Soak up the Rain LANDSCAPING FOR WATER QUALITY

University of New Hampshire Cooperative Extension

Sea Grant New Hampshire

NOAA National Oceanic and Atmospheric Administration U.S. Department of Commerce

United States Environmental Protection Agency

New Hampshire Department of Environmental Services

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Hydrology and Water Quality Considerations in Great Bay

Jillian McCarthy

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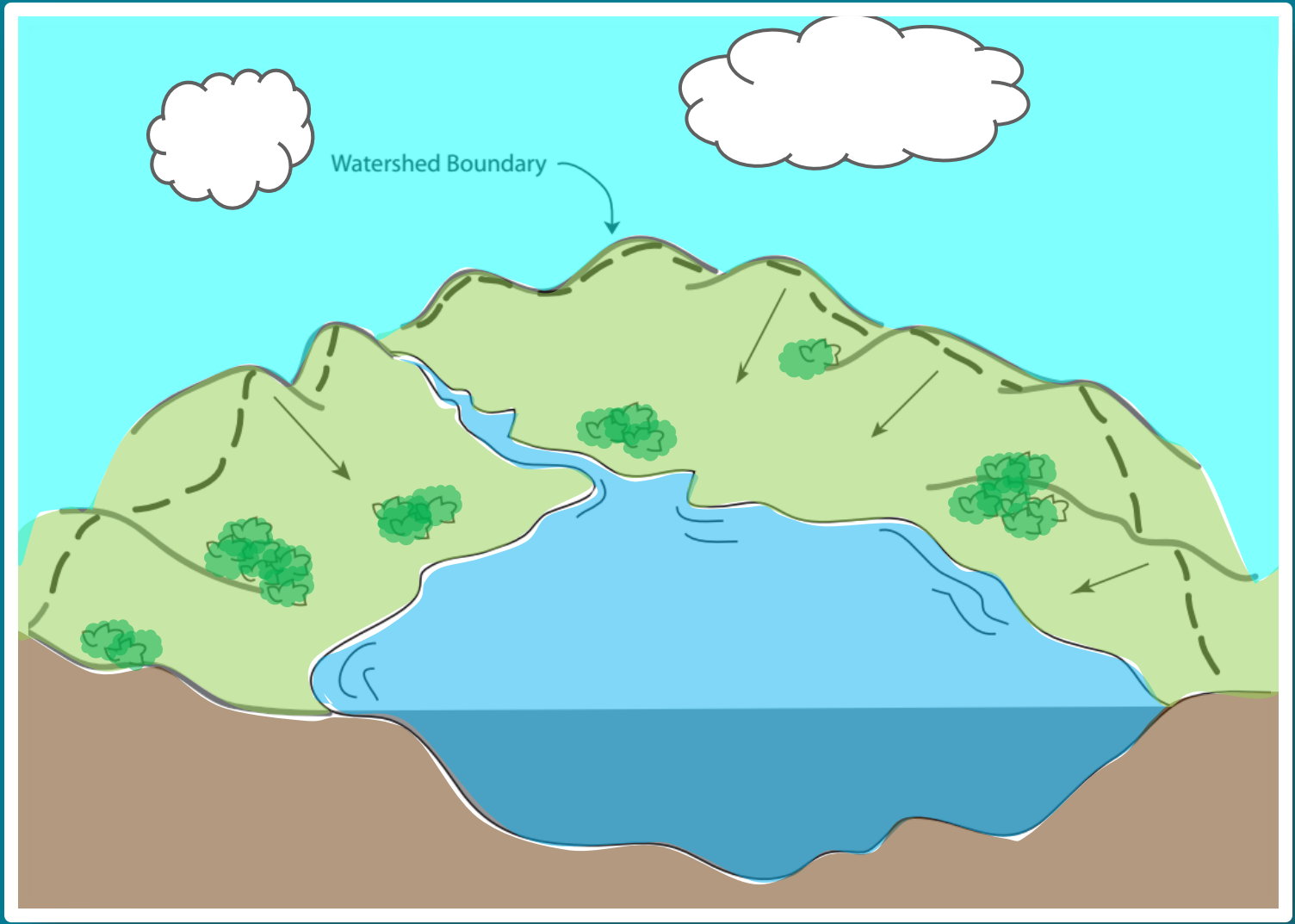
Watershed



