

# **Sustainable Stormwater Funding for the Upper Charles River**

Steering Committee Meeting #2  
November 15, 2010



# Agenda

- 1:00-1:30 Project schedule and milestones; Confirm decision points; Review future agenda process;
- 1:30-2:00 Status report: Data collection and very initial assessment. Town's weigh in on priorities;
- 2:00-2:30 Presentation: Stormwater finance background, introduce regional approach;
- 2:30-2:45 Discussion on additional priorities, thoughts on regional approach;
- 2:45-3:00 Other coordination:
  - Industry / private sector input and representation;
  - CWA Section 319 Grant to CRWA; and
  - Discuss coordination efforts with upcoming MAPC presentations.



# Sustainable Stormwater Management Financing for the Upper Charles River Watershed Project Framework

*Issues and Context for Stormwater Utility Evaluation*  
November 2010

## 1. Municipal Stormwater Program Drivers

<i>Regulatory</i>	<i>Non-Regulatory</i>
<ul style="list-style-type: none"><li>• EPA RDA General Permit;</li><li>• EPA MS4 Phase 2 General Permit;</li><li>• Massachusetts Wetlands Protection Act (Stormwater Standards); and</li><li>• Local Subdivision/Site Plan Review requirements.</li></ul>	<ul style="list-style-type: none"><li>• Property values;</li><li>• Municipal Assets (drainage and infrastructure);</li><li>• Drainage/flooding issues;</li><li>• Water quality;</li><li>• Deferred drainage/stormwater practice maintenance; and</li><li>• Aesthetics (trash and debris, turbidity, eutrophication).</li></ul>

## 2. Charles River Phosphorus TMDL

Requires reduction of phosphorus loading to receiving waters from:

- Private sources (both residential and non-residential);
- Municipal sources (MS4 drainage system);
- CSO discharges; and
- Wastewater Treatment Facilities.

## 3. Range of Stormwater Control Strategies

### *Non-structural measures:*

- Enhanced street sweeping;
- Semi-annual catch basin cleaning;
- Phosphorus ban on fertilizers;
- Organic waste and leaf litter collection.

### *On-site structural measures:*

- Infiltration of 1" of precipitation;
- Range of other acceptable BMPs (sized appropriately).

### *Watershed-based Phosphorus management:*

- Certified Municipal Phosphorus Program (CMPP);
- Phosphorus Control Program (PCP);
- Stormwater Master Plan (long-term plan for implementation of programs and practices).

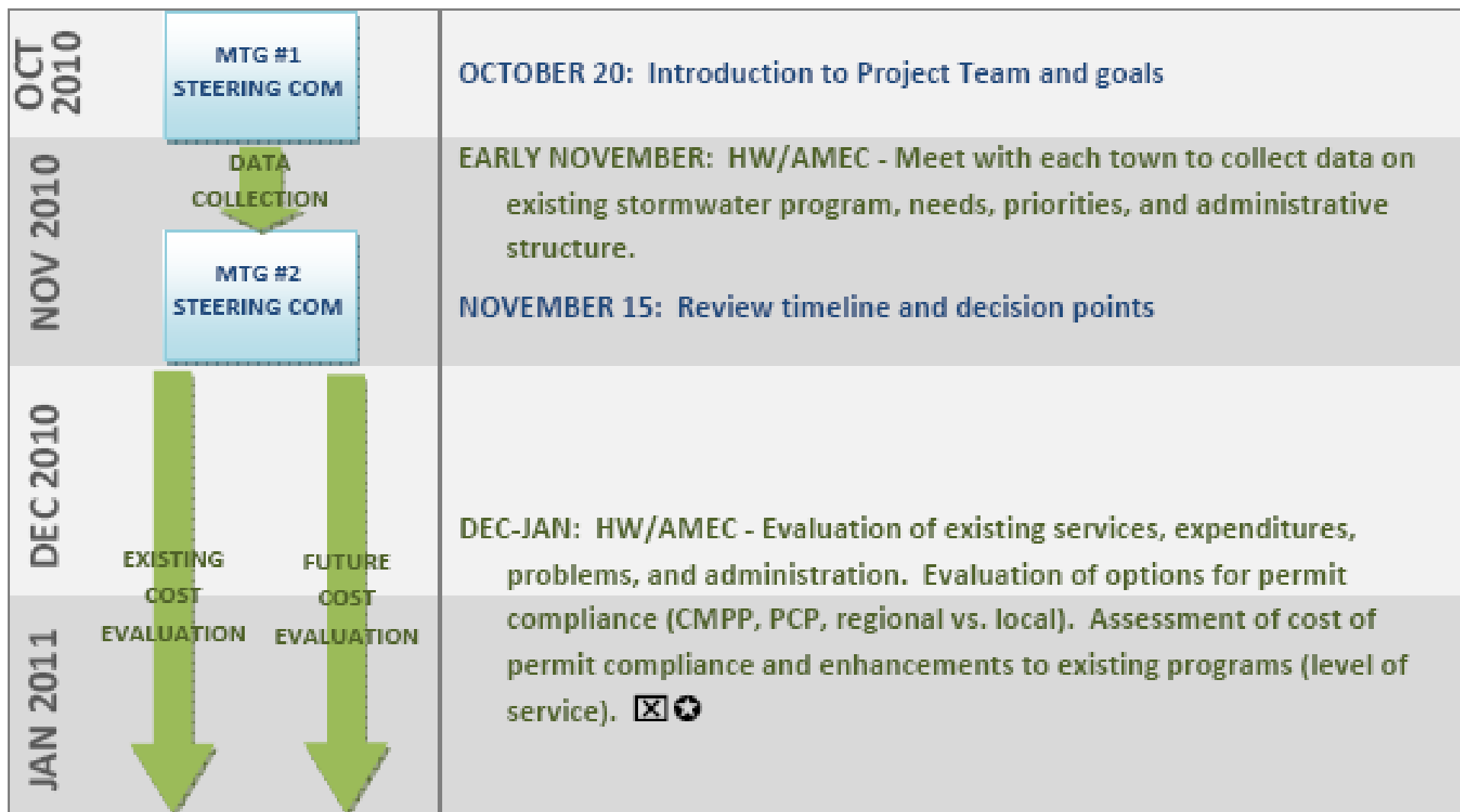
## 4. Basic Options for Meeting TMDL Requirements

