

## William (Bill) J. Gerken, PE

Senior Coastal Engineer / Project Manager

### KEY FEATURES

#### REMOVE IF NOT USED

List 3 to 5 items; Examples:

Years of experience

Number of similar projects  
(Relevance List)

### EDUCATION

BS, Ocean Engineering,  
Texas A&M University,  
College Station, 1993

### REGISTRATION

Washington, Civil, 34802,  
1998

### CERTIFICATIONS

40-hr HAZWOPER

8-hr HAZWOPER Supervisor

30-hr OSHA Construction  
Safety

### AFFILIATIONS

Western Dredging  
Association

American Society of Civil  
Engineers (ASCE) / Coasts,  
Oceans, Ports & Rivers  
Institute

Society of American Military  
Engineers (SAME)

### EXPERIENCE

Mr. Gerken is a senior coastal/civil engineer, with over 28 years of experience, specializing in coastal and marine design and construction. His experience covers all project phases including project management, planning, permitting, coastal processes, facility design, cost estimating, construction oversight, and site and fabrication inspection. Mr. Gerken's experience, gained through both consultant and contractor perspectives, has given him a unique understanding of marine and coastal conditions, along with the experience of interacting with clients, government agencies, and the public planning process.

Mr. Gerken has spent extensive time working in the field, both internationally and throughout the coastal United States, including Alaska. His field experience covers a variety of activities: dredging, pile driving and marine construction; breakwaters and shore protection; bathymetric and topographic surveys, contaminated sediment dredging, and capping; geotechnical sampling and investigation; project planning, project supervision and construction management.

### REPRESENTATIVE PROJECT EXPERIENCE

#### **Elliot Bay Marina Floating Breakwater Replacement, Seattle, Washington.**

Project manager for replacement of a 1,090-foot-long x 14-foot-wide floating breakwater which protects the eastern side of a 1,200-slip marina basin. The floating breakwater has 27 finger floats providing 56 vessel slips along its western (marina) side and yacht moorage along the eastern side. The new breakwater will include upgraded electrical services, water, and fire system. Work includes, permitting, design, production of drawings and performance specification, coordination with suppliers and contractors, and construction support. 9894

#### **Coos Bay Channel Modifications Project (Section 204(f)/408), Coos Bay, Oregon.**

Senior coastal engineer providing technical review of project memoranda and reports, technical lead for the preparation of design plans and specifications, and senior review of constructability, cost and schedule. As a sub consultant for the Project Delivery Team, Moffatt & Nichol is completing coastal engineering for the Section 204 (f)/408 navigation improvements. The proposed project involves navigation channel widening and deepening, jetty modification and relocation of aids to navigation, in order to accommodate a wider variety of vessels, including larger LNG vessels than currently feasible, and larger bulk and breakbulk carrier ships. Moffatt & Nichol is preparing the marine and coastal engineering studies and analyses, including: design parameters for site environmental conditions, channel and dredging parameters; dredge material placement, alternatives analysis, estimates of construction costs, and preparation of construction documents. 9342

#### **Engineering and Design Support for Major Marine Industrial Development, Southern Oregon Coast. Confidential Client(s).**

Project manager for work including Dredge Material Management Plan modifications. Preliminary design constructability analysis for potential mitigation sites. Analysis including numeric modeling for site hydrodynamics, sediment transport, vessel wake impacts, prop wash, impacts to pile dikes, turbidity, vessel cooling water discharge, impacts to salinity, and impacts to navigation. 9248-04



**Elliott Bay Seawall, Seattle, Washington.** Senior coastal engineer providing constructability and coastal design review for the proposed intertidal habitat bench, coordinated with project team of an adjacent City of Seattle project in order to integrate design details. Moffatt & Nichol is supporting the City of Seattle with elements of final design for the replacement of 7,000 feet of the Elliott Bay seawall on the Seattle waterfront. Moffatt & Nichol is responsible for coastal design expertise and structural design loads for the seawall structure and appurtenances and for the coastal geomorphic and engineering analysis supporting the associated habitat features of new beach and intertidal bench sites constructed to mitigate for the project. 7790-04

