

Heavy metal contamination is a problem at many marine and fresh water environments as a result of industrial and military activities. Metals such as lead (Pb), zinc (Zn), copper (Cu), and chromium (Cr) are common contaminants in sediments due to many Navy activities. The mobile, soluble forms of these metals are generally considered toxic; are bioavailable to gill breathing organisms, easily pass through cell walls, and can bioaccumulate in living organisms. Induced chemical precipitation of these heavy metals can shift toxic metals from the aqueous phase to a solid, precipitated phase, which is often a less bioavailable phase. This study examines the immobilization of metals at U.S. Navy sites to evaluate the relationship of metal speciation to bioavailability.