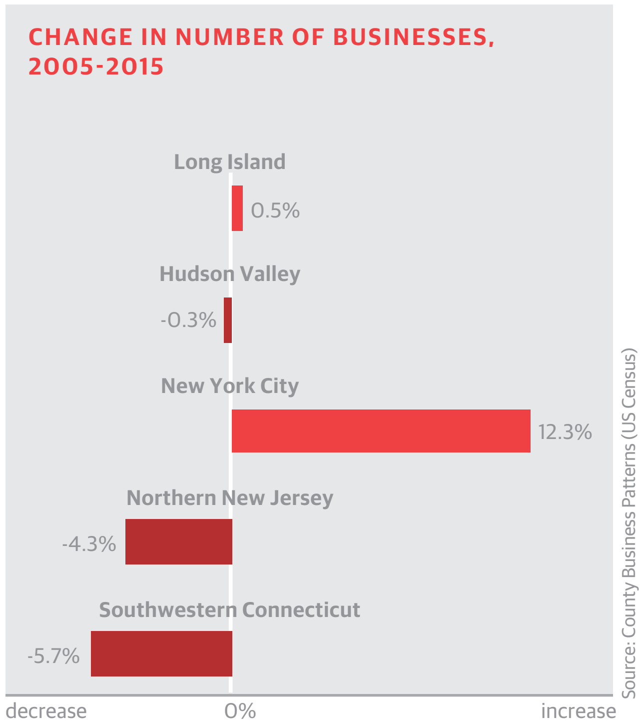
Long Island's challenges are not unique. Other suburban parts of the New York region had similar or worse trends in the number of new businesses, and shifting business preferences for more urban environments require different business models for both public and private sectors. One particular challenge for businesses on Long Island is the large number of jurisdictions, each with their own land use and regulatory environment. As documented in the 2011 Long Index report, *Getting It Done,* many villages and towns have complex, unpredictable approval processes, and lack the technology and capacity of jurisdictions elsewhere.

There has been little recent growth in number of establishments.

The number of businesses on Long Island stayed largely flat on Long Island between 2005 and 2015, growing by only 0.5%. The industries that increased are consistent with industries that added the most jobs over the last decade. Hotels and restaurants added over 1,000 establishments. Health care added 750 establishments and miscellaneous services added nearly 900.

The industries that lost firms included retail trade (-900), wholesale trade (-748) and manufacturing (-709). Since retail inventory increased over this period, either existing retail firms increased in size or firms consolidated.

The lack of expansion in the number of businesses is consistent with other suburban parts of the New York region. In fact, the number of businesses declined by 4% in northern New Jersey and 6% in southwestern Connecticut. By contrast, the number of establishments in New York City increased by over 12%, another sign of how much recent economic growth has been concentrated in the city.



LESSONS LEARNED BY RICHARD C.D. FLEMING

Lessons Learned from Building Innovation Districts

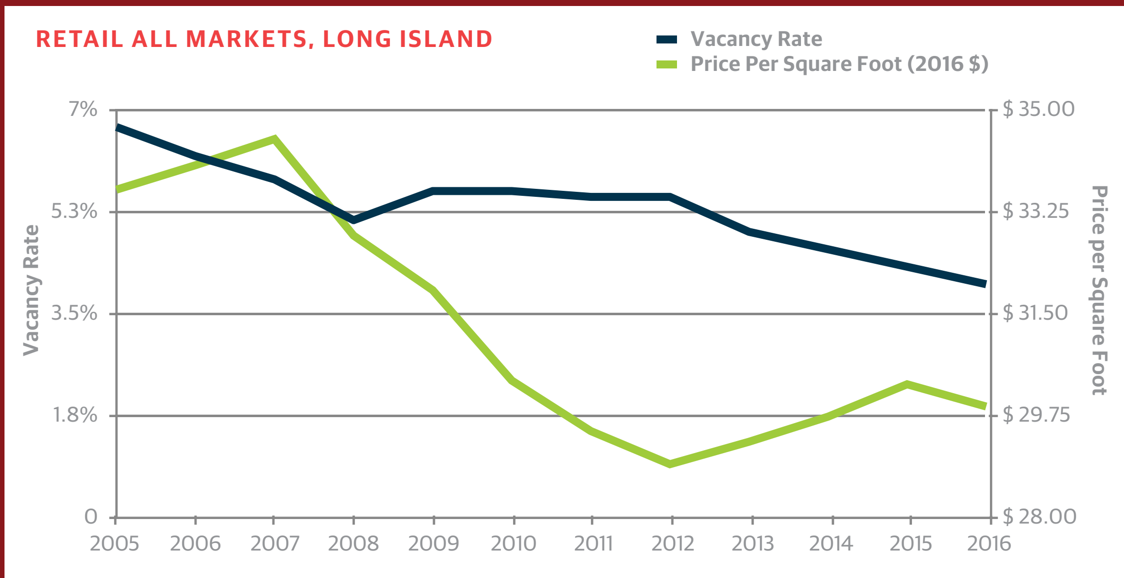
Mr. Fleming is chairman and chief executive of Community Development Ventures Inc., a St. Louis-based advisory firm specializing in economic, entrepreneurial, and urban development strategies.

The mantra for establishing real estate value has been "Location, Location, Location." But recently it's been expanded to include Mixed-Use Placemaking, Walkability, and Innovation. The Nassau Hub Innovation District, proposed in the Long Island Index, could combine all four factors to energize Long Island's economy.

National research, and my firm's experience planning and building innovation districts in Denver and St. Louis, underscore several priorities to maximize this opportunity. In St. Louis, these priorities are shaping several innovation districts simultaneously: the CORTEX Innovation District, the 1,500-acre NorthSide Regeneration Mixed Use Development, and the $1.75-billion National Geospatial Intelligence Agency's new headquarters. The priorities are these:

First, innovation districts should be mixed-use, so a unique character emerges. And the mix of office, retail, and housing is crucial. Long Island faces a challenge in ensuring that housing is accessible, affordable and appealing to the talent needed in an innovation economy, including young professionals.

Second, this sense of place should generate synergies among the institutions and individuals who populate it. It's not enough to simply place them near each other; they must interact and connect in ways that create ongoing collisions of people and ideas that facilitate innovation.



Source: Costar LI Retail Report

Third, it's vital to make the development transit-oriented, which can include bus and internal shuttles, as well as train service. Public transit must be frequent, reliable, and affordable.

Fourth, parking should not dominate a site, as it has historically at Nassau Coliseum. Developers can wrap parking decks with housing and retail, so parking is invisible from street level.

Finally, walkability is both a vital place-making asset and a real estate value.

If Long Island achieves this level of creativity, the Nassau Hub Innovation District can be an economic powerhouse for the entire region.

Retail vacancy rates have declined over the last decade, but so have rents for retail space.

In spite of the trend toward online shopping, the amount of space devoted to brick-and-mortar retail space has grown over the last decade. Total retail inventory increased from 126 million to 132 million square feet between 2005 and 2016. And vacancy rates have declined, meaning that there has been even faster growth in the amount of occupied retail space. The overall vacancy rate has declined from 6.7% in 2005 to 4.0% in 2016. Even during the recession, the vacancy rate held relatively steady.

Even so, retail landlords were not able to command the same rents that they could a decade ago. Rents for retail space dropped from $33.62 per square foot in 2005 to $29.90 in 2016. Here, the business cycle did have an effect with a steep drop from 2007-2012 and some recovery since then.

Neighborhood retail centers have expanded more slowly and vacancy rates have risen faster than for other types of retail. Total square footage of neighborhood centers increased by 2% from 2005 to 2016 compared to 4% overall. And while the average vacancy rate declined for all retail, it increased from 4.1% to 6.1% for neighborhood centers. Rents, however, increased for neighborhood centers, from $25.73 to $27.82 per square foot.

Shopping malls remained healthy over the last decade, with inventory increasing by 2%, vacancy rates remaining around 1%, and rents increasing from $45.43 to $47.99 per square foot.

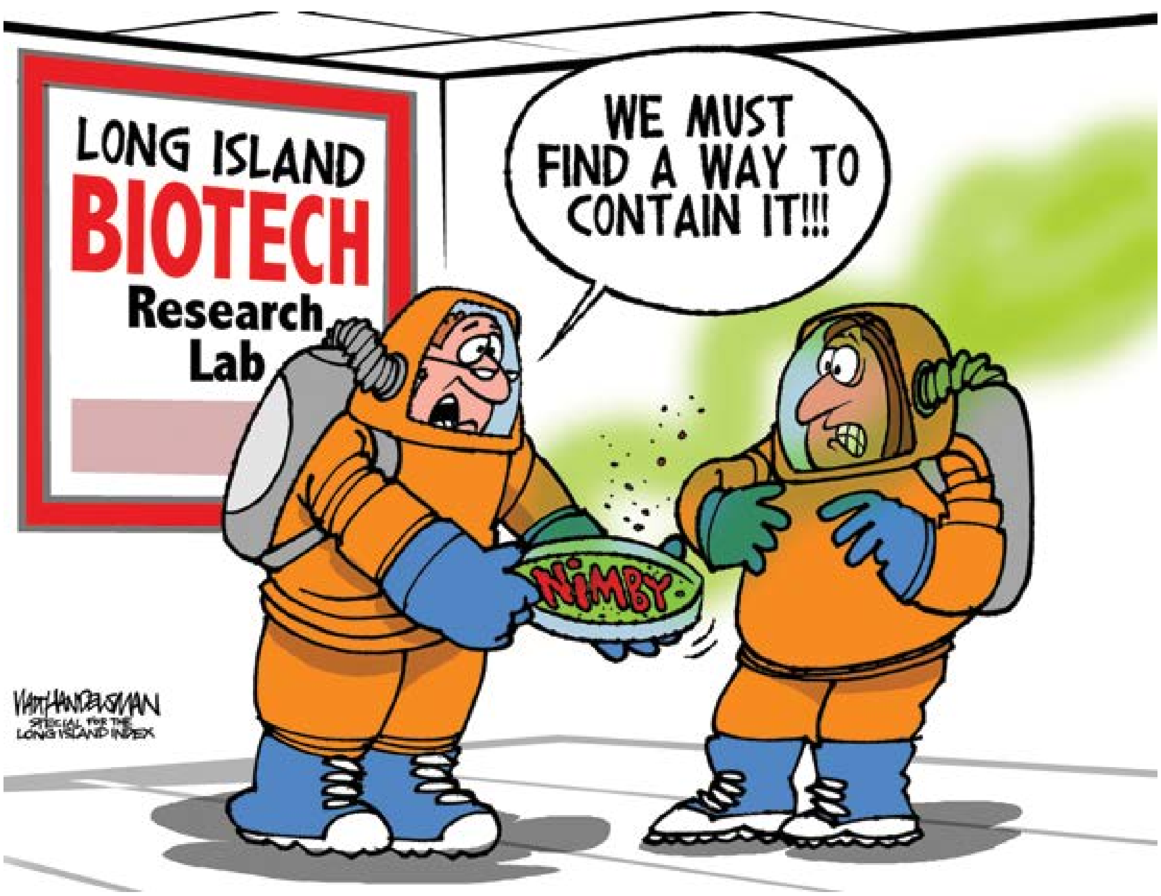
LESSONS LEARNED BY GEMMA DE LEON

Building a Supportive Work Environment

Wage stagnation impacts every aspect of our regional economy. A decline of brick and mortar retail establishments could adversely affect our main streets and downtowns and have a cascading effect on our overall job climate. And despite record corporate profits, many workers continue to face prospects of losing their pensions and paying more for skyrocketing healthcare and insurance costs. Young workers lack access to affordable, quality daycare, after-school and pre-kindergarten programs, often forced to choose between their jobs and their families. These factors add to the burden of an already expensive place to live.

When we reimagine jobs on Long Island, in addition to highly skilled high-tech jobs of the future, we must also prioritize attracting and maintaining great companies that offer quality jobs with decent benefits in industries that support our existing workforce—such as construction, hospitality, retail, manufacturing, healthcare and transportation. We must also foster workforce education programs, utilize the vast resources of our community colleges, improve our childcare system and continue to lift working people's chances of achieving their highest potential.

Ms. De Leon is the National Director of Strategic Planning for the Retail Wholesale and Department Store Union.



GOAL #3

Innovative Economy

Our economy incubates, supports and retains companies.

Creative content—scientific, technological, artistic, intellectual, organizational—is the fuel for a successful economy. Regions that attract and nurture the people, businesses and institutions that develop this content and turn it into products and services that people and companies want are the places that have the most robust economic growth and the highest incomes. In 2012, the Long Island Index produced a comprehensive survey of the island's innovation assets and systems. It found a number of strengths, including world-class research institutions and a growing number of innovation companies, particularly in the areas of biosciences, information technology and clean energy. It also found that Long Island's regional innovation system is not yet fully developed compared to other leading innovation regions, and areas for improvement included the need for continued investment in Long Island's talent and R&D and greater commercialization of its technology resources.

In 2017, several indicators show that Long Island's innovation economy is still developing.

In 2017, several indicators show that Long Island's innovation economy is still developing. New businesses are emerging, as evidenced by 10 technology startups that were given $10 million by two Long Island investment funds (the Accelerate Long Island Seed Fund and the Long Island Emerging Technologies Fund) and have attracted $24 million from venture capital, government agencies and other businesses.* However, several broader indicators provide a more mixed picture, albeit one that is obscured by limited data and the overall performance of Long Island's economy.

Jobs in innovation-related sectors such as information and professional, scientific and technical services have grown slowly over the last fifteen years, but so has the rest of Long Island's economy. Sectors like biomedicine and professional services have grown more rapidly since the recession ended in 2010, but most are still outpaced by the U.S. and New York City.

Data on venture capital was not available for this report, but small technology companies on Long Island continue to receive their share of government funds intended to accelerate the commercialization of new technologies. The number of patents issued on Long Island remains low, in part because it has a small information technology sector, an industry that generates an outsized share of patents.

The digital infrastructure that supports innovation is more robust on Long Island than in other parts of the New York region, but a majority of homes still lack fiber optic service and nearly half of low income households have no internet service at all.

* James Madore, *Nurturing Seedling Companies*, *Newsday*, December 17, 2017.

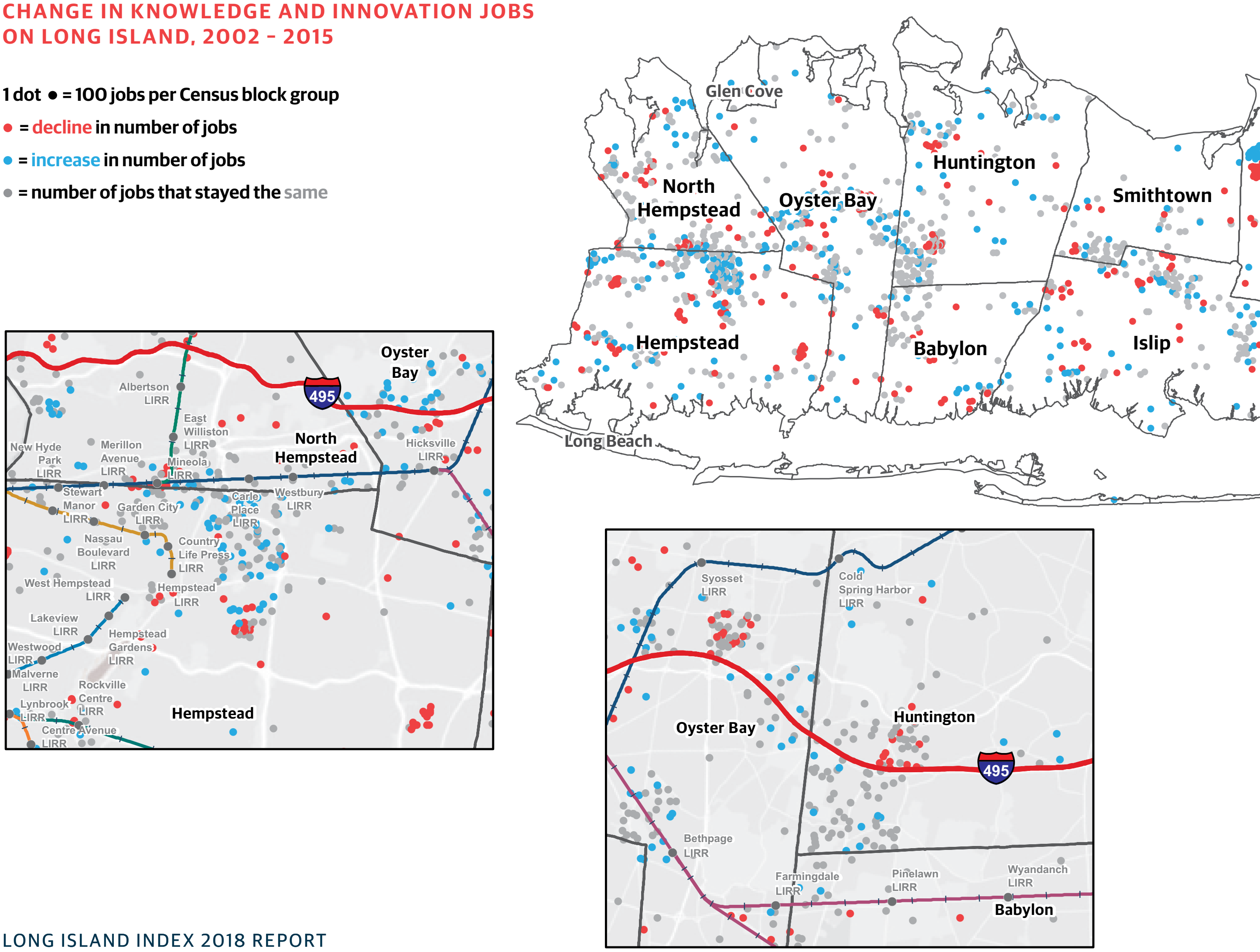
Jobs in industries related to innovation are growing slowly along with the rest of Long Island's economy.

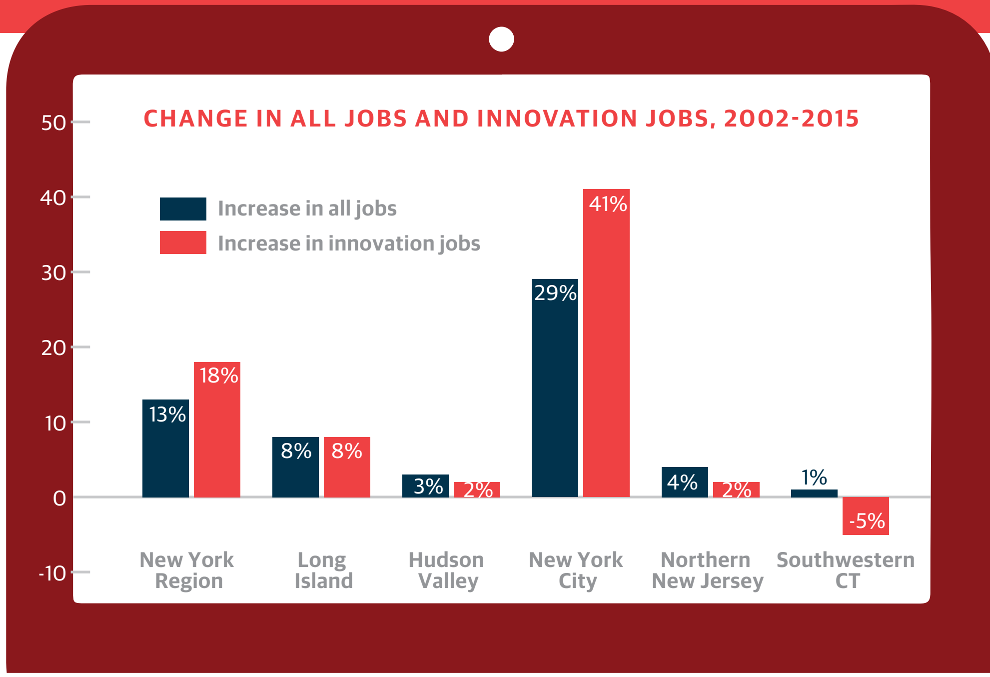
Jobs in industries requiring a high degree of innovation—information and communications, professional, scientific and technical services, and arts and entertainment—grew by 8% between 2002 and 2015. This relatively low rate of job growth matches Long Island's growth rate for the economy as a whole and reflects more on the state of the overall economy than on the competitiveness of innovation-related sectors. Innovation jobs soared with the rest of New York City's economy in this period, growing by 41% compared to a growth of 29% for all jobs in the city. Every other part of the region fared worse than Long Island, with only small gains in all jobs and even less growth in innovation jobs.

One recent bright spot for Long Island is the biotechnology cluster, which grew by 12% from 2001-2016, matching the rate of growth for biotech in the US economy as a whole.

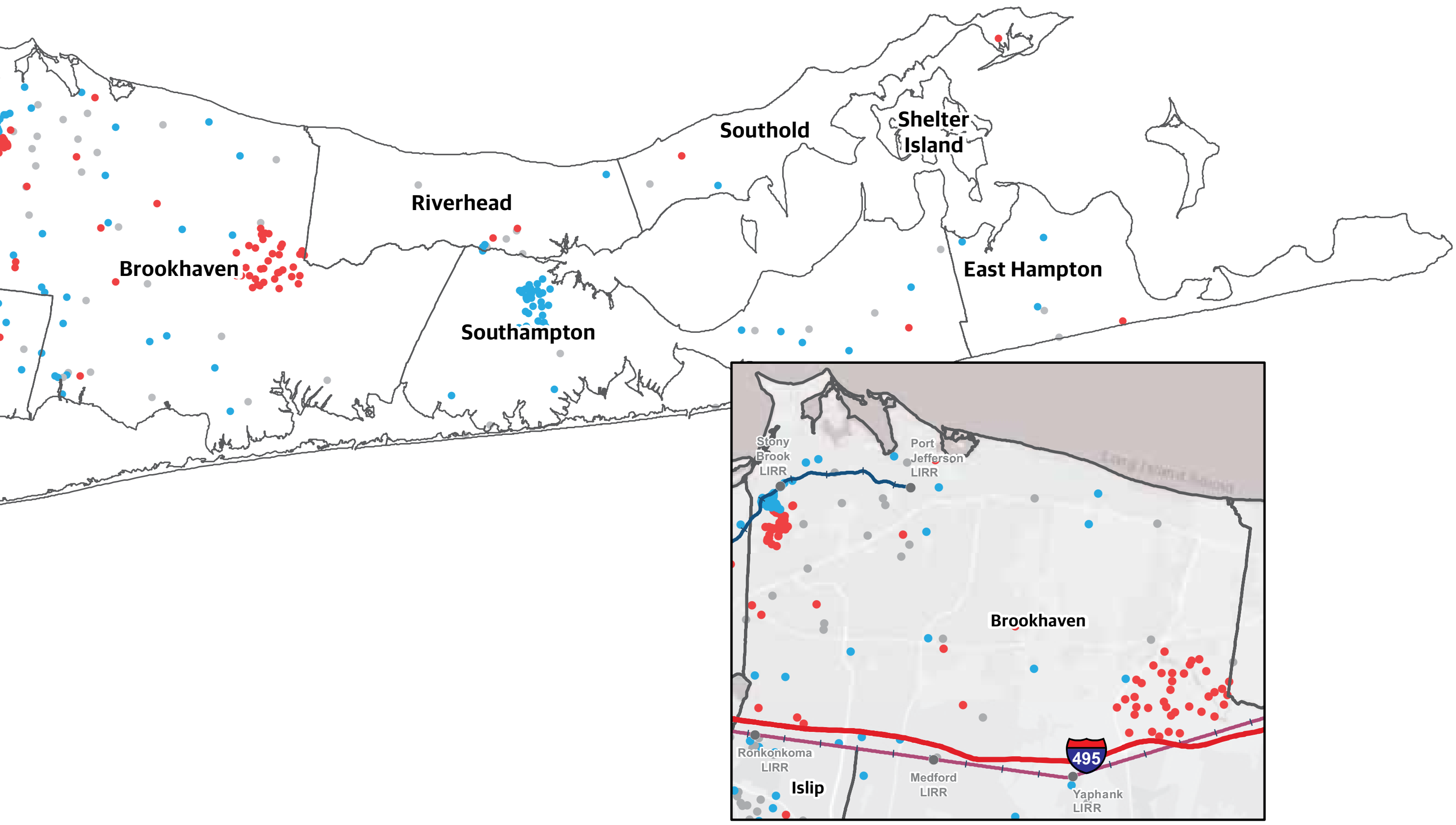
A challenge for Long Island in attracting innovation jobs is the type of business environments where these jobs are clustering. Nearly all of the large increase in innovation jobs in New York City occurred in very walkable, transit-oriented places, the types of downtown business environment that Long Island has relatively few of.

CHANGE IN KNOWLEDGE AND INNOVATION JOBS ON LONG ISLAND, 2002 – 2015





Source: Longitudinal Employer-Household Dynamics, U.S. Census



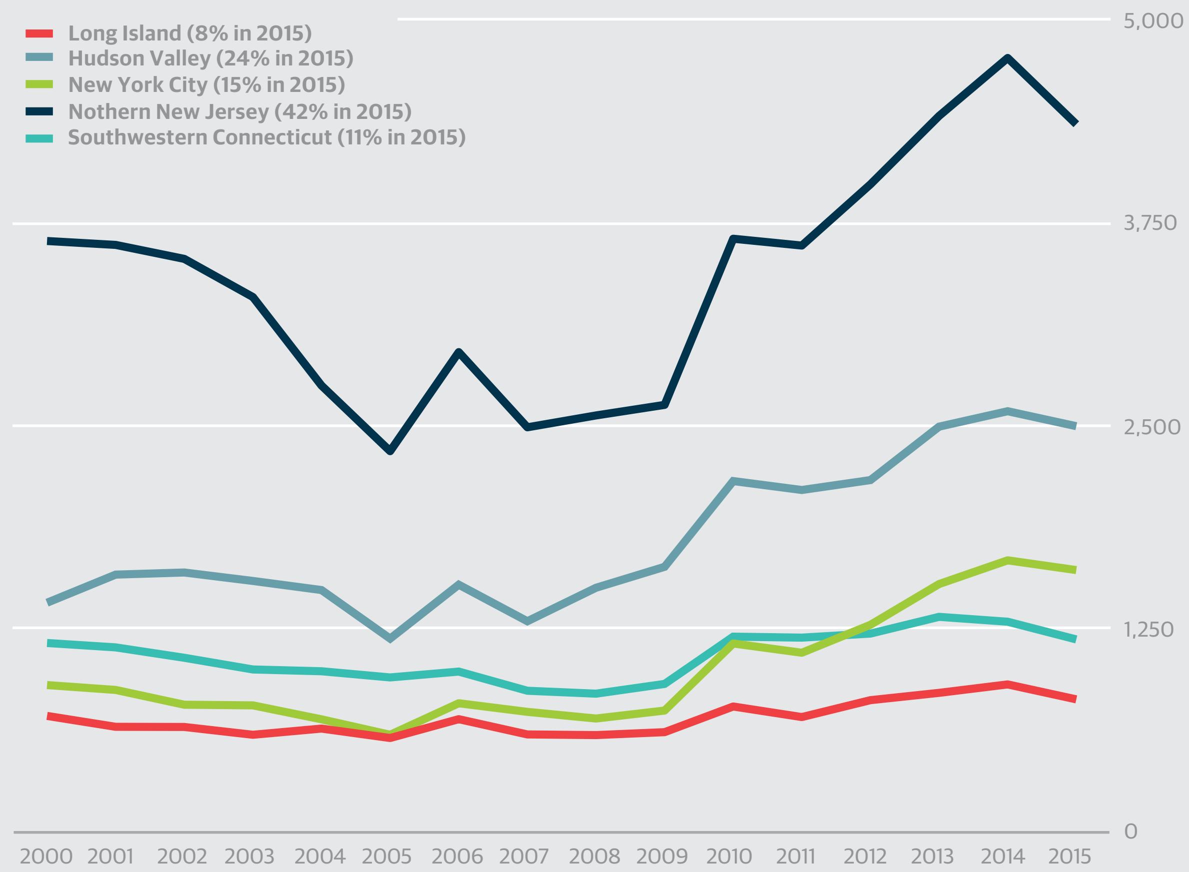
Data source: Longitudinal Employer-Household Dynamics, U.S. Census, via Regional Plan Association.
Map prepared by Center for Urban Research, CUNY Graduate Center.

The number of patents issued on Long Island has grown slowly compared to other areas.

The number of U.S. patents issued on Long Island has grown significantly since the beginning of the century, from an average of 668 patents per year from 2000-2002 to 859 per year from 2013-2015. However, the number of patents issued on Long Island is considerably lower than in other parts of the region, and growth has been slower that it has been nationally and in other parts of the region and New York State. In the last three years, an average of 4,509 patents per year were issued in New Jersey and 2,507 were issued in the Hudson Valley. The number of patents grew by 29% between 2000-2002 and 2013-2015 on Long Island, while they grew 61% nationally and 39% in the New York region. The most rapid growth within the region occurred in New York City and the Hudson Valley.

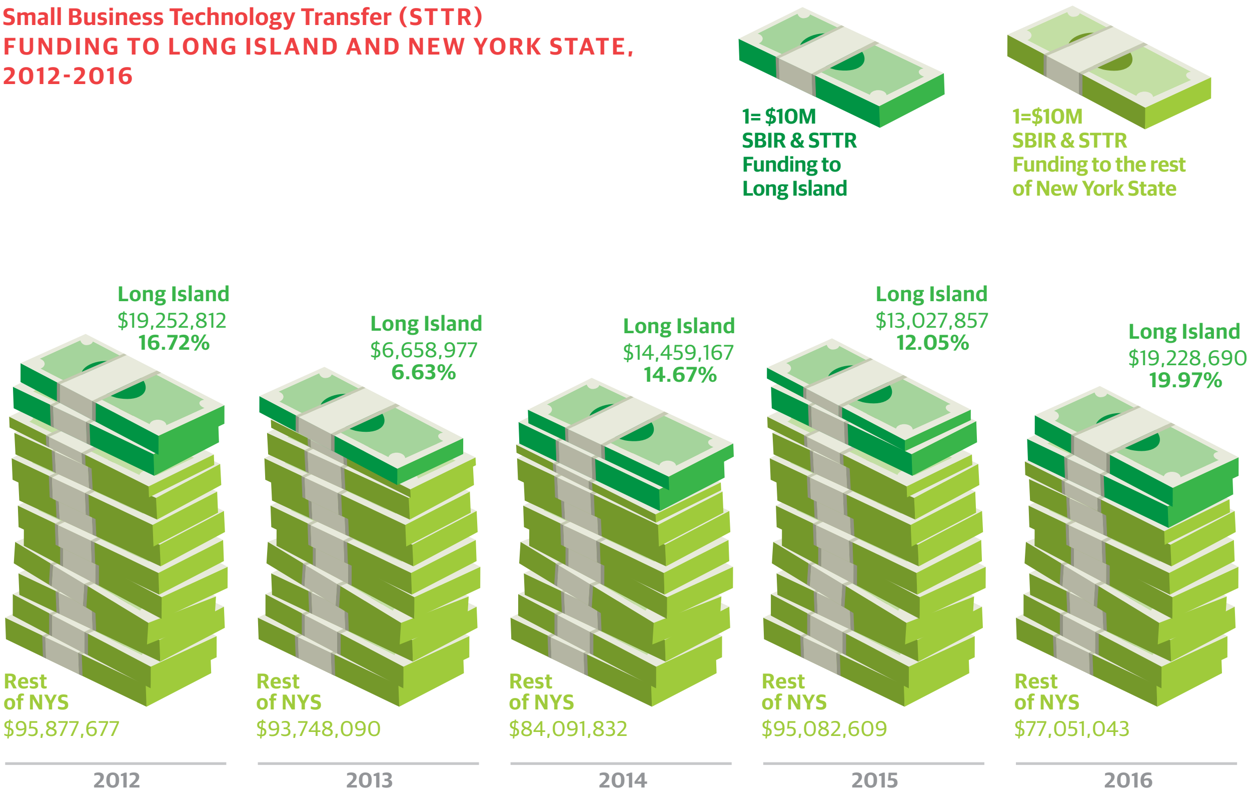
The relatively low number of patents issued on Long Island is due in part to its industry structure. The information technology sector, for example, issues a large share of patents but is a relatively small industry on Long Island. Nationally, for example, California with its large technology sector issues far and away the most patents in the U.S. even after size is taken into account, and has doubled the number of patents issued since 2000-2002.

NUMBER OF PATENTS ISSUED



Source: United States Patent and Trademark Office

U.S. Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) FUNDING TO LONG ISLAND AND NEW YORK STATE, 2012-2016



Source: U.S. Small Business Innovation Research

Small technology companies on Long Island receive a relatively high share of federal grants compared to other parts of New York State.

Small technology companies on Long Island continue to be competitive in securing funding from the Small Business Research and Innovation (SBIR) and Small Business Technology Transfer (STTR) programs, which provide funding to small technology companies of less than 500 employees to accelerate the development and commercialization of scientific discoveries and innovative ideas into commercial products and services. In 2016, Long Island technology companies attracted over $19M in SBIR/STTR funding, representing almost 20% of the SBIR/STTR funding secured by small technology companies across New York State ($96.2M).

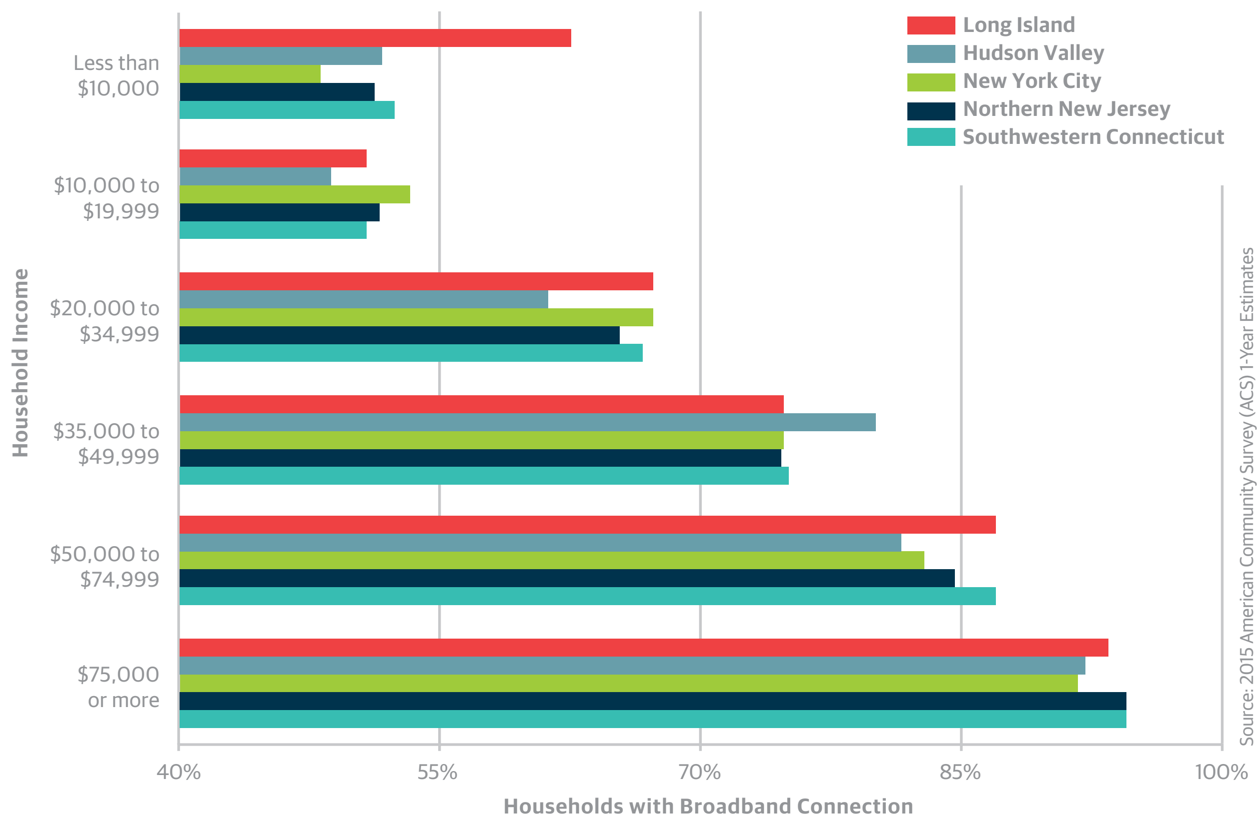
The average SBIR/STTR award to companies on Long Island in 2016 was $549,391, significantly higher that the New York State average of $471,000. The $19M in SBIR/STTR funding to Long Island companies in 2016 is practically identical to the funds secured in 2012, and up 48% from $13M secured in 2015. By comparison, New York State attracted $96.2M in SBIR/STTR funding in 2016, compared to $115M in 2012, and down 11% from $108.1M in 2015.

Long Island ranks relatively well for internet service, but there is a steep digital divide and a long way to go for fiber optic service.

As the innovation economy in Long Island develops, so do its infrastructure needs. Many businesses already use digital technologies very heavily, and this typically requires very reliable and high speed access to the internet. These are not only technology businesses but also core sectors such as finance and health. And the need to move data via the internet will only increase. Workers will increasingly need higher and higher internet speeds in order to work from home. Already 80% of those workers who work from home part of the week report relying on the internet. As the needs of the businesses they work for or consult with evolve, so will their home internet needs.

Long Island is comparatively well prepared for such a future, with 24%, the highest share of households in the New York region with fiber-optic service, which is typically the fastest, most reliable services. Still, that leaves three-fourths of households without this service at a time when it will become more and more essential for tomorrow's economy. Access to the internet at home is also very stratified by income. 93% of households earning $75,000 or more have a wired internet connection at home, as opposed to only about 57% of households earning less than $20,000. In this respect, Long Island is very similar to the rest of the region. And like the New York region overall, Long Island fares relatively poorly when compared to other U.S. innovators such as San Francisco and leading metro areas across the country.

HOUSEHOLD INCOME BY PRESENCE OF A BROADBAND CONNECTION IN HOUSEHOLD, 2015



LESSONS LEARNED
BY DAVID L. CALONE

Long Island as an Innovation Hub

Long Island—a high-cost location with an incredible array of research institutions, a highly educated workforce, and close proximity to the world's financial capitol—has wisely placed its bet that "economic gardening" (catalyzing business growth by harnessing existing economic strengths) rather than "economic hunting and gathering" (enticing companies to relocate here) is the key to restoring steady economic growth and expanded opportunity.

In recent years, regional collaborations such as Accelerate LI and governmental initiatives like the LI Regional Economic Development Council have helped local businesses grow our innovation economy by making sure that Long Island research leads to Long Island companies and jobs. We must continue that momentum to ensure that the Long Island garden's early green shoots continue to grow. And we must never forget that Long Island's economic potential will be maximized only when all Long Islanders have the tools and access—such as home broadband connections, STEM programs in each of our high schools, community college-based training programs, and intentionally nurtured pathways to technology careers from every community—that they need to participate in that growth.

Mr. Calone is President and CEO of Jove Equity Partners, LLC.

GOAL #4

Vibrant Communities

We create exciting communities and downtown centers that offer people a wide choice of places to live, work and play.

Vibrant communities—places with active, walkable downtowns, attractive homes that are affordable to a broad ranges of incomes, good public spaces and services, reasonable property taxes, and that are welcoming to people of all ages, races and backgrounds—support a high quality of life and the workforce for a strong economy.

Demographic changes indicate how Long Island's communities are keeping pace with a national society that is becoming older, more racially and ethnically diverse, and more competitive for a shrinking working age population. How slow or fast the population is expanding and how many people are migrating to or from Long Island are signs of how well Nassau's and Suffolk's communities are meeting the needs of a changing population. Changes in the age, racial and ethnic composition of the population indicate how these communities are being transformed, and the diversity of families and individuals that need affordable homes, healthy neighborhoods and job opportunities with reasonable commutes.

> Together, these indicators show a population that is growing slowly but changing rapidly.

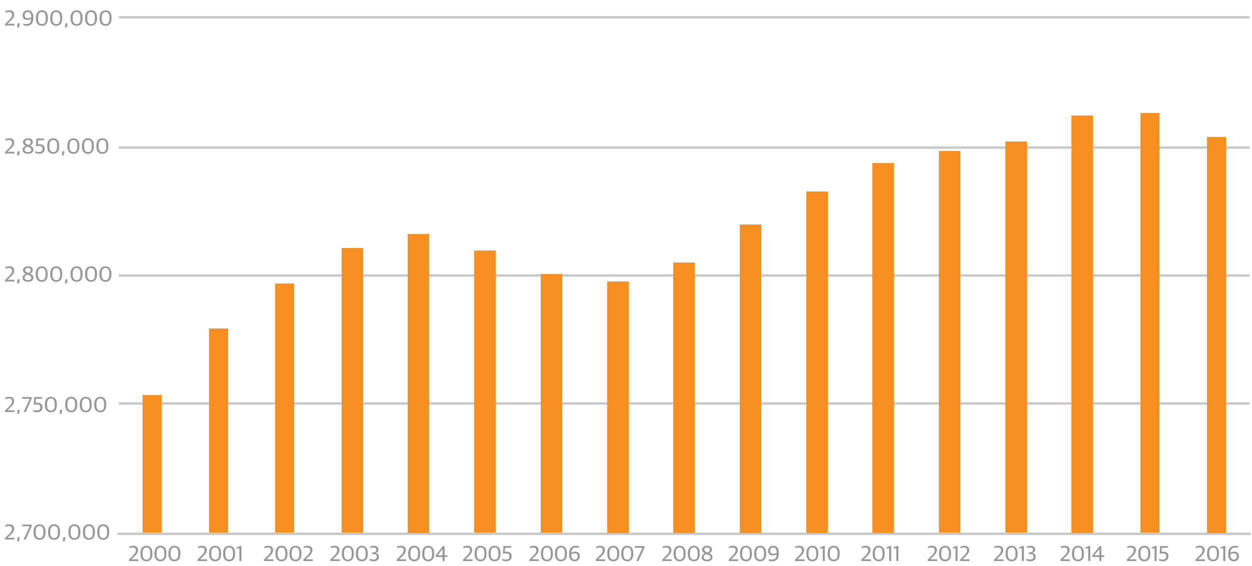
Together, these indicators show a population that is growing slowly but changing rapidly. Since 2000, Long Island's population has grown at a rate of 0.2% per year, far less than the rapid growth of the 1950s and 1960s, but a pace that has been largely steady in a maturing suburban region. Even though more people moved out of Nassau and Suffolk than into them from other parts of the United States, especially when housing prices were at their peak, a combination of natural population increase and immigration from outside the United States kept population growing.

Long Island's population today is older and more racially and ethnically diverse than it has been since at least World War II, as the large baby boom generation that has shaped the island's development moves into its retirement years and as Black, Hispanic and Asian residents grew from 16% of Long Island's population a generation ago in 1990 to 35% today. Both of these trends are likely to continue into the future.

A shift is also occurring geographically. Since 2010, population growth has accelerated in Nassau County while growth in Suffolk County has stopped after four decades of rapid growth. The reasons are not entirely clear, nor is it certain that this trend will continue, but it is consistent with demographic and economic trends favoring walkable communities and shorter commutes to job opportunities throughout the region.

