

Helping Massachusetts Municipalities Create a Cleaner Energy Future



COMMONWEALTH OF MASSACHUSETTS
 Deval L. Patrick, Governor
 Richard K. Sullivan, Jr., Secretary
 Mark Sylvia, Commissioner

Introduction:
 Meg Lusardi, Director
 Green Communities Division

Webinar
 October 26, 2011
 11:00 am

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Green Communities Division
 Serves as the hub for all Massachusetts cities and towns on energy matters



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Green Communities Division Programs & Resources for Municipalities

- Green Communities Grant and Planning Assistance Program
- MassEnergyInsight energy tracking and analysis tool
- Municipal Energy Efficiency Program
- Energy Management Procurement Assistance
- ARRA stimulus funding
- Website filled with tools & resources for municipalities www.mass.gov/energy/greencommunities
- Email updates via listserv – [sign up today](#).




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Outreach - Regional Coordinators

- Regional Coordinators act as direct liaisons with cities and towns on energy efficiency and renewable energy activities
- Located at each of the DEP Regional Offices:

SERO – LAKEVILLE: Seth Pickering
Seth.Pickering@state.ma.us

NERO – WILMINGTON: Joanne Bissetta
Joanne.Bissetta@state.ma.us

CERO – WORCESTER: Kelly Brown
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WERO – SPRINGFIELD: Jim Barry
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Recording & Presentation

- The webinar is being recorded and will be available on our website in approximately 48 hours at: www.mass.gov/energy/greencommunities
- The slide presentation will also be posted at: www.mass.gov/energy/greencommunities
- Websites are also listed at end of presentation




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Zoning to Reduce Car Traffic and Greenhouse Gas Emissions

Kurt Gaertner
 Executive Office of Energy and Environmental Affairs

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Massachusetts Clean Energy and Climate Plan for 2020

Executive Office of Energy and Environmental Affairs

- In 2008 Gov. Patrick Signed the Global Warming Solution Act
- In 2010 the Clean Energy and Climate Plan was issued; it outlines the policies MA will pursue to reduce GHG emissions to 25% below 1990 levels by 2020 and 80% by 2050

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Massachusetts Baseline and BAU Projection of GHG emissions 1990-2020 by sector

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Transportation is 2nd only to buildings in responsibility for MA GHG emissions, and is the fastest growing sector.

Emissions from transport are projected to grow under the business as usual projection

Clean Energy and Climate Portfolio Impacts vs. Business as Usual

- Many sectors must improve to meet the 25% & 80% goals
- Today's webinar focuses on transportation, & vehicle miles traveled (VMT) in particular

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The Transportation Sector is slated to realize 7.6% in reductions from the following policies:

- Federal and CA vehicle efficiency and GHG standards (2.6%)
- Federal emissions and fuel efficiency standards for medium and heavy duty vehicles (0.3%)
- Federal renewable fuel standard and low carbon fuel standard (1.6%)
- Clean car consumer incentives (0.5%)
- Pay As You Drive auto insurance (pilot program, possible expansion later (1.1%)
- Sustainable Development Principles (0.1%)
- GreenDOT (1.2%)
- Smart growth policy package (.4%)

Anticipated reductions from smart growth policies are modest in 2020 (1.7%) but significant in 2050

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Zoning – in Massachusetts is the legal basis for future growth

Why focus on communities?

- Primary decision makers regarding where & how growth will occur
- Local regulations heavily influence energy use by all living in the community (stretch code)

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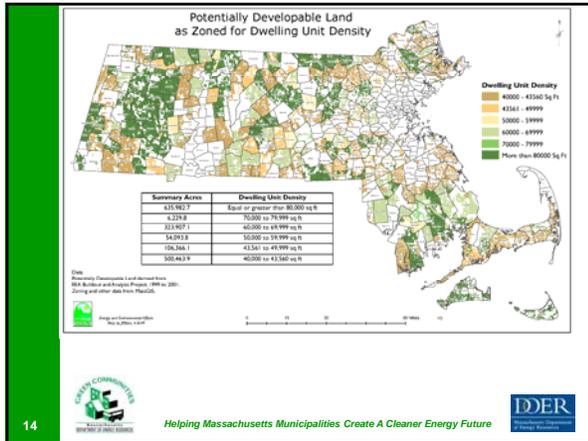
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Generalized Zoning

