Strangers in a Stranger Land – Habitat and Water Conservation at the Dawn of a New (and Uncertain) Era

Andover Village Improvement Society (AVIS)

Annual Meeting

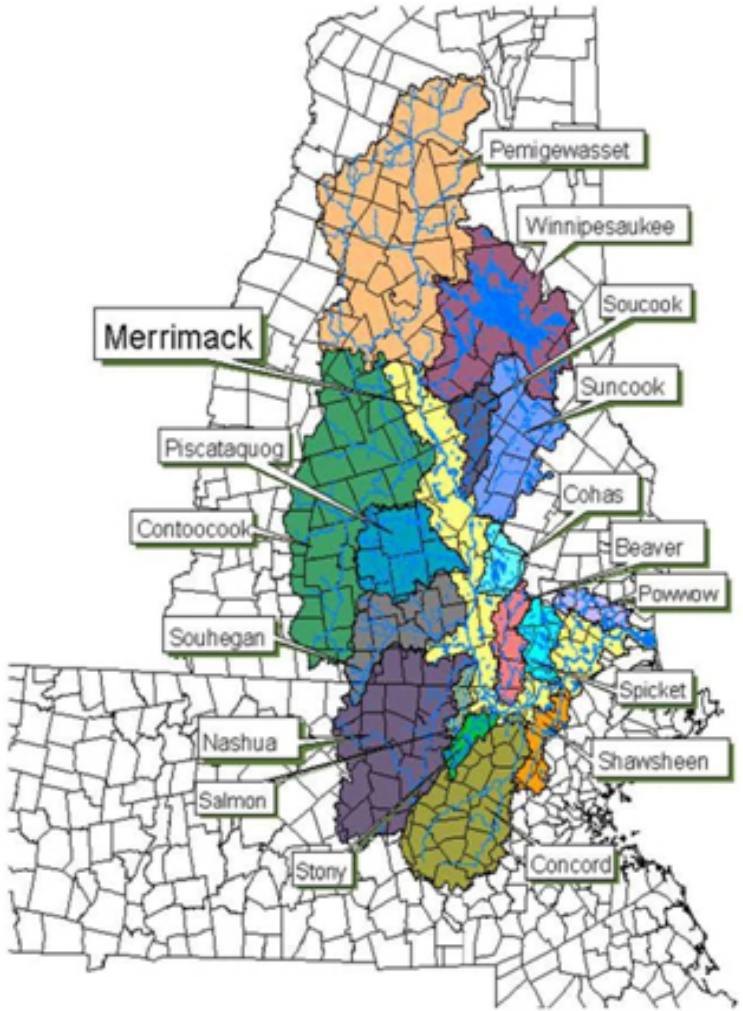
Wednesday, April 5, 2017

Remarks by Robert H. (Rusty) Russell, Executive Director

Merrimack River Watershed Council

Is Our Watershed Adrift?

Or Are *We* Adrift?


Pemigewasset
Winnipesaukee
Merrimack
Soucook
Suncook
Piscataquog
Cohas
Contoocook
Beaver
Powwow
Souhegan
Spicket
Nashua
Shawsheen
Salmon
Stony
Concord


Pemigewasset
Squam Lake
Lake Winnipesaukee
Contoocook
Concord
Manchester
Souhegan
Merrimack
Nashua
Haverhill
Lawrence
Lowell
Nashua
Concord
Wachusett Reservoir
Boston

A Brief Status Report: Then

"Historically, the water quality of the Merrimack River was severely degraded by industrial and domestic wastes"

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Sources: *U.S. Army Corps of Engineers (2003)*

A Brief Status Report: Now

Today: "The Merrimack River is <u>one of New England's treasures</u>"

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Sources: *U.S. Army Corps of Engineers (2003)*

Results — Hard to Miss!

Nashua River, a major tributary

But: The Longer View

The Merrimack River has not yet transitioned from a Nineteenth Century piece of industrial infrastructure to a Twenty-First Century centerpiece of environmental and recreational vitality

What Does Our Watershed Need?

- Clear, clean water
- Ample land area to filter runoff
- Large parcels of unfragmented habitat
- Little-to-no legacy of industrial waste
- Carefully planned development
- Thoughtful human interactions with the landscape (and waterscape)

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How Does It/Can It Meet this Need?

- Dedicated citizen advocates and allies
- An aware public
- Strong laws and regulations
- Attentive public officials
- Effective collaboration
- Long-term commitment
- Attending to the big picture – in time + space
- Believing in Your Objective