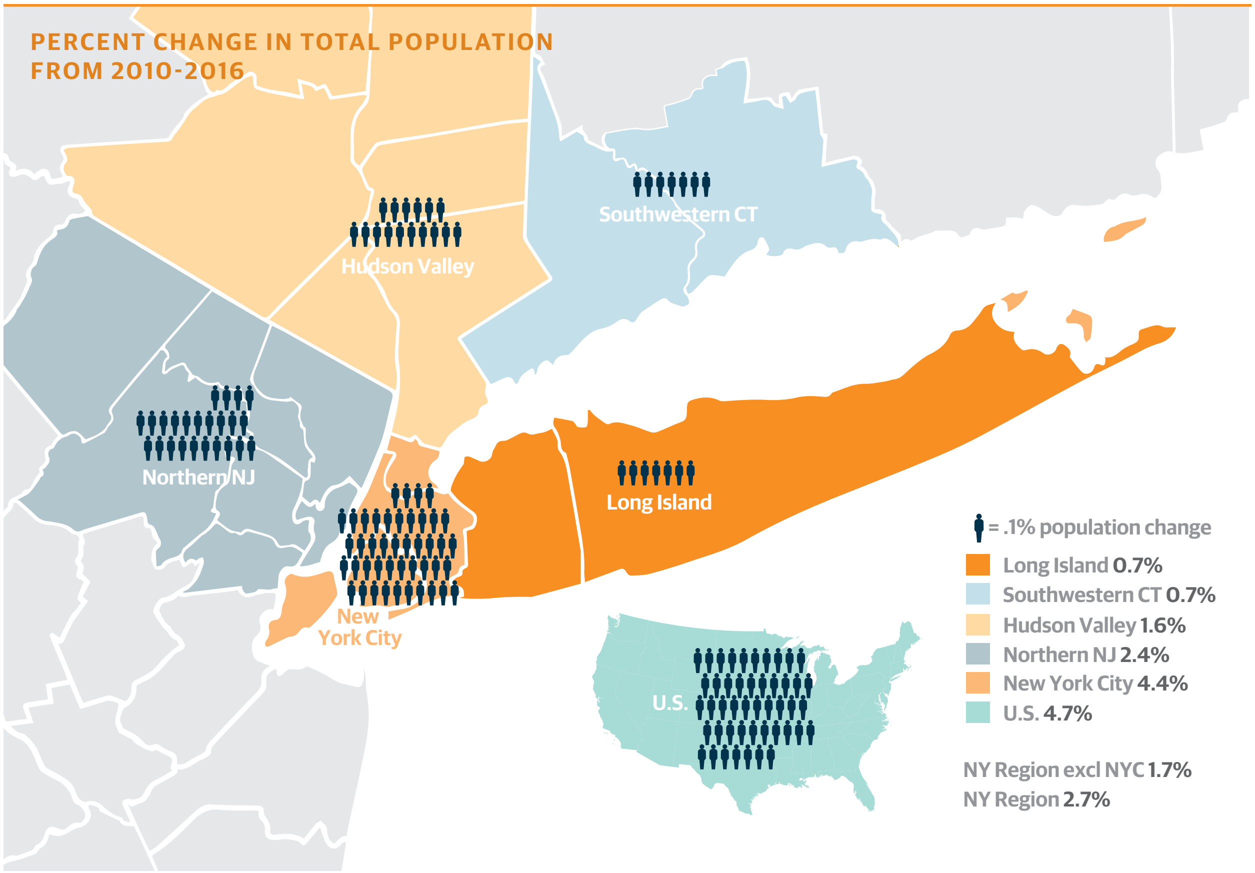
These demographic changes hold both promise and challenges for Long Island's future. A shrinking working age population, not just on Long Island but nationwide, makes it even more imperative to provide the housing and lifestyle choices to retain and attract both young and middle-aged workers to keep the economy growing and support a larger dependent population. A growing senior population requires a wider range of housing, transportation and health care options. A more diverse population is an asset in an increasingly globalized economy, but Long Island's segregated communities and school districts could prevent many residents from reaching their full potential.

LONG ISLAND POPULATION



Source: 2000 and 2010, Census; 2001 - 2009, Census intercensal estimates; 2011-2015 ACS 1-Year estimates

PERCENT CHANGE IN TOTAL POPULATION FROM 2010-2016



Source: 2000 and 2010, Census; 2001 - 2009, Census intercensal estimates; 2011-2015 ACS 1-Year estimates

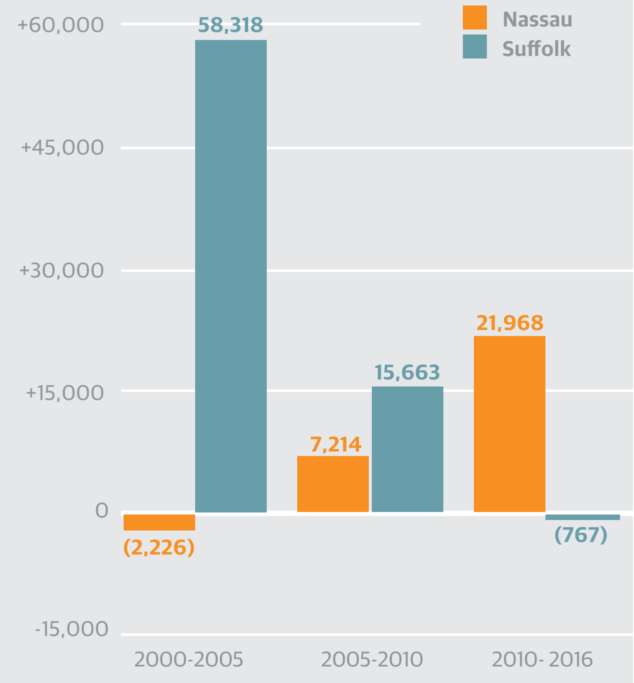
Population growth is shifting back to Nassau County.

Long Island's population has grown slowly but steadily since 2000, adding about 100,000 people total, or 3.6%, to reach a population of 2.85 million. Population increased every year except 2004-2007, and 2015-2016. That is, population increased even during the recession, but not when housing prices were rising fastest before the bubble burst. While a far cry from the rapid population growth of the decades after World War II, Long Island continues to add population as births exceed the number of deaths, and as immigration from other countries continues.

Along with southwestern Connecticut, Long Island is the slowest growing part of the New York region. Since 2010, Nassau and Suffolk have grown by 0.7%. Meanwhile, the Hudson Valley has grown by 1.6% and northern New Jersey by 2.4%. But the fastest growth by far has been in New York City, which has increased it's population by 4.4%.

The most striking change is that since 2010, nearly all the growth has been in Nassau County, reversing the trend of several decades in which Suffolk County grew while Nassau's population stayed relatively flat. Suffolk has little more open space that can be developed for single-family homes, while Nassau's downtowns and easier access to Manhattan provide it with an advantage as demand has shifted to multi-family. In the last six years, Nassau's population has grown by 1.6%, while Suffolk's has declined slightly.

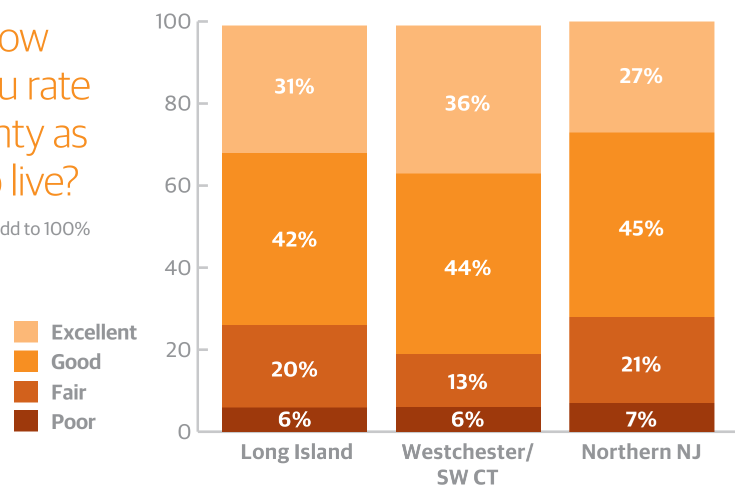
POPULATION CHANGE IN NASSAU AND SUFFOLK COUNTIES



Source: 2000 and 2010, Census; 2001 - 2009, Census intercensal estimates; 2011-2015 ACS 1-Year estimates

Overall, how would you rate your county as a place to live?

Numbers may not add to 100% due to rounding.



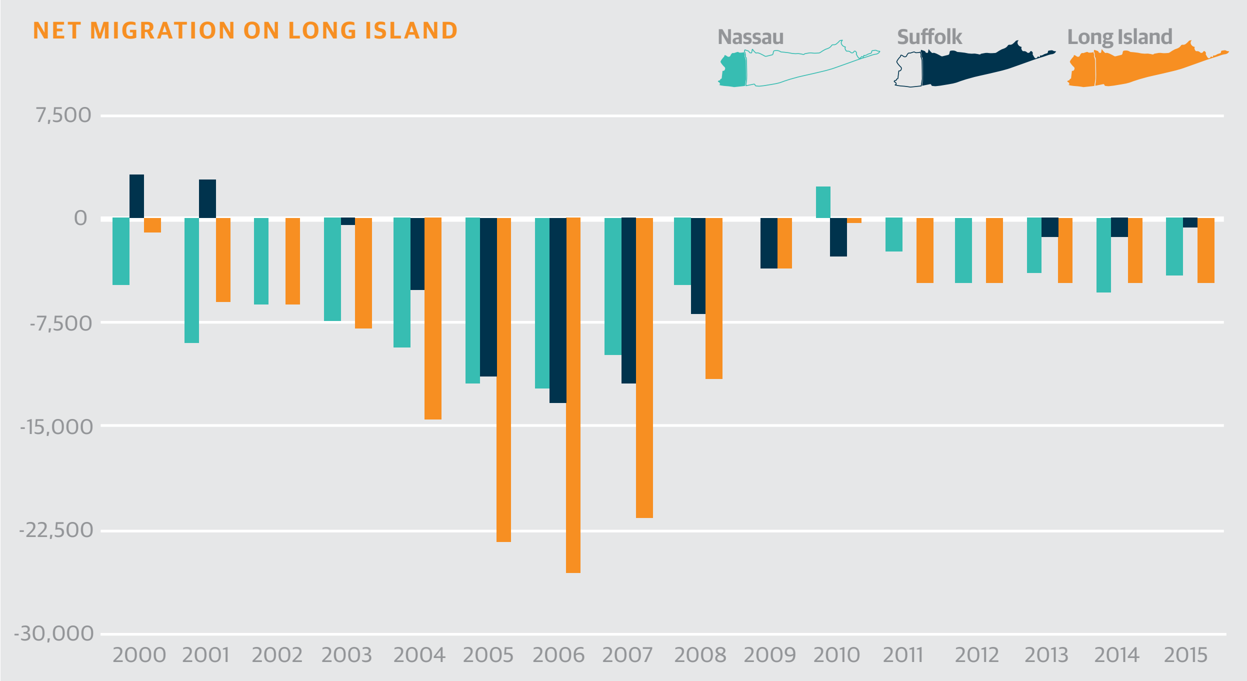
Source: 2017 Long Island Index survey

More people are migrating to other parts of the United States than staying here.

Data on the number of people moving to and from Long Island from other parts of the United States fills in the story of population change. Not including foreign immigration, more people moved out of Long Island than moved in during every year since 2000. The years of heaviest net out-migration were 2005-2007. This was when housing prices were most out of line with incomes, making it hard for people to move in and giving homeowners thinking of moving more incentive to cash in on the value of their homes.

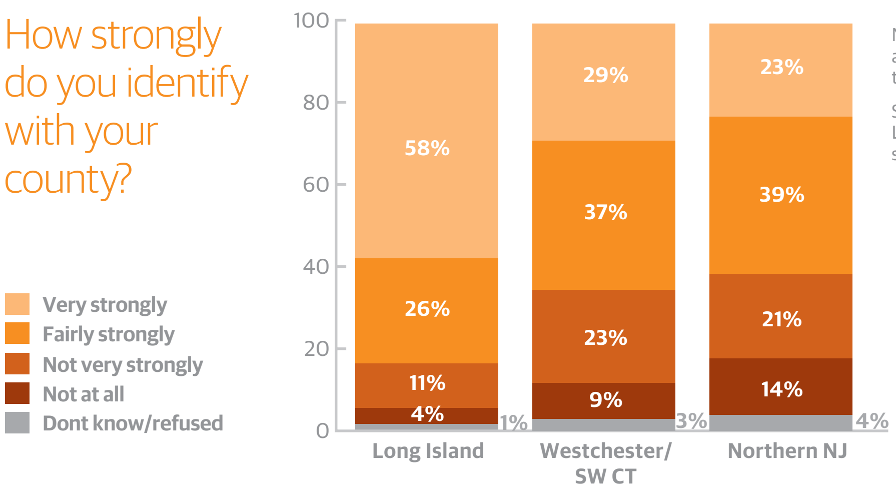
Net outmigration has moderated since the recession, but outflows continue to be higher from Nassau than Suffolk even though Nassau has gained more in population. The only explanations are that Nassau has more births relative to deaths than Suffolk or, more likely, that it has more immigrants.

NET MIGRATION ON LONG ISLAND



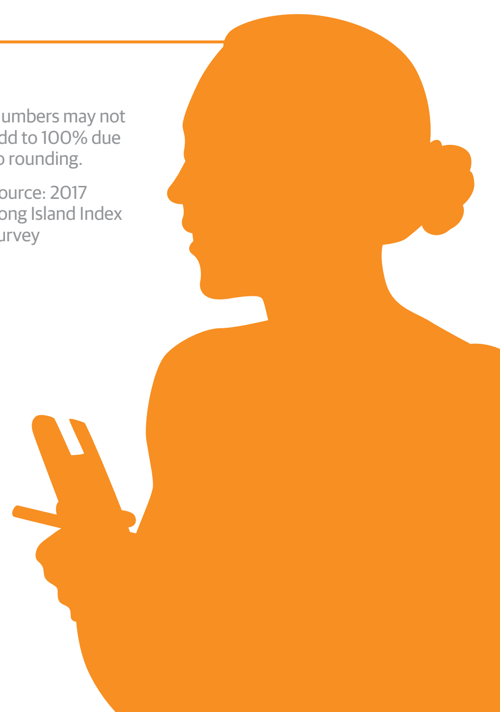
Source: IRS County to County Migration Flow

How strongly do you identify with your county?



Numbers may not add to 100% due to rounding.

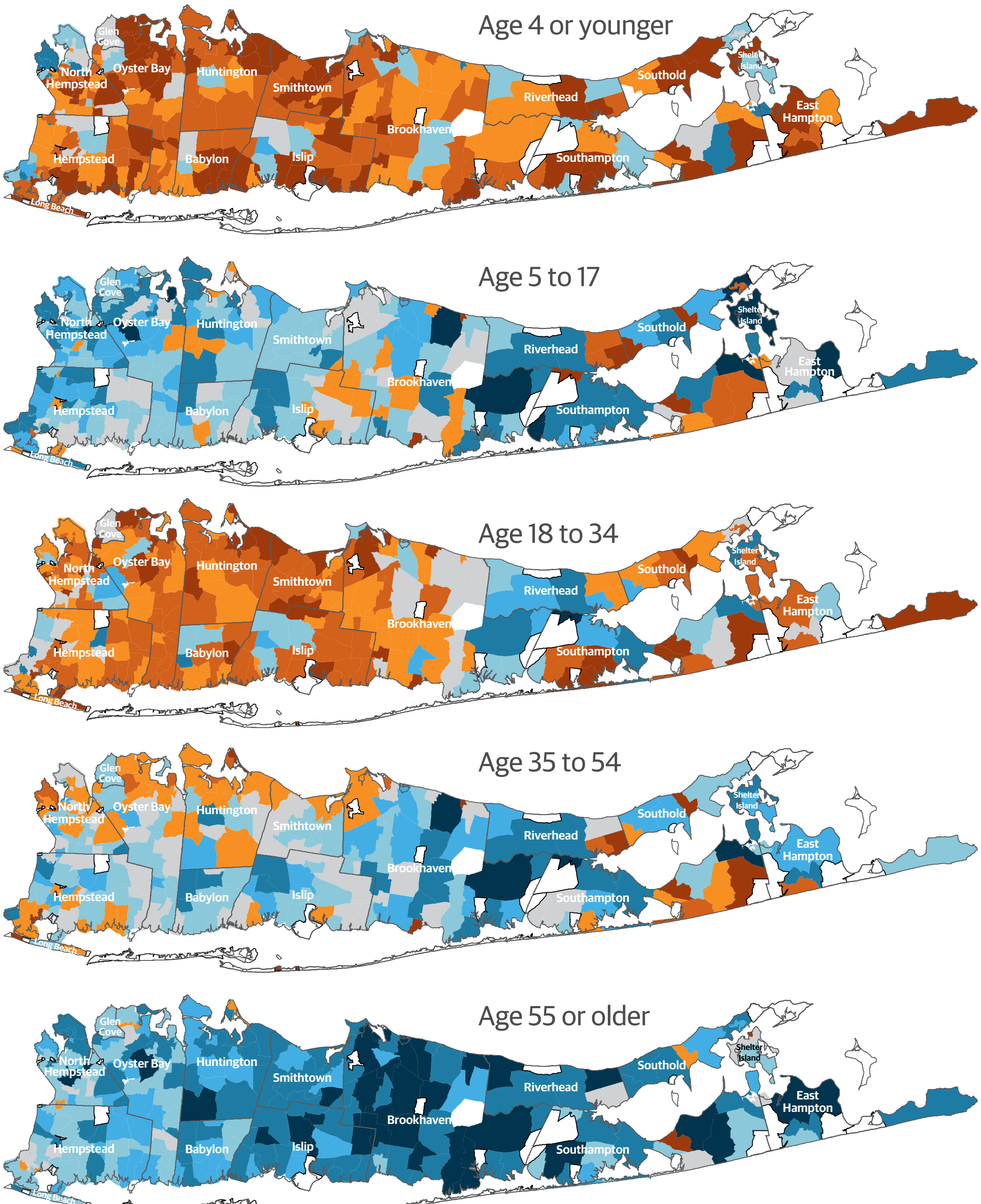
Source: 2017 Long Island Index survey



TWENTY-FIVE YEARS OF POPULATION CHANGE ON LONG ISLAND

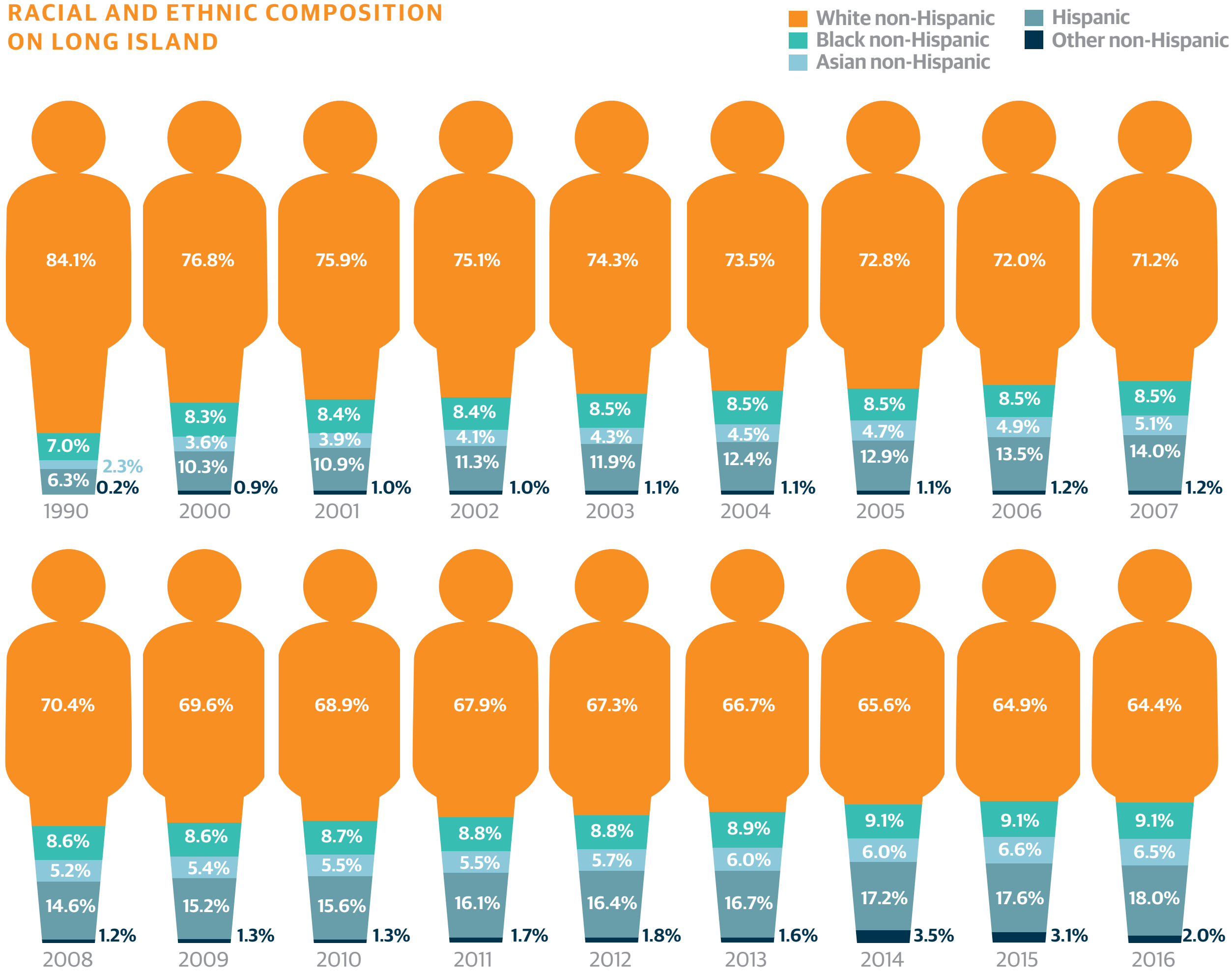
Age group trends by village, 1990 to 2016

Decreased 40% or more	Increased 5% – 25%
Decreased 25% – 40%	Increased 25% – 40%
Decreased 5% – 25%	Increased 40% – 100%
No change (+/- 5%)	Increased 100% or more
	Not measured in 1990



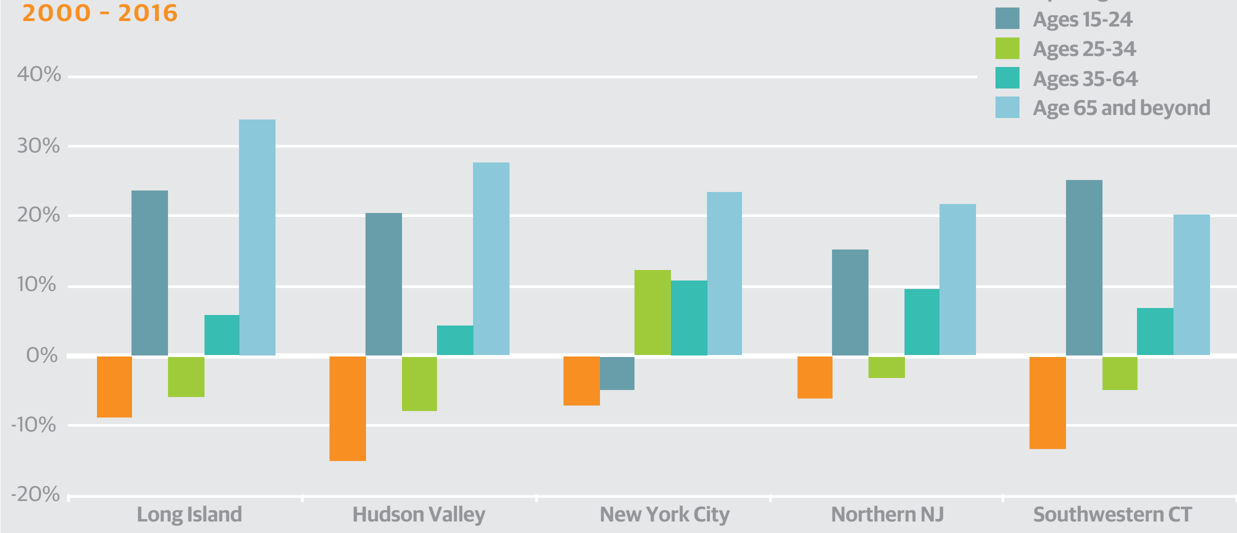
Data Source: U.S. Census Bureau 1990 Decennial Census and 2016 American Community Survey 5-year estimate (2012-2016). Maps prepared by Center for Urban Research, CUNY Graduate Center.

RACIAL AND ETHNIC COMPOSITION ON LONG ISLAND



Source: 1990, Census; 2000, estimates based on Census 2000 to reflect reclassification of "Some Other Race" category; 2001 - 2009, intercensal estimates; 2010, estimates based on 2010 census that reclassify "Some Other Category"; 2011-2015 ACS 1-Year estimates

CHANGE IN POPULATION BY AGE GROUP 2000 – 2016



Source: 2000 Census; 2016 ACS 1-Year Estimates

Over a third of Long Island's residents are now people of color.

Blacks, Hispanics and Asians are now 35% of Long Island's population, an increase from 23% in 2000. This continues a longer term trend that is likely to keep going. Asian and Hispanic populations are the fastest growing racial and ethnic groups. Both grew by more than 50% between 2000 and 2010. Growth for these populations has slowed since 2010, but has increased for other non-white, non-Hispanic groups. The black population has increased slowly, while the non-Hispanic white population has declined.

Long Island still has a larger share of white residents than any other part of the New York region or the United States. Nassau County has a larger share of black and Asian residents than Suffolk County, while Suffolk has a larger share of Hispanic residents.

Long Island is seeing the largest increase in seniors in the New York region.

Long Island's senior population has grown by 34% since 2000, more than in any other part of the region. Now 13% of the population, it will continue to grow as baby boomers age and as life expectancy increases.

25-34 year-olds declined by 6%, more than any part of the region except the Hudson Valley, a consequence of a small age cohort and probable outmigration from lack of affordable rental housing, downtown amenities, job opportunities and transportation. This group will start to increase as the larger age cohort behind them ages, but those 35-55 will start to decline.

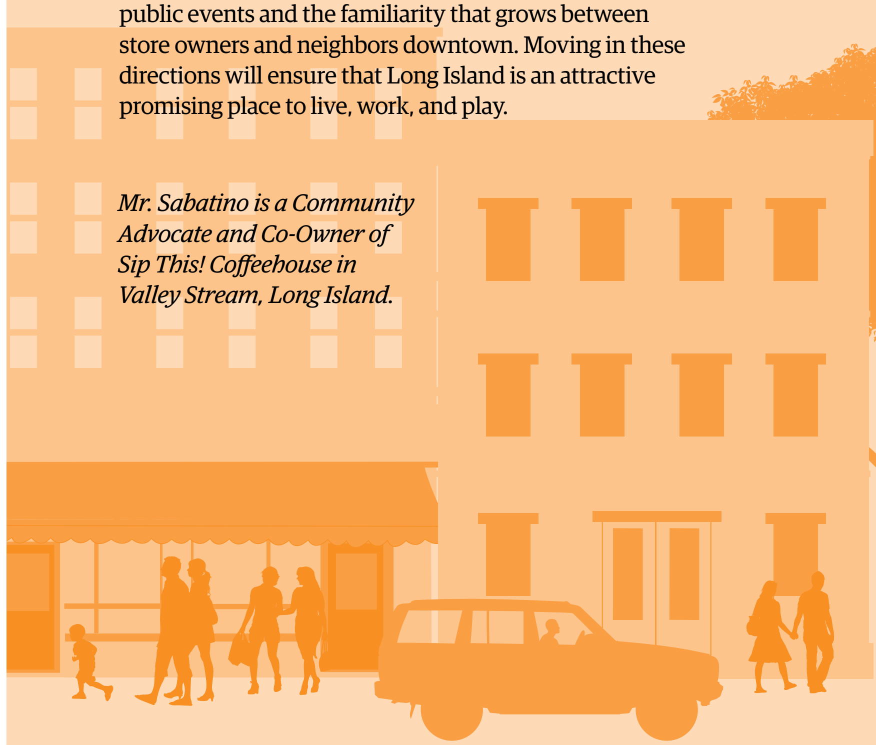
LESSONS LEARNED
BY DAVID SABATINO

Building a Strong Downtown

Long Island residents and elected officials have increasingly come to realize that strong downtowns contain a mixture of housing types—at different scales of size and income. But what is not widely recognized is that vibrant downtowns protect all the things we love about our suburban lifestyle. They concentrate growth in walkable transit-oriented areas, thereby reducing pressure on single-family neighborhoods. They support new businesses, adding to community vitality. And multifamily downtown housing impacts schools and traffic less than single-family homes.

To enhance our downtowns further, we need to develop physical and social connections to them. The physical connections include enhanced sidewalks, bike lanes, parks, and even signage pointing the way to downtown attractions. The social connections include public events and the familiarity that grows between store owners and neighbors downtown. Moving in these directions will ensure that Long Island is an attractive promising place to live, work, and play.

Mr. Sabatino is a Community Advocate and Co-Owner of Sip This! Coffeehouse in Valley Stream, Long Island.



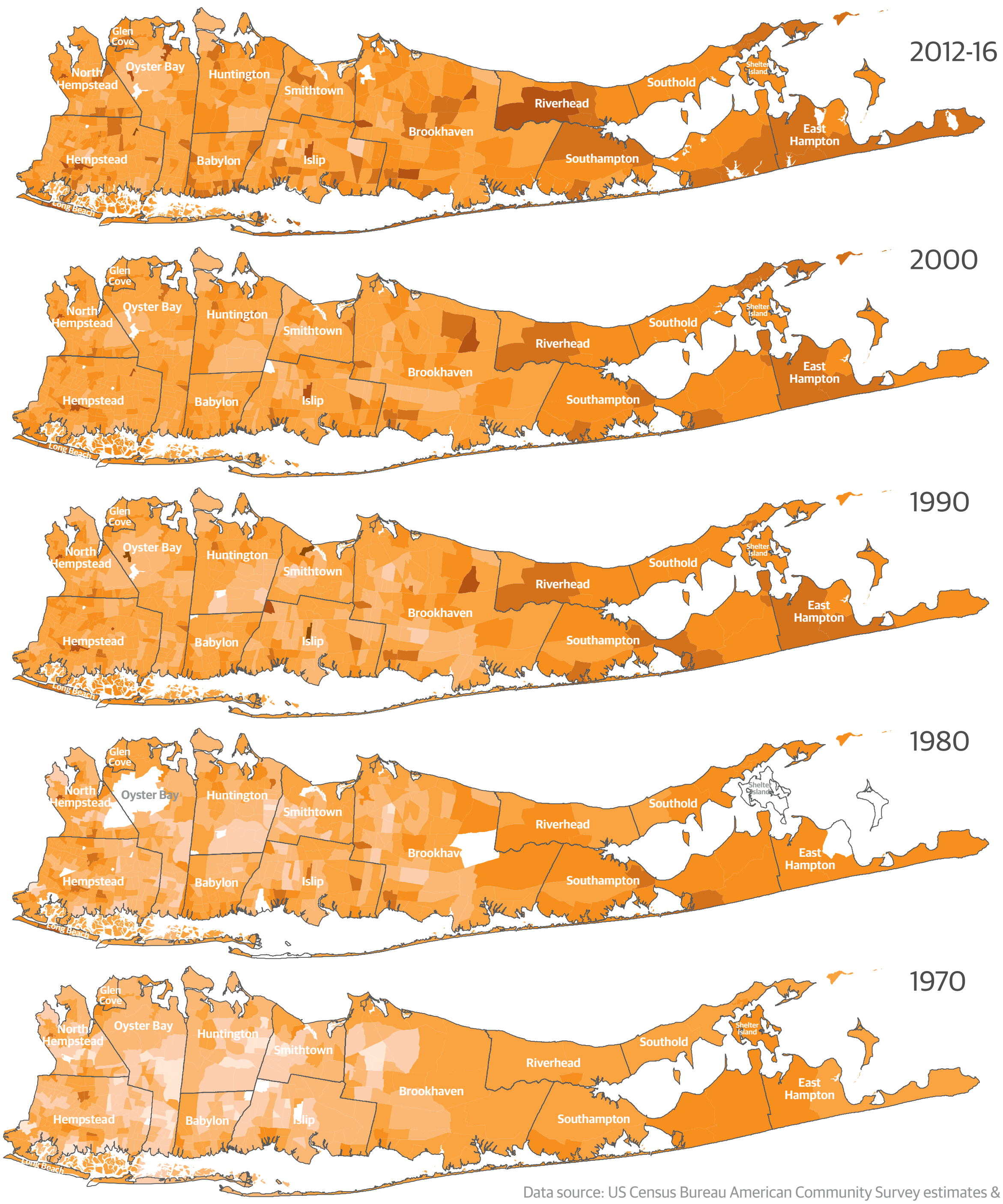
PEOPLE LIVING ALONE ON LONG ISLAND

by Census tract, from 1970 to 2012-16

For this and other maps of Long Island's population trends, visit http://historiccensus.longislandindexmaps.org/

People living alone
as % of total households

less than 2.5% | 2.5% - 5% | 2% - 3% | 5% - 10% | 10% - 20% | 20% - 30% | 30% - 40% | 40% - 60% | 60% or more



Data source: US Census Bureau American Community Survey estimates & National Historical GIS via Minnesota Population Center, University of Minnesota. Maps prepared by Center for Urban Research, CUNY Graduate Center.

GOAL #5

Affordable Homes

We generate housing options that are affordable to people of all ages and income levels.

Long Island's growth was fueled by the availability of modestly-priced single family homes that middle-income families could afford. As it became more affluent, and as it ran out of open space that could be easily developed within commuting distance of job centers, the income threshold needed to own a home on Long Island became higher and higher. First-time buyers needed to move farther and farther out to qualify for a mortgage, pushing up commuting distances. And the lack of affordable rental homes on Long Island left few other options, particularly for low-income households and young adults not yet interested in or able to own their own home.

While there are a growing number of communities starting to provide more diverse housing options, Long Island is lagging other parts of the New York region and unaffordable for too many.

While there are a growing number of communities starting to provide more diverse housing options, Long Island is lagging other parts of the New York region and unaffordable for too many. The broadest indicator of housing affordability is housing cost burden—the share of income that a household spends on all housing costs including rent, mortgage payments, utilities and property taxes. The standard used by most federal and state housing programs is that a household should spend 30% or less of its income on housing. Using a higher standard—35% of income—nearly a third of households pay too much for housing and nearly one in five have an extreme housing burden paying more than half their income for housing. Both of these shares have dropped as incomes have recovered in the last few years, but remain higher than they were in 2000.

Rents, home values, sales prices and household incomes help understand what is driving changes in housing cost burden. Since renters on average have lower incomes than owners, changes in rent are a main factor in housing cost burdens for those with the fewest resources, and high rents can make it difficult for people entering the workforce or housing market to remain on Long Island.

Rents fluctuated less than housing prices, not rising as much during the hot housing market but coming down only slightly during the recession. Both home values, which are self-reported and include all owner-occupied homes, and home sales prices soared through 2007 as pent up demand, low interest rates and lax, and often predatory, lending practices fueled an overheated housing market, both nationally and on Long Island. Stagnant income growth meant that most who didn't already own their own home could not keep up. When the bubble burst and triggered a deep recession, incomes initially declined along with housing costs, keeping housing burdens high. Values, prices and incomes have all recovered some of their losses in the last three years.

As the most suburban part of the New York region, Long Island has fewer housing options than New Jersey, Westchester, the Hudson Valley or Connecticut. A much smaller share of Long Island's homes are either rental homes, which can be in either single or multi-family buildings, or multi-family homes, which includes condominiums and cooperatives as well as rentals. It also lacks cities the size of places like Stamford, White Plains or New Brunswick that provides options for those who don't want to live in New York City but still desire the amenities and convenience of a larger downtown.

Comparative data indicates that Long Island is falling even farther behind. It is building less new housing overall, and less multifamily housing than its neighbors. This may be starting to change, with downtowns as different as Rockville Centre and Wyandanch building new multifamily homes for both owners and renters. And a 2014 inventory by the Long Island Index found 26,000 multifamily units either under construction or in various stages of planning. Much of the new construction is fueled by demand from either retirees looking to downsize and live closer to shops and transit, or professionals who are looking for housing that is less expensive than Manhattan or Brooklyn.

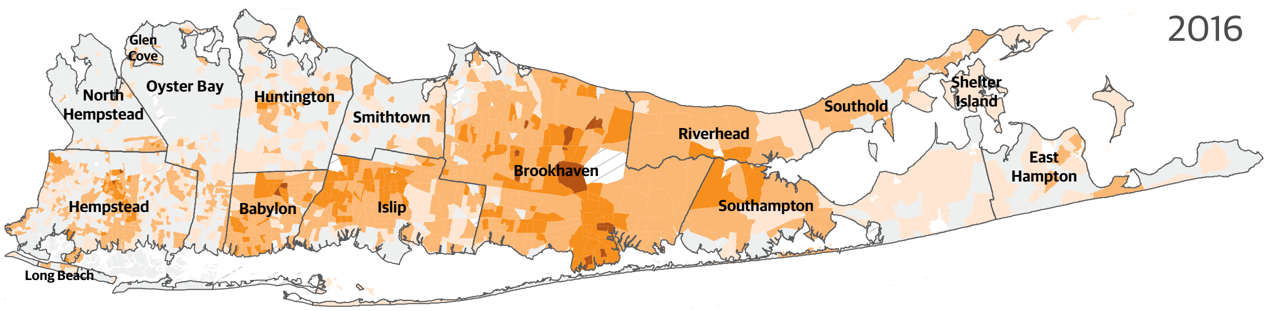
But much of the new inventory remains too expensive for the average Long Island household, and it is not clear whether the new momentum will expand enough to meet current and future needs. In fact, a 2015 Long Island Index study found that Long Island needs between 52,000 and 94,000 new homes beyond those already in the pipeline to meet needs over the next 15 years. The acres of surface parking and underutilized property around train stations could provide for much of this need, but only a third of train station areas are zoned for substantial amounts of multifamily housing.

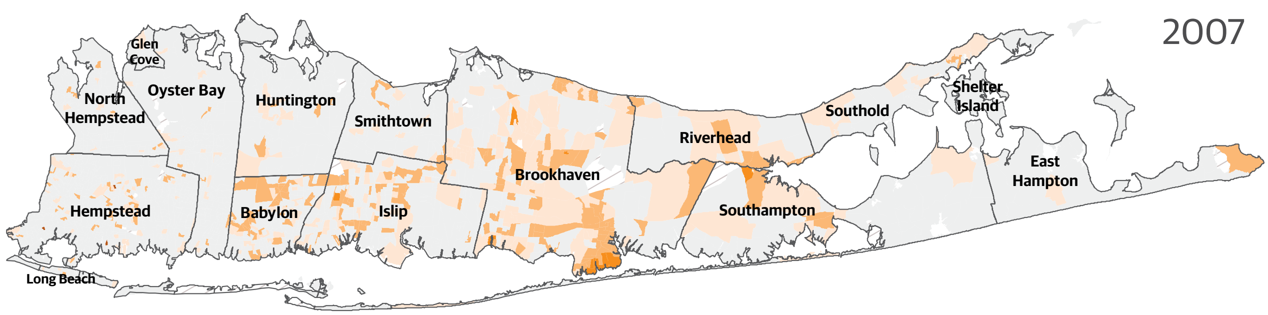
AVAILABILITY OF AFFORDABLE HOMES ON LONG ISLAND IN 1997, 2007 & 2016

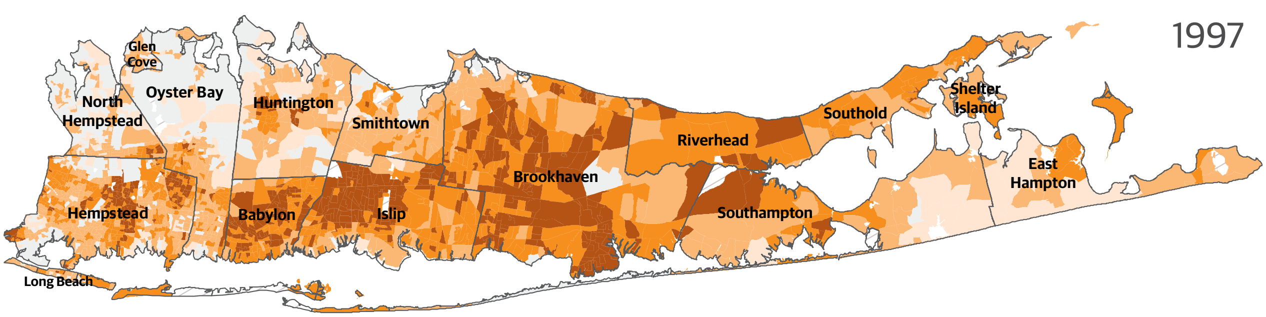
Percent of homes sold in each Census Block Group that sold for less than 2.5 times the LI median family income

2.5x LI median family income =
$171,250 in 1997
$234,500 in 2007
$265,500 in 2016

- 91% – 100%
- 51% – 90%
- 11% – 50%
- Under 10%
- No sales under 2.5 x threshold
- No sales

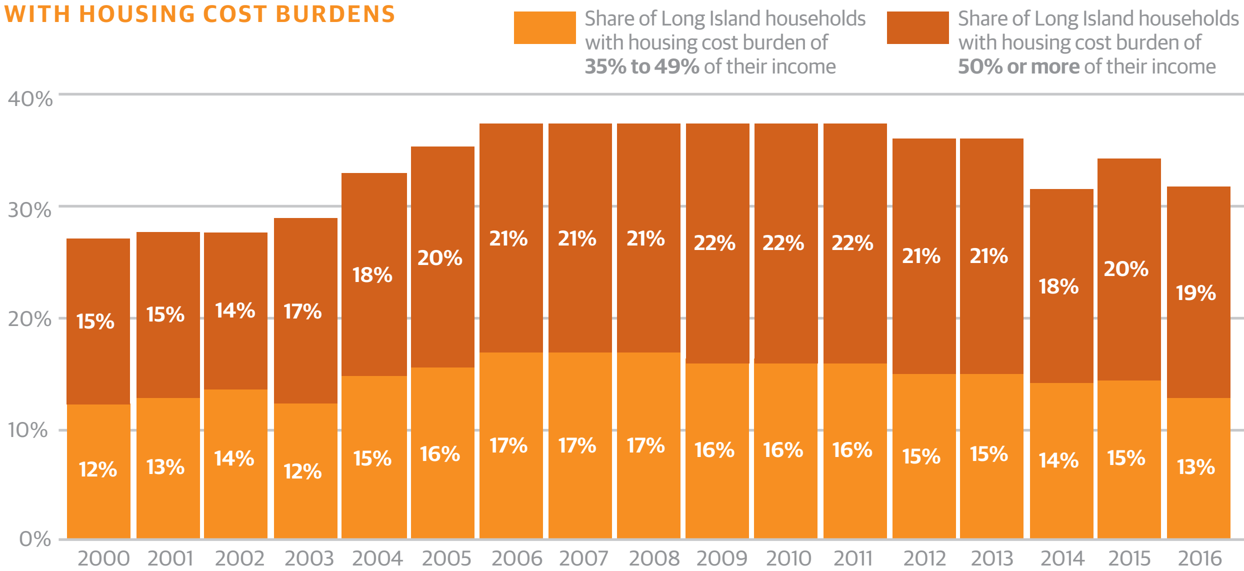






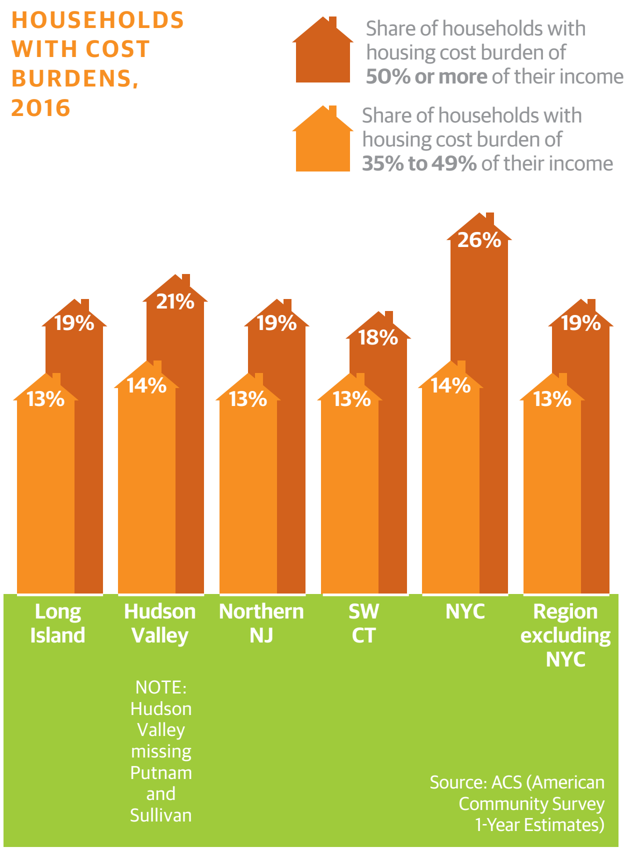
Data sources: LI Profiles; LI Real Estate Report.
Maps prepared by Center for Urban Research, CUNY Graduate Center.