- Everyone on their own (private properties under the RDA; municipal town by town decisions; homeowner participation- mostly volunteer);
- CMPP tied to watershed management plan(s) containing PCP (town by town with regulated RDA active participation); and
- Regional Watershed Management District (CMPP/PCP; trading & banking structure).



# SUSTAINABLE STORMWATER FUNDING IN THE UPPER CHARLES RIVER WATERSHED

## PROPOSED PROJECT FRAMEWORK - November 15, 2010



FEB 2011

PROGRAM  
COSTS REPORTMTG #3  
STEERING COMREVENUE  
ASSESSMENTUTILITY  
MANAGEMENT  
ASSESSMENTFUNDING OPTIONS  
REPORT

MAR 2011

APRIL 2011

MTG #4  
STEERING COMPUBLIC  
MESSAGINGFINALIZE  
EVALUATIONSUSTAINABLE  
STORMWATER FUNDING  
EVALUATION REPORT

MAY 2011

MID-FEB: Draft report outlining existing and estimated future program costs and options for RDA participation. Towns/other stakeholders to send feedback to HW/AMEC. ☒ ⚙

MID-FEB: Progress meeting – Review/discuss findings on costs report.

FEB-MAR: HW/AMEC - Evaluation of funding options/alternatives (regional, local, hybrid), potential rate structure, credit options, billing options, and legal authority/constraints. Evaluation of management considerations and long-term data maintenance needs. ☒

END OF MAR: Draft report outlining funding options and data management assessments. Towns/other stakeholders to send feedback. ☒ ⚙

EARLY APR: Progress meeting – Review/discuss findings on the funding options and data management assessments. Discuss appropriate public messaging options for each town.

APR-MAY: HW/AMEC – Produce project outreach materials and assist each town with public messaging. HW/AMEC – Finalize evaluation based on feedback from stakeholders.

MAY: Draft and Final Evaluation Report, consisting of revised versions of the Program Costs Report and the Funding Options Report.



# Prior Studies/Assessments

## Affecting Stormwater Level of Service and Cost

- Lower Charles TMDL;
- Draft MS4 for North Coastal Watersheds;
- Draft RDA Permit for Milford, Bellingham & Franklin;
- Optimization Study for Three Upper Charles Communities - Tetra Tech, Dec 09;
- Spruce Pond Brook - Stormwater Management Plan: CRWA, Summer 2010;
- Phos. Removal Costs, BEC, Feb 10;
- Misc. Utility Publications: CRWA, Mar 07, Pioneer Valley PC, 89, Maine Model Utility, Jun 05, Ipswich River Watershed Association, Jun 07, NE Finance Center, May 05, Yarmouth MA DIMS, May 09; and
- Misc case studies: Reading, Newton, Chicopee, Long Creek, Lewiston, ME, S. Burlington, VT.



