

Dike 14 Confined Dredge Material Disposal Facility

Cleveland, Ohio

The Dike 14 Confined Dredge Material Disposal Facility (CDF) at Cleveland, Ohio, was the site of an avian botulism outbreak in 1986. In addition to the waterfowl mortality problem, the outbreak of botulism became a major public relations problem for the US Army Corps of Engineers. Applied Ecological Services, Inc. (AES) worked with US Army Corps of Engineers, Waterway Experimental Station, Vicksburg, Mississippi in developing a pilot project, wherein plant materials were installed prior to the disposal operations so that a vegetative cover would rapidly appear as the CDF dewatered after disposal operations. The specific vegetation on the dewatering dredged material was selected to make the CDF unattractive to shorebirds, wading birds, and waterfowl susceptible to avian botulism. The pilot project was a success in the prevention of a 1987 outbreak of avian botulism.

AES identified strategies for alleviating the avian botulism outbreak at the time of the outbreak, and in the future. AES designed unique equipment and planting strategies to alter the environment from the open exposed mud flats and pools, which attracted shore birds, ducks and geese vulnerable to botulism, to a dense grass, sedge and bulrush habitat that attracted birds that were not vulnerable to avian botulism.



A three-point-hitch modified strawberry planter was used with a Pasquali tractor to plant cuttings and rhizomes in the relatively consolidated portions of the dredged material. Inset: a least sandpiper.

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