LONG ISLAND HOUSEHOLDS WITH HOUSING COST BURDENS



Source: 2000 and 2010, Census; 2001 - 2009, Census intercensal estimates; 2011-2015 ACS 1-Year estimates

HOUSEHOLDS WITH COST BURDENS, 2016

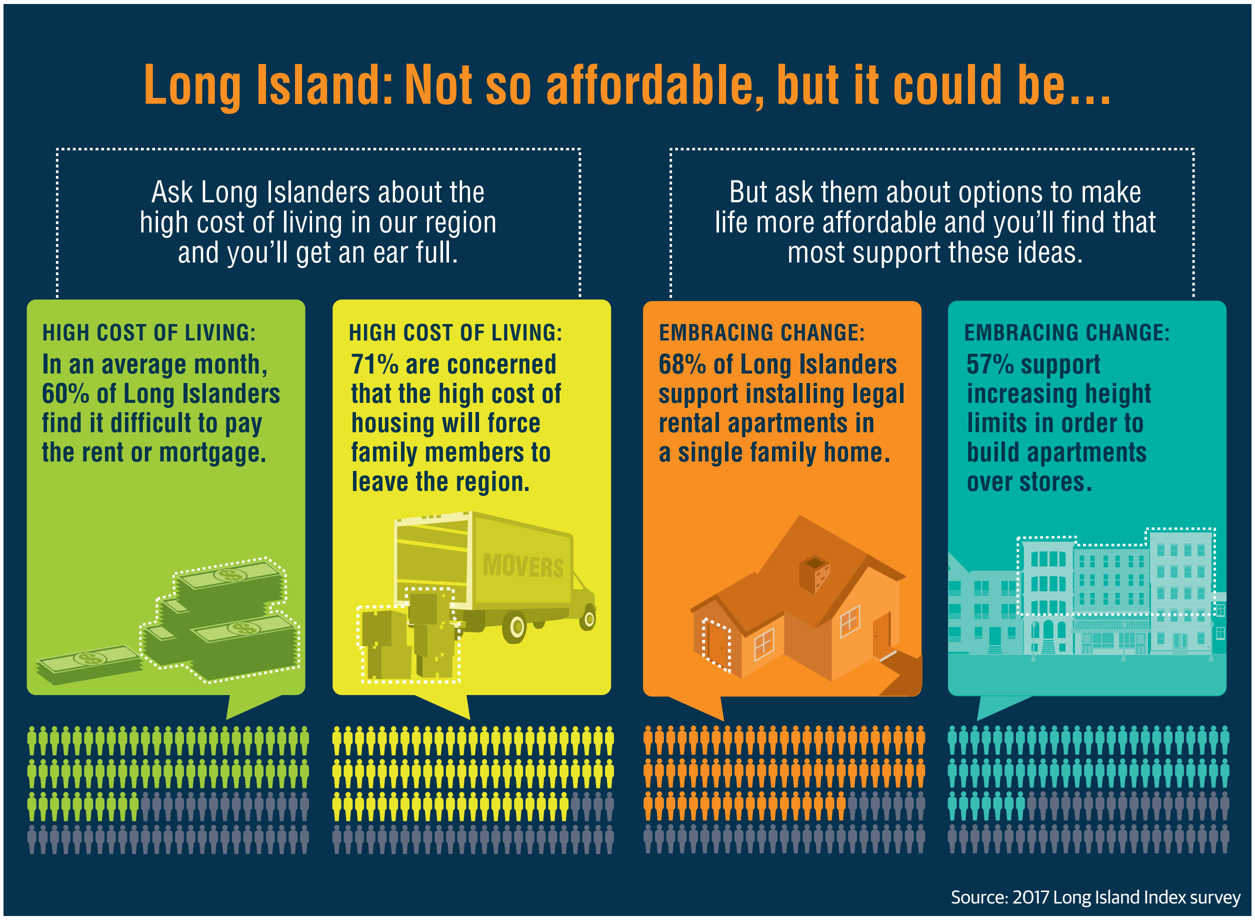


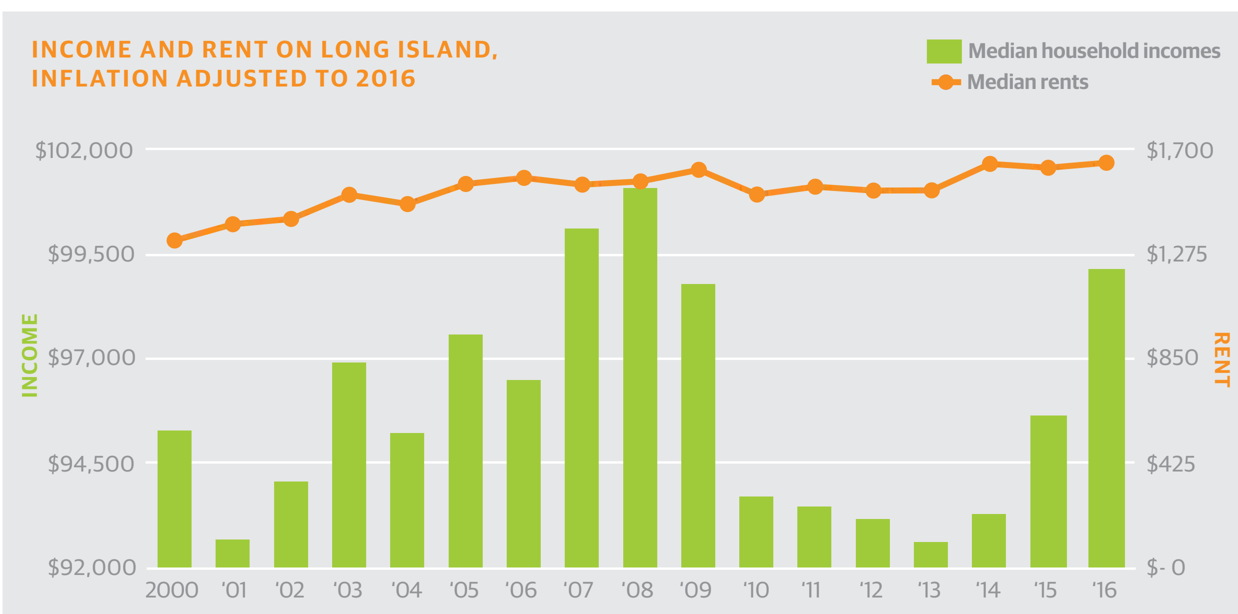
Sixty percent of Long Islanders report difficulty in paying their rent or mortgage.

Three out of every five Long Island residents report that it is somewhat or very difficult to pay the rent or mortgage, according to the 2017 Long Island Index poll conducted by the Center for Survey Research at Stony Brook University, compared to only one in three in 2003. This increase reflects how much housing affordability has become an economic and quality of life issue. The increase in the share of households paying more than 35% of their income is not as striking as the increase in the share reporting difficulty with housing costs, but still demonstrates how the burden has increased. These households increased from 27% of all households in 2000 to 32% in 2016. This is down from a peak of 38% in 2011. The share paying over half of their income for housing rose from 15% in 2000 to 22% from 2009 to 2011 before falling to 19% in 2016.

Increasing rents and home prices are only part of the story. Slow income growth has also kept many households from keeping up with rising costs. For example, while rents have steadily increased, median incomes dropped sharply in 2010 and have still not fully recovered to their pre-recession peak.

Overall, housing cost burdens are comparable to other suburban parts of the New York region, which range from 31% to 35% for the share of households paying more than 35% for housing. New York City has a much higher share at 40%.

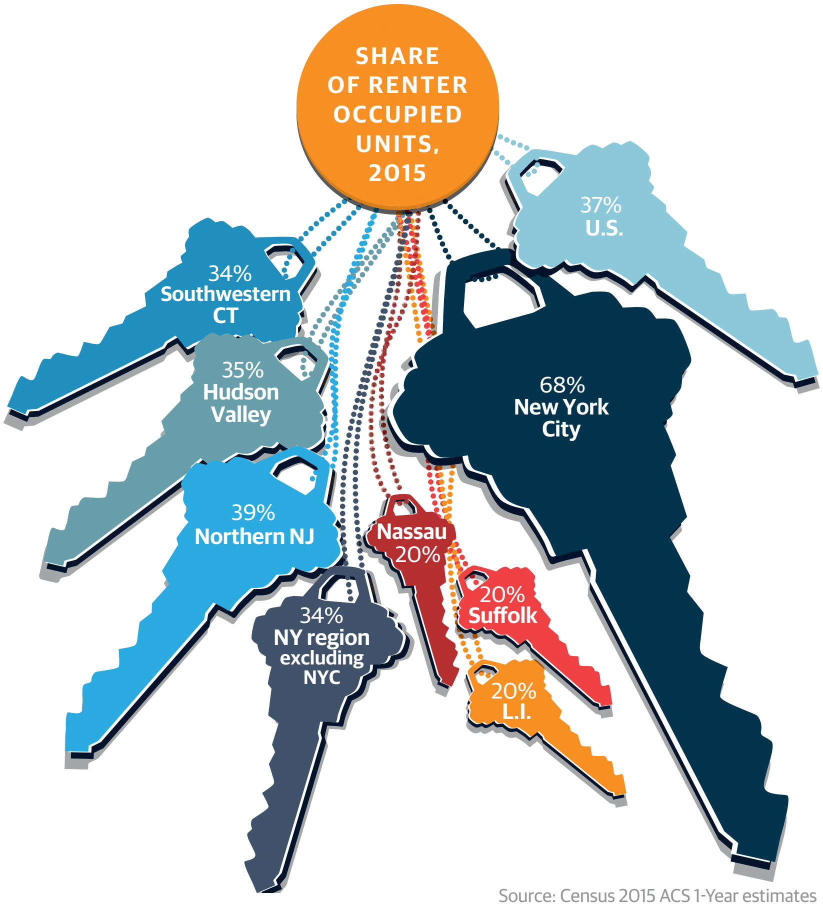




Source: 2000 and 2010, Census; 2001 - 2009, Census intercensal estimates; 2011-2015 ACS 1-Year estimates

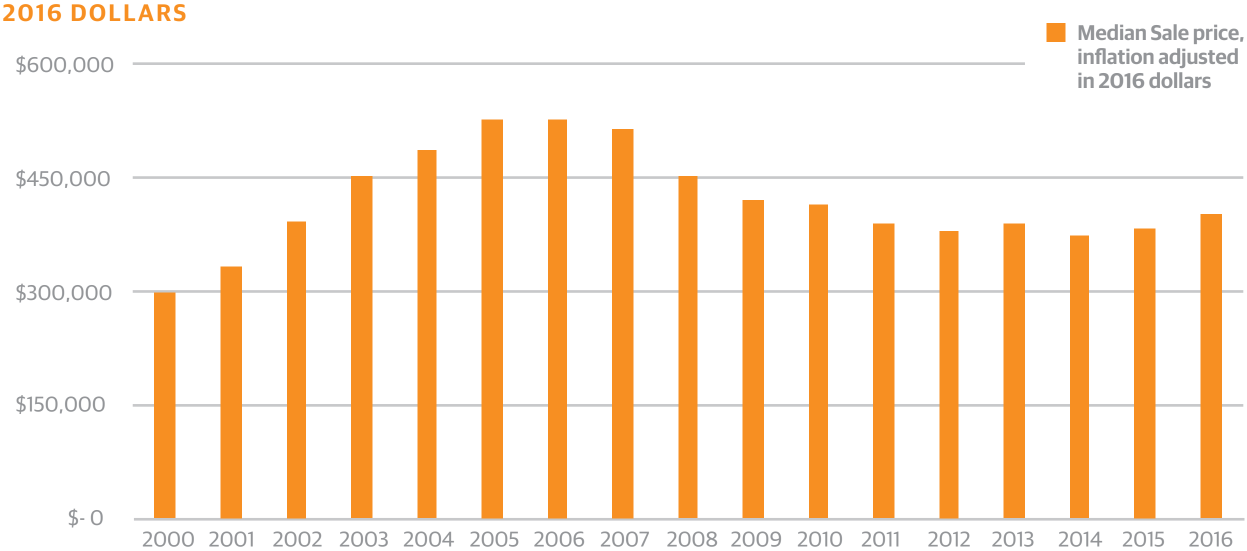
Long Island continues to have a shortage of rental homes.

Long Island continues to have far fewer rental homes than other parts of the New York region. The share has fluctuated between 16% in 2008 and 21% in 2014, and stood at 20% in 2015, the last year available. In all other parts of the region, rental homes represent at least a third of the total. This puts Long Island at a disadvantage for retaining young adults who can't yet afford to buy a home and workers in occupations ranging from nurses to computer support specialists whose incomes are too low to qualify for a mortgage or afford average rents.



Source: Census 2015 ACS 1-Year estimates

MEDIAN HOME SALES PRICES ON LONG ISLAND 2016 DOLLARS



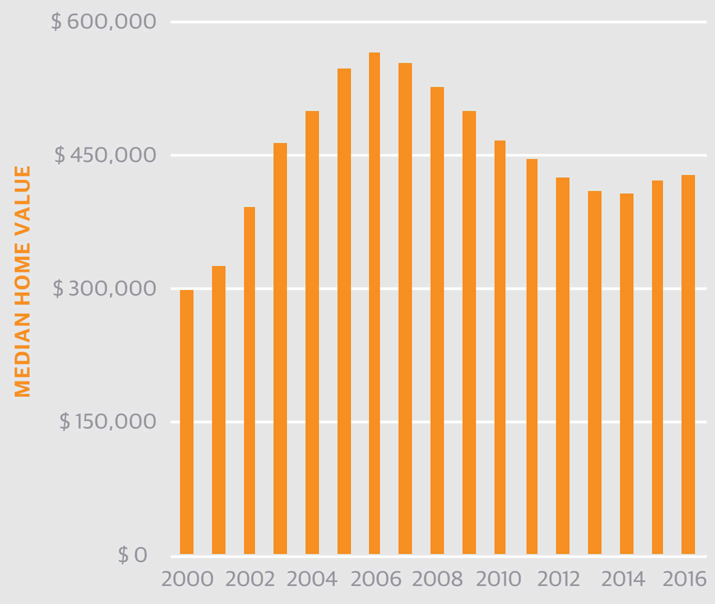
Source: Long Island Profiles

Home values are increasing, but are below the pre-recession peak.

Home sale prices in Long Island peaked in 2005 at $527K in 2016 dollars and peak (self-reported) home value was in 2006 at $565K in 2016 dollars. While sales prices and home values have recovered since their trough in 2012, they are still below their peak at $403,000 and $428,000 respectively in 2016.

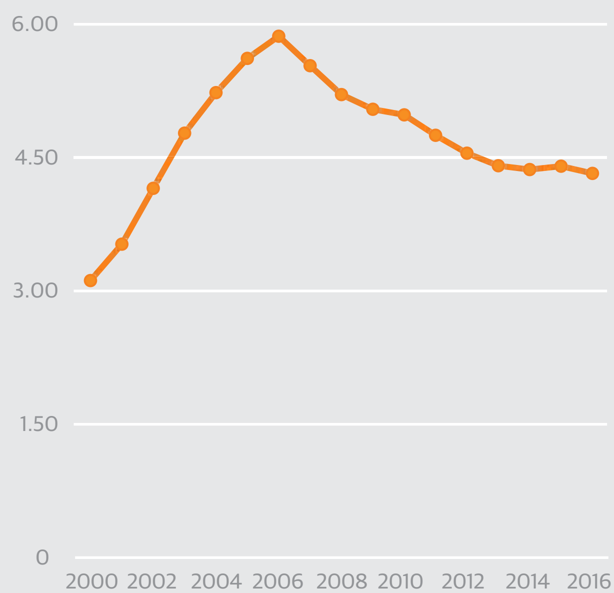
The ratio of home sale prices to household income has also gradually declined from its peak in 2006, when the average home sold for six times the median income. Only six years earlier, the median sales price was only three times the median income. Falling housing prices led to a gradual decline in this ratio, but by 2016 the average price was still more than four times the average income, putting homeownership out of reach for many.

MEDIAN HOME VALUE, LONG ISLAND 2016 DOLLARS



Source: 2000 and 2010, Census; 2001 - 2009, Census intercensal estimates; 2011-2015 ACS 1-Year estimates

RATIO OF MEDIAN HOME SALES PRICE TO MEDIAN HOUSEHOLD INCOME



Source: 2000 and 2010, Census; 2001 - 2009, Census intercensal estimates; 2011-2015 ACS 1-Year estimates; Long Island Profile reports

LESSONS LEARNED
BY MARK W. HAMER

Redefine Suburban Living to Make It Affordable

Long Island continues to be threatened by an affordable housing problem, for which there is no one solution. Addressing it requires more housing, more housing options, and greater efficiency in the approval and building processes.

We should start by re-imagining our communities to provide for more densely populated neighborhoods in downtowns and business districts and near commuter rail stations. We must offer more townhomes, condominiums and rental housing to complement Long Island's abundance of single-family homes. Our communities must invest in infrastructure to facilitate these more densely populated neighborhoods, including parks, sewer plants, roads and public transit. Our towns need to adopt more flexible zoning codes and more uniform building codes to lower construction costs.

Redefining our communities around regional assets will offer new cultural opportunities and enriched living experiences. Just as Long Island defined suburban living 70 years ago, we can re-define suburban living for the 21st century.

Mr. Hamer is President of Harvest Real Estate Services, Inc.

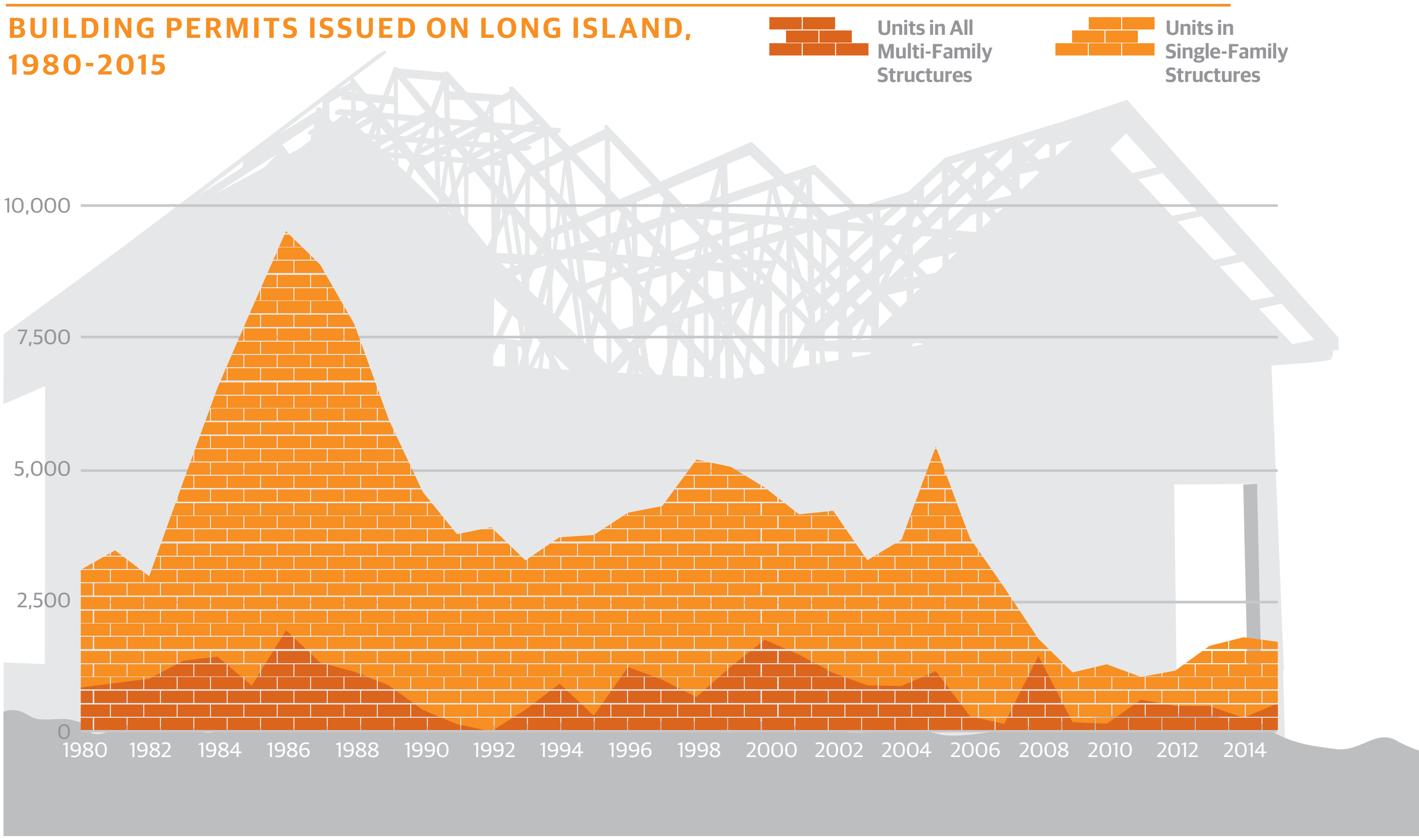
Housing construction lags other parts of the New York region.

Despite an uptick since 2013, permits for new homes—both single-family and multi-family—are well below their pre-recession levels. In 2015, permits were issued for 1,736 single-family homes and 568 homes in multi-family buildings. By contrast, in 2005 there were 5,438 permits for single-family and 1,180 permits for multi-family homes.

The number of permits for new homes on Long Island remains well below the number in other parts of the New York region. Only 0.7 permits were issued for every 1,000 residents on Long Island from 2011-2015. By contrast, 1.3 permits per 1,000 were issued in the Hudson Valley, and 2.7 were issued in both New Jersey and New York City.

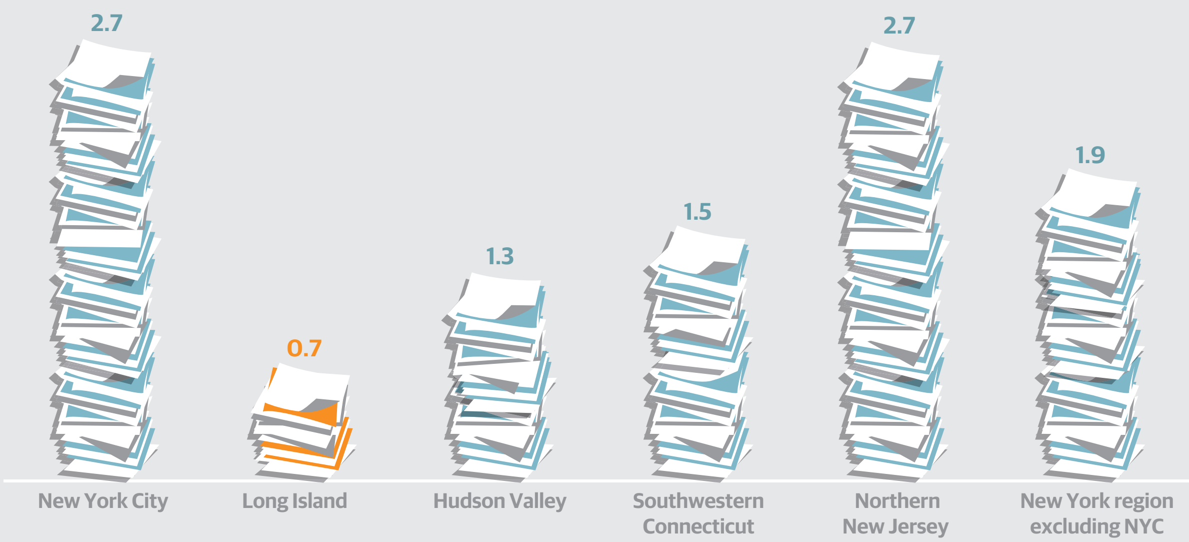
The permit data, which is reported by towns and villages to the U.S. Census, appears to be undercounting the amount of multi-family construction underway. A 2015 inventory by the Long Island Index found 3,011 multi-family homes under construction. Part of the discrepancy may be a lag between permits and construction, and many permitted developments may have been on hold until demand and financing improved following the recession. However, there does appear to be an increase in multi-family construction that is not reflected in the permit data.

BUILDING PERMITS ISSUED ON LONG ISLAND, 1980-2015



Source: Census Bureau Building Permits Survey

RESIDENTIAL PERMITS ISSUED PER 1,000 RESIDENTS, Average, 2011 – 2015

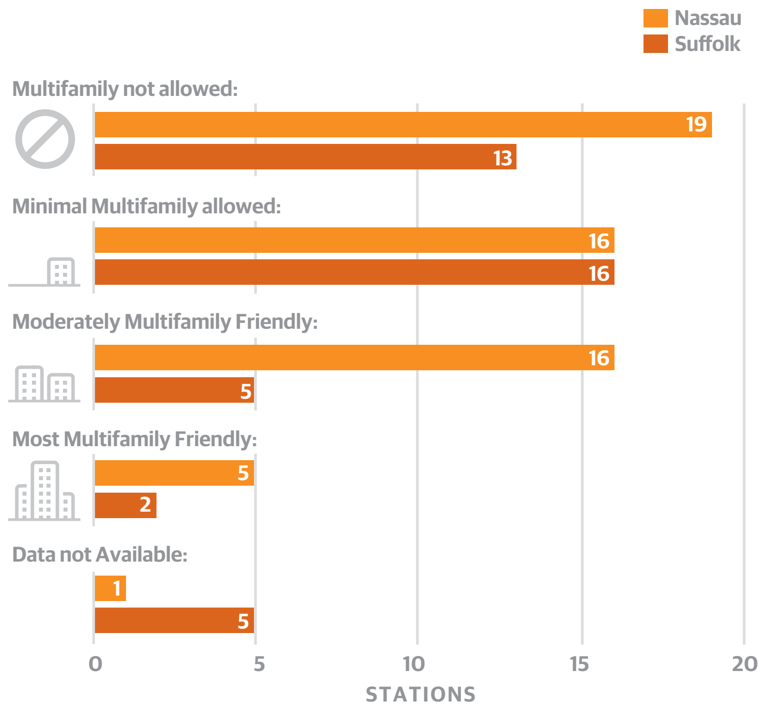


Source: Census Bureau Building Permits Survey

Many villages and towns do not allow multi-family development near train stations.

Multi-family housing makes the most sense in downtowns and near train stations where there is less need to drive as often and the infrastructure exists to support higher density development. However, a recent analysis by Regional Plan Association found that zoning does not allow multi-family housing within half a mile of 32 Long Island Rail Road stations, a third of the total. At least 20 of these station areas have sewers, and more are in Nassau than Suffolk County. The study found that municipalities that do not allow multi-family tend to be in wealthier communities, and was more pronounced in Nassau County than any other county in the tri-state region. Of the remaining 66 stations, 32 allow a minimal amount of multi-family housing, and 21 allow a moderate amount.

MULTIFAMILY FRIENDLINESS OF ZONING AROUND LONG ISLAND RAIL STATIONS

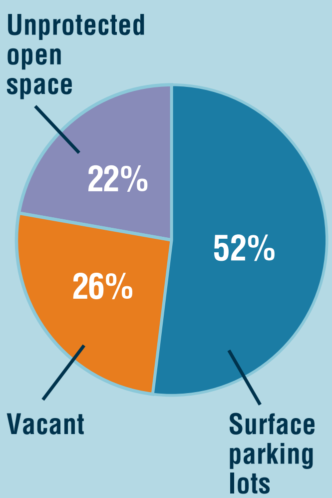


Source: Regional Plan Association analysis

The Power of 8,300

Long Island has **8,300 acres** of underutilized properties in our downtowns and around our rail stations. These acres represent an untapped potential that could begin to address our housing challenges—offering the next gen and aging boomers a place to live.

How are these acres being used today?



If we used just HALF of these acres, we could build as much as 90,000 new housing units:

= 900 new housing units:

- = Mid-rise apartments
- = Townhouses
- = Garden apartments

LESSONS LEARNED BY JOHN DURSO

The Lack of Affordable Housing on Long Island

Long Island's future is being driven away by a lack of affordable housing. Too many young adults are living with relatives (41%, according to the Long Island Index), and most are likely to leave in the next five years (71%). Seniors can't downsize and stay in the communities they have sustained.

The challenge is to tackle this problem regionally, when zoning decisions are made locally. While progress is being made in a few places, it's not enough, and time is running out.

What we need is to hold a summit of all cities, towns, and villages on Long Island to develop a set of principles for affordable housing. If we can agree on a core set of principles, they can then be implemented in locally appropriate ways to achieve the same overriding goal—providing housing at all price points so that Long Island's many extraordinary attributes can be sustained.

Mr. Durso is President of both Local 338 RWDSU/UFCW and the Long Island Federation of Labor.

GOAL #6

Safety Net

We assure that people are provided with basic necessities such as food and shelter.

Both government and non-profit service organizations provide housing, food, medical care and other necessities to those who need them. Beneficiaries are primarily low-income families and individuals, but include services for the elderly, disabled, medically ill, veterans and others with special needs. It includes both people temporarily in need of food and shelter, and those with long-term needs and chronic illnesses. Measuring the number of people in need is difficult because they are less likely to respond to government surveys than the general population and many do not apply for the services that they are eligible for. So official statistics most likely undercount the number of low income individuals, as well as the number of people in overcrowded housing or in need of food assistance or other services.

> By a number of indicators, the number of low-income Long Islanders and residents in need of basic necessities is increasing.

By a number of indicators, the number of low-income Long Islanders and residents in need of basic necessities is increasing. The share of people below the poverty line, which is calculated by a national formula based on a basic needs budget for families of different sizes, is the most commonly used measure of economic need. Like much of suburban America, poverty is rising on Long Island. While still relatively low, over the last sixteen years it has risen faster than in the United States as a whole or in other parts of the New York region. There are several probable causes. High housing prices in New York City appear to be pushing low-income households farther out. Growing demographic diversity brings a wider range of incomes. And slow wage growth and the disproportionate increase in low-wage jobs leads to higher poverty rates. Because Long Island has a higher cost of living than other parts of the United States, many people well above the poverty line also have difficulty making ends meet.

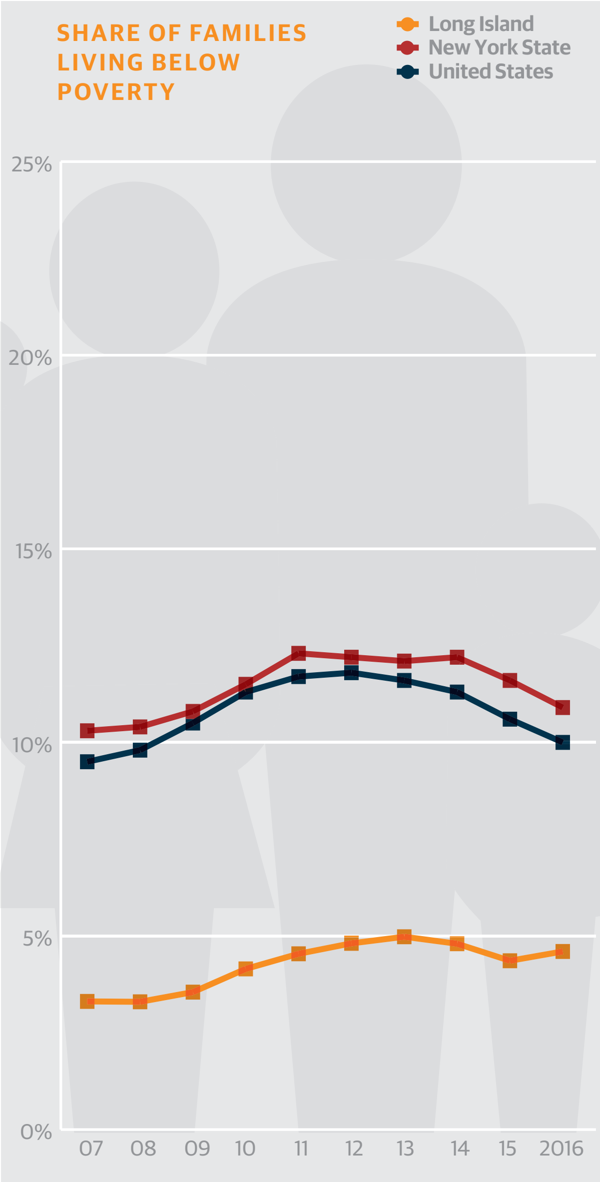
Programs that provide income or in-kind assistance have also risen over the last sixteen years, generally peaking during or shortly after the recession but remaining higher than they were in 2000. The number of families receiving Temporary Assistance for Needy Families (TANF), the main program for cash assistance for those neither over 65 or disabled, remains low at 1% of all families. But the number of families receiving food stamps, which has a higher income threshold, rose more sharply and has remained high since the recession, with 15% of all households receiving some amount of food stamps. Fourteen percent of households receive Medicaid, the main government-provided health insurance based on income, but the share of households without any insurance has declined sharply to 5.7% since the Affordable Care Act went into effect in 2010.

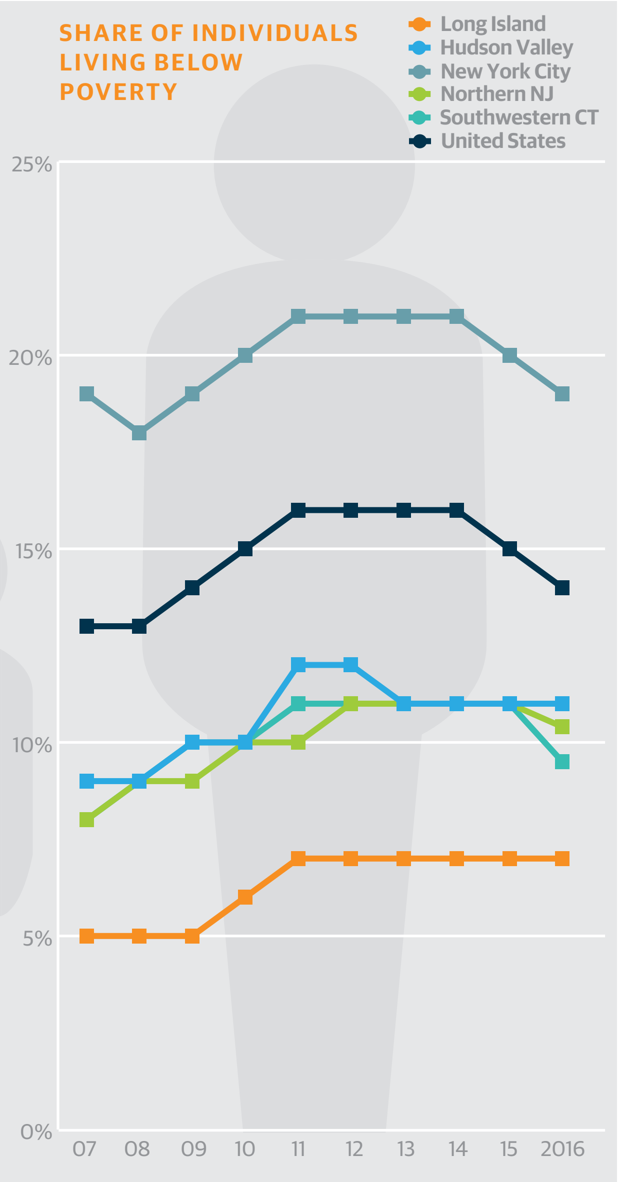
Even if the economy grows stronger, shoring up Long Island's safety net is likely to become an even greater need. Federal funding, the main source for most programs, is either already shrinking or facing future reductions. Populations with particular needs, such as the elderly, are likely to grow. And addressing poverty in the suburbs can be more challenging than in large cities. The population is more dispersed and there are fewer service organizations. With less public transportation, getting to jobs, health care and services is a much greater challenge than in urban areas. And shortage of affordable rental remains far more acute.

Long Island's poverty rate has increased far beyond other regions while still being relatively low.

185,000 Long Islanders were below the poverty line in 2016, accounting for 6.6% of the total population. This is the lowest poverty rate in the region—the poverty rate in southwestern Connecticut, the next runner up, is 9.5% and the poverty rate in New York City is nearly three times as high—18.9%. However, poverty rates in Long Island have increased at a faster pace than any other part of the region. Its increase from 4.7% to 6.6% represented a 40% growth in the poverty rate—well above the increase in the Hudson Valley, northern New Jersey and southwestern Connecticut, and far higher than that of the United States overall and New York City where poverty increased slightly. Poverty began to decline across the United States in 2012 as the economy recovered. Long Island's rate began to decline in 2014 from a peak of 7%.

Prior to 2011, poverty rates grew most rapidly in Nassau County. Since 2011, however, the poverty rate declined in Nassau County while continuing to grow in Suffolk. In 2016, 7.3% of Suffolk's population was below the poverty line, compared to 5.9% in Nassau County.





Source: American Community Survey, 2007-2016

How much does it cost to make ends meet on Long Island?

A recently released report provides a detailed measure of what it takes to make ends meet in each county without relying on public or private assistance. The standard is based on the costs of six basic needs and excludes anything for entertainment, emergencies or savings. It is truly "bare bones."

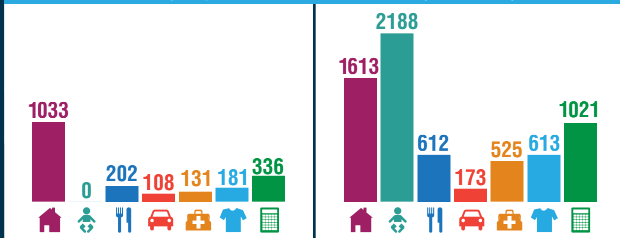
Comparing the "bare bones" expenses to average salaries in the region demonstrates that many, many families are struggling to make ends meet.

Bare Bones Expenses:
- HOUSING
- CHILD CARE
- FOOD
- TRANSPORTATION
- HEALTH CARE
- MISCELLANEOUS
- TAXES

Nassau Family Composition

1 Single Adult	2 Adults, 1 Infant, 1 Preschooler

Monthly Expenses - the Bare Bones (in dollars)

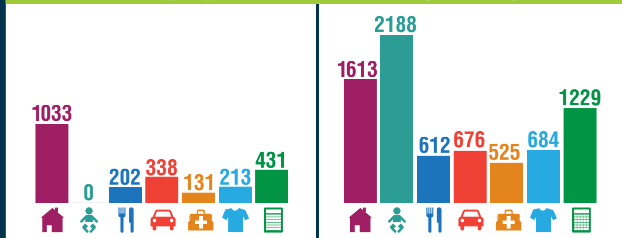


1 Single Adult		2 Adults, 1 Infant, 1 Preschooler
$ 1,991	Total Monthly Expenses	$ 6,745
$ 23,892	Annual Salary/Household to cover Monthly Expenses	$ 80,940
$ 11.95	Hourly Wages	$ 40.47

Suffolk Family Composition

1 Single Adult	2 Adults, 1 Infant, 1 Preschooler

Monthly Expenses - the Bare Bones (in dollars)



1 Single Adult		2 Adults, 1 Infant, 1 Preschooler
$ 2,348	Total Monthly Expenses	$ 7,527
$ 28,176	Annual Salary/Household to cover Monthly Expenses	$ 90,324
$ 14.09	Hourly Wages	$ 45.16

Can families make ends meet with just a bare bones budget on their salary? (Nassau)

1 Wage Earner		2 Wage Earners*, 1 Preschooler, 1 School Age
	Finance & Insurance Employees	
$106,124	Average Salary	$212,248
$ 23,892	Expenses	$ 80,940
$ 82,232	What's Left	$131,308
	Average Wage on Long Island	
$ 58,620	Average Salary	$117,240
$ 23,892	Expenses	$ 80,940
$ 34,728	What's Left	$ 36,300
	Retail Employees	
$ 33,638	Average Salary	$ 67,276
$ 23,892	Expenses	$ 80,940
$ 9,746	What's Left	($ 13,664)

Can families make ends meet with just a bare bones budget on their salary? (Suffolk)

1 Wage Earner		2 Wage Earners*, 1 Preschooler, 1 School Age
	Finance & Insurance Employees	
$106,124	Average Salary	$212,248
$ 28,176	Expenses	$ 90,324
$ 77,948	What's Left	$121,924
	Average Wage on Long Island	
$ 58,620	Average Salary	$117,240
$ 28,176	Expenses	$ 90,324
$ 30,444	What's Left	$ 26,916
	Retail Employees	
$ 33,638	Average Salary	$ 67,276
$ 28,176	Expenses	$ 90,324
$ 5,462	What's Left	($ 23,048)

Data from United Way ALICE Report - New York; A Study of Financial Hardship. (ALICE is an acronym for Asset Limited, Income Constrained, Employed.)

These households earn more than the U.S. poverty level but less than the basic cost of living for the county.

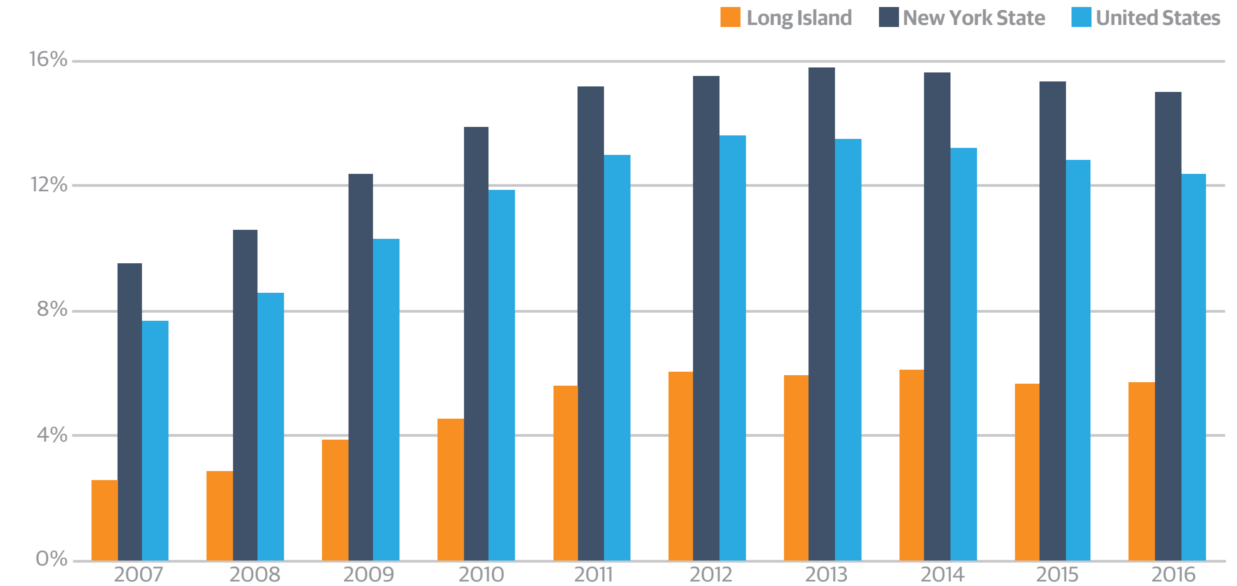
In Nassau County 6% meet the threshold for the U.S. poverty level; another 25% fall within the population that is employed but unable to make ends meet.