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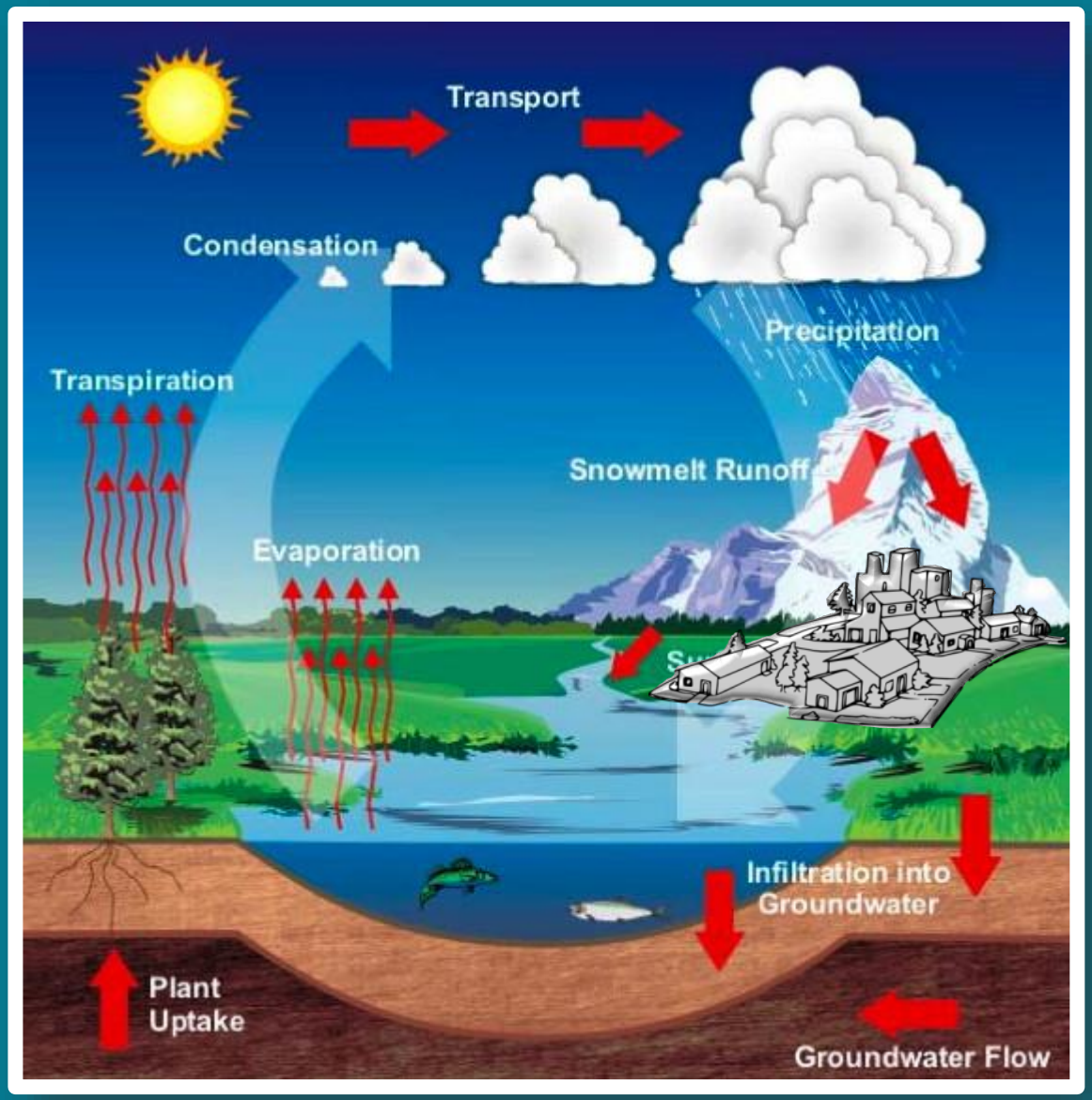
The Water Cycle



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Credit: Think Blue Maine

stormwater runoff

Water from rain or melting snow that doesn't soak into the ground.

