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Three decades of Environmental Dredging - How far have we come?

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The term “environmental dredging” has been used to describe a wide variety of dredging operations, which include terms like restoration, cleanup, remedial, hazmat, precision, surgical, and even hybrid. Sometimes the term is used to describe highly specialized equipment or approaches to remove highly toxic waste materials remaining from historical discharge practices. In these cases, the emphasis is entirely on environmental remediation.

“Environmental dredging” is also used to describe equipment and practices used to assist navigation dredging projects in meeting existing regulatory requirements for environmental protection. Dredging of navigation projects results in the removal of sediments from an existing or future channel to a depth and width adequate to support anticipated vessel traffic into or through the area. These projects tend to involve much larger sediment volumes and impact areas. Still, environmental concerns may be significant, ranging from protecting nearby sensitive habitat from the deposition of clean sediments to water quality and sediment toxicity concerns associated with mildly contaminated sediments.

Although dredging has been conducted for centuries to increase and maintain navigation depths in harbors and waterways, the concept of environmental dredging is young in comparison. Much of the publicly available information on environmental dredging based on cleanup experience has been developed within the past 15 to 20 years. The TAMU/WEDA Meetings have provided a key forum to present environmental dredging technologies and strategies and to track their evolution. Approximately 80 technical papers related to environmental dredging have been presented at the WEDA annual meetings along with three separate sessions; two of them were in cooperation with the International Navigation Association, PIANC.

This presentation briefly overviews the evolution of environmental dredging by examining what has been presented during the WEDA meetings.