# One-on-One Town Meetings

- What is your current program, what do you spend \$ on?
- What are you not doing, or have trouble funding?
- How much data/information do you have?
- What are some of the unique problems?
- What are your priorities for this project?



# Typical Stormwater Utility Data Needs Checklist

## Problems and needs

- What are your problems or opportunities?
- Do you have supporting data (e.g. CIP list, complaint files, etc.)?
- What sort of messaging might resonate with the public about these needs?

## Existing program

- Who does what?
- What do you spend (all aspects)?
- How are you organized?

## Future Program

- What are your program priorities?

## Data

- What is the shortest path to a master account file within rate parameters?
- What is the current billing platform, would it work to get stormwater on it?

## Misc.

- What is going on that might impact implementation (e.g. recent rate increase)?
- What is the character/demographics of the town?
- Other municipal agreements in place?





# Data Collection

## *What is the current stormwater program?*

Such as:

- Conveyance operations and maintenance (pipes, CBs, culverts);
- Street sweeping and leaf collection;
- Stream repair and maintenance;
- Permitting, inspection, and enforcement for new construction and redevelopment;
- Public education and awareness; public involvement activities;
- Pollution prevention/good housekeeping on publicly owned lands and operations;
- Illicit discharge detection and elimination;
- Mapping;
- Flood plain management; and
- Planning and studies related to land use and/or stormwater management.



# GIS Data

## MassGIS + town specific data

- Land use/zoning;
- Impervious cover;
- Drainage network (outfalls);
- Existing stormwater practices; and
- Other supporting data (water lines, sewer, soils, etc)



# Milford

## Data Collection Progress

- NPDES Phase II Permit Annual Report - 4/30/10;
- Zoning, Subdivision and Wetland codes;
- Comprehensive Plan - 2003;
- General bylaw -Chapter 36 Stormwater Mgmt;
- List/street address of existing detention basins;
- Mapping: MassGIS; portion of storm drain system, parcels from DEP; and
- Misc: Educational flyers, population, etc.



# Bellingham

## Data Collection Progress

- NPDES Phase II Permit Annual Report #6, through March 2010;
- Master Plan 2010;
- Zoning bylaw, Wetlands, Subdivision Rules & Regulations;
- General bylaw - Chapter 19(Water & Sewer);
- Comprehensive Water Resources Management Plan (CWRMP);
- Development Handbook;
- Stormwater and Erosion Control Handbook;
- List/location of In-line BMPs; and
- Mapping: MassGIS; storm drain system, parcels, impervious cover components, lots of other stuff.



# Franklin

## Data Collection Progress

- NPDES Phase II Permit Annual Report May 20, 2010;
- Master Plan 2010;
- Subdivision Rules & Regulations, Wetlands R&Rs;
- Stormwater Utility Initial Feasibility Study: CEI, July 07, July 09 cost update;
- BMP Inspection Inventory: CEI, Feb 07;
- Examples of inter-municipal agreements;
- Franklin BMP Guidebook, Nov 01;
- Town Stormwater bylaw - Chapter 153;
- Mapping: MassGIS; storm drain system, parcels, impervious cover components, lots of other stuff.



# Why do we need all this information?

- Evaluate Cost of Service
  - ✓ MS4
  - ✓ RDA
  - ✓ Other Drivers
- Evaluate Revenue Potential
  - ✓ ERUs