"rain water"
"runoff"
"stormwater"

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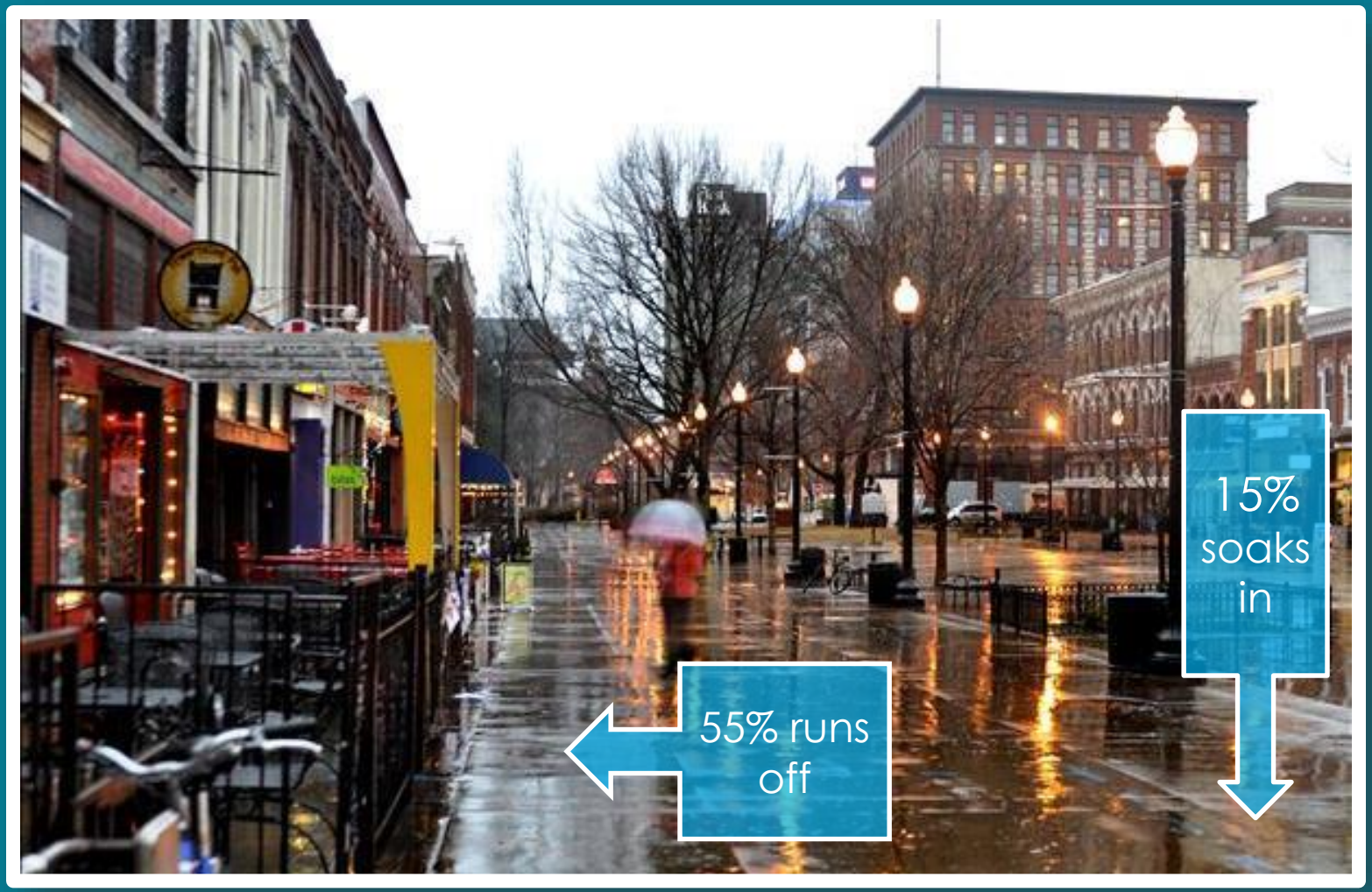
Undeveloped Area