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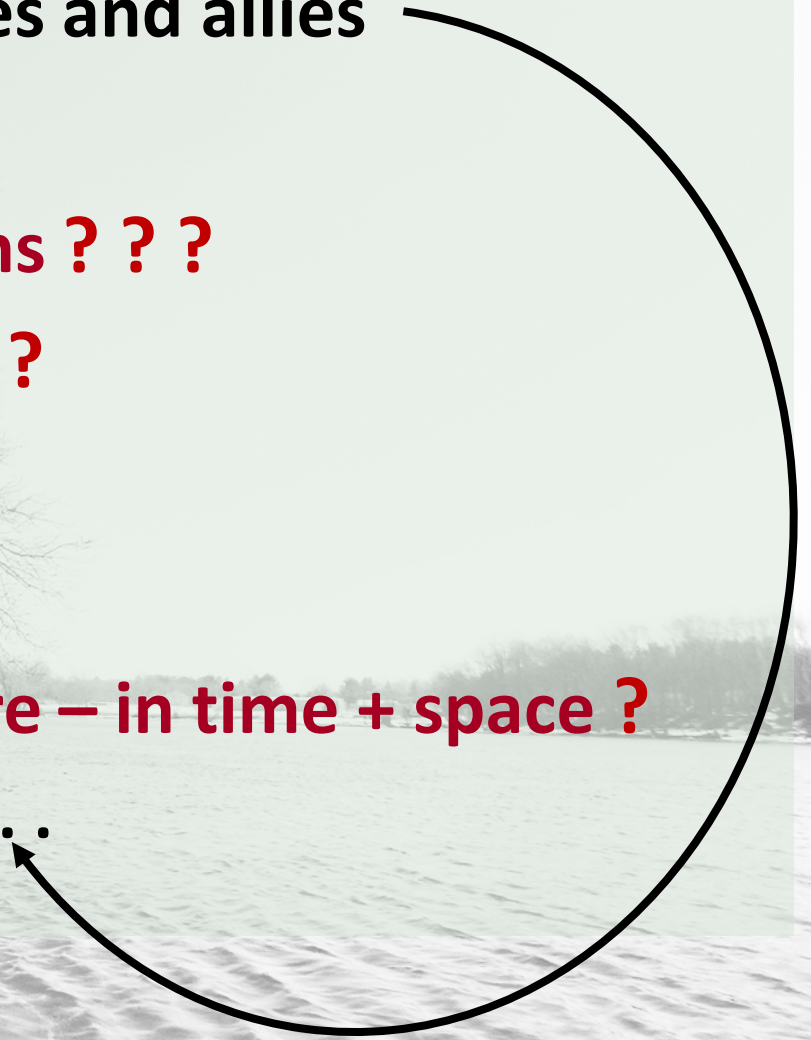
How Does It/Can It Meet this Need?

- Dedicated citizen advocates and allies
- An aware public ?
- Strong laws and regulations ? ? ?
- Attentive public officials ? ?
- Effective collaboration ?
- Long-term commitment ?
- Attending to the Big Picture – in time + space ?
- Believing in your objective . . .



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The Strange Land: *An Explorer's Atlas*

or: "Say, What's Going on Down There in D.C.?"

- **Major (potential) de-funding of core programs**
- **Strong anti-environment signals**
- **Lack of interest in empirical policy development**
- **Sharp turn in program, policy and budget direction**
- **Uncertain status of a range of federal programs**
- **States continue to rely on federal environmental funding, while cutting own budgets**
  - **E.g., Massachusetts:**
    - **DEP staff down by 45% since 2000**
    - **Inspections and enforcement drop steeply**
    - **Fines plummet by 75% in past decade**

Source: *Boston Globe*, March 9, 2017

Initial Signals – Not Positive

"The president has been very clear that he is not going to pursue climate or environmental issues that put the U.S. economy at risk"

– Senior Trump Administration Official

Source: *Los Angeles Times*, March 27, 2017

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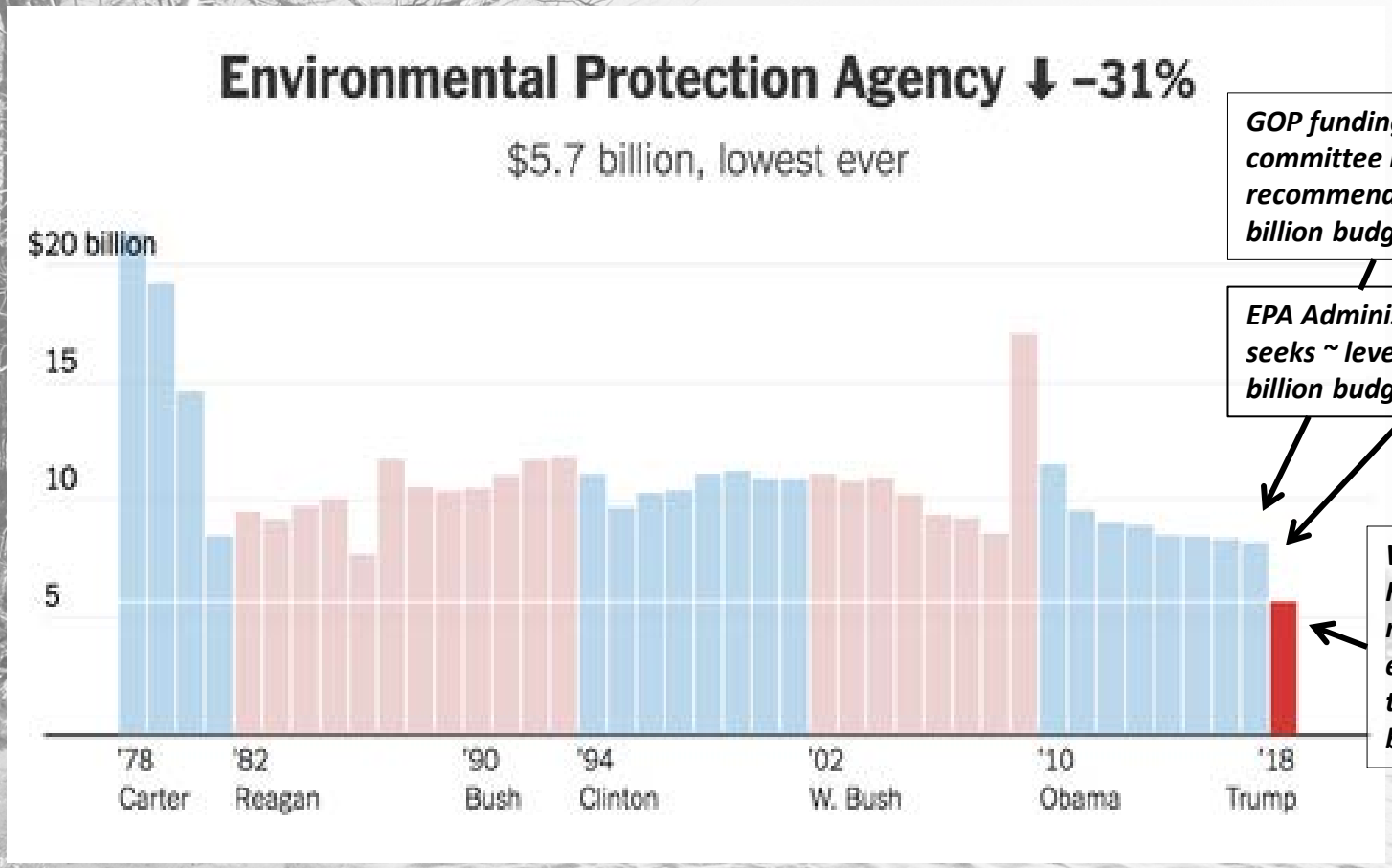
Follow the (lack of) Money