## Legend



Management categories in the community of Franklin

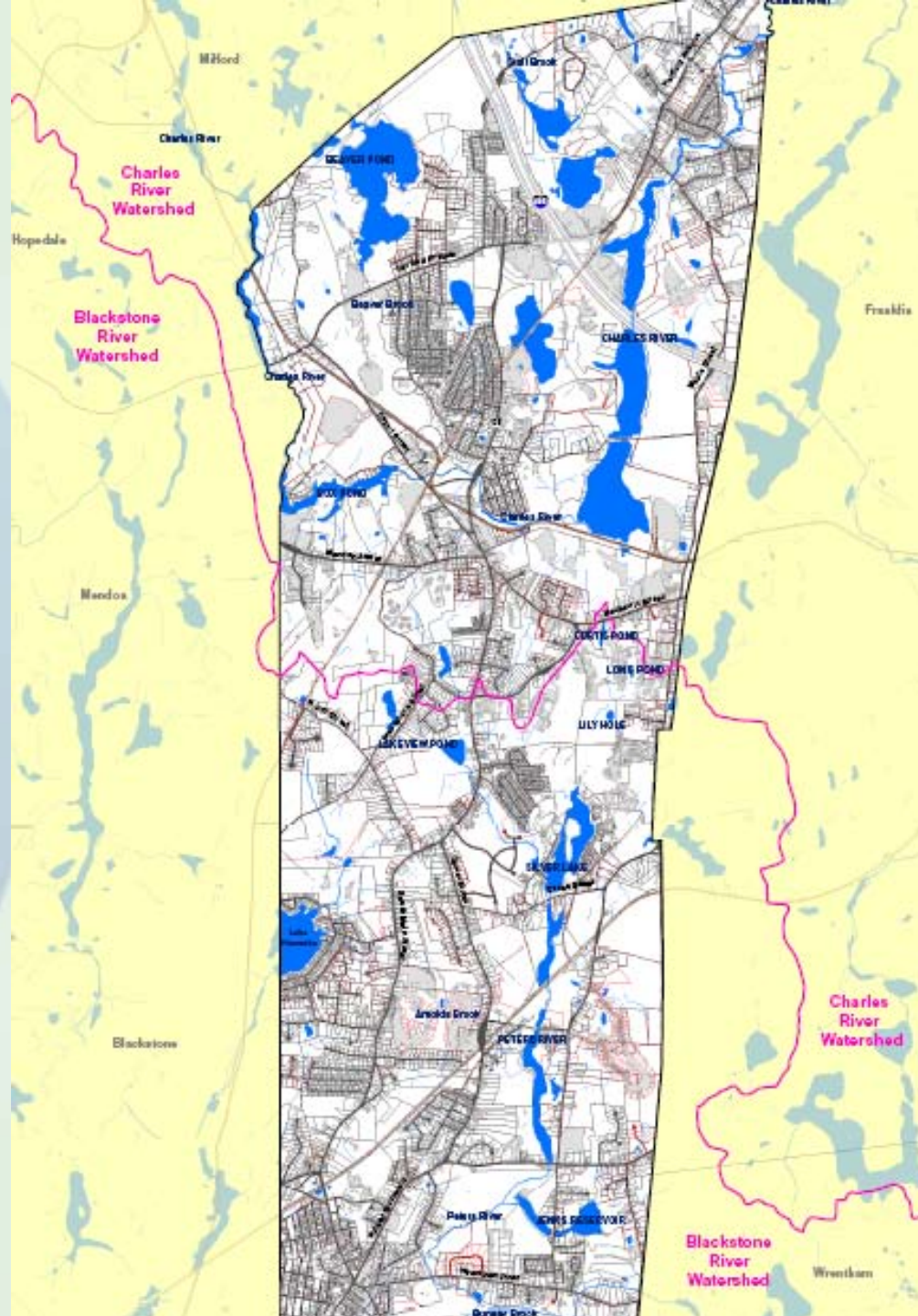


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Figure B-2. The management categories in Franklin.