**Experience – Prior to Moffatt & Nichol**

**NAVELENA Consorcio Constructor, Magdalena River Navigability Recuperation Improvements Project, Rio Magdalena, Colombia.** Dredge plan technical lead for a design build team led by the NAVELENA consortium. The consultant team provided design services for the Magdalena River Navigability Recuperation Improvements project during the pre-construction and design phases. The project is focused on a 908 km portion of the Magdalena River in Colombia with the primary purpose to improve the river's navigability. To improve river navigation, the project includes development of a dredging plan to establish and maintain a permanent navigation channel as well as the design of river training structures to create natural scour of sediments to assist in maintaining navigable depths. The project is a Colombian government initiative through the national agency (Cormagdalena) in charge of Rio Magdalena Watershed Management. Multiple international consultant offices formed the coordinated design team, with the U.S. responsible for the dredging plan and the hydrologic-hydraulic modeling of the river. Colombia responsible for the fluvial dynamic design of the river, and Spain responsible for the geological-geotechnical portion of the project and structure design. (2015 – 2016)

**U.S. Navy, Midway Island Old Bulky Waste Landfill Shore Protection Repair/Replacement, Midway Atoll.** Technical lead and design engineer for the development and design for repair/replacement of shoreline protection for the U.S. Navy's Old Bulky Waste Landfill. The landfill is a peninsula located on the south side of Sand Island (Midway Atoll). The project involved site inspection and survey (topographic and bathymetric), numeric modeling to determine design wave conditions, design development, cost estimating, constructability analysis, and production of plans and specifications. Midway Atoll is a remote location managed by the U.S. Fish and Wildlife service as part of the Papahānaumokuākea Marine National Refuge. The remote location and nature of the project location created additional logistic permitting and cost challenges that needed to be considered in design. (2014 – 2016)

**U.S. Army Corps of Engineers Portland District, Major Maintenance Reports (MMR) and NEPA Environmental Assessments (EA) for Sand Island and Cottonwood Island Pile Dike Systems, Portland, Oregon.** Coastal engineering, cost, constructability, technical lead/review and project management for two MMRs for pile dike systems (PDS) in the tidally influenced Lower Columbia River. In each PDS study, repair/design alternatives were developed and evaluated with respect to system function over a 50-year life cycle. A preferred alternative recommended based on benefit/cost factors, including environmental issues. Long-term strategy for future repair requirements was developed. Work included structural and performance evaluation of the PDS, detailed hydrographic surveys, analysis of currents, sediment transport and shoreline impacts through engineering analyses and numerical modeling techniques, and life cycle cost analysis. For each PDS, the team prepared documentation that combined and integrated the MMR and National Environmental Policy Act (NEPA) EA processes. This work built on prior work as



documented in the Structural and Hydraulic Analysis of Columbia River Pile Dikes Final Report (USACE, 2011) and subsequent Final Field Investigation Results Report. (2014 – 2016)

**Port of San Francisco, Crane Cove Park Master Plan and Design, San Francisco, California.** Coastal engineering technical lead for the Port of San Francisco Crane Cove Park Design. Crane Cove Park is an 8-acre waterfront open space within the historic Pier 70 industrial district on San Francisco Bay. The project included design services for creation of a pocket beach, shore protection, armored contaminated sediment cap, pier extension(s) and sea level rise impact analysis. (2013 – 2016)

**California State Lands Commission and C.S. Land, Inc., Selby Slag Former Smelter Site Remedial Design.** Senior coastal engineer who provided coastal engineering, cost, constructability, and technical lead/review services for evaluation of site coastal conditions, development of remedial alternatives and remedial design. The Selby Site is the location of a former metal smelter located on the San Francisco Bay covering an area of approximately 66 acres including over 5,000 feet of shoreline. Site environmental issues include lead, copper, arsenic and other heavy metals-impacted soils and groundwater, presence of smelter slag throughout the site and nearshore environment extending into the Bay. (2013 – 2016)