Highly Developed Area



Impacts to Water

Adapted from Jeff Schloss, UNH CE and Wisconsin Dept. of Natural Resources and the Wisconsin Lakes Partnership using the Simple Method and the Residential Loading Models. Photo source: www.landvest.com.

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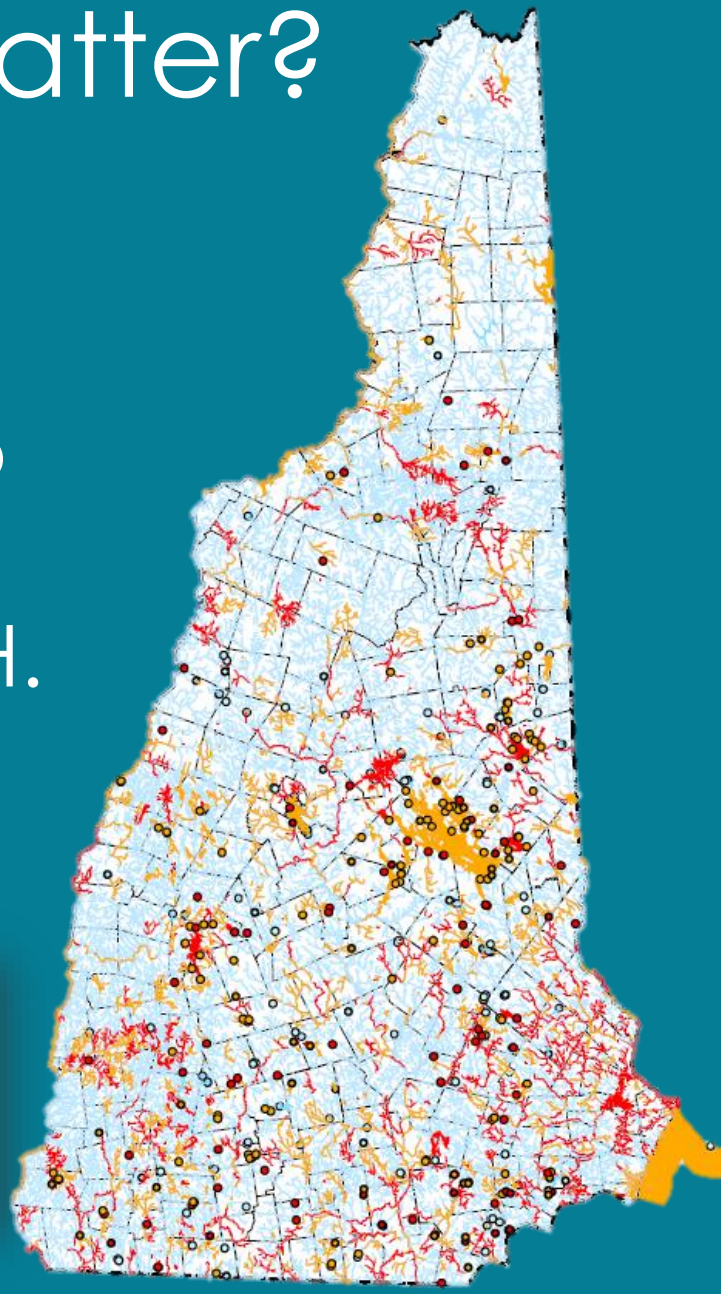
Why does it matter?

Stormwater runoff causes or contributes to over 90% of the water pollution problems in NH.