# Bellingham, MA

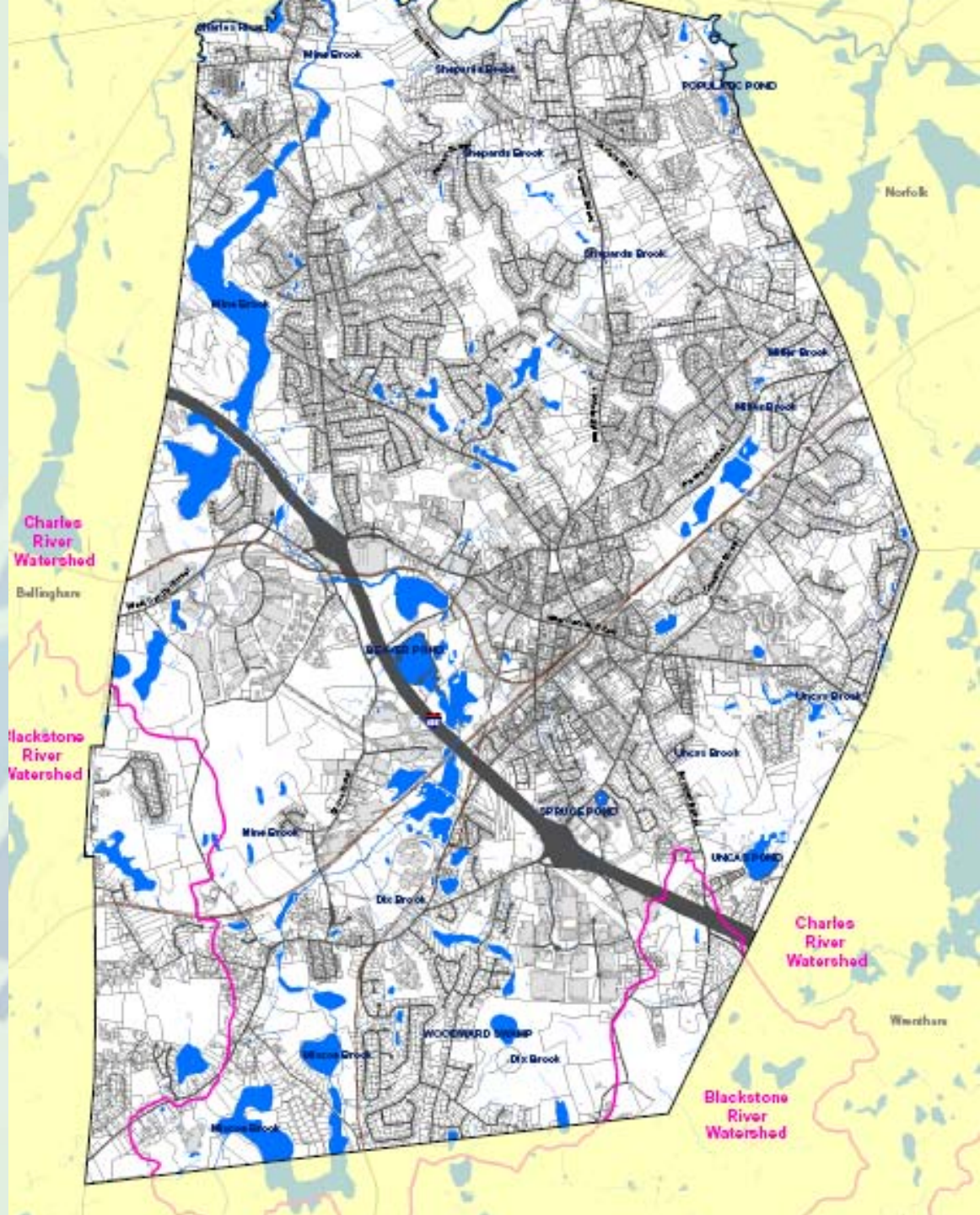








# Franklin, MA

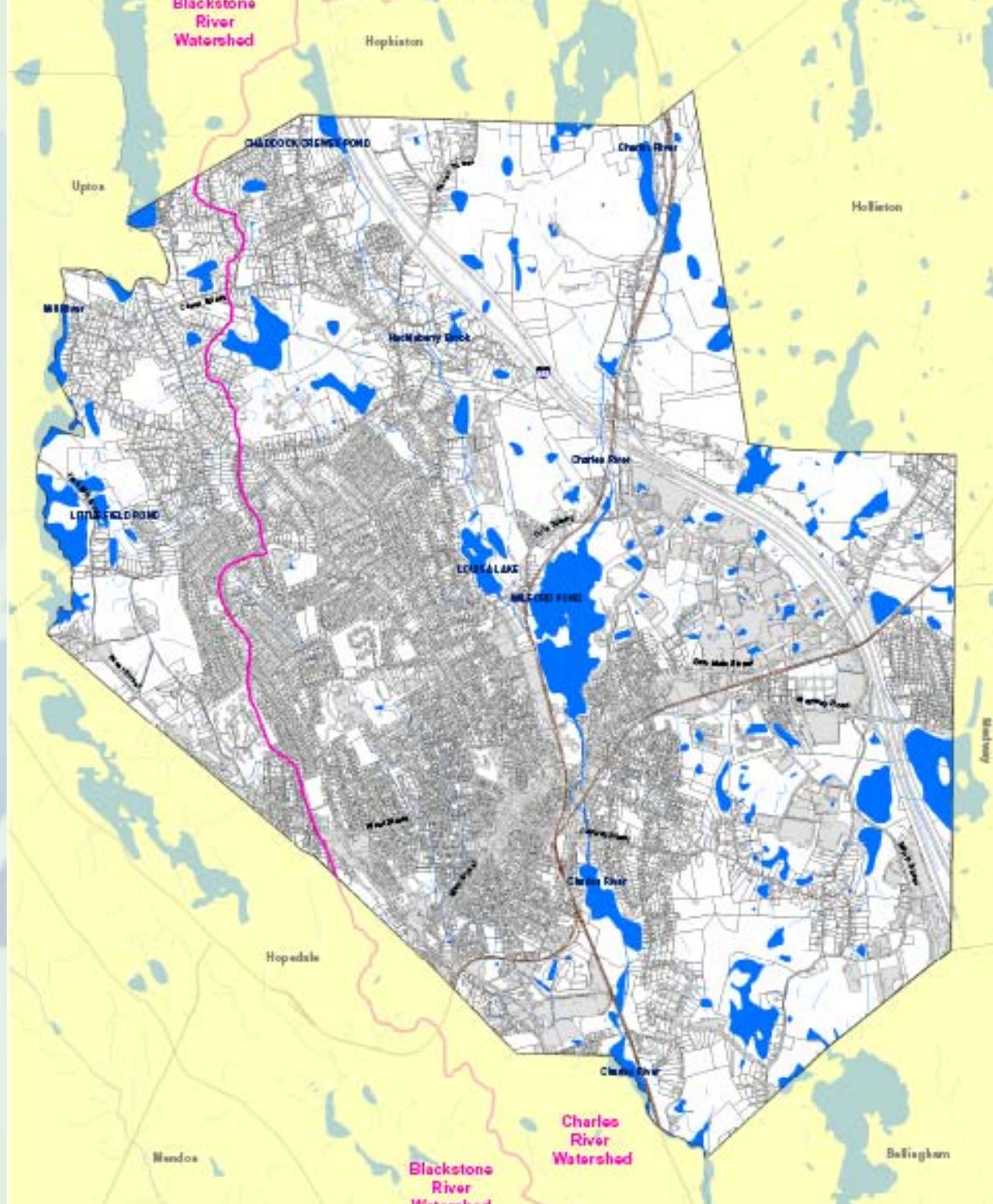




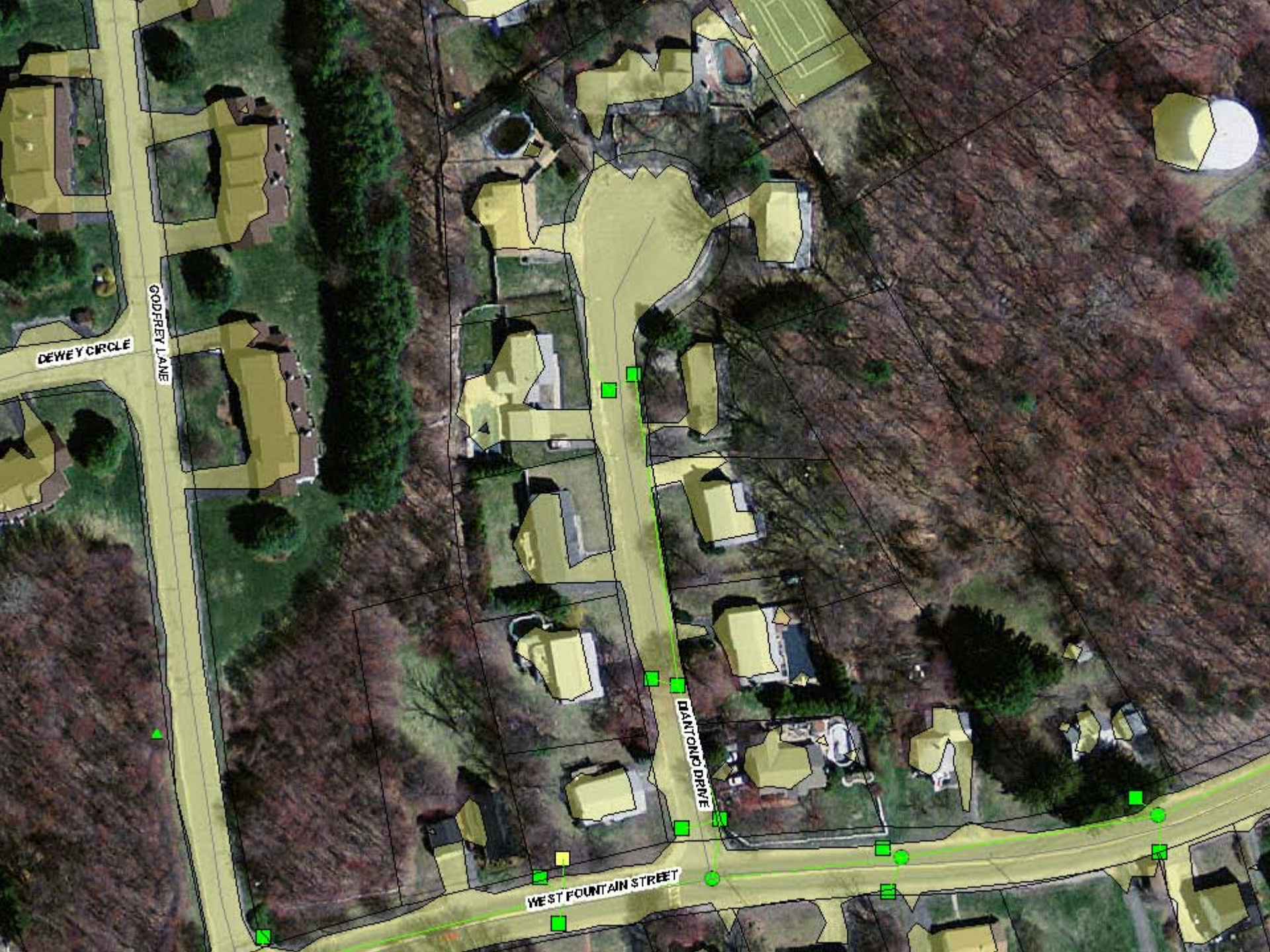




# Milford, MA







DEWEY CIRCLE

GODFREY LANE

DANTON DRIVE

WEST FOUNTAIN STREET



