

ANCIL TAYLOR

SUBJECT MATTER EXPERT in DREDGING and Related MARINE ISSUES

EDUCATION / TRAINING

BS, Construction Management, 1978, University of Southern Mississippi, Hattiesburg, MS.

Continued Research and Development in The Netherlands to enhance dredging science and technology. 1978 - 2007

REGISTRATIONS / CERTIFICATIONS / PATENTS

Patent(s)

<https://patentimages.storage.googleapis.com/55/70/43/5c7d06d756bd44/US20020195400A1.pdf> &

<https://patentimages.storage.googleapis.com/0b/6e/d9/e881690544ba41/US6860989.pdf>

Slurry Processing Unit(s)

YEARS OF EXPERIENCE

Total: 46

SUMMARY

Mr. Taylor has more than forty-six (46) years of direct experience in the field of marine dredging and related marine issues. His experience includes numerous coastal restoration projects along the Gulf, East, and West coasts of the United States as well as large inland lakes and reservoirs.

Mr. Taylor has also been involved in the maintenance as well as expansion of this nation's ports through the deepening and widening of many of the offshore entrance channels and navigation channels along all coasts of the United States. In addition to the primary mission of enhancing navigation, the Beneficial Use of dredged material was a primary goal of Mr. Taylor's.

As President of Bean Environmental, Mr. Taylor led one of the most technically progressive and innovative marine dredging remediation companies in the United States. He has studied and developed science in the transportation of dredge slurries in addition to many aspects of the dredge production process. As the inventor of a significant technology breakthrough in slurry transportation, he holds patents for the development and implementation of the Slurry Processing Unit, SPU.

Mr. Taylor has served as the Chairman of the Board of the Western Dredging Association, WEDA. WEDA is the largest of three divisions of the World Dredging Association, WODA. Mr. Taylor also served as Chairman of the World Dredging Congress, WODCON. He has been consulted in various dredging sciences by the Marine Board of the National Academy of Science. Mr. Taylor was recognized and honored by his peers in 2011 by receiving the "Dredger of the Year" award for the western hemisphere as testimony to his outstanding and remarkable achievements in the dredging industry.

Mr. Taylor is currently serving as the Managing Partner of Ancil Taylor Dredging Consulting, LLC.

His role as a consultant includes clients that require a more thorough understanding of dredging project applications. Clients include a broad spectrum of both private and public stakeholders in dredging. Numerous large and small engineering firms are beneficiaries of Mr. Taylor's broad experience. Developing projects for long distance slurry transportation is a major area of focus in recent years.

Mr. Taylor serves as an expert and specialist in dredge project characterizations, developing solutions for complicated and sensitive dredging applications and performing constructability reviews. His four + decades of experience in connecting the most challenging dredging



requirements with science based practical solutions has resulted in a list of very successful projects for his clients. He identifies project needs and develops specific dredge equipment requirements to meet those needs.

RELEVANT EXPERIENCE

Dredging

Mr. Taylor entered the field of dredging after graduating from the University of Southern Mississippi in 1978. Initially, his assignments involved project layout and field engineering for various types of dredging projects.

Within a couple of years, he was chosen to be the recipient of a comprehensive training investment into the science of dredging in The Netherlands. Mr. Taylor was transferred and assigned to the Research and Development Department of the largest dredging company in the world at that time, Volker Stevin of Rotterdam. His focus of training and education included the transportation of dredge slurries, production optimization including dredge automation. Upon his return to the United States in the early 1980's, he began building a Production Engineering department in the Bean Dredging organization. That department was soon to become known as "cutting edge" in the United States dredging industry. Mr. Taylor designed and implemented the automation for the first fully automated cutter suction dredge in the United States in 1984. With hundreds of actual dredging projects in his portfolio, he now has experience with virtually every type of dredging application.

Mr. Taylor currently serves as a subject matter expert on a broad range dredging related issues providing in-depth design and constructability reviews for his clients. He is recognized as an expert in the field of dredging by the United States Court of Claims in Washington DC.