Source: ***New York Times, March 16, 2017***

Initial Signs – Not Positive (1)

- **Transportation**
  - **2012 fuel-economy (CAFE) rules to be re-examined (and rolled back?)**
  - **2012 rules:**
    - **Would double US car/truck average to 54.5 mpg by 2025**
    - **Would save 1+ year's worth of US oil use and CO_2 emissions**
    - **So far: 2008: 25.5 mpg**
      2016: 31.2 mpg
    - **Review would cover 2022-2015 model years**
  - **Then there's California…**
    - **Can set stricter emissions standards under Clean Air Act**
    - **Needs a waiver – but all but one have been granted without delay**
    - **12 states follow California standards = > 1/3 total US car market**

Source: *New York Times*, March 24, 2017

Initial Signs – Not Positive (2)

- **Air and Energy**
  - End of EPA's Clean Power Plan?
  - Goals:
    - 32% ↓ in CO_2 from power sector
    - By 2040, reduction to 2005 levels
    - 25% ↓ in soot/smog-causing chemicals
- **Climate Change**
  - Impact of Clean Power Plan shut-down
  - Impact of reduction in vehicle mpg requirements
  - Impact of funding cuts targeted to GHG programs
  - Impact of top government policymakers who are climate change skeptics/deniers

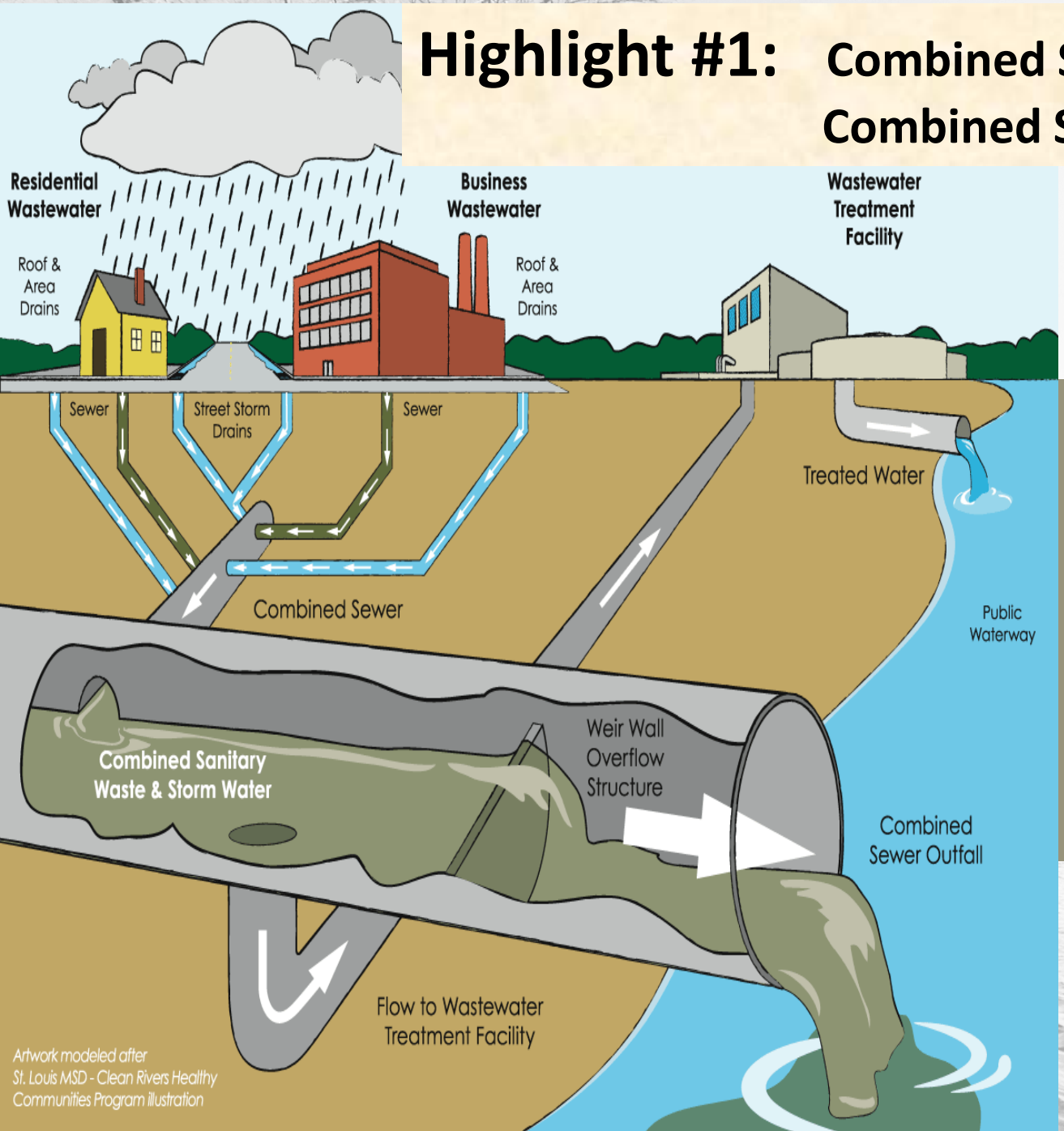
Initial Signs – Not Positive (3)