Aquatic Life Use

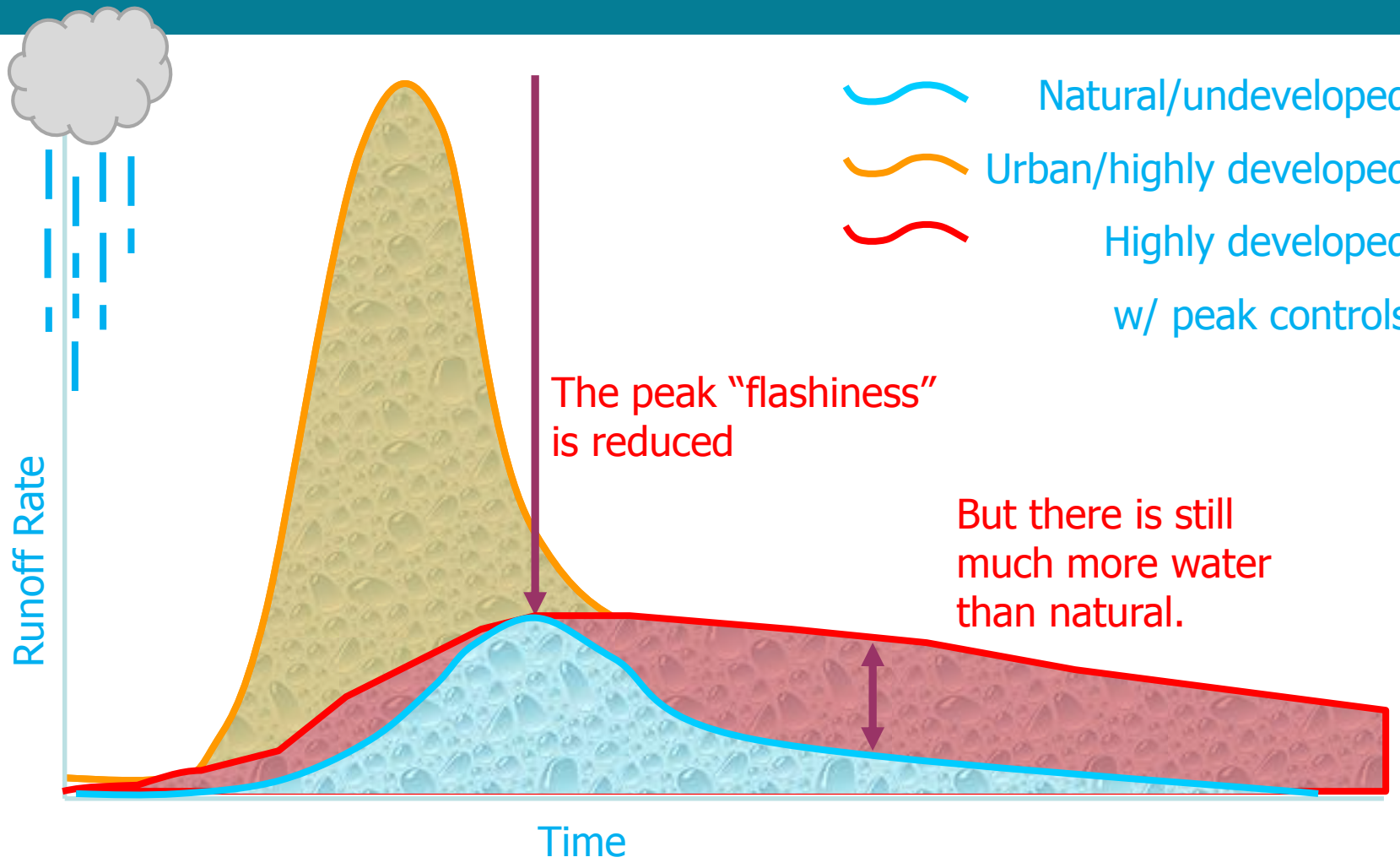
Primary Contact Recreation

Two Issues

1. TOO MUCH WATER

2. CARRIES POLLUTION

Too Much Water



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Effects of Too Much Water

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Carries Pollution

Sediment

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Nutrients

Pathogens


ADVISORY
High levels of BACTERIA have been detected in this WATER.
N.H. Dept. of Environmental Services