Interstate 495

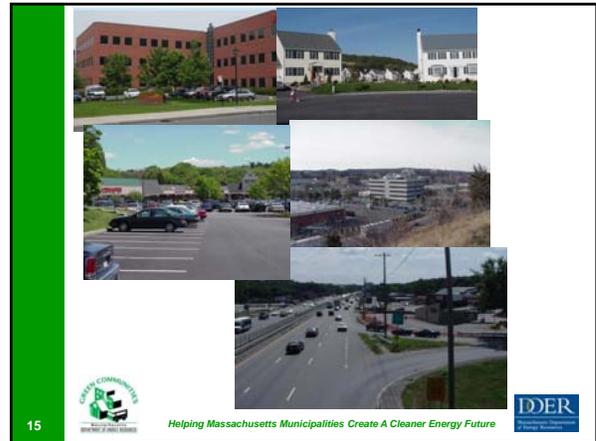
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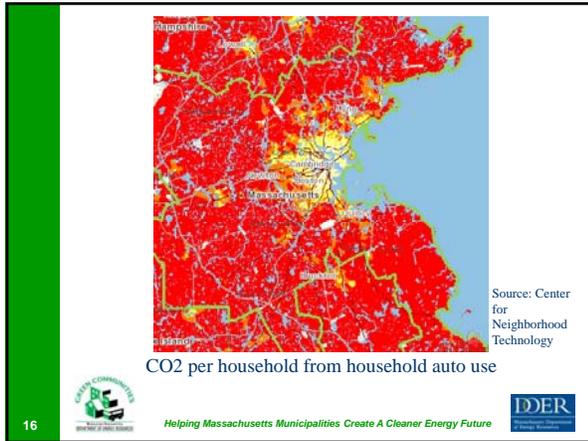
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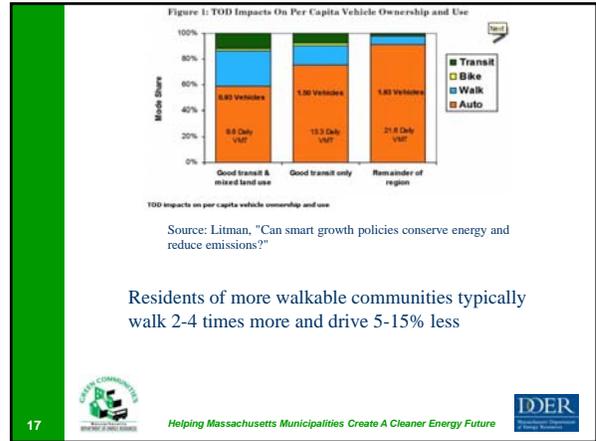
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Poll Question 1

Which forms of transit are available in your community?

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While VMT is a result of a lot of factors – lifestyle choice, employment trends, fuel costs, etc. growth patterns are the key.

What is the relationship between development patterns, VMT and emissions?

Study	VMT Reductions	GHG Reductions
Moving Cooler	20–60 percent	20–60 percent
Growing Cooler	20–40 percent	18–36 percent
Driving and the Built Environment	5–12 to 25 percent	5–12 to 25 percent

Source: Land Use and Driving: The Role Compact Development Can Play in Reducing Greenhouse Gas Emissions

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VMT and GHG contributors:

- Long distances & barriers between buildings
- Single use developments
- Lack of pedestrian & bike accommodations

Assumptions:

- The farther we travel, the more we are likely to use energy and emit GHG
- The more we travel by car, the more likely we are to emit pollutants
- Land use that helps with VMT has many other benefits; less land and water consumed, fiscal impacts, etc.
- Mixed use and proximity are key factors; rather modest density when combined with mixed-use helps a lot



Sustainable Development Principles

1. Concentrate Development and Mix Uses
2. Advance Equity
3. Make Efficient Decisions
4. Protect Land and Ecosystems
5. Use Natural Resources Wisely
6. Expand Housing Opportunities
7. Provide Transportation Choice
8. Increase Job and Business Opportunities
9. Promote Clean Energy
10. Plan Regionally



The Principles are intended to guide state & local actions



In 2010, MassDOT launched GreenDOT, a comprehensive environmental responsibility and sustainability initiative to make MassDOT a national leader in “greening” the state transportation system.



GreenDOT is driven by three primary goals:

1. Reduce greenhouse gas (GHG) emissions
2. Promote the healthy transportation options of walking, bicycling, and public transit
3. Support smart growth development.



“Smart Growth Policy Package”:

- Provide technical assistance to help establish zoning and other land use regulations that reduce VMT.
- Invest consistent with the Principles
- Offer incentive to communities to so zone
- Reform state planning, zoning, and subdivision statutes

Green Communities – logical participant

- Mission consistent with the approach
- Already a technical assistance provider
- Established relationships with communities



The Specific “Ask”:

Consider implementing 3 techniques that reduce VMT and GHG Emissions –

- Complete Streets Policy
- Traditional Neighborhood Development
- Transit Oriented Development



Poll Question 2

Which techniques are already in place in your community?



Complete Streets:

- Multi-modal; pedestrian, bikes, and cars
- Green; environmentally sensitive
- Smart; logical way-finding, signalization, etc.

Multimodal

Resources:

- MassDOT Complete Streets Guide
- <http://bostoncompletestreets.org/about/>

Smart

“Ask” – make it feasible to live & work without a car

Green






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Smart Growth / Smart Energy Toolkit

What is the Toolkit?