- **Water**
  - **Issue:**
    - **Jurisdictional scope under Clean Water Act**
    - **The disputed language: "Waters of the United States"**
  - **Two extremes:**
    - **Only waters that are "navigable"**
    - **All waters that Congress could legally regulate under its commerce power**
  - **The stakes:**
    - **EPA's and US Army Corps' power to regulate, e.g., dredging and filling, effluent discharge, permitting re: jurisdictional waters**
    - **Waters most vulnerable in mid-US, where state water regulation is weak/absent**
  - **The context: two recent US Supreme Court rulings that have badly muddied the waters**
    - **SWANCC (2001) (5-4) (Rehnquist)**
    - **Rapanos/Carabell (2006) (4-1-4) (Scalia – Kennedy – Stevens)**

Initial Signs – Less Negative

- **Land**
  - Federal lands likely to remain federal
- **Brownfields**
  - EPA to prioritize site cleanups/brownfields
- **???**

Highlight #1: Combined Sewers *and* Combined Sewer Overflows (CSOs)



181 active CSO outfalls in Massachusetts, which together discharged **2.8 billion gallons of raw sewage** into rivers and streams *(2011 data)*

Merrimack CSOs Upstream of Us

city	# combined sewers/outfalls	year	# events	total (million gallons)
Lawrence	4	2014	10	6.15 MG
Lowell	9	2013	202	761.00 MG
Manchester	16	2015	143	651.00 MG
Nashua	8	2015	15	6.80 MG
Haverhill	15	2012	?	?

Data compiled by EPA, Region 1; city of Haverhill

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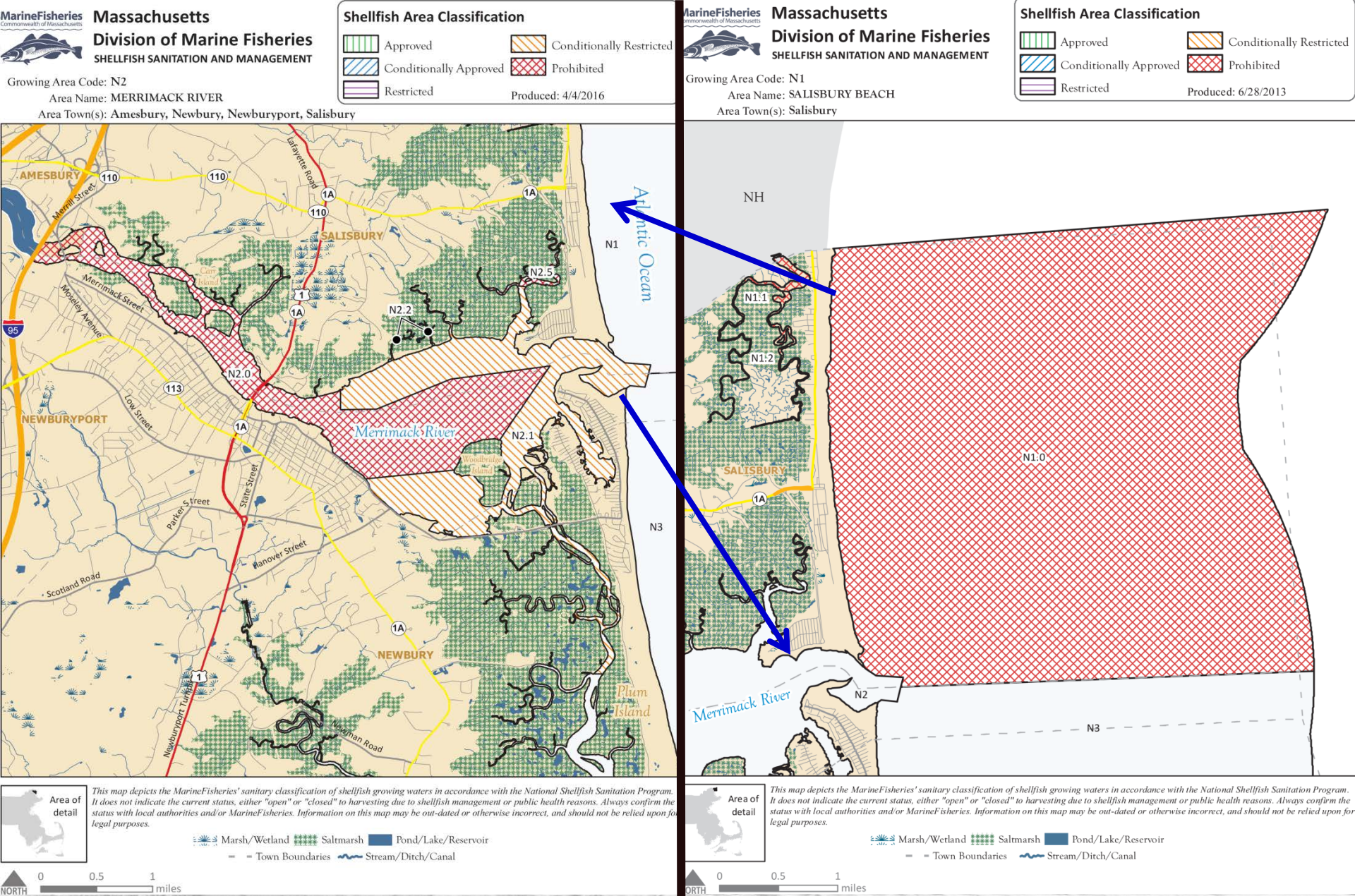


