



MAKING A GREATER BOSTON REGION



REGIONAL PLAN



GOALS AND OBJECTIVES

Metropolitan Area Planning Council
May 2008

MetroFuture: Making a Greater Boston Region

An Initiative of the Metropolitan Area Planning Council

www.metrofuture.org

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All contents of this plan can be found online at www.metrofuture.org, including full-size maps, supporting data, technical documentation, interim products and links to other resources.



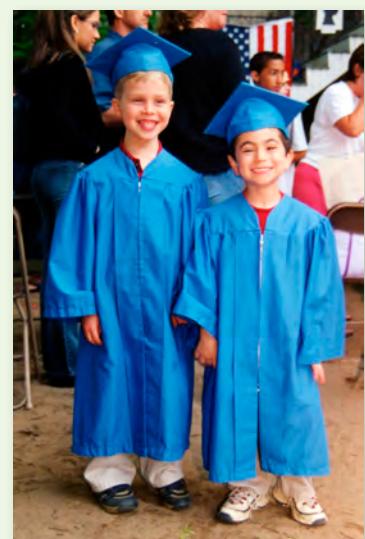
MAKING A GREATER BOSTON REGION

MetroFuture is a bold and achievable plan to make a Greater Boston Region – to better the lives of the people who live and work in Metropolitan Boston between now and 2030. It capitalizes on the region’s most important assets: its diverse people and landscape, a history of innovation, and a commitment to education and civic engagement. It is a plan that will help the region to overcome its challenges and to embrace its future.



The challenges facing our region are in the news every day: Families can't find homes they can afford, even as new subdivisions sprawl across the region's open space. Employers can't find the educated workers they need, yet our public schools lack adequate resources. Roadways are crumbling, while the demand for more transit goes unmet. Water levels are falling in our rivers and reservoirs, but will soon be rising along the coast due to global warming. The region is becoming more diverse, but racial and economic inequality are getting worse. The list goes on.

These contradictory challenges are mirrored in the actions we take as individual communities, businesses, or households. We try to solve our problems one at a time, with little appreciation for the unintended consequences our actions may have down the road or in the future. Cities and towns, residents, businesses, advocates, and political leaders all work hard to solve problems; but real progress comes slowly, if at all. Decision-making is fragmented—with a lack of coordination or understanding across municipal boundaries and among issues of concern. Advocates and public agencies lack the resources needed to make good ideas a reality. Due to outdated laws and ways of thinking, we spend all our time reacting to growth and change, rather than planning better ways to control our future.





MetroFuture represents a new way of planning for the future.

It is based in an understanding that Metro Boston is an interconnected system: regional trends shape local conditions, and every local decision has a broader impact on our regional well-being. MetroFuture distinguishes itself by the fact that it is **comprehensive, regional, and long-range**. It embodies a forward-thinking, unified understanding of how different issues relate to each other, and how each municipality has a role to play in a building a brighter future.

The scale and complexity of the region's challenges make it clear: making a Greater Boston Region requires a transformative plan, a sustainable plan that will improve equity among our residents, strengthen the economy, protect the environment, and improve our quality of life. MetroFuture is that plan. At its heart are new patterns of growth and development that help to create choices and conserve resources. People would have more housing options and different ways to get around. The region would use less energy and water; and would spend less money extending infrastructure to new developments. The region's communities would be more sustainable as well, with stronger municipal finances and high quality education in every city and town. The changes necessary to achieve this plan will not come easily—or cheaply—but the costs of inaction are too high to let current trends continue.



ORIGINS OF METROFUTURE

The plan was drafted and adopted by the Metropolitan Area Planning Council (MAPC), the regional planning agency for the people who live and work in the 101 cities and towns of Metropolitan Boston, but its real authors are over 4,500 people and organizations who helped to write the plan – we call them “plan builders.” Through countless meetings, conversations, emails, and consultations, they created not only the strategic direction for this plan, but its details and nuances as well. To them go our thanks, and upon their shoulders rest the responsibility and opportunity of implementation. Without their active engagement, there would be no MetroFuture plan. The plan can only be realized through their ongoing commitment to advocate for regionally minded choices at town meetings and in city council chambers, in boardrooms and on Beacon Hill.

The state statute that created MAPC in 1963 requires the agency to “*prepare and, from time to time, revise both comprehensive regional plans and comprehensive economic development programs...including recommendations for the physical, social and economic improvement*” of the region. The last such plan, MetroPlan, was adopted in 1990. When MAPC began the process to update that plan in 2003, it took a new approach. With the assistance of a broadly representative Process Design Committee, MAPC defined a process that included technical planning, civic engagement, and implementation in equal measures.

The process has been guided by a Steering Committee comprising representatives from government, nonprofits, institutions, business, and advocacy organizations. MAPC retained fiduciary and supervisory control over the budget and staff.

Similar planning processes, each with its own distinct flavor, have been conducted in Utah, Metropolitan Chicago, central Florida, Lower Manhattan, the San Francisco Bay area, and other parts of the country – but never before in Metropolitan Boston. MAPC studied these processes for successes and lessons learned, we hope MetroFuture can also serve as a model to other parts of the country.

The founders of the project also established a set of **key principles** that inform the civic engagement process, the technical analysis, the evaluation of alternatives, and the recommendations of MetroFuture:

- **A set of critical resources, opportunities, and challenges unites the people and communities of Metropolitan Boston.** We cannot confront the problems that face us unless we work together to devise and implement a unified approach that crosses political, social, economic, and cultural boundaries. Active public participation and open dialogue will yield a stronger regional plan, a constituency united behind implementation, and greater understanding, identification, and pursuit of common goals.
- **We embrace the opportunities of growth and development, while seeking to maintain and enhance the beauty and uniqueness of the Greater Boston region and our individual communities.**
- **We recognize inequalities that persist in the Metropolitan region and seek concrete steps to achieve greater regional equity as a component of strong and just growth.**
- **All planning and public policy decisions should be evaluated in terms of their impacts upon economy, environment, community, and equity.**
- **We want a vision that is bold, and a plan that is compelling and implementable.** While we seek consensus, we insist that the elements of our plan be significant. We recognize that Metropolitan Boston faces serious challenges, and we know these challenges can only be overcome by deliberate and decisive action.

MAPC at a Glance

- Regional planning agency (RPA) for 101 cities and towns in Metro Boston
- Created by statute in 1963
- One of 13 RPAs statewide
- Governed by a council comprising city and town representatives, gubernatorial appointees, and city and state agencies
- 25 member Executive Committee
- Primary areas of work: land use, transportation, economic development, housing, environment, public safety, and municipal administration

THE PRODUCTS OF METROFUTURE

MetroFuture is more than a land use plan with maps and charts. It includes a **detailed vision** for the future; specific **goals and objectives** to assess whether the region is moving in that direction; and detailed **implementation strategies** that will serve as a roadmap for policy, advocacy, planning, and development decisions.

MetroFuture plan is also accompanied by a **computer model of growth** in the region, a model that can track changing trends and assess the impact of different policy choices, making it a powerful tool for a future generation of regional advocates inside and outside of government. The **website**, at www.MetroFuture.org will supplement the printed plan, providing more detail, advocacy opportunities, best practices, tools, and data. Over time, it will also comprise a “living” version of the MetroFuture plan, updated to reflect arising challenges, successes, learning, and context.

Possibly the most important product of the MetroFuture process so far is the constituency of “**Plan Builders**” who have developed a much stronger understanding of regional issues through their participation. No single entity will be able to implement all the recommendations of the plan; the implementation strategies include recommendations for cities and towns, state government, residents, institutions, and corporations. Going forward, MetroFuture will rely on a network of “**Regional Stewards**,” operating in both the public and private sectors, to bring these recommendations forward and support their accomplishment in a variety of different settings.

About This Document

The next few pages describe how MetroFuture has achieved the process objectives, through public education, civic engagement, capacity building, and technical analysis. The introduction concludes with a description of the MetroFuture geography, Metro Boston Community Types, and the fundamental demographic and economic trends that inform this plan.

The section on the MetroFuture Region includes a detailed **vision** for the future; 65 specific **goals** (organized into six topic areas); and hundreds of quantitative **objectives** that can be used to assess whether the region is moving toward a brighter future.

The most significant elements of the plan are the 13 **implementation strategies** that include specific recommendations for actions by government, businesses, institutions, and individual households. Each of these strategies cuts across conventional topic areas and silos to present a comprehensive approach to the region’s major challenges. Each of the plan’s goal relates to multiple strategies, and each strategy seeks to achieve multiple goals. This approach is informed by the understanding that there is rarely one single action that can achieve a particular goal, and each policy action has implications across many different areas of interest.



Introduction

A NEW APPROACH TO COLLABORATIVE REGIONAL PLANNING

Over the last five years, MetroFuture has engaged 4,500 people in collaborative learning and decision-making about the future of the region. MAPC encouraged participants to look beyond today's immediate challenges and take a long-range view. Participants also had unprecedented opportunities to use tools and information to help explore regional challenges, understand tradeoffs, and create different scenarios for how the region might grow.

The MetroFuture process was guided by four **Process Objectives**:

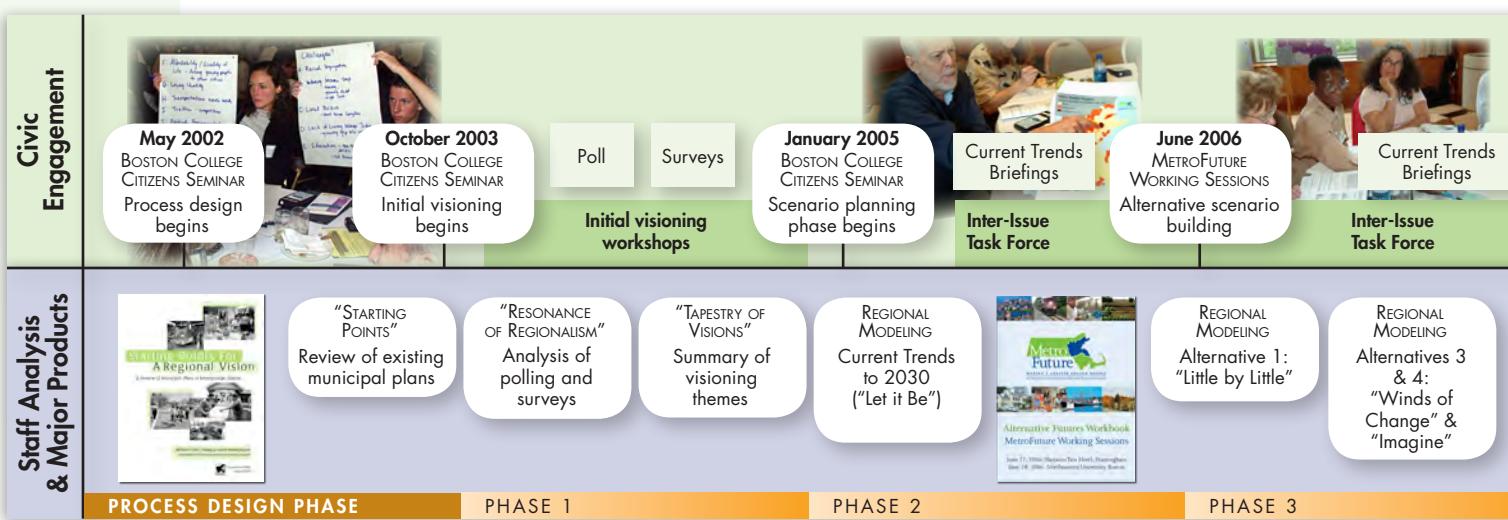
- **Development of a sustainable growth plan for the MAPC region, including implementation steps for state and local government, and recommendations for private sector stakeholders.**
- **Large-scale public education to increase visibility and awareness of regional issues related to the economy, environment, and quality of life.**
- **Region-wide civic engagement in the planning process, helping to build a constituency of knowledgeable and committed supporters who will work to translate the plan into reality.**
- **Institutional capacity building throughout the region, linking technology and information to community decision making for current and future planning processes.**

"MetroFuture events are wonderful silo-busting opportunities. People from every sector gather and brainstorm about the future of our region. Because the MAPC has been active in creating a regional data repository, they always able to present hard data about issues that are of great short-term and long-term importance."

— MetroFuture Participant



MetroFuture's "plan builders" were not passive meeting attendees—their participation also guided the process along the way. Participant input helped to define the scope of the analysis; in particular, to include education, health, food systems, and other topics not traditionally addressed in regional plans. Participants also pushed MAPC to expand its outreach and supported those efforts by organizing meetings and bringing the project's message to their constituents. Most importantly, participants actively defined three alternative scenarios and voted on the scenario that they thought would help make a brighter future for the region.



METROFUTURE PROCESS

The MetroFuture plan was developed in five distinct phases, described below with their major accomplishments, products, and milestones.

Phase 1. Initial Visioning Activities intended to define a vision for the region's future and establish the scope of analysis and scenario evaluation.

- 30 Visioning Workshops and Leadership Dialogues; 1 Boston College Citizens Seminar
- Review of 250 municipal planning documents and vision statements.
- Telephone poll of 400 people; 500 surveys administered through local papers, on-line, and in person.
- Final report outlining 52 Visioning Themes, based on 3,000 statements about the region's strengths, weaknesses, and future.

Phase 2. Analysis of Current Trends, to create a picture of what Metro Boston would look like in 2030 if current trends continue. Results were summarized into an integrated scenario known as "Current Trends."

- Baseline projections for demographics, employment, water demand, land use, municipal finance
- Over 60 Briefings describing the Current Trends

Phase 3. Development of Alternative Futures, based on public input at briefings and large scale meetings where participants used computer technology to see the impacts of different assumptions about future growth. Each of these scenarios (described on page 7) included the same amount of housing and employment growth, but comprised a different set of assumptions about the distribution of that growth across the region, the location of that growth within communities, and the types of development that will occur.

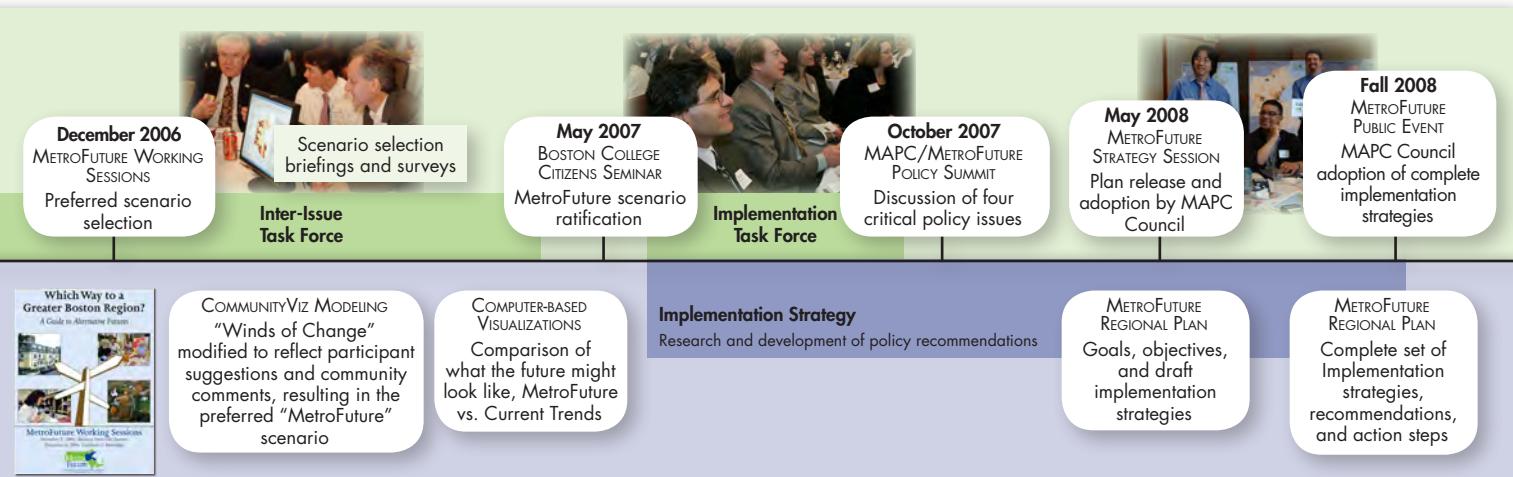
- 3 internally-consistent, feasible alternatives for growth and preservation in the region.
- 2 Working Sessions in Framingham and Boston
- 20 Briefings

Phase 4. Preference Selection, based on evaluation of the alternative scenarios against the regional vision. Participants at two working sessions used the Community Viz model at each table to adjust assumptions to see how the scenarios balance various concerns. "Winds of Change" emerged as the clear favorite but was also modified in response to participant concerns regarding resource conservation and suburban density.

- 2 Working Sessions in Danvers and Randolph
- 16 Briefings
- Preferred scenario (MetroFuture) ratified by 94% of the 400 people at a Boston College Citizen Seminar on May 1, 2007.
- 65 specific goals adopted by MAPC Council as the official regional plan on May 28, 2008

Phase 5. Development of Implementation Strategies to make the plan a reality. Recommendations organized into 13 cross-cutting strategies, posted on the website with opportunities for comment, learning, and advocacy.

- Policy Summit in October 2007 to address four key policy areas
- Strategy Summit in May 2008 to review draft recommendations in key policy areas.
- 12 Briefings on implementation during Summer, 2008.
- Implementation strategy adopted by Council in Fall 2008



MODES OF ENGAGEMENT

In order to engage a broad cross-section of the region, MetroFuture employed many different modes of participation:

Visioning Workshops: Open-format discussions with groups of 10 – 200 participants, intended to solicit ideas about the region's strengths and weaknesses, and visions for its future. Visioning workshops began with a presentation on recent trends to help set a context for discussion. All comments were recorded, coded, and entered into a searchable database.

Briefings: Presentation and discussions hosted or co-hosted by other organizations that brought together their constituencies on behalf of MetroFuture, usually in their own venue or in conjunction with a regularly scheduled meeting. The standard 1.5 hour briefing format included a slide show presentation, discussion, and written comments, but was modified where necessary.

Working Sessions/Boston College Citizens Seminars: Large scale, three-hour public events, attended by people from different backgrounds throughout the region. They were designed to support collaborative learning through table discussion and interactive participation with maps or computer models at each table.

Leadership Dialogues: Informal meetings with individuals or small groups of leaders and decision makers from the public and private sectors.

Inter-Issue Task Force: A group of more than two-dozen researchers, advocates, public officials, and experts that helped to guide the technical analysis and development of alternative scenarios.

Implementation Task Force: A group of more than two-dozen researchers, advocates, public officials, and experts that helped to develop policy recommendations.

www.metrofuture.org: The site for “virtual” participation and opportunities to access project reports, meeting results, data, descriptions of alternative scenarios, and video visualizations. Visitors could also provide input via email and comment forms, or vote on their preferred scenario.

Polling and Surveys: Survey instruments used to solicit input from the broader public. MAPC commissioned a telephone poll in conjunction with UMass Boston and placed surveys in local newspapers throughout the region.



Targeted Outreach and Engagement

Throughout the planning process, MetroFuture has sought to engage communities traditionally under-represented in regional planning processes. The following are some of the MetroFuture target constituencies and the activities we used to reach them:

- Minority, low-income, and/or immigrant constituencies: 30 Briefings or Visioning workshops (with simultaneous translation on several occasions)
- Chambers of commerce and other business organizations: 10 Briefings
- Organizations or institutions focused on health care: 10 Briefings and Leadership Dialogues
- Decision makers from the public and private sectors: 20 Leadership Dialogues

METROFUTURE'S TECHNICAL ANALYSIS

The MetroFuture plan is built on extensive technical analysis. MAPC created the first integrated multidisciplinary model of development in the region, and used it to develop and quantitatively analyze alternative patterns of future growth. The model, developed using a computer program called Community Viz, links population, housing, employment, land use, water demand, and many other factors in a fully integrated and dynamic representation of the region's future. Key elements of the model include:

- **Demographic projections**, based on birth and death rates (by age and race) and in- and out-migration rates (including international immigration.)
- **Employment projections**, based on national growth projections by employment sector and capture rate estimates for Eastern Massachusetts, as well as each community's share of our recent growth. Labor demand was estimated based on current region-specific staffing patterns for each sector.
- **Labor supply**, modeled on a regional basis by applying age, race, and gender-specific educational attainment and labor force participation rates to the projected population.
- **Land use**, initially modeled by allocating municipal-level population and employment projections to Traffic Analysis Zones (TAZs) within each community, based on local land use trends, vacant developable land (accounting for wetlands and other constraints), redevelopment opportunities, and two rounds of community comments in 2005.
- **Open space resources**, identified using land use maps, protected open space parcel data, the Massachusetts Land Conservation Plan, National Resource Conservation Service soil data, and various other environmental resource layers from MassGIS.
- **Housing supply**, projected in eight basic housing types, ranging from single family homes on 1-plus acre lots to multifamily buildings with more than 50 units. Current Trends housing projections were based largely on existing zoning (with some allowance for variances and Comprehensive Permits), while existing zoning was not a constraint on the alternative scenarios.
- **Water demand**, based on existing "baseline" demand and standard assumptions about the per-capita and per-employee (by sector) consumption for new growth.
- **Municipal Finance**, based on recent trends in revenue from various sources (state aid, property tax, other local revenue), and per-capita expenditures in ten spending categories.
- **Transportation** modeling was conducted primarily by the Central Transportation Planning Staff (CTPS), using the EMME2 model that estimates trip generation, mode split, vehicle miles travel, congestion, and air quality indicators. EMME2 results were supplemented by regional-level estimates from the Community Viz model.
- **Energy Consumption**, based on per unit energy consumption for heating, water heating, appliances, lighting, and other uses for various housing types.

The Current Trends scenario was based on continuation of recent trends in each of these areas; the alternative scenarios, including MetroFuture, were based on different assumptions about the distribution of growth, the type of alternative housing, per-capita water consumption, and various other important regional drivers. MAPC's conducted careful TAZ-level review of the housing and employment projections to ensure their consistency with MetroFuture principles. In May 2007, MAPC distributed the TAZ-level MetroFuture projections to each municipality in the MAPC region and to neighboring Regional Planning Agencies. This third round of community comments was intended as a "reality check," by asking for information about recent or imminent developments. Over 50% of MAPC's member municipalities responded to this request for information, and their responses are largely reflected in the final MetroFuture projections.

FOUR POSSIBLE FUTURES FOR METRO BOSTON

Current Trends: Let It Be

This is what Metro Boston might be like in 2030 if current trends continue. The problems we face today are likely to get worse, with sprawling development, unaffordable housing, educational inequity, lack of skilled labor, and unsustainable water withdrawals.

Alternative 1: Little by Little

This is what the region might be like if it implements many of the "smart growth" tools that are already available. In most cities and towns, growth rates would be the same as under Current Trends, but communities would take steps to change the location and pattern of growth at the local level.

Alternative 2: Winds of Change

This alternative would significantly change the regional distribution of growth, requiring new land use planning tools and a great increase in regional cooperation, including some regional decision-making on planning and land use issues.

Alternative 3: Imagine

This alternative would revolutionize growth patterns in the region, directing almost all new growth to high-density development in urban areas. The region would make massive investments in to provide college education for three quarters of the region's working-age adults.

ABOUT THE METROFUTURE REGION GEOGRAPHY AND COMMUNITY TYPES

The MetroFuture Region of Analysis

MAPC is the regional planning agency for the people who live and work in 101 cities and towns of Metro Boston, and developed MetroFuture as the official regional plan for those 101 municipalities. While MAPC's official authority ends at our statutory boundaries, the forces that shape our region do not. For this reason, MAPC chose to analyze regional trends on a broader 164-municipality region used by the Boston MPO for transportation modeling. This scale of analysis provides a better understanding of the impacts of different growth patterns. In addition, many of the policies, tools and resources will be available to municipalities outside the MAPC region.

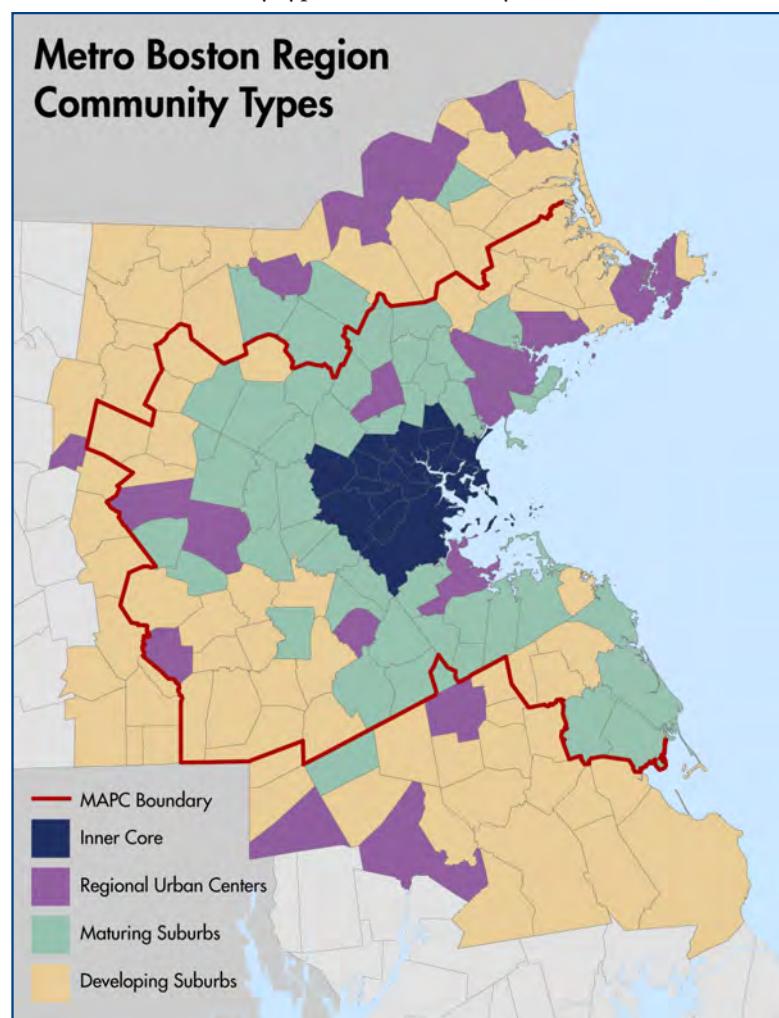
In this report, references to findings for "Metro Boston" or "regionwide" refer to the entire MetroFuture study area (164 municipalities.) When findings or recommendations refer to just the 101 municipalities, the text uses the term "MAPC Region."

