

Green Infrastructure in Milford Town Park



Rendering of Rain Garden in Milford Town Park

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Stacy Middle School, 6th Grade
May 14, 2021



Charles River Watershed Association

Charles River

Naturalist



UMass Amherst - Geology

Student



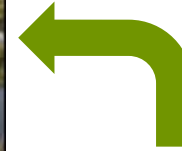
City Year



Teacher

CRWA

Advocate



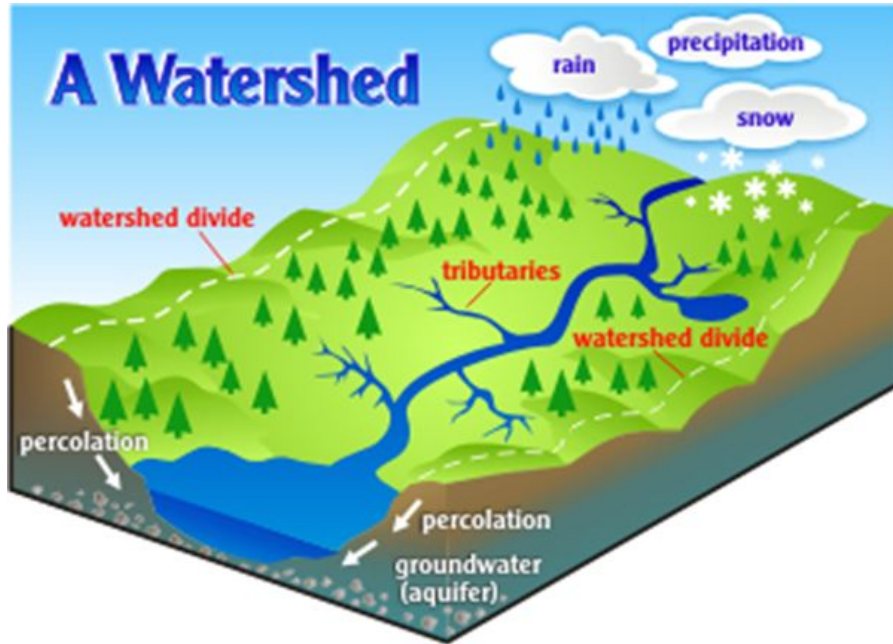
Boston College - River Research

Scientist

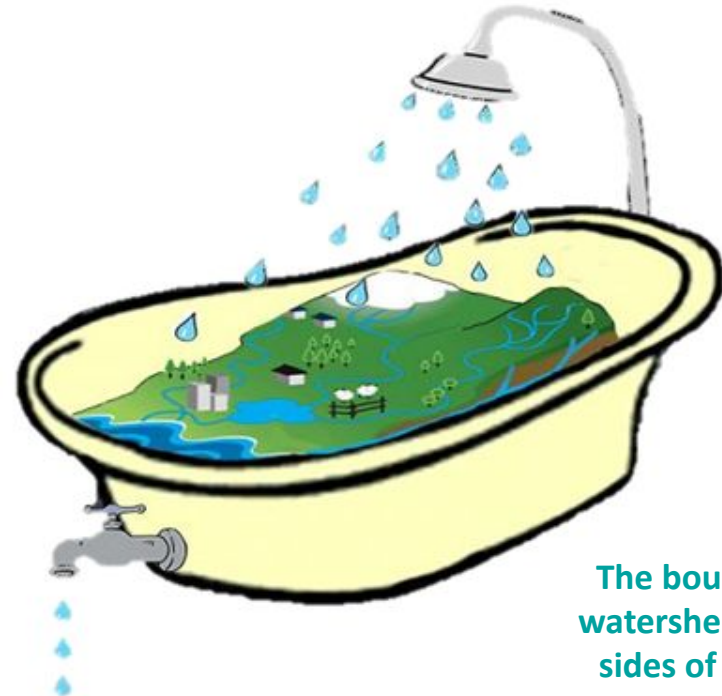


What is a Watershed?

Water flows downhill...