In Suffolk County 7% meet the U.S. poverty level; another 32% struggle to make ends meet.

http://unitedwayalice.org/documents/16UW%20ALICE%20Report_NY_Lowres_11.11.16.pdf

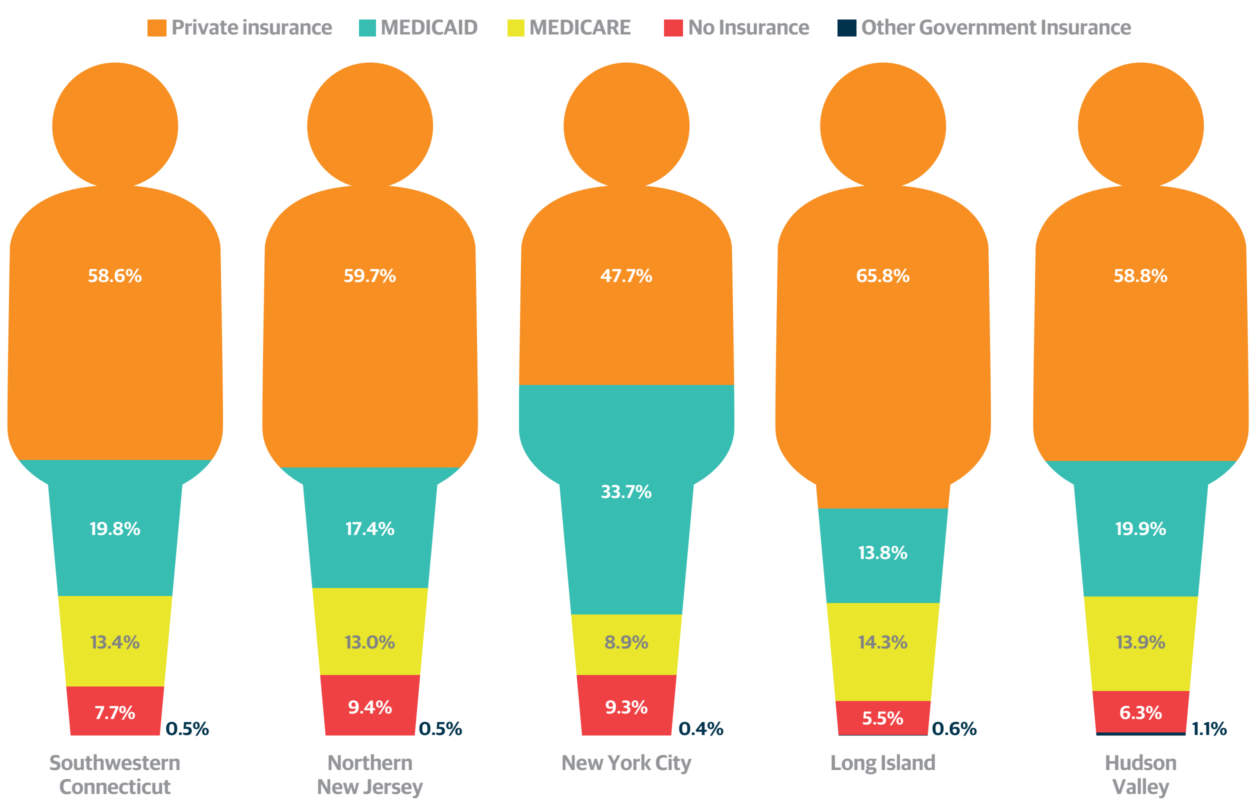
*Assumes both wage earners have the same salary.

SHARE OF HOUSEHOLDS RECEIVING FOOD STAMPS



Source: American Community Survey, 2007-2016

SHARE OF POPULATION BY INSURANCE COVERAGE, 2015



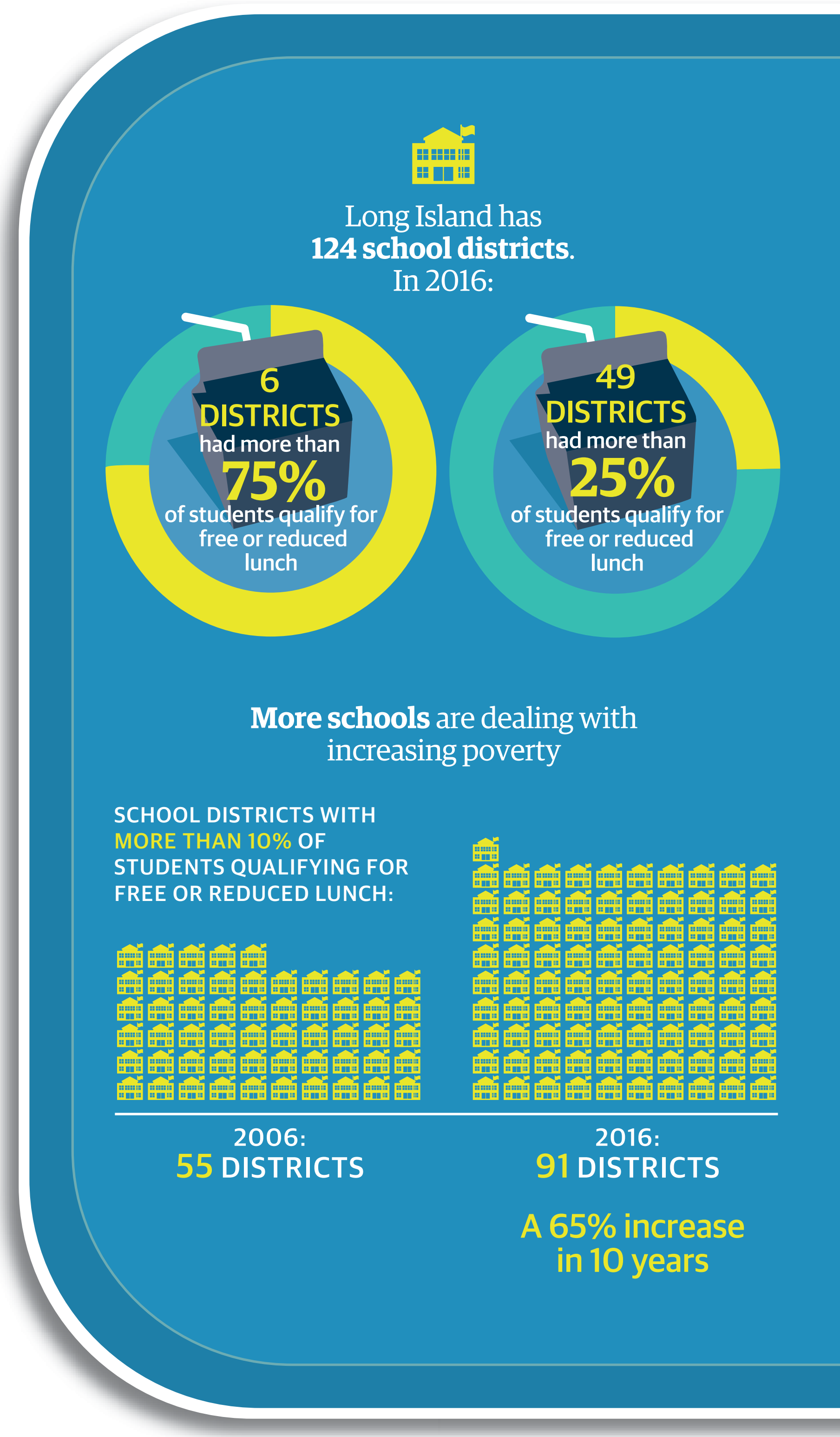
Source: American Community Survey, 2015 via iPUMS USA

More Long Islanders are receiving assistance of various types even as number remains relatively low.

The Food Stamp Program is a federal program that provides low-income families with assistance in purchasing food. 52,000 Long Island households received food stamps in 2016, representing 5.8% of all Long Island households. This rate is lower than New York State, where 15% of households receive food stamps, and the United States, where 12.4% of households receive food stamps. However, just like with poverty, the share of food stamps recipients increased much faster in Long Island than it did elsewhere. The number of households receiving food stamps more than doubled in just five years from 2007-2012, and has declined only slightly since then. Increases were high in New York State and the United States as well, but not as substantial as on Long Island.

Long Islanders are less likely to be uninsured or be on Medicaid, but have a higher share of people on Medicare.

Only 5.5% of Long Islanders lack health insurance, the lowest rate of uninsured in the New York region. New York City, by contrast, has an uninsured rate of 9.3%. Long Island also has a relatively low share of people on Medicaid, a health care program for families and individuals with limited resources. Only 14% of Long Islanders use Medicaid, compared to 34% of people in New York City. The share of Medicare recipients, however, in Long Island was the highest in the region at 14.3% as Long Island also has the highest share of residents over 65. Medicare provides health insurance for people 65 and older, people with disabilities and people requiring kidney dialysis or transplant. Long Island also saw a 45% decrease in the number of uninsured between 2010, the year before various provisions of the Affordable Care Act started coming into effect, and 2015. This was a larger decrease than the 39% decrease in the United States overall during the same time period.



LESSONS LEARNED
BY DREW BOGNER

Enhance Social Mobility and Vital Safety Nets

The success of Long Island is dependent on increasing the capacity of every citizen to be a fully contributing member of society adding his or her talent to the common good. The increase, since the Great Recession, in the percentage of Long Islanders living below the poverty line should, therefore, be of great concern. Accompanying that increase is a corresponding growth in the number of individuals relying on food stamps and other safety nets.

Long Island should increase its commitment to address this situation by enhancing social mobility, while providing vital safety nets. I see the need for this increased commitment every day at Molloy College. Some of our students come from low socioeconomic circumstances, and many of our graduates have chosen to help others through their choice of profession.

Both public and private resources are crucial to advancing this societal commitment, yet public funding is in jeopardy. Long Island needs to underscore the importance of these services, which are essential to the region's overall prosperity.

Dr. Bogner is President of Molloy College in Rockville Centre, New York.

GOAL #7

Transportation

We increase mobility by investing in an integrated, regional transportation system and by encouraging creative problem solving to find transportation alternatives.

Getting around Long Island is nearly impossible without a car. Most of Nassau and Suffolk were developed with low-density, single-family homes around major highways. Even though it has an extensive commuter rail system, the Long Island Rail Road is designed primarily to take commuters into Manhattan in the morning and back home at night, and has neither the connections nor the capacity to serve major destinations within Nassau and Suffolk. And most of Long Island lacks the density to support frequent bus service.

While the automobile is synonymous with Long Island's way of life and will remain the predominate form of transportation, the imbalance between auto and transit use makes it increasingly difficult to maintain a strong economy and high quality of life. Highway congestion would be reduced if people took transit more and drove less. Jobs would increase if employers had access to a larger number of workers. Increasing numbers of both younger and older adults are looking to drive less. Many lower-income residents can't afford to own a car but have few other options. And much of the island's real estate is devoted to parking and storing vehicles.

Long Island is moving toward greater use of the Long Island Rail Road, but bus ridership is declining and there are few signs that driving is decreasing.

Long Island is moving toward greater use of the Long Island Rail Road, but bus ridership is declining and there are few signs that driving is decreasing. LIRR ridership is up sharply from 2000, after falling and rising with the economy. Strong job growth in New York City appears to be driving much of the increase. Bus ridership, which is used mostly for intra-island commuting, has declined sharply since 2008, with much of the decline driven by funding cuts and reduced service. While there is no current measure of how much Long Islanders are driving, vehicle registrations are increasing. Rail investments such as East Side Access are likely to increase rail ridership into Manhattan, while a third track on the main line and a second track to Ronkonkoma will improve service for intra-island commutes.

Technology is already changing travel patterns for Long Islanders, and more profound changes are likely in the future. More people are working at home, and more are using ride sharing services. Over the coming years, driverless cars will become more common on Long Island's roadways. Estimates vary, but by 2040 three-fourths of vehicles on the road could be fully automated. Combined, these changes could have a number of impacts that are hard to predict. They could make it much easier to get from a train station to home or work, and sharply reduce the amount of space needed for parking. They could also increase the number of vehicles on the road and the distances people are willing to travel. Shared car services could take people far more places than bus service, but many who rely on transit could find these too expensive even as bus service continues to decline.

LIRR ridership has increased, but so have delays.

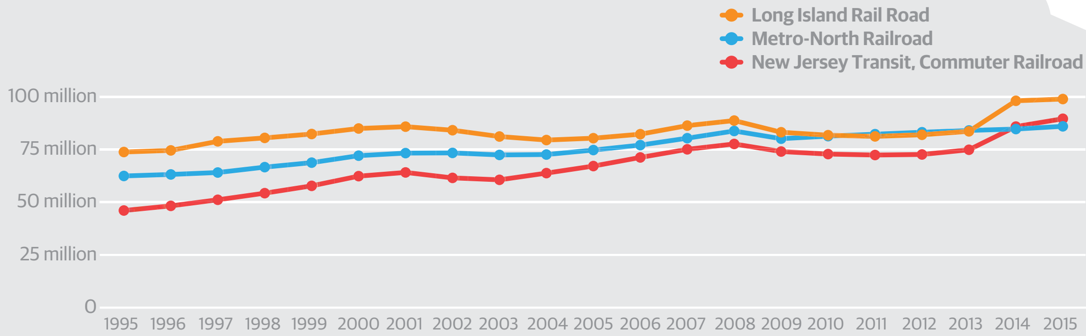
The number of riders taking the Long Island Rail Road (LIRR) surged after 2013 as employment in New York City experienced its strongest growth in decades. Over the longer term, ridership increased from 80 million annual passengers in 1998 to 99 million in 2015, once again becoming the nation's most heavily traveled commuter rail line after being briefly surpassed by Metro-North.

Delays, however, have also increased, as they have on most of the region's transit lines. 91.6% of trains arrived at the destination on time in 2015, the lowest on-time performance since 2000.*

Major LIRR expansion projects, including the East Side Access project connecting the LIRR to Grand Central Terminal, a third track on the LIRR main line, and a second track from Farmingdale to Ronkonkoma should all be completed within the next few years. These should boost ridership on LIRR even further, and reduce delays by giving the rail road more capacity and flexibility in their operations.

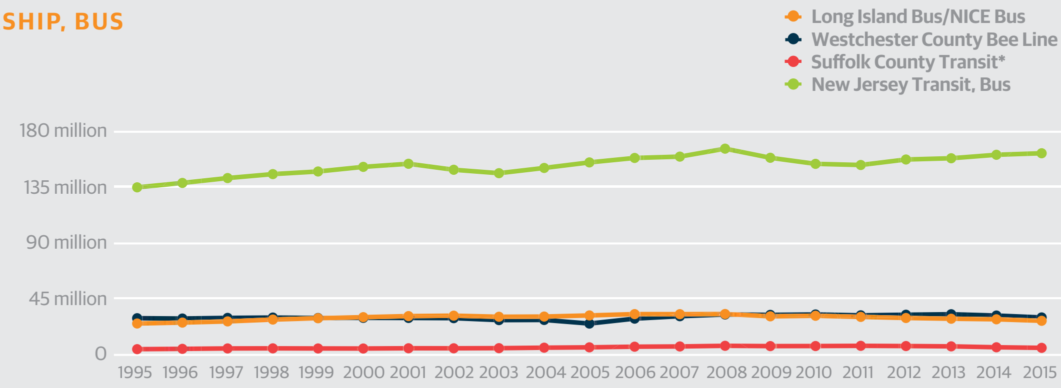
* https://www.osc.state.ny.us/osdc/rpt1-2018-lirr-performance.pdf

ANNUAL RIDERSHIP, RAIL

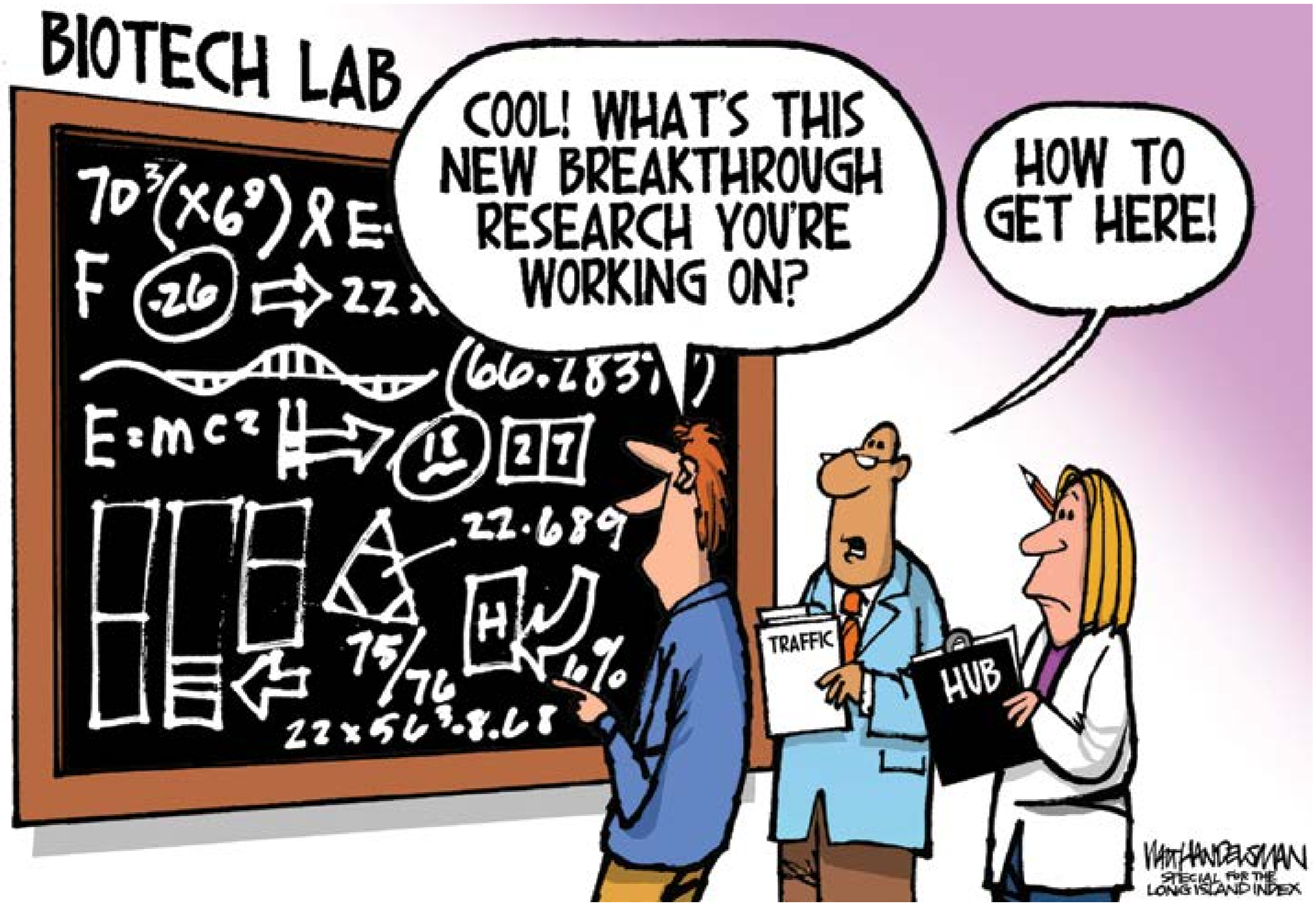


Source: American Community Survey, 2007-2016

ANNUAL RIDERSHIP, BUS



Source: National Transit Database; https://www.transit.dot.gov/ntd



Bus ridership is declining while driving may be going up

Bus ridership has declined dramatically since 2008 due to both the recession and service reductions. After increases of 8% on Nassau's NICE buses and 45% on Suffolk County Transit between 2000 and 2008, ridership declined by 17% on NICE and 24% on Suffolk County transit between 2008 and 2015. Other systems in the region had less dramatic contrasts. New Jersey Transit buses, which include a large number of commuters to Manhattan, increased by 10% from 2000-2008 before declining by 2% to 2015. Westchester County bus ridership increased by 9% to 2008 and declined by 7% to 2015.

LESSONS LEARNED BY PAT FOYE

The Role of the Railroad in Long Island's Future

As critical as the Long Island Rail Road was to the economies of the 19th and 20th Centuries, it is essential to a thriving innovation economy in the 21st Century. Its mission remains: getting people where they need to go safely, quickly and easily. But in a rapidly changing economy, the railroad that once ran East to West during morning peak hours and the reverse in the evening must now meet new needs. Today, passengers must reach more destinations than our 180-year-old railroad anticipated, and they must get there throughout the day—not necessarily on a 9-to-5 schedule. East Side Access, Third Track and Second Track are all part of addressing these changes. These transformative projects championed by Governor Cuomo will in turn create new jobs on Long Island, encourage transit-oriented development, revitalize downtowns, and reduce emissions and dependence on cars. In the 21st Century, the LIRR will be more catalytic than ever.

Mr. Foye is President of the MTA.

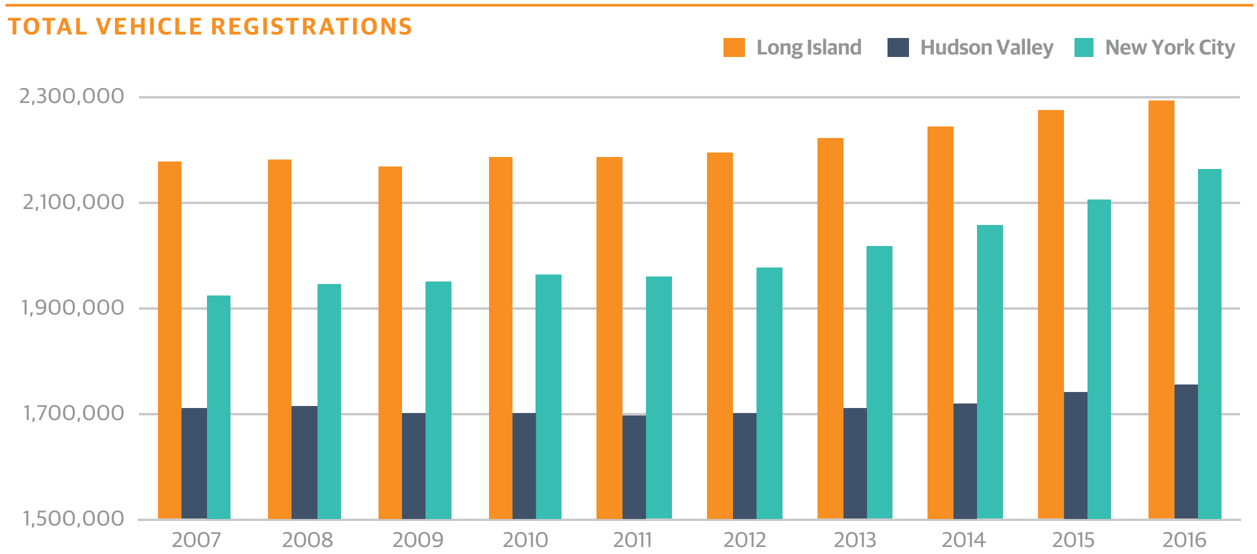
In spite of an increase in LIRR ridership, there are few signs that Long Islanders are driving less. The number of vehicle registrations has increased by 5.6% since 2007, as they have in other parts of the region as well. While not conclusive that people are driving more, the number of vehicles has been associated with the numbers of vehicle miles driven in the past. Gas sales by gallon have decreased by 6% during the same period, but that is more likely the result of improving fuel economies than a decrease in miles travelled.

Technology is changing the way Long Islanders travel, but raises issues for who will benefit.

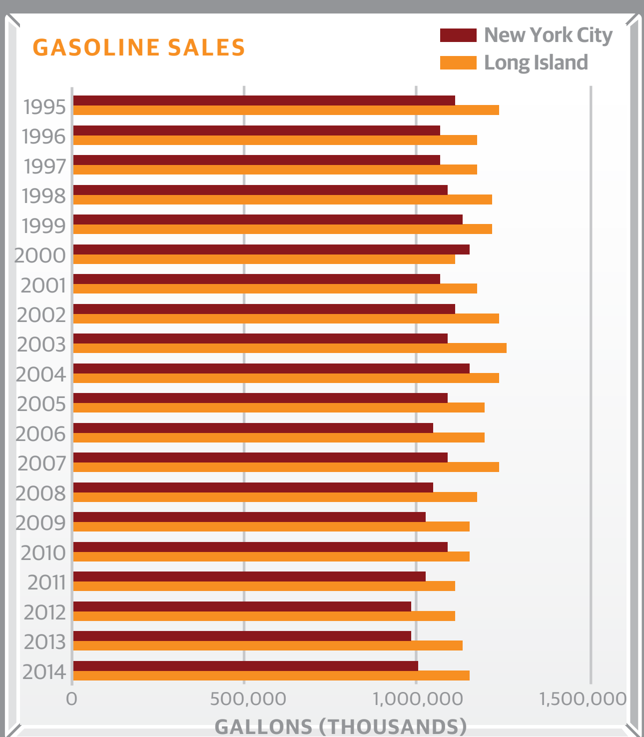
Digital communications have provided more options for where to work and how to travel, and could change how much and when people drive or take transit in the future. The 2017 Long Island Index survey found that 30% of Long Island residents have used a share ride service such as Uber or Lyft in the past 12 months. These services can help solve the problem of how to get from a train station to home or work, but members of households earning less than $35,000 a year were much less likely to have used a shared ride service than those in households with incomes of $100,000 or more (16% vs. 40%).*

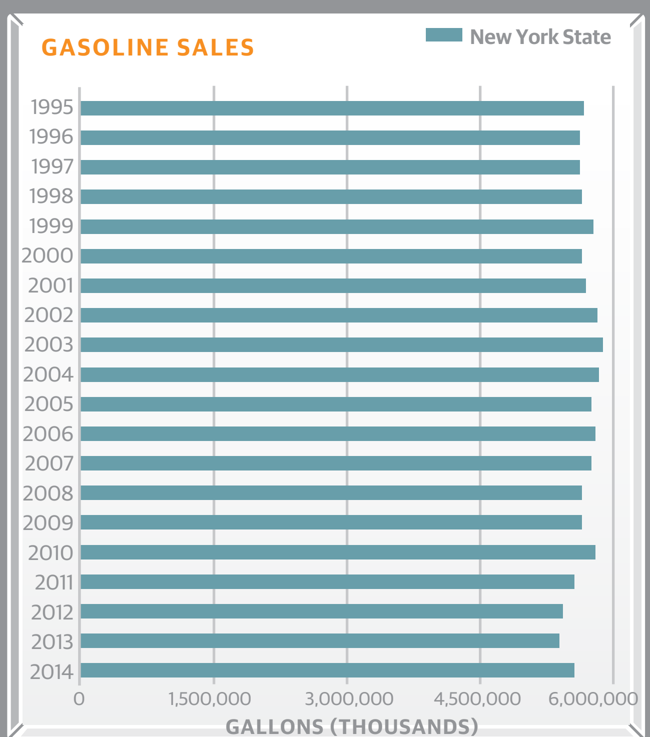
The survey also found that 31% have the option to work from home and of those, 57% work from home 3 days or more. 80% of those working from home rely on the internet to do so, confirming that the ability to work remotely can create more flexible schedules. Low-income households are far less likely to have internet service or occupations that allow them to work at home.

* 2017 Long Island Index survey findings



Source: Federal Highway Administration; https://www.fhwa.dot.gov/





Source: NYS Open Data- Estimated Gasoline Sales (Thousands of Gallons): 1995- 2014; https://data.ny.gov/Energy-Environment/Estimated-Gasoline-Sales-Beginning-1995/cwrk-j5nn/data

GOAL #8

Healthy People

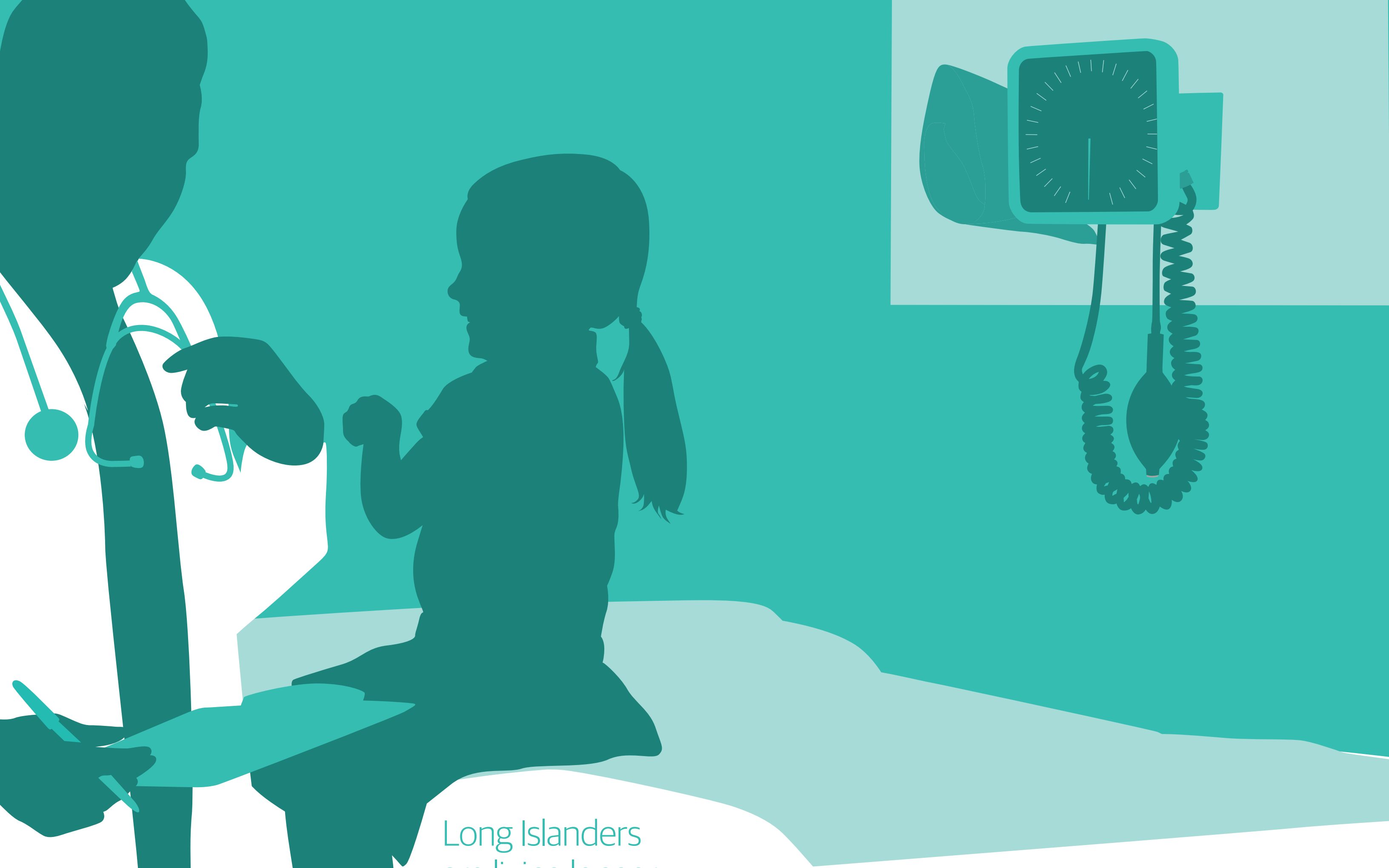
All people have access to quality affordable health care that focuses on disease and illness prevention.

Health is one of the most fundamental indicators of well-being. Access to health care is important for maintaining a healthy population, but far more is determined by environmental and social factors, such as child poverty, air quality, public safety, access to healthy food and physical activity.

Long Island is doing well by health outcomes such as life expectancy, but there is a wide gap between the health of affluent and lower-income residents.

Long Island is doing well by health outcomes such as life expectancy, but there is a wide gap between the health of affluent and lower-income residents. As in other parts of the New York region, life expectancy is much lower and rates of disease are much higher for low-income residents. Overall, Long Island has many attributes that correlate with good health—high incomes and educational attainment, clean air and access to nature. But its auto-centered culture also means that Nassau and Suffolk residents have more auto-related accidents than places with higher transit use, and walk less, contributing to obesity and chronic diseases.

Changes that can help Long Island's economy and quality of life, such as improving transit and building more multi-family housing in walkable downtowns, can also improve Long Islander's health. Improving the safety net and expanding education and economic opportunity should also reduce the gap between low and high income residents by improving life expectancy and other health outcomes for low-income residents.

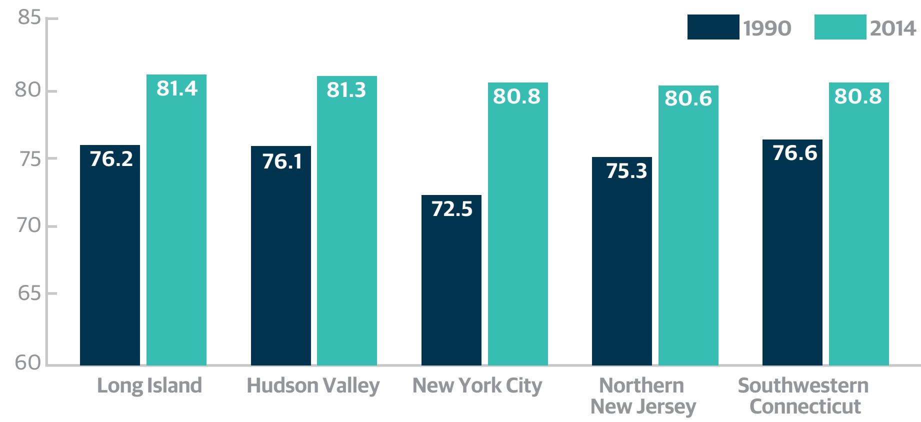


Long Islanders are living longer than ever before.

Long Island enjoys the highest life expectancy in the New York metropolitan region. A typical Long Island resident born in 2014 can expect to live until the age of 81.4. Life expectancy on Long Island increased by 5.2 years between 1990 and 2014. This is lower than the dramatic increase of 8.3 years in the same time period in NYC, which saw particularly sharp gains in life expectancy due to a reduction in HIV deaths, a large drop in homicides and potentially, an increase in immigrants who typically live longer.

There are some differences in life expectancy between the two counties. People in Suffolk County can expect to live until the age of 80.6, a little lower than the region's average of 80.9 years. Those in Nassau County can expect to live until age 82.2—more than a year longer than Suffolk. Health—meaning both length of life and quality of life—is determined by a variety of factors, not simply by healthcare. And Nassau County's greater life expectancy likely reflects socio-economic conditions such as higher incomes.

CHANGE IN LIFE EXPECTANCY



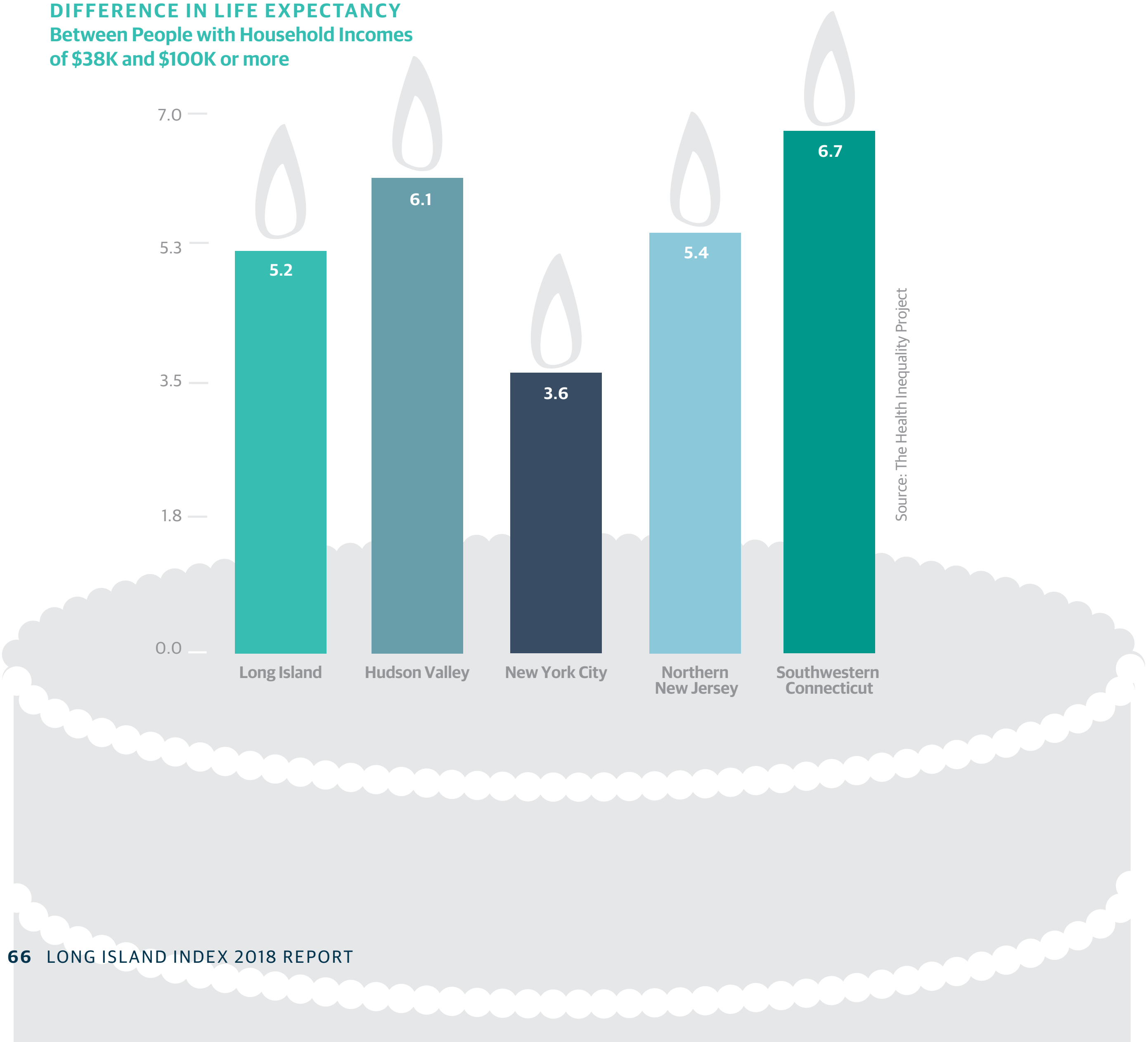
Source: Institute for Health Metrics & Evaluation

There are large life expectancy gaps by income

But there are also big gaps in life expectancy between different incomes on Long Island. Lower income people—those with household incomes of less than $38,000—typically live five years less than higher income people—those with incomes greater than $100,000, according to an analysis by the Health Inequality Project. This is part of a national trend that has been growing in recent years, where life expectancy is highly correlated with income, not only for the very rich and the very poor but at all incomes. In fact, according to some estimates, life expectancy for the bottom two income quartiles in the United States has actually dropped in recent decades.

The life expectancy gap on Long Island is somewhat smaller than the gap in the Hudson Valley, northern New Jersey and southwestern Connecticut but higher than that of New York City. While precise causes are not known, some researchers suggest that variations in levels of public health programs such as healthy food programs and smoking cessation efforts help explain the gap, but other factors from housing to neighborhood environmental conditions likely play a role as well.* Overall, however, the life expectancy gap between rich and poor in the New York region is far smaller than many other parts of the country.

DIFFERENCE IN LIFE EXPECTANCY
Between People with Household Incomes of $38K and $100K or more



Rising obesity and diabetes rates are a major health concern.

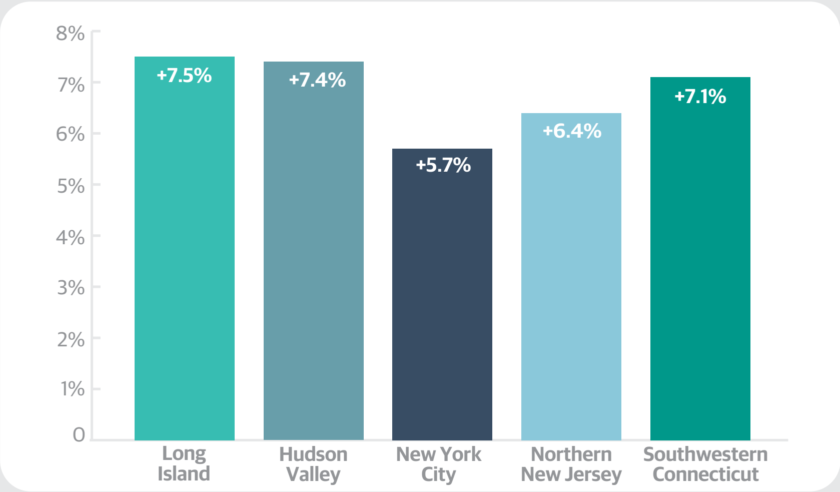
In recent decades, health conditions related to physical activity, food access and poverty have become a great concern nationwide. Obesity rates, associated with conditions such as heart disease, cancer and diabetes, have been increasing sharply across the country. While Long Island is fairly well positioned compared to the nation overall, it has not been spared these trends. In 2011, 31.2% of adults in Long Island were obese, an increase of 7.5 percentage points since 2001. Today, Long Island's obesity rate is lower only than that of northern New Jersey.** The share of those with diabetes, a chronic illness that severely impairs people's quality of life and is very costly to treat, has doubled between 1998 and 2015.

By contrast, Long Island's share of adults with diabetes, 11%, is lower than in any part of the region other than southwestern Connecticut.