**BC Ministry of Forests, Lands and Natural Resource Operations, Toquaht Bay Campground and Marina Remediation Planning, Barkley Sound, British Columbia, Canada.** Coastal engineering technical lead for site evaluation, coastal design, cost and constructability for development of remedial options. The Province of British Columbia, Ministry of Forests, Lands, and Natural Resource Operations is under obligation to remediate the upland, intertidal bank and sediments of a former mine tailings site located in Barkley Sound Canada as part of a first nations treaty. This wild lands, complex, abandoned mine tailings site, owned by the Toquaht Nation, was used as a campground and marina until ordered closed by the Medical officer of Health due to the presence of elevated arsenic and iron concentrations. Potential remediation options including dredging, insitu stabilization, exsitu treatment, capping, enhanced natural recovery, and monitored natural recovery were explored. Work included a site visit to assess conditions, development of a wave, current, and sediment transport/littoral drift model and report, and assistance in constructability and cost evaluation of potential remedial actions. (2013 – 2016)

**California Metropolitan Transportation Commission (MTC) and San Francisco Bay Conservation and Development Commission (BCDC), Climate Change and Extreme Weather Adaptation Options Pilot Project for Transportation Assets in the Bay Area, Oakland, California.** Senior coastal engineer who provided coastal engineering, constructability, and costing services to support identification of vulnerable assets in the Oakland area, and to develop potential adaptation strategies to protect critical assets as part of a detailed analysis of potential inundation under several sea level rise scenarios. These strategies included an offshore breakwater, to protect a site near the Bay Bridge from increased wave overtopping, and two living levees. Using detailed wave and water level data, Oversaw development of the preliminary designs for the offshore breakwater and living levees. In addition to flood protection, the levees were also designed to enhance the intertidal marsh habitat in the Bay. The project received a 2015 APA Award of Excellence in the category of Best Practices. (2013 – 2015)

**Port of Seattle, Terminal 117 Sediments Remediation, Seattle, Washington.** Dredging engineer who provided design and constructability planning for dredging and disposal of 10,000 cubic yards of impacted sediments. Provided technical and oversight assistance during in-water construction. Terminal 117 is a CERCLA time-critical removal action for PCB impacted soil at a former asphalt plant site within the



Lower Duwamish Waterway Superfund site. The removal action included sediment and soil removal, capping/backfill, intertidal habitat restoration enhancement, and public access. (2012 – 2015)

**Companhia Siderurgica Nacional (CSN) Brazil, Volta Redonda Plant, Remediation/Capping of Contaminated River Sediments at RP15, Volta Redonda, Brazil.** Project manager and lead engineer who provided project management and design services for this contaminated sediment capping project in a fast-flowing river over petroleum-contaminated sediment with sheening and gas bubbles. The project required multi-phase design and installation of an innovative modular geotextile armored sediment cap in a river environment with very high design flow velocities and challenging construction conditions. Provided management and coordination of design and construction services between U.S. and Brazilian offices. In addition to its technical challenges, the project was implemented within tight budget, schedule, and scope constraints. (2012 – 2014)

**BG Group, Sediment Sampling and Analysis Program and Dredging Alternatives Analysis for Berthing Facilities at a Potential New Liquefied Natural Gas Terminal, Prince Rupert, British Columbia, Canada.** Dredge engineering lead who provided planning, engineering, and technical review services for development of a Sediment Sampling and Analysis Plan in support of permitting and development of offshore dredge material disposal alternatives. Work was completed under a highly constrained schedule driven by need to complete sampling prior to fall weather conditions. Also provided engineering and cost estimation for the project Dredging and Disposal Alternatives Analysis. (2013 – 2014)

