How Does an Upland Disposal Area Work?







Pearce Creek CDF Geochemistry

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Oxidation of Pyrite

 $4FeS_2(s) + 14O_2(g) + 4H_2O(l) \iff 4Fe^{2+}(aq) + 8SO_4^{2+}(aq) + 8H^+$



Where does it come from?



- Sediment is a natural part of the Chesapeake Bay, created by the weathering of rocks and soil. Sediments erode mostly from watershed area and are transported downstream
- More than 18.7 billion pounds of sediment are believed to enter the Chesapeake Bay each year and the ultimate destination of sediment is the Atlantic Ocean.



 In September 2011, the Lower Susquehanna River Watershed Assessment (LSRWA) team was formed to evaluate the sediment management options for all of the dams on the Lower Susquehanna River. The team has entered into a three-year, \$1.4 million study led by the Army Corps of Engineers, and includes representatives from the Maryland Department of Natural Resources (DNR) and Department of the Environment (MDE), as well as the Susquehanna River Basin Commission (SRBC), the Nature Conservancy and Chesapeake Bay Program. The first year of the study has focused on information gathering, data collection and model development

- <u>Study shows long-term improvements in Bay</u> <u>health</u>
- Nutrient and sediment levels at a number of Chesapeake Bay monitoring sites have improved since 1985, according to a report released by the U.S. Geological Survey (USGS). These improvements in long-term trends indicate pollution-reduction efforts are working.