



DIRTY JOBS



THE CHESAPEAKE BAY IS ON A "DIET"

In December 2010, the U.S. Environmental Protection Agency (EPA) established the Chesapeake Bay Total Maximum Daily Load (TMDL), a historic and comprehensive "pollution diet." This "diet" describes the maximum amount of pollutants that the Chesapeake Bay can receive while still meeting water quality standards. The TMDL also allocates how much of those pollutants can come from various sources, including NASA Langley.

WHAT ARE THE POLLUTANTS OF CONCERN?



Nitrogen, phosphorus, and sediment are the pollutants of concern in the Chesapeake Bay. High levels of these pollutants enter the water from various sources, including agricultural operations, urban runoff, construction, wastewater facilities, septic systems, air pollution, and other sources. *This article will cover sediment.*

LOOKING TO THE FUTURE

Sticking to a diet for a 64,000-square-mile watershed that includes 18 million people can be very challenging. A number of elements are put in place to restore the bay and its tidal rivers by 2025. Actions are being taken across six states and the District of Columbia to reduce nitrogen, phosphorus, and sediment loads to meet the clean water goals.

POLLUTANTS AT NASA LANGLEY?

The demolition of old facilities and construction of new ones continues across the Center as part of LaRC's comprehensive Center Revitalization (ViTAL) Plan. *However, all of this positive development does carry with it environmental risks during the demolition and construction of these facilities.* Construction sites present unique environmental challenges, especially when it comes to erosion and sediment control. Fortunately, LaRC has plans to manage these environmental challenges for each project from start to finish.

IT'S JUST DIRT...SO WHAT?

While many may not think of dirt or sediment as a pollutant, it certainly is.

More than 18.7 billion pounds of sediment are believed to enter the Chesapeake Bay each year according to the Virginia Department of Conservation and Recreation.

Excess sediment suspended in the water is one of the leading causes of the Chesapeake Bay's poor health. The culprits are the tiny clay and silt-sized fractions of sediment. Because of their small size, clay and silt particles often float throughout the water, rather than settling to the bottom, and can be carried long distances during rainstorms. When there is too much sediment in the water, the water becomes cloudy and muddy-looking.

Cloudy water does not allow sunlight to filter through to bay grasses growing at the bottom of the Bay's shallows. Just like plants on



Earth, bay grasses need sunlight to grow; without it, these underwater grasses die, which affects the young fish and blue crabs that depend on bay grasses for shelter.

We all know that a construction site means a lot of dirt. LaRC's Standard Practice Environmental and Engineering Management Branch (SPEEB) tries to focus on the successful minimization of these erosion impacts by requiring the

implementation of erosion and sediment control measures on construction sites. LaRC also tries to minimize excess sediment through our street sweeping processes. These measures aim to prevent soil movement/loss and eliminate any damage to our neighbors downstream. On LaRC construction sites you'll see controls in place to minimize sediment runoff such as silt fences, inlet protection, rock entrances, etc. SPEEB also regularly inspects construction sites and ensures that controls are in place and maintained.



YOU CAN HELP

SPEEB strives to keep an eye on construction activities, but sometimes we miss things. SPEEB regularly inspects larger job sites (over 2,500 square feet in total size) such as big construction projects like the MSL building, yet there are a lot of smaller jobs that disturb land and could cause sediment pollution that we may miss.

If you are ever on Center and see dirt and sediment tracking on roads or muddy water flowing to a ditch, storm inlet, or conveyance channel, please contact SPEEB immediately at 4-7517 or 4-2451.