Community Types

In order to understand how regional trends will affect the region's diverse communities over the coming decades, MetroFuture identified four basic community types. While each city and town is unique, communities within each type share important characteristics that will influence their development over the coming decades. The criteria used to define Community Types include land use and housing patterns, recent growth trends, and projected development patterns.

Many of the findings and recommendations in this report are described in terms of Community Types, and many of the recommendations refer to application in different Community Types. However, there is considerable variability even within community types, and the classifications are in no way determinative with regard to policy recommendations or allocation of resources.

In this report, findings or recommendations for "Urban" communities or municipalities refer to the Inner Core and the Regional Urban Centers. "Suburban" communities and municipalities include those in the Maturing Suburbs and Developing Suburbs.



Inner Core

These are the high density cities of Boston, Cambridge, Somerville, Revere, Everett, and Chelsea, as well as more residential “streetcar suburbs.” The Inner Core is essentially “built out” with little vacant developable land. Virtually all recent development has occurred through infill and reuse of previously developed land. Multifamily housing is a significant component of the housing stock, as is rental and subsidized housing. Most employment is concentrated in Downtown Boston and portions of Cambridge. Streetcar suburbs are built around village-scale commercial districts.

- 16 cities and towns, including the “streetcar suburbs” inside Route 128
- 1.3 million residents (31% of year 2000 population)
- Below average residential growth rates (6% projected if current trends continue)
- High density neighborhoods, multifamily housing, large immigrant populations

Regional Urban Centers

This group includes urban centers outside of the Inner Core. These communities are characterized by an urban-scale downtown core with multiple blocks of multi-story, mixed use buildings; moderately dense residential neighborhoods surrounding this core; and (in some cases) lower density single-family residential development beyond. Some of these communities are ‘built out,’ while others still have vacant developable land around the periphery of the community. Rental housing and multifamily structures comprise a significant component of the housing stock.

- 21 urban centers mostly outside Route 128
- 1.0 million residents (24% of year 2000 population)
- Below average residential growth rates (9% projected if current trends continue)
- Urban neighborhoods, large immigrant communities
- Some have large amounts of developable land

Maturing Suburbs

These municipalities are moderate-density residential communities with a dwindling supply of vacant developable land. Less than 25% of their land area is still developable. Less than 20% of their land area is devoted to commercial and industrial uses, although some of these towns comprise significant job centers. More than half of their housing units are owner-occupied single family homes.

- 50 towns, generally along Route 128
- 1.0 million residents (24% of year 2000 population)
- Average residential growth rates (11% projected if current trends continue)
- Mostly moderate density neighborhoods
- Dwindling supply of unprotected developable land

Developing Suburbs

These are less-developed towns with large expanses of vacant developable land. Most have recently experienced high rates of growth, primarily through large lot single-family homes. Some towns have a locally-significant stock of rental units and units in modestly-sized multifamily structures. Many of these towns have a well-defined, mixed use town center. Others have town centers with historical and civic significance but no commercial or neighborhood function. The extent of economic development varies but is generally quite limited.

- 77 towns, generally along I-495 and on the North and South Shores
- 900,000 residents (21% of year 2000 population)
- Above average residential growth rates (19% projected if current trends continue)
- Some have strong town centers and moderate density neighborhoods, others are more rural
- Large supply of vacant land available for development

THE FUNDAMENTALS: DEMOGRAPHIC, ECONOMIC, AND GLOBAL TRENDS

Steady—but Slow—Growth

Based on historic trends in birth rates, mortality, and migration, we expect **546,000 new residents by 2030**, an increase of almost 13%. This is in line with recent U.S. Census projections for Massachusetts, but much slower than the projected national growth rate of 28%. **Average household size may decrease** from 2.6 to 2.4 people per household.

What it means:

- The region will need to build **349,000 new housing units**.
- Slow growth could turn into no growth** if more people move out of the region or fewer immigrants move in.

An Aging Region

As the Baby Boomers move into their 60s and beyond, the **over-55 population will increase by 78%**. In 2030 one-third of our residents will be 55 or older. Meanwhile, all other age groups will shrink—including school-age children.

What it means:

- The demand for senior housing will remain strong, and there will be increased demand for senior services and transit.
- If more seniors decide to retire elsewhere due to high housing costs in the region, the projected population growth may evaporate.
- Region-wide, the **school-age population may decline** by 6%.

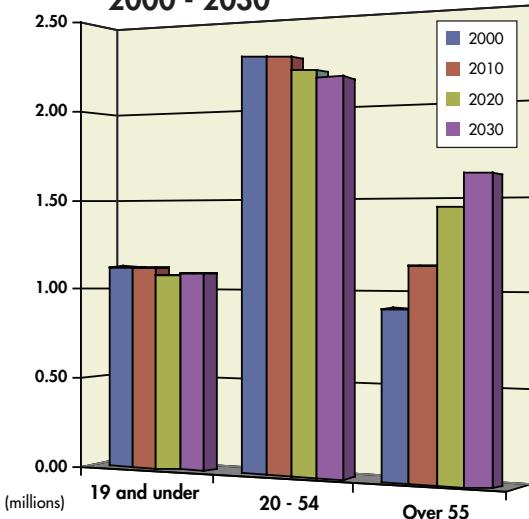
Increasing Diversity and Segregation

Our region will become more diverse over the coming years. By 2030, we expect that 31% of the region will be Black, Hispanic, Asian, or another non-White race. If recent trends continue, most growth in non-White populations may be confined to a dozen urban cities, and the racial mix of the region's suburbs will change very little. International **immigration is a key part of our region's growth**, since it makes up for the loss of population to other states. By 2030, almost one-quarter of our region will be foreign-born. Many immigrants have a bachelor's degree and arrive prepared to work in high-skill jobs; others have little education and come seeking new opportunities.

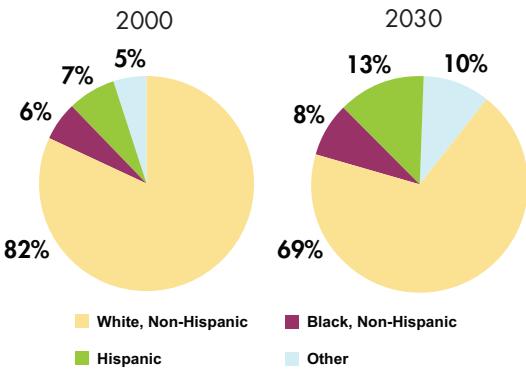
What it means:

- Failure to provide housing opportunities for lower-income families in suburban communities will worsen regional segregation.
- The increasing number of children from homes where English is not the primary language will create **challenges for many public school systems**.
- Post-9/11 immigration restrictions, if extended or tightened, may create long-term declines in immigration among skilled workers and students.
- High housing costs or a sluggish economy may drive more residents to move to other states, depleting the region's supply of skilled labor.

**Population by Age, MetroFuture
2000 - 2030**



Population Diversity in Metro Boston, 2000 – 2030



Moderate Economic Growth

MAPC projections suggest that the region's economy may add 293,000 jobs from 2000 to 2030, an increase of 12.4%. A closer examination indicates that some sectors will grow more than others. Half of the net new jobs are expected to be in **Professional & Business Services and Education & Health Services**. Manufacturing is the only sector expected to decline, mirroring national trends; we may lose **46,000 manufacturing jobs**, a decrease of 16%.

What it means:

- The loss of manufacturing jobs creates a need for workforce retraining.
- Gains in Education and Health Services suggest that the region will remain a national leader in this field, though rising costs and infrastructure limits could constrain the growth of academic and medical institutions.
- The Leisure and Hospitality Sectors may not grow as fast if unattractive development detracts from the New England character that brings tourists to the region.

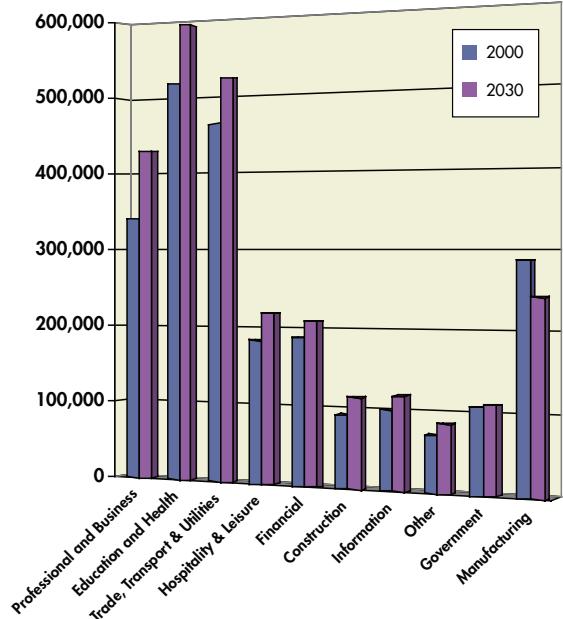
Global Trends

Increasing demand for oil and depletion of supplies is likely to drive up energy prices. **Global warming** may alter the region's temperature and rainfall patterns, and will increase the demand for renewable energy. Modernization of China, India, and a host of other countries will increase **international economic competition** and off-shoring of jobs at all skill levels.

What it means:

- Energy efficiency and leadership in renewable energy technologies may help to protect the region from energy price spikes and can provide a major growth industry.
- Gas prices may rise enough to affect the cost of goods from outside the region, making local food production more important.

**Employment by Sector,
MetroFuture 2000 – 2030**



THE METROFUTURE VISION

The MetroFuture plan is built on a positive and inclusive vision for a Greater Boston Region. That vision, created by the thousands of people who have participated in the process, reflects the special character of Metro Boston and the diverse values of the people who live and work here. The 65 specific goals of MetroFuture define how this plan would balance the various elements of that vision, and the objectives associated with each goal will allow the region to assess whether we are moving toward a brighter future.

MetroFuture's vision for a Greater Boston Region comprises a constellation of unique cities and towns, full of character and rich in culture. A regionally-minded population will make decisions based on informed civic engagement, political leadership, and proactive planning. The region will see growing regional diversity as an asset that can make the lives of all groups richer, and the region more attractive. The region will have more housing options that meet the diverse needs, especially those of seniors and families. Great schools in every community will help to create an educated populace, to provide opportunity, and to drive the economy. All people will live in healthy and safe communities, with local governments that have the resources they need to provide the services people expect. The region will retain its special landscape, unique to New England, and its environmental integrity, with healthy water, clean air, working farms, quiet forests, and beautiful coastlines. The region's economy will be strong, supported by a well maintained transportation system that provides people with different ways to get around. Communities work together to find common solutions for common problems.



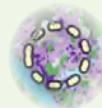
Metropolitan Core

- Job growth built around medical and educational institutions, and other major industries
- Improved schools, safety, parks attract families and retirees
- Build on role as the "hub" of the regional transportation network



Regional Hubs

- Rebirth of industrial cities and downtowns
- Focused growth in major suburban economic centers
- Best prospects for new transit outside of Metro Core



Suburban Centers

- Maximize potential of major town centers and existing transit
- Mixed-use growth expands housing choice and tax revenue
- New local bus connections and bike/pedestrian paths



Transportation Corridors

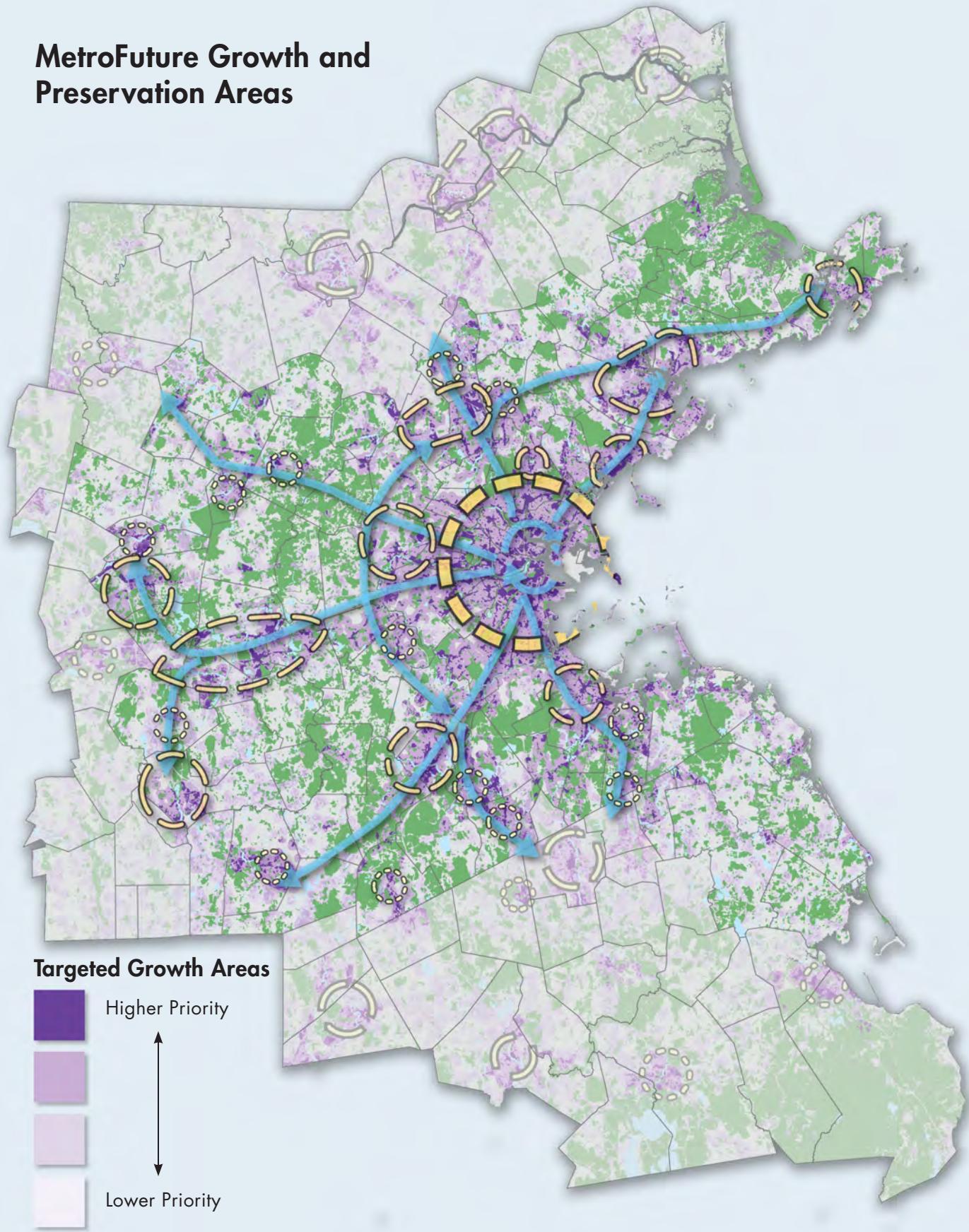
- Multi-modal investments to support growth
- New transit allows people to circulate around MetroCore, as well as "in and out."



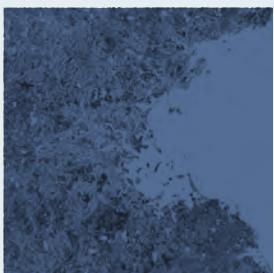
Priority Conservation Areas

- Areas with significant natural, scenic, agricultural, and recreational values

MetroFuture Growth and Preservation Areas

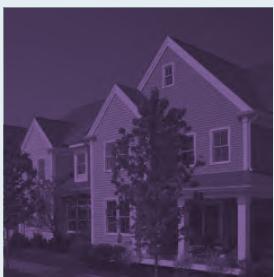


The MetroFuture scenario for growth and development will help to bring us closer to that vision. Key elements of the scenario described below, organized by the six topic areas that structure the remainder of this chapter.



Sustainable Growth Patterns

MetroFuture envisions great changes in the region's growth patterns. Instead of being dispersed across the region, more growth would occur in the region's city and town centers, bolstered by improvements to schools, safety, and parks. Many fast-growing suburbs would grow more slowly while expanding housing choices through more small homes and townhouses. In rural areas, increased land protection, working farms, and clustered homes would help to preserve traditional landscapes. Region-wide, more growth would occur through the reuse of vacant commercial and industrial sites, both large and small. More mixed use developments (for example, housing located above shops) would help to revitalize local business districts. More new jobs would be located closer to where people live, where there is existing infrastructure, and where employees have more commuting choice. Consistent planning, zoning, and design guidelines would expedite high-quality developments that improve community character and the economy.



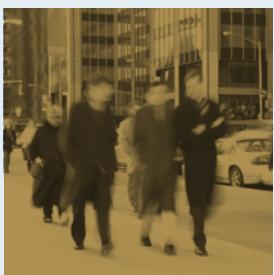
Housing Choices

New housing in the region would favor a wide range of housing types. New apartments, townhouses, and condominiums in urban neighborhoods and town centers would create more choices for the retiring population of Baby Boomers, helping more of them to stay in their community and freeing up supplies of existing single family homes. In cities both large and small, an increased supply of urban "starter homes" (lofts, condominiums, two-families) would help to attract and retain young professionals and their families. An increased emphasis on smaller and more affordable homes, both rental and ownership, would help residents who either don't need or can't afford large single family homes. Over half of the region's new moderately priced housing would be in suburban towns, providing more opportunities for lower income families to live anywhere in the region, and helping to reduce regional segregation.



Community Vitality

More cities and towns would save money, raise revenue locally, and control their fiscal destinies. Savings would accrue through statewide insurance programs and multitown collaboration on purchasing and basic services such as emergency dispatch and animal control. Increases in state aid would target those communities with the largest expenses for new growth under the plan. Many smaller towns would see slower growth rates and would therefore have less need to build new schools and infrastructure. Municipalities would have incentives and technical support to ensure that zoning and land use decisions reflect local and regional goals. A strong regional food system—linking farmers, distributors, markets, and consumers—would improve access to healthy and local food. Well-designed developments, improved sidewalks, and more bicycle paths would provide more opportunities for residents to have an active lifestyle. With more healthy food, a cleaner environment, and improved parks, more families—especially those in urban areas—could lead healthier lifestyles.



Prosperity

MetroFuture would help the region to remain competitive in the global knowledge economy. Dramatic public education improvements, more adult education opportunities, and a stronger network of community colleges would create a skilled workforce that will drive economic growth. Support services such as child care assistance would enable more people to join the labor force. More job growth would occur through redevelopment of existing commercial and industrial areas, aided by proactive planning policies that would reduce time spent in permitting. Fewer new jobs would be located in currently undeveloped "greenfields." New office space in town centers would attract small businesses and micro-enterprises, enhancing the region's creative economy.

Getting Around

With more new jobs and houses in cities, town centers, and commercial districts, more people could walk or take transit for work and play. Local buses and “feeder” service to commuter rail stops would increase transportation choices in suburban communities. Increased population and ridership in urban areas would drive service improvements, including increased frequency and new services. Less money would be spent on expanding major highways and interchanges, in favor of improvements and programs that would provide more alternatives to driving. Local traffic in town centers and downtown areas might increase with new jobs and housing, so pedestrian improvements and “traffic calming” will be used to make it more convenient for people to conduct errands on foot or by bicycle. An expanded network of bicycle and pedestrian routes and trails would provide better access to regional open spaces.



Energy, Air, Water, and Wildlife

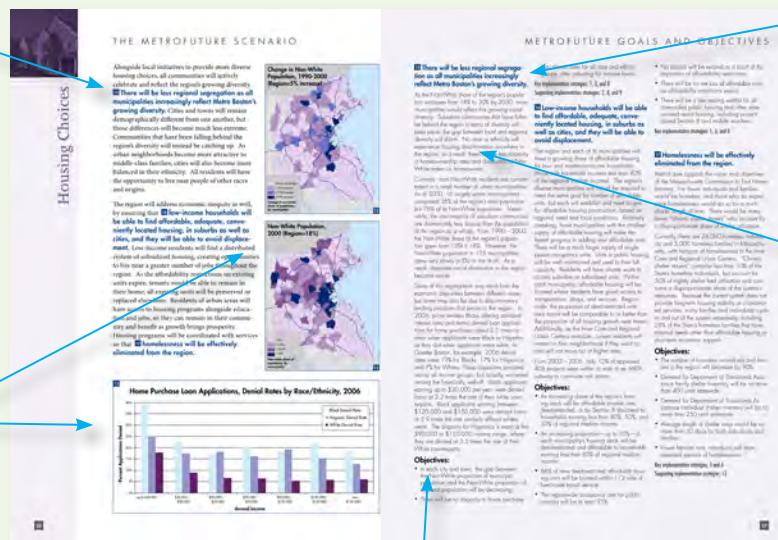
New technologies and practices would ensure conservation and sustainable use of natural resources. Smaller, more efficient housing units, increased renewable energy production, and less reliance on the automobile will be major drivers in the reduction of the region's greenhouse gas emissions. Comprehensive water conservation and reuse would reduce demand on public water supplies, while innovative wastewater and stormwater techniques would improve the health of local water resources. Greater energy efficiency would protect the region from spikes in energy costs and would support new industries and job growth. Perhaps more importantly, our local environment would be healthier and Metropolitan Boston would be doing its fair share to curb global climate change.



HOW THIS CHAPTER IS ORGANIZED

The remainder of this chapter includes a narrative description of the MetroFuture scenario, along with a description of all the goal and objectives that support that scenario. The scenario description runs continuously on the left-hand (even-numbered) pages, and the goals are presented on the right-hand (odd-numbered) pages.

The MetroFuture Scenario is a narrative description of what the region would be like in 2030 if MetroFuture is implemented. Specific goal statements are embedded in this narrative and are highlighted. A detailed description of each goal can be found on the facing page.



Maps and Charts throughout the document depict current conditions, Current Trends projections, and/or MetroFuture projections

The MetroFuture Goals are the specific and measurable “end state” outcomes that MetroFuture seeks to achieve. There are 65 discrete Goal Statements.

Objectives are specific quantitative targets or milestones, generally based on available data, that can be used to determine whether a goal has been achieved. Unless otherwise noted, the time horizon for all objectives is the year 2030.

The Goals Annotations provide more detail on each goal, including current conditions, MetroFuture projections, and Current Trends projections, where available

- The scenario is a narrative description of what the region would be like in 2030 if MetroFuture is implemented. Specific goal statements are embedded in this narrative and are highlighted. A detailed description of each goal can be found on the facing page.
- Maps and charts throughout the document depict current conditions, current trends projections, and/or MetroFuture projections.
- The MetroFuture Goals are the specific and measurable “end state” outcomes that MetroFuture seeks to achieve. There are 65 discrete Goal Statements.
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THE METROFUTURE SCENARIO

The Region will Build on Sustainable Growth Patterns

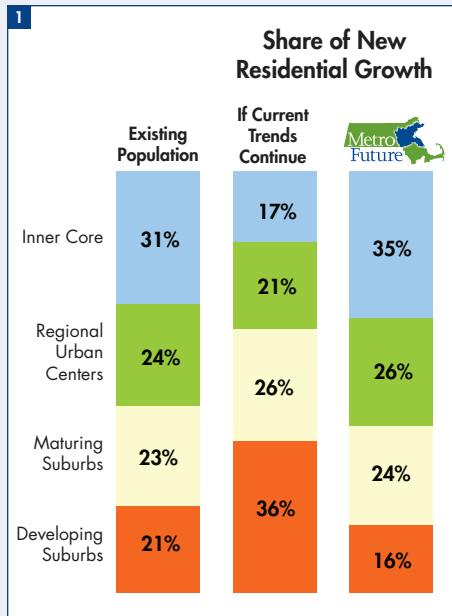
MetroFuture builds on the region's unique development patterns, with a balanced mix of growth in urban communities, developed suburbs, and low density towns. **1 Population and job growth will be concentrated in municipalities already well served by infrastructure, with slower growth in less developed areas where infrastructure is more limited.** Instead of being dispersed across the region, new homes are focused in areas that can meet the needs of new residents. No one type of community would shoulder a disproportionate share of growth.

New growth will be balanced to reinforce the region's strong patterns of development and open space. The region's urban communities would be home to more of the region's new residents, and roughly half of all new housing units. This means not only the cities and streetcar suburbs of the Inner Core, but also Regional Urban Centers such as Beverly, Salem, Framingham, Marlborough, and Norwood. Urban areas benefit from existing infrastructure and they demonstrate great potential for new growth through reuse of existing buildings and developed land. They also represent a more sustainable form of development due to energy-efficient housing types and compact development patterns that are readily served by transit. Roughly half of all new homes would be located in urban communities. An increased supply of urban "starter homes" (condominiums, two families) would help to attract and retain young professionals and their families. Many more people would find it attractive to live in urban areas, with high-quality schools; easy access to shops, services, jobs, and culture; nearby parks and playgrounds; and a feeling of safety. Improvements to city life would benefit both current and new residents, and households at risk of displacement would find more programs to help them stay in their homes or to find new housing opportunities throughout the region.

