

The <u>Back River</u> is a breeding ground for many species of fish and crab, including the Chesapeake Bay's well-known blue crab. This estuarian inlet river, located North/Northeast to NASA Langley, flows directly into the Chesapeake Bay. Stormwater from LaRC flows directly into the Back River, which is also used for recreation and as a wildlife refuge. This includes any pollution and illicit discharges, which is why it is so important to educate ourselves in protecting this vital resource.

TOTAL MAXIMUM DAILY LOADS (TMDLS)

Back in 2014, after an extensive study of the Back River's water quality, it was determined by the Virginia Department of Environmental Quality (DEQ) that the river was in violation of the state's water quality standards for fecal coliform based on the count of E. coli and enterococcus found in the water, indicating a contamination by fecal material.

At the conclusion of its research, DEQ decided to establish <u>Total Maximum Daily Loads (TMDLs)</u> to reduce fecal coliform bacteria. TMDLs establish the maximum amount of pollution an impaired waterway can hold while remaining healthy.



A term used to describe bacteria found in the intestines of warmblooded animals. High levels of this bacteria in our waterways indicate the presence of disease-causing bacteria, viruses, and protozoa, which are harmful to the health of both people and wildlife. This often results in beach closures and restrictions on shellfish consumption.

Blue Crabs



One of the Chesapeake Bay's most prized fisheries, both commercially and recreationally, the <u>Blue Crab</u> is a local favorite raking in more than <u>\$33 million</u> annually. In 2022 the population fell to an awful historical low, but thankfully is once again on the rise in 2023. Even though the population appears to be rebounding, a sense of caution is still necessary to ensure their survival. One way this can be accomplished is by improving the water quality in their breeding grounds, such as the Back River.

TMDLS AT NASA LANGLEY

NASA Langley is under a bacterial TMDL for the Back River, meaning that NASA is required to develop an action plan to address bacterial contamination and reduce the annual fecal coliform load by 35%. Since the Center doesn't have septic systems, pets, marinas, or livestock within its property, its largest contributor to bacterial discharges is wildlife. Thus, the Center's best management practices are designed to reduce bacteria from urban wildlife.

Outreach and training for NASA Langley personnel are a necessary step to bring awareness and understanding of the Center-wide initiatives set forth in the Back River TMDL Action Plan. You can find the TMDL on our environmental <u>website</u>. Your education and consideration will help us to reduce bacteria loading!



How To Help!

HOW YOU CAN HELP (AT WORK)

- <u>DO NOT</u> feed any wildlife (especially feral cats) -- for their health and your safety!
- Report any stray or feral animals to the Environmental Management Office.
- Reduce unnatural food sources accessible to wildlife.
- Keep picnic areas free of litter and dumpsters closed. This will deter wildlife and help reduce wildlife bacterial coliform pollution.

ACTIONS NASA LANGLEY UNDERTAKES

- The Environmental Management Office conducts training and outreach to employees about preventing stormwater pollution, how to report illicit discharges, and who to contact with questions or concerns.
- Stormwater retention practices (e.g., ponds) are prohibited to discourage Canadian geese and other birds from nesting on Center.
- The Center's Grounds contract:
 - Cleans out storm drains at least twice a year to remove waste from wildlife.
 - Conducts stormwater ditch cleaning and vegetation removal that attracts wildlife.
 - Implements a program for the proper disposal of animal carcasses.

HOW YOU CAN HELP (AT HOME)

- Properly dispose of pet fecal matter.
- Individual home septic systems should be checked at least once a month to ensure they are functioning properly.
- Do not flush substances such as pesticides, fertilizers, chlorine bleach, and oven cleaners down septic or storm drains.
- When camping, be familiar with waste management requirements of the area, use proper facilities, or follow "Leave No Trace."



Let's work together to keep our water clean!

For water quality concerns call: Ande Remington (757.864.8332), Sarat Calamur (757.864.4791), or James Griczin (757.864.5030)

In an emergency or spill, always call 911 (from a Center phone) or 757.864.2222 (from a cell phone).

Information obtained from: VIMS Virginia Institute of Marine Science Hampton City Gov't NASA Chesapeake Bay Foundation NOAA EPA