One of the primary services that Mr. Taylor provides is constructability reviews, project development oversight and value engineering to ensure the project's maximum value is available to his clients. See the reference from one of his clients:

"Mr. Taylor's adeptness at navigating the complexities of incomplete data sets was instrumental in guiding our VE Study to fruition. He possesses a rare and invaluable ability to fill informational voids with his vast experience from his rich and storied background. This skill was especially crucial in times when our project data was less than complete, yet progress was imperative." - Jeff Rude RHA'LLC's Value Team Leader

Dredge Types

Mr. Taylor's direct hands-on experience includes numerous dredge types:

1. Medium and large trailing suction hopper dredges (TSHD) in all phases of operation, including pump-off,
 2. Cutterhead suction dredges (CSD) ranging in size from 8-inch to 32-inch pipeline diameter,
 3. Small auger head (AU) dredges,
 4. Plain suction dredges (PS),
 5. Dustpan dredges for both inland river applications as well as ocean going offshore operations,
 6. Clamshell (wireline) bucket dredges (CL) along with barge transport operations,
 7. Marine excavators, barge mounted stationary backhoe (BH),
 8. Barge unloaders in both hydraulic and mechanical mode of operation,
 9. Hybrid combinations of dredge types including mechanical dredging and hydraulic transportation, (see patents above.)
 10. Environmental dredging applications associated with handling sensitive impacted sediments.
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Project Types

Dredge Construction Projects

32" CSD *General MacArthur*

Mr. Taylor developed the Production Systems Design and ensured delivery of the equipment capabilities during the vessel's commissioning of a 32-inch diesel electric cutter suction dredge, CSD, *General MacArthur* with over 24,000 installed horsepower. Construction was completed in late 2020. The dredge is USCG certified, suitable for all oceans.

30" Dustpan Dredge *Pawnee II* for Loup Power- Nebraska

Mr. Taylor was asked to determine the most appropriate equipment needs to maintain a distributary channel providing water for a hydro-electric power plant near Columbus, Nebraska. Mr. Taylor developed the production systems design for this electric dredge. Once the dredging equipment production specifications were determined, contract documents were prepared to receive bids for dredge construction and delivery. Contract procurement led to the successful delivery of a new dredge to the client and Mr. Taylor provided training for the client on their new dredge.

30" Dustpan Dredge *Beachbuilder*

Mr. Taylor designed the production systems necessary to ensure the maximum production capacity of the offshore dustpan dredge, *Beachbuilder*. Constructed in 1992, the *Beachbuilder* was responsible for successfully constructing or rebuilding numerous coastal restoration features on the Gulf and East Coasts of the United States. Mr. Taylor was responsible for ensuring the production capacity designed into the dredge was achieved through the commissioning phase of construction. Mr. Taylor executed the training operations for this sophisticated offshore dustpan. The dredge was later reconfigured into a cutter suction dredge and renamed the *Ohio* in 2009 for work in the Middle East.

30" CSD *Meridian*

Mr. Taylor developed the Production Systems Design and ensured delivery of production systems' capabilities during the vessel's commissioning. The CSD, *Meridian*, included over 14,000 horsepower. Construction was completed in early 1996. The dredge was renamed as the *EW Ellefsen* in 2008. The dredge is USCG certified, suitable for all oceans.

Specialty Dredge, *Twin Lakes*, Port of Santa Cruz, Santa Cruz Harbor, California

Mr. Taylor was asked to assist the Port of Santa Cruz in determining their dredging equipment needs to provide navigation maintenance dredging for the Port. After evaluating and establishing the most appropriate needs, specifications and contract documents were prepared to receive offers for the dredge construction. Mr. Taylor provided the owner representation during construction and assisted in the successful delivery of the new dredge. Mr. Taylor also provided the training and development needs of the Port's personnel.

San Carlos Irrigation and Drainage District, Arizona

GEI Consultants retained Mr. Taylor as a sub-consultant to assist them with the dredge equipment construction, delivery, testing and training on a large irrigation project in Arizona.