Traditional Neighborhood Development (TND)

In Brief: TND, also known as “new urbanism”, “neo-traditional” or village-style development, includes a variety of housing types, a mix of land uses, an active center, a walkable design, and often a transit option within a compact neighborhood scale area either as infill in an existing developed area or as a district scale project.

The Problem: Traditional Neighborhood Development seeks to remedy the most pressing problem associated with recent suburban expansion - low-density, auto-oriented development, single-use developments lacking in context and distinction as a unique community.

- Website that is user friendly, comprehensive, and MA focused
- Integrated materials on each smart growth technique to promote understanding and local passage of new zoning bylaws
- Case studies show real world implementation, many in Massachusetts communities

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Introduction to Techniques

The Problem

Traditional Neighborhood Development seeks to remedy the most pressing problems associated with recent suburban expansion - low-density, auto-oriented development, single-use developments lacking in context and distinction as a unique community.

In Brief: TND, also known as “new urbanism”, “neo-traditional” or village-style development, includes a variety of housing types, a mix of land uses, an active center, a walkable design, and often a transit option within a compact neighborhood scale area either as infill in an existing developed area or as a district scale project.

Each technique includes:

- In Brief
- The Problem
- An Introduction
- Local Success and Benefits
- Financial Considerations

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Open Space Residential Design (OSRD)

Resources – Slideshows

Slideshows for different audiences

- Illustrate the basic concepts of each smart growth technique
- Address some of the issues surrounding local implementation
- Provide summaries of case studies
- Where appropriate, provides multiple slideshows that include varying levels of detail or different perspectives (e.g. developers as compared with local officials).

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Resources – Case Studies

Interactive Map

Accessory Dwelling Units (ADU)
Lexington
Northampton
Pelham

- The case studies illustrate key concepts for each smart growth technique.
- Where possible, three distinct types of case studies were identified: a rural, a suburban, & an urban setting.

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Resources – Model Bylaws

Three Step Process for New Local Bylaw

1. Model bylaw provides a framework for new local zoning regulation
2. Blue commentary sections highlight questions local decision makers should answer to tailor the model to local circumstances
3. Review customized bylaw with legal counsel

Transit Oriented Development

RECOMMENDATION: The minimum setback for a side yard shall be zero feet. Where deemed appropriate by the Planning Board, alleys between buildings may be encouraged for the provision of beneficial public connections between buildings, open spaces and streets. The maximum side setback shall be determined by the Planning Board, and shall not exceed 25 feet.

ALTERNATIVE: In smaller town centers or rural locations, it may be more appropriate to have side yard setbacks of up to 15 feet. In town centers or urban areas with substantial vehicle traffic, side setbacks may need to be up to 30 feet to allow for two-way traffic to rear parking & loading areas.

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Transit-Oriented Development (TOD)

TOD creates mixed-use, higher density communities that encourage people to live, work, and shop near transit services and decrease their dependence on driving.



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Transit-Oriented Development (TOD) and VMT/GHG Emissions:



Mixed-use, higher density, pedestrian friendly development within ¼ to ½ mile, or a 5-7 minute walk from a transit station.



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Characteristics of Transit-Oriented Development

- A mix of uses;
- Moderate to high density ;
- Pedestrian orientation/connectivity;
- Transportation choices;
- Reduced parking;
- High quality design.



Reasons to Pursue TOD

- Encourage smart growth development;
- Decrease cost of municipal services;
- Improve tax base;
- Improve environmental quality;
- Broaden transit financing options;



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Traditional Neighborhood Development (TND)

- Also called New Urbanism, village-style development, or neo-traditional planning;
- Mixes residential, commercial and civic uses in a compact area;
- Balances public and private space to enhance identity and value;
- Builds community, promotes walkability, and increases affordability;
- Use traditional cities, towns, and villages as a model for the future.



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Overview of TND Principles

- Principle 1: Town Center and Edges
- Principle 2: Connectivity
- Principle 3: Walkability
- Principle 4: Mixed Uses
- Principle 5: Mixed Housing
- Principle 6: Compatible Architecture
- Principle 7: Community-Oriented Design
- Principle 8: Vibrant Neighborhood Districts

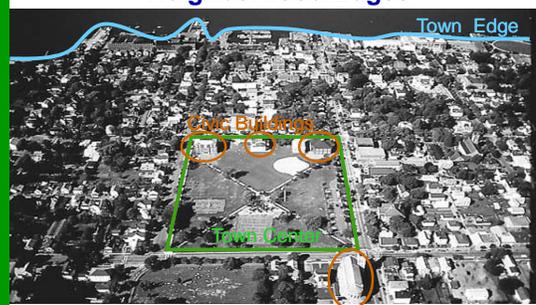


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Principle 1: Town Center and Neighborhood Edges



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Q&A



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THANK YOU!

- The webinar was recorded and will be available for viewing at your convenience on our website at: www.mass.gov/energy/greencommunities
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