Suburban municipalities would see growth focused into existing residential and commercial centers, and away from undeveloped areas. Those Developing Suburbs that have seen runaway population growth straining environmental and municipal systems would generally see much slower increases. Maturing Suburbs would preserve their dwindling supply of open space through the reuse of already-developed commercial and industrial land. Some towns would see more growth than if Current Trends continues, others less. Lower-density towns would capture much less economic development, but their municipal bottom line would not suffer for it, due to lower expenses and more diversified revenue options.

Urban neighborhoods, town centers, streetcar suburbs, shopping centers, and other areas commonly considered "built out" would see considerable new growth through sensitively designed compact growth that creates new vitality and housing choices. **2 Throughout the region, most new growth will occur through reuse of previously developed land and buildings,** in ways that fit into the context. Developments would range from small "infill" developments and building reuse in town and village centers to large-scale redevelopment of industrial areas, strip malls, surplus state land, or decommissioned federal properties. Historic buildings would be reused for residential or commercial uses, and property owners would add additional capacity to buildings through additions or accessory apartments. Property owners will find strong incentives to convert outmoded properties, such as strip malls and industrial sites, to higher and better uses. As they do, municipalities will see higher tax revenue without the loss of open space or the need to extend infrastructure into new areas. Redevelopment will happen expeditiously thanks to well-defined community expectations and new infrastructure financing tools. Communities will have more resources to deal with eyesores and abandoned or contaminated properties. **3 As brownfields and other polluted sites are cleaned up and re-used for development or parks,** their reuse will have a positive ripple effect nearby; the public sector investments in these "keystone" properties will generate private sector investment in surrounding properties.

METROFUTURE GOALS AND OBJECTIVES



1 Population and job growth will be concentrated in municipalities already well served by infrastructure, with slower growth in less developed areas where infrastructure is more limited.

The distribution of growth in the region would largely follow existing patterns of population and job distribution. Population growth rates (2000 – 2030) would be more comparable by Community Type, ranging from 10% to 14%. Areas in or near existing commercial and industrial centers would capture nearly 70% of job growth.

If Current Trends continue, a disproportionate share of population and employment growth

would occur in suburban areas, especially in the Developing Suburbs. Their share of new growth would be nearly twice as large as their share of existing residents and jobs. All together, Developing Suburbs would grow at a rate of 19%, more than three times as fast as the Inner Core (6%).

Objectives:

- The Inner Core will capture 35% of the region's population growth and 41% of the region's employment growth.
- Regional Urban Centers will capture 26% of the region's population growth and 14% of the region's employment growth.
- Maturing Suburbs will capture 24% of the region's population growth and 29% of the region's employment growth.
- Developing Suburbs will capture 16% of the region's population growth and 16% of the region's employment growth.

Key implementation strategies: 1, 3, 6, 5, 7, and 4

Supporting implementation strategies: 8, 12, 11, and 2

ment occurs on greenfields; previous investments in infrastructure will be lost.

Objectives:

- 60% of new commercial and industrial development in the region (measured in terms of jobs created) will occur on land that is already developed.
- 61% of new residential development in the region (measured in terms of housing units) will occur on land that is already developed.

Key implementation strategies: 1, 11, 6, 5, and 2

Supporting implementation strategies: 3

3 Brownfields and other polluted sites will be cleaned up and re-used for parks or development.

MetroFuture prioritizes the remediation of contaminated sites that pollute the environment and have negative impacts on neighboring real estate. In order for the region to find 10,000 acres of already developed land available for reuse, it must remediate and reuse all existing contaminated properties.

As of June 30, 2002, over 650 projects have received funding approval and/or direct project assistance as a result of the Brownfields Act implementation in Massachusetts. Approximately 125 projects are pending and partner agencies have provided concerted outreach in over 140 communities. Brownfield Redevelopment Access to Capital (BRAC), a \$15 million environmental insurance fund based on two state-negotiated policies provided by AIG, reports that, as of 2002, 7,399 jobs have been created, 121 businesses have been located on or near sites, and tax revenues have increased by \$796 million.

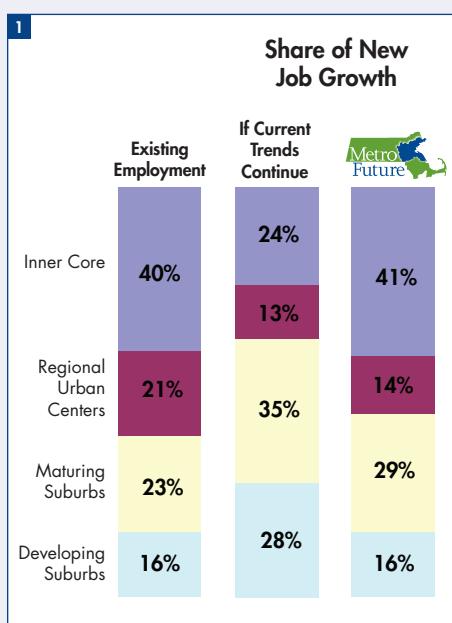
Currently, 28 of the 36 Federal Superfund Sites in Massachusetts are in Metro Boston. In accordance with the Massachusetts Contingency Plan (MCP), over 35,000 releases statewide have been reported to the Department since 1984. Since 1993, there have been roughly 2,000 notifications per year, and 24,000 sites have been remediated. 90% of sites that have been remediated are clean enough for unrestricted use, while 7% include deed restrictions as part of the remedy activity and 3% are temporary solutions.

Objectives:

- All existing 21E or Superfund sites will be remediated and reused by 2020.
- All new 21E or Superfund sites will be remediated within 10 years.

Key implementation strategies: 11, 6, and 5

Supporting implementation strategies: 3



Reuse of previously developed land and buildings can add housing and tax revenue without the loss of open space. It also conserves land, energy, and previous investments in buildings and infrastructure. MetroFuture directs more than 69% of all new housing construction to land that was previously developed for other uses. Regionwide, the reuse of 7,700 acres of mostly commercial and industrial land (6% of the region's existing commercial and industrial land) would accommodate 240,000 housing units. The share of housing created through redevelopment would vary across the region: 95% in the Inner Core; 66% in the Regional Cities and Maturing Suburbs; and 32% in Developing Suburbs.

Over 2,500 acres of existing commercial and industrial land (2% of the region's total) would be redeveloped for higher density commercial uses, accommodating 60% of new job growth regionwide, at an average density of 70 jobs per acre. Relatively more growth would occur through redevelopment in urban areas than in suburban areas.

If Current Trends continue, 75% of new suburban housing units would be built on undeveloped greenfields. Regionwide, 80% of new jobs would be created on greenfields. As employment in manufacturing and other basic industries declines, vacant industrial properties will remain that way as new economic develop-

THE METROFUTURE SCENARIO

Throughout the region, different locations are more or less suited for compact growth, due to variations in land use, infrastructure, and the environment. Traditional town and village centers, with their compact arrangement of businesses and homes, are often excellent places to focus new growth so that new residents live closer to shops, services, and transit. MetroFuture reinforces these growth patterns, in order to preserve open space and increase efficiency; **4 in suburban municipalities, most new growth will occur near town and village centers.** Because suburban towns are all different, this new growth would take different forms in different communities. Smaller towns might see new clusters of shops and small homes in or near village centers. Built-up suburbs would see more multistory mixed-use buildings (housing and commercial) in town centers and along commercial corridors. Where the opportunities present themselves, large-scale reuse of industrial, commercial, or surplus public land would create a mix of housing, shops, and employment in new villages that take their cues from traditional New England town centers.

Communities would control new compact growth through proactive planning and supporting land use regulations, defining how much growth they want, what type of growth they want, and what they want it to look like. With a permitting process structured to achieve these goals, each development proposal will be evaluated expeditiously on its merits, rather than being bogged down by lack of consensus about what is wanted.

In order to provide greater transportation choices for residents throughout the region, **5 most new homes and jobs will be near train stops and bus routes, and new growth will be designed to promote transit use.** Land near existing transit stations would be used to its utmost capacity, with the support of surrounding communities who recognize that people who live or work near transit drive fewer miles and create less congestion and pollution. Increased ridership will help support more frequent service, which will in turn increase the attractiveness of growth near transit, in a “virtuous cycle.” New growth would be easily accessible on foot, bike, or via new bus service, with buildings and homes clustered together, rather than separated by parking lots and roadways, and connected by safe and direct pedestrian routes.

As more growth occurs in existing neighborhoods, among town centers, and near transit, it will necessitate a new regional emphasis on **6 high-quality design that will help compact development enhance the region’s character and livability.** New development will prioritize human-centered design, rather than car-oriented engineering. Safe and direct pedestrian paths, tree-lined streets, and smaller parking lots will make it easier to walk around, make connections, and enjoy the environment. There will be fewer ‘formula’ buildings of fast food and big-box stores as communities insist that new growth be designed to complement and reflect the surrounding areas. New growth will be more accessible to seniors and persons with disabilities, and will be designed to protect the health of people who live and work there.

METROFUTURE GOALS AND OBJECTIVES

4 In suburban municipalities, most new growth will occur near town and village centers.

MetroFuture focuses more growth near existing (or new) town and village centers, at a scale appropriate to the surroundings. Nearly two-thirds of new suburban housing units will be near existing centers, either historic town and village centers or more recent commercial districts. New growth in those areas will be a mix of apartments, condominiums, townhouses, and senior housing. 30% of housing near town centers would be multifamily homes and townhouses; and 55% would be multifamily buildings of more than 6 units. The mix would vary across Community Types, with a higher proportion of multifamily homes in the Maturing Suburbs. Economic development is also focused; only 20% of new suburban job growth would be far outside of town centers or existing commercial/industrial areas.

The region would also see more large mixed-use developments that fulfill the same role as existing centers. One-quarter of new suburban housing units would be in mixed-use developments (also 6% of suburban jobs.)

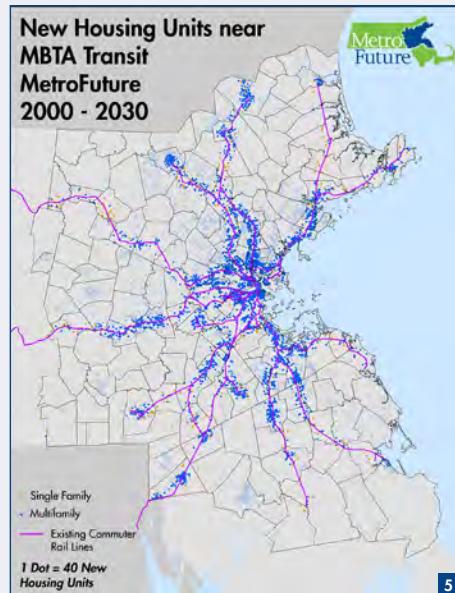
If Current Trends continue, two-thirds of new suburban development will occur far outside of town centers or existing commercial/industrial areas. New residents will be more dependent on their car and will be more likely to shop at strip malls and shopping centers that drain the life from traditional town centers.

Objectives:

- 67% of housing unit growth in Maturing Suburbs will be concentrated near town/village centers or commercial districts.
- 47% of housing unit growth in Developing Suburbs will be concentrated near town/village centers or commercial districts.
- 64% of new Suburban job growth would occur near existing employment centers.
- 25% of Suburban housing units and 6% of Suburban jobs will be in mixed-use developments.

Key implementation strategies: 1, 12, 11, and 5

Supporting implementation strategies: 3, 8, and 7



5 Most new homes and jobs will be near train stops and bus routes, and new growth will be designed to promote transit use.

MetroFuture's land use plan supports transportation choices that the region needs. The plan focuses more than two-thirds of new housing and jobs near existing train stops and bus routes (comparable to the proportion of existing residents and jobs that are near existing transit.) Of course, this is not possible throughout the entire region; in the Inner Core, 100% of new housing and jobs would be near transit, but just 60% in the Maturing Suburbs and Regional Urban Centers. In Developing Suburbs, 26% of new housing and 22% of new jobs would be near existing transit.

Growth near transit would also be as compact as possible, in order to create maximum ridership potential and make the most of transit investments. Person density (population and jobs per developed acre) in areas near transit would increase 10% regionwide.

If Current Trends continue, a smaller share of the region's population would live near existing train stops and bus routes, even as the need for transit increases. Only 50% of new jobs and housing would be near existing transit. Transportation demands of new auto-oriented development would increasingly compete with transit for limited resources. Growth near transit would also fail to generate much ridership, due to its low density, poor design, and lack of connections. During recent decades, the density of residents and jobs around commuter rail stations (and therefore the potential ridership) has decreased or increased slower than the region

overall, due to restrictive zoning. This decrease in density would continue, with average density (population and jobs per developed acre) near transit declining by 3% regionwide, and bigger declines (5%) in suburban municipalities.

Objectives:

- 66% of new housing units regionwide will be within 1 mile of fixed-route transit service.
- 70% of new commercial and industrial development (measured in number of jobs created) will be within 1 mile of fixed-route transit service.
- 75% of new development within 1/2 mile of rapid transit will be at densities of at least 50 people/jobs per developed acre.

Key implementation strategies: 1, 12, 11, and 5

Supporting implementation strategies: 8, 6, and 7

6 High-quality design will help compact development to enhance the region's character and livability.

While MetroFuture calls for more growth in and near existing cities and town centers, that growth must be designed well in order to improve quality of life. Urban areas will see the largest amount of new growth in existing neighborhoods, but suburbs would also experience changes. 14% of existing suburban households are in areas where the net density of housing units per developed acre would increase by 25%. New development would be reviewed to ensure compatibility with community-driven design standards. Most projects would also meet national best practices for sustainable, human-centered, and accessible design. High-quality design is difficult to assess quantitatively. The US EPA Leadership in Energy and Environmental Design Neighborhood Development (LEED ND) program represents the state-of-the-art framework for assessing new development against a comprehensive set of design criteria (including site design, accessibility, and sustainability.)

Objectives:

- 100% of the region's municipalities will have design guidelines or form-based codes.
- 100% of the region's municipalities will have incorporated LEED or LEED-equivalent requirements in their zoning.
- All new residential and commercial development will meet the requirements of LEED Certification or equivalent.

Key implementation strategies: 1, 8, 6, 5, 7, and 2

Supporting implementation strategies: 12

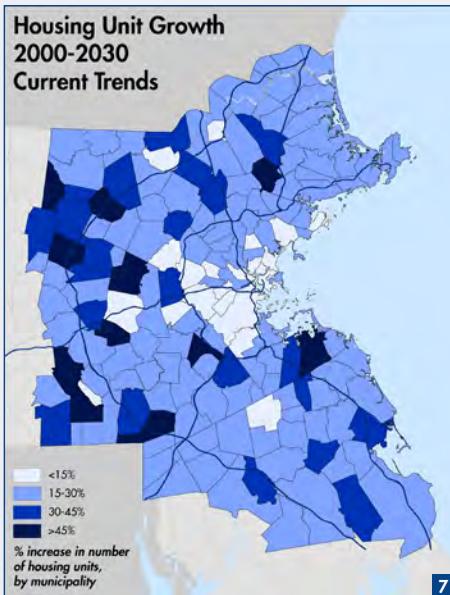
THE METROFUTURE SCENARIO

With high-quality design and a renewed focus on the historical centers that make the region distinctive, **7 cities, towns, and neighborhoods will retain their sense of uniqueness and community character.** Well-designed growth in cities and town centers will help to support local business districts, with their distinctive mix of local merchants. Stronger municipal finances will also help city and town governments to support efforts that build community, whether they are parades, libraries, festivals, or community centers. More moderate growth rates throughout the region will also help municipalities to avoid drastic population increases that can destabilize community character, not to mention the environment and municipal finance. Urban areas will become more vibrant, town centers will be more robust, and rural areas will retain their bucolic character.

Metro Boston is unique in the way that new and old are juxtaposed, and this mix of new and old would become stronger under MetroFuture. The region will welcome innovative, sustainable, and modern development in historic districts, recognizing that this growth will help to stem the greatest threat to Metro Boston's historic character—unplanned sprawl that obscures the region's unique land use heritage and drains the life from traditional centers. Even as robust new growth occurs alongside (or within) historic buildings and places, **8 historic resources will be preserved and enhanced.** Vibrant cities, community-oriented suburbs, and bucolic landscapes will keep their integrity. New growth in city and town centers will create opportunities to bring historic structures alive through new uses, by harnessing well-planned public and private investments. Enhancement and reuse of historic resources will make city and town centers more interesting and attractive places to live and work. Residents will recognize that community character does not depend only on the legacy of the past, but on how communities proactively address change; obstructionism in the name of community character drives growth out of historic centers and into undeveloped areas.

With a shift in new growth to developed areas and a new emphasis on land preservation, **9 the region's landscape will retain its distinctive green spaces and working farms.** There will be far fewer conventional one acre subdivisions that are responsible for most of the region's lost open space. Residents and visitors alike will enjoy scenic roadways and vistas of our traditional New England landscape of farms and forests juxtaposed with compact clusters of development. As farmers respond to increased demand for locally grown food, more of them would be expanding, rather than selling their farms. The landscape would be dotted with wind turbines, symbol of a new era for the region.

METROFUTURE GOALS AND OBJECTIVES



7 Cities, towns, and neighborhoods will retain their sense of uniqueness and community character.

Fewer towns would see drastic population increases that destabilize municipal finances, or massive commercial developments that erode community character. In only 10 towns would the number of housing units increase by more than 25% over 30 years, and in no municipality would the number of housing units increase by more than 60%. In the region's 50 fastest-growing towns (if Current Trends continue), housing unit growth rates would be 12% less under MetroFuture. Compact new growth near town centers would bring customers and vitality to historic business districts, helping locally owned businesses to thrive.

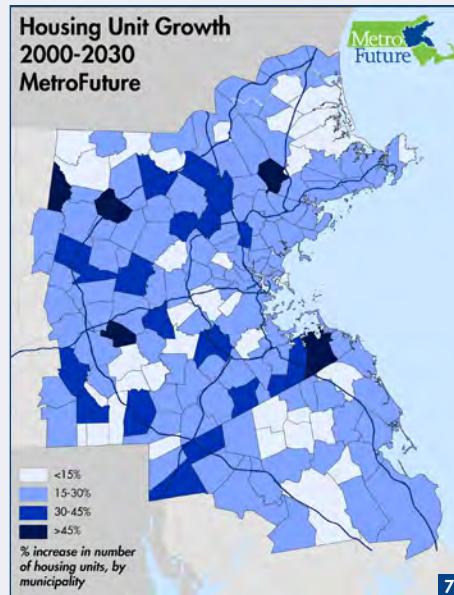
If Current Trends continue, the number of housing units would grow by more than 40% in 15 municipalities, and by more than 60% in 7 towns.

Objectives:

- In no municipality will the number of housing units grow by more than 60% from 2000 - 2030.
- The acreage of land in commercial uses will grow only 7% regionwide.
- Small, locally owned businesses will capture an increasing share of the region's retail and service spending.

Key implementation strategies: 1, 8, 6, 5, 7, and 4

Supporting implementation strategies: 3, 12, and 11



8 Historic resources will be preserved and enhanced.

MetroFuture will enhance the rich history of Metro Boston that sets it apart from other places. Greater support for planning will help communities to identify historic properties and plan for their preservation, enhancement, and reuse.

As of 2005, Massachusetts was one of the top contributing states to the National Registry of Historic Places, responsible for over 3,970 listings (comprising 65,720 historic resources) and roughly 800 National Register districts. The Inventory of Historic and Archaeological Assets of the Commonwealth now lists over 200,000 properties and sites. Metro Boston has the state's highest concentration of inventoried

properties and the highest number of communities with comprehensive surveys of historic resources. The region is home to approximately 550 historic resources and districts. Community Preservation Act funds and the Heritage Landscape Inventory Program have helped communities identify and protect these important places.

Objectives:

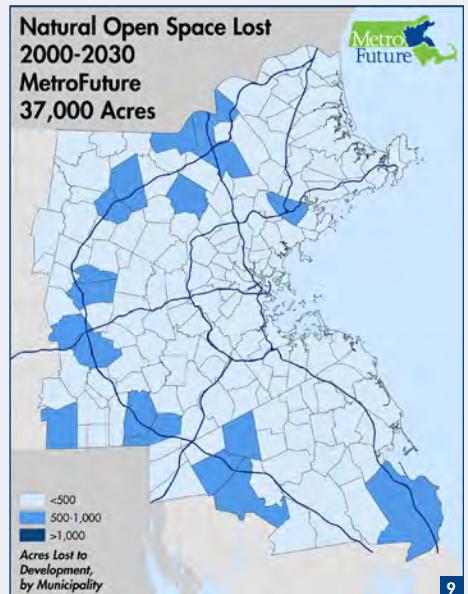
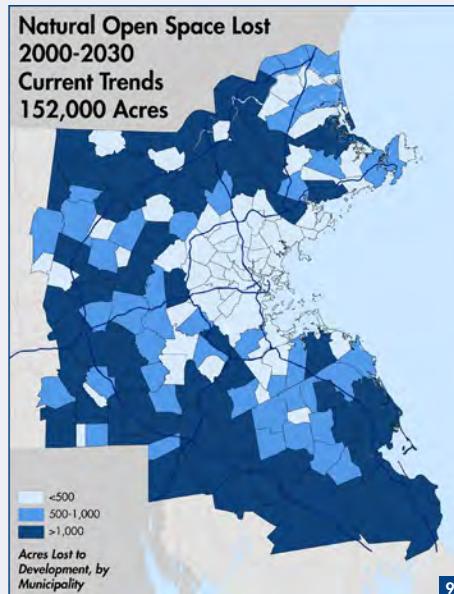
- Every municipality will have a historic resources preservation plan.
- There will be no loss of significant historic resources.

Key implementation strategies: 1, 6, 5, and 7

9 The region's landscape will retain its distinctive green spaces and working farms.

MetroFuture will help the region retain more of its special open spaces and traditional New England landscapes – forests and farms alternating with compact development. Only 20% of all single-family homes would be built in large lot ($>1/2$ acre) subdivisions, which currently account for the vast majority of open space loss. Another 33% would use open space or conservation designs that cluster homes while preserving much of the land as open space. The remaining single-family homes (47% of the total) would be on small ($1/4$ acre) lots clustered near developed areas. Only 8,800 acres of open space would be developed for commercial and industrial uses.

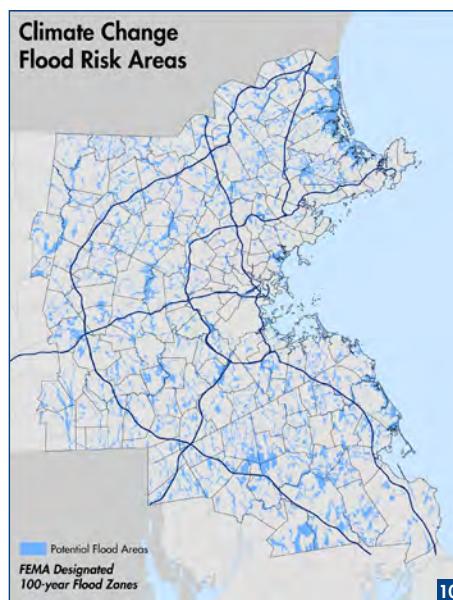
If Current Trends continue, the region would lose 140,000 acres of open space to a checkerboard of large-lot subdivisions (119,000 single-family homes on a half-acre or more). An additional



THE METROFUTURE SCENARIO

The transformative nature of this land use plan requires a similarly transformative approach to the entire development and planning process. Today's decision-making processes are often fragmented, reactive, and starved for resources; as a result, they yield uncoordinated growth that detracts from the region's many strengths. Under MetroFuture, **10 growth in the region will be guided by informed, inclusive, and proactive planning.** There will be greater continuity from planning to development. Municipalities will take a long-term perspective on growth and will focus, not on how growth can be avoided or minimized, but on how it can be harnessed to enhance existing land use, resources, and community character. Considerations of climate change will take on a greater role in development and policy decisions, with regional efforts to guide growth and conserve energy. A collaborative approach to preventing damage from future disasters would help **11 the region to be prepared for and resilient to natural disasters and climate change.**

Metro Boston can only achieve its full potential if cities and towns work together and think like a region. The region cannot be sustainable or economically competitive without greater regional equity. Recognizing that the challenges ahead do not respect municipal boundaries, **12 communities will work together to plan for growth and share resources.** Municipalities would save money through collaboration. New modes of intermunicipal communication—both formal and informal—will help create a stronger regional identity.



10

METROFUTURE GOALS AND OBJECTIVES

12,000 acres would be lost to commercial and industrial development. Among the lost would be 17,000 acres of farmland, 30,000 acres of prime agricultural soils, and 58,000 acres of habitat for rare and endangered species.

Objectives:

- No more than 37,000 acres of undeveloped natural land will be lost to development by 2030.
- There will be no net loss of the region's agricultural land (117,000 acres.)
- 66% of single-family housing on nominal lots of 1/2 acre or more in suburbs will use open space or conservation subdivision designs.

Key implementation strategies: 1, 11, and 7

Supporting implementation strategies: 5

10 Growth in the region will be guided by informed, inclusive, and proactive planning.

Sustained public engagement helps to yield more effective and durable planning solutions. New planning tools would create continuity of participation and priorities through time (from planning to development) and across jurisdictions (from state to regional to local). Local master plans, consistent with the regional plan, would be in place across the region, and local zoning would be consistent with those plans. Broad, positive, and informed public support for plans will encourage consistent decision-making and generate fewer appeals. Compact growth areas would have the zoning capacity to accommodate a large share of the region's growth.

Currently, only 40% of MAPC's municipalities have up-to-date comprehensive master plans. In most cities and towns, zoning is not consistent with the land use plan outlined in the Master Plan.