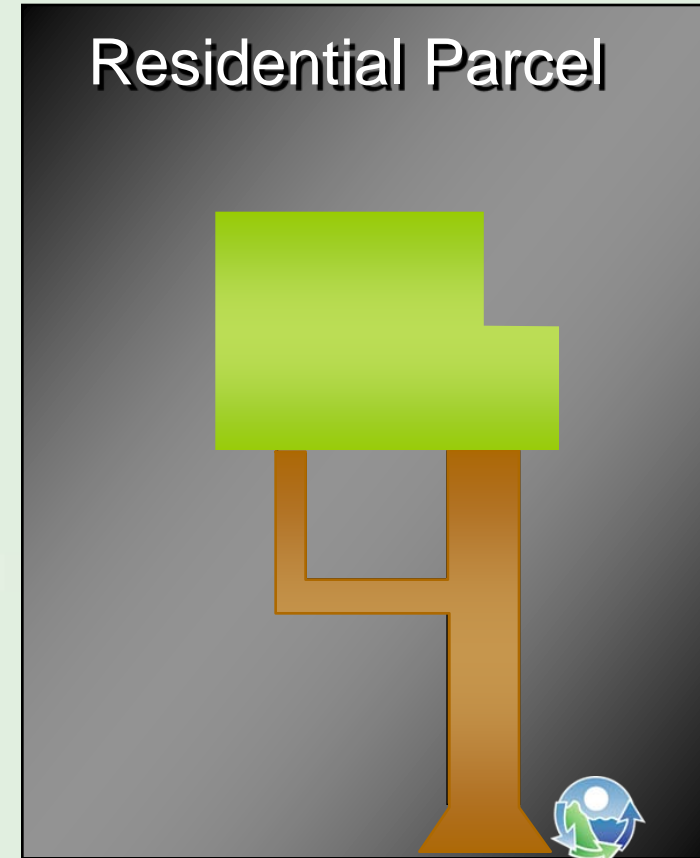
# Milford's Priorities

- Phosphorus Control Plan (PCP) and a Certified Municipal Phosphorus Program (CMPP) should address both costs/rates and management.
- Guidance for implementation of the local and/or regional stormwater utility, particularly regarding legal, billing, and data requirements.
- Costs and staff needed to comply with the MS4 permit.
- The specific benefits to the Town and its residents of having a stormwater utility.
- Public involvement and education - throughout the Feasibility Evaluation process.