WATER CURRENTLY NOT SUITABLE FOR WADING OR SWIMMING!
Exposure to this water may cause nausea, vomiting, diarrhea, or fever.
Children, the elderly and others with sensitive immune systems are especially vulnerable.
All current advisories posted at www.des.nh.gov
Click "beach advisory" in left column
CONTACT INFORMATION:
NHDES Beach Program
29 Hazen Dr., Concord, NH
(603) 271-0698
beaches@des.nh.gov
Environmental Services

Toxic Contaminants

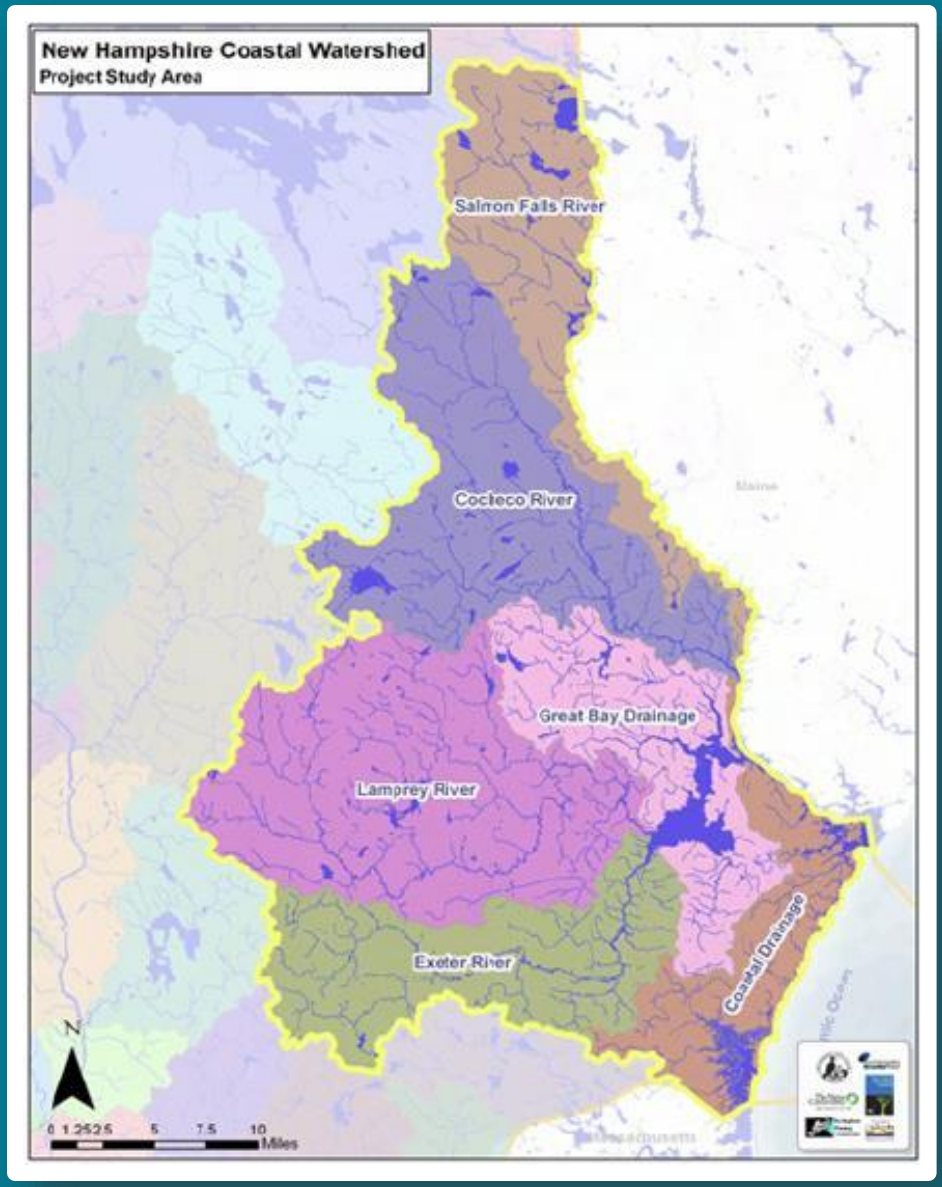
Chlorides
(Road Deicing Agents)

