

**Department of Natural Resources and Environmental Control**  
**Division of Water Resources**

Statutory Authority: 7 Delaware Code, Chapter 60

**Final Regulation**

**Total Maximum Daily Load (TMDL) for Zinc in the Red Clay Creek, Delaware**  
**(Effective Date: December 11, 1999)**

- Article 1. The TMDL for zinc in the Red Clay Creek shall be 1.81 pounds per day, measured as total zinc.
- Article 2. The combined mass loading of zinc to the Red Clay Creek from NVF's permitted discharge 002 (i.e., WLA<sub>002</sub>), plus the mass loading of zinc to the Red Clay Creek from contaminated groundwater beneath the NVF property (i.e., LA<sub>g.w.</sub>) shall not exceed 1.2 pounds of zinc per day, measured as total zinc.
- Article 3. The load allocation of zinc from the area upstream of Yorklyn (i.e., LA<sub>up</sub>) shall be capped at 0.6 pounds per day, measured as total zinc.
- Article 4. The margin of safety (MOS) for the TMDL listed in Article 1 has been set at 0.01 pounds of zinc per day. This small margin of safety (less than 1% of the TMDL) reflects the robust data set and the conservative approach used to establish the TMDL, while still accounting for the uncertainty associated with possible diffusion of zinc from Red Clay Creek sediments.
- Article 5. DNREC has determined with a reasonable degree of scientific certainty that water quality standards for zinc will be met in the Red Clay Creek once the mass loading requirements of Articles 1 through 3 are met.
- Article 6. Implementation of this TMDL Regulation shall be achieved through the development of a Pollution Control Strategy. The Strategy will be developed by DNREC in concert with affected parties, the interested public, and the Department's ongoing Whole Basin Management Program. The manner in which the 1.2 pounds per day that is noted in Article 2 above is allocated between discharge 002 and the contaminated groundwater discharge shall be one particular area of focus as part of the Pollution Control Strategy. The Pollution Control Strategy will also consider how monitoring will be conducted to verify compliance with the TMDL.