# The Typical Residence Defines the Equivalent Residential Unit (Base Unit)

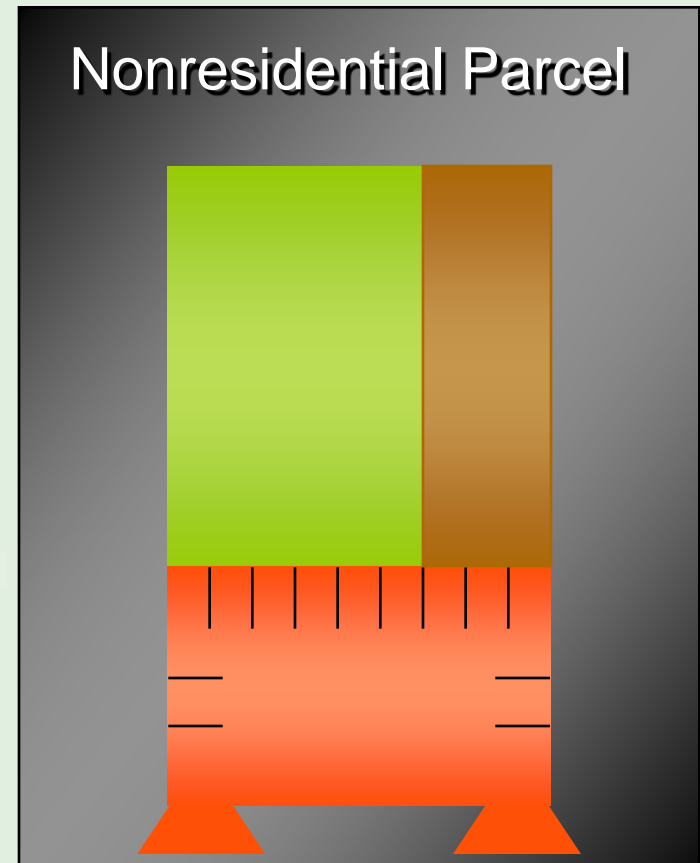
House Area	1,785 Ft <sup>2</sup>
Other Impervious Area	621 Ft <sup>2</sup>
Total	2,406 Ft <sup>2</sup>



# Businesses Are Billed as Multiples of the ERU

Building Area	9,000 Ft <sup>2</sup>
Parking	11,000 Ft <sup>2</sup>
Other Impervious Area	4,060 Ft <sup>2</sup>
Total	24,060 Ft <sup>2</sup>

$$24,060 \text{ Ft}^2 = 10 \text{ ERUs}$$

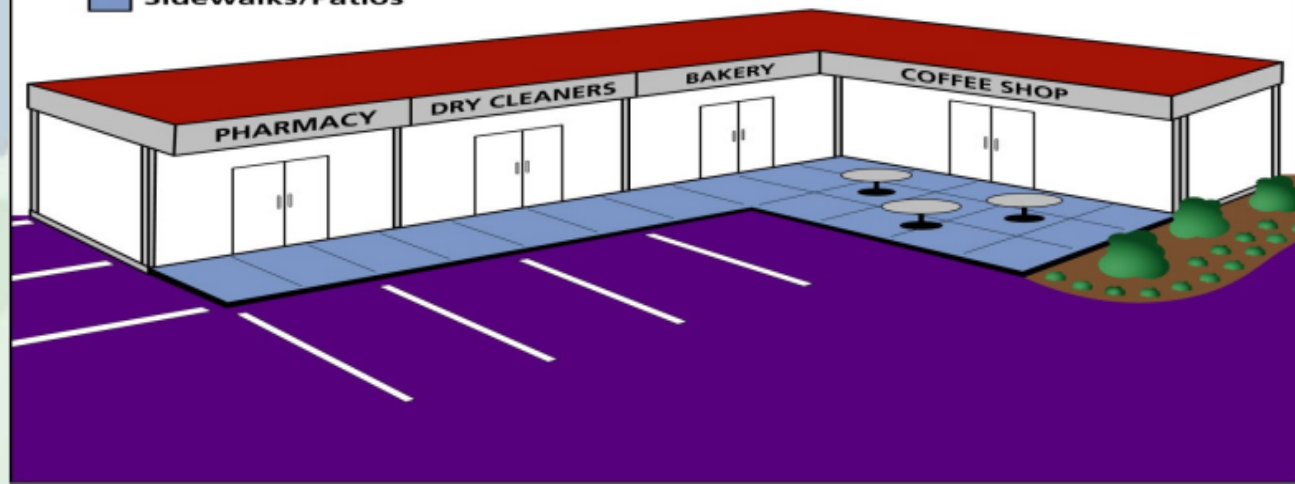


## Residential Impervious Surfaces



- Roofs**
- Driveways**
- Walkways**  
(does not include County-maintained sidewalks)

## Associated Non-Residential Impervious Surfaces



- Roofs**
- Parking Lots**
- Sidewalks/Patios**