Objectives:

- 100% of municipalities will have a master plan that has been created or updated in the past five years and is consistent with the regional plan.
- 100% of municipalities will have zoning consistent with the local master plan.
- Disparity between actual development patterns and the MetroFuture land use plan will steadily decrease over time by most measures.
- Regionwide, "as of right" development potential (in terms of housing units and commercial/industrial square footage) in designated growth areas will be equal to or greater than the regional plan's forecasts for those areas.

Key implementation strategies: 1, 12, 5, 7, 4, and 2

Supporting implementation strategies: 3, 8, and 11

11 The region will be prepared for and resilient to natural disasters and climate change.

More cities and towns would take actions to mitigate the effects of increasing global temperatures and to prevent damage from natural disasters. The region would put fewer new buildings in harm's way, and will make strategic investments to protect vulnerable areas. Well-maintained infrastructure would be more resilient to disasters.

Current research suggests that Metro Boston is facing a future in which: temperatures could exceed 90 degrees on 30 days per year (twice the current number); sea levels along the Metro Boston coastline could rise at least 24 inches, increasing storm intensity and causing up to \$94 billion in coastal property damage during this century; and river flooding is projected to impact twice as many properties and cost twice as much in damage. Currently, 95% of municipalities in the MAPC region are preparing or have already completed pre-disaster mitigation planning documents.

Objectives:

- All municipalities will have up-to date Pre-Disaster Mitigation plans.
- All municipalities will be fully implementing their Pre-Disaster Mitigation plans.
- The region will have no structurally deficient dams.
- The region will have limited new growth in flood zones.

Key implementation strategies: 1, 4, and 2

Supporting implementation strategies: 3, 12, 6, and 13

12 Communities will work together to plan for growth and share resources.

A stronger regional identity will grow from increased communication and coordination, both formal and informal, across municipal boundaries. Through planning, joint services, and revenue sharing, cities and towns will be more efficient and more protective of infrastructure and the environment.

Objectives:

- The region will have an increasing number of inter-municipal planning efforts such as regional open space, economic development, public safety, or housing plans.
- The inflation-adjusted dollar value of goods and services purchased through joint procurement will steadily increase.
- There will be 100% participation of the region's municipalities in MAPC subregions.
- An increasing proportion of local tax revenues will be shared through regional tax sharing.

Key implementation strategies: 1, 3, 12, and 4

Supporting implementation strategies: 8, 11, 9, 6, 5, 7, 13, and 2



Housing Choices

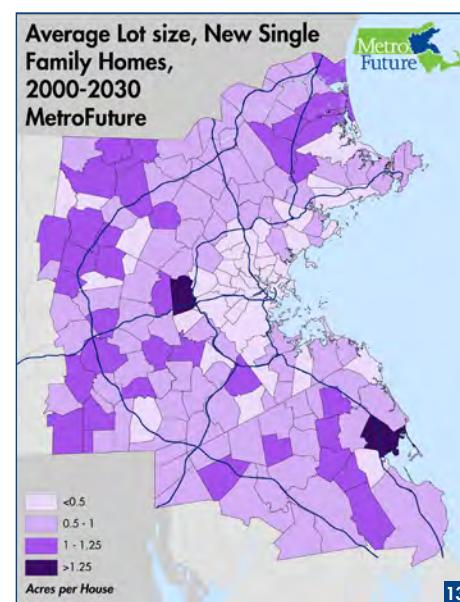
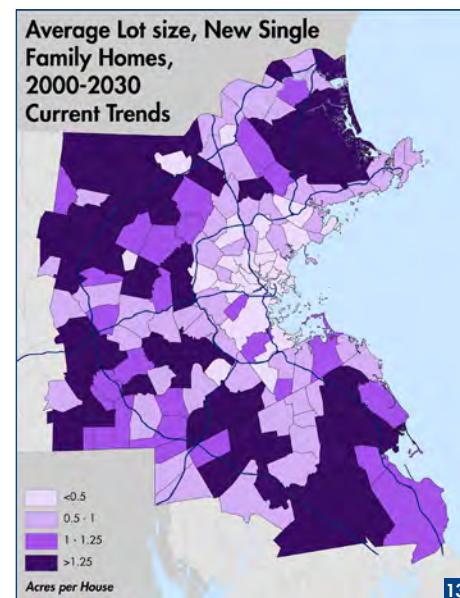
THE METROFUTURE SCENARIO

Residents Will Find Better Housing Choices

MetroFuture housing patterns support regional equity, quality of life, and economic competitiveness. The region will have an adequate housing supply, and housing-friendly zoning policies (targeted to appropriate locations) will allow the housing market to quickly respond to increased demand by increasing supply. Workers at all skill levels will be able to find housing they can afford, in convenient locations. There will be less market demand for single-family homes (especially those on large lots, which will largely remain very expensive) as more people will find compact housing types to be affordable and convenient. The region will have an abundant supply of apartments, condominiums, townhouses, and 2-family homes—housing types that require less land, less energy for heating and cooling, and shorter trips to access shops and services. New housing would be only one component of the housing supply, however. As the growing senior population moves or downsizes to smaller, more convenient housing types, they will free up a significant supply of existing single-family homes for younger families. While single-family homes on large lots will be less abundant than today, **13 families looking for suburban single-family homes will have a greater choice of smaller homes in more traditional neighborhood settings.**

Families will find more new small homes among existing neighborhoods or clustered together near open space.

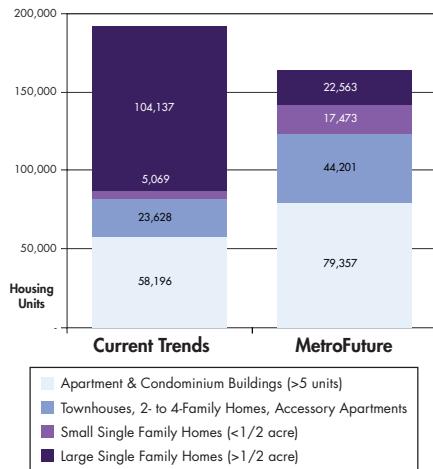
With a general broadening of housing types and costs, the region will focus on efforts to increase equitable access to housing, and decrease regional segregation. All municipalities will recognize their obligation to provide lower-cost housing; and will work toward providing their fair share of the region's diverse housing needs. **14 An increasing share of the housing in each municipality will be affordable to working-class families and fixed-income seniors.** Municipalities will be evaluated not solely by the total percentage of affordable housing, but also by progress toward meeting agreed-upon housing targets that take into account both local conditions and regional needs.



METROFUTURE GOALS AND OBJECTIVES

13

Suburban Housing Production by housing type, 2000 - 2030 Current Trends vs. MetroFuture



13 Families looking for suburban single-family homes will have a greater choice of smaller homes in more traditional neighborhood settings.

MetroFuture's land use plan would provide many opportunities for families to find suburban single-family homes, especially smaller ($<1,700$ square feet), more reasonably priced homes. The region would produce fewer single-family homes (52,000 versus 132,000) overall, but many more single-family homes on quarter-acre lots (25,000 versus 13,000.)

Supply of single-family homes will also be impacted by demographic trends. Nearly 1.7 million baby boomers in the region will move past the age of 65 between 2000 and 2030. Some will move out of state, and, according to recent surveys, at least 40% of those who plan to stay will want to downsize to smaller, less expensive housing. Increased supply of smaller units in attractive locations means that these seniors will have more opportunities to downsize. As a result, there will be an increased supply of existing single-family homes available.

From 1998 – 2002, the median lot size for new single-family homes was 0.91 acres per house. If Current Trends continue, regional average single-family lot sizes would continue to grow, up to 1.04 acres regionwide, and nearly 1.2 acres in Developing Suburbs. 64% of the region's new single-family housing would be on lots of one acre or more, and less than 10% of new single-family housing would be on lots of $\frac{1}{4}$ acre or less.

Objectives:

- By 2030, there will be 17,500 new suburban single-family homes less than 1,700 square feet and/or on lots $\frac{1}{4}$ of an acre or smaller.
- Average lot size for new single-family houses in suburban communities would be 0.75 acres (0.62 acres in Maturing Suburbs, and 0.79 acres in Developing Suburbs.)

Key implementation strategies: 1, 8, 5, and 7

Supporting implementation strategies: 3 and 4

- The regional affordability gap will be eliminated by 2030, for households earning 80%, 100%, and 120% of regional median income.
- There will be an increasing number of municipalities in which local median housing costs (ownership and rental) are equal to or less than 30% of regional median income.
- Ownership housing units with monthly costs less than 30% of regional monthly median income will comprise a growing share of the region's housing stock.
- Rental housing units costing less than 30% of regional median income will comprise a growing share of the region's housing stock.
- There will be 97,000 new starter homes (single-family homes $<1,700$ square feet; single-family attached; 2-4 family homes) by 2030.

Key implementation strategies: 1, 8, 6, and 5

Supporting implementation strategies: 10 and 9

14 An increasing share of housing in each municipality will be affordable to working families and fixed-income seniors.

MetroFuture calls for housing production sufficient to keep pace with demand, including demand created by new residents and decreasing household size. An adequate supply will help to mitigate prices overall, especially for moderately priced units. MetroFuture's plan to diversify housing production will create more housing for middle-income families and individuals (those earning 80% to 120% of regional median income), especially in those communities where very little moderately priced housing is being built. Each municipality would plan for housing production at a broad range of prices. Most middle-income families will spend no more than 30% of their income on housing, including property tax and insurance for ownership units.

Metro Boston's "affordability gap" would be eliminated: regional median ownership and rental costs would be no more than 30% of regional median income levels, adjusted for household size. While there would still be differences in housing prices and affordability across the region, these differences would be less extreme. In cities and towns with the least moderately priced housing, an increasing share of housing would be affordable to moderate-income families and individuals.

Currently, in 71% of the region's cities and towns, the median single-family home is not affordable to families making regional median income, versus 8% in 1998. As of 2005, 37% of homeowners and 46% of renters spend more than 30% of their income on housing.

Objectives:

- The region will produce 350,000 new housing units by 2030.

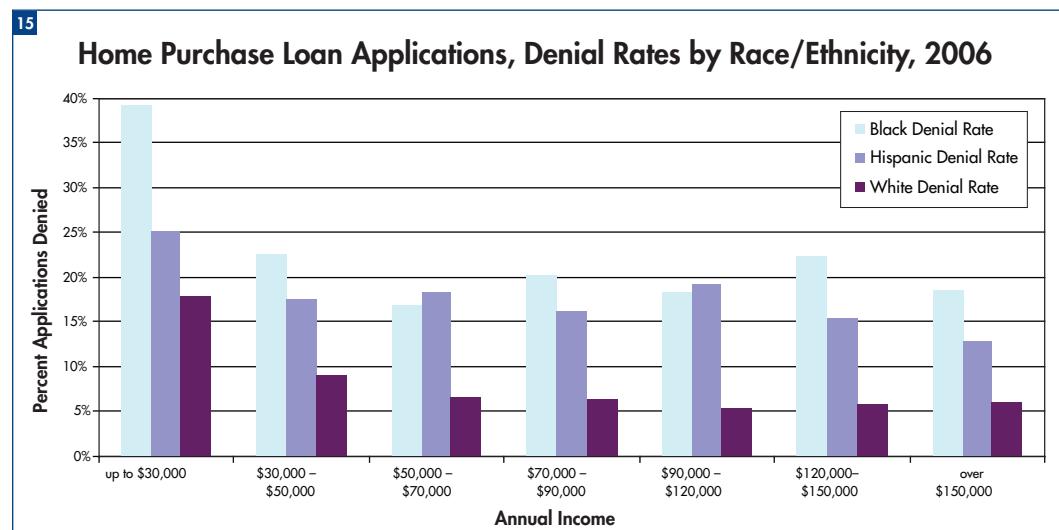
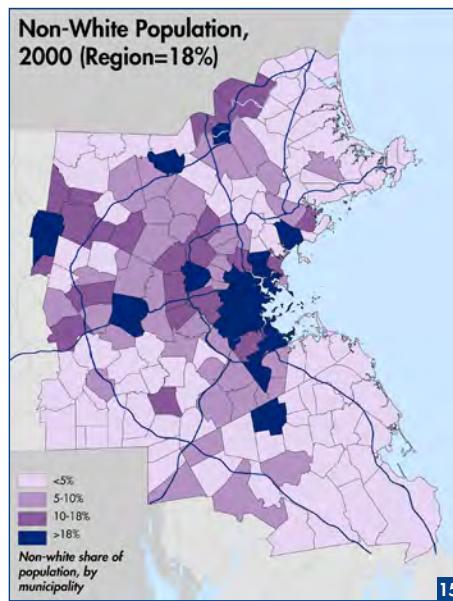
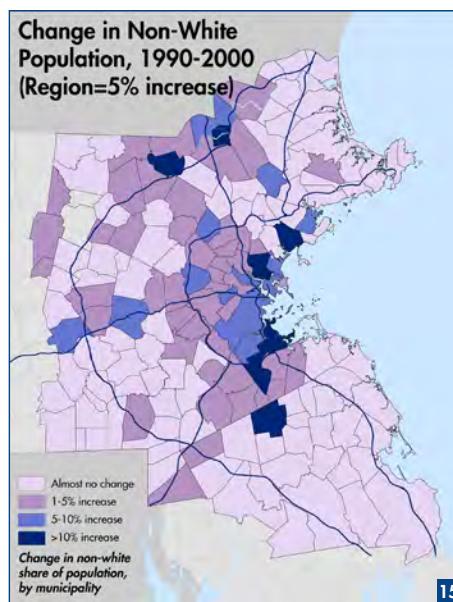
Housing Choices

THE METROFUTURE SCENARIO

Alongside local initiatives to provide more diverse housing choices, all communities will actively celebrate and reflect the region's growing diversity.

15 There will be less regional segregation as all municipalities increasingly reflect Metro Boston's growing diversity. Cities and towns will remain demographically different from one another, but those differences will become much less extreme. Communities that have been falling behind the region's diversity will instead be catching up. As urban neighborhoods become more attractive to middle-class families, cities will also become more balanced in their ethnicity. All residents will have the opportunity to live near people of other races and origins.

The region will address economic inequity as well, by ensuring that **16 low-income households will be able to find affordable, adequate, conveniently located housing, in suburbs as well as cities, and they will be able to avoid displacement.** Low-income residents will find a distributed system of subsidized housing, creating opportunities to live near a greater number of jobs throughout the region. As the affordability restrictions on existing units expire, tenants would be able to remain in their home; all expiring units will be preserved or replaced elsewhere. Residents of urban areas will have access to housing programs alongside education and jobs, so they can remain in their community and benefit as growth brings prosperity. Housing programs will be coordinated with services so that **17 homelessness will be effectively eliminated from the region.**



METROFUTURE GOALS AND OBJECTIVES

15 There will be less regional segregation as all municipalities increasingly reflect Metro Boston's growing diversity.

As the Non-White share of the region's population increases from 18% to 30% by 2030, more municipalities would reflect this growing racial diversity. Suburban communities that have fallen far behind the region in terms of diversity will keep pace; the gap between local and regional diversity will shrink. No race or ethnicity will experience housing discrimination anywhere in the region; as a result, there will be less disparity in homeownership rates and distribution of Non-White renters or homeowners.

Currently, most Non-White residents are concentrated in a small number of urban municipalities. As of 2000, 16 largely urban municipalities comprised 36% of the region's total population but 76% of its Non-White population. Meanwhile, the vast majority of suburban communities are dramatically less diverse than the population of the region as a whole. From 1990 – 2000, the Non-White share of the region's population grew from 13% to 18%. However, the Non-White population in 135 municipalities grew very slowly (<5%) or not at all. As a result, disparate racial distribution in the region became worse.

Some of this segregation may result from the economic disparities between different races, but some may also be due to discriminatory lending practices that persist in the region. In 2006, prime lenders (those offering standard interest rates and terms) denied loan applications for home purchases about 2.5 times as often when applicants were Black or Hispanic as they did when applicants were white. In Greater Boston, for example, 2006 denial rates were 19% for Blacks, 17% for Hispanics, and 7% for Whites. These disparities persisted across all income groups, but actually worsened among the financially well-off. Black applicants earning up to \$30,000 per year were denied loans at 2.2 times the rate of their white counterparts. Black applicants earning between \$120,000 and \$150,000 were denied loans at 3.9 times the rate similarly affluent whites were. The disparity for Hispanics is worst at the \$90,000 to \$120,000 income range, where they are denied at 3.5 times the rate of their White counterparts.

Objectives:

- In each city and town, the gap between the Non-White proportion of municipal population and the Non-White proportion of regional population will be decreasing.
- There will be no disparity in home purchase

loan denial rates for all race and ethnic groups, after adjusting for income levels.

Key implementation strategies: 1, 8, and 6

Supporting implementation strategies: 3, 6, and 5

16 Low-income households will be able to find affordable, adequate, conveniently located housing, in suburbs as well as cities, and they will be able to avoid displacement.

The region and each of its municipalities will have a growing share of affordable housing for low- and moderate-income households (those with household incomes less than 80% of the regional median income). The region's diverse municipalities will not all be required to meet the same goal for number of affordable units, but each will establish and meet targets for affordable housing construction, based on regional need and local conditions. Relatively speaking, those municipalities with the smallest supply of affordable housing will make the fastest progress in adding new affordable units. There will be a much larger supply of single-person occupancy units. Units in public housing will be well maintained and used to their full capacity. Residents will have shorter waits to access subsidies or subsidized units. Within each municipality, affordable housing will be located where residents have good access to transportation, shops, and services. Region-wide, the proportion of deed-restricted units near transit will be comparable to or better than the proportion of all housing growth near transit. Additionally, as the Inner Core and Regional Urban Centers revitalize, current residents will remain in their neighborhood if they want to, and will not move out at higher rates.

From 2000 – 2006, only 12% of approved 40B projects were within ½ mile of an MBTA subway or commuter rail station.

Objectives:

- An increasing share of the region's housing stock will be affordable (market rate, deed-restricted, or by Section 8 Vouchers) to households earning less than 80%, 50%, and 30% of regional median income.
- An increasing proportion—up to 10%—of each municipality's housing stock will be deed-restricted and affordable to households earning less than 80% of regional median income.
- 66% of new deed-restricted affordable housing units will be located within 1/2 mile of fixed-route transit service.
- The regionwide occupancy rate for public housing will be at least 95%.

• No tenants will be evicted as a result of the expiration of affordability restrictions.

• There will be no net loss of affordable units as affordability restrictions expire.

• There will be a decreasing waitlist for all state-aided public housing and other state-assisted rental housing, including project-based Section 8 and mobile vouchers.

Key implementation strategies: 1, 8, and 6

17 Homelessness will be effectively eliminated from the region.

MetroFuture supports the vision and objectives of the Massachusetts Commission to End Homelessness. Far fewer individuals and families would be homeless, and those who do experience homelessness would do so for a much shorter length of time. There would be many fewer "chronic shelter stayers" who account for a disproportionate share of shelter utilization.

Currently, there are 24,000 homeless individuals and 5,000 homeless families in Massachusetts, with hotspots of homelessness in the Inner Core and Regional Urban Centers. "Chronic shelter stayers" comprise less than 10% of the State's homeless individuals, but account for 50% of nightly shelter bed utilization and consume a disproportionate share of the system's resources. Because the current system does not provide long-term housing stability or coordinated services, many families and individuals cycle in and out of the system repeatedly, including 25% of the State's homeless families that have minimal needs other than affordable housing or short-term economic support.

Objectives:

- The number of homeless individuals and families in the region will decrease by 90%.
- Demand for Department of Transitional Assistance family shelter inventory will be no more than 400 units statewide.
- Demand for Department of Transitional Assistance individual shelter inventory will be no more than 250 units statewide.
- Average length of shelter stays would be no more than 30 days for both individuals and families.
- Fewer families and individuals will have repeated periods of homelessness.

Key implementation strategies: 8 and 10

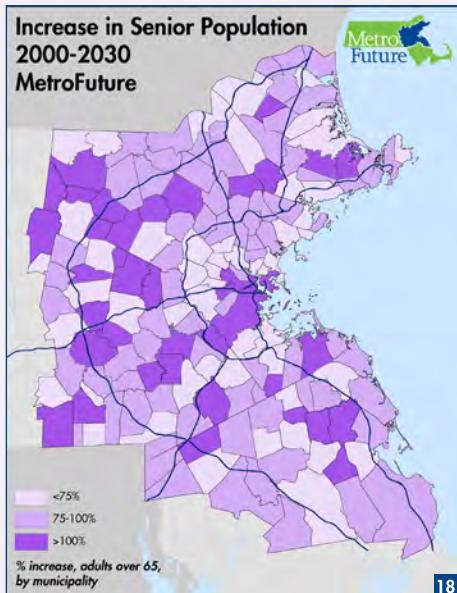
Supporting implementation strategies: 4

THE METROFUTURE SCENARIO

There will be increased social and intergenerational interaction as new housing, especially larger developments, includes a greater mix of housing types near each other, including different types of buildings and unit arrangements, meeting the needs of people with disabilities, families, singles, and, most notably, seniors. Much of the region's growing senior population will be looking for different types of housing: smaller units that have lower costs for heating, taxes, or rent; and are located near shops, services, and transit. **18 The region's seniors will have more housing choices and opportunities to downsize while staying in their own community.** Accessory apartments will be a rapidly growing segment of housing production, creating more options for seniors who wish to stay in their own home and those who wish to downsize. There will be more multifamily buildings close to town centers near shops, services, and parks—the type of housing many seniors will find more convenient than large single family homes, and more attractive than over-55 developments in isolated locations. Aging residents will find more housing options that provide independent living opportunities thanks to design that accommodates a wider variety of physical abilities. **19 Persons with physical or mental disabilities will be able to find housing that meets their needs in terms of design, services, and affordability.** A basic level of accessibility ("visitability") will be provided in all housing, creating opportunities for greater autonomy and empowerment of people with disabilities or limited mobility.

MetroFuture's regional growth patterns are predicated on making cities more attractive places to live. **20 Urban neighborhoods will boast more appealing housing options for young professionals and their families.** Young professionals and their families will find many attractive choices—townhouses, two- and three-families, lofts, among others—in safe neighborhoods near jobs and cultural attractions. Recent college graduates will find affordable options in interesting urban neighborhoods, put their roots down in cities, and raise their families there. Fewer families, new or old, will feel the need to move out of the city for lower crime rates or higher MCAS scores. Instead, they'll find urban neighborhoods that are safe, healthy, convenient places to raise kids.

METROFUTURE GOALS AND OBJECTIVES



18 The region's seniors will have more housing choices and opportunities to downsize while staying in their own community.

MetroFuture calls for a realignment of housing production to meet the needs of the region's older residents. The region's over-65 population will grow by 83% over three decades, an increase of 455,000 residents. Demand for smaller units in more convenient locations will increase as well. MetroFuture calls for production of 83,000 units in multifamily buildings near suburban town centers or existing commercial areas and transit. Accessory apartments will be a rapidly growing segment of housing production, constituting 11% of new suburban housing units. With more housing options available, fewer seniors will pay excessive housing costs, even after including property taxes, heating, and transportation. Fewer seniors will find it necessary to move out of the region for more affordable housing or higher quality of life.

If Current Trends continue, the region will produce only 47,000 townhouses and small apartment buildings in suburban town centers.

Objectives:

- There will be 17,000 new accessory apartments in suburban municipalities by 2030.
- A declining proportion of seniors will spend over 30% of their household income on housing costs; and none will pay over 50%.
- 76% of new suburban housing units will be in attached single-family or multifamily buildings.

Key implementation strategies: 1, 8, and 5

Supporting implementation strategies: 3, 11, 9 and 6

19 Persons with physical or mental disabilities will be able to find housing that meets their needs in terms of design, services, and affordability.

Persons with disabilities, their families and elders will be able to obtain housing suitable to their accessibility needs in the municipalities in which they choose to live. A consistent and accurate application of all state and federal mandated accessibility codes and standards will increase and ensure the availability of housing stock for persons with disabilities, their families and elders. Application of Universal Design principles would help to ensure that homes are usable by the widest range of people operating in the widest range of situations without special or separate design.

Objectives:

- All new construction will be built in full compliance with state and federal accessibility rules, regulations, and standards.
- The supply of accessible homes will equal or exceed the number of households needing such homes.
- Most new development will incorporate principles of visitability and Universal Design.

Key implementation strategies: 1, 8, 12, and 5

Supporting implementation strategies: 6

20 Urban neighborhoods will boast more appealing housing options for young professionals and their families.

Overall, MetroFuture calls for urban municipalities to increase their housing stock by 19%. This increased housing stock would accommodate both decreasing household size as well as 330,000 new residents. The additional supply would help to temper housing price increases. 45,000 townhouses and 2- to 4-family homes would be built in urban communities; an additional 12,000 units would be created through accessory apartments, conversion of single-family to multifamily housing in appropriate locations, or adaptive reuse of warehouses or other nonresidential buildings. Overall production, including units in multifamily buildings, would include a balanced mix of 2-, 3-, and 4-bedroom units, so that there will be housing options for people at various stages of life. Fewer professional residents will move out of cities after they have children.

If Current Trends continue, the region's urban communities would produce only 20,000 units in 2- to 4-family buildings or townhouses. Only 3,300 units would be created through accessory apartments or adaptive reuse.

Objectives:

- There will be 183,000 new housing units in the region's urban municipalities.
- 25% of urban housing production will be in 2- to 4-family homes or townhouses.
- 6% of urban housing production will occur through accessory apartments, conversion of single-family housing to multifamily, or adaptive reuse.
- An increasing number of housing units in urban communities will have more than 2 bedrooms.