Mouth of the Merrimack

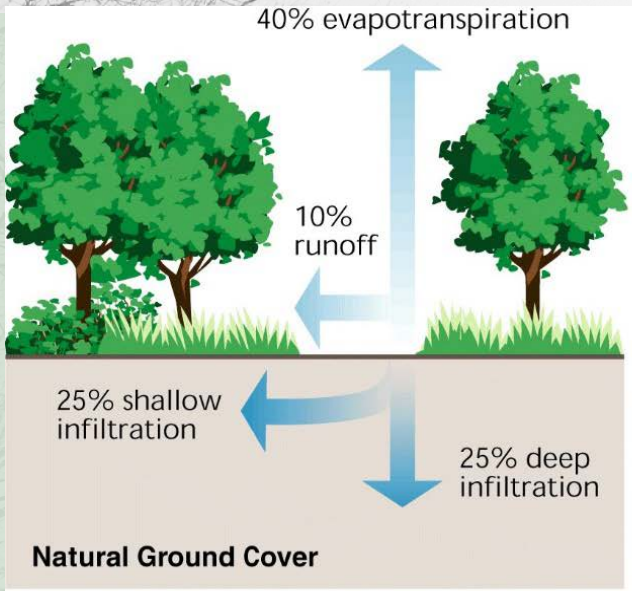
Salisbury Beach

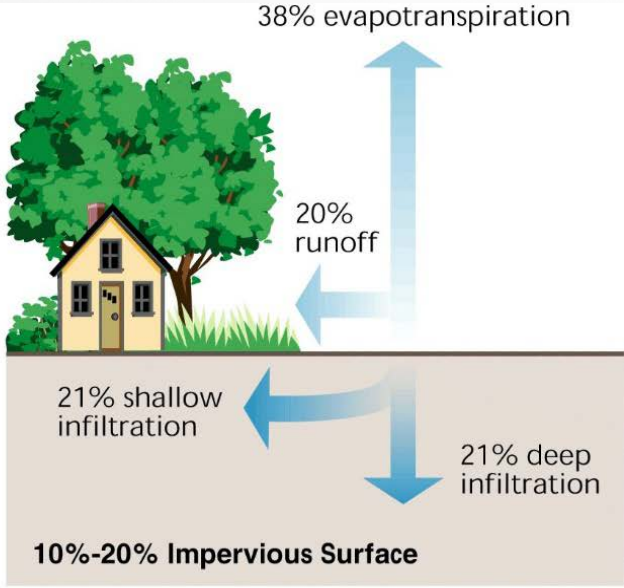
Highlight #2: Stormwater Pollution

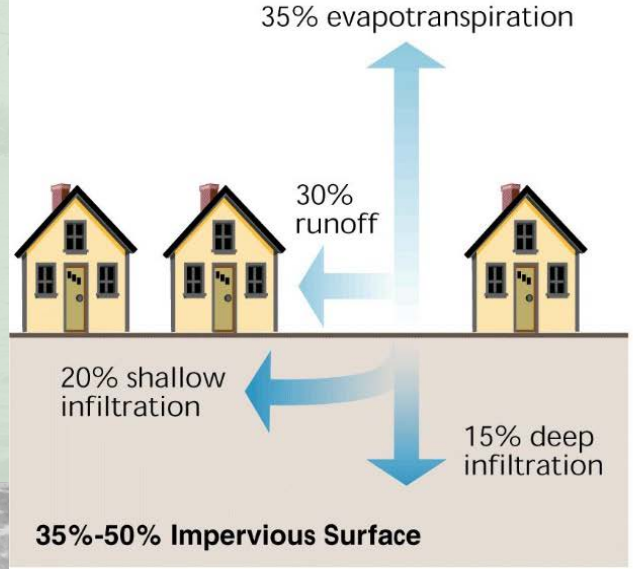
How does it happen?