**U.S. Navy, Naval Magazine Indian Island Site 10 Landfill Shoreline Protection, Indian Island, Washington.** Technical lead and project engineer for repair/replacement design of the shoreline protection system(s) at Naval Magazine Indian Island Site 10 Landfill. The landfill lies along the northern shoreline of Indian Island with exposure to waves and associated erosion. Previous shore protection systems had failed and/or not met performance expectations. The new design provided long term protection of the land fill while implementing green and sustainable habitat components. (2012 – 2013)

**Confidential Client(s), Passaic River and Newark Bay Multi-beam Bathymetric Surveys.** Survey oversight officer who provided QA/QC services and oversight for three multi-beam and single beam hydrographic survey efforts of 14 miles of the Passaic River. The surveys were conducted as part of ongoing studies to assess the stability of the river bottom sediments. The second survey effort was undertaken following passage of Hurricane Irene in August of 2011 which provided a unique opportunity to characterize the potential effects of a large storm event on the study area. Also provided QA/QC services and oversight for a multi-beam and single beam hydrographic survey of Newark Bay. (2011 – 2013)

**U.S. Army Corps of Engineers Portland District, Coquille River Pile Dike and Jetty Root Assessment and 90% Design, Bandon, Oregon.** Coastal engineering and technical lead in support of the U.S. Army Corps of Engineers Portland District jetty and structures monitoring, dredging and navigation programs. Provided project management, coastal engineering and design for an engineering assessment and repair report— including design for the jetty root, L-shaped pile dike, and navigation aids at the Coquille River mouth in Bandon, Oregon. Tasks included a condition and structural evaluation, function and needs assessment, alternatives analysis with selection of a preferred alternative, design, production of 90% level plans and specifications, and a construction cost estimate. (2011 – 2012)



**U.S. Army Corps of Engineers Portland District, Siuslaw River Jetties Major Maintenance Report, Florence, Oregon.** Coastal engineering technical lead in support of the U.S. Army Corps of Engineers Portland District jetty and structures monitoring, dredging and navigation programs. Provided QA/QC, design and technical review for a Major Maintenance Report (MMR) for the Siuslaw River jetties. The MMR included structural evaluation of the jetties above and below water level, a wave and current analysis, and a sediment transport analysis using engineering analyses and numerical modeling techniques to evaluate project performance and adjacent shoreline issues. The MMR included a detailed evaluation of project performance over time, and a comprehensive discussion on recommended project repairs required to sustain usage levels. Several repair/design alternatives were developed and evaluated and a preferred alternative was recommended based on benefit/cost factors that include environmental issues and life cycle cost analysis. (2011 - 2012)

**Jazan Economic City, South Breakwater Need Assessment, Jazan Economic City, Saudi Arabia.** Provided review of design and numerical modeling performed for an expanded/new port for Jazan Economic City. Focus was on the need for and benefits of a southern breakwater for the facility. Participated in consultant meetings with the client, a major stakeholder and their engineers, to resolve differing views with supporting engineering results related to need for the southern breakwater. (2012)

**The Boeing Co., Boeing Plant 2 Shoreline and Sediment Remediation Independent Design Review, Seattle, Washington.** Provided peer review services for Boeing's dredging and shoreline remediation and habitat restoration project at their Plant 2 site on the Duwamish Waterway in Seattle, Washington. Reviewed design documents and work plans, participated in peer review panel working sessions, participated in the completion and presentation of findings, and responded to follow on questions. (2011- 2012)

**U.S. Navy, Shine Tidelands State Park Proposed Restoration, Jefferson County, Washington.** Coastal and civil engineer for the proposed Shine Tidelands State Park Restoration project, part of the mitigation program for capital construction at the Bangor Naval Base. Shine Tidelands State Park is a barrier beach feature with a berm between the wetland/lagoon and Puget Sound preventing any significant exchange of tidal waters. Restoration design work included the removal of the berm, roadway fill and riprap, and creation of a tidal channel to fully restore tidal flow. Restoration was designed to increase the size of the wetland and intertidal beach, enhance and increase the tidal marsh function, and enhance the terrestrial interface with the restored wetland by removing invasive plant species. (2012)

