

Challenges Faced by the Niantic River Estuary



The Niantic River is impacted by **two pollutants** that are attributed to development throughout the watershed:

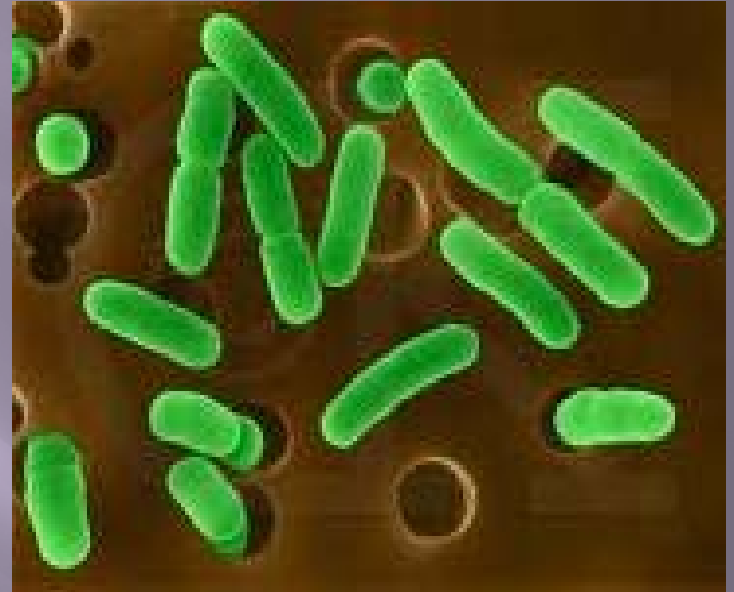
Bacteria and *Nutrients*



Image from Bing.com

Bacteria

Fecal coliform is an indicator bacteria that comes from the gut of warm-blooded animals. It is not typically harmful, but it indicates that other potentially harmful bacteria may be present



Fecal coliform can come from:

- ▣ Untreated or under-treated sewage from combined storm sewer overflows and septic systems
- ▣ Animal waste

Results of Bacteria Contamination

Restricted recreation, ie. swim area closures after rainfalls, which may animal waste from the ground surface or flush untreated or under-treated septic waste through soil.

Shellfish bed closures – either permanent bed closures, restricted areas or temporary closures after rainfalls of 1 inch or more.



Nitrogen

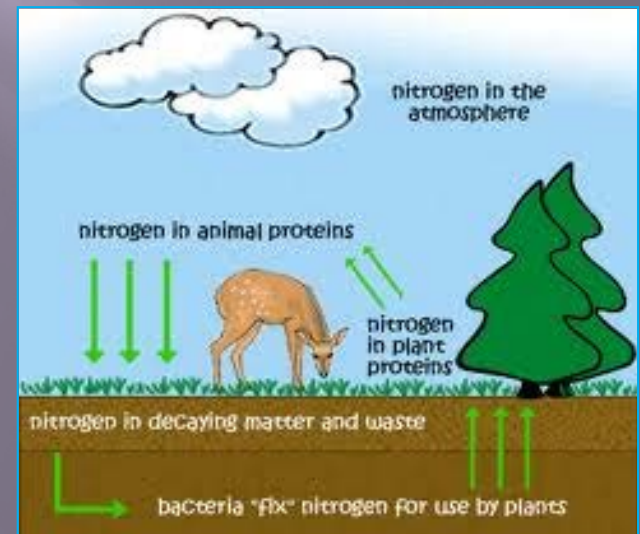
Nitrogen is a necessary component to cell growth in all living things.

We most commonly know it as the first number in fertilizers, ie. 10-5-10, where it promotes plant growth.

Excess nitrogen in an estuarine system can cause algae blooms – algae are plants too!

Sources of Nitrogen:

- Fertilizers
- Manure and pet waste
- Leaky septic systems
- Atmosphere (nitrogen is the most common gas in air)



Results of Excess Nitrogen



Excessive, nuisance aquatic plant growth among both native and invasive plants.



Algae blooms, which can lead to hypoxia (low oxygen conditions in the water).

Eelgrass!

Eelgrass was once very common in shallow waters and estuaries along the Atlantic coastline.

Eelgrass beds provides habitat for numerous estuarine species including bay scallops and winter flounder.



In recent years, eelgrass has been in decline.

As a result, species dependent on eelgrass, such as bay scallops and winter flounder, have also been in decline.

The Nitrogen-Eelgrass Connection

Researchers believe that excessive nitrogen in estuarine waters is detrimental to eelgrass.

Excessive nitrogen may promote the growth of phytoplankton that reduces light penetration into the water column.

Excessive nitrogen may also promote planktonic and algal growth that coats eelgrass and smothers it.



How you can help!!

Identify and manage sources of nutrients and bacteria to the Niantic River on your own property:

- ▣ Maintain your septic system
- ▣ Test your soil before applying fertilizers
- ▣ Install a vegetative buffer along shorelines to reduce storm run-off and capture nutrients
- ▣ Install a rain garden to reduce runoff
- ▣ Install a rain barrel to capture runoff
- ▣ Manage pet waste and livestock manure to reduce both nutrients and bacteria in runoff



All Together Now!!!

If everyone in the watershed does a little bit to help,
together we can make a **BIG** difference!!!



***FOR MORE INFORMATION
PLEASE CONTACT THE
NIANTIC RIVER WATERSHED
COMMITTEE***

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