...and washes off the land



The boundary of a watershed is like the sides of a bathtub

Charles River Watershed

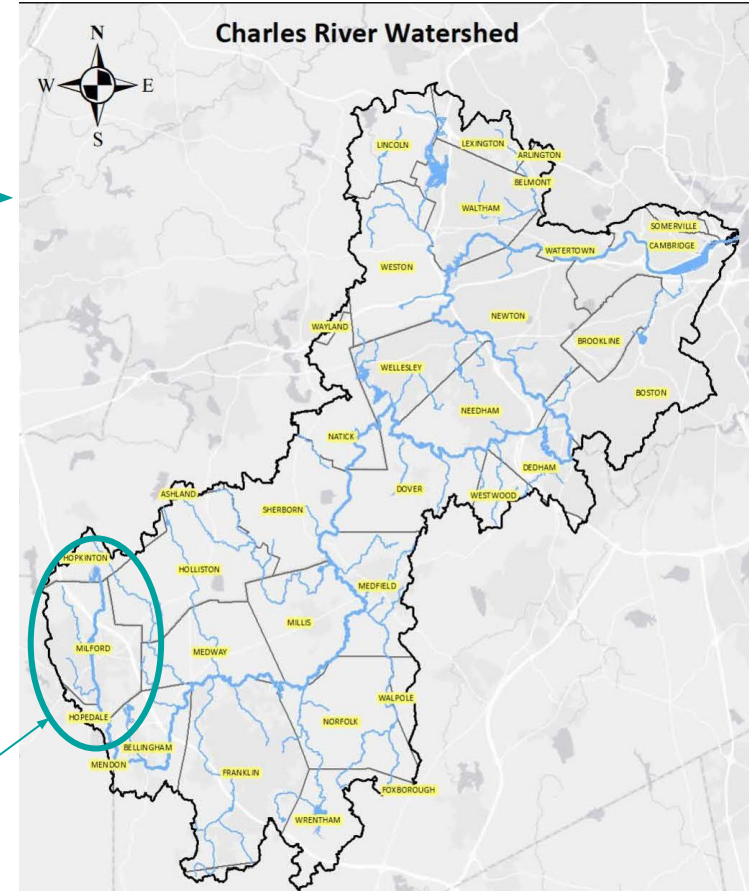


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- 28 watersheds in MA
- Charles River is 80 miles long
- 35 towns in watershed
- Over 1 million residents

You are here!

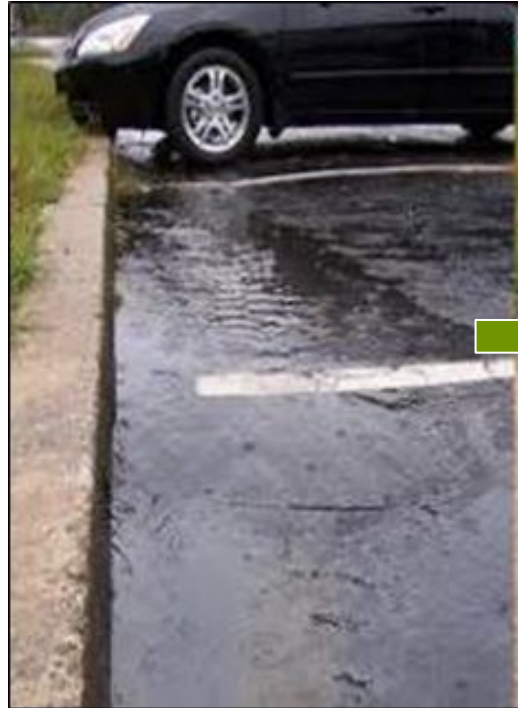


When it Rains



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Rain falls on a parking lot,



goes down the storm drain,
bringing pollution with it,



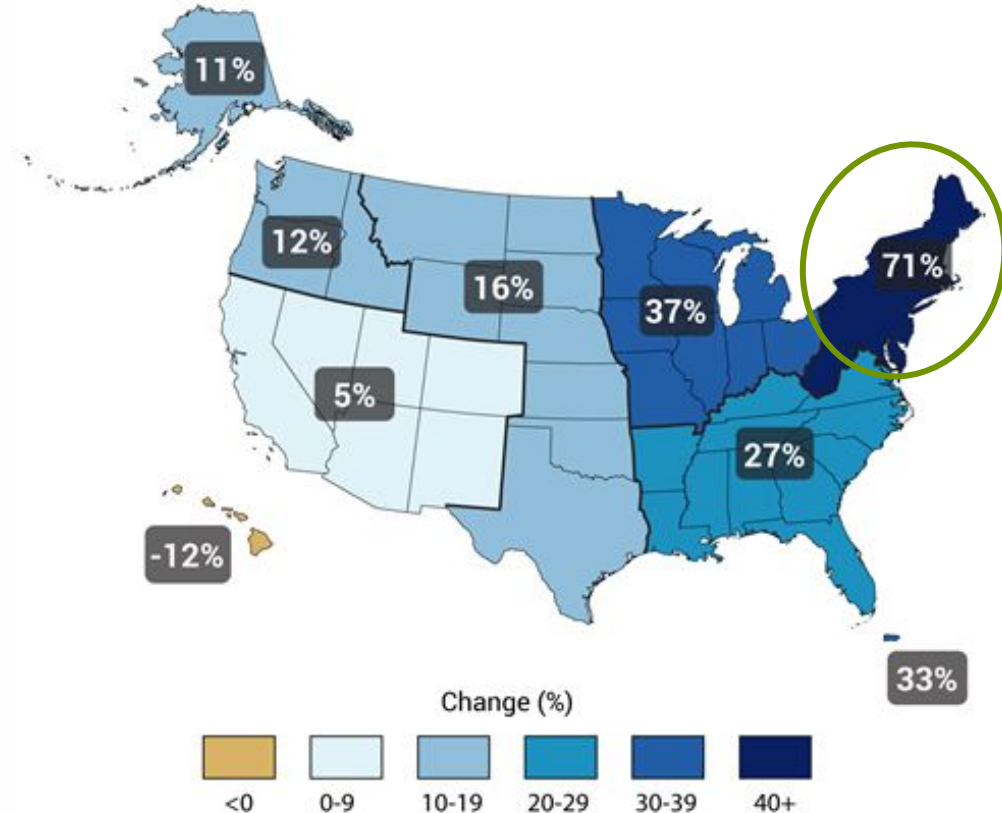
and ends up in a river.

