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Updated Pearce Creek studies find consistent results

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An updated study of Pearce Creek-area surface water and sediment quality, such as that seen here on the Elk River, has found consistent healthy results.

CECILTON — A second biannual study of Pearce Creek-area surface water and sediment quality found consistent results compared to the previous period, officials reported Friday.

Since a U.S. Geological Survey study found contamination of local water tables in a cluster of Pearce Creek-area neighborhoods, state and federal stakeholders have been working toward providing potable water for residents and sealing the Pearce Creek Dredge Material Containment

Area so that it could be reopened for dredge spoil disposal.

Maryland Port Authority officials are committed to showing local residents that they know what effect future dredge spoil disposal will have on local waters, so they hired the environmental and engineering consulting firm Anchor QEA to study the health of the nearby Elk River and Pearce Creek Lake before and after the first spoils are scheduled to be disposed of at Pearce Creek in the fall of 2017.

On Friday, Karin Olsen, with Anchor QEA, explained the results of the second seasonal period of studies, conducted during the spring, during a routine meeting of the Pearce Creek Implementation Committee, which contains federal, state, county and local stakeholders.

The consultant's test examined 12 sampling locations: seven in Pearce Creek Lake near the DMCA's discharge point and one farther away as a reference, and one in the Elk River near the outflow from Pearce Creek Lake with another one farther away as a reference. They also added two new testing locations off of Elk River beach at the insistence of locals.

Of the 18 chemicals tested for in the surface water last fall, only one – zinc – exceeded water quality standards at one site in Pearce Creek Lake, a common result for the Chesapeake Bay, officials reported. In the spring, none of the testing sites found chemicals in excess of water quality standards.

In sediment testing last fall, levels of nickel higher than what scientists like to see were detected in Pearce Creek Lake, while other metals were found in less concerning degrees. Such findings, while not perfect, are not of great concern in the Chesapeake Bay, where higher nickel concentrations are common.

In the spring, elevated levels of nickel were again detected in Pearce Creek Lake, while five other metals were found in less concerning degrees. At the reference location in the spring, nickel also exceeded comfort levels while four other metals had some concern.



At the Elk River testing site, only one metal was found in a less concerning degree, while two metals were found in that range at the reference site — again indicating that their presence is naturally occurring.

Meanwhile, lab-controlled benthic bioassays, or 10-day growth studies of organisms that live in or on sediment, found that both Pearce Creek Lake and the Elk River were not toxic and had high survival rates for organisms last fall. Studies during the spring also found that the soil was not toxic and had high survival rates for benthic organisms.

A further organism survey at the locations last fall found that both the lake and river met Chesapeake Bay restoration goal levels in most cases, with only one Pearce Creek Lake site drawing results of concern for further study. During the second study period, fewer benthic organisms were found in both Pearce Creek Lake and the Elk River when compared to the previous period, but officials are not yet sure if that is due to expected seasonal shifts of the species during the winter.

Testing will continue over the next year to finish establishing a two-year baseline to use as a reference to post-dredge spoil disposal findings.

The U.S. Army Corps of Engineers is on schedule to resume disposal of dredge spoils at the Pearce Creek site next fall. Officials reported Friday that 95 percent of the synthetic liner has been placed on the site and 85 percent of the overall site work, including upgrades to the sluice box and riprap basin, has been completed to date.