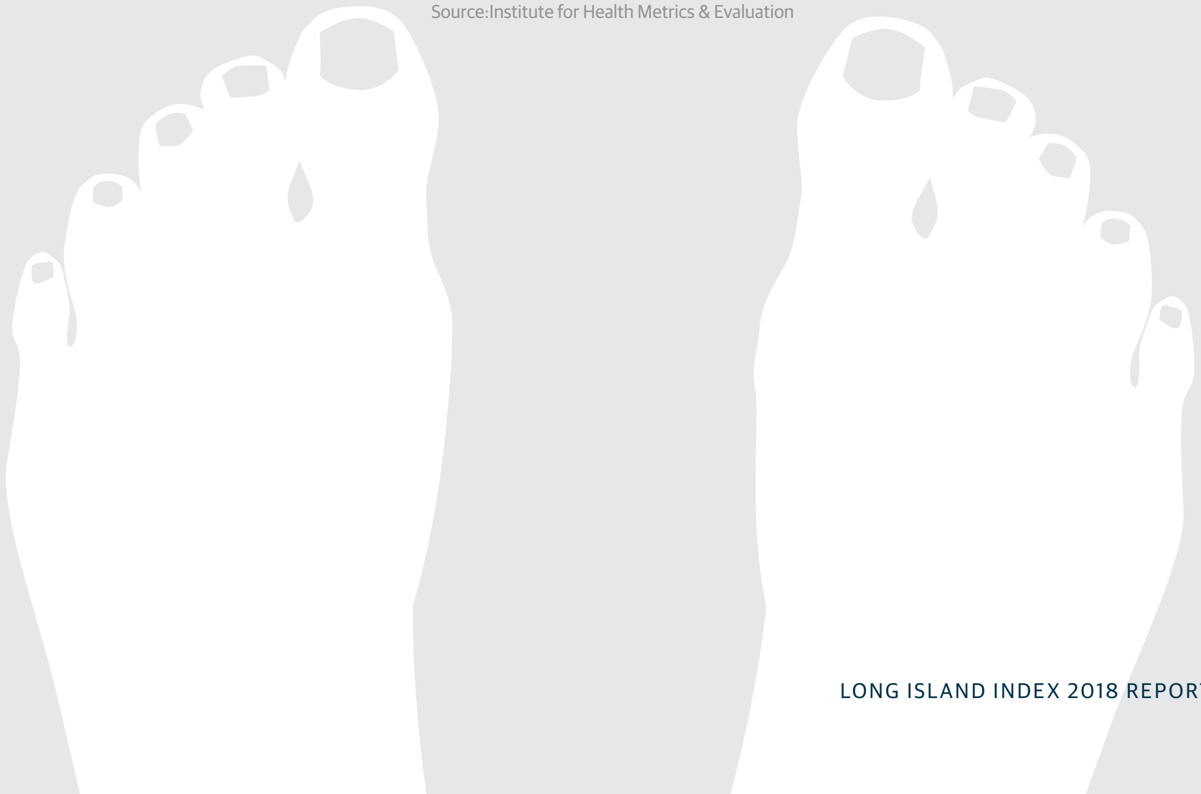
* https://www.nytimes.com/interactive/2016/04/11/upshot/for-the-poor-geography-is-life-and-death.html

** Note: there are several sources on obesity rates. We selected a longitudinal source from the Institute for Health Metrics and Evaluation.

PERCENT CHANGE IN OBESITY FROM 2001-2011



Source:Institute for Health Metrics & Evaluation



LESSONS LEARNED
BY THERESA REGNANTE

Improving Health on Long Island

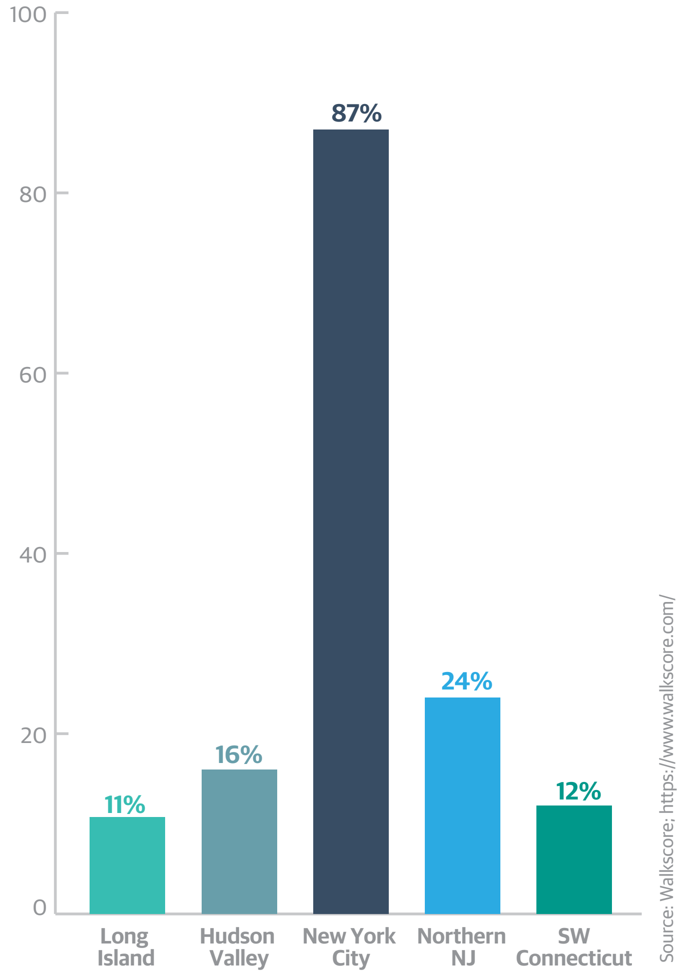
Long Island has extraordinary hospitals and health care services, but access to care alone does not ensure health. Poor health outcomes and deep poverty are closely linked, and poor eating habits and unhealthy homes are byproducts of poverty as well. Long Island needs to take a neighborhood-by-neighborhood approach to improving health, recognizing that health, education, and financial stability are three legs of a stool.

Ms. Regnante is President and CEO of United Way of Long Island.

Long Island's built environment may play a role.

While the causes are complex, an unhealthy diet and a more sedentary lifestyle are often implicated with obesity and diabetes. These local factors are why successful interventions have often been local and targeted to diet and exercise. One way to get exercise easily is simply to incorporate it into one's daily life. People who live in areas served by the subway in New York City, for example, typically walk one hour a day. But when it comes to walkability, Long Island performs fairly poorly. 11% of Long Islanders live in places which are very walkable, meaning that most errands, such as shopping for milk or doing laundry, can be completed on foot. This is the lowest share compared to other suburban areas. In the Hudson Valley, for example, 50% more people, comparatively, live in walkable places.

SHARE OF POPULATION LIVING IN VERY WALKABLE NEIGHBORHOODS (Walkscore of 71 or higher), 2013



GOAL #9

Educational Readiness

All students are prepared to learn at each stage of the educational pipeline.

Long Island has a large number of high quality educational institutions from pre-schools to universities. It also has a high level of educational attainment. Over 90% of adults have a high school diploma and nearly 40% graduated from college. Maintaining excellent schools and a well-educated population is critical on many levels. Educational attainment is one of the most reliable predictors of individual success, from good health to a high standard of living. It is also one of the main avenues for climbing from poverty to the middle class. An educated workforce is perhaps the most important factor in maintaining a competitive regional economy, and good schools are one of the first qualities that families seek when moving to a new community.

Measuring how well students are learning and preparing for college and careers is complex. There are a variety of indicators from standardized test results to graduation rates to qualitative measures, and these can vary from year to year based on changes in tests and measurement standards. They are also determined by factors beyond the classroom, from the socioeconomic background of the students to the safety and environment of both home and school. Two measures, how well 8th graders perform on New York State English and math tests, and a state measure of college readiness, are problematic for measuring how students or schools are improving from year to year, but can show how Long Island compares to other parts of the state, and how schools on Long Island compare to each other.

These indicators show a wide gap in educational readiness by income and race among Long Island's schools, and potential signs of a need for most schools to catch up with a changing economy.

These indicators show a wide gap in educational readiness by income and race among Long Island's schools, and potential signs of a need for most schools to catch up with a changing economy. Low-income, Black and Hispanic students are highly concentrated in high-poverty schools, a product of Long Island's segregated residential communities and school districts.

These high-poverty schools perform well below both average and low-poverty schools. Only 12% of students in these schools are ready for college, according to state measures. National studies and a number of successful school districts have shown that low-income students perform better in economically and racially integrated schools, with no decline in the performance of more affluent students.* Other models have improved academic performance through increased resources and reforms within high-poverty schools.

These differences are also reflected in school spending and taxes. Long Island spends more per student and raises more from local property taxes than any other part of the New York region, but there is a wide variation by the size, wealth and ethnicity of the school district. Smaller and wealthier school districts spend more per student and raise more from local property taxes than other districts.

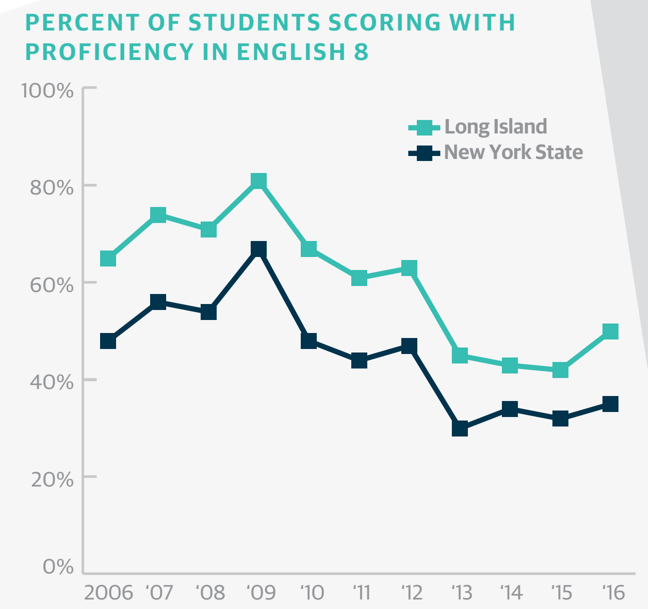
But problems may not be isolated to high-poverty schools. In the 80% of schools between the highest and lowest poverty levels, only 32% of students were considered college ready. Even though Long Island students perform well versus others in New York State, postsecondary education and life-long learning are increasingly important in an economy where secure, well-paying careers continually require higher levels of education and cognitive abilities.

Long Island students outperform state averages academically, but less than half are considered proficient in English and math or ready for college.

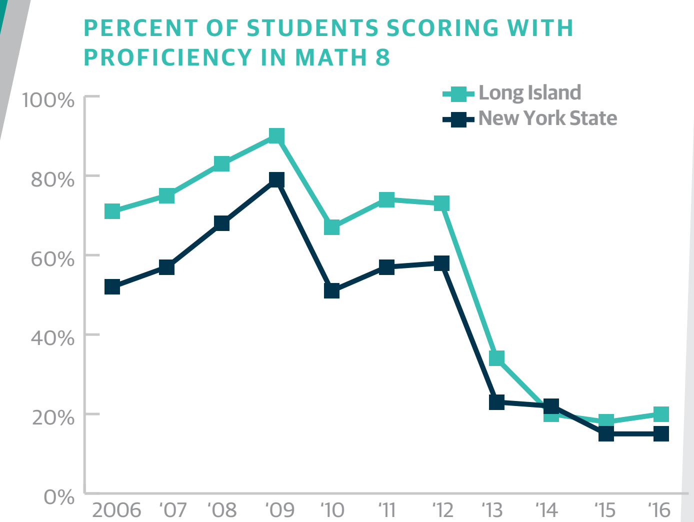
Using test scores to track progress is difficult, because testing requirements and difficulty can change from year to year, and in recent years many families have chosen to not have their children participate in these tests. For example, the sharp drop in 8th grade students deemed proficient in English and math between 2012 and 2013 is largely the result of more difficult tests introduced in 2013 based on Common Core learning standards. And Long Island scores may have dropped more sharply in 2014 and 2015 because more families chose not to take the tests than statewide.

With these caveats, only 50% of Long Island 8th grade students were considered proficient in English in 2016 and only 20% were considered proficient in math. Just seven years earlier, the percent proficient were 81% and 90%. The more rigorous testing standards are controversial, but are intended to more accurately reflect that knowledge and skills needed in today's economy and society. Regardless of the time period, Long Island students outperform the state average. For example, in 2016 only 35% of 8th graders were proficient in English and 15% in math statewide.

* National Coalition on School Diversity, *School Integration and Educational Outcomes, Brief #5*, 2011; The Century Foundation, Hartford Public Schools, 2016



Source: NYS Department of Education

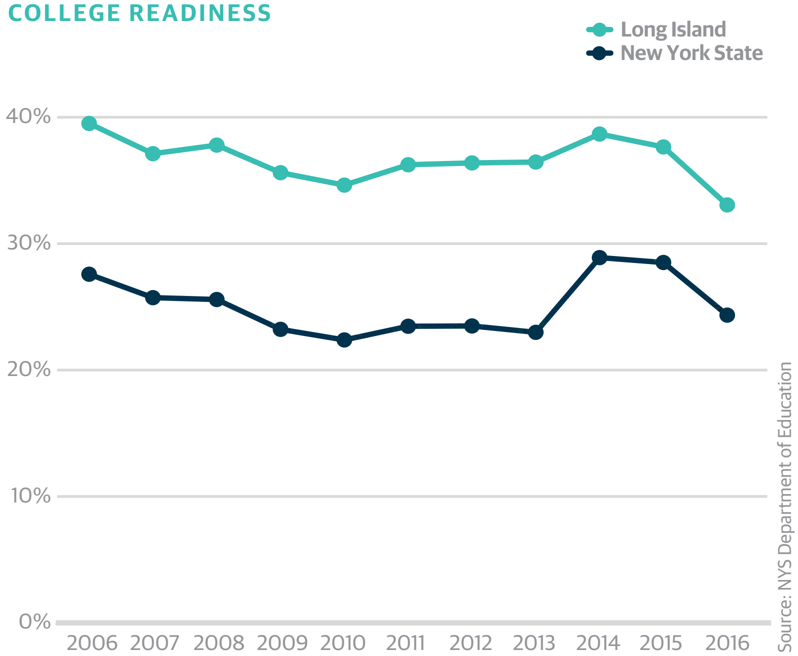


Source: NYS Department of Education

Using an alternative measure, college readiness, which the New York State Department of Education defines as the percent of students scoring above 85% on key Regents examinations, the share of high school students ready for college-level academics has declined from 40% in 2006 to 33% in 2016. These scores are still higher than state averages.

These comparisons cannot determine how well schools are improving the academic performance of their students. Affluent areas like Long Island generally have fewer high need students and score higher on academic performance measures at least in part because of the socioeconomic background of their students. But both test scores and college readiness indicate that there is substantial room for improvement in current proficiency levels.

COLLEGE READINESS



LESSONS LEARNED
BY HUBERT KEEN

Training Long Island's Workforce

It is common to hear that one cannot live comfortably on Long Island without a college degree, typically meaning bachelor's degree. Educational indicators, however, reveal that many high school graduates are not college-ready. The four-year degree may not be realistic, neither for the potential of many recent high school graduates nor for their interests. The ongoing demographic shift has resulted in more students in high-poverty schools who are not college-ready.

While it is essential to persist toward the goal of "college and career ready," a rethinking is needed on both elements of that strategy. First, expecting all high school graduates to earn bachelor's degrees is and will continue to be unrealistic. Associate's degrees in technological fields are in high demand, yet are not being produced. Second, as many employers shift their expectations to focus on skills rather than degrees, motivated high school graduates who earn certificates in areas of technological need can expect prompt employment. The CEO of IBM states that 15% of the company's "new collar" hires do not have bachelor's degrees, and that this is the anticipated trend for the company's hires.

As Long Island's economy adapts to the 21st century, our educational system must also adapt. It is essential for educational institutions to serve the full range of workforce needs as well as to match our educational programs with students' potential and interests. That is one of the keys to building a strong future for the region.

Dr. Keen is President of Nassau Community College.

Average school performance masks wide disparities by income.

Whether measured by state test scores or college readiness, there is a wide gap between schools depending on the share of students who are living in poverty. While 78% of 8th grade students are proficient in English in the 10% of schools with the lowest poverty levels, only 30% are proficient in the schools with the highest poverty levels. For math, the gap is 22% to 10%, and for college readiness it is a difference of 56% to only 12%.

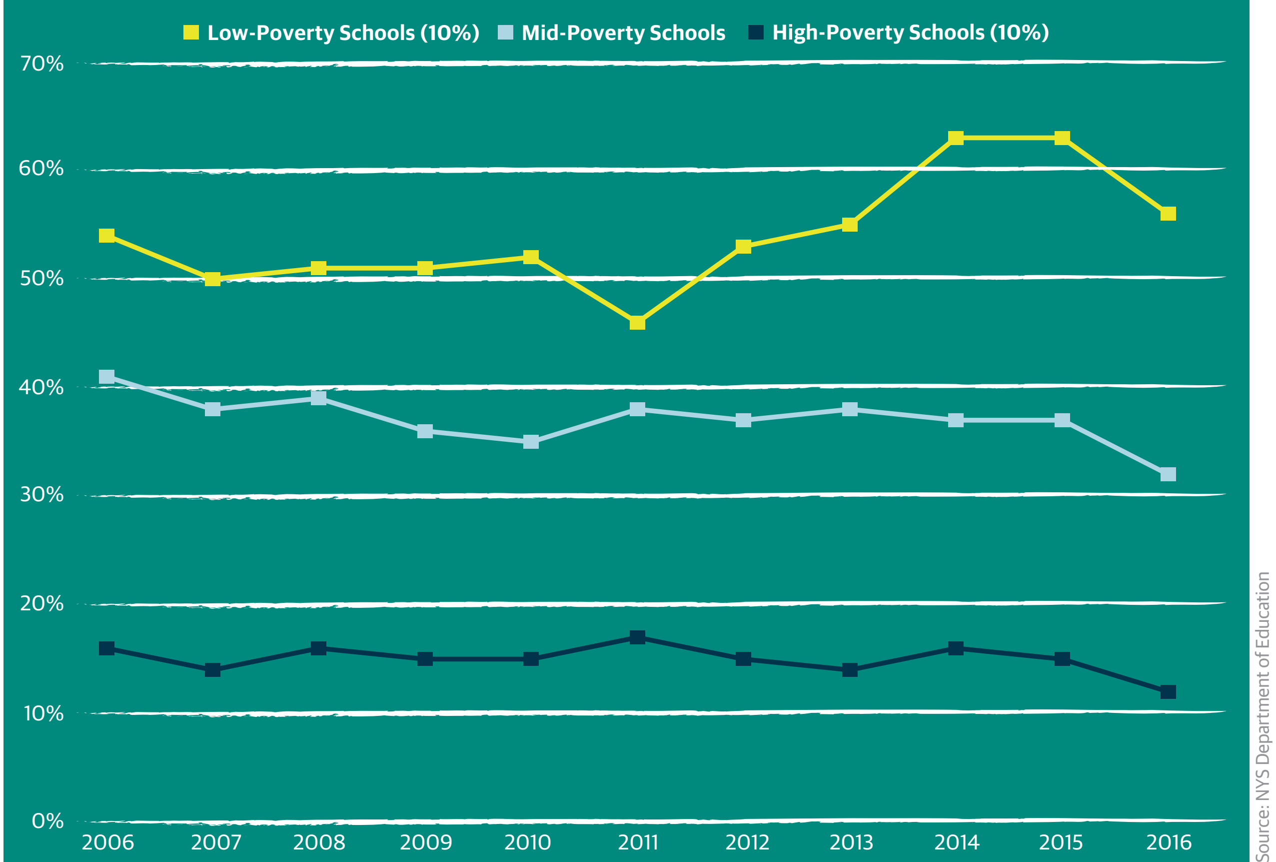
Because high poverty schools are larger than low or mid poverty schools, 15% of all students attend the 10% of schools with the highest poverty levels. In 2013, the average school in a high poverty district had 753 students, compared to 693 students in mid poverty districts and 614 in low poverty districts. Not only does this mean that poor students are highly concentrated in low performing schools, but that schools lack the advantages of smaller school environments. Since 2008, school size has been getting larger in high poverty school districts while it has been shrinking in other districts.*

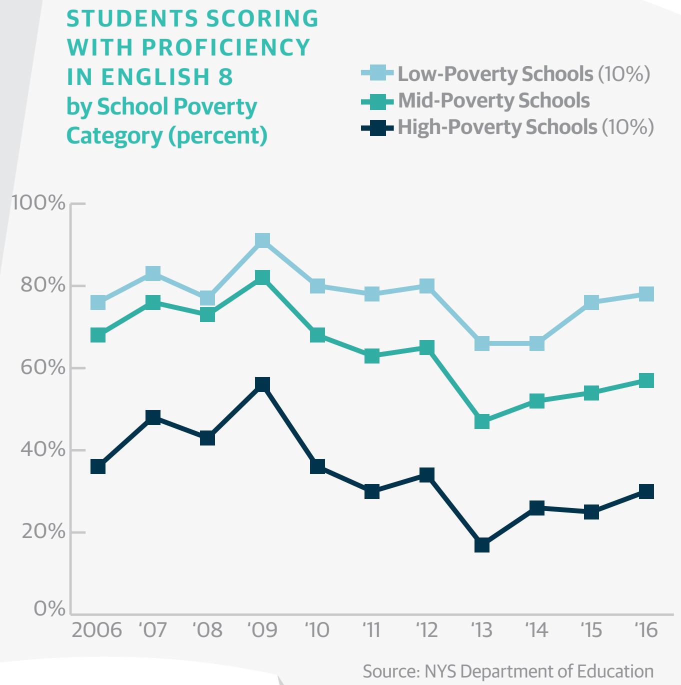
Even though high poverty schools have higher needs, they receive less funding than other schools. High poverty school districts had $24,100 in revenue per student in 2012 compared to $26,100 in mid poverty districts and $30,000 in low poverty districts. While state and federal aid reduce the gap, most education funding still comes from local property taxes, and the higher property values in low and mid poverty districts allow them to direct more resources to their schools.**

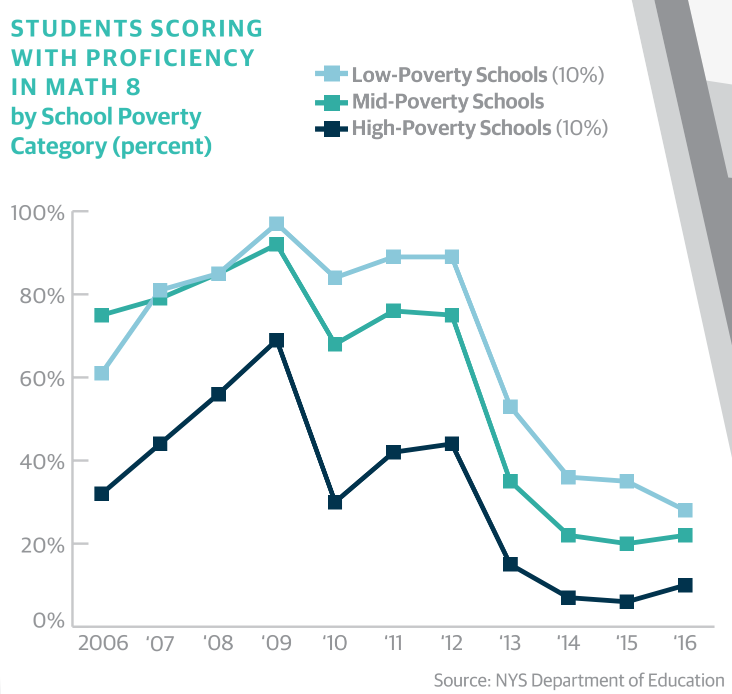
* William Mangino and Marc Silver, *Still Separate and Not Getting More Equal: The Persistence of Economic and Racial Inequalities in Education on Long Island*, Long Island Index, 2015.

** Ibid.

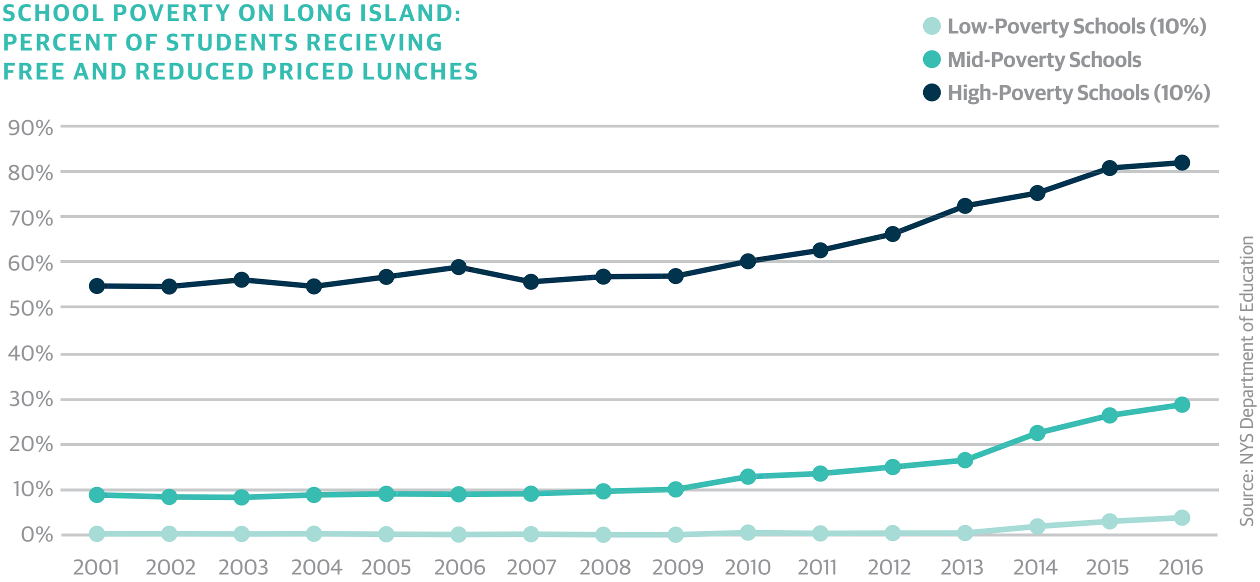
COLLEGE READINESS BY SCHOOL POVERTY CATEGORY



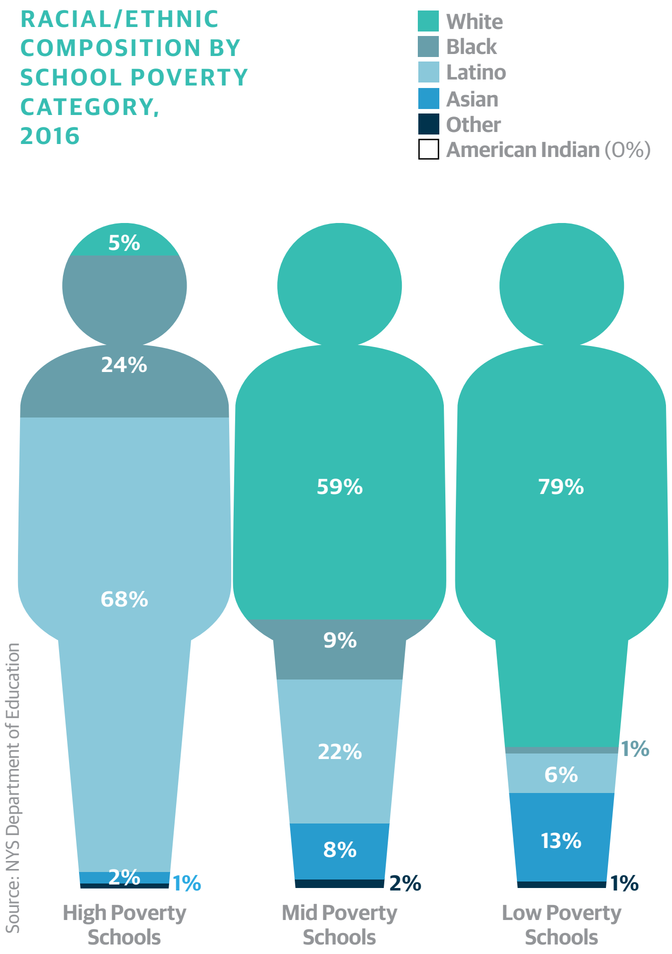

STUDENTS SCORING WITH PROFICIENCY IN ENGLISH 8
by School Poverty Category (percent)
Low-Poverty Schools (10%)
Mid-Poverty Schools
High-Poverty Schools (10%)
100%
80%
60%
40%
20%
0%
2006
'07
'08
'09
'10
'11
'12
'13
'14
'15
'16
Source: NYS Department of Education


STUDENTS SCORING WITH PROFICIENCY IN MATH 8
by School Poverty Category (percent)
Low-Poverty Schools (10%)
Mid-Poverty Schools
High-Poverty Schools (10%)
100%
80%
60%
40%
20%
0%
2006
'07
'08
'09
'10
'11
'12
'13
'14
'15
'16
Source: NYS Department of Education

SCHOOL POVERTY ON LONG ISLAND: PERCENT OF STUDENTS RECIEVING FREE AND REDUCED PRICED LUNCHES



RACIAL/ETHNIC COMPOSITION BY SCHOOL POVERTY CATEGORY, 2016



Education disparities by income and race are a result of Long Island's highly segregated schools

Low, mid and high poverty schools are all experiencing increases in the number of poor students as measured by the share of those receiving free or reduced price lunch. In high poverty public schools, the share of children receiving free or reduced lunch grew from 55% to 82% from 2001 to 2016. In mid poverty schools the share tripled from 9% to 29%, and in low poverty schools increased from 0.2% to 4%.

High poverty schools also have much higher percentages of students of color. 92% of students in high poverty schools are black or Hispanic, compared to 31% in mid poverty schools and 7% in low poverty schools. These findings are consistent with the 2012 Long Island Index study that found Long Island school districts are among the most segregated in the United States. The study found that by one measure racial segregation in Long Island's schools is nearly twice the national average, and in Nassau is almost triple the national average. It also found that the segregation was almost entirely due to segregation between, rather than within, school districts, reflecting Long Island's segregated residential communities.*

* Douglas Ready, *Inter-District and Intra-District Segregation on Long Island*, Long Island Index, April 2012

LESSONS LEARNED BY ROBERT A. SCOTT

Educational Readiness: An Assessment of Long Island's Progress

From the start, the operating principle of the Index was a belief that "good information presented in a neutral manner can move policy." The Index has been an effective regional pioneer in gathering and publishing objective information in aggregate and detail. Yet here we are, fifteen years later, and the signs of educational readiness among public school students give cause for continuing concern. Fragmented, segregated school systems persist. College and career readiness seems to have declined, and pre-school, with its known benefits, lags for Suffolk County children.

While a political response to this report might be to blame the teachers and school leaders, the data indicate that the culprit is public policy. Students cannot benefit from pre-school programs, and teachers cannot teach in them, if programs are unavailable.

Fragmented, segregated schools are a systemic societal problem, not a school problem.

And declines in college-readiness may well result from an over-reliance on standardized testing. Such testing is analogous to picking up a grape plant by its root to check its health, instead of providing watchful care, necessary stimulation to the soil, and appropriate nourishment.

In order for students to enter school ready to learn, they need to have had a good night's sleep in a safe and protective environment, adequate and regular healthcare, nutritious meals, and a quiet place to do homework. It is no wonder that student achievement and poverty are highly correlated.

If we are to achieve our educational goals, policy makers must engage in systemic, not silo thinking. Academic achievement and college and career readiness are effected by societal issues, including poverty, homelessness, inadequate healthcare, unemployment, the underfunding of schools, and curricula that give short shrift to the humanities, expressive arts, and the responsibilities of citizenship.

These are the lessons to be learned from the data and the core of the agenda to be pursued.

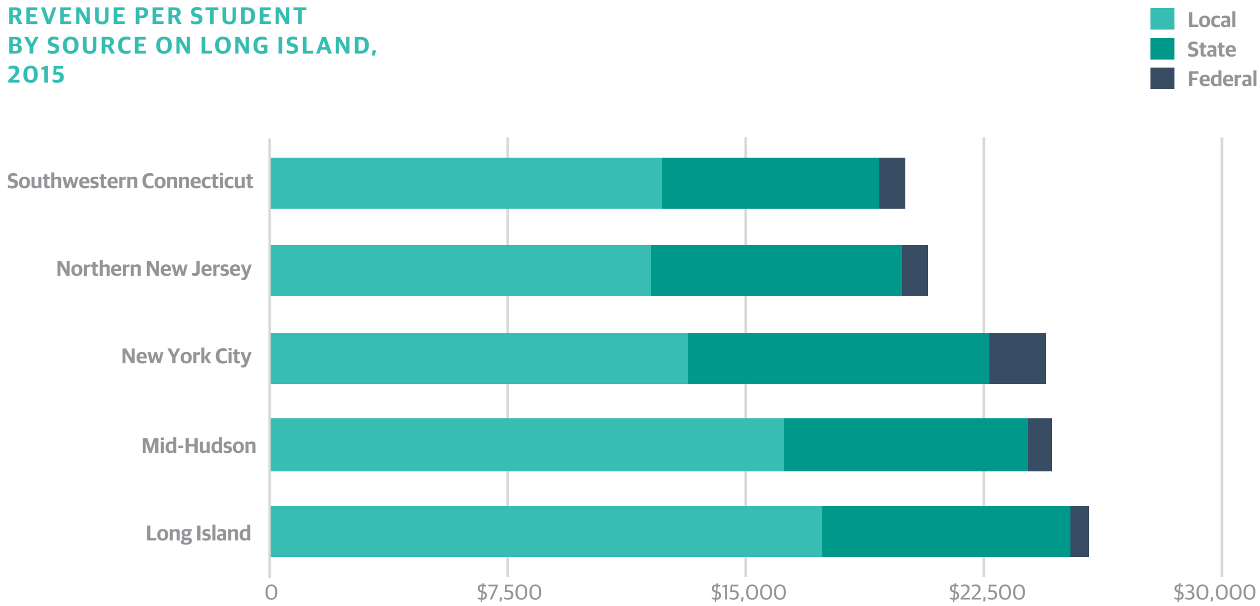
Dr. Scott is President Emeritus and University Professor Emeritus at Adelphi University.

Long Island spends more per student than other parts of the region, but with smaller and wealthier school districts spending more in local taxes than larger and poorer ones.

Long Island school districts spend an average of $25,829 per student from all sources of revenue, higher than any other part of the New York region. By comparison, schools in the Mid-Hudson region spend $24,632 and New York City spends $24,484. Schools in northern New Jersey and southwestern Connecticut pay considerably less. Two-thirds of Long Island school revenues come from local sources, primarily property taxes. The share is similar for Mid-Hudson schools, and substantially less in other parts of the region. Most of the remaining revenue comes from state sources. In New York State, state aid is determined by a formula established in 2007 to provide every student a sound basic education based on variations in local costs, the share of impoverished students and those with special needs, and the expected local contribution based on district property values.

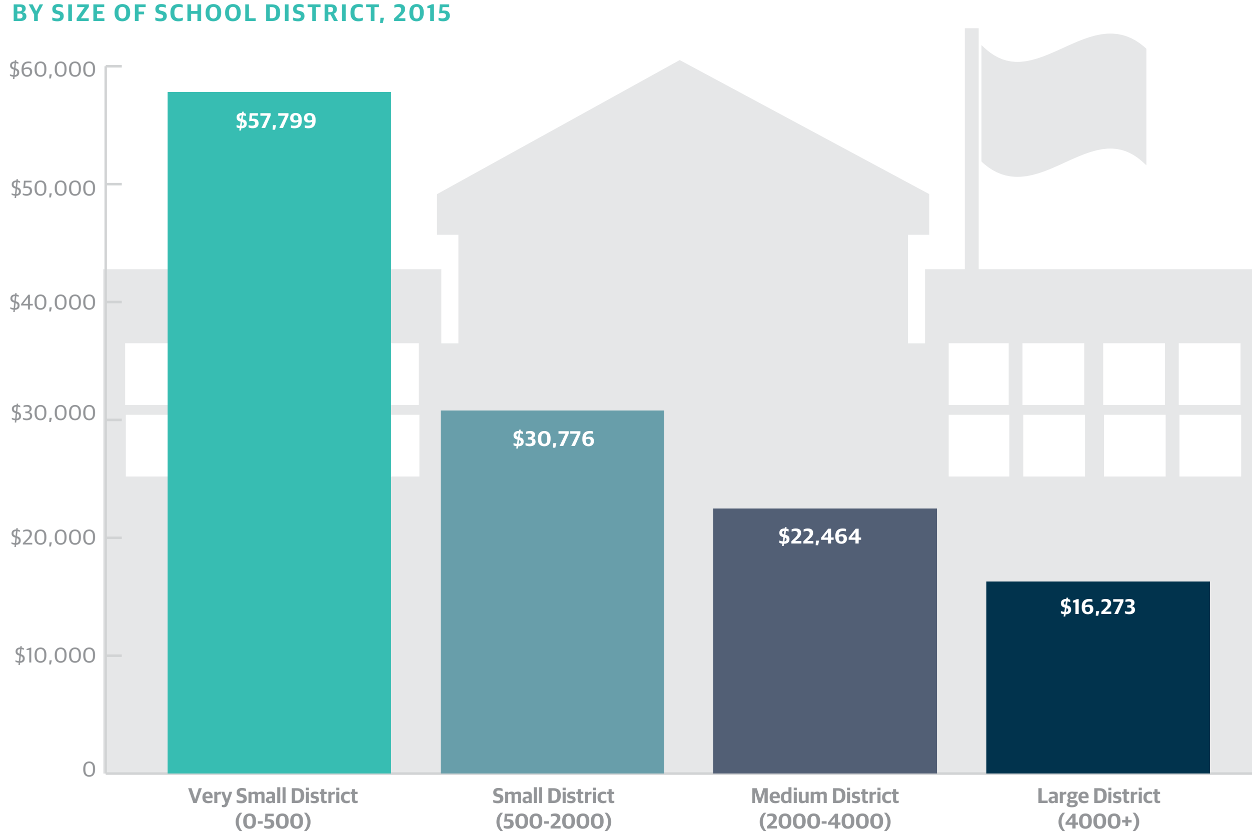
There is wide variation in the amount of local taxes depending on the size of the district. Smaller school districts, which tend to be more affluent and have lower shares of Black and Hispanic students, spend far more than larger districts. Small school districts, those with 500-2,000 students, raise an average of $30,776 per student, nearly twice the $16,273 raised by larger districts with over 4,000 students. Very small districts with less than 500 students raise $57,799. These districts enroll less than 1% of all Long Island students. By comparison, over 65% of Long Island students are enrolled in large districts. State and federal aid fills some, but not all, of the gap in revenue between these districts.

REVENUE PER STUDENT BY SOURCE ON LONG ISLAND, 2015



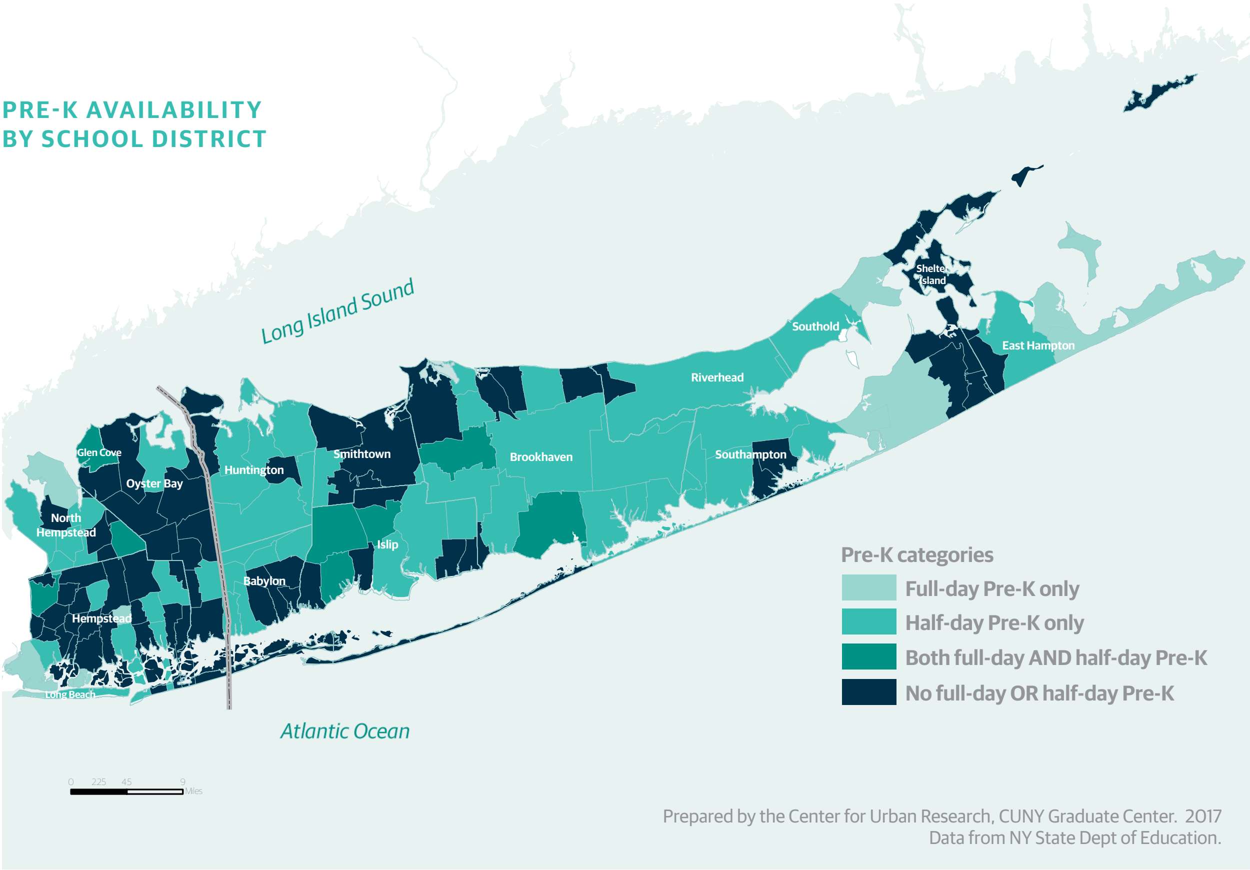
Source: Taxes for FY 15 Source: http://www.osc.state.ny.us/localgov/orptbook/index.htm; Enrollment for 2014-15 Source: http://www.p12.nysed.gov/irs/statistics/enroll-n-staff/ArchiveEnrollmentData.html

LOCAL TAXES LEVIED PER STUDENT ON LONG ISLAND BY SIZE OF SCHOOL DISTRICT, 2015



Source: Taxes for FY 15 Source: http://www.osc.state.ny.us/localgov/orptbook/index.htm; Enrollment for 2014-15 Source: http://www.p12.nysed.gov/irs/statistics/enroll-n-staff/ArchiveEnrollmentData.html

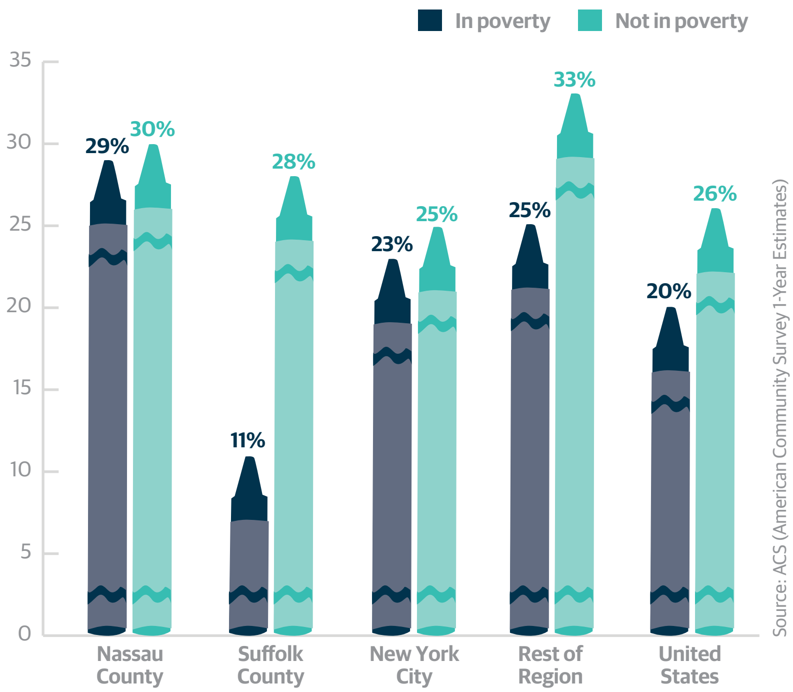
PRE-K AVAILABILITY BY SCHOOL DISTRICT



Except for poor children in Suffolk County, pre-school enrollments compare favorably with the United States.