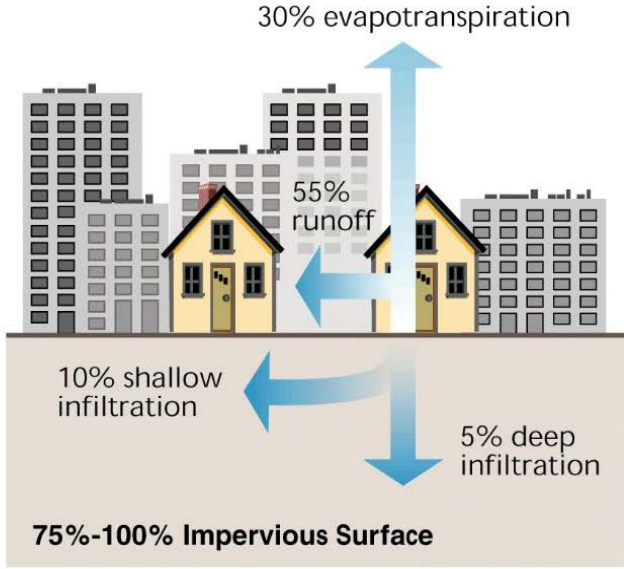
- Impervious cover prevents water from infiltrating (or percolating) into the soil
- This changes the water cycle from 10% surface runoff and 50% infiltration to just 15% infiltration and 55% surface runoff
- Runoff picks up all manner of contaminants
- Polluted stormwater runs untreated into the river

Increased surface runoff from the built environment is called *STORMWATER*



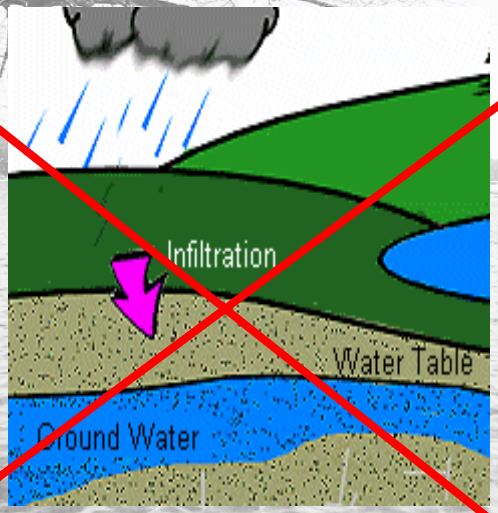






Development and Impervious Cover =

Stormwater Pollution



What's Wrong with More Runoff?

- It's polluted – by trash, chemicals, bacteria, sediments
- It can lead to more flooding
- It can intensify droughts
- It helps trigger combined-sewer overflows
- It's a lost resource….

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How Can We Deal with Runoff?

Reduce pollutants:

Keep streets clean, scoop up, use fewer yard chemicals

Capture/treat runoff:

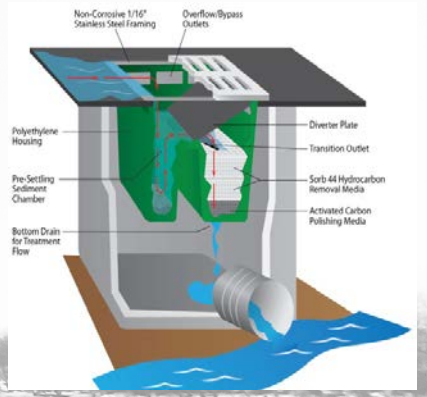
Take advantage of "gray infrastructure" like detention ponds and filters

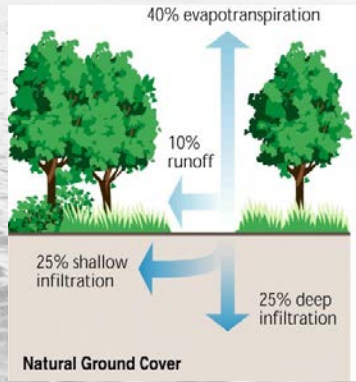
Protect land:

Maintain natural areas, especially in urban settings

***Implement MS4*:**

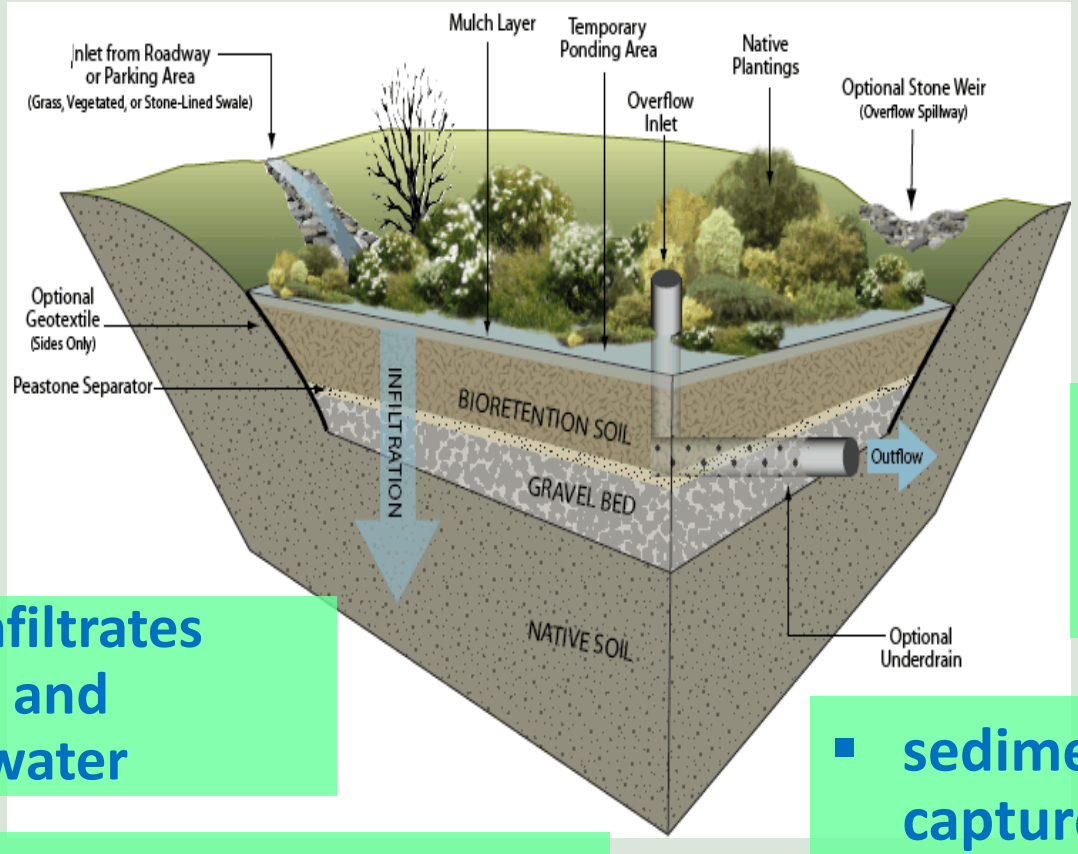
Municipal Separate Storm Sewer System
As of July 1, 2017