Key implementation strategies: 1, 8, and 6

Supporting implementation strategies: 12

THE METROFUTURE SCENARIO

People Will Live in Vital, Well-Educated Communities

Throughout Metro Boston, individuals and families would find more places where they feel good about living and raising a family. **21 All communities will be safe, including areas currently afflicted by high rates of crime.** Increased policing, more programs for at-risk youth, and CORI reform would help to reduce crime and recidivism. Crime rates would decline most in cities where they are now worst, and residents will have better access to information about crime patterns. Families will also be safer from environmental threats such as pollution, contamination, or traffic. In particular, **22 urban and minority residents will not be disproportionately exposed to pollutants and poor air quality.** An increasing number of urban trees will reinforce the region's character while helping to improve air quality and quality of life, while mitigating noise and heat.

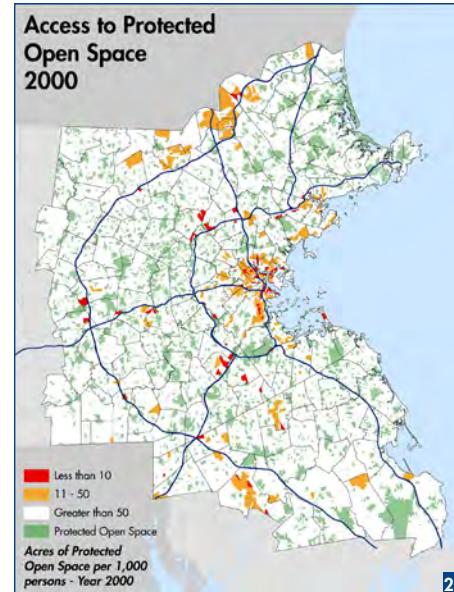
Across the region, compact growth will be paired with new compact parks and open spaces, strategically located to serve the entire community. Residents of compact new growth might not have large yards, but they will live near safe, inviting spaces where

kids and adults socialize and exercise. **23 All neighborhoods will have access to safe and well-maintained parks, community gardens, and appropriate play spaces for children and youth.** Along with ballfields and playgrounds, they'll find tot lots, greenways, riverwalks, green alleys, urban orchards, and community gardens.

The growth of urban agriculture will be one element of a healthy regional food system that brings local agriculture, fresh produce, and nutritious meals to school cafeterias, corner stores, and dinner tables. **24**

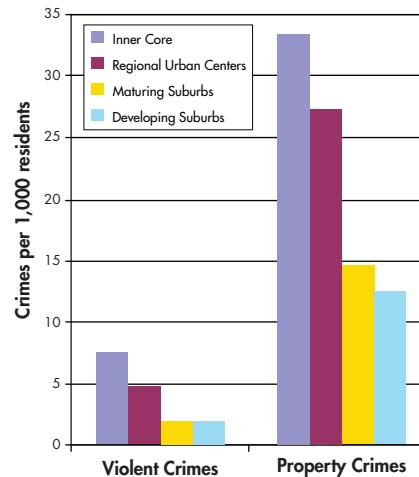
Residents in all communities and of all incomes will have access to affordable healthy food.

They'll find affordable fresh fruit alongside the chips at the convenience store; and they'll help their health by staying active and getting exercise. A truly connected pedestrian network will make it easy for



29

Crime Rates by Community Type, 2000



METROFUTURE GOALS AND OBJECTIVES

21 All communities will be safe, including areas currently afflicted by high rates of violent crime.

MetroFuture seeks a reduction of crime rates in all municipalities. In particular, the plan calls for the biggest improvements in urban areas where crime rates are now worst. Fewer communities would be disproportionately affected by crime, and improved public safety would encourage families to live in urban areas. Residents would also have better access to information about crime patterns, helping to correct misconceptions and foster more effective community-based solutions to crime.

Currently, regional crime rates are 4.4 violent crimes and 23.2 property crimes per 1,000 residents. There is considerable regional disparity in crime rates. Violent crime rates in the Inner Core (7.6 per 1,000) are 4 times as high as rates in Maturing and Developing Suburbs (1.8 & 2.0 per 1,000, respectively.) Property crime rates are 2 ½ times as high (33.5 per 1,000 versus 14.6 & 12.4 per 1,000).

Objectives:

- The regional property crime rate will decline.
- The regional violent crime rate will decline.
- Disparities in property crime rates across community types in the region will decline.
- Disparities in violent crime rates across community types in the region will decline.
- All residents can access neighborhood crime data that is updated daily.

Key implementation strategies: 6 and 4

Supporting implementation strategies: 3

22 Urban and minority residents will not be disproportionately exposed to pollutants and poor air quality.

If the region is to achieve MetroFuture's goal of focused growth, it must ensure that urban communities are healthy places to live. More urban trips would be made using transit (at least 32% of all trips in the Inner Core, versus 14% in 2000), helping to reduce traffic and emissions. The urban environment would also benefit from a dramatic increase in tree canopy coverage. Urban trees provide substantial air quality benefits; trees filter and remove harmful pollutants, such as ozone and particulate matter, helping to mitigate the impacts of air pollution-related asthma. Trees also reduce the urban heat island effect and reduce noise pollution.

MetroFuture supports efforts to increase the region's urban tree canopy, such as the City of Boston's goal of increasing canopy coverage from 29% to 35% by planting 100,000 trees before the year 2020. Assuming that other urban mu-

nicipalities have canopy coverage comparable to that of Boston, MetroFuture identifies a need for 1.2 million trees in order to achieve 35% canopy coverage in the region's urban communities.

Currently, urban families, many of whom are racial or ethnic minorities, are currently suffering from disproportionate exposures to poor air quality. As of 2007, the mean estimated concentration of ambient black carbon in the City of Boston was 0.56 µg/m³, but many neighborhoods exceed this level. Results from a 2003 air quality study show that concentrations of black carbon, which has been associated with decreased cognitive functioning in children and cardiovascular problems in adults, are far greater in inner-city areas than they are in the surrounding suburbs. In fact, researchers have found that black carbon concentrations are up to 3.5 times higher in downtown Boston than in surrounding non-urban regions; areas within 10 miles of downtown are most burdened with dangerous air pollutants.

Objectives:

- By 2030, asthma hospitalization rates in urban municipalities will be no higher than the regional average.
- There will be no urban areas in the region with ambient black carbon levels above 0.56 µg/m³.
- Incidence of lead poisoning will fall to zero in all municipalities.
- Acres of canopy coverage in urban communities will increase by 20%.

Key implementation strategies: 12, 9, 6, and 13

Supporting implementation strategies: 8 and 7

23 All neighborhoods will have access to safe and well-maintained parks, community gardens, and appropriate play spaces for children and youth.

Even as density increases, MetroFuture will protect and enhance access to open space. The region would have at least 1,800 acres of new urban parks, with a focus on areas currently underserved by open space and in compact growth areas. As a result, the proportion of households living in areas with limited access to open space would decline to 21% of the region's total. More residents who do not have their own yard will have access to nearby parks and community gardens, including seniors living in compact development in suburban town centers.

Currently, 400,000 of the region's households—24% of the total, and mostly in urban areas—have limited access to open space (less than 50 acres of public open space in or within ¼ mile of a TAZ, per 1,000 people).

Objectives:

- No more than 20% of the region's households will have limited access to open space (<50 acres per 1,000 people, at the TAZ level)
- The acreage of community gardens in urban areas will increase.
- Reported crimes in public parks will decrease.

Key implementation strategies: 3, 6, 7, and 4

Supporting implementation strategies: 5

24 Residents in all communities and of all incomes will have access to affordable, healthy food.

MetroFuture would enhance the region's health and food security by bringing new resources to currently underserved communities with less access to healthy food. Urban neighborhoods would have more supermarkets, produce vendors, and farmers markets. Students would have more nutritious choices at school, and residents who find it hard to afford healthy food would participate in federally funded nutrition assistance programs. Improved diets will lead to lower rates of obesity and better health, increasing productivity and lowering medical costs. MetroFuture supports the objectives of the Massachusetts Partnership for Healthy Weight, which has adopted the national goal that 95% of the region's children and 60% of adults will be at a healthy weight by 2010.

Currently, 51% of residents in the MAPC region are overweight (35%) or obese (16%), and 70% do not eat the recommended daily servings of fruits and vegetables. As of 2002, Massachusetts had the lowest Food Stamp participation rate of any state in the country; only 39% of eligible persons received food stamps. Based on actual food costs in the City of Boston, a standard "market basket" of food staples costs \$27 more than the maximum monthly Food Stamp benefit, and an alternative, healthier "market basket" costs \$148 more. Urban residents also have less access to healthy food because the smaller stores more common in urban areas feature fewer healthful foods than larger stores and supermarkets.

Objectives:

- In each Community Type, 95% of children and more than 60% of adults will be at a healthy weight.
- An increasing proportion of the region's residents will eat the recommended number of fruits and vegetables per day.
- All children that qualify will receive school meals.
- The nutritional quality of school meals will improve.

THE METROFUTURE SCENARIO

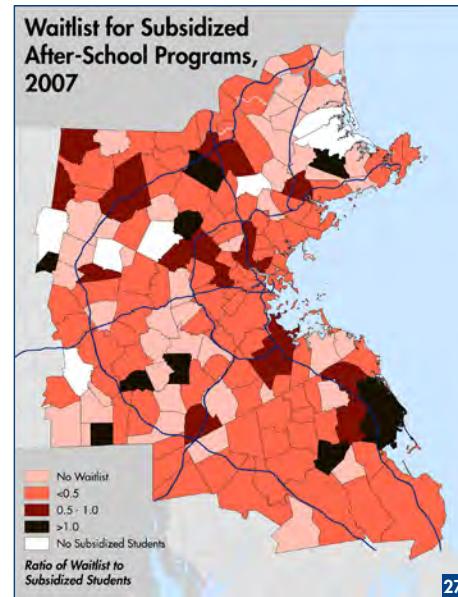
people to walk to nearby destinations, one way that **25 more residents will build regular physical activity into their daily lives.** With better nutrition and exercise, the epidemic of obesity, heart disease, and diabetes will recede in the communities most afflicted. The region's health will also improve as **26 all residents will have access to affordable health care**, including preventative care.

From an early age, children will benefit from a network of programs that prepare them for school, supplement the regular school day, and provide enrichment. **27**

Children and youth will have access to a strong system of early education programs, after school programs, teen centers, and youth organizations.

Children and youth will continue to receive support as they age. Programs that cultivate creativity and leadership would empower young people to enhance their own lives and contribute to their communities.

Programs specifically focused on at-risk youth will help prevent violence and ensure that all of Metro Boston's young people are productive, positive citizens.



METROFUTURE GOALS AND OBJECTIVES

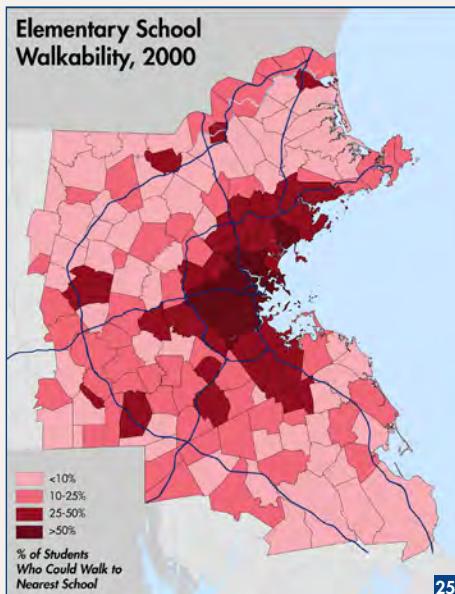
- All households that qualify will receive food stamps and will participate in the Women Infants and Children (WIC) program.
- The percentage of population living with food insecurity will be decreasing.
- Food stamp benefits will be sufficient to cover the cost of a healthy diet.
- 100% of the region's neighborhoods will have food outlets that together provide a complete "market basket," of healthy foods, at prices that do not significantly exceed the cost of the same market basket elsewhere in the region.

Key implementation strategies: 9, 6, and 7

25 Most residents will build regular physical activity into their daily lives.

MetroFuture will enable residents to be more active, through clustered land use and improved bicycle and pedestrian connections. Complete sidewalk networks would allow more students to walk to nearby schools. The region would have completed 200 miles of off-road multi-use trails, and residents would use this regional network for commuting and recreation. Seniors who live in new housing near city and town centers will be able to stay active by walking to nearby shops and services. Along with increased access to healthy food, increased activity will contribute to lower incidence of the region's major killers: obesity, heart disease, and diabetes.

Currently, in 61 municipalities, fewer than 10% of students live within a half mile of school and could walk there safely. As of 2004, nearly half (47%) of residents in the MAPC region do not get regular physical activity.



Objectives:

- All public school students will have physical education classes at least once per week.
- All public and private schools will be accessible by sidewalk for children living within one mile.
- An increasing proportion of adults will have at least one 30-minute session of physical activity per week, across all Community Types.

Key implementation strategies: 1, 12, 9, and 6

Supporting implementation strategies: 5 and 7

26 All residents will have access to affordable healthcare.

MetroFuture supports the Commonwealth's goal of universal health insurance. The plan will help residents to access health care by increasing transportation services to health care facilities. Its emphasis on physical activity and access to healthy food will also yield better health outcomes, reducing the incidence of obesity and its attendant health problems. Healthier lifestyles and better preventative care are two important factors in the production of a comprehensive and sustainable health care system, but health care affordability must be addressed as well. The Commonwealth would continue to work with insurers, businesses, and individuals to guarantee that individuals can not only afford their health insurance premiums but also copayments, deductibles, medications, and other expenses associated with health care.

Cost is a substantial barrier to accessing health care in the Commonwealth, even among the insured. As of 2007, 86% of uninsured residents reported cost to be an obstacle to care. Attaining the Commonwealth's goal of universal health insurance is a goal within reach: almost 95% of the Commonwealth's residents were insured in 2007. However, an increasing number of the insured (up from 29% in 2000 to 37% in 2007) are also reporting cost to be an obstacle.

Objectives:

- All residents in the region will have health insurance.
- A decreasing proportion of the region's residents aged 19 to 64 will find cost to be an obstacle to obtaining medical care.

Key implementation strategies: 9 and 4

27 Children and youth will have access to a strong system of early education programs, after-school programs, teen centers, and youth organizations.

All children would have access to the powerful positive effects of early education, which is correlated with better educational outcomes and fewer assignments to special education. Minority and low-income students that attended early education programs are 40% less likely to need special education or be held back and are better prepared for kindergarten. Children are also more likely to be literate. Recent studies suggest that the state would see a benefit of \$1.18 for every \$1 invested in early education.

Currently, there are 6,400 license-exempt or licensed School Age Child Care (SACC) and Family Child Care programs in the region, with a total capacity of 67,000 children (approximately 12% of the region's 5-14 year old population). In 2007, 23% of participating children received subsidies administered by MA Department of Education and Care, and approximately 2,700 children are on the waitlist. The ratio of waitlisted children to those receiving subsidies is 0.25, though 32 municipalities have a waitlist ratio higher than 0.5.

Objectives:

- No municipality will have a waitlist for SACC or EEC subsidies that is more than 25% of the number of subsidized children.
- The region's capacity in licensed and license-exempt after-school programs will be a growing percentage of the region's 5-14 year old population.

Key implementation strategies: 9 and 6

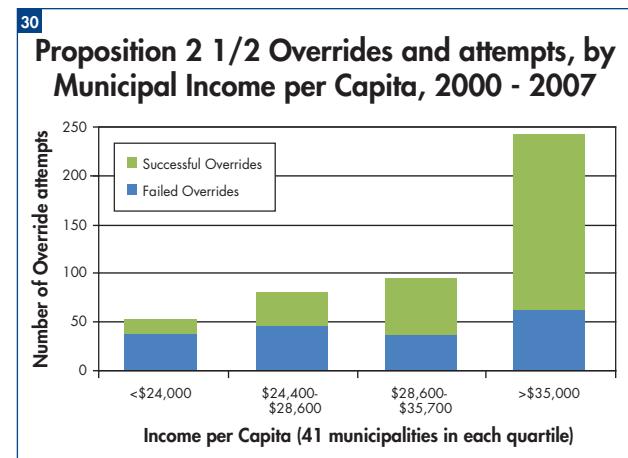
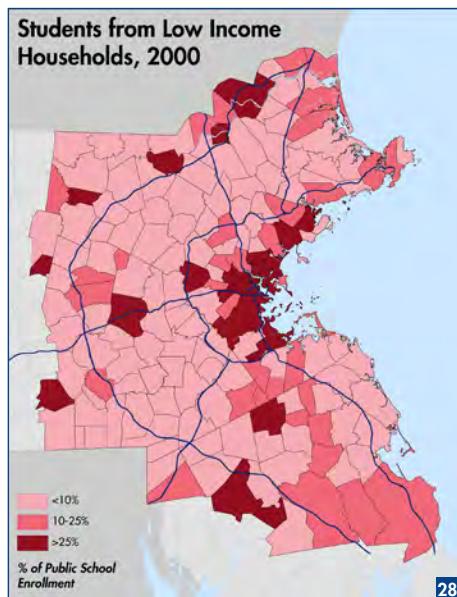
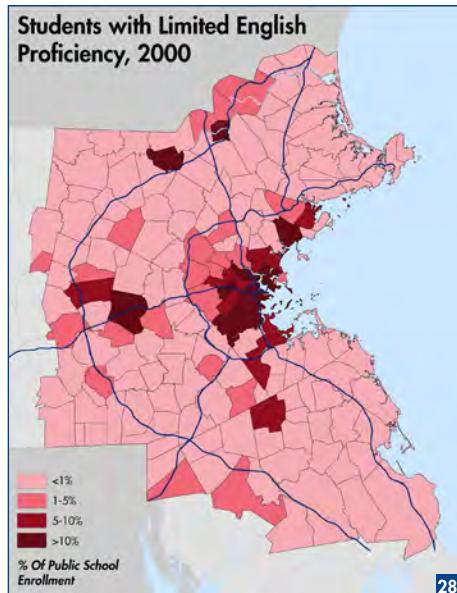
THE METROFUTURE SCENARIO

Critical elements in the system, after-school programs will only work if they can complement an excellent public education system characterized by regional equity, high achievement, and well-prepared graduates.²⁸

Public schools will provide a high-quality education for all students, not only in the fundamentals, but also in areas like health education, physical education, art, music, civics, and science. Currently underperforming schools will benefit from great teachers, more flexibility, and interventions based on data. Urban communities would offer a variety of high-quality education choices for families. With decreased regional segregation and increased quality of urban schools, there would be a smaller gap in educational outcomes among schoolchildren of different races and genders. By shifting growth to more mature suburbs or urban communities, MetroFuture's land use plan would reduce growth pressures on rapidly growing suburban school districts. Across the region, adequate funding and community partnerships would enable schools to provide more diverse offerings, helping to create more well-rounded students.

Higher graduation rates would reflect higher academic performance, so all graduates are ready to work or continue their education. ²⁹ **More students will graduate from high school and go on to college or career training opportunities.** Fewer students would drop out and those who do would find opportunities to return to school or earn a GED. High school graduates would have broader access to community colleges and higher education and will find themselves well prepared for college level work when they arrive. In turn, employers would find a larger supply of high school and community college graduates ready for work or specialized job training.

Public schools will have adequate resources to provide high quality education thanks to stable municipal finances. With innovation and diversified funding, ³⁰ **municipalities will operate efficiently and will have adequate funding with less reliance on the property tax.** Cities and towns will have more control over their revenue, building their budget on a mix of property tax, local taxes and fees, value capture tools, regional tax sharing, and state aid. Revenues will be more predictable and less volatile. Municipalities will also take every chance to



METROFUTURE GOALS AND OBJECTIVES

28 Public schools will provide a high-quality education for all students, not only in the fundamentals, but also in areas like health education, physical education, art, music, civics, and science.

MetroFuture seeks to eliminate regional disparity in public education quality. The most significant improvements to educational performance would occur in underperforming districts. There will be a decreasing achievement gap for students with limited English proficiency and those from low-income households. With decreased regional segregation and increased quality of urban schools, there would be a smaller gap in educational outcomes among schoolchildren of different races.

Due to slower population growth rates in most Developing Suburbs, fewer new schools would be needed and more resources would be available for rehabilitation and expansion of existing schools. Schools will take a leading role in helping children to develop healthy lifestyles.

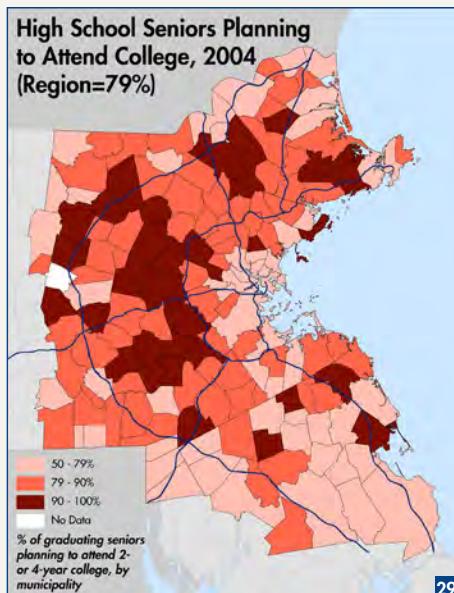
If Current Trends continue, racial inequality in education would continue, and lower-performing urban school districts would discourage families from settling in urban areas. A recent study projected that 74% of schools in the state would not meet federal proficiency standards in 2014, compared to 22% in 2004. Schools with fewer black, Hispanic, low-income, or special needs students are more likely to meet federal standards. Review of MCAS scores indicates that the highest performing districts are often made up of middle-class or demographically advantaged communities. As of 2000, almost half of immigrants age 16-24 with poor English skills dropped out of high school.

Objectives:

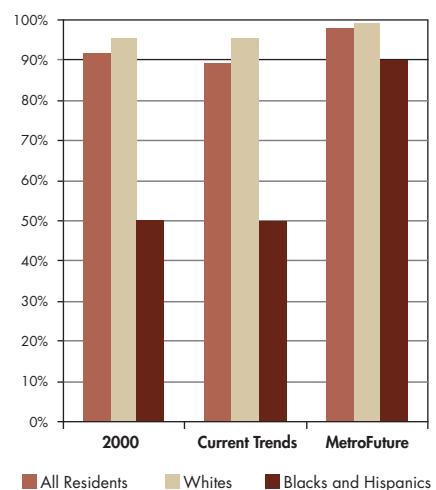
- The region will have declining disparities in standardized test outcomes and graduation rates by race, ethnicity, gender, income and Community Type.
- Student-teacher ratios will steadily decrease.
- All elementary and middle schools will use a health and physical activity curriculum.
- All of the region's public schools will have at least one teacher dedicated to each of the following: visual arts, music, theater, and health/physical education.

Key implementation strategies: 3, 9, and 6

Supporting implementation strategies: 4



29 25-34 Year Olds with a High School Diploma or Equivalent



29 More students will graduate from high school and go on to college or career training opportunities.

MetroFuture identifies a need for programs to help 3,000 K-12 students each year, who might otherwise have dropped out before graduating from high school. An increasing share of high school graduates would continue on to college, and fewer will have to take remedial courses when they get there.

MetroFuture also identifies a need to expand programs to help 3,000 adults annually to obtain a GED or adult basic education, who otherwise would not have. As a result, the proportion of the working-age (25 – 65) population without a high school diploma or equivalent would decline from 10% to 9%. It is likely that 50% of those who would benefit from the programs described above would be Black or Hispanic residents, whose cohorts tend to have lower education attainment.

If Current Trends continue, the number of working-age adults without a high school diploma would increase by 50%, from 236,000 to 352,000. By 2030, 15% of all working-age adults, and 33% of working-age Blacks and Hispanics would be without a diploma. With slow growth in the number of low-skill jobs, 62,000 workers without a high school diploma might be unable to find work, and will likely have lower pay, fewer benefits, and less job security. Meanwhile, there would be a shortage of 74,000 workers with a high school diploma, and a shortage of 219,000 workers with an associate, bachelors, or graduate degree.

Objectives:

- 91% of working-age adults (25–65) will have a high school diploma or equivalent (up from 90% today, and 85% if Current Trends continue.)
- 98% of 25-34 year olds will have a high school diploma or equivalent (up from 91% today, and 89% if Current Trends continue).
- 90% of high school graduates will go on to 2- or 4-year college (up from 79% today).
- Only 10% of graduates from public high schools will need to take remedial courses during their first year of college (down from 37% today).

Key implementation strategies: 10, 9, and 6

30 Municipalities will operate efficiently and will have adequate funding with less reliance on the property tax.

MetroFuture would help the region to resolve its municipal finance crisis, with balanced efforts at cost savings and revenue diversification. With new municipal revenue streams, property tax would comprise a smaller share of total municipal revenue. More predictable funding would help municipalities to run efficiently, and fewer overrides would be necessary.