High quality pre-school can be an important means for giving children the abilities to do well academically and economically later in life. While data on pre-school quality is unavailable, information on pre-school enrollment shows that more 0–4 year olds, both poor and non-poor, are enrolled in Nassau County than the United States or New York City. The 29% of poor children enrolled is particularly high. In Suffolk County, only 11% of children in poverty ages 0–4 are enrolled in pre-school, compared to 28% of children who do not live in poverty.

SHARE OF CHILDREN UNDER 5 ENROLLED IN PRE-SCHOOL OR NURSERY SCHOOL, 2016



LESSONS LEARNED BY LUCINDA HURLEY

The Need for a Regional Commitment to Pre-School Education

Long Island has been recognized for strong K–12 educational outcomes, but recently we've seen declines in college readiness as well as persistent and wide educational disparities among our 124 school districts. Fortunately, research indicates that investment in high-quality early childhood pre-school, including Pre-K, can close the achievement gap for low- and middle-income children.

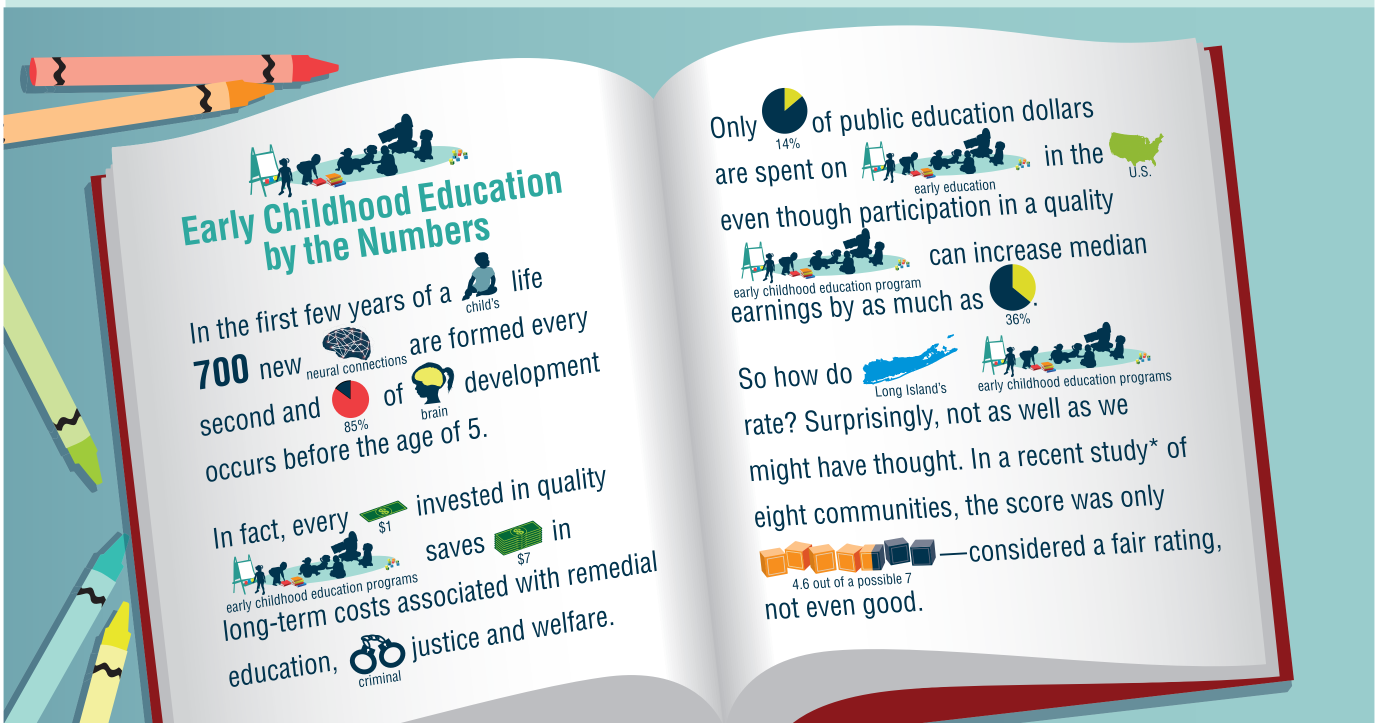
These experiences improve outcomes, including high school graduation rates, reduced costs for special education and English-language learners, and improved financial well-being for families and communities. Yet our region receives the lowest New York State funding for Pre-K, and in Suffolk County the rate of pre-school education is significantly lower than in Nassau County.

Structurally, Long Island faces challenges in expanding access to Pre-K. Over the past three summers, The Long Island Pre-K Initiative has convened regional thinkers and stakeholders to consider how best to address such issues as equity, curriculum, assessment, professional development, quality, and family engagement, among others.

Several regional approaches have been suggested, ranging from centralized coordination and administration to partnering across district boundaries to the creation of a regional technical assistance center. Each approach reflects two premises: first, to serve all four-year-olds on Long Island, districts and community-based organizations must work together to leverage resources and expertise; second, families should have multiple publicly funded options for their children, as is the case in New York City.

We need to take on these challenges. Long Island needs to work as a region to assure that all children and families have access to high-quality pre-school/Pre-K programs. Investing early can make all the difference to access, equity, and Long Island's future.

Ms. Hurley is Executive Director of Nassau BOCES Department of Strategic Initiatives.



*Young Children's Early Experiences: Examining Differences on Long Island Prepared by National Center for Children and Families, Teachers College, Columbia University

GOAL #10

Natural Resource Conservation

We promote the conservation and efficient use of the region's natural resources.

Long Island's success over time has stemmed in many ways from its abundance of critical natural resources, from its popular sandy beaches, biodiverse bays and significant wetland habitat to still-thriving agricultural lands. Its protected pine barrens and other forested land help to replenish and protect the Island's essential drinking water aquifers, ensuring the health and quality of life on Long Island.

Long Island has some of the highest rates of carbon emissions and water consumption in the region, and declining rates of open space protection.

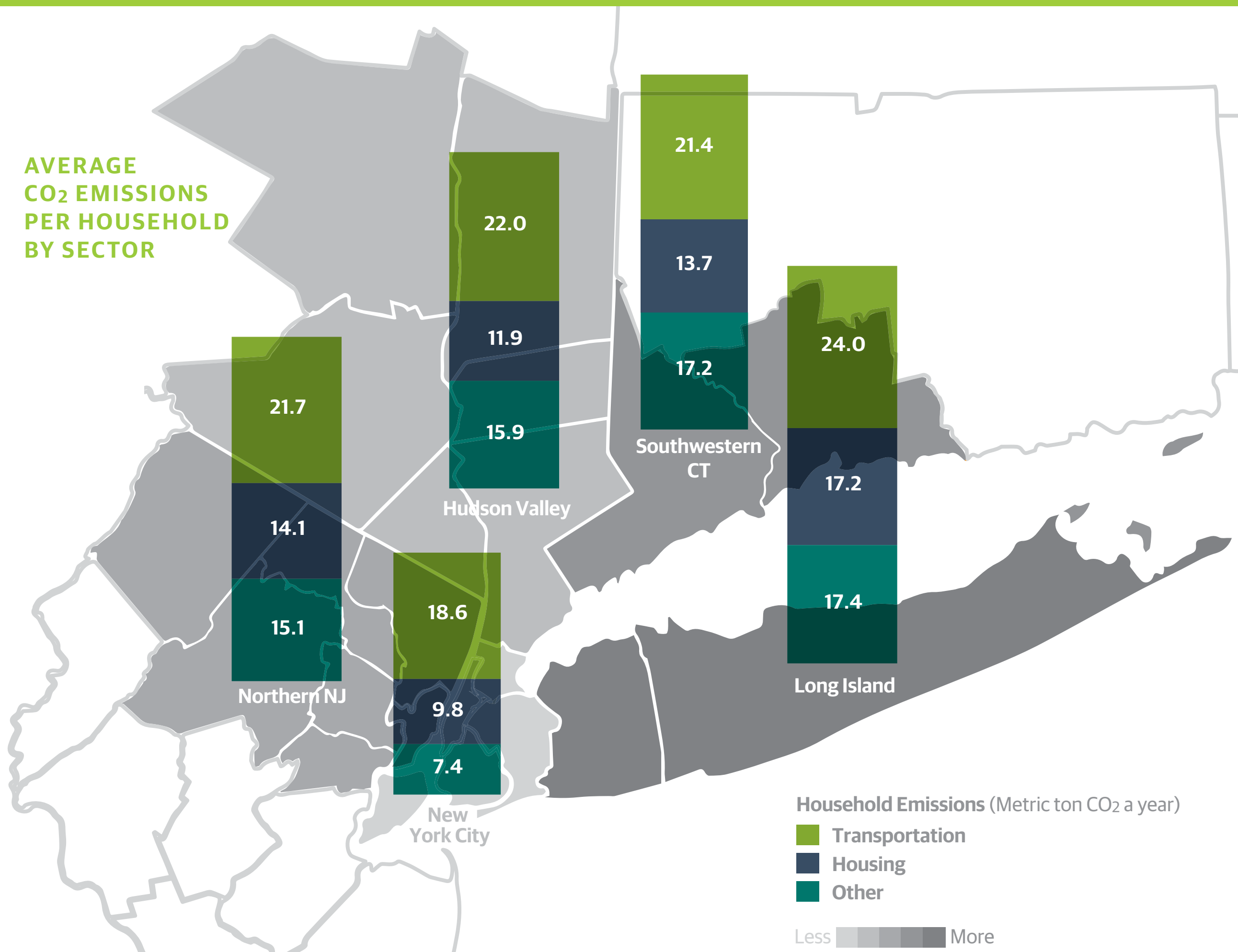
As the effects of climate change begin to intensify, these resources will become more important for reducing greenhouse gases and protecting against flooding and droughts. Over the next generation, both sea level rise and intermittent flooding from extreme storms will move farther inland, and droughts are likely to become more frequent. Conserving natural resources should attempt to maximize their benefits in adapting to climate change, and the energy use and sources should minimize the burning of fossil fuels, the major cause of climate change.

Where that energy comes from is important to slow the rate of climate change from greenhouse gases. Water consumption helps to determine the rate at which fresh water supplies are depleted and affects vulnerability to droughts, which are likely to increase as global temperatures continue to rise. Open space is important for protecting water quality, for recreation and for helping to cool the island.

Long Island has some of the highest rates of carbon emissions and water consumption in the region, and declining rates of open space protection. These are driven in part by large homes and high rates of auto use, and reduced funding for open space protection. Climate change will make resource preservation even more critical in the future. Vegetation and wetlands absorb heat and water, providing protection against the two biggest dangers from global warming.

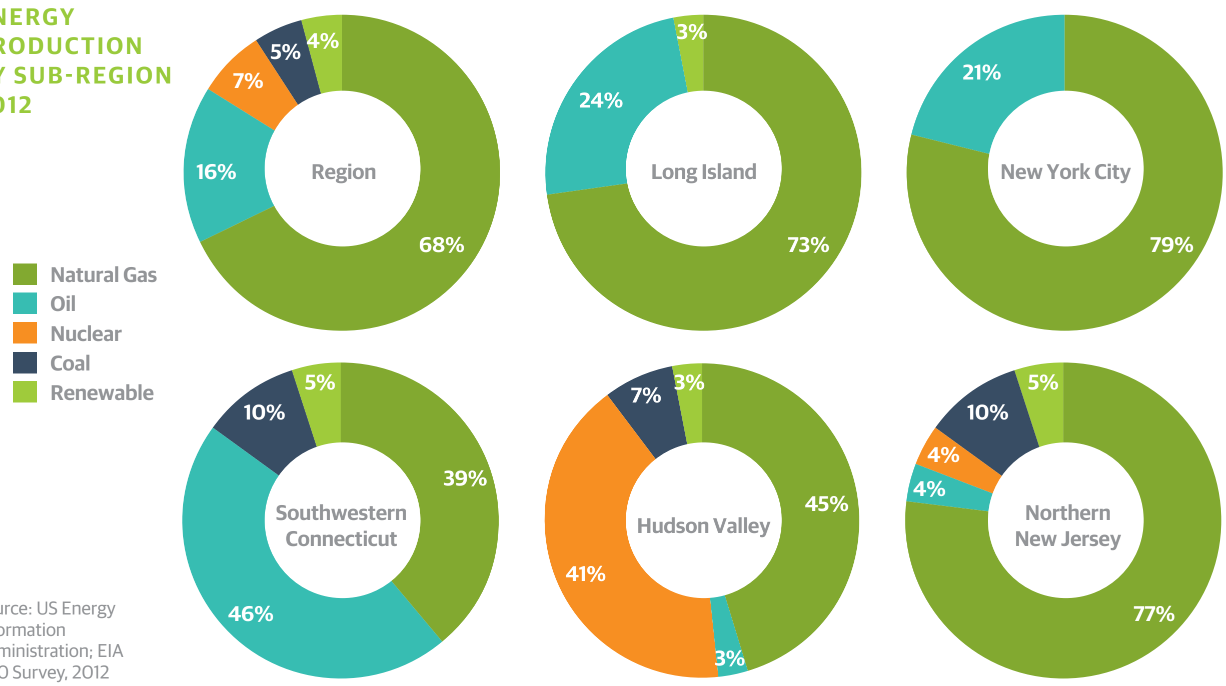
Long Island, like other parts of the region, also has a low use of renewable energy sources. Yet its terrain and position between Long Island Sound and the Atlantic Ocean also make it a likely location to expand use of both solar and wind energy.

AVERAGE CO_2 EMISSIONS PER HOUSEHOLD BY SECTOR



Source: CoolClimate Network, 2013 http://coolclimate.berkeley.edu/

ENERGY PRODUCTION BY SUB-REGION 2012



Source: US Energy Information Administration; EIA 860 Survey, 2012

Long Island has the highest level of carbon emissions per household in the New York region.

Carbon dioxide is the most prevalent greenhouse gas emitted by human activity and is largely responsible for global climate change. Slowing or minimizing the impacts of climate change will require steep reductions in the amount of greenhouse gases emitted. New York State has committed to reducing its overall greenhouse gas emissions 80% by 2050, the first 40% by 2030. If the state is to reach its goal, and reduce its share of the contribution to climate change, significant cuts in emissions from all sources statewide will be necessary. Long Island households emit 35 metric tons of carbon dioxide a year, compared to 25 for the New York region overall. Emissions from both housing and transportation are higher than in any other part of the region. With more prevalence of single family homes and higher use of automobile travel than the rest of the region, these high-emitting lifestyle choices make Long Island the greatest contributor of CO_2 emissions per household in the region.

Nearly three-fourths of energy produced on Long Island comes from natural gas, only 3% from renewables

Power generation remains a significant source of greenhouse gas emissions, despite improvements over the past decade largely driven by a shift to lower-emitting natural gas. On Long Island, energy produced is 73% reliant on natural gas, 24% dependent on oil sources, with only 3% coming from solar and other renewable sources.

All are somewhat higher than shares for the region as a whole, since some parts of the region rely on coal or nuclear energy for part of their power supply. Region-wide, 2% of energy comes from renewables. Natural gas has far fewer carbon emissions than oil and coal, but much higher shares of renewable energy would be needed to meet the state adopted target of an 80% reduction in carbon emissions by 2050. Innovations in battery storage and other energy technology are making renewable energy increasingly competitive. But no large-scale solar and offshore wind farms exist today either on Long Island or in the region. This could change substantially in the near future. In 2017, the Long Island Power Authority approved the nation's largest offshore wind farm: 15 turbines capable of powering 50,000 homes.

LESSONS LEARNED
BY NEAL LEWIS

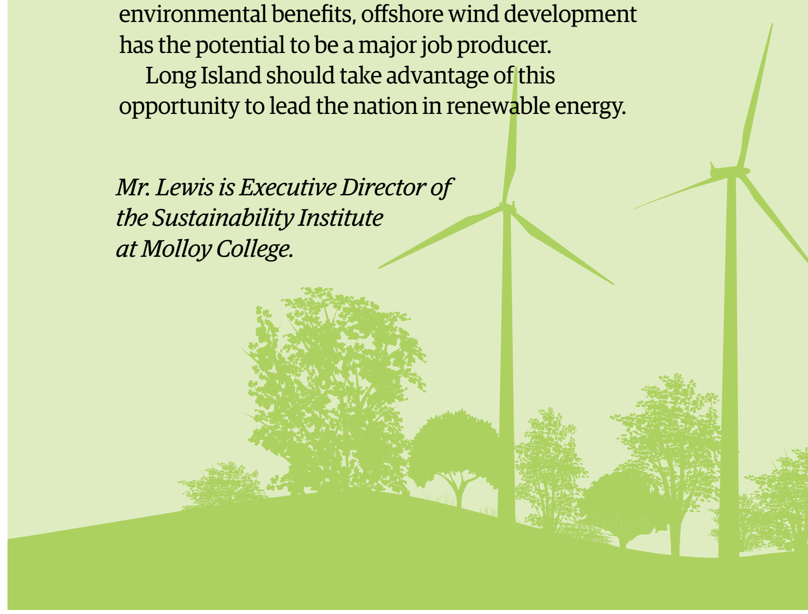
Long Island Should Lead the Nation in Renewable Energy

Superstorm Sandy underscored Long Island's vulnerability to global warming and sea level rise, and Long Island is now poised to be a national leader in renewable energy.

Long Island already leads New York State in solar energy generation and soon could lead the state and nation in offshore wind power as well. New York State is undertaking a master plan for the waters off Long Island's south shore with a goal of building 400 wind turbines providing 2,400 MW of electricity. And LIPA recently approved the first 15 turbines in what could be among the largest areas of offshore wind generation anywhere. In addition to environmental benefits, offshore wind development has the potential to be a major job producer.

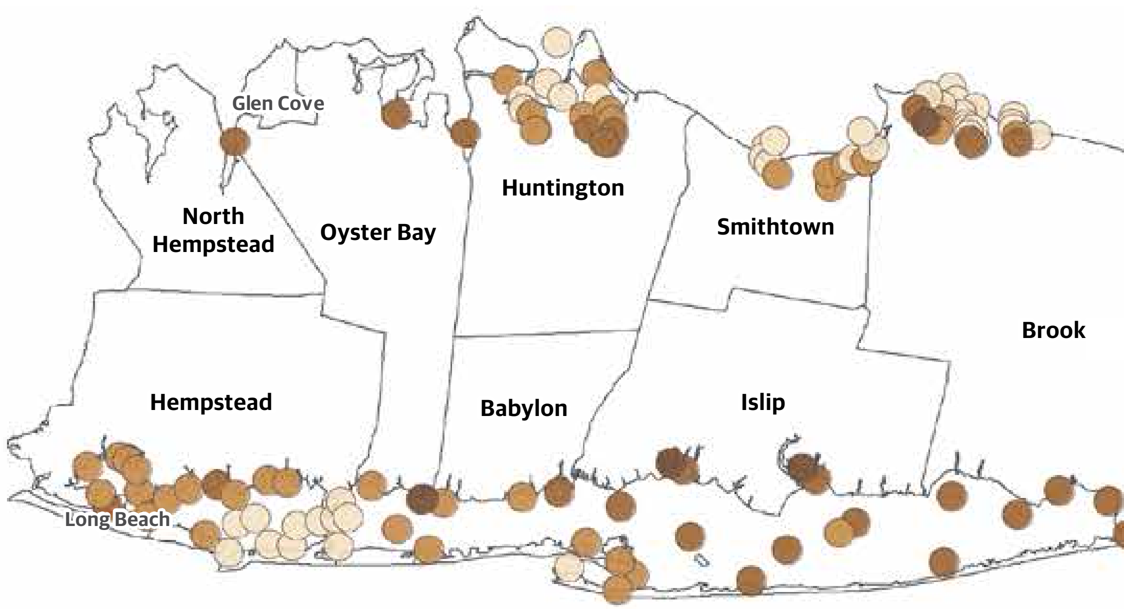
Long Island should take advantage of this opportunity to lead the nation in renewable energy.

Mr. Lewis is Executive Director of the Sustainability Institute at Molloy College.



WATER CLARITY

Mean Secchi depth
- 1 to 3 feet (murky)
- 3 to 5 feet
- 5 to 7 feet
- 7 to 14 feet (clear)

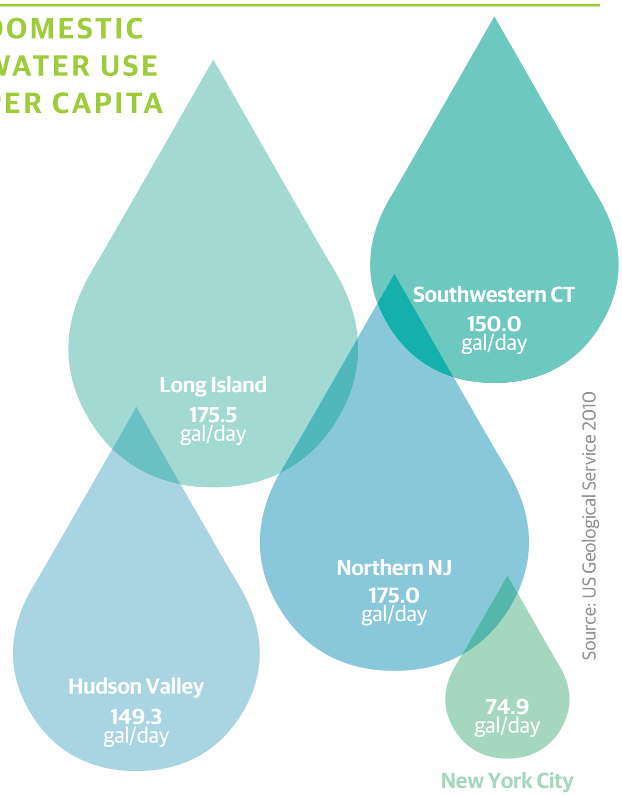


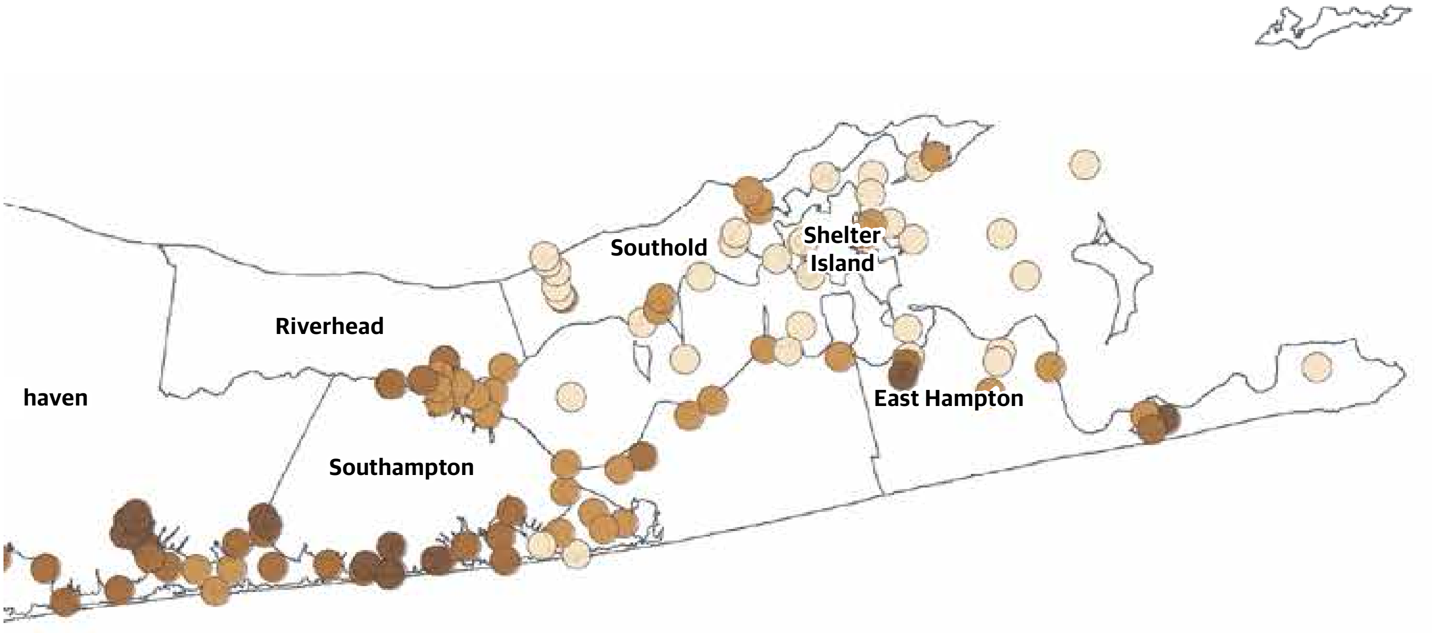
Prepared by the Center for Urban Research, CUNY Graduate Center. 2017 Data from Stony Brook University's School of Marine and Atmospheric Sciences.

> Long Island households consume more water than most parts of the New York region.

The homes, businesses and industries on Long Island could not exist without a steady and clean supply of drinking water. Unlike other areas in the region, such as New York City or northern New Jersey, Long Island is not connected to a larger network of water supply sources. Instead, Long Island is wholly dependent on the groundwater aquifers that ebb and flow in quantity based on the amount of water consumed and the amount of water that is able to replenish these sources. Given this critical dependence, management and protection of the supply is essential, particularly as climate change makes rainfall more unpredictable and droughts more likely. Yet, Long Island households consume more water than every other part of the region except northern New Jersey. With lawns, larger homes and more cars to wash, water consumption is higher in suburban areas. And given the concentration of development along Long Island's coastline, excessive groundwater pumping near the coastline has led to "saltwater intrusion" or the contamination of portions of groundwater with salt water, making it undrinkable.

DOMESTIC WATER USE PER CAPITA




Southold
Shelter Island
Riverhead
haven
East Hampton
Southampton

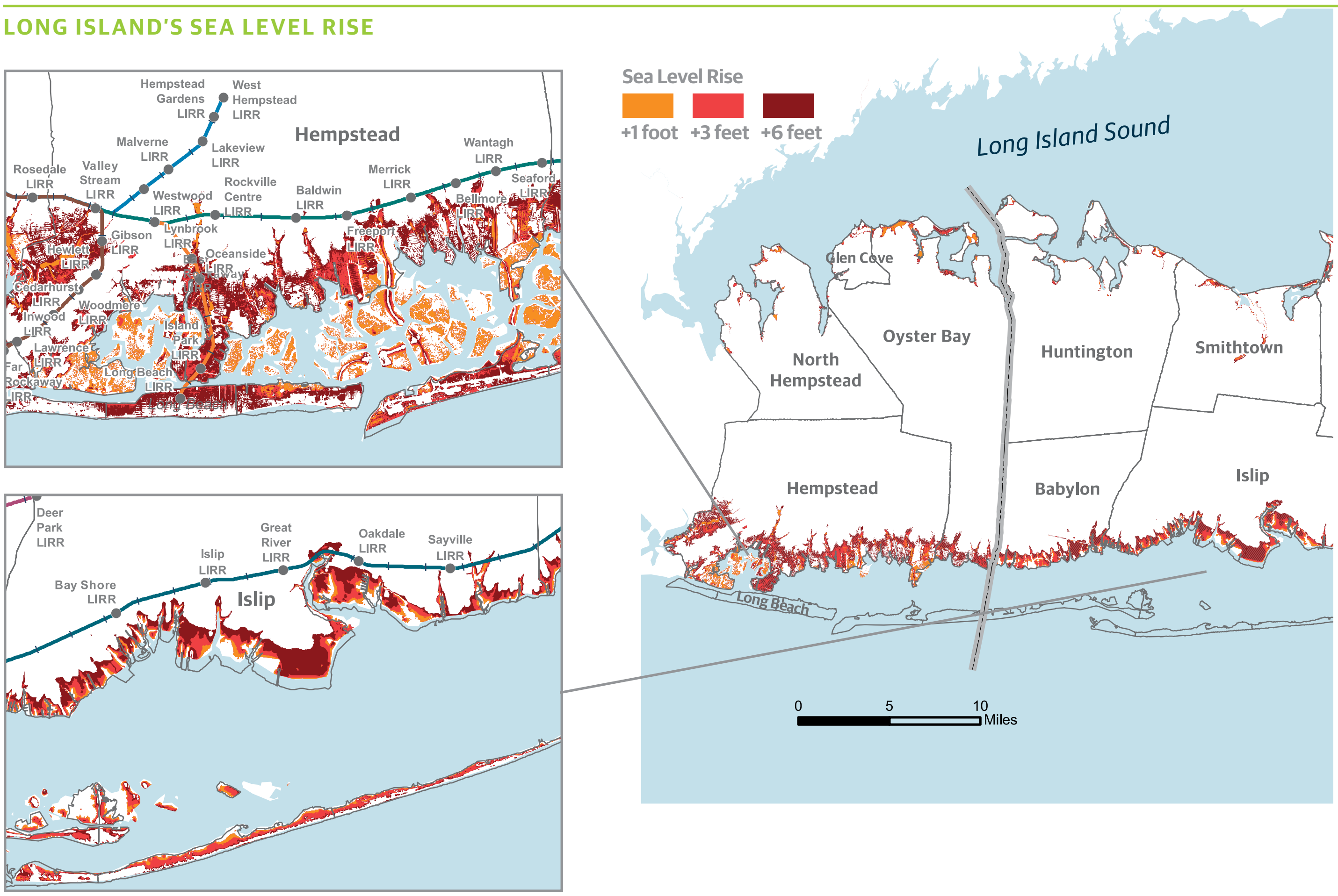

HELP
LONG ISLAND'S SOUND...

By 2050, 249,000 people could be at risk of flooding from a severe storm, up from 169,000 today.

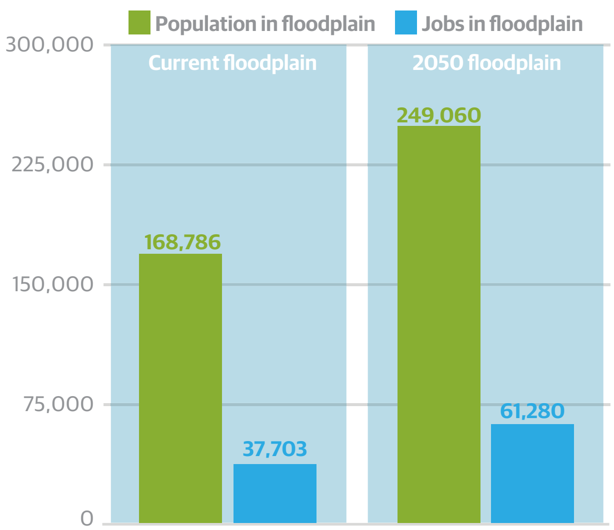
Extreme storms like Superstorm Sandy and the surge in flooding that occurs with each one are likely to become more frequent. By 2050, sea level rise will expand the floodplain of these storms and affect the places where 249,000 people live today, around 80,000 more people than are affected by storms today. The places where 61,000 jobs are today would also be subject to storm-related flooding in 2050. And unlike the temporary flooding that occurs during storms and recedes once the storm has passed, the eventual flooding from sea level rise alone will be permanent, inundating everyday places where we currently live and work. While the exact pace and timing of sea level rise is uncertain, it is already occurring and is intensifying. Based on methodology adopted by New York State, Long Island could see a one foot rise in sea levels as early as the 2030s, permanently flooding homes that currently house 10,000 people. With three additional feet of sea level rise, a possibility later this century, the homes of 50,000 people could be under water.

Charts, opposite page
Source: Data compiled by the RPA and released in their report, "Under Water." Sources include US Decennial Census 2010, LEHD 2011, USGS Digital Elevation Model (1/9th Arcsecond resolution) NOAA Coastal Services Center, FEMA National Flood Hazard Layer, The Nature Conservancy

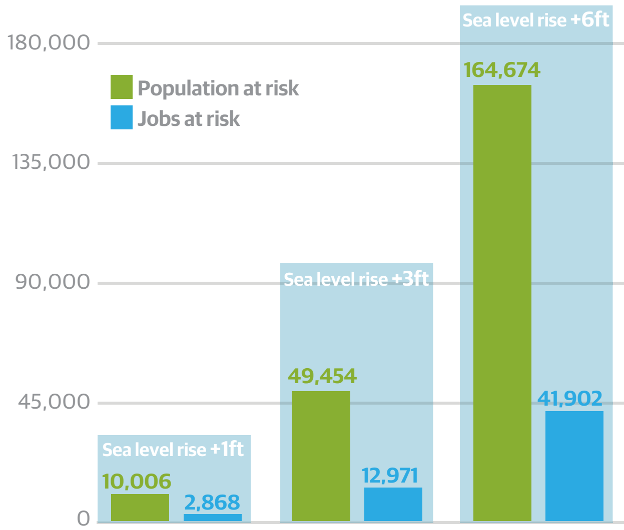
LONG ISLAND'S SEA LEVEL RISE

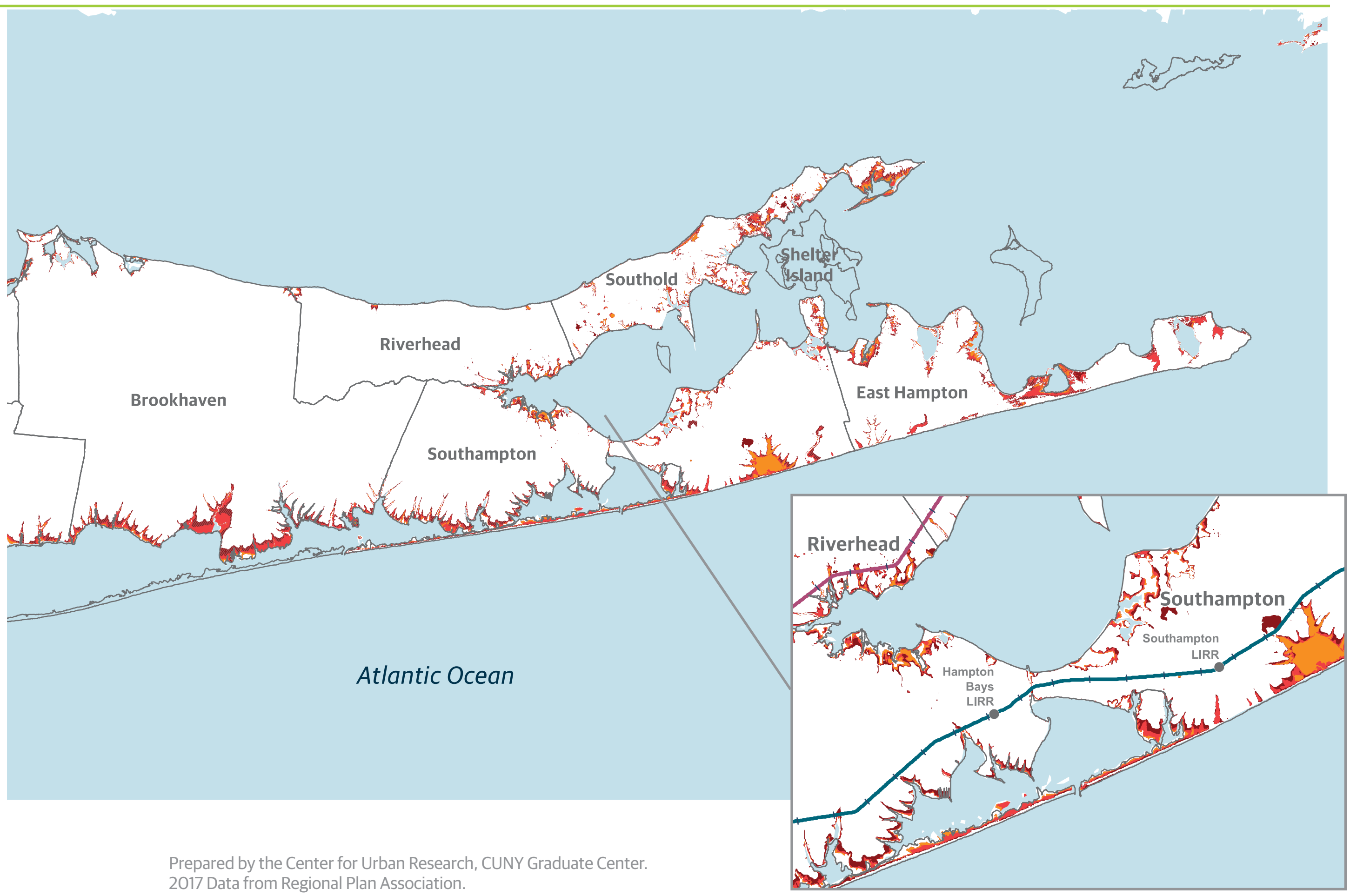


POPULATION AND JOBS IN THE 2050 FLOOD PLAIN ON LONG ISLAND



POPULATION AND JOBS AT RISK FROM SEA LEVEL RISE ON LONG ISLAND





Prepared by the Center for Urban Research, CUNY Graduate Center.
2017 Data from Regional Plan Association.

LESSONS LEARNED
BY PATRICK HALPIN

Conserving Long Island's Natural Resources

Long Island's natural resources still define the region, but will that be true in the future?

Most of Nassau County and the five western towns of Suffolk County had been suburbanized, industrialized, filled in and paved over, before Long Islanders came to realize that the environment is the economy. Beginning in the 1970s, an environmental awakening occurred: landfills were capped to protect aquifers; sewers built in Nassau, and sales tax increases approved in Suffolk to preserve the remaining Pine Barrens and parklands.

The challenge now is to overcome the mistakes of suburban sprawl. Will the smart-growth redevelopments of Patchogue, Westbury, Rockville Centre, Babylon and Ronkonkoma be one-offs or models for the region? Will Hempstead, Hicksville, Heartland, and Syosset's Cerro Wire be redeveloped into beautiful sustainable communities with jobs, parks, public transit and housing all in walking distance? Will Suffolk expand such needed infrastructure as sewers and high-tech septic systems and protect our water resources? The nature of Long Island is in our hands.

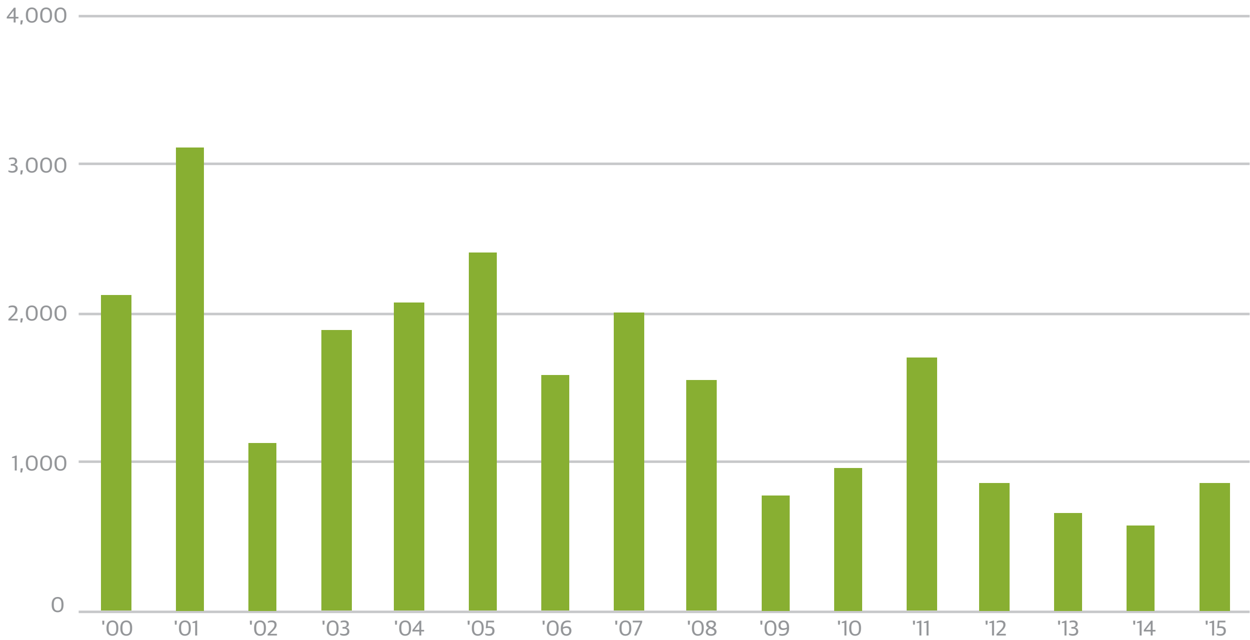
Mr. Halpin is former Suffolk County Executive.

The amount of open space that we are preserving each year is declining.

Open spaces are the places where we recreate, grow food and connect with nature. They are also the places that absorb floodwaters and stormwater, replenishing the aquifers that supply our water. Open space also serves to store carbon, clean air and cool our communities. There are 65,000 acres of protected open space on Long Island, 7.5% of Long Island's total land. However, the number of acres being preserved each year has declined sharply from an average of 2,122 acres each year in 2000-2002 to 703 in 2013-2015. There are 2,373 acres of high-quality, high-benefit unprotected open space in those two counties, land that if protected would bring the greatest environmental and climate change benefits.*

* Based on criteria developed by Regional Plan Association based on importance for climate mitigation, flood resilience, species protection, local food production and community health. See http://fourthplan.org/action/open-space.

ACRES OF LAND PRESERVED
2000 - 2015



Source: NYS Department of Environmental Conservation, Nassau County, Nature Conservancy, Suffolk County Planning Department, Town of Brookhaven, Town of East Hampton, Town of Huntington, Town of Riverhead, Town of Shelter Island, Town of Southampton, Town of Southold.

LESSONS LEARNED
BY JIM LARGE

Collaborate to Protect Long Island's Environment

The quality of the environment impacts all aspects of our lives, and virtually everything we do has potential to damage its fragility. The threats on Long Island are serious and growing. Fortunately, there is a way forward. It requires an "all hands" effort from all who can enable corrective action.

That means that the silos must come down, and leaders at all levels of government, business, labor, and civic organizations must come together in coalitions around common priorities. But there is more: Leaders are typically driven by the will of their constituencies, so educating those constituencies and convincing them of the need to speak out is necessary as well.

Recently, against all odds, we employed this approach with great skill to advance with Governor Cuomo the LIRR Third Track initiative—an environmental priority. It produced a broad-based commitment that succeeded. We would do well to reflect on that success and activate that approach further, as we face the environmental challenges that lie ahead.

Mr. Large is former President and CEO of the Dime Savings Corporation.

GOAL #11

Managing for Results

Long Island's counties, towns, villages, and other jurisdictions manage their costs and provide quality local and regional services.

Local governments—counties, towns, villages, school districts, fire districts and other special districts—are the level of government closest to their constituents and provide a wide range of services, from education to public safety. Program allocations and assistance from the state and federal governments provide a large share of local revenue, but the majority of funding is raised locally, primarily from taxes on residential, commercial and industrial property. How much revenue these governments raise and how much they spend is determined in part by how well the local economy is doing, but mostly by decisions of elected officials and voter approval of school budgets.

Government spending and property taxes are no longer increasing as rapidly as they had when property values were rising rapidly, but it's not clear if this has resulted in more efficient service delivery.

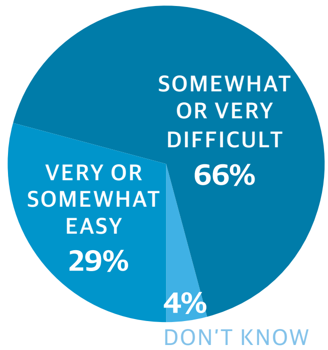
Long Island property taxes are unquestionably high compared to the United States, as is New York State as a whole. Compared to other parts of New York State, taxes are slightly higher or somewhat less, depending on how they are measured. Because they are affluent counties, Nassau's and Suffolk's property taxes look worse when measured on a per person basis rather than as a share of property value. Less clear is whether services are similarly of higher quality, and if these services are delivered efficiently.