and… *Green Infrastructure/ Low Impact Development*

a new type of infrastructure combining engineering and natural processes to reduce stormwater pollution and restore ecosystems



- **plants and soil filter pollutants**
- **water infiltrates into soil and groundwater**
- **sediments and trash are captured, then removed**
- **water flow slows down, reducing flooding and erosion**
- **native plants create habitat**

GI and *LID*: different shapes, sizes, and functions

Rain gardens, bio-swales, constructed wetlands, and more

The Challenges Ahead

(some municipal, some state, some federal)

- **Concerns linger about water quality—** ***especially drinking water***
- **Merrimack River continues to suffer from periodic combined-sewer overflow (CSO) discharges**
- **Stormwater runoff is the main pollution source—and one that's a challenge to address**
- **Development threatens to add to pollution and speed species decline**
- **Anadromous fish passage must be safeguarded and enhanced**
- **Pubic access is limited in many areas**

MRWC Is Ready to Take Them On

**Our mission is to protect, improve,
and conserve the Merrimack River watershed
for people and wildlife through
education, recreation, advocacy, and science**

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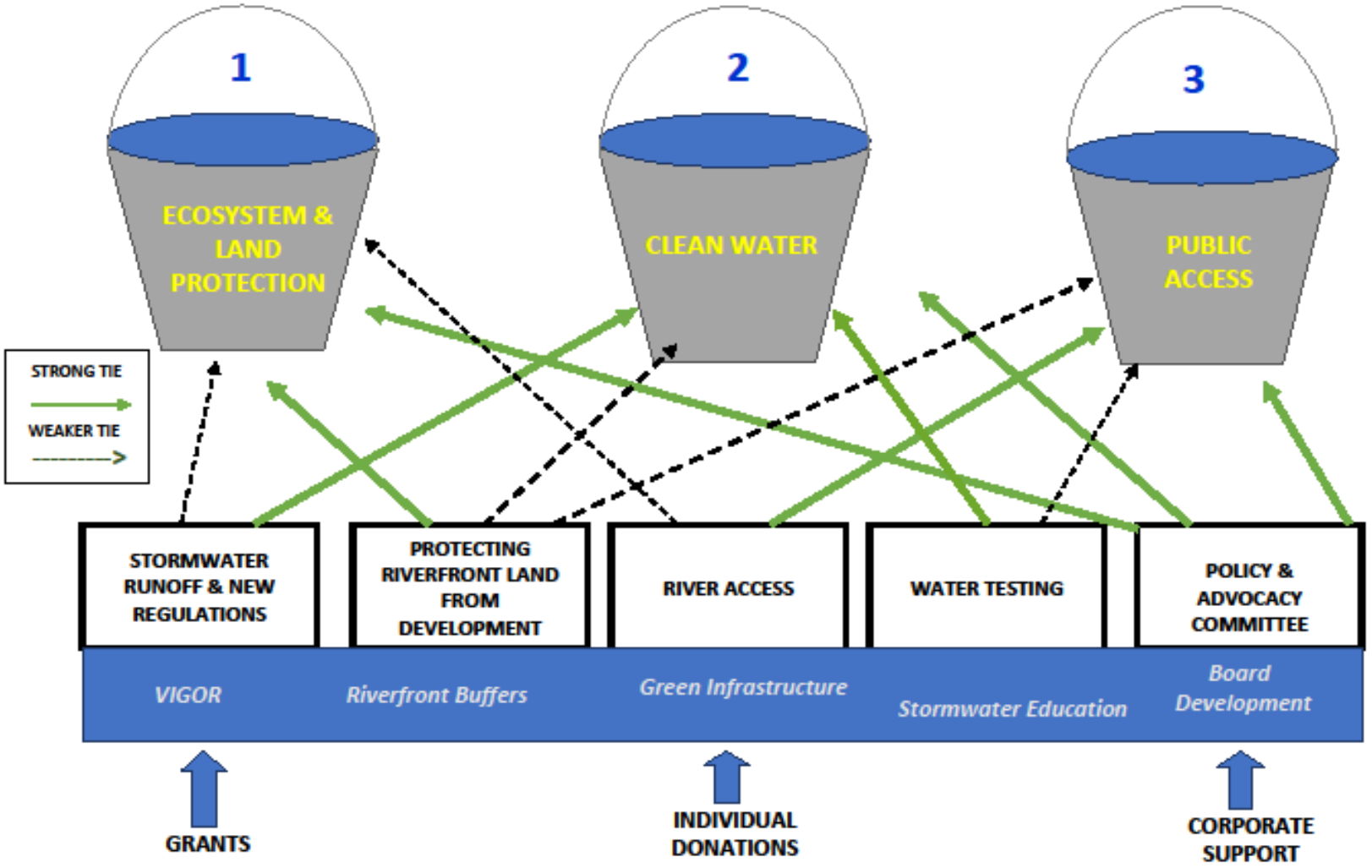
MERRIMACK RIVER WATERSHED COUNCIL [MRWC]

Our Approach

MISSION

Our mission is to protect, improve, and conserve the Merrimack River watershed for people and wildlife through education, recreation, advocacy, and science

GOALS "THREE BUCKETS"



STRATEGIES

PROJECTS

And We Work Well with Others….