Currently, cities and towns work under the double bind of shrinking and unpredictable revenues and steadily growing expenses. Massachusetts municipalities have few revenue options and rely heavily on the property tax, with 53% of all municipal revenue coming from property tax, compared to a national average of 28%. Proposition 2 1/2 helps to limit this reliance, but often at the expense of overall

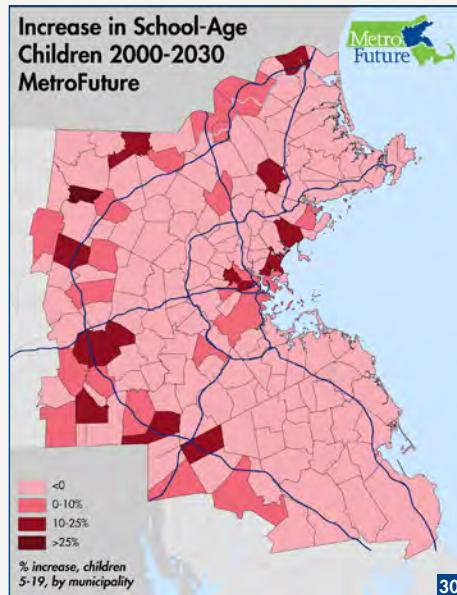
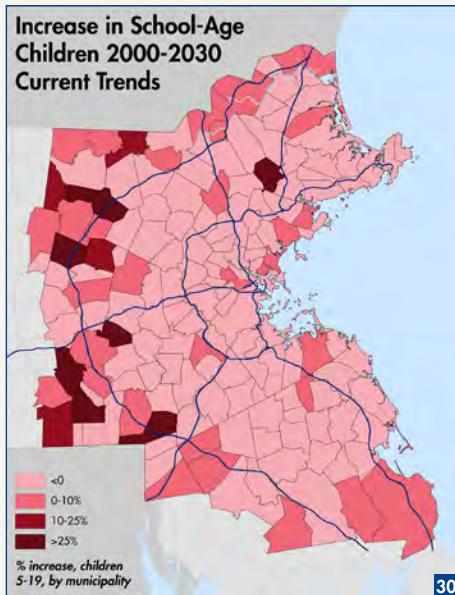
THE METROFUTURE SCENARIO

save money through energy efficiency, regional service delivery, and reform. Residents will have confidence in the competence of local government thanks to benchmarking efforts that assess the efficiency of service delivery.

Transparency of municipal finances is a precondition for rational discussion about municipal budgeting; the other precondition is an informed and engaged populace. **31 The region's residents—including youth, seniors, and immigrants—will be well informed and engaged in civic life and community planning.** Metro Boston's legacy of civic participation and democracy will become stronger as immigrants, minorities, and the poor become more actively involved in civic discourse and politics. Cities and towns will make more efficient and effective decisions thanks to diverse and sustained civic engagement.

Profound demographic shifts will change the face of Metro Boston communities over the coming years with large increases in the number of seniors and foreign-born residents. As Baby Boomers age, the region's senior population will grow dramatically by 2030; the leading edge of this generation has already demonstrated that it will age quite differently than previous seniors. Boomers will live longer, and fewer will be looking for traditional retirement and senior living models. Many will want to work part time, either to supplement their retirement income or simply to stay active. This generation also has different housing preferences; many will avoid isolated over-55 developments in favor of housing choices integrated into town centers where they will help contribute to the economic vitality of those town centers. With attractive options available, fewer seniors will choose to move to other states, and more **32 seniors will remain active members of their communities.** They will be volunteering, working, shopping, and socializing; and fewer seniors will be isolated or unable to join the workforce if they want to.

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municipal strength. From 2000 – 2007, there were 467 override attempts in Metro Boston, of which 61% were successful. However, there are significant economic disparities in the use of overrides. Wealthier municipalities attempt and pass more overrides; poorer communities and urban municipalities attempt fewer overrides and have success rates that are half of that for wealthier communities (27% versus 74%, for the first and fourth income quartiles.) Nearly 75% of suburban municipalities have attempted overrides since 2008, compared to just 25% of municipalities in the Inner Core and 5% of the Regional Urban Centers. Constrained by limits on municipal taxes, the amount of money municipalities raise from local revenue other than the property tax only grew by 6% from 1994 – 2004, in real dollar terms. With those constraints, reliance on the property tax is expected to continue increasing, from 54% in 2000 to 62% by 2030.

From 1987 to 2004 total municipal spending in Massachusetts grew by 1.3% annually in real dollars per capita. The following have seen growth rates beyond the 1.3% state-wide: Debt service (growth of 3.1% annually); fixed costs (health insurance, pensions and benefits, 2.2% annually per capita); education (2.1% annually). The fastest increases in debt service and fixed costs have been in Maturing and Developing Suburbs. If Current Trends continue, per capita spending on fixed costs, adjusted for inflation, would increase 60% by 2030. Meanwhile, per capita municipal spending on public works, public safety, libraries, planning, and other non-school services would decline by 29%, adjusted for inflation.

Objectives:

- No more than 53% of municipal revenue, regionwide, will come from local property taxes.
- In all Community Types, a steadily decreasing share of municipal revenue will come from property taxes.
- Per capita local revenue (property taxes, state aid, local “other”) will increase at least as fast as inflation.
- The region’s municipalities will have fewer override attempts; and there will be less disparity in override attempts by municipal median income.
- Regionwide, annual increases in municipal fixed costs will be slower than currently, after adjusting for inflation.
- The majority of the region’s cities and towns will have a municipal bond rating of AA or higher.

Key implementation strategies: 3 and 4

Supporting implementation strategies: 11 and 2

31 The region’s residents—including youth, seniors, and immigrants—will be well-informed and engaged in civic life and community planning.

A well-informed and engaged population helps create more successful and enduring planning and policy solutions. MetroFuture seeks a region in which more residents participate in civic discourse; and where civic leaders and officials represent the mix of backgrounds in their community.

Objectives:

- 78% percent of registered voters will vote in presidential elections
- There will be a smaller gap in voter participa-

tion between presidential, gubernatorial, and local elections.

- The demographics of elected state officials will increasingly reflect the region’s genders, ethnicities, and races.
- The demographics of elected local officials will increasingly reflect the region’s genders, ethnicities, and races.
- The demographics of appointed municipal boards will increasingly reflect the region’s genders, ethnicities, and races.

Key implementation strategies: 1, 3, and 2

Supporting implementation strategies: 9, 5,

32 Seniors will remain active members of their communities.

By 2030, one in three residents of the region will be over the age of 55. MetroFuture sees the growing ranks of older adults as assets to their communities. As these baby boomers age, they may choose to continue working, or to volunteer in their communities. Fewer of them will move out of the region, thanks to abundant housing opportunities and a high quality of life.

In 2005, half of all Massachusetts Boomers described themselves as “very or somewhat involved in community and neighborhood activities.” About 60% had volunteered in the previous year and over 70% planned to volunteer post-retirement. Aside from civic and community group activities, many seniors will stay involved in public life through the workplace. Boomers currently make up about 45% of the Commonwealth’s workforce, and about half plan to keep working past age 65. About two thirds intend to work even after retirement.

While continued employment allows seniors to remain engaged in their communities and earn extra money, boomers should have the option not to work post-retirement. Currently, about 40% of Boomers who plan to work after retirement expect that they will do so out of financial necessity rather than choice.

If Current Trends continue, an increasing number of seniors will move out of the region; from 1990 – 2000, the net outmigration rate for people over 65 was 2.5%.

Objectives:

- The net outmigration rate for seniors (over 65) will be no more than 1.5%.
- An increasing number of seniors will choose to continue participating in the workforce.

Key implementation strategies: 10, 9, and 6

Supporting implementation strategies: 4



THE METROFUTURE SCENARIO

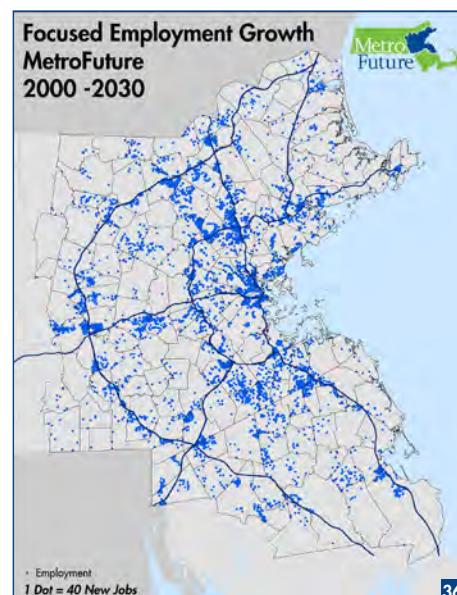
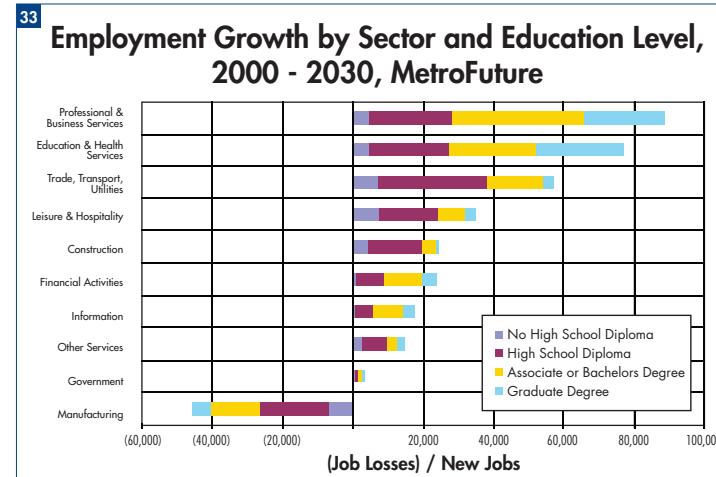
Everyone Will Benefit from Increasing Regional Prosperity

In the past several decades, the Boston region has transformed itself from an economy based primarily on traditional manufacturing to one based on innovation, the development and commercial application of new technologies and related health, education and professional services. Our future prosperity is tied to the region's capacity to remain a global competitive center of innovation, technology and advanced

services while ensuring diverse and rewarding opportunities for the region's labor force. Supported by strong schools, a skilled workforce, a high quality of life, and supporting infrastructure, ³³ **Metro Boston will be globally competitive in the knowledge economy.** The region will remain a leader in key sectors such as medicine and technology. The region's unparalleled clusters of universities and hospitals will continue to grow and will create a thriving economy of supporting firms in research, product development, and high-value manufacturing.

The region will not simply rely on its existing economic strengths, but will find new niches and opportunities for leadership. In particular, ³⁴ **the region will be a national leader in the green technology and clean energy sectors**, from development through manufacturing and application. Widespread local application of locally-developed technologies will help "green-tech" businesses to grow rapidly and become national leaders. ³⁵ **Small business owners and entrepreneurs will play a major role in the region's economy and innovation.** Entrepreneurship will be a hallmark of the new economy. Small businesses will have the freedom and support they need to be flexible and innovative, quickly adapting to changing national or local economic conditions. While small businesses will not individually generate as much income as larger businesses, in the aggregate they will play a major role. The regional emphasis on compact growth in or near existing town and city centers creates new retail and service opportunities that small businesses can capitalize on.

MetroFuture concentrates economic growth in certain areas and decreases economic development potential in areas slated for preservation. Businesses would find many development opportunities, if fewer total acres of undeveloped commercially zoned land. They would also find greater certainty regarding expeditious permitting of appropriate projects consistent with land use plans and design guidelines. As a result, ³⁶ **businesses will grow expeditiously thanks to consistent and predictable economic development policies set by an informed public sector.** Busi-



METROFUTURE GOALS AND OBJECTIVES

33 The region will be globally competitive in the knowledge economy.

MetroFuture would strengthen the Metro Boston's leadership in core economic areas and would positioned the region as a leader in emerging fields. The strongest employment growth would occur in the business and professional services sector, and the education and health services sector. Together these sectors would grow by 165,000 jobs, or 56% of net employment growth. Both sectors require more skilled labor than the economy overall—67% of new jobs in these sectors require at least an associate or bachelors degree.

Innovation and technology-based industries are critical to the Boston region's global competitiveness, economic base and income and wealth generation. In 2002, high-tech industries (defined as 19 different industries spanning various NAICS super-sectors) accounted for almost 1 in 6 jobs but 25% of total payrolls for the Boston PMSA.

While high-tech jobs declined in the early part of the 2000s decade, MetroFuture's emphasis on a high-skilled workforce would help these industries to grow more rapidly in the future. From 2010 to 2030, high tech jobs would grow by 12%, faster than overall regional employment, and accounting for 19% of net job increases over that period.

Metro Boston has core research and development strength in ten technologies, including computer science, genomics, disease research, renewable energy, nanotechnology, and advanced materials. The "intellectual productivity" of these industries may be indicated in the number of patents awarded to local individuals and companies, which reflect the conversion of research into new commercially useful and profitable goods. Studies have shown a strong relationship between patent activity and employment growth for US metropolitan areas. Massachusetts currently ranks fifth in national measures of patents granted per 10,000 businesses. MetroFuture would support continued increases of at least 4.75% per year in research and development funding (public and private combined); such investments would more than double the number of patents generated annually in Metro Boston from 2,700 in 2002 to 6,200 in 2030. Commercialization of these patents would strengthen the region's economy, both through royalties and through some capture of downstream manufacturing activities.

Regardless of the number of patents in the region, the region is likely to lose 46,000 jobs in the manufacturing sector from 2000 – 2030, a 16% decline that mirrors national trends. Most

of these (60%) are jobs that do not require a high school degree. MetroFuture recognizes the importance of manufacturing jobs to the region, but does not seek to halt this decline altogether. Such an effort would run counter to global trends and would be stymied by the region's many competitive disadvantages in the manufacturing sector, including a high-wage workforce, limited land availability, and high energy costs. While the region cannot gain all of the downstream commercial activities, especially for cost-driven standardized production activities, it may be able to retain activities that require highly skilled labor and ongoing interaction with research and development services. MetroFuture focuses on mitigating projected losses by attracting a limited number of jobs in manufacturing that are directly linked to the region's strengths, such as pharmaceutical or solar panel manufacturing.

If Current Trends continue, the region would have slower growth in Business and Professional Services and Education and Health Services (only 140,000 jobs), partially due to a significant shortage of skilled workers with a 2- or 4-year college degree. The region's innovation capacity would also be reduced due to slower growth in research and development spending due to increased competition for federal research and development funds and global outsourcing of R&D; growth in patent generation would be 20% less than under MetroFuture.

Objectives:

- Total employment in the region will grow by 11%, or 292,000 jobs.
- Sectors that require a more highly skilled workforce will grow faster than the region's employment overall.
- Total research and development (R&D) funding, from both public and private sources, will grow at least 5% annually.
- Metro Boston will be ranked in the top ten in the nation in number of patents per 10,000 businesses

Key implementation strategies: 1, 11 and 10

Supporting implementation strategies: 4

34 The region will be a national leader in the green technology and clean energy sectors, from development through manufacturing and application.

The clean energy and green technology sectors cut across multiple industries: renewable energy production, manufacturing, consulting, research, architecture, and construction. Together, the "green" and "clean" sectors are small (employing just 14,000 people statewide), but are projected to grow by 20% in the next year alone.

Objectives:

- The region will have an increasing share of the nation's employment in clean energy and green technology industries.

Key implementation strategies: 11 and 13

35 Small business owners and entrepreneurs will play a major role in the region's economy and innovation.

Small businesses would be a primary component of economic growth over the coming decades. MetroFuture would ensure that small business owners will have sufficient access to capital, technical assistance, and other resources necessary to start and expand their locally-based enterprises. As a result, job growth and economic productivity from small businesses will grow faster than the economy overall.

In 2004, there were 94,000 micro businesses (<4 employees) in Massachusetts and 424,000 sole proprietors, defined as business owners who work alone. Statewide, micro-businesses and sole proprietors together comprise 86% of all business establishments; employ 30% of non-government workers; and were responsible for 30% of net new jobs from 1994 – 2004. Some of these businesses may grow to employ more people; others will remain small and successful through partnerships with other small businesses, rather than through growth.

Objectives:

- Employment in micro-businesses and sole proprietorships will grow at a faster rate than overall regional employment.

Key implementation strategies: 11 and 10

Supporting implementation strategies: 6 and 5

36 Businesses will readily relocate to and expand in the region thanks to consistent and predictable economic development policies set by an informed public sector.

Consistent and transparent policies and permitting will facilitate business development in appropriate locations. Businesses will be able to make and act on decisions promptly.

Objectives:

- 100% of all projects in priority areas, consistent with development guidelines, will be permitted in 180 days.

Key implementation strategies: 1, 11, 5, 4



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nesses would have a better sense of what is expected—and what to expect from the public sector—so they would make more informed decisions and will spend less time in permitting. The region will capture economic growth more readily than under the current system.

While Metro Boston will still not have the low costs of other regions, it will retain the most significant factor in attracting businesses here: a world-class workforce.

37 A strong supply of educated and skilled workers—of all ages—will encourage businesses to locate and expand here.

Better housing choices and a high quality of life will attract and retain professionals. More recent graduates will choose to stay here, more workers will find it worthwhile to move to the region, seniors will find attractive options for remaining in the workforce, and a welcoming environment will attract educated foreign workers.

The region will not focus solely on attracting or retaining existing skilled workers, however. It will also have to invest in the education and training of residents, to create a new generation of skilled and versatile workers. Stronger public school systems throughout the region will prepare students for secondary education and participation in the workforce. As a result, there will be a much stronger supply of workers that have graduated from high school, community college, or targeted job-training programs.

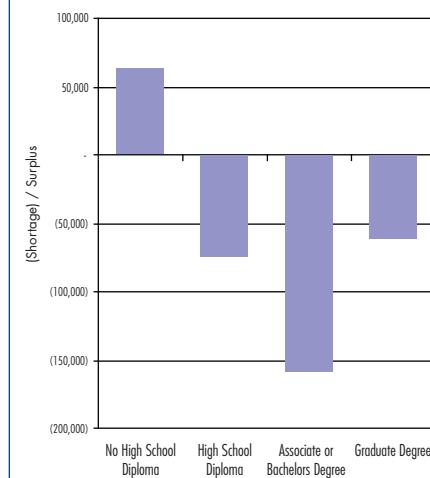
The most significant improvements in educational attainment and workforce preparedness will be among those groups that currently have the fewest economic opportunities. High quality urban schools and partnerships with businesses and institutions will provide the mostly Non-White urban youth population with many more economic opportunities.

Employment will be concentrated in urban areas and urban revitalization will be managed so that it creates economic opportunities for surrounding residents, homeowners and businesses. As a result, **38 more minority and immigrant workers will have opportunities to advance on the career ladder, acquire assets, and build wealth.** A growing Black, Hispanic, and Asian middle class will be a positive and powerful economic force as families purchase homes and spend more money in local business districts.

Access to economic opportunity will not be limited to those residents who have graduated from college. All residents of the region would find fewer barriers to finding and keeping a job. With assistance and reform, **39 more workers will participate in the labor force, earning a living wage through secure employment.** Residents of the region would encounter fewer barriers to entering the workforce at all levels, including single parents with greater access to affordable childcare, recent immigrants receiving the language training they need, and former prisoners given

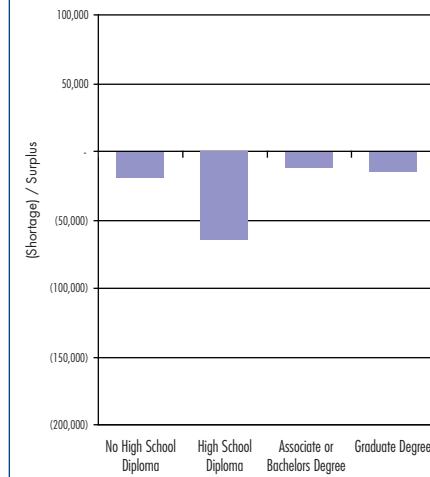
37

Jobs-Skills Mismatch, by Education Level 2030, Current Trends



37

Jobs-Skills Mismatch, by Education Level 2030, MetroFuture



METROFUTURE GOALS AND OBJECTIVES

37 A strong supply of educated and skilled workers—of all ages—will encourage businesses to locate and expand here.

MetroFuture would help to stop the “brain drain” of recent graduates and young professionals. Increased housing choices and improved quality of life would retain 1,900 working-age (25–65 years old) adults every year, who would otherwise have moved out of state, adding 24,000 educated workers to the labor force by 2030.

More significantly, MetroFuture would maximize the potential of existing residents and workers. The plan calls for expansion of community colleges and advanced job training programs to increase the number of workers with an associate degree or advanced training by 4,500 each year, as compared to what would occur if Current Trends continue. Expansion of public higher education would increase the number of bachelors degrees and graduate degrees by 4,500 over what would occur if Current Trends continue.

As a result of better education and slower outmigration, the number of working-age (25–65) 2- or 4-year college graduates will grow by 11% from 2000 – 2030. More graduates, especially those from community colleges, will have the specific skills demanded by the region’s economy. Firms looking for well-educated workers would find a strong supply, and only 2% of the region’s high-skill jobs would need to be filled by someone commuting into the region from elsewhere in Massachusetts or neighboring states.

If Current Trends continue, the region will face a major shortage of skilled workers. 690,000 college graduates now in the labor force will move into retirement age over the coming decades. The working-age population (25–65) will increase by only 3%, and fewer of them would have post-secondary education. The number of working-age adults with a 2- or 4-year college degree would decline from 43% to 34%. As a result, the region would have a shortage of 158,000 workers with a 2- or 4-year college degree, and of 60,000 workers with a graduate degree. Firms looking for high-skilled workers would have to pay them more, would lose workers more often, and might choose to relocate elsewhere. Even if workers commuting in from outside Metro Boston could fill the shortage, this in-commuting would put a significant strain on the region’s transportation system, especially highways.

Objectives:

- 53% of working-age adults will have at least a 2- or 4-year college degree (up from 43% today).
- There will be at least 1.32 million workers

in the labor force with at least a 2- or 4-year college degree, up 11% from year 2000.

- There will be at least 455,000 workers in the labor force with a graduate degree, up 11% from year 2000.
- The net outmigration rate for adults age 30 – 55 will be no more than 1.6% (was 2.7% from 1990 – 2000.)

Key implementation strategies: 10, and 6

Supporting implementation strategies: 8

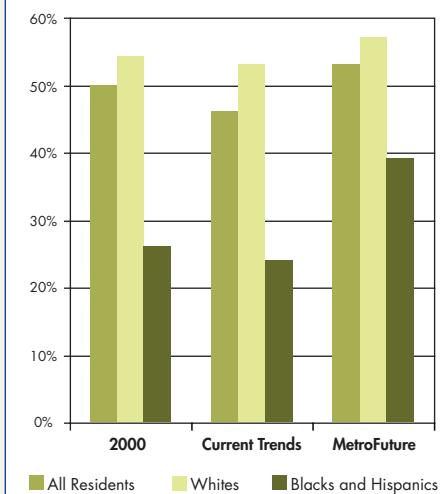
38 More minority and immigrant workers will have opportunities to advance on the career ladder, acquire assets, and build wealth.

By 2030, nearly a quarter of the region’s residents will be foreign born, and 30% will be Non-White. MetroFuture would help Immigrant and minority residents to be full participants in the region’s economy. In particular, educational improvements would especially benefit Black and Hispanic demographics with lower educational attainment rates than those of Whites and Asians. With the improvements to public education (described in Goals 29 & 37), at least 89,000 more Blacks and Hispanics (11% of the total) would have a college degree and opportunities to participate in the region’s economy.

Currently, only 26% of working-age Blacks and Hispanics have a 2- or 4-year college degree, versus 54% for Whites, resulting in a 28 point post-secondary attainment gap. If Current Trends continue, the proportion of working-age Blacks and Hispanics would decline to 24%, and the post-secondary attainment gap would grow to 29 points.

38

Working-Age Adults (25 - 65) with an Associate or Bachelors Degree



Objectives:

- The proportion of working-age Blacks and Hispanics with a 2- or 4-year college degree will increase from 26% to at least 39%.
- The post-secondary attainment gap between Blacks and Hispanics versus Whites will decline by at least 9 points.

Key implementation strategies: 10, 6, and 2

Supporting implementation strategies: 8

39 More workers will participate in the labor force, earning a living wage through secure employment.

Even with large growth in high skill, high education jobs, the region’s economy would still need less-skilled labor for many positions: 22,000 new jobs might not require even a high school diploma. The educational improvements described in Goals 29 & 37 would provide more than 200,000 of the region’s residents with better education and training. It would also increase the size of the labor force by 32,000 workers, since workers with higher educational attainment tend to have higher labor force participation rates. But as people gain a high school diploma or advanced training, fewer low skill workers are available to the retail, hospitality, and service industries. Assistance and reform, including ESOL training, childcare supports, CORI reform, and transportation, would help 41,000 people to join the labor force; more than 90% of these workers would have a high school diploma or less.

These efforts would also reduce disparity of labor force participation by race and education. The gap between Black and Hispanic labor force participation rates and Regional labor force participation rate is 4% for people without a high school diploma; 8% for high school graduates, and increases to 16% for graduate degrees. MetroFuture would close the gap to no more than: 1% for workers without a high school diploma; 5% for high school graduates; and 11% for workers with a graduate degree.

If Current Trends continue, low skill workers will exceed available jobs, and labor force participation will generally decline, falling from 79% to 76% for all working-age adults, with the fastest declines among lower skill levels (from 63% to 59% for workers without a diploma.)

Objectives:

- Labor force participation rates for Blacks and Hispanics will increase by at least 4% overall (from 67% to at least 71%), with the largest gains in cohorts without a high school diploma (from 59% to at least 67%).



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the chance to re-enter the workforce. As a result, employers will find an adequate supply of lower-skilled workers, the region will spend less money on unemployment and public assistance, and there will be lower rates of recidivism. There would also be less disparity in labor force participation rates by race or education. Employment opportunities at the lowest skill levels would create opportunities for many of the region's poorest households. Workers will also have greater access to housing opportunities, education, and social services; as a result, **[40 fewer of the region's residents will live in poverty.](#)**

Regional economic growth will bring more than monetary benefits to the region's residents. New business-civic partnerships will make the region more competitive, and residents will benefit from strong growth in sectors that also contribute to quality of life.