Government spending and property taxes are no longer increasing as rapidly as they had when property values were rising rapidly, but it's not clear if this has resulted in more efficient service delivery. Both the 2007-2009 national recession and a statewide property tax cap enacted in 2011 have checked the increases in both revenues and expenditures. Some services, such as county-provided bus service, have clearly declined, but it is difficult to assess how the overall quality of services has changed.

Bond ratings are a primary measure of how well budgets and the fiscal underpinnings of the jurisdictions are managed. These are important because they affect how much it costs jurisdictions to borrow money. Both Nassau and Suffolk Counties have "A" bond ratings from Moody's Investment Services (Nassau has an A2 and Suffolk an A3 rating) considered "upper medium grade with low credit risk." Towns and village ratings vary, with only a few in the highest AAA tier.

The large number of local governments on Long Island has often been cited as a source of high property taxes, and it does appear to result in duplicative services and less economy of scale. Long Island has a similar number of governments compared to other parts of the New York region, but much of the country outside of the Northeast has different government models with far fewer units of government. And a 2007 Long Island Index comparison with northern Virginia found the wide difference in the number of governments to be a factor in differences in property taxes. For example, Long Island had nearly eight times the number of fire districts, leading to a number of duplicative equipment costs.

If you had an issue that required the assistance of an elected **COUNTY** official, how easy or difficult do you think it would be for you to get the elected official or a member of their staff to consider your situation?



Numbers may not add to 100% due to rounding.
Source: 2017 Long Island Index survey

Local government expenditures have leveled off after several years of rapid growth

Both revenues and expenditures from all local governments on Long Island—counties, towns, villages, cities, school and fire districts—grew rapidly from 2000-2008 but have since leveled off. Government expenditures per person grew from $6,595 in 2000 to $8,164 in 2008, a 24% increase in just eight years. However, they declined from 2008 to 2011, and increased only slightly from 2011 to 2015. All in all, expenditures have decreased by 1.2% since 2008. At the same time, total revenues increased by 23% between 2000 and 2015. While 18% of this increase took place between 2000 and 2008, an additional 4.4% took place between 2008 and 2015. Taken together, in 2015 Long Island local governments raised $7,740 in revenues per capita and spent $8,066 per capita.

Both economic and policy changes are likely behind the inflection point in 2008. Rapid increases in property values drove an increase in revenues and allowed expenditures to rise. Both state and local revenues took a large hit from the economic downturn, even though federal stimulus helped limit the decline. And in 2011, New York State limited property tax increases from all local governments and school districts to 2% per year.

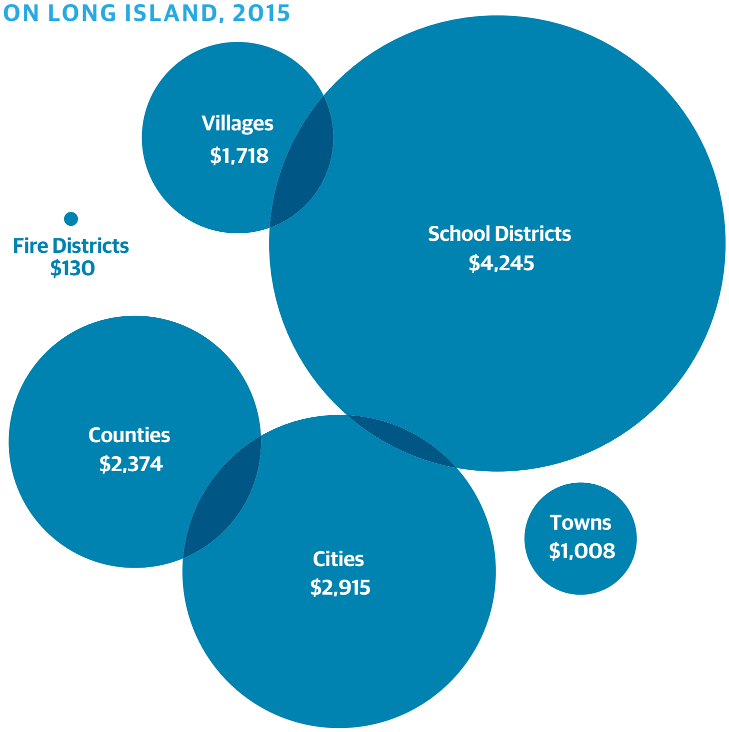
Local governments are now slightly more dependent on property taxes—they were 52% of all revenues in 2015 compared to 48% of revenues in 2000. Property values also increased overall, but fluctuated with the economy and real estate market. After full property values for the purposes of tax collection more than doubled in real terms between 2000 and 2008, they then decreased by 26% between 2008 and 2015.

School districts had the highest expenses in 2015—$4,245 per capita. This pattern of expenses matches that of New York State overall, excluding New York City. However, in absolute terms, Long Island expenditures were consistently higher than those of New York at large, with towns and school districts overspending in comparison with New York by 17% and 20% respectively.

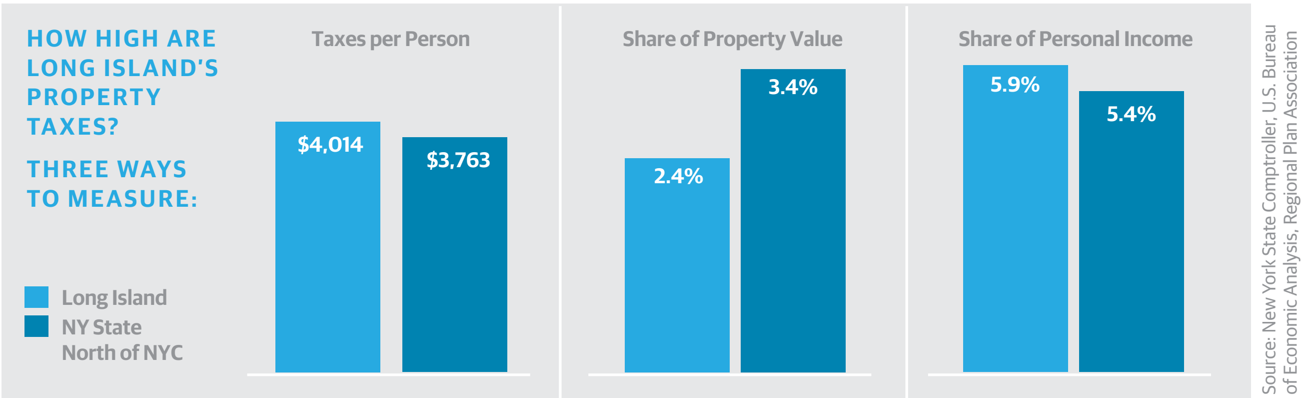
PER CAPITA GOVERNMENT EXPENDITURES FOR ALL LOCAL GOVERNMENTS

Source: Office of the New York State Comptroller; http://www.osc.state.ny.us/localgov/datanstat/findata/index_choice.htm

GOVERNMENT EXPENDITURES PER CAPITA ON LONG ISLAND, 2015



Source: Office of the New York State Comptroller; http://www.osc.state.ny.us/localgov/datanstat/findata/index_choice.htm



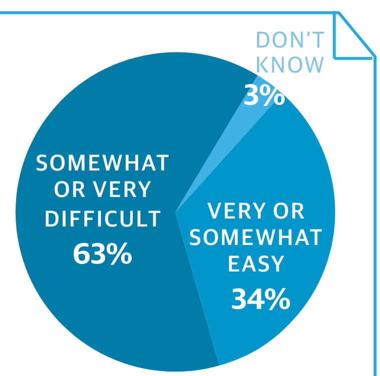
Long Island's property taxes are higher than in other parts of New York State when measured as taxes per person or as a share of income, but less when measured as a share of property values.

Homeowners in Nassau and Suffolk pay higher property taxes than most parts of the United States, as do most homeowners in New York State, New Jersey and Connecticut. Whether Long Island taxes are higher than other parts of New York State or the metropolitan region depends on how they are measured. In 2015, property taxes from all levels of government amounted to $4,014 for every person living in the two counties. That's 7% higher than the $3,763 per person paid in New York State outside of Long Island and New York City. (New York City is excluded because it uses a combination of local income, sales and property taxes to pay for schools and other services that most localities pay for exclusively with property taxes.) But because property values are much higher than in other parts of the state, Nassau and Suffolk residents actually pay a smaller share of property values, 2.4%, than in the rest of New York State, which averages 3.4%. Using a third measure—taxes as a share of income—Long Island's taxes are slightly higher at 5.9% than the 5.4% of income in other parts of the state.

No one method is necessarily better than the other. Taxes per person is the method most commonly used to compare regions, but doesn't account for differences in wealth or ability to pay. Measuring as a share of property values takes into account whether homeowners' taxes are relatively high or low compared to how much their homes are worth. But while this is a good way to assess how wealthier and poorer regions compare in terms of how much their properties are taxed, it doesn't necessarily indicate whether taxes are comparable in terms of ability to pay. Residents living in homes that have appreciated in value faster than their incomes or home payments can be "house rich but income poor." Taxes as a share of personal income is a better measure of ability to pay, but even this does not take account of differences between low, moderate and high income households.

Looking at the three measures together, Long Island's property taxes do not look that far out of line with the rest of the state. By comparison, when the Long Island Index did a similar comparison in 2005, Long Island's taxes were much higher than the rest of the state on a per person basis (65% higher in 2005 compared to 7% in 2015) and were also less favorable by the other two measures.

If you had an issue that required the assistance of an elected official in your **TOWN**, how easy or difficult do you think it would be for you to get the elected official or a member of their staff to consider your situation?



Numbers may not add to 100% due to rounding.
Source: 2017 Long Island Index survey

LESSONS LEARNED
BY DAVID KAPELL

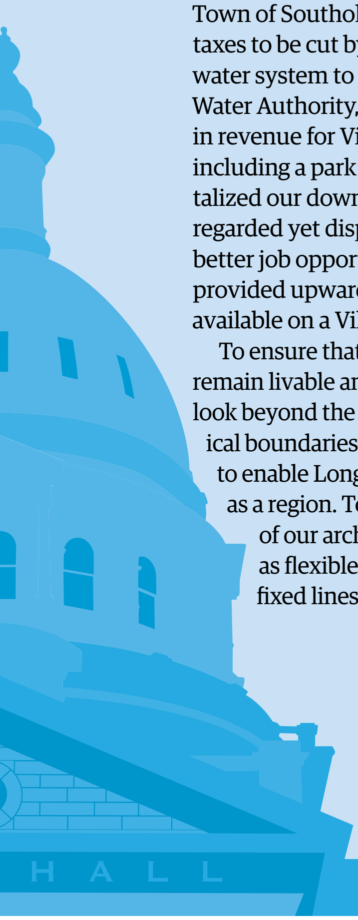
Managing for Results

There is enormous inefficiency in how municipalities on Long Island are structured, both in terms of duplication of services and a reluctance to cut payroll because of its impact on adversely affected employees. But in my experience as Mayor of Greenport, inefficiencies can be eliminated, savings and much-needed improvements can be achieved, while new opportunities emerge for adversely affected employees.

While I was Mayor, the Village of Greenport abolished our police department—with services absorbed by the Town of Southold, allowing Village taxes to be cut by 70%. We sold our water system to the Suffolk County Water Authority, resulting in $3.5 million in revenue for Village improvements, including a park that has totally revitalized our downtown. And the highly regarded yet displaced employees found better job opportunities in settings that provided upward mobility that was not available on a Village scale.

To ensure that Long Island communities remain livable and vibrant, they need to look beyond the limitations of fixed political boundaries and work collaboratively to enable Long Island to be competitive as a region. Together, we need to think of our archaic municipal boundaries as flexible lines drawn in sand, not fixed lines etched in stone.

Mr. Kapell is former Mayor of Greenport, Long Island and Executive Director of Right Track for Long Island Coalition.



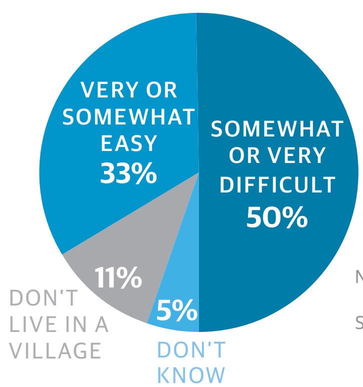
Long Island's 665 units of local government are far more than in other parts of the United States.

An inventory by the Long Island Index found 665 units of government across the two counties that includes 124 school districts, 200 fire districts and 331 districts for functions including sewers, water, sanitation police and libraries. Some are a part of general purpose governments (counties, towns, cities and villages) but most are separate entities.

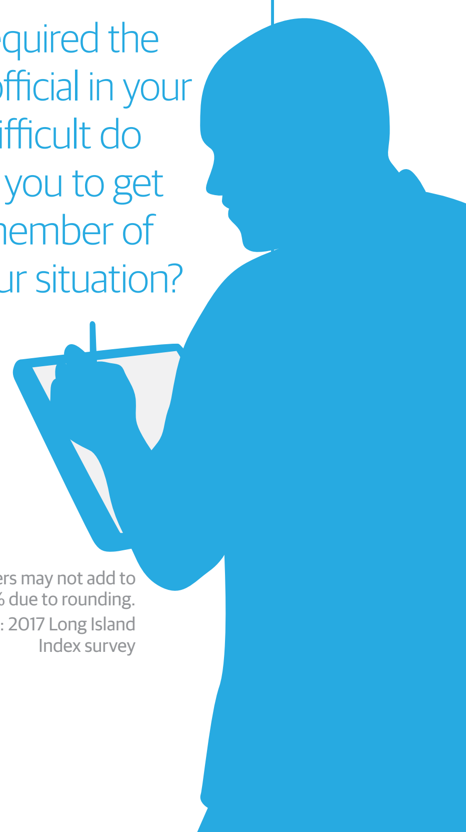
This complex governance structure may be part of the reason that property taxes are higher than in other parts of the United States. A 2007 Long Island Index study comparing Nassau and Suffolk with a comparable two-county suburban area in northern Virginia found that Long Island spends more per capita than the counties of Fairfax and Loudoun and has far more government entities that provide similar services and levy property taxes.. For example, the study counted 179 fire districts on Long Island at the time, compared to only 21 in northern Virginia (2 county, 2 city and 17 volunteer). These different models produced highly divergent resource allocations for areas of similar size. Northern Virginia had much higher personnel costs because they relied primarily on professional fire fighters while Long Island's were mostly volunteer. However, the difference was more than made up by Long Island's higher equipment and other non-personnel costs. For example, Long Island had more than six times as many fire stations (381 vs. 58) and more than seven times the number of fire engines (693 vs. 90). One implication cited in the study was that Long Island's model could become increasingly costly and inefficient if it is unable to maintain the same number of volunteer workers.*

* Long Island Index, *A Tale of Two Suburbs: A Comparative Analysis of the Cost of Local Governments on Long Island and in Northern Virginia*, Long Island Index, 2007

If you had an issue that required the assistance of an elected official in your VILLAGE, how easy or difficult do you think it would be for you to get the elected official or a member of their staff to consider your situation?



Numbers may not add to 100% due to rounding.
Source: 2017 Long Island Index survey



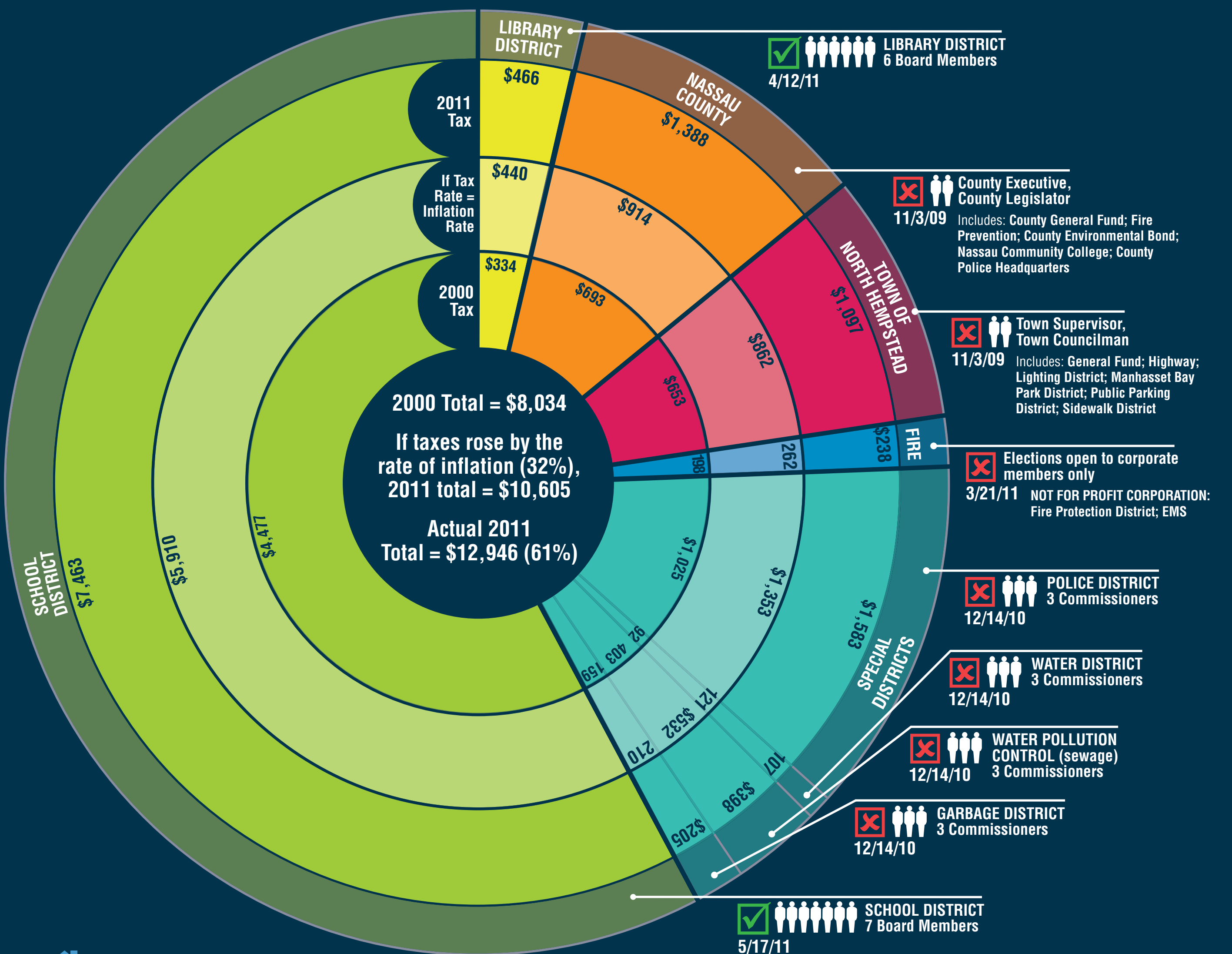
Who determines my property taxes?

Long Islanders have some of the highest property taxes in the country and they are increasing at a much faster rate than inflation. Our taxes are determined by county, town and multiple local districts. And every neighborhood is different depending on the districts in their community. Here is a break-down for just one homeowner living in an unincorporated area of North Hempstead. Breakdowns for other communities are likely to differ.

Elected officials who vote on the budget

0/0/00 Date of last elections

Public has/has no direct vote on budget



Try this at home.

Learn more by checking your annual tax statements sent by your town's Receiver of Taxes. If you live in Nassau, you can go to www.mynassauproperty.com for details on each tax levy.

GOAL #12

Civic Engagement

All residents and business people are actively engaged in local civic life.

There are multiple ways that residents can participate in the civic life of their community. Voting in local elections is the most direct means of influencing decisions that affect conditions in a town or village. Other forms of participating include attending school board or parent-teacher association meetings, attending public hearings or town meetings, participating in a neighborhood civic association, or contacting an elected or public official with a concern or request. Robust participation in civic life can help ensure that tax dollars are spent in the best interests of community residents and businesses. It can also provide a stronger sense of community and provide volunteer services that can improve quality of life, particularly for vulnerable residents.

Surveys conducted by the U.S. Census Bureau provide self-reported participation in various types of civic engagement. These show that a small share of citizens participate in civic life, but generally no less than in other parts of the New York region. Part of the reason is that voting is restricted to citizens, and many citizens are not registered to vote.

> Few Long Island residents have confidence that public officials will address their concerns if they tried to bring them to their attention.

Surveys by the Long Island Index identify a likely cause. Few Long Island residents have confidence that public officials will address their concerns if they tried to bring them to their attention. This lack of trust, whether based on experience or perception, likely affects other forms of civic engagement as well.

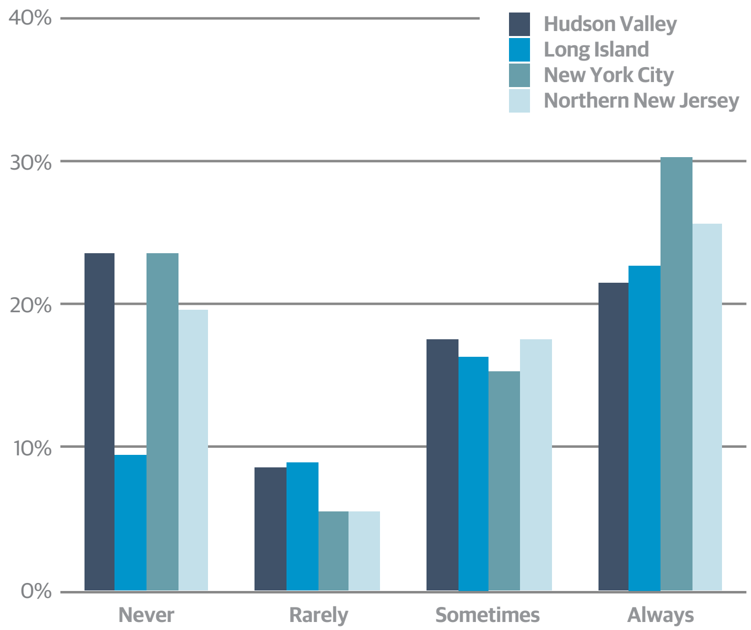
Technology may offer ways to increase resident participation in civic life. Digital communication makes it easier for governments to improve both services and communication with constituents, and for residents to contact public officials and government employees. However, unless efforts are also made to improve internet access for low-income residents, technology can reinforce the disproportionate exclusion of these residents for local decision-making.

Few people vote in local elections.

Only 23% of Nassau and Suffolk residents report always voting in local elections. The school election of November 2017 is another example of relatively low civic engagement. Overall, only 8% of people voted in the election. Smaller school districts saw slightly higher participation rates—12% voted in school districts with fewer than 10,000 adults, while larger school districts saw lower participation rates—with only 7% of people voting in school districts with over 30,000 adults.

Participation in local elections is low everywhere in the New York region, but reported rates are higher in more urban areas such as New York City and northern New Jersey. Participation in the suburbs north of New York City is similar to that on Long Island. While Long Island had the fewest number of people who reported that they never vote in a local election, they had the highest number that gave no response.

FREQUENCY VOTING IN LOCAL ELECTIONS, CPS, 2013



Source: Current Population Survey, 2013

LESSONS LEARNED
BY RICHARD AMPER

What Civic Engagement Can Accomplish

The health and functionality of a place can only be assured by thoughtful and effective civic engagement. It took too long for Long Island to develop this capacity, resulting in poor planning, over-development and uncoordinated policy-making.

But we've made great progress in the last quarter century. We protected more than 100,000 acres of Pine Barrens, thanks to the coordinated effort of some 125 environmental and civic groups and a population that identified the need for land and water protection and put up the billion dollars it cost.

Recently, the Long Island Clean Water Partnership comprised of four leading environmental groups has used their diversified skills to attract the professional and governmental resources needed to restore water quality Island-wide.

And most recently, Long Island overcame its reputation for NIMBY to achieve commitment to a "Third Track" to dramatically improve Long Island's transit system. Continued thoughtful, focused civic engagement can and is improving Long Island.

Mr. Amper is Executive Director of the Long Island Pine Barrens Society.

LESSONS LEARNED
BY PAUL TONNA

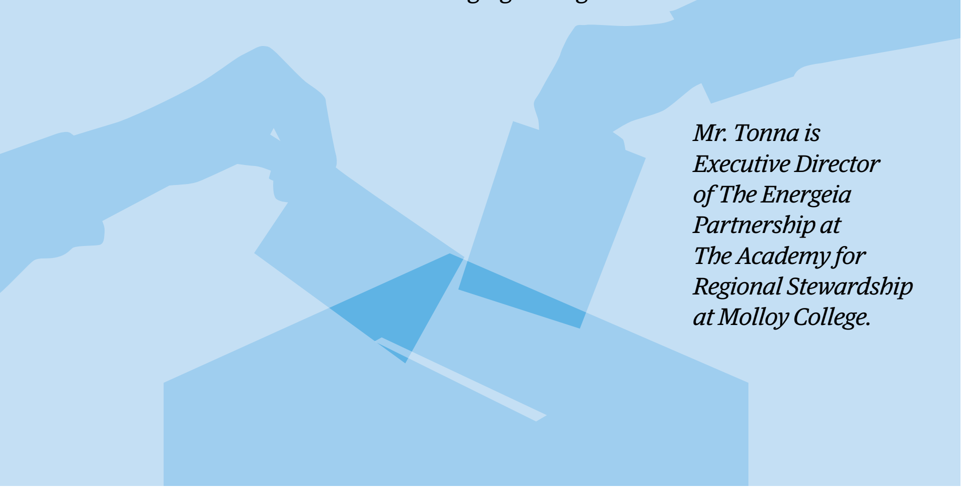
Long Island Needs More Civic Engagement

In the 1830s, Alexis de Tocqueville remarked that America's dedication to civic engagement impressed him as the essential element in making our democracy work. But what has happened to Long Island? As the Long Island Index shows, most Long Islanders are disengaged from local government.

Primary among the causes is that Long Island is fractured—with a total of 665 government entities, making it difficult to know the who, when and where of voting. The result is an egregious lack of accountability and transparency, perpetuated segregation, and increased corruption.

What can we do? First, Long Island needs unified voting for special district elections. New York State needs to pass legislation in Albany on a unified voting initiative, so all special district elections are on the same day and at the usual November polling places, thereby making it easier for residents to vote. Second, Long Island needs vigorous election day notifications. Special districts should be required to rigorously notify all residents about local district elections. Third, Long Island needs to grow a culture of leadership committed to the virtues of wisdom, to discern long-term necessities vs. short-term appeasement; justice, to include the voiceless, vulnerable and disenfranchised; courage, to battle those consumed with self-interest, shortsightedness and parochial views in the face of long odds, furious opposition and bigotry; and moderation, to temper our passions and seek compromise when necessary.

We need these roadblocks to civic engagement removed, so that Long Islanders can address the serious, complex and multi-dimensional issues challenging the region.



Mr. Tonna is Executive Director of The Energeia Partnership at The Academy for Regional Stewardship at Molloy College.

Other types of civic participation also engage a small share of Long Island residents, and surveys indicate that residents have little confidence that public officials will address their concerns.

Only six percent of Long Island residents reported contacting a public official in 2013, and only 15% reported that they participated in a school, neighborhood or community association. Both shares are comparable to New York City, the Hudson Valley and northern New Jersey.

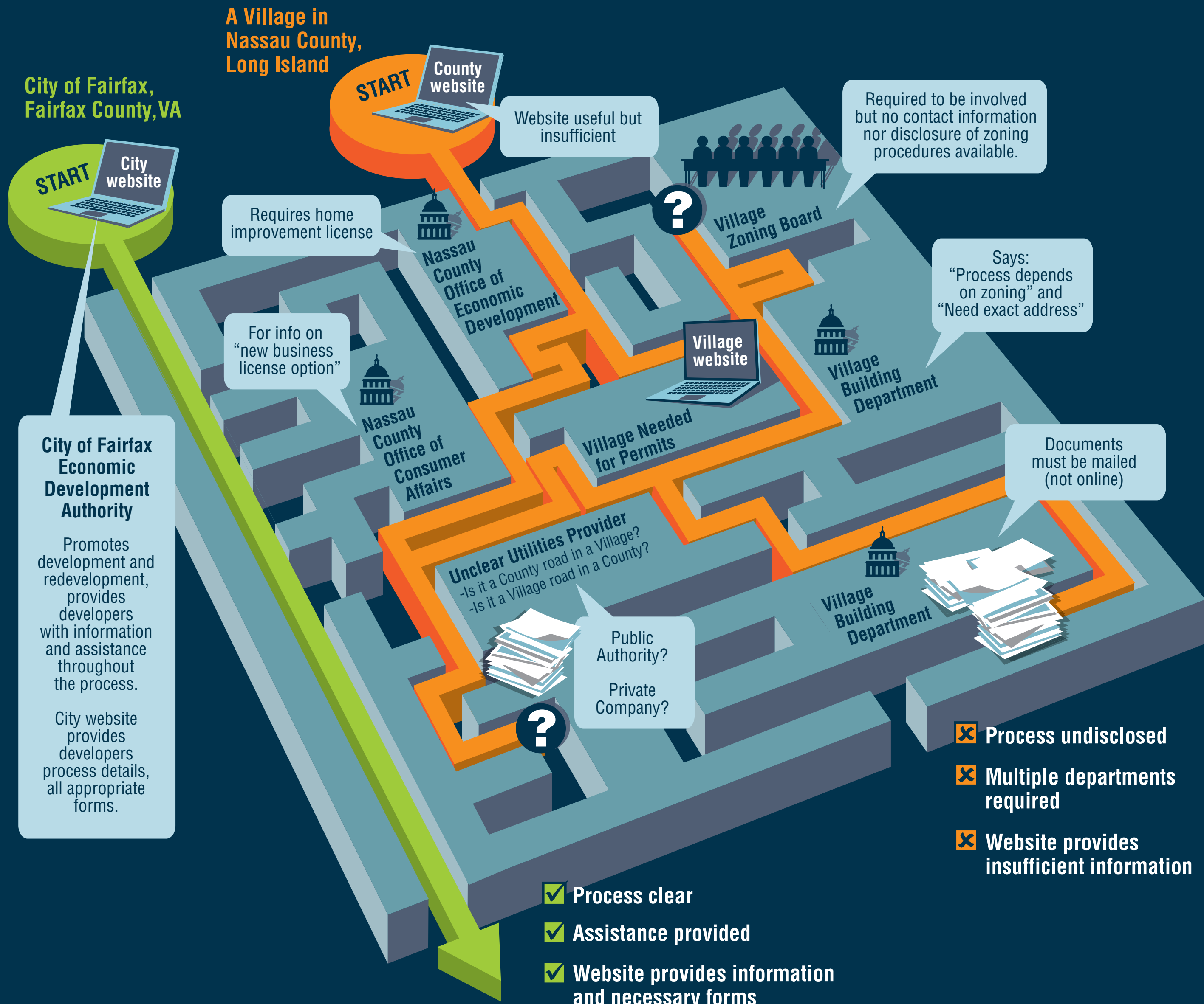
Surveys conducted by the Long Island Index in 2017 indicate that few residents have confidence that government officials would address issues brought to their concern. When asked if they had an issue that required the assistance of an elected official, 66% said that it would be very or somewhat difficult to get a county official or staff member to consider their situation, and 63% said the same for town officials. Village officials fared somewhat better, but 50% still said that it would be very or somewhat difficult.

The Building Permit Process: VA vs. LI

How well does Long Island compete with other suburban regions in building the types of housing needed to attract and retain young professionals? Hmmm, not great.

In Fairfax, Virginia all the necessary data, forms and permit requests are online and clearly documented. Long Island? Not so easy. Check out the maze of offices, permissions, and multiple jurisdictions that have to get involved in one typical Long Island village.

What does this mean? Long Island's transformation of its built environment will be slower and more costly. Hope our kids can wait…



BOB KEELER

A Better Long Island for All

Perhaps the most difficult attitude to nurture in Long Islanders is regional thinking. Despite the best efforts of the Long Island Index and *Newsday*, the Long Island newspaper, regional thinking remains a still-desirable but still-distant goal. That is deeply disappointing to me, as a Long Islander, as an employee of *Newsday* for more than four decades, and as the author of a book about the paper, which also focused on the history of Long Island.

In the 1940s, the decade when both *Newsday* and I came into being, Long Island was essentially a collection of small villages separated by large trees. The number of trees has declined, the number of villages has increased, but the sense of regional interconnectedness has not grown nearly enough.

Yes, entities such as the Long Island Regional Planning Council and the Long Island Regional Economic Development Council have come into existence, and they perform useful roles. But the instinct of separateness and parochial thinking continues, untamed.

Take the Third Track for the Long Island Rail Road, between Hicksville and Floral Park. Research commissioned by the Index showed that it would produce major regional benefits. Still, local officials resisted, thinking locally instead of regionally. One of the great triumphs of the Rauch Foundation and the Index, through the creation of the Right Track for Long Island Coalition, has been overcoming that resistance and putting the Third Track on a promising road to completion.

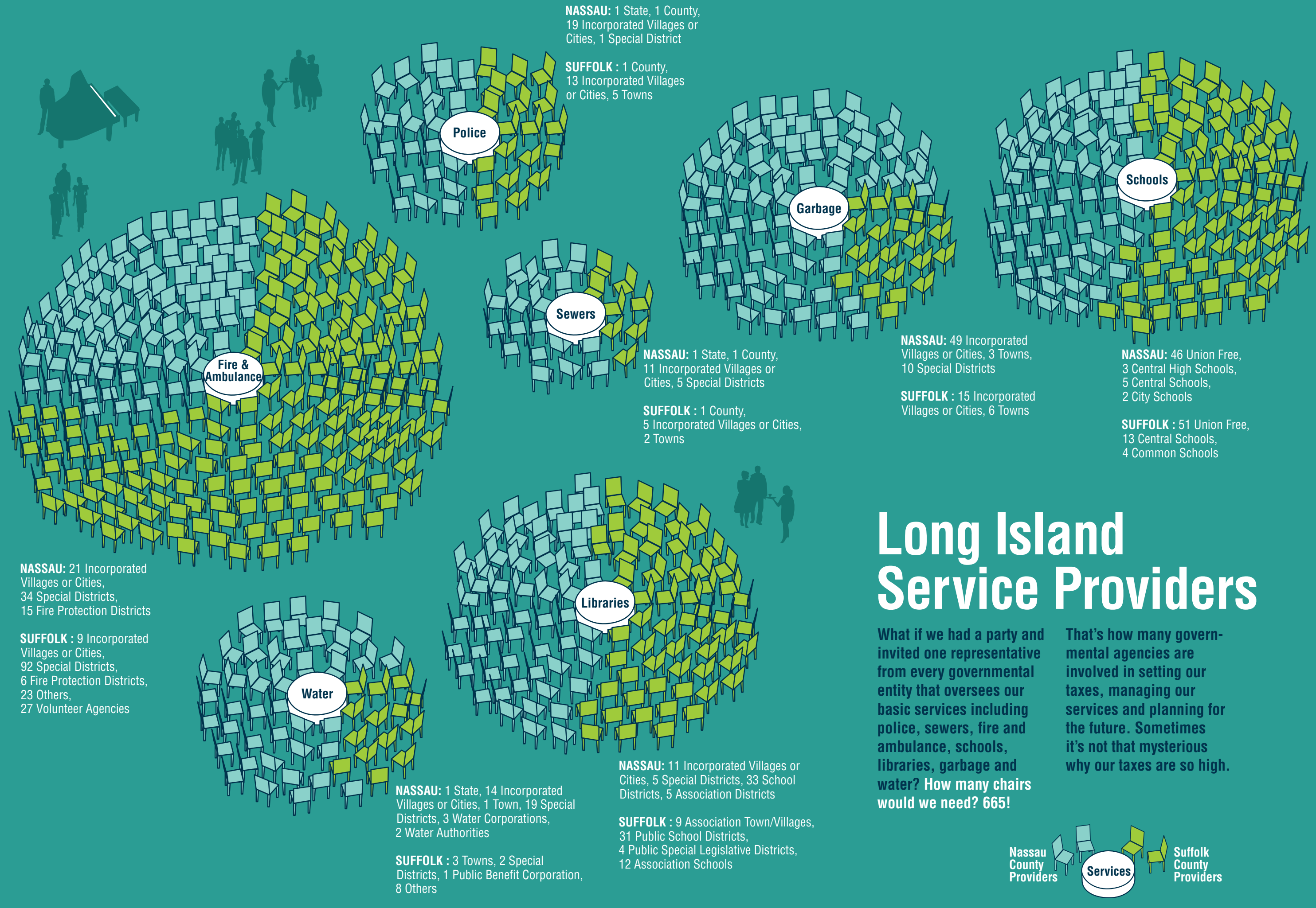
Still, the array of more than 600 governmental entities, from elevator districts to huge towns, has stood in the way of regional thinking and progress toward a sustainable future for Long Island. That progress requires less reliance on cars, better mass transit, and walkable downtowns—all key elements of what the Index research has shown Long Island needs.

"Cost aside, those many levels of government, and their varying rules and regulations, also slow the planning and development process and make it harder to move forward on the key issues impacting the region," said the Index's overview of issues impacting Long Island. "As a result, developers find it far easier to replicate the automobile-dependent, single-purpose suburb of the past than to create the mixed-use, transit-oriented and walkable downtowns the region needs for the future—and which young Long Islanders demand."

In addition to the multiplicity of government units, the obstacles to a sustainable region include the proliferation of industrial development agencies, too often competing with one another and giving corporations tax breaks that do not produce the promised number of jobs.

Until we start to think as a single unified region, working toward the common good of its nearly three million residents, we will continue to be stuck with the reality that the Index has documented: the continuing loss of the young people who should be the region's future. The Index has worked hard to produce the data that show what we need, what we have, and what we're missing. Now it's time for our local leaders to lead the way to the future with a strong dose of regional thinking.

Mr. Keeler is a former Newsday *reporter and editor.*



Long Island Service Providers

What if we had a party and invited one representative from every governmental entity that oversees our basic services including police, sewers, fire and ambulance, schools, libraries, garbage and water? How many chairs would we need? 665! That's how many governmental agencies are involved in setting our taxes, managing our services and planning for the future. Sometimes it's not that mysterious why our taxes are so high.

ELAINE GROSS

The Need to Tackle Segregation Head-On

Long Island is renowned for being the nation's first suburb—birthed with its tens of thousands of affordable new homes, federally financed to bring them within reach of GIs returning from World War II. But this wealth-building machine was explicitly for white people only. GIs who were black were summarily blocked from living in these new homes, just because they were black.

The racism was structural—brought about by both government and business—and it was interpersonal, with individuals actively carrying out the policies and discriminating to ensure that blacks didn't slip in. This is Long Island's legacy. Structural racism continues, and today other non-white groups are sometimes victimized as well.

Our housing is still segregated. Measuring residential segregation, Long Island is among the 10 most racially segregated metropolitan regions in the United States. White-to-black segregation levels remain severe. Segregation levels between whites and Hispanics, and whites and Asians, while not yet severe, are rising. Housing discrimination is still occurring. Local housing discrimination lawsuits are resulting in successful settlements.

Segregation levels in public schools are heading in the wrong direction. Between 2004 and 2016 the number of intensely segregated school districts (90–100% non-white) more than doubled, and students attending these segregated schools more than tripled.

Interestingly, the Long Island Index's latest survey of Long Islanders shows significant differences by race concerning public education—with 60% of blacks saying that more should be done to integrate schools, compared to 49% of Hispanics and only 28% of whites. Whites are also dramatically more satisfied with the quality of public education than are blacks and Hispanics.

The ongoing segregation and discrimination create indefensible disadvantages for certain Long Islanders and also deprive Long Island of talent and skills that the region needs to compete successfully in a 21st Century economy. They are a self-inflicted drag on Long Island's economic prosperity.

How can the current trajectory be reversed? A sizeable proportion of the current silent bystanders on Long Island will need to become champions for change in their own communities and with local and state governments. They will need to support laws, policies, and practices that dismantle segregation.

Structural problems require structural solutions. Yet too often the instinct is to leave structural racism in place and then wonder why efforts around the edges don't make a lasting difference.

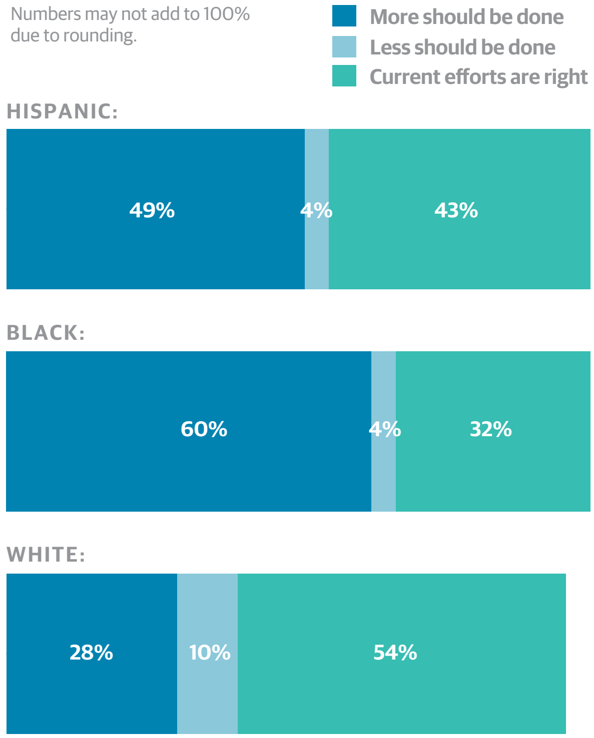
Regional cohesion and empathy across racial groups is far less likely, because people from different racial groups do not know each other, do not live together or go to school together, and as a result inhabit very different realities. Solving structural racism will require a shared understanding of history, objective facts about current challenges and how to address them, and familiarity with and empathy for people who are not like oneself.

The familiarity and empathy gaps on Long Island will not lessen if segregation remains so widespread and unchallenged. Central to the prosperity and sustainability of Long Island is the extent to which Long Islanders tackle segregation head-on.

Ms. Gross is President of ERASE Racism.

On balance, do you think more should be done to include students from different racial and ethnic backgrounds in public schools on Long Island, do you think less should be done, or are the current efforts about right?

Numbers may not add to 100% due to rounding.



Source: 2017 Long Island Index survey

MARIANNE GARVIN

Build Apartments, and They Will Come

The economic future of Long Island depends on developing transit-oriented multifamily housing across all price points. That's not instead of single-family neighborhoods; that's to strengthen single-family neighborhoods.

We all know too well the complaints of excessive property taxes, unaffordable housing, not enough jobs, and young people leaving. That won't change until Long Island offers more housing options, accessible to public transit, in settings that attract businesses and young people.

My experience building more than 1,000 affordable rental apartments, while leading the Community Development Corporation of Long Island (CDCLI), provides confidence that such essential developments will enhance the region's traditional strengths and values—not undercut them. That experience suggests some guiding principles:

First, the housing should always be transit-oriented: near trains and/or buses. That provides easy access, enhances walkability, and reduces congestion and pollution. Walkability is key, because it increases community, strengthens local businesses, and provides a destination for those living downtown as well as those in nearby neighborhoods, which are reinforced in the process.

Second, the housing should be at all price points (with both ownership and rental options) for several reasons: to offer breadth of opportunity and choice to respond to diverse needs; to provide housing for those who work in local businesses as well as those who shop there, and to ensure that everyone, regardless of income, has money (not consumed by housing) to spend locally. It's always easier to get approval for higher-cost housing, but it's vital to have the full range.

Third, that range of housing should be located together—not separated. It should reinforce community, and it's already happening. Wincoram Commons, which CDCLI co-developed, and the luxury Enclave at Charles Pond Apartments are located next to each other in Coram. Together they bring needed definition and vitality to the hamlet's center.