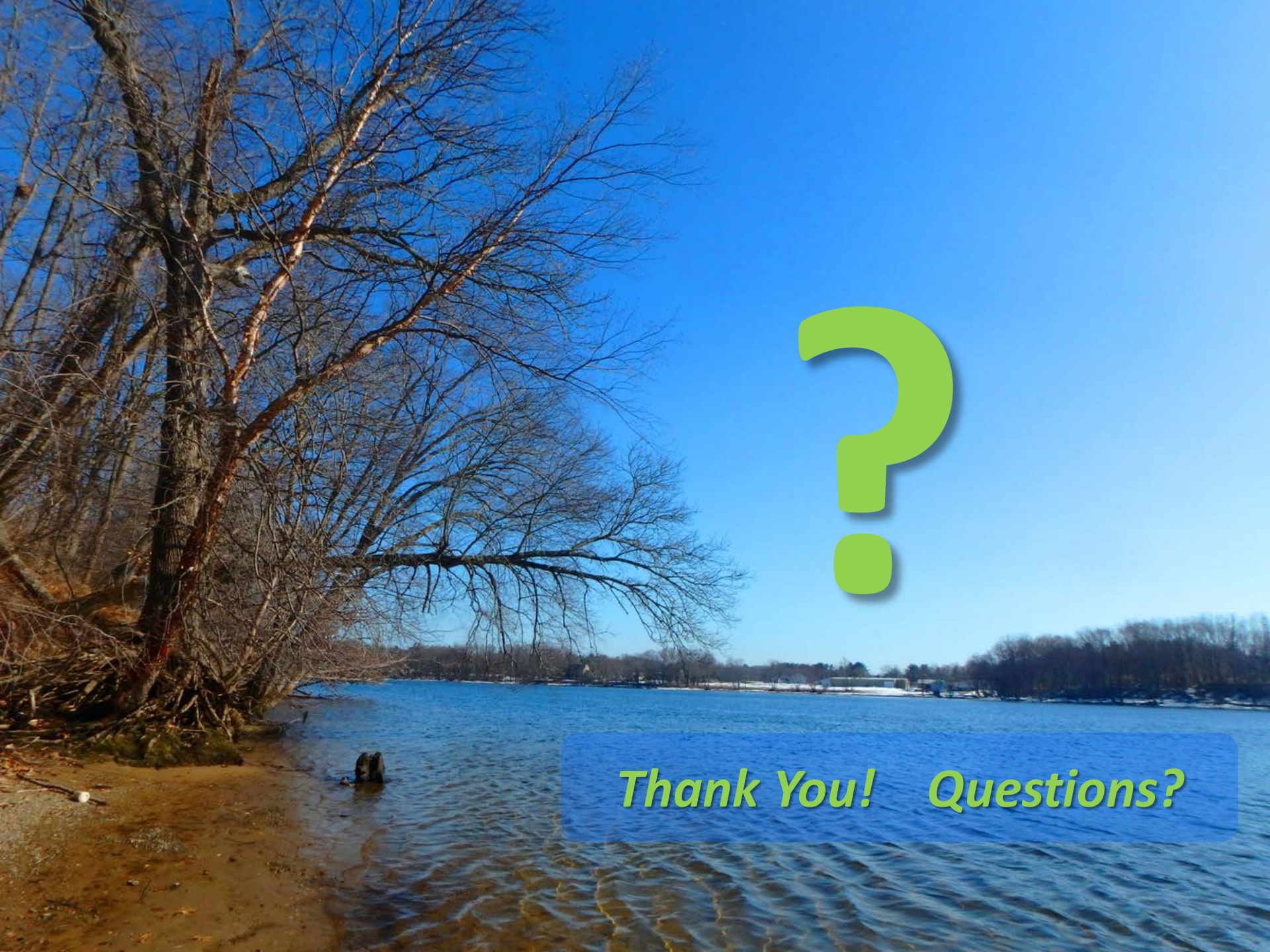
What Can YOU Do?

- **Join MRWC!**
- **Volunteer – for clean-ups, plantings, and more…**
- **Attend an event**
- **Join our new Policy & Advocacy Committee (the "PAC")**
- **Spread the word**
- **Get in touch! Follow us on Facebook, Instagram and Twitter (@mrwc_), give us a call or send us an email**

→ ***When it comes to the Merrimack River, we want to know what's important to YOU***

A Top MRWC Priority:
Water Quality Testing Program

- **Main stem of the Merrimack**
  - **Focus: from Manchester to Newburyport**
  - **Bacteria, nutrients, dissolved oxygen**
  - **More exotic chemicals, metals in sediments**
  - **Continuation of EPA's real-time monitors**
- **Seek 3-year commitment**
- **Program cost per year: $75,000**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Thank You! Questions?