

**Nomination of Cottrell
Contracting Corporation for
the Susquehanna River
Maintenance Dredging and
Battery Island Creation**

**WEDA Environmental Excellence Award
2013**

Introduction

In the late winter of 2013 Cottrell Contracting, and their subcontractor, Ecological Restoration and Management (ERM), completed the maintenance dredging, island creation, and planting of the Battery island in the Susquehanna River at Havre de Grace, Maryland. Cottrell Contracting carefully structured their schedule and planned their work to ensure maximum safety and efficiency while executing the work and ensuring ample flexibility was maintained to prevent weather delays from affecting project performance. There was a near perfect quality of workmanship while constructing the island. The dredge operators and lead equipment operator were recognized for their skill, quality, and safety by several US Army Corps of Engineers employees. This skilled and efficient management team was perfectly suited for the project needs and brought a strong commitment to partnership and cooperation. Cottrell Contracting completed the project in a little over a month's time (10 days ahead of schedule), and ERM completed planting throughout the spring and summer months to ensure stability and habitat resilience on the island. Timing was critical due to the scheduled arrival of the tall ships for the bicentennial celebration of the battle of Havre de Grace.

Environmental Benefits

Susquehanna National Wildlife Refuge, also known locally as Battery Island, is located at the mouth of the Susquehanna River in Harford County, Maryland. The refuge and surrounding areas were once covered with wild celery, pond weeds, redhead grass, and other desirable waterfowl food sources. At their peak, waterfowl included over 500,000 canvasback and redhead ducks as well as over 200,000 American wigeon. These rich areas of aquatic growth began declining in the 1960's due to changes in the water quality and quantity. The only remaining portion of the Refuge was the eroded one acre Battery Island.

Maintenance dredging provided the opportunity to expand the island and to restore high-quality nesting and brood rearing habitat for black ducks and other waterfowl. The island was constructed using 200,000 cubic yards of clean dredged material to create approximately 11 acres of upland habitat in a horseshoe shape around and including the existing island. The island was planted with agreed upon species to encourage waterfowl habitat. The area surrounding the island should provide habitat for submerged aquatic vegetation (SAV) to establish as well as habitat for juvenile fish.

The challenges for this project was to allow construction in an area with returning SAV and how to construct without creating an upland placement site with dikes and weirs.

Innovation

A team was formed which include the FWS, Maryland Environmental Service, Maryland Department of Natural Resources, National Marine Fisheries Service, the State Waterfowl expert and the Corps. The task was to design an expansion of Battery Island that would help protect the remaining area while

providing additional habitat that could be designed and planted to allow for waterfowl use. Meetings were also held with the local sponsor (Harford County), the City of Havre de Grace, and local marina owners and businessmen. All parties fully supported the project but expressed a desire to have the dredging completed before Memorial Day since they had invited tall ships to help commemorate actions in the Susquehanna River during the War of 1812. This added scenario to accommodate the customer's request required agreement on scope, methodology, and design in a timely manner

Letting the team brainstorm the process after an initial design provided by the Corps resulted in a number of scenarios. The team then discussed the type of, and amount of planting to ensure stability and try to keep the public off the final constructed site. This allowed the team to have a major say in the project which ultimately made the process and subsequent agreement non-controversial. Part of the team surveyed the area for SAV so any design changes that needed to be made to avoid this habitat could occur. Since there were no SAV in the immediate area and the dredged material consisted of predominately sand, it was proposed, and accepted, that the material would be placed unconfined. The species of flora selected for planting was twofold; to keep the geese from eating new shoots but entice waterfowl nesting, and to keep the public off the island to avoid disturbing planted and seeded areas.

Allowing the team help design the project and openly discuss the pros and cons, aided in continuing the project in a timely manner. Several issues arose with stakeholder tradeoffs, but the cooperation and compromising by the team as a whole produced a plan and design agreeable in the early stages. This approach has been used successfully on another maintenance dredging project in the Coastal Bays of Maryland that was proposed in controversial areas.

Economic Benefits

No economic benefits were calculated since it was an environmental project as beneficial use of dredged material. There was a huge commercial benefit for the users of the channel, especially the quarry on the Susquehanna which barges stone for many Bay wide projects. Commercial fishermen and charter boats also enjoy the benefits. The town of Havre de Grace experienced an economic surge due to the presence of the tall ships in May of 2013.

Transferability

The methods of team building, group discussion, and design in the early stages, resulted in an agreeable project going forward in the Maryland Coastal Bays. Also, the success of the unconfined placement of material, and the creation of this island, has been instrumental in the acceptance of island creation in the Coastal Bays. The island creation in the bays will include unconfined placement with material having less sand than material used at Susquehanna, and one confined island using sand as a retaining dike. Also, two of the four islands to be created will be planted and two will be left barren. The differences in the islands will encourage different species to make use of the diverse habitats.

Outreach and Education

As part of the outreach to stakeholders, monitoring was performed by the State of Maryland before the dredging to allow configuration of the island for avoidance of SAV. The Fish and Wildlife Service brought historical experience and a perspective that addressed unconfined placement of the material. All parties supported island creation with the expectation of waterfowl returning to the area. The town of Havre de Grace lent its support providing dockage, water, and the staging area. The Refuge will be monitoring the island for plant growth and waterfowl usage. The State waterfowl department will also be monitoring the island's usage.

Susquehanna River Maintenance Dredging

Prime Contractor: B.G.Cottrell & J.M.Cottrell Owners; Franklin Hall - Project Manager; Eiford Clemmons – General Superintendent; Eddie Bellamy – Captain Dredge Lexington; Andy Clemmons, Taylor Farley and Randy Stanley – Quality Control Managers; Ricky Fulford – Lead Equipment Operator

Environmental Restoration & Management: (Subcontractor for Planting) Mr. Griff Evans: Vice President; Dave Grogan – Operations Manager ; Jason Freeman – Forman.

U.S. Fish and Wildlife; Suzanne Baird Superintendent Blackwater Wildlife Refuge: Mr. George Ruddy Team Member

State of Maryland: Mr. Dave Brinker Regional Ecologist, Maryland Department of Natural Resources.

Baltimore District Corps of Engineers: Mr. Robert Blama, Ms Danielle Szimanski, co-project managers; Mr. Jeff Price, Corps Inspector.