**GenOn Energy, Inc., Mandalay Power Plant Canal Dredging Alternatives Analysis, Oxnard, California.** Dredging engineer whose responsibilities included alternatives exploration and feasibility analysis for removal and disposal of mildly contaminated sediments from approximately two miles of open canal. Project included evaluation of various means and methods of dredging, de-watering, and disposing of material, project and lifecycle costs, and potential regulatory issues. Work also included exploration of BMP's to potentially limit sedimentation due to run-off from adjacent agricultural lands. (2011 - 2012)

**Port of Longview, Berth 5 Mooring Dolphin, Longview, Washington.** Project manager for permitting, design, bidding services, and construction administration for a new ship-mooring dolphin located between Berths 4 and 5 at the Port of Longview. The dolphin is designed to accommodate the mooring of Panamax-size vessels at either berth or both berths simultaneously. The project also included access via a catwalk from Berth 5. (2009 - 2011)



**Dakota Creek Industries, Dakota Creek Shipyard Remediation and Redevelopment, Anacortes, Washington.** Project manager who led the design team and provided coastal engineering, construction engineering and QA/QC services for this redevelopment of Dakota Creek Industries shipyard. The project included creation of two deep water berths, new bulkheads and piers, utilities, stormwater, and dredging of approx. 130,000 cubic yards of material, of which 23,000 cubic yards was unsuitable for open water disposal and disposed of uplands. Also provided engineering and design assistance for the environmental impact statement, public process, and permitting of this project, which was completed in 2010. The project won a 2010 American Society of Civil Engineers (ASCE) Honor Award. (2005 – 2010)

**Heavy Duty Debris Barrier System for Highland Bridge Replacement, Highland, New Jersey.** Project engineer who provided engineering design services for the Gunderboom-led team tasked with development and design of a pile anchored full depth containment boom utilized during replacement of the Highland bridge in Highland, New Jersey. Barrier system was designed for use in a strong current regime and to be re locatable/re-usable. (2010)

**Facility Condition Inspection Services at U.W. Friday Harbor Labs, Friday Harbor, Washington.** Project manager who led facility condition inspection at Friday Harbor Labs for the University of Washington Capital Projects Office. Inspection projects included piers, floating breakwaters, floats, and other in-water and over-water structures, as well as shoreline and seawall assessment. Inspection services included mechanical and electrical services, design for floating breakwaters, and anchor system repair and replacement. (2009 – 2010)

**Electricité de France, Blayais and Paluel Nuclear Power Plant Vegetal Debris Exclusion Studies, France.** Project coastal engineer for Gunderboom-led teams developing feasible solutions for exclusion of vegetal debris sufficient to cause shutdowns from the cooling water intakes at two nuclear power plants in France. Paluel is a four-reactor power plant located on the Normandy coast. Cooling water is drawn through a channel protected by armored breakwaters extending offshore in a heavy wave environment. The proposed solution involved reconfiguration and extension of breakwaters and groins to divert and/or trap algae during varying parts of the tidal cycle. Blayais is a four-reactor power plant on an estuary in the Bordeaux region with offshore intakes located in a high current region with moderate design wave heights. The proposed solution was an enclosure barrier combining solid diversion/end walls and permeable filter walls to allow flow while providing vegetal debris exclusion. (2007 – 2010)

**U.S. Army Corps of Engineers Galveston District, Matagorda Ship Channel VE Study, Matagorda, TX. Coastal and Dredge Engineer.** Selected member of a value engineering team for the U.S. Army Corps of Engineers project “Design Deficiencies at the Matagorda Ship Channel”. Reviewed the Design Deficiency report and planning and design documents. Assisted in development of alternatives and cost estimating, study report, presentations. (2009)

