

John D. Pauling

Dredged Material Management and Beneficial Use Regional Case Studies

Biography

Mr. Pauling joined Roy F. Weston, Inc. in 1986 after receiving his MS in Civil Engineering at Drexel University College of Engineering. Mr. Pauling has diverse engineering design experience, including project management, project engineering, and structural engineering in the environmental/engineering/consulting industry. Currently, he is the Program Manager of Weston's Port and Waterways Program. In this capacity, John has coordinated two projects designed to demonstrate the use of innovative technologies on sediments in the NJ/NY Harbor. Mr. Pauling is also currently directing beneficial use/innovative use projects in the ports of Philadelphia and Baltimore.

Presentation Abstract

Millions of cubic yards of sediment are dredged annually from USACE navigational channels and industrial docks and access channels. Much of this sediment contains low levels of pollutants. Traditional disposal options (ocean/bay disposal, containment islands, etc.) are becoming more difficult and costly to implement. Regions across the country have unique beneficial use opportunities and implementation challenges.

In response to the problem, a variety of options are being pursued for beneficial use/recycling of this sediment. When developing a beneficial use plan, it's important to understand the specific nature of the contaminants and sediment matrix, factor into the plan the technical, financial and political array of solutions available, and set short term and long-term achievable goals.

Currently, the most common beneficial uses of dredged material are:

- Construction Materials -- aggregate, cement, tiles, and structural fill.
- Environmental -- wetland restoration, landfill cover, brownfields stabilization, mine reclamation.
- Trophic -- manufactured soil.

Generally, these products are in use everywhere, are plentiful and frequently inexpensive. One of the major challenges of using *recycled sediment* to

make these products is to do so equally inexpensively, and to find a ready market willing to accept a product that comes with the inherent stigma of having been manufactured from "dredged sediment."

Several case studies at various stages of development/implementation will be described that will provide examples of developing regional beneficial use programs that create win-win situations for stakeholders in the regions.