Fourth, support for multifamily housing has grown on Long Island, as Long Islanders themselves seek more options. The 2017 Long Island Index survey shows that most Long Island residents support raising height limits in local downtowns from two to four stories to build apartments above stores. That proposal is especially popular among young Long Islanders (74% of those 18-34). And 26% of Long Islanders expect to live in an apartment, condo, or townhouse in five years (an increase of 11% from 2015).

That support is reinforced by growing evidence of downtown development. Downtowns like Patchogue, Copiague, and Rockville Centre have permitted higher-density housing, and it has invigorated their centers as well as the surrounding neighborhoods. The benefits are no longer theoretical; they can be seen, experienced, and enjoyed over dinner.

Fifth, the greatest practical barrier going forward is no longer public opinion; now it's outdated municipal zoning codes—often 50 or 60 years old. It will take time, effort, and expense to update them. But that's no excuse; it's essential.

Long Island is lopsided with single-family housing, and the multifamily housing that is needed will not change that reality. What it will do is provide a range of housing options and the economic vitality to sustain the region's single-family neighborhoods in the 21st century.

Build apartments, and they will come. And they will be coming largely from Long Island.

Ms. Garvin was President & CEO of the Community Development Corporation of Long Island from 2009 to 2017.

TOM ROGERS

Education and the Economy

In the second half of the 20th century, Long Island was the beneficiary of the region's strong economy, as both the host of a robust defense industry and the archetypical bedroom community for New York City. That economy has in turn built Long Island's many regional assets, including and perhaps especially, its superb public education system. With the decline of the defense industry and growing cost of living, that symbiosis has come under stress. Long Island's educational excellence has come at a price, and it would be delusional to presume it could endure a protracted period of austerity without damage.

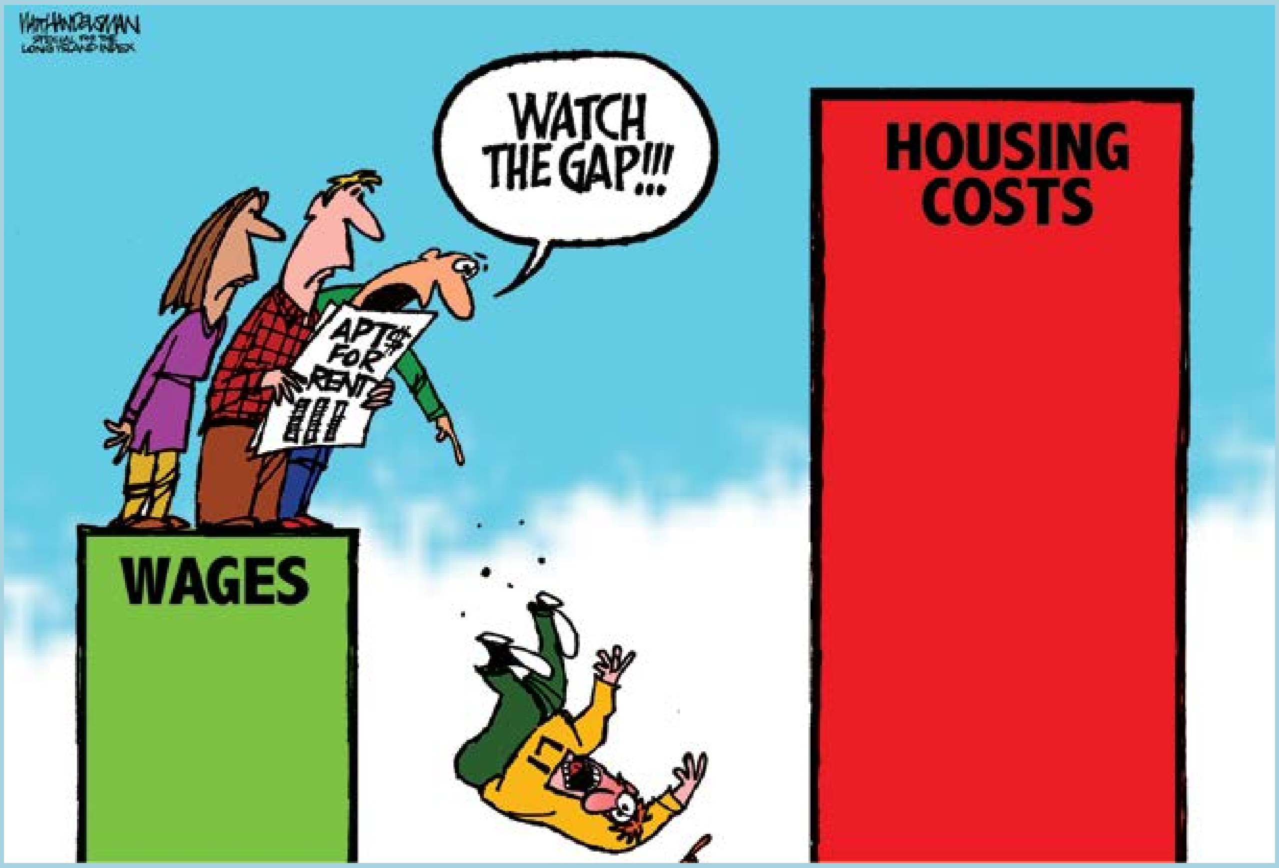
Thus, Long Island is confronted with the challenge of reimagining itself as a regional economic powerhouse, not just the beneficiary of the happy coincidence of its location and legacy. But this region is not alone in seeking to establish a high-tech economic presence, and its ability to compete will fall far short of its potential should it suffer from Long Island's chronic affliction of fragmentation. The window of opportunity hasn't closed, but in the prescient words of the Long Island Index, "The Clock is Ticking."

Fortunately, Long Island has internationally-renowned research institutions in the bio-tech, alternative energy, advanced materials engineering, and heath care fields that could be the foundation for this high-tech renaissance. Moreover, its public education system collaborates with these institutions to routinely produce more Intel, Siemens and Regeneron scholars from our two counties than from most other whole states in the country. But this has been driven more by internecine competition than a concerted plan to connect and leverage these assets in service of a regional economic development strategy.

While it's unclear where the leadership will emerge to make this vision a reality, the first steps forward are apparent, if not easy. Though extraordinary, Long Island's education system is far from perfect, as too many of Long Island's educational opportunities and successes are shared unevenly along lines of race and income. This has been Long Island's intractable challenge and regional shame for decades. The situation is exacerbated by fragmentation and underinvestment, so it's clear it won't be solved in the absence of collaboration and resources. A focused regional development strategy could direct investments towards partnerships supporting economic sectors highlighted as regional growth priorities. These priorities could in turn shape the education system. Just as schools focus on teaching New York's unique history, we can be attentive to the unique skills and programs needed to build the region's workforce.

Long Island is a high-cost region. It requires high-wage employment, which in turn requires high levels of skill and education. The education part of that equation and the region's powerhouse industries and research institutions are Long Island's twin advantages. Coupled, they could accelerate Long Island's new economy, provide a pipeline of talent to its emerging industries, and slow its "brain drain" among young people. Long Island's symbiosis between education and the economy can emerge from this stress stronger than ever; but it must evolve, and it can no longer afford to overlook the talent that is every bit as present in disadvantaged communities as it is in the Gold Coast.

Dr. Rogers is the Superintendent of the Syosset Central School District in Nassau County.


WATCH THE GAP!!!
HOUSING COSTS
APTS FOR RENT
WAGES

SHUPROTIM BHAUMIK

Moving a Region Forward

Long Island's transformation from farmland to vibrant suburb started in the early 20th century and gained momentum after World War II, as our troops returned home and started families. In contrast to the dense, closely-packed, apartment buildings of New York City, from which many residents had moved, Long Island symbolized freedom—the ability to comfortably raise a family in a single detached home within commuting distance of the city and with easy access on leafy parkways to beaches for weekend outings. Nationally, Levittown became an iconic symbol of idyllic, affordable, suburban living.

In recent decades, the decline in good quality jobs, combined with increasing housing costs and property taxes, has led to a brain-drain of young working-age adults. According to the Long Island Index, the Island's share of young adults (ages 25-34) dipped by 12 percent between 2000 and 2010, even as their numbers grew in NYC and the US as a whole. Young educated workers, as well as empty-nesters, now wish to live in walkable transit-friendly communities that have great restaurants, distinctive shopping, and unique cultural attractions.

Not only is the urban experience becoming more in demand but residents are growing increasingly intolerant of sitting in traffic. And ongoing transit investments will make public transit an increasingly attractive option. The Third Track and Double Track, for instance, will both increase capacity and improve reliability. East Side Access will provide commuters a one-seat ride to Midtown East. Proposed new north-south transit options like the Nicolls Road BRT from Stony Brook University, with connections to the Ronkonkoma Hub and MacArthur Airport, will provide much-needed inter-regional mobility.

To complement these transit investments, a handful of towns and villages on Long Island are re-imagining the notion of suburbia in and around LIRR stations and downtowns with flexible zoning that encourages density, walkability, and a mix of uses. Communities such as Mineola, Farmingdale, Wyandanch, and Valley Stream have shown the way in creating a new suburbia that is anchored by public transit.

But more needs to be done. Throughout the New York metropolitan area, many municipalities are well on their way towards a future where fewer residents and workers rely on automobiles. Those communities are experiencing the clear benefits of transit in creating economic activity and attracting new residents and employers.

Long Island's communities have a lot of catching up to do. Change is difficult, and increasing density brings fears of "becoming Queens." But change can be designed to be both distinctive and attractive. And without bold moves, Long Island will stagnate, falling behind the rest of the region.

Transportation is changing before our eyes: soon driverless vehicles will be an integral part of our daily lives. Big ideas—such as a true north-south transit network, bicycle highways, and ambitious transit-oriented downtown developments—are key to keeping the region competitive, resilient, vibrant, and still distinctly Long Island.

Mr. Bhaumik is a Partner at HR&A Advisors.

Memo to zoning boards, town boards, village councils, planning commissions:

This is what **Long Islanders** are asking for:

Today 18% live in an apartment, condo or townhouse:

In just five years 26% want to live in an apartment, condo, or townhouse:

TODAY

5 YEARS FROM NOW

Will they find it on Long Island?

Source: 2017 Long Island Index survey

BY BRUCE STILLMAN

Building Regional Leadership for the Innovation Economy

Long Island is in a remarkable position to capitalize on the innovation economy, an economy built around the latest research and development as well as a highly educated population. But we have a major challenge: a greater need for regional leadership in this area. Fortunately, it's a challenge that we can overcome with enough collective effort.

The opportunity is extraordinary, because of Long Island's many assets, including world-class research institutions, proximity to New York City, a celebrated lifestyle, and a strong legacy of innovation from the space age to the present. But the region's government is broadly diffuse—with 665 government entities providing services, as the Long Island Index has underscored.

This raises an essential question if Long Island is to effectively pursue an innovation economy: Who is leading it?

If Long Island was a state, the Governor would oversee an office of economic development focused solely on Long Island. But that's not the case.

On key issues like infrastructure and economic development, we look to Governor Andrew Cuomo, who fortunately has taken welcome action, for instance, to make the Long Island Rail Road's Third Track a reality.

But Long Island must also "compete" with other regions in New York, so it is incumbent on us to take the lead and propose how we can most effectively move our innovation economy forward. This requires cooperation between both counties, their towns and villages and existing industries.

The challenge then is to expand our regional leadership, so that we can more aggressively champion the innovation economy on Long Island. To do that, we need to discuss and consider how to generate a powerful regional consensus. That consensus requires buy-in not only from the two counties and the State but also from the public and the region's cities, towns, and villages, so that all parties are engaged, aligned, and committed to a shared future. Once a consensus is achieved, proposals put to the State have a much higher probability of succeeding. The Third Track is a great example.

The innovative regional leadership that we need for the innovation economy has several key components:

First, Long Island must articulate an increasingly distinctive and compelling vision for positioning itself in the innovation economy. What sectors of that economy can we dominate, as we did in past decades with aerospace and defense? How do we differentiate ourselves from the competition? What do we need to make ourselves not just competitive but unbeatable?

The Long Island Index has given us an extraordinary base of objective data—about our comparative strengths and weaknesses. We should continue to draw on it heavily.

That vision must provide a clearly articulated direction that can generate public support. It must enable us to be opportunistic and capitalize on emerging fields, where we are in the forefront.

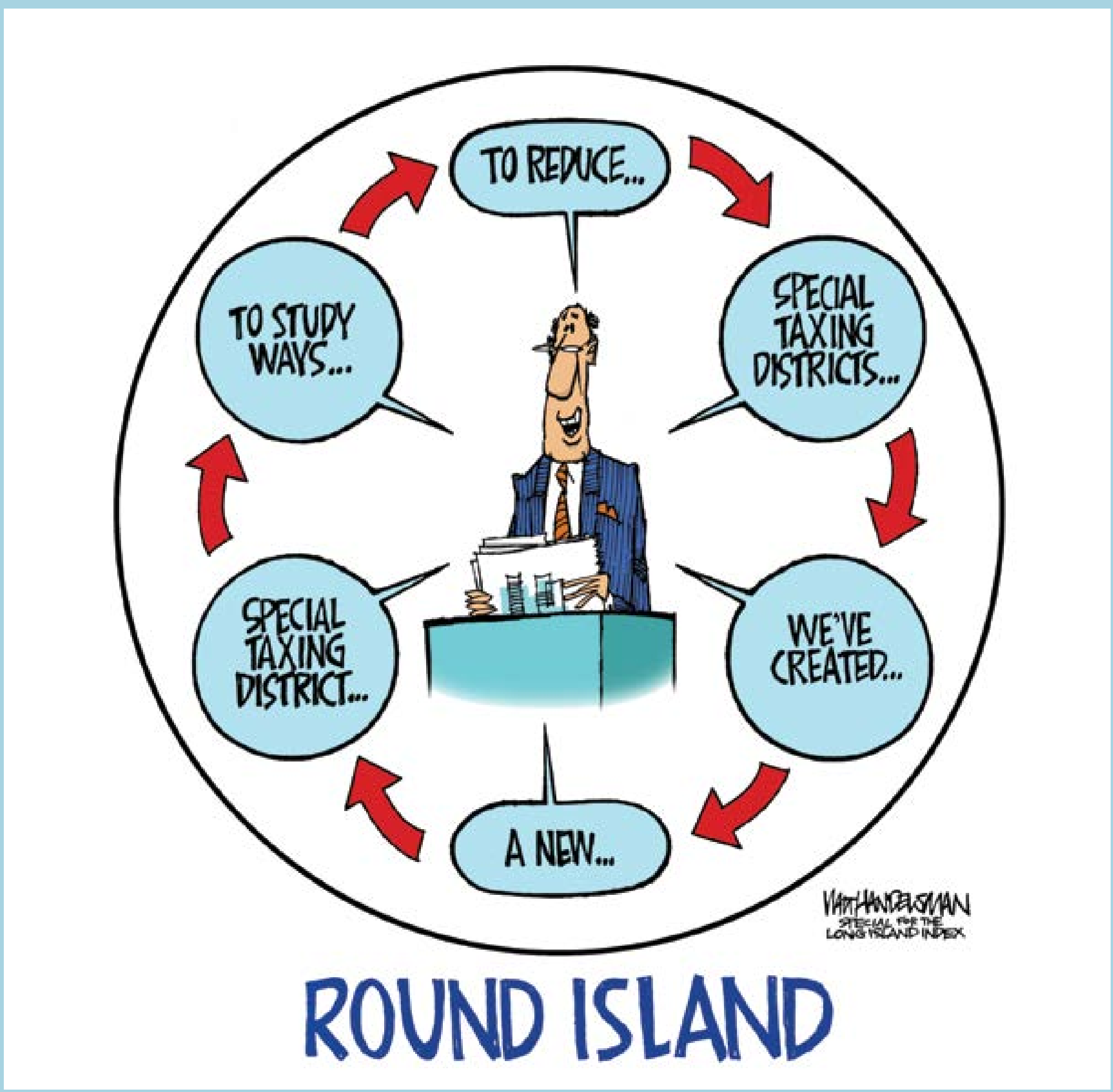
Second, implementing the vision will require a multi-faceted strategy with such essential elements as facilitating entrepreneurship; recruiting business development experts and tech CEOs who can turn promising ideas into successful businesses; attracting companies that need more space, and developing clusters of companies so that talent can move among them.

Third, each element requires constant regional pursuit, tracking, and promotion.

To achieve these goals, I suggest that a Leadership Council be established so that our political, academic, and business leaders can meet to discuss and formulate ideas that may facilitate the new innovation economy. In essence, the Council should form a consensus that presents a vision on which we can build.

Long Island has an extraordinary opportunity to make the most of the innovation economy. Let's now enhance our regional leadership to maximize the opportunity before us.

Dr. Stillman is President and CEO of Cold Spring Harbor Laboratory.



JEFFREY KRAUT

Creating Alliances Among Long Island's 665 Government Entities

Since its founding in 2002, the Long Island Index has facilitated the creation of a unifying future vision for our region by collecting and disseminating data that documents the challenges facing Long Islanders and monitors change. One persistent piece of data stands out: the number 665. That's how many government entities exist on Long Island, including special districts providing basic services such as fire, police, sanitation, water, schools, and libraries.

Boundaries in government can be good; they define responsibility for our elected officials and create accountability to taxpayers who vote. But too many boundaries create inefficiency and drive up property taxes, which are legendary on Long Island, as duplication of services drives up costs.

A stunning example of that inefficiency appeared in the Index's 2006 report, which revealed that Long Island's 179 fire agencies had more fire trucks and apparatus than the City of New York and the City and County of Los Angeles combined! At the time, Long Island had 146 heavy rescue trucks at a cost of $750,000 a piece, for a total of $110 million, while New York City owned six—one per borough and a spare—for a total cost of $4.5 million.

The prospect of significantly reducing the number of government entities on Long Island may seem dim, but creating alliances and sharing services should be politically palatable and practical.

That approach could produce high-value opportunities to improve services, increase cost-effectiveness, and bend the cost curve of tax increases. The State of New York is encouraging this approach through its Shared Services Initiative—mandating last year that counties appoint working groups of local officials to identify ideas for sharing services, and agreeing to match any Year 1 savings that the towns and counties achieve.

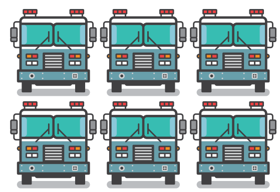
I've seen the extraordinary benefits of sharing services right here on Long Island in my work at Northwell Health, which has evolved from a group of like-minded hospitals that came together to improve care and achieve economies of scale in response to rapid changes in the industry and significant reductions in federal and state funding. Each hospital had a board of trustees that aggressively valued its independence and local focus. But over time they recognized the benefits of sharing knowledge, pooling resources, and improving access—creating a regional health system that now provides the majority of care on Long Island and is the region's largest employer.

New winds of change are blowing from Washington, DC that will increase pressure on all levels of government. The resulting demands of a highly taxed electorate may further alliances among the 665 government entities to reduce costs through economies of scale or improved services.

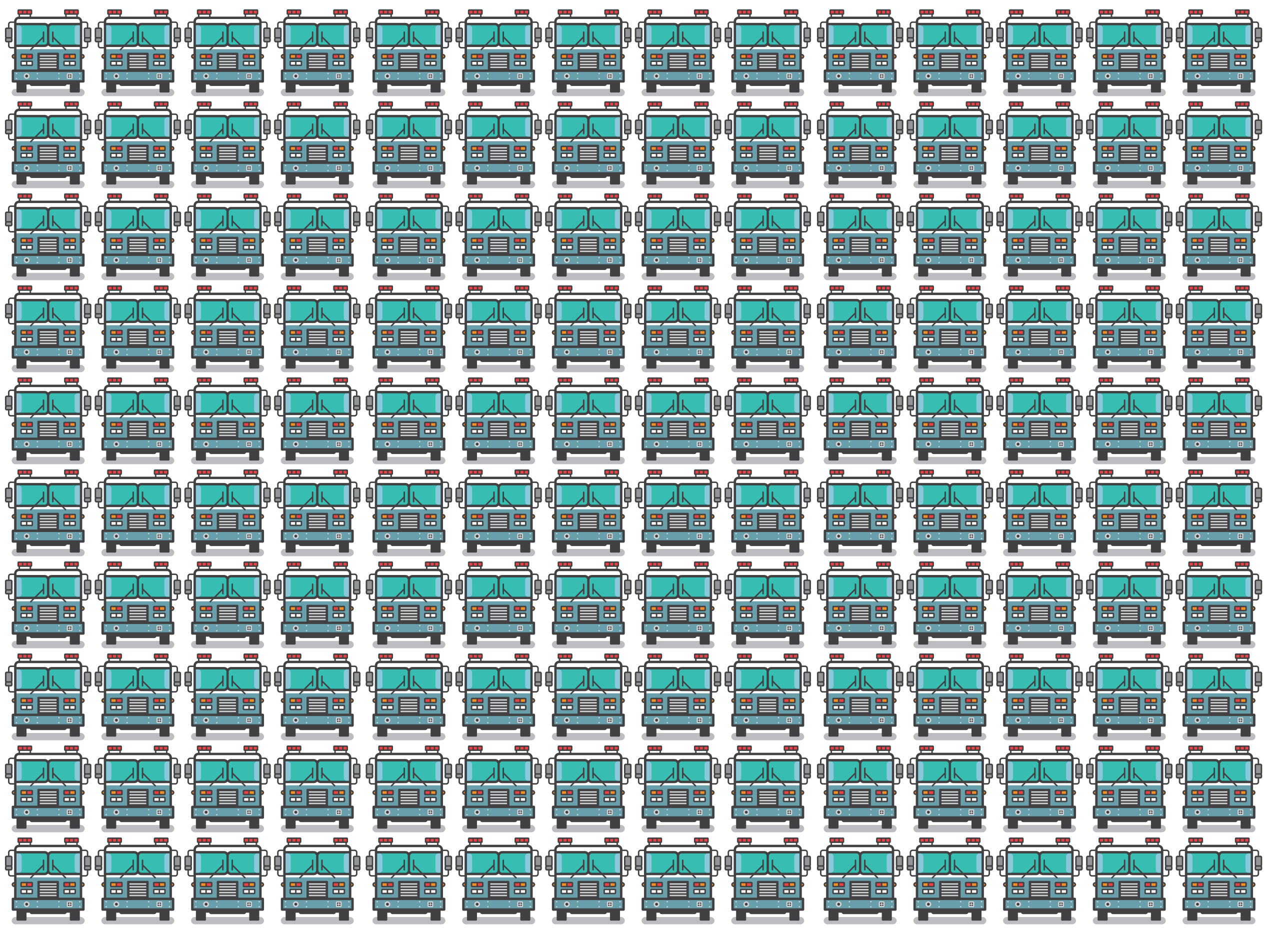
Fear of losing local control will be advanced as an obstacle to change, but with 665 government entities we need not fear losing local control. Instead we should recognize the shared interests of many of those entities and the rampant opportunity for increased efficiency and improved services. Long Islanders should actively support leaders who encourage cooperation and collaboration. It's essential to reducing the economic consequences of government fragmentation on Long Island.

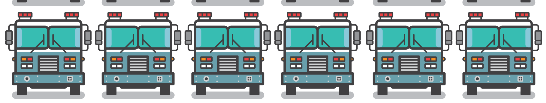
Mr. Kraut is Executive Vice President, Strategy and Analytics at Northwell Health.

At **$750K per truck,** NYC owns **ONE** heavy rescue truck **per borough**, plus one extra for city-wide use.



6 trucks = **$4.5 million.**



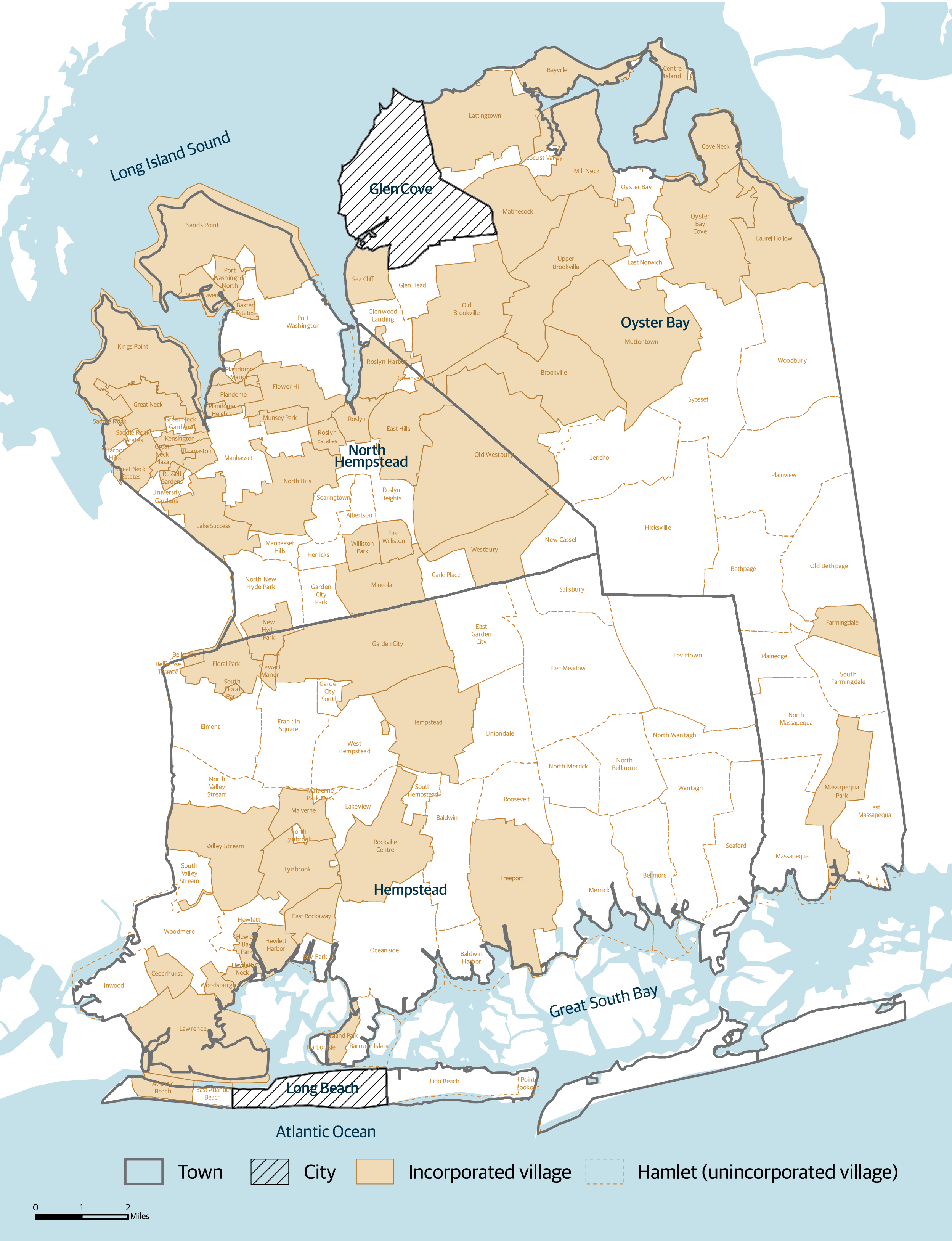


Long Island has 146.

Source: Long Island Index video, *The Clock is Ticking*, 2010

NASSAU COUNTY

Cities, towns, villages, and hamlets



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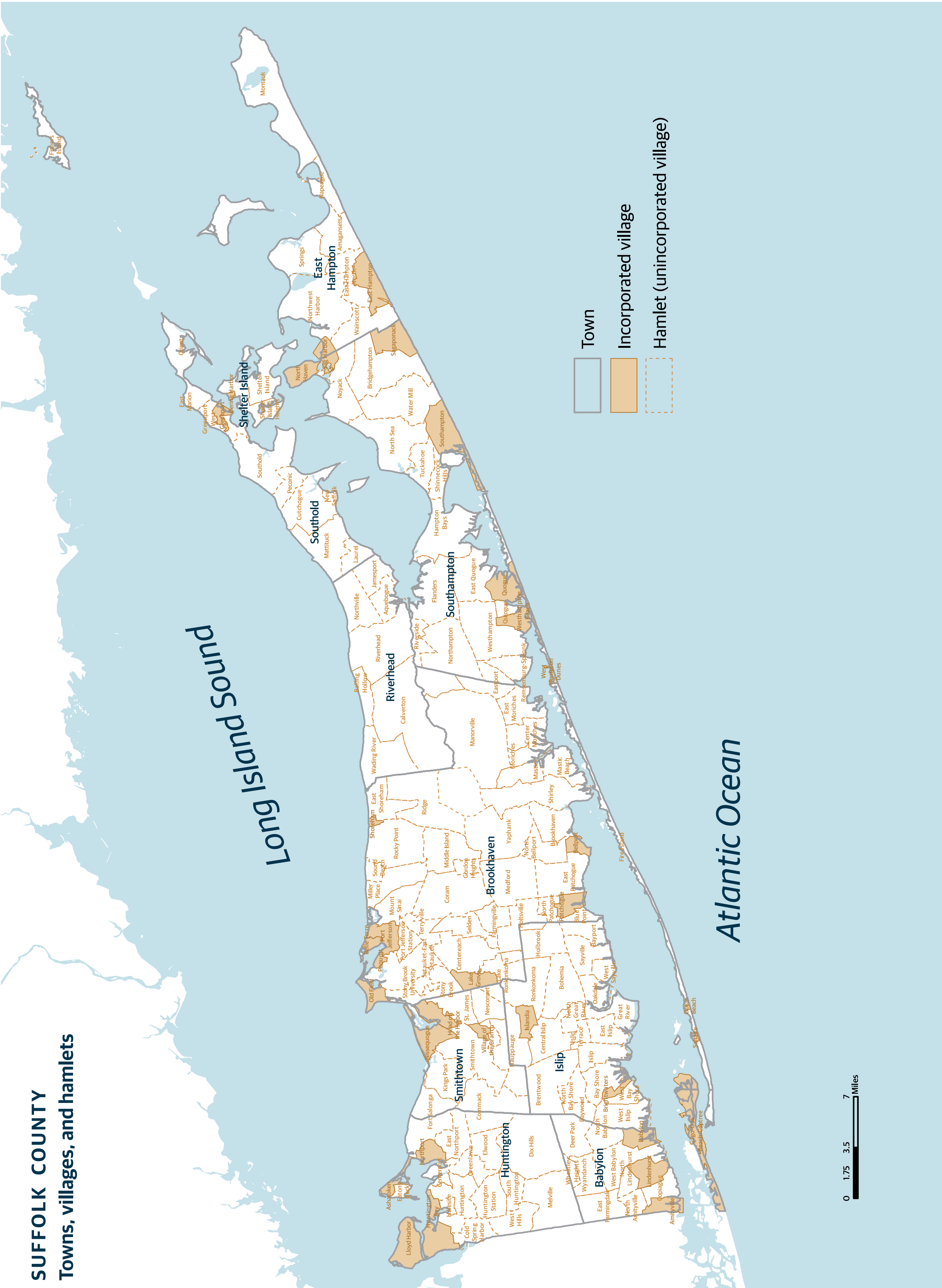
SUFFOLK COUNTY

Towns, villages, and hamlets



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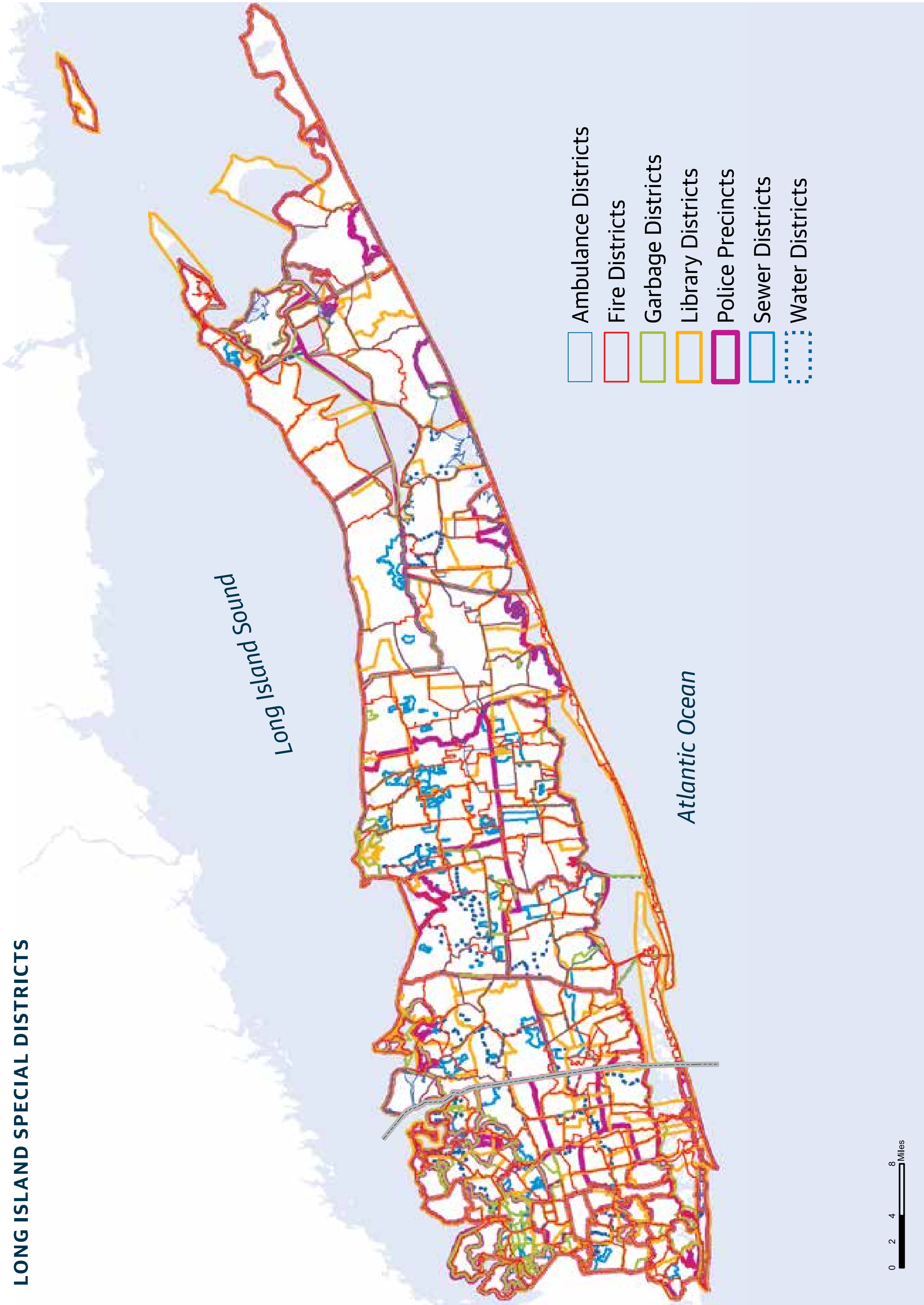
LONG ISLAND SPECIAL DISTRICTS



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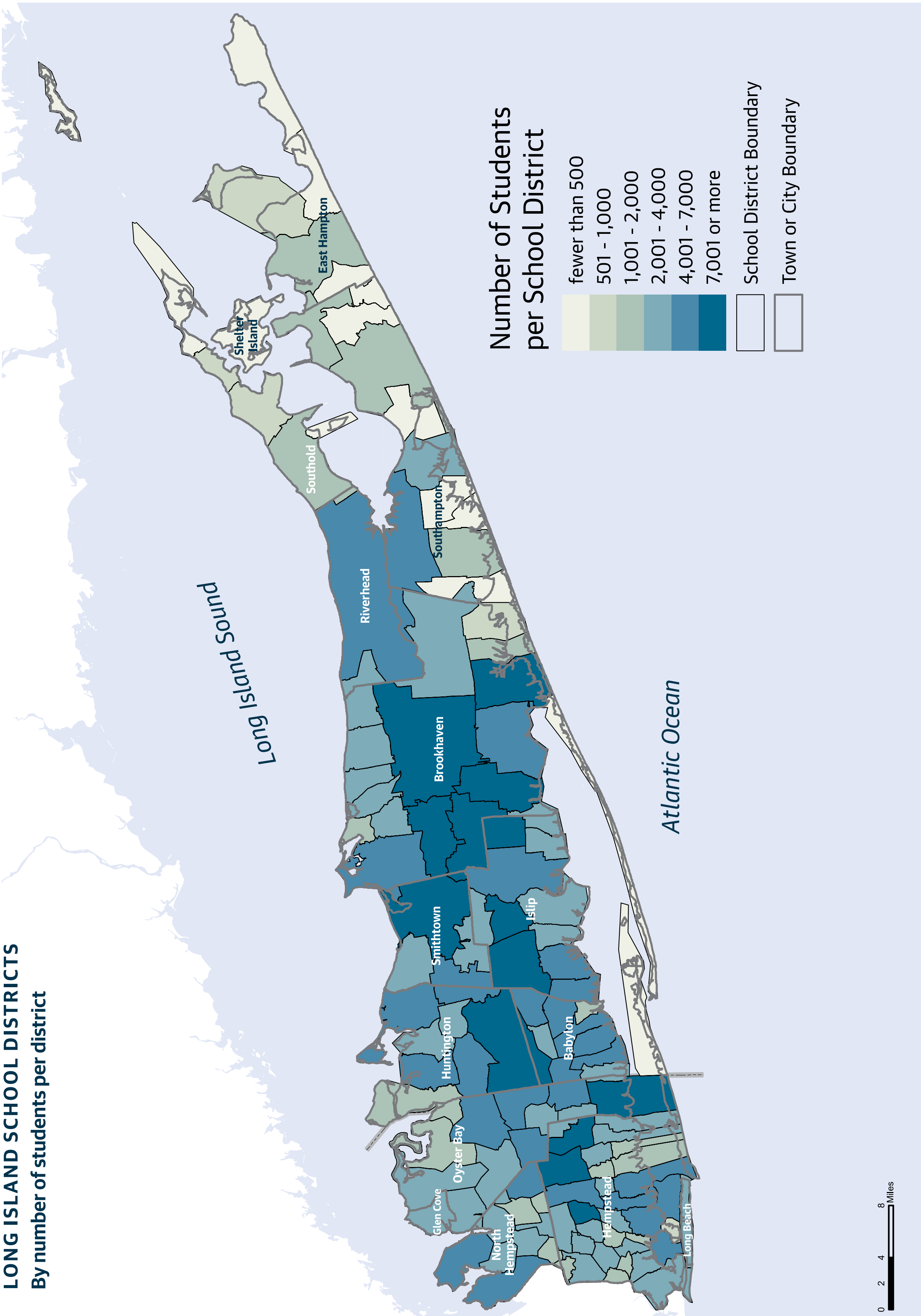
LONG ISLAND SCHOOL DISTRICTS

By number of students per district



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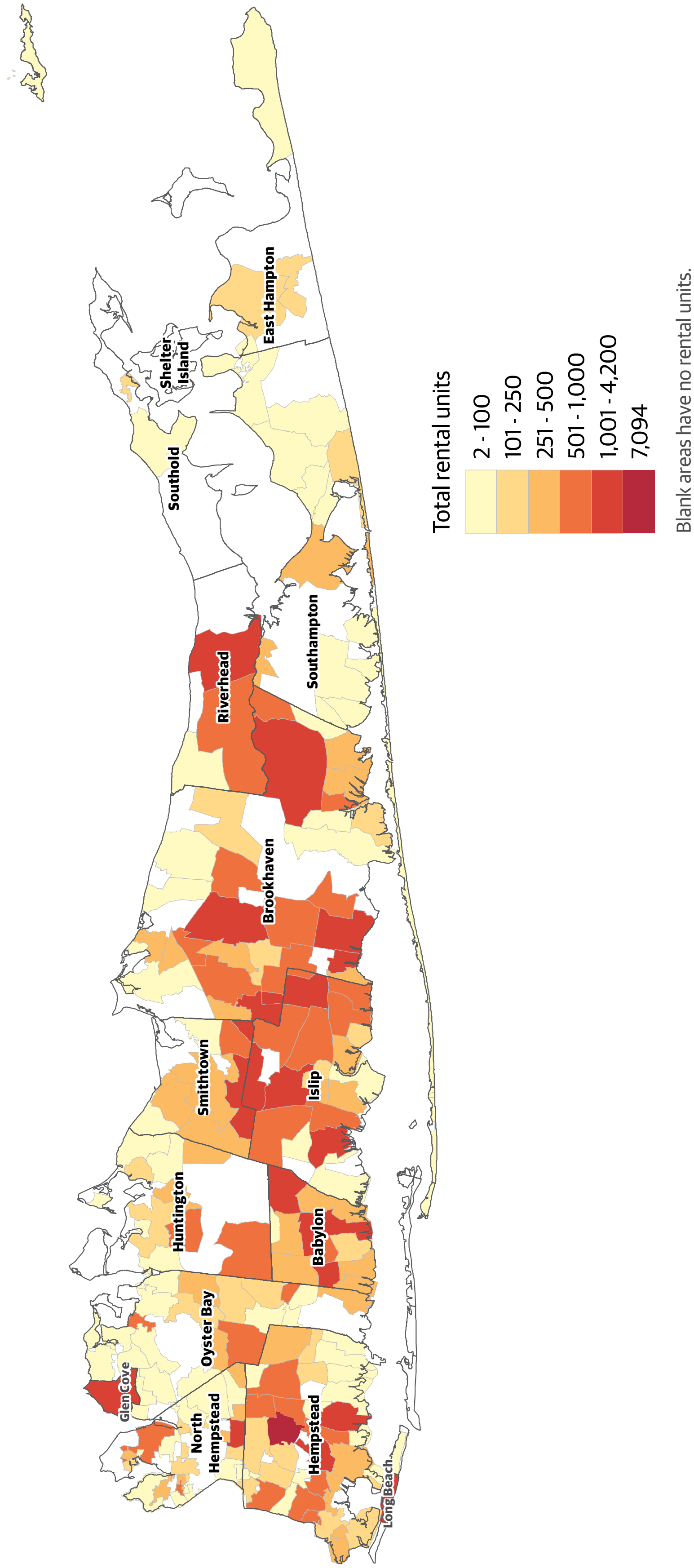
Data source: National Center for Education Statistics, 2014-15 Academic Year

RENTAL MULTIFAMILY PROPERTIES
by decade built



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Our Sincere Thanks

IN OUR FIFTEEN YEARS of producing in-depth research reports, the Index has relied on key partners. Foremost among the many with whom we have worked are:

- **Chris Jones** and the team at the **Regional Plan Association**
- **Steven Romalewski** and the team at the **CUNY Mapping Service**
- **Leonie Huddy** and the team at the **Center for Survey Research at Stony Brook University**
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- **Trudi Renwick** and the team at **Fiscal Policy Institute**
- **Tom Amper,** freelance writer
- **Robert Simkins** and the team at **Infinitech Public Relations**
- **Doug Henton, John Melville** and the team at **Collaborative Economics**.

Several years ago, we decided to be more visual in presenting our findings. Many people helped us achieve that goal;

- **Amy Unikewicz** who created infographics with us
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- **Paul Smith, Elizabeth Madariaga, Michael Moon** and the team at **Duarte Design** who helped us create our videos.

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The Index challenges Long Islanders to work together in new ways, as all of these partners, friends and colleagues, have done in the work we produced for fifteen years. With great pride in what we achieved, we extend our sincere thanks and appreciation to all.

Ann Golob, *Director*
Nancy Rauch Douzinas, *Publisher*
Long Island Index

Working Together in New Ways for Long Island's Future

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