Mr. Taylor's project portfolio includes maintenance and new work (capital) dredging of this nation's ports and waterways ranging from deep draft to shallow draft. With his primary residence in the southern states during his career, his dredging experience across the Gulf Coast has provided him with an understanding of the issues associated with dredging related challenges available to very few people. The Mississippi River, as this nation's largest conduit of sediment and cargo tonnage, is one of Mr. Taylor's primary work areas over the recent decades.

Working with stakeholders, private and public, to identify opportunities to beneficially use dredge material is a specialty of Mr. Taylor. He has worked closely with the states of Louisiana, Texas, and Mississippi to strategically and synergistically identify and seize upon opportunities to beneficially use dredged material.

Coastal restoration, land creation and marsh habitat development has been a centerpiece for Mr. Taylor for more than 35 years. Whether it involves mining sediment from the Mississippi River or its distributaries or from offshore deposits along the gulf and east coasts of the United States, his experience covers the entire spectrum of mining sediments for creating land. Mr. Taylor also helped to design a project and construct a dredge to create the Behren's Trench across the Great Salt Lake. <https://epod.usra.edu/blog/2014/06/behrens-trench.html> This project involved the excavation and removal of a 2–3-meter layer of dense salt lying above lake sediments. The trench was excavated successfully to allow a plume of brine to traverse the lake bottom from west to east.

Emergency Berms in response to the BP Oil Spill – State of Louisiana

The State of Louisiana retained Mr. Taylor to assist the Shaw Group in designing, executing and monitoring the \$360,000,000 emergency berm construction project in 2010. Mr. Taylor worked with the large dredging fleet from around the nation to expeditiously deploy an unprecedented emergency response of more than 300 vessels and 700 individuals. <https://www.waterwaysjournal.net/2010/08/16/ancil-taylor-heads-sand-boom-dredging-effort-to-protect-gulf-coast-from-deepwater-horizon-oil/>

Sediment Transport

Transportation of dredge sediments is a specialty of Mr. Taylor's. His thorough understanding of the science of dredged sediment transport refined by decades of hands-on practice provides his clients with unprecedented access to real-world experience. Mr. Taylor helped to pioneer the transportation of sediments over long pipeline distances. His development of the transportation science, dredge and booster automation, and dredge pipeline dynamics associated with pressure and flow opened many new opportunities for executing many projects around the nation.

Predicting dredge and slurry transport performance and production is critical to properly designing dredge projects. His patented technology for slurry transport and dredge automation yields significant savings in many slurry transport applications.

Project Types

Mr. Taylor's experience over the last four + decades includes thorough site characterizations for the purpose of optimizing project design. The science of matching dredging equipment performance and cost efficiency of a project delivery can be complex. Mr. Taylor's training in this science early in his career provided opportunities to work

with clients in the design phase to help ensure maximum cost efficiency. Project site characterization must include geotechnical investigations that are relevant to the equipment anticipated to perform the work.

Mr. Taylor's projects over the years have included the expansion of large and medium-size ports across the USA. The expansion and deepening of the Port of New York and New Jersey involved approximately \$500 million of dredging, blasting, and placement of material at sea. The removal and transportation of over-burden sediments that were unsuitable for ocean disposal required special handling. The projects were completed on time and on budget.

Mr. Taylor's projects include the creation, restoration, and renourishment of numerous beaches in coastal communities along all coasts of the US. These projects have involved many different types of dredges, cutter suction (CSD), hopper (TSHD), dustpan (DP), as well as hybrid dredges where both mechanical and hydraulic properties are combined.

Mr. Taylor is currently the managing partner of Ancil Taylor Dredging Consulting, LLC, and works extensively with Owners to help ensure their dredging project is designed in a way that is attractive to the bidding market. Mr. Taylor is currently working with Port Houston Authority in Texas with their \$1 billion + Project 11 to expand and modernize the Port. Mr. Taylor's broad experience in both the technical and operational aspects of dredging combined with the commercial disciplines of the business provides a unique depth of understanding in the dredging market.

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