[41 Corporations and institutions will see civic engagement and sustainability as central to their own success.](#)

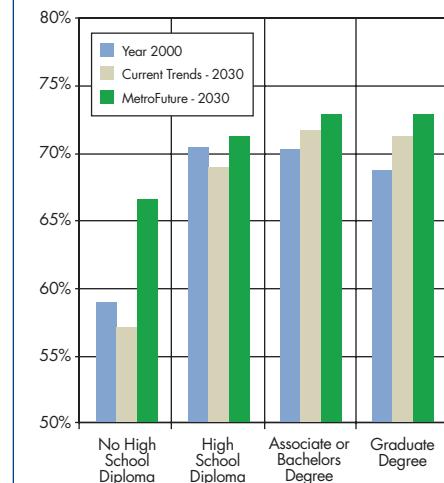
[41 Corporations and institutions will see civic engagement and sustainability as central to their own success.](#) More businesses will factor regional impacts into their decision-making; and will advance the goals of MetroFuture through their actions. Businesses and corporations will participate in local and regional planning; charitable giving, sponsorships, and partnerships will bring more resources to the region's nonprofit sector; and the private sector will take a leading role in energy and water conservation, helping the region prepare for global challenges.

While agriculture and food-related businesses do not constitute a dramatic share of the region's economy, they provide a host of ancillary benefits. **[42 The region's agricultural economy will grow through a focus on sustainable farming and by bringing more locally produced foods to the market.](#)** Environmental and health concerns and culinary tastes are building interest in locally grown food, and Metro Boston's new generation of farmers and small businesses would profit from this interest. Programs and financing will encourage environmentally sensitive growing practices and environmental improvements in farm buildings and land. Creative programs will increase the supply of farm labor and financing available for new entry farmers and farmers wishing to make investments in their business. With a shift to higher value products and more efficient distribution systems, farmers would realize higher revenues and their operations would be more sustainable. Consumers will find more outlets for local produce. As food prices rise generally due to transportation costs, local food will become more competitively priced. A stronger agricultural economy means that more farmland will remain open space, helping to preserve the region's character.

The region will be an exciting place to live, with access to museums, music, artist districts, and nightlife. **[43 More people will take advantage of the region's artistic and cultural resources.](#)** This rich cultural tapestry would attract tourists and will help attract and retain talented workers and entrepreneurs who are critical to the knowledge economy. It would also contribute to the development of creative thinking and skills necessary for success in the 21st century economy. Access to arts and culture will help to attract and retain the well-educated workforce critical to the knowledge economy.

39

Blacks and Hispanic Labor Force Participation Rate by Education Level



METROFUTURE GOALS AND OBJECTIVES

- Labor force participation rates for Blacks and Hispanics will be within 9% of regional average labor force participation rates.
- There will be decreasing disparity of unemployment by race and by education.

Key implementation strategies: 10

Supporting implementation strategies: 12 and 9

40 Fewer of the region's residents will live in poverty.

MetroFuture would help more of the region's residents to live above the poverty line. With increasing regional prosperity and improved educational opportunities, the region's residents will have more chances to advance economically. Affordable housing and reliable public transportation will allow people to develop stable routines and succeed at work and school.

As of 2000, about 8.3% of residents and 9.2% of households in the region lived in poverty. Those in families were slightly better off, with the percent of families in poverty trailing the percent of individuals by an average of 1.3% across the region. Single parents with children under age 18 are especially vulnerable; nearly 29% of this demographic lived in poverty as of 2000.

Objectives:

- There will be steady declines in the proportion of residents, households, and families living in poverty.
- The region will increasingly reduce income disparities between top and bottom quintile of the population, as measured by the GINI Index.

Key implementation strategies: 11 and 10

Supporting implementation strategies: 8 and 9

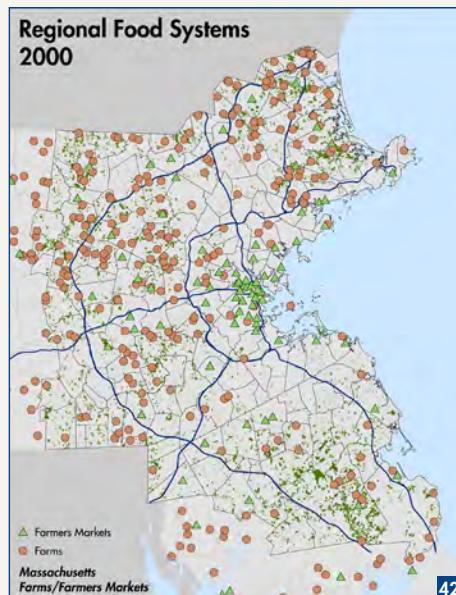
41 Corporations and institutions will see civic engagement and sustainability as central to their own success.

Strong corporate actions in the areas of social responsibility and environmental sustainability will supplement and spur government actions. Public funding is never unlimited, and public-private partnerships will ensure that more resources are available for the communities in Metro Boston. Corporate leaders will continue to push for innovations to support the region as efficiently as possible, and will actively participate in regional discourse and decision-making.

Objectives:

- Charitable corporate contributions will increase faster than inflation or Gross Regional Product.

Key implementation strategies: 11 and 13



42 The region's agricultural economy will grow through a focus on sustainable farming and by bringing more locally produced foods to the market.

Metro Boston's food system will have a strong foundation in local food production and distribution. MetroFuture would help create a younger generation of farmers and would support a shift to higher value products and more efficient distribution systems, so that farm revenues would increase faster than the economy overall. Farms would be more sustainable and have fewer negative environmental impacts due to less reliance on oil-based fertilizers, pesticides, and herbicides. There would be no net loss of agricultural land, and an overall increase in productive acres.

The region currently has 117,000 acres of agricultural land uses; 59% percent of that land is actively harvested cropland. In 2002, farms in MetroFuture region counties sold \$144 million worth of products, 38% of the state's total market value of agricultural products sold. The industry has a large economic multiplier; each dollar generated by agriculture circulating three times through the economy. Agricultural land also provides numerous hard-to quantify benefits, including wildlife habitat, carbon sinks, and open space.

Currently, 58,000 acres of agricultural land is not permanently protected and therefore at risk of development. If Current Trends continue the region will lose 11,000 acres of agricultural land. In 2002, the average age of farmers in Massachusetts was 55, and many will be looking to retire over the coming decades.

Objectives:

- There will be at least 117,000 acres of agricultural land in the region, and at least 105,000 acres (90%) will be actively harvested cropland.
- The total market value of agricultural products sold by the region's farms will grow faster than the regional economy.
- The dollar value of local foods purchased by schools, state institutions, restaurants and health care facilities will increase steadily.
- An increasing number of farms, and an increasing share of the region's agricultural sales, will be certified organic.
- There will be no restrictions on the harvestable shellfish beds in the region due to human health concerns.

Key implementation strategies: 9 and 7

Supporting implementation strategies: 11, 6, and 4

43 More people will take advantage of the region's artistic and cultural resources.

The region's cultural and creative enterprises generate an exciting destination for tourists—the "Creative Cluster" is currently Massachusetts' third largest industry sector. These activities also help to grow, attract, and retain a talented workforce. Rich cultural and ethnic diversity offers an increasing range of experiences throughout the region.

Although the region's cultural and artistic resources would remain concentrated within the Inner Core, many suburban and regional centers would have vital resources as well. These resources would measured not only by arts organizations and cultural institutions, parades and festivals, but also by their capacity to support artists in the for-profit and nonprofit arts sectors, support for arts education, and the variety of expressions of cultural and racial/ethnic diversity.

Currently, Metropolitan Boston is the arts and culture capital of New England. 42% of the Region's tourists are from other New England states. The region is home to world-class institutions, events, and spectacles that attract people from around the world, almost 100,000 international visitors in 2006, a 24% increase from the previous year. Cultural tourism to Greater Boston—spurred by leisure travelers—has been steadily increasing, reaching a 6-year high in 2006.

Objectives:

- Increasing economic impact of the "Creative Cluster" industries.

Key implementation strategies: 11 and 6



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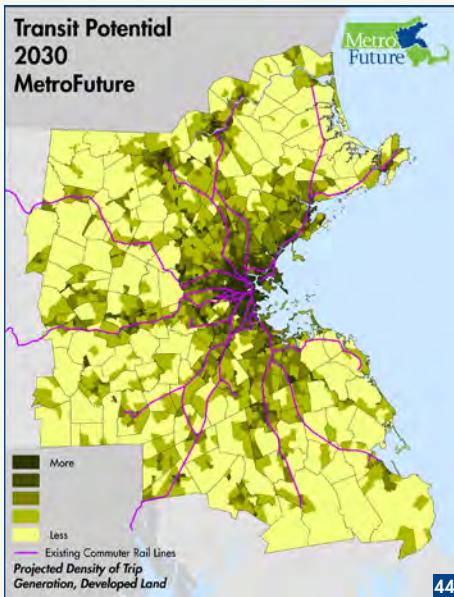
People Will Have More Transportation Choices

The MetroFuture land use plan will be accompanied by an improved transportation system that will provide more choices for residents and businesses. The region will not be free of traffic congestion, but people will have more choices for how to get around; innovative transportation solutions will ensure access and quality of life. Most significantly, **44 an expanded transit system will provide better service to both urban and suburban areas, linking more homes and jobs.** Bus and rail lines will serve more areas than they do today, supported by transit-friendly land use that makes the most of public investments. New suburban transit services will not provide universal coverage but will provide connections to job centers and along key corridors, where growth is focused and where predictable commuting patterns can be served more efficiently.

New and old residents will find transit service that meets their needs, with higher frequencies, better customer service, and reverse commute services. Thanks to shuttles and demand responses services, the region would also see less of the “last mile” problem that exists mostly in suburban areas: jobs and homes just a mile away from transit stops are effectively inaccessible due to the lack of sidewalks or local transit. Traditional transit services will also be supplemented by more informal transportation services such as car sharing and internet-based carpooling. The system will also work more efficiently and reliably due to consistent maintenance and well designed bus lanes and intelligent transportation services. As a result, **45 more people will use transit for work and personal services.**

By 2030, the age of chronic commuting headaches in the region will have faded, because **46 commuters will have more options to avoid congestion.** Rush hour traffic on major highways will remain a challenge, but MetroFuture prioritizes transportation alternatives that create more choices, rather than expensive highway expansion projects that have a limited impact on long-term congestion. More workers will be able to find housing choices near work or transit options, so fewer will have to drive long distances. Workers will have better information on transportation access and commuting options when they decide where to locate. Coupled with a higher quality of life in urban areas, this information will encourage people to live in urban hubs where they have better access to more jobs nearby or via transit. Employers will use a similar approach, locating in areas where there workers will have more transportation options for commuting. Employers and employees will make greater use of flextime, telecommuting, and nontraditional work arrangements.

METROFUTURE GOALS AND OBJECTIVES



44 An expanded transit system will provide better service to both urban and suburban areas, linking more homes and jobs.

MetroFuture would make transit a more attractive option by improving service on existing lines and by extending the reach of service to new locations that can support it with transit-friendly land uses (new, old, or a mix of the two).

Regionwide, approximately two-thirds of current residents and jobs are within a mile of the MBTA system. MetroFuture focuses more than two thirds of new housing units and jobs near existing train stops and bus routes.

By focusing growth in developed areas, MetroFuture also increases the number of locations that have a "critical mass" of people, jobs, and destinations sufficient to support some sort of transit service. With additional growth in cities, town centers, and employment centers, an increasing share of the region's residents and jobs would be at or near transit-supportive densities by 2030: (32% at densities greater than 30 residents & jobs per developed acre at the TAZ level, compared to 30% in 2000; and 53% at densities above 15 residents & jobs per developed acre, compared to 49% in 2000.) However, the existing transit system does not serve all these areas. Under MetroFuture, by 2030, there would be 575,000 residents and jobs at densities above 15 persons per acre, but in locations beyond the reach of the existing transit system.

The plan also seeks to address the "last mile" problem that exists where homes and jobs that are near (within two miles) transit stops but not

within walking distance. With new fixed route or demand response service, all residents and workers near transit could access the station with no more than a 5-minute walk to the station or to connecting service.

Objectives:

- All Traffic Analysis Zones with a density of 15 persons per developed acre will be served by fixed-route transit.
- All residents and employees who live or work within two miles of a commuter rail station will have access (5-minute walk) to bus or other services providing connections to that station.
- In each municipality, average commuting time by transit to the municipality where the largest share of residents work will be equal or better than commuting time by car.
- The region will fully implement all transit projects in the State Implementation Plan (SIP.)

Key implementation strategies: 1, 12, and 4

Supporting implementation strategies: 11, 6, and 5

45 More people will use transit for work and personal trips.

MetroFuture would more than double the number of trips made on transit, through expansion and improvements to the existing system; creation of more suburban transit services; land use plans and site designs that promote transit use; and a steady increase in gas prices

Central Transportation Planning Staff transportation modeling results indicate that MetroFuture could increase the number of transit trips by at least 50%. MetroFuture has established a more ambitious goal of more than doubling the regional transit mode share, from 6.3% to 13.8%, based on the expectation that the region would pursue more ambitious improvements to transit and land use than accounted for in the CTPS model.

Applied to a growing number of trips overall, this mode split means that the number of total transit trips regionwide would increase by 150%, from 900,000 to 2.2 million. Since many commuter trips are easier to serve with transit due to their predictability, the relative increase in the number of commuter trips made via transit would be even greater (200% increase).

If Current Trends continue, transit mode share would increase slowly, to just 7.8%. People will find transit to be increasingly inconvenient, due to the dispersal of land uses, poor service quality, and lack of access.

Objectives:

- Regional mode share for public transit would increase from 6.3% to 13.9%.
- The number of people who take transit to work will triple.
- The region would see 2.2 million daily trips transit ridership.

Key implementation strategies: 1, 12, 11, 6, and 5

Supporting implementation strategies: 8

46 Commuters will have more options to avoid congestion.

An increasing share of workers would avoid congestion through transit, flextime, telecommuting, carpooling, and other nontraditional work and commuting arrangements. The greater share of new jobs and housing near transit will make it more likely that people can commute via transit, even when they change jobs. Congestion and related delay hours would not decline for rush-hour auto commuters; but more workers would be using alternative modes or other work options, so that the delay hours per person or per employee would decline.

Currently, 34% of the region's workers spend more than a half hour in their car to get to work; and 7% spend more than an hour in the car.

Objectives:

- Fewer than 34% of the region's workers will have an auto commute that takes more than 30 minutes.
- The proportion of people walking or biking to work will increase from 17% to 25%.
- The proportion of commuters who carpool will double.
- There will be an increase in the number of jobs within one hour via transit for the region's residents.
- There will be an increasing proportion of workers who telecommute at least one day per week.
- Total annual delay of 23 hours (2005 delay per person will not increase.

Key implementation strategies: 1, 12, and 10

Getting Around

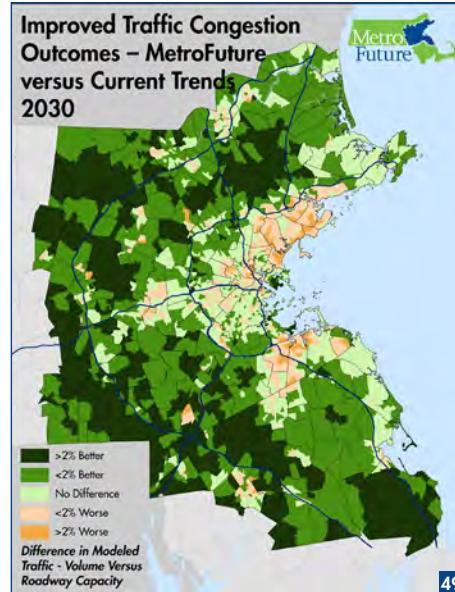
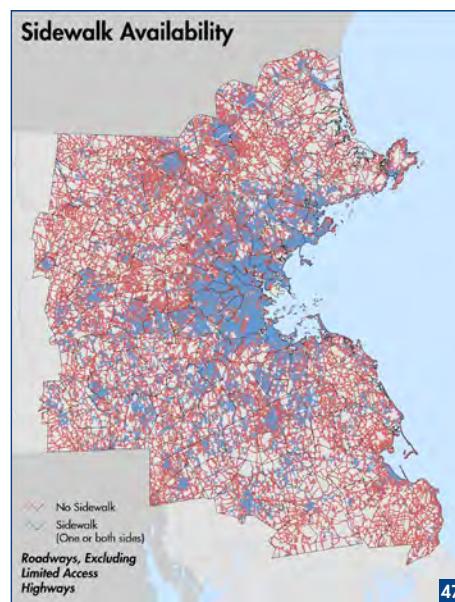
THE METROFUTURE SCENARIO

Residents will also use their cars less for errands and local trips. In urban neighborhoods, town centers, and new compact growth areas, people will find a connected network of sidewalks and paths. With more concentrated growth patterns, people will live closer to shops and services, and shops and services will be clustered together in revitalized town centers. Instead of making many short, fuel-inefficient trips by car, **47 most people will choose to walk or bike for short trips** to school, convenience shopping, or even to the gym! An increase in walking and biking access will help to mitigate demand for parking in commercial districts; and parking requirements will be less of a constraint on economic development; with less land devoted to parking, more land can be used for economic development. With shorter trips for shopping and work, increased transit service, and more people choosing to walk or bicycle, **48 the average person will drive fewer miles every day.**

As a result, people will spend less time in the car, less money on gas, and more time with their families and communities.

With a concentration of growth in existing town and city centers, **49 outlying areas will see little increase in traffic congestion.** The region's lower density suburbs will experience less commercial and residential development; but they will also have less traffic congestion and fewer people driving around.

Those who cannot or do not want to drive will find more places where they can live without owning a car; in particular, **50 people with disabilities will find it easier to get around the region.** All elements of the transit system will be fully accessible.



METROFUTURE GOALS AND OBJECTIVES

47 Most people will choose to walk or bike for short trips.

MetroFuture would double the share of trips made by walking or biking. This would come about through greater connectivity of sidewalk and path networks; better maintenance of sidewalks and bike paths; and closer proximity of new housing, shops, services and schools. At least 200 miles of new off-road multi-use paths would be built in the MAPC region alone.

With improved sidewalks, safety, and site design, MetroFuture seeks to achieve a regional walk/mode share of 25%. (The CTPS transportation model projects that MetroFuture land use patterns alone could increase the regional walk/bike share from 16.7% in 2000 to 18.9% in 2030, without any major changes in pedestrian connections, site design, or gas prices.) People would make nearly 4 million trips by foot or bike each day, a 68% increase from 2000. Most of this increase would result from walking or biking for the shortest trips, which are often the most fuel-inefficient.

Currently, 66% of the region's streets and roads (excluding limited access highways) have no sidewalk. 69% of the MAPC region population lives more than 1 mile from an off-road multi-use path. If Current Trends continue, more of the region's growth would be in low-density areas with the most dispersed destinations (shops, services, and schools) and the lowest proportion of roadways with sidewalks. The mode share for walking and biking would increase only slightly, from 16.7% to 17.7%.

Objectives:

- 25% of all trips will be made on foot or by bicycle.
- 60 % of region's streets and roads (not limited access highways) will have sidewalks on at least one side of the road.
- There will be at least 200 miles of new off-road multi-use paths in the MAPC region.
- There will be a steady reduction in the rate (per bicyclist mile) of auto-bike crashes that result in death and bodily harm.
- There will be a steady reduction in the rate (per pedestrian mile) of auto-pedestrian crashes that result in death or bodily harm.

Key implementation strategies: 12, 6, and 5

Supporting implementation strategies: 7

48 The average person will drive fewer miles every day.

MetroFuture's emphasis on alternative modes would allow the region's residents to rely less on

their cars, with a goal of reduce the regionwide automobile mode share from 77% in 2000 to 61% by 2030. The greatest improvements would be made in urban areas, where fewer than half of all trips would be auto trips (down from 56% currently). Regionwide, even as the number of residents and jobs grows by 13% and 11%, respectively, MetroFuture would reduce the actual number of vehicle trips and the total miles traveled by 5%. The vehicle miles traveled per person would decline by 15%. Thanks to proximity of shops, convenience of transit, and availability of car-sharing services, more households would be able to live with a single car, and many could live well with no car at all.

Currently, the region's residents and workers drive 107 million miles per day for commuting, work, delivery, and personal trips; equivalent to 25 miles per person per day. If Current Trends continue, the number of vehicle miles travelled would increase faster than population and jobs. The region's residents and workers would be driving an additional 17 million miles each day, an increase of 16% overall, and 5% per person after accounting for population growth.

Objectives:

- There will be a 15% reduction in per-capita vehicle miles traveled by automobiles registered in the region.
- There will be a steady reduction in the number of cars per resident.
- An increasing proportion of the region's households, distributed equally across income levels, will have no car.

Key implementation strategies: 12, 6, and 5

49 Outlying areas will see little increase in traffic congestion.

MetroFuture focuses growth in urban communities and developed suburban areas with the infrastructure to support it. Other portions of the region will see slower growth rates than they would under Current Trends and, as a result, slower increases in congestion.

CTPS model results indicate that regionwide average congestion levels (measured in terms of vehicles/roadway capacity, at the TAZ level) would increase slightly from 55.5% in 2000 to 58.7% in 2030 under MetroFuture land use patterns. The increase in congestion would be markedly less than would occur if Current Trends continue (would increase to 59.2%, even with lower overall growth rates than MetroFuture). The improvements would be most significant in the Developing Suburbs, where average congestion levels would be 4% less under MetroFu-

ture than under Current Trends. Assessed at the Traffic Analysis Zone level, 75% of the region's area would have lower levels of congestion under MetroFuture than under Current Trends.

The MetroFuture land use plan and emphasis on transit and walkability would fully mitigate increased density in suburban growth centers. Suburban employment hubs and town and village centers would see 40% more new housing than they would if Current Trends continue, but would have comparable or lower levels of average congestion. Meanwhile, suburban areas outside of growth centers would experience average congestion 1 – 2% lower than they would if Current Trends continue.

Objectives:

- Traffic congestion (roadway volume/capacity) will not increase by more than 10% across all suburban municipalities.

Key implementation strategies: 1, 12, 5, and 7

50 People with disabilities will find it easier to get around the region.

MetroFuture's emphasis on compact development, alternative transportation, and social services would make it easier for people with disabilities to get around in Metro Boston. People with limited mobility would be able to physically access most new housing, regardless of whether it was created specifically for disabled populations. Application of Universal Design principles would help to ensure that homes, workplaces, public spaces, and information are usable by the widest range of people operating in the widest range of situations without special or separate design.

Objectives:

- All transit stations and vehicles (MBTA and RTAs) will be fully handicapped accessible.
- 100% of municipalities will be served by demand response service with average response times less than 30 minutes.

Key implementation strategies: 12

Supporting implementation strategies: 5

THE METROFUTURE SCENARIO

Like all public infrastructure, transportation investments can either enable or curtail continued dispersal of jobs and homes. In order to make the most efficient use of limited transportation resources, **51 regional transportation planning will be linked with sustainable land use planning.** In order to support MetroFuture's plan for focused growth (and all its appurtenant housing, environmental, social, and fiscal benefits), transportation resources must be similarly focused. Resources are limited, and investments must be targeted to locations where the investment is needed most and will have the greatest impact. The benefits of these investments would be judged not by increase in lane miles or capacity, but by improved accessibility, diversity transportation options (mode choice), economic and environmental benefit to the Commonwealth, alignment with state policy, and long term effectiveness. Municipalities would have increased responsibility for allocation of transportation funding, providing them with incentives to consider long-term transportation impacts when making land use decisions.

The region will allocate limited resources more effectively, but the pie will also be larger since **52 the transportation system will be reliably funded and transportation agencies will demonstrate accountability to the public.** Rational decision-making and transparent/efficient project delivery will generate public support for expanded revenue sources. The MBTA will be free of crippling debt and benefit obligations, so it can focus on providing high quality service. Municipalities will use a diversity of revenue streams to make transportation improvements, including traditional public revenue sources, tolling, congestion pricing, impact fees, value capture tools, and other innovative approaches to leverage private capital. Local governments will also have more freedom to generate local funds for transportation improvements.

The public will have little appetite for increased revenue if they are not confident that it will be spent efficiently. Publicly available performance analysis of project delivery will increase accountability across transportation agencies, from programming to project delivery. With reliable funding streams and greater accountability to the public, **53 transportation projects will be designed and built cost-effectively.**

With a renewed regional focus on focused growth near existing infrastructure, more transportation resources will be directed to maintenance or improvements that enhance safety and provide transportation choice. **54 Roads, bridges, and railways will be safe and well-maintained.** Maintenance of both passenger and freight facilities will ensure that **55 the region's businesses will access the global marketplace through an efficient freight transportation network.** More of Metro Boston's commerce would be directed onto its rail and port systems, reducing congestion, emissions, and the costs for goods imported into the region. Focused growth of housing and employment in suburban locations would make it more efficient for delivery and distribution companies to access new growth.

METROFUTURE GOALS AND OBJECTIVES

51 Regional transportation planning will be linked with sustainable land use planning.

The MetroFuture region would use limited transportation resources wisely. Land use impacts will be clearly quantified using up-to-date information and modeling tools. Priority will be given to those projects that support a land use plan that will efficiently utilize new transportation capacity to support sustainable growth.

Objectives:

- No Federal Aid and Non-Federal Aid resources will be allocated to transportation projects with a land use rating that is in the bottom third of the MPO Universe of Projects.
- No transportation projects over \$50 million will be programmed without a comprehensive corridor land use plan.
- Funding for community-based transit such as shuttle services and on-demand services will be at least 5% of the total transportation budget.
- Funding for sidewalks, bike paths, and rail trails and transportation demand management programs will be at least 5% of the total transportation budget.
- Funding for expansion of transit network (subways, bus, and commuter rail) will be a greater proportion of the region's transportation budget than is spent on roadway expansion projects.

Key implementation strategies: 1, 12, 11, 5, and 2

Supporting implementation strategies: 10 and 9

52 The transportation system will be reliably funded and transportation agencies will demonstrate accountability to the public.