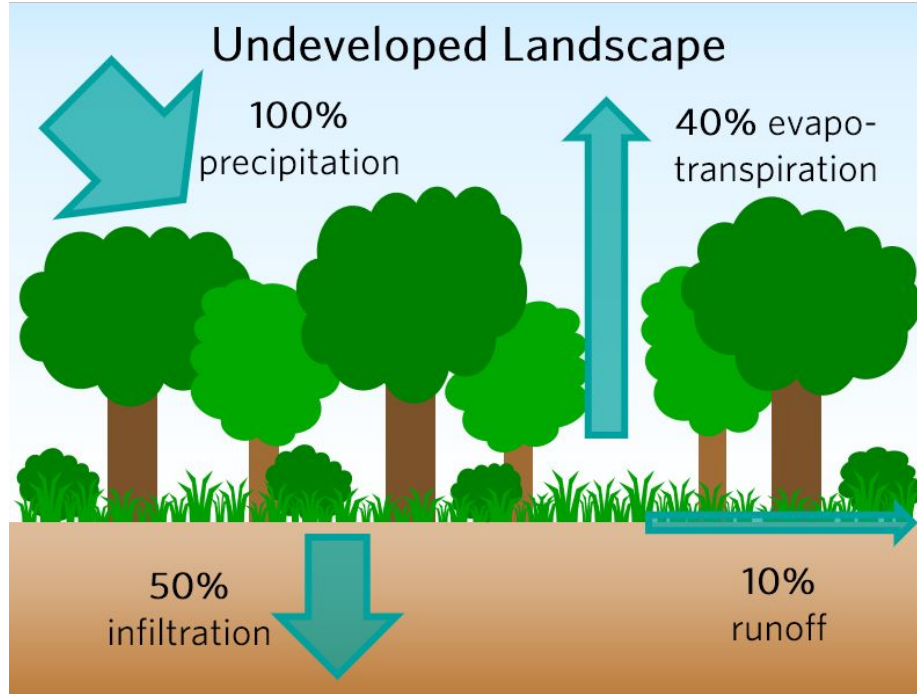


called:
Stormwater Runoff

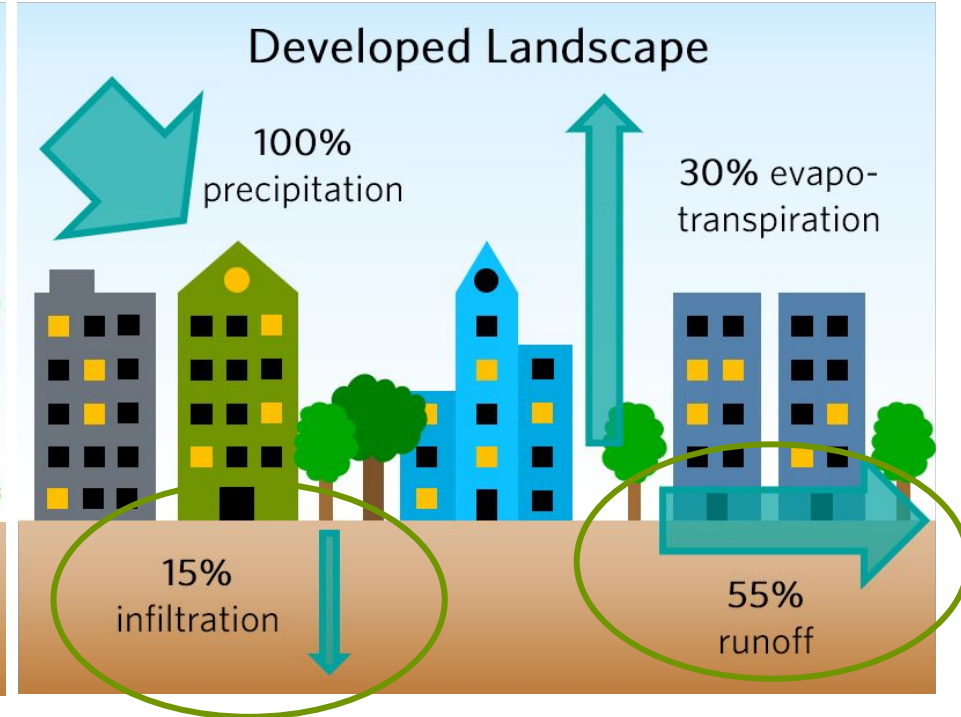
To protect the river, we have to
protect the whole watershed