Sources of chloride in Policy Brook, Salem

NH's Coastal Watershed

42 Communities

Over 1,000 sq. miles



Great Bay Estuary

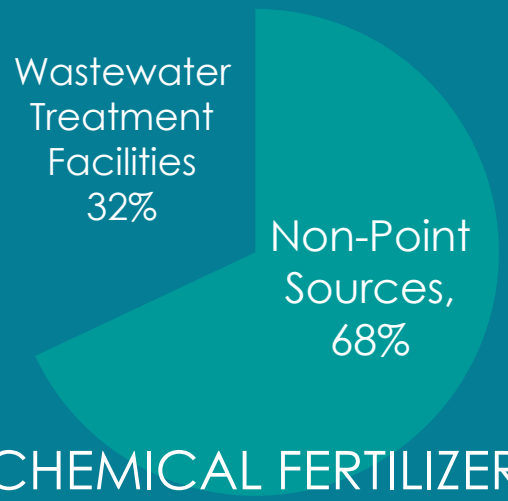
The estuary is showing classic symptoms of too much nitrogen:

- Low dissolved oxygen in tidal rivers
- Increased microalgae growth
- Declining eelgrass

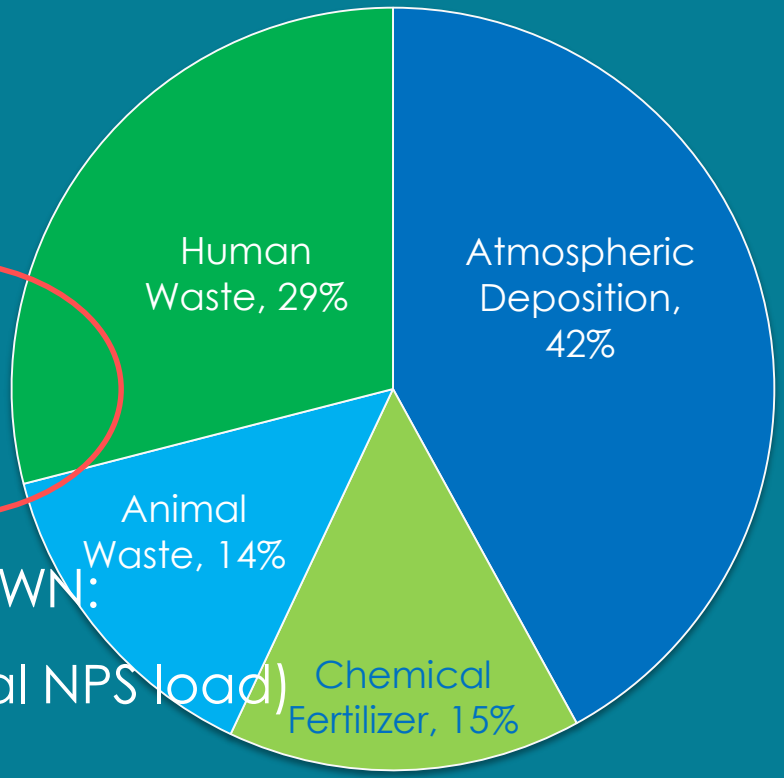
Photo source: Coastal Home online.

Nitrogen in Great Bay

Total Nitrogen Load



NPS Nitrogen Load



CHEMICAL FERTILIZER BREAKDOWN:

- 70% from lawns (10.5% of total NPS load)
- 22% from agriculture
- 8% from recreational fields, including golf courses

Data source: GBNNPSS, DES 2014

What can we do to protect Great Bay?

Photo: ©Jerry & Marcy Monkman