MetroFuture would supplement traditional transportation revenue sources with tolling, congestion pricing, impact fees, value capture tools, and other innovative approaches to leverage private capital. Long-range transportation plans and annual programs would be constrained by realistic financial assumptions; fewer projects would be paid for by borrowing from anticipated future revenues.

Under the current tax and tolling system, road users do not pay for themselves. Massachusetts pays for 52% of its highway system with bonds; only 15% is paid for by gas tax revenue (48th nationally) and 6.5 % through tolls.

Objectives:

- The region will complete 95% of maintenance targets annually.

- 95% of roadway maintenance and transit maintenance funding will be allocated according to the priorities of a comprehensive transportation asset management system.
- There will be a steady decrease in the MBTA debt service costs.
- A growing share of transportation funding in the region will come from user fees and value capture tools.

Key implementation strategies: 3, 12, and 4

Supporting implementation strategies: 2

53 Transportation projects will be designed and built quickly and cost-effectively.

Transportation projects will be chosen in an efficient, transparent manner, and those choices will be based on realistic estimates of costs and revenues. Fewer projects would suffer delays due to unforeseen cost increases or revenue decreases, which will in turn help to improve public perception of transportation projects.

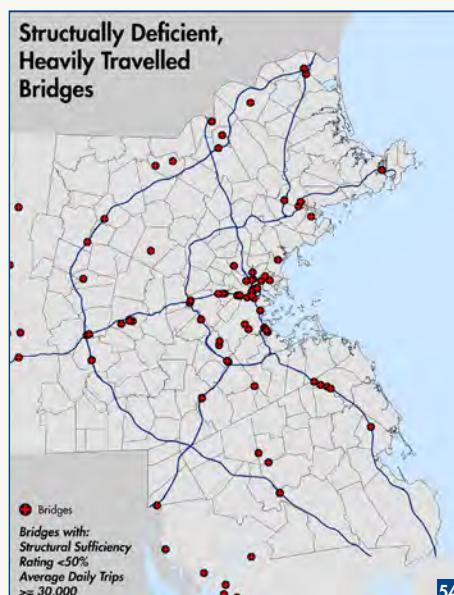
Objectives:

- 90% of transportation infrastructure projects will be complete on time and within budget.

Key implementation strategies: 12

54 Roads, bridges, and railways will be safe and well maintained.

With a renewed focus on growth in developed areas where infrastructure is available, more funding would be allocated to maintenance or improvements (including safety enhancements and multimodal adaptation) of existing transportation assets.



In Metro Boston, there are currently 120 structurally deficient bridges that carry over 30,000 vehicle trips each day. 40 of these bridges carry over 60,000 vehicles per day, and a dozen carry over 100,000 vehicle trips per day. Statewide, 18% of bridges under the jurisdiction of the Department of Conservation and Recreation are structurally deficient, as are 16% of city and town bridges.

Objectives:

- At least 70% of state-maintained roads will be in good repair.
- 90% of auto crashes will be cleared from the roadway within 90 minutes.
- The number of structurally deficient bridges will not increase.
- All municipalities will have a pavement management system in place.

Key implementation strategies: 3 and 12

55 The region's businesses will access the global marketplace through an efficient freight transportation network.

Metro Boston's businesses will compete in the global marketplace thanks to efficient movement of goods and people on a well-maintained system of railways, roadways, ports, and airports.

Currently, trucks move 94% of the freight transported in Massachusetts (nationally, that figure is 78%).

Objectives:

- 15% of the region's freight will travel by rail.
- The Port of Boston will be fully connected to the regional rail network.

Key implementation strategies: 12 and 11

Supporting implementation strategies: 4

THE METROFUTURE SCENARIO

Residents and wildlife will enjoy a Healthy Environment

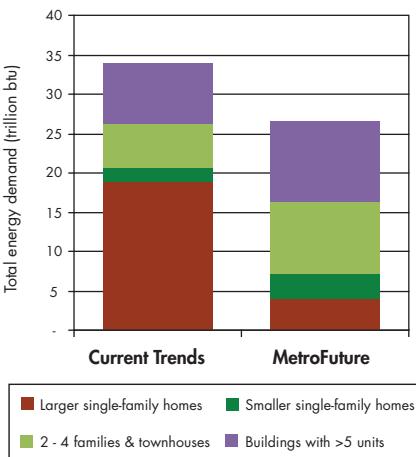
The coming decades will bring great changes to the way the nation uses natural resources. Nowhere will these changes be greater than in the field of energy, where rising prices could become a drag on economic growth if the region is not prepared. MetroFuture charts a course through these changes by applying regional innovation to conserve finite natural resources. More communities and individuals would evaluate their actions through the lens of climate change. The region would develop and apply new tools and technologies, strengthening the economy while contributing to a global effort. By using less energy and sourcing more of it from renewable resources, **⁵⁶ the region will be a national leader in reducing greenhouse gas emissions.**

The reduction of energy demand will result from changes across the spectrum. People will find smaller, efficient homes, and ways to use their car less. More stable municipal finance will allow cities and towns to make long-term commitments to renewable energy investments. As a result, **⁵⁷ the region will use progressively less energy for electricity, heating, cooling, and transportation.** Residents and businesses will spend less on energy and will be able to better withstand price increases. The region will need to build fewer power plants and transmission lines, because conservation will help accommodate new demand.

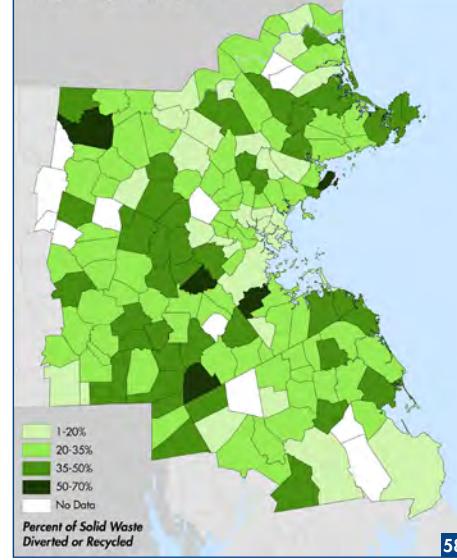
Energy goes into all the products we use. The region will find ways to reduce the amount of “embedded energy” in products, packaging, and construction materials. **⁵⁸ The region will produce less solid waste, and more of that waste will be recycled or composted.** While using recycled content in products still requires energy, it is far less than virgin materials.

57

Energy Demand, New Housing Units, by Housing Type, Current Trends vs. MetroFuture

**58**

Recycling Rates, 2006



METROFUTURE GOALS AND OBJECTIVES

56 The region will be a national leader in reducing greenhouse gas emissions.

The region would take advantage of its unique academic and technical resources to be a leader in the effort against global warming. MetroFuture would reduce greenhouse gas emissions 33% by the year 2030. This is equivalent to a 20% reduction from 1990 – 2020, another 30-year planning period commonly used by others.

Through a combination of reduced demand and increased reliance on renewable and low-carbon fuels, MetroFuture would achieve more than the 2004 Massachusetts Climate Protection Plan (10% reduction from 1990 – 2020) and the Regional Greenhouse Gas Initiative (RGGI) which would cut emissions from electrical generation by 10% from 1990 to 2018. The biggest reductions would accrue from the transportation and electric power sectors, which together comprise nearly ¾ of total emissions. A 30 – 40% reduction in emissions from both of these sectors would generate 25% reduction in overall emissions. The remainder of the reduction would be accomplished through conservation and fuel switching in the residential, commercial, and industrial sectors.

Municipalities would take a leading role in emissions reduction through initiatives such as the Cities for Climate Protection program of the International Council on Local Environmental Initiatives (ICLEI). This program currently includes 14 MAPC region communities as members and offers a well established and globally successful template for any community committed to reducing greenhouse gas emissions and saving taxpayers' money.

Currently, the transportation and electric power generation sectors are the two largest emitters of CO₂ in Massachusetts at 40% and 29% respectively, in 2005. Total Massachusetts GHG emissions increased by about 1.1% from 1990-2005. Commercial, industrial, residential, and electric power sectors all decreased over that period. The increase was driven by a large increase in transportation-related emissions, which rose 19% from 1990 to 2005, and 7% from 2000 - 2005. Emissions from electricity generation have declined by 5% overall from 1990 – 2000, but not consistently; emissions declined by 14% during the 1990s, but then increased 10% from 2000 – 2005.

Objectives:

- Regional CO₂ emissions related to electrical generation and commercial, industrial, residential, and transportation uses will be 33% below 2000 emissions.
- Regional transportation-related emissions will be 40% below 2000 emissions

- Emissions resulting from the region's electric power demand will be 40% below 2000 emissions
- 100% of municipalities will participate in the Climate Protection Campaign or equivalent.

Key implementation strategies: 3, 12, and 13

Supporting implementation strategies: 8, 7, and 4

If Current Trends continue, the region's new housing would demand 30 trillion btu; 55% of this demand would be for larger single-family homes on a half-acre or more. In the transportation sector, total vehicle miles traveled would increase by 16%, with comparable increases in energy demand for fuels.

Objectives:

- Regionwide average annual energy demand for heating, cooling, lighting, and appliances in new housing units will not exceed 75 million btus per unit.
- Total energy demand for passenger transportation will decline by 38%.
- Per-capita energy demand in the residential sector will decline by 38% from 2000 – 2030.
- Non-emergency municipal and state vehicles will be 100% alternative fuel vehicles by 2030.

Key implementation strategies: 3, 12, and 13

Supporting implementation strategies: 8 and 5

57 The region will use progressively less energy for electricity, heating, cooling, and transportation.

MetroFuture will help the region to achieve dramatic reductions in per-capita energy demand: land use, housing mix, and technology application. The plan supports a 38% reduction in per capita energy demand from 2000 - 2030, yielding a 30% reduction in total demand over the same time period.

Much of this reduction would result from more compact land use patterns and more energy-efficient transportation options. With shorter trips and a decreasing auto mode share, the region overall would collectively put 5% fewer miles on its cars and trucks each year (15% reduction per capita.) If average fuel efficiencies increased by 35%, the region would use 38% less energy for passenger transportation.

MetroFuture also emphasizes smaller, more compact housing types that require less energy. As of 2001, the average single-family home in New England uses 140 million British Thermal Units (btu) for heating, cooling, lighting, and appliances each year. Smaller units use progressively less, down to 43 million btu for each unit in larger multifamily buildings. Even before accounting for increased efficiency, the per-unit energy demand for MetroFuture's more compact housing mix would be 77 million BTU per year, 21% less than the average per-unit demand if Current Trends continue. Total energy demand for new residential development would be 12% less than if Current Trends continue, even though total housing production is 13% higher. More of this demand would be in multifamily buildings, where conservation technologies and designs can be applied most cost-effectively; as a result, the energy demand would be even lower than projected. MetroFuture would also support retrofits and improvements to make the region's existing housing stock, industries, and municipal operations more energy efficient.

Currently, Massachusetts is one of the more efficient consumers of energy in the nation. In 2004, Massachusetts ranked 48th in per capita energy consumption. Massachusetts residents consumed only 255 million btu per capita in 2003, compared to the national average of 350 million btu per capita.

58 The region will produce less solid waste, and more of that waste will be recycled or composted.

MetroFuture supports the goals and objectives of the Massachusetts Solid Waste Master Plan. Products, packaging, and buildings all contain embedded energy, and the region can conserve this energy through waste reduction, recycling, and composting. Each ton of solid waste contains the equivalent of 10 million British Thermal Units (btu.) Each ton of recycling or waste reduction can reduce greenhouse gas emissions by the equivalent of 500 pounds of carbon.

The region would conserve this energy by applying technologies and strategies developed by local "green tech" industries. Recycling, reuse, and remanufacturing activities in Massachusetts generate revenues of \$3.6 billion annually, and comprise an estimated 19,000 jobs statewide.

Metro Boston produced 2.3 million tons of solid waste in 2006; only 25% of which was recycled or composted. 64 municipalities diverted less than 25% of their waste to recycling or compost. Only 5 municipalities recycle or divert more than 50% of their solid waste to recycling or compost.

Objectives:

- By 2030, the region's solid waste production will be 70% below potential waste generation (based on gross regional product.)
- By 2030, 100% of the region's cities and towns will recycle or compost 56% of municipal solid waste.

Key implementation strategies: 13

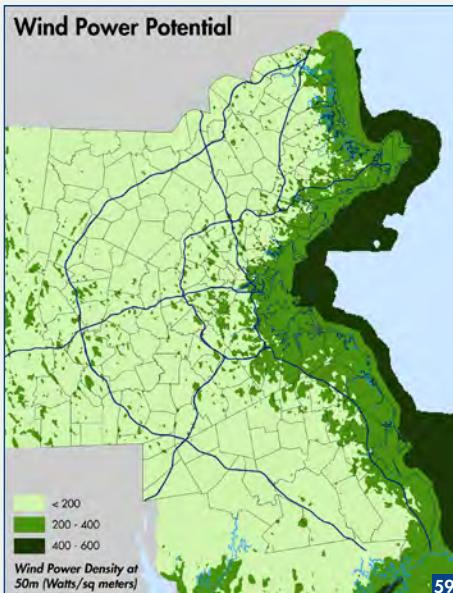
THE METROFUTURE SCENARIO

As the cost of carbon-producing fossil fuels increases, cleaner energy sources that are more expensive now will become more cost competitive. With university research driving economic development, the region will be a hotbed of new technologies. Metro Boston will act as both consumer and producer: by purchasing more energy from renewable sources, it increases demand for new technologies that the region is uniquely positioned to produce. **59 The region will produce more renewable energy and will obtain more of its energy from renewable sources.** Small renewable energy installations will be common on many types of properties. Compact growth patterns create economies of scale for the creation of geothermal energy, distributed generation, and other renewable or efficient technologies. Focused growth will help to reduce encroachment of residential development on potential wind energy locations. Small-scale wind energy will be a good revenue source for many farmers and other owners of undeveloped land.

A reduction in energy demand (especially for transportation demand) and a shift away from conventional fossil fuels sources will result in lower emissions of pollutants other than carbon dioxide. Developers will use healthier building materials alongside the energy efficient technologies. **60 The region will have better air quality, both indoors and out.** People will live and work in healthier buildings and will have lower rates of illness. Fewer children will have asthma, and fewer residents will die of lung diseases.

The region's water comes from a diverse system of public and private supplies all over the region; the aquifers and watersheds they draw from have only a limited supply. The region can increase sustainability by reducing demand or moving to alternative sources; but it will also protect supplies by reducing pollution and keeping water local. **61 Water resources will be carefully budgeted and sustainably managed so that clean water is available for appropriate uses and development.** Alteration of local hydrology by water withdrawals will be slowed or reversed.

METROFUTURE GOALS AND OBJECTIVES



59 The region will produce more renewable energy and will obtain more of its energy from renewable sources.

MetroFuture supports efforts to increase renewable energy production and consumption. As of 2005, the state sources 8% of total energy consumption from hydroelectric, biomass, other renewable sources, and nuclear power. There are approximately 27 megawatts of renewable energy installed in the MAPC region with about 33 additional megawatts in development.

In 1997, Massachusetts adopted a Renewable Portfolio Standard (RPS) for electricity sellers. It required 1% of all sales be from renewable sources in 2003, with the percentage increasing to 2% in 2005, 4% by 2009 and 1% each year thereafter. In 2005, the last year for which data are available, 664,000 megawatt-hours of renewable energy were supplied under the RPS, accounting for 1.25% of all electricity sales. The Division of Energy Resources estimated that this amount of renewable energy reduced carbon dioxide emissions by more than 365,000 tons.

Objectives:

- By 2030, the region will purchase from renewable sources (without increases in nuclear, large hydroelectric, and biofuels) electricity equivalent to 25% of year 2000 electricity demand.
- The region will build at least 400 MW of clean energy capacity in the MAPC region.

Key implementation strategies: 13

Supporting implementation strategies: 7

60 The region will have better air quality, both indoors and out.

MetroFuture's would improve air quality through reduced energy demand and a shift away from fossil fuels. A decrease in total vehicle miles traveled in the region (Goal 48) would have the biggest impact. Congestion would increase in some locations, though much less than if Current Trends continue. Air quality in urban areas would be improved through the use of alternative fuels. Urban trees would help to reduce and mitigate congestion and air quality effects of new growth. Fewer sensitive land uses and disadvantaged populations will be located near highways and major emission sources. This will result in improved health for its residents, with substantially lower allergy and asthma rates, especially among urban residents.

Objectives:

- Regional ozone (smog)-O₃ levels will never exceed 0.070 ppm (8 hour average).
- Sensitive land uses (homes, schools, day care, playgrounds, or medical facilities, etc) will not be sited closer than 500 ft to a major transportation facility (freeways or urban roadway with 50,000 vehicles or more per day).
- There will be no areas in the region that have ambient PM 2.5 level higher than 10 micrograms per cubic meter on an annual basis.

Key implementation strategies: 12, 9, 6, and 13

Supporting implementation strategies: 8 and 7

61 Water resources will be carefully budgeted and sustainably managed so that clean water is available for appropriate uses and development.

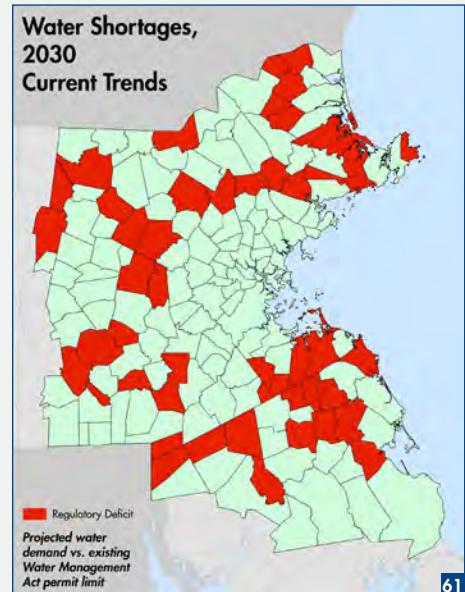
MetroFuture identifies water conservation as a key increment of supply to serve new growth in many communities. New residents would use 33% less than today's average demand for existing residents; and new jobs would use 20% less than today's average per-employee demand for comparable sectors. Existing homes and businesses would use 20% less than they currently do; and water systems would lose less than 10% of their water to unaccounted-for uses. These savings would be sufficient for all but 5 of the region's municipalities to live within their existing regulatory limits.

MetroFuture's land use plan would also help to preserve water supplies. New growth using Low Impact Development techniques would mimic existing hydrology and mitigate past alteration. The region will also be less reliant on private septic systems. Two-thirds of new

housing units in Developing Suburbs would use shared systems or sewers (43,000 units, versus 21,000 (23%) if Current Trends continue.) This brings opportunities for local groundwater recharge and local water reuse systems.

Currently, 27 of the Inner Core communities and many of the Maturing Suburbs are served by the Massachusetts Water Resources Authority, which gets water from the Quabbin Reservoir; this system has adequate supply to meet projected demand from now into foreseeable future. Meanwhile, 22 communities in the region have no public water systems; in these towns residents and businesses provide their own water through private wells. The remainder of the communities in the region rely on local public water systems, which are regulated by the Massachusetts Department of Environmental Protection, which issues permits stating how much each system can withdraw. In three quarters of the MAPC region municipalities, peak month water demand is 25% higher than annual average demand; and 50% higher than average demand in 20% of municipalities.

If Current Trends continue, total water demand in the region would increase by 11%; and 52 cities and towns in Metro Boston would exceed their withdrawal limits. 40 of those municipalities would exceed by more than 100,000 gallons per day and five systems will exceed allowances by more than half a million gallons per day. Those communities that are exceeding their allowances would have a collective deficit of 12 million gallons per day. 71,000 housing units would rely on private septic systems, with irregular schedules for maintenance and inspection.



THE METROFUTURE SCENARIO

Conservation will provide an increment of supply to serve new growth, at lower cost and with less environmental impact than increasing withdrawals. It will also help to ensure that **62 The region's rivers, streams, lakes, and ponds will have sufficient clean water to support healthy aquatic life and recreational uses.** Excess stormwater runoff and other pollution will be minimized throughout the region, especially in water supply areas. The region would make more use of lower-impact site designs, green roofs, and innovative stormwater management to help maintain natural hydrology. The emphasis on redevelopment would create more opportunities to retrofit developed sites for better stormwater management. **63 The ecological condition of wetlands will improve, and fewer wetlands will be lost to development.** The region's sensitive habitats would be protected from development, and the region will invest in restoration of impacted ecosystems. As a result, **64 The region will retain its biodiversity and will have healthy populations of native plants and animals, and fewer invasive species.** Compact growth and more coordinated land acquisition would ensure that the region's important open spaces are not lost, and will be joined in a network that stretches across the region. **65 A robust network of protected open spaces, farms, parks, and greenways will provide wildlife habitat, ecological benefits, recreational opportunities, and scenic beauty.**

METROFUTURE GOALS AND OBJECTIVES

Objectives:

- Total demand for public water systems will decline by 12%.
- Per capita residential water consumption will decline by 20%.
- Average water demand for all new residential development will be no more than 50 gallons per person per day.
- In 100% of public water systems, peak month water demand will be no more than 125% of average annual demand.
- 100% of public water suppliers have unaccounted for water less than 10%.
- The volume of interbasin transfers (via water or wastewater) out of medium- or high-stress basins will steadily decline.

Key implementation strategies: 5, 13, and 4

Supporting implementation strategies: 11 and 7

62 The region's rivers, streams, lakes, and ponds will have sufficient clean water to support healthy populations of native fish and other species, as well as recreational uses.

MetroFuture's compact land use and emphasis on redevelopment would reduce the footprint of new growth, helping to reduce acreage of watershed alteration. Compact growth has less impervious area per housing unit or square foot than does residential or commercial development in more dispersed settings.

MetroFuture would also allow the region to focus more spending on maintenance and upgrades to existing stormwater infrastructure, instead of building new infrastructure in outlying areas. All of the region's storm and sanitary sewers would be separated, preventing contamination of stormwater during storm events.

Under Current Trends, 49,000 acres of the region will be newly paved, creating increased runoff and pollution in our rivers and streams and increasing the potential for unnatural flooding.

Objectives:

- Fewer of the region's waterways will be impaired due to pollution.
- 100% of combined sewer lines in the region will be separated and 100% of CSO outfall points will be closed.
- Stream flow levels measured by USGS gauges will be comparable to historical stream flow patterns.
- There will be zero violations of safe swimming standards in the region's rivers, lakes, and beaches.

- The region will have no more than 18,000 acres of new impervious surface.

Key implementation strategies: 7 and 13

Supporting implementation strategies: 4

63 The ecological condition of wetlands will improve, and fewer wetlands will be lost to development.

Wetlands help to improve water quality and manage flooding; they also provide habitat for a wide variety of plants and animals. MetroFuture directs growth away from wetlands and floodplain areas, resulting in less development in or near wetlands.

The Metro Boston area is home to over 250,000 acres of wetlands, 32% of which contain rare or endangered species habitat. Despite the important role these ecosystems play, nearly 40% of the region's wetlands are not permanently protected.

Objectives:

- There will be no net loss of wetland acreage.

Key implementation strategies: 7 and 13

64 The region will retain its biodiversity, and will have healthy populations of native plants and animals, and fewer invasive species.

MetroFuture directs growth away from areas designated as "core" and "supporting" habitat for rare and endangered species. Fewer new housing units would be built in or near the region's Areas of Critical Environmental Concern. The region's connected open space network would allow for more movement of wildlife.

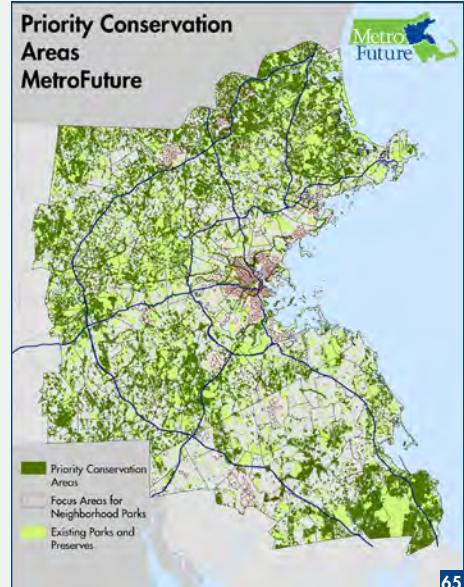
If Current Trends continue, 49,000 acres of priority habitat for rare or endangered species will be lost, primarily in the Developing Suburbs. Residential development would result in the loss of 24,000 acres of undeveloped land in or near Areas of Critical Environmental Concern.

Objectives:

- Residential development will result in the loss of no more than 6,000 acres of land in Areas of Critical Environmental Concern.
- There will be no loss of core habitat for rare and endangered species.

Key implementation strategies: 5, 7

Supporting implementation strategies: 13



65 A robust network of protected open spaces, farms, parks, and greenways will provide wildlife habitat, ecological benefits, recreational opportunities, and scenic beauty.

Compact growth and more coordinated land acquisition would ensure that the region's important open spaces are not lost, and will be joined in a network that stretches across the region. This will allow for corridors of use for animal use and migration. Residents would enjoy more bike and pedestrian trails.

If Current Trends continue, the region would lose the opportunity to create a comprehensive network of greenways, wildlife routes, and trails, as almost 45% of the land along these corridors is developed.

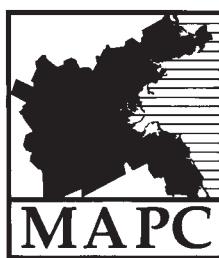
Objectives:

- 139,000 acres of developable land identified as a high priority by the State Land Conservation Plan will be permanently protected from development.
- No more than 5,000 acres of prime and important farmland soils will be lost to development.

Key implementation strategies: 1, 6, 5, 7, and 13

Find data, maps, and resources online at

www.metrofuture.org



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