- More intense storms
- More time in between storms





Less infiltration → Drought



More runoff → Pollution

Why is drought dangerous?

- Low groundwater & river levels
- Drinking water source limited
- Less habitat for aquatic life
- Risk of forest fire high



Ipswich River
Normal



Ipswich River
Drought

What is the pollution?

- Sewage
- Excess nutrients
- Trash
- Oils

Trash in Storm Drain



Why is it unsafe?

- People get sick when swimming or boating
- Ecosystem thrown off balance
 - Cyanobacteria (toxic algae)
 - Invasive plants
 - Fish kills

Fish Kill



Cyanobacteria



What Can We Do?



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Biomimicry

Plane shape modelled after falcon

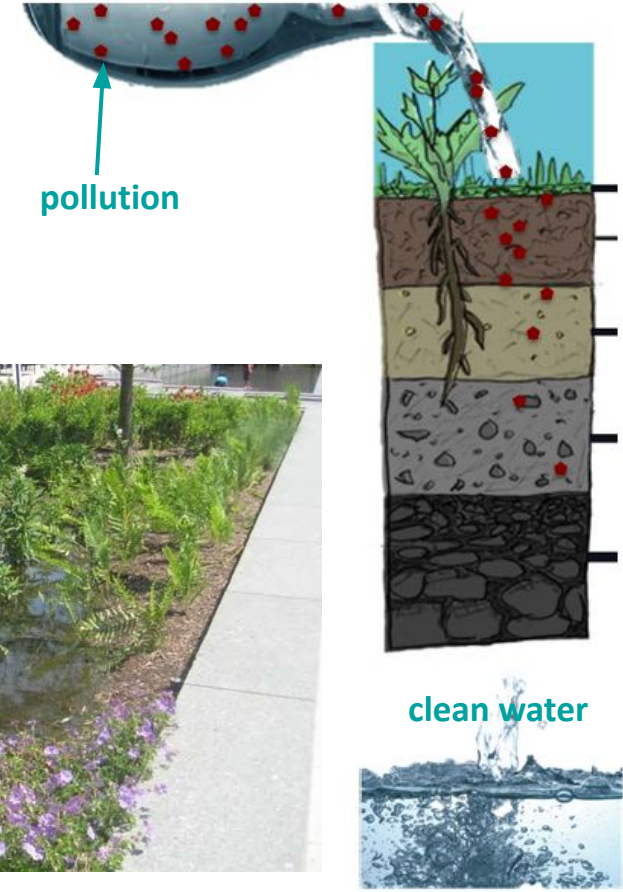


**Mimic natural conditions in
developed landscape**

How does it work?

- Takes water out of pipes
- More water infiltrates into ground
- Plants use nutrients
- Soil filters pollutants
- Water is cleaned

Rain Garden



Rain Gardens



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Rain redirected into green infrastructure

Milford Town Park



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Infiltration Chambers



Rain Garden 1



Rain Garden 2



Middle School



Rain Garden 1



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Before



After



Rain Garden 2



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Before



After



Reduce Impacts of Drought

- More water going into ground
- Less chance of drinking water shortages
- Aquatic life can thrive



Charles River
Drought in
Natick, 2020

Reduce Pollution

- Less trash & nutrients reaching river
- Fewer risks for human health
- Keeps aquatic ecosystem in balance



Fish Run in
Charles
River

Before Construction:

- Final design & engineering
- Educate Town residents
- Construction in Spring 2022

Survey QR Code



After Construction:

- Frequent maintenance
 - Weeding
 - Watering
 - Trash removal
 - Plant replacement



Thank you!



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Questions? Contact us!

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