**Port of Kennewick, Clover Island Marina Design, Kennewick, Washington.** Project manager who provided engineering services for the Clover Island Redevelopment master planning team and led the design effort for the Clover Island Marina for the Port of Kennewick. The marina project includes redevelopment of a 150-slip marina (70% covered moorage), transient and boat house moorage, approach pier, gangways, utilities, and additional amenities. Provided engineering, developed performance specifications, and bidding and construction administration assistance. The project received a 2008 AGC Build Washington Award. (2005 – 2008)



**Clover Island (Metz) Marina Condition Assessment, Kennewick, Washington.** Project manager who led a facility condition inspection and report for the Port acquired Clover Island Marina (formerly the Metz Marina) for the Port of Kennewick. Work included a load rating of marina structures as well as maintenance and redevelopment recommendations. Also identified an approximate schedule for planned maintenance and repairs. Based on the results of the inspection, damage sustained in a winter storm, and output from a master planning effort it was determined that the Port's future needs could not be met by the existing marina. (2006)

**City of Oak Harbor, Oak Harbor Marina Redevelopment Master Plan, Preliminary Engineering and Permitting, Oak Harbor, Washington.** Project manager who led a multidisciplinary team that developed the Marina Redevelopment Master Plan for the redevelopment of Oak Harbor's marina. The plan addressed accommodation for larger recreational vessels, evaluation and phased replacement of the marina, and maintenance. Following adoption of this master plan, Mr. Gerken led the team that provided preliminary design and permitting services for redevelopment of the 350-slip marina. The project included surveys, PSDDA sampling and analysis, permitting for 206,000 cubic yards of primarily new work dredging, a reconfigured/expanded slip mix, and development of an acceptable mitigation plan. Final permits for the project were obtained. (2006 - 2008)

**Oak Harbor Municipal Pier Project, Oak Harbor, Washington.** Project manager who provided management, permitting, and design for work that encompassed a large area of new dredging, large fixed piers, floats, a wave barrier, and shoreline enhancement, as well as the development of a creative and viable mitigation plan. The project permitting process included ESA formal consultation by the agencies. Necessary permits were obtained. Final design of project was held at 90%. (2005 - 2006)

**City of Seattle, Luna Park Reconstruction, Seattle, Washington.** Project manager who provided design and construction administration for the renovation/reconstruction of Luna Park near Alki Beach in Seattle for the City of Seattle Parks Department. The project involved replacement of a 100-year-old deteriorated concrete bulkhead and fill that was 100 feet x 90 feet. The new structure is a pile-supported pier that accommodates a large, grassy area and continues to serve as a waterfront park. The project was well received by the community, and provided an environmentally sound solution that helps to restore the shoreline. (2004 - 2005)

**Port of Skagit County, La Conner Marina Maintenance Dredging, La Conner, Washington.** Project engineer who led teams in the permitting, design, and construction monitoring for two maintenance dredging projects at the La Conner Marina's North and South Basins. Permitting efforts included sampling and analysis under the PSDDA protocols. For the second project, a down-ranking of site sediments under PSDDA protocol was achieved along with a 10-year maintenance dredging permit, thus reducing costs at that time and in the future. (2000 - 2006)

**Ketchikan Pulp Company, USEPA, Ward Cove Sediment Remediation Project, Ketchikan, Alaska.** Quality Assurance Oversight Officer who provided QA/QC and technical review services on behalf of the oversight agency (USEPA), and acted as full time on-site third party quality assurance officer on this Superfund project that included dredging of 12,000 cubic yards of material from two berthing areas and thin capping of over 26 acres of bottom sediments with 23,000 cubic yards of clean sand. (2001 - 2002)

**Duwamish Yacht Club, Dredging Project on the Duwamish Waterway, Seattle, Washington.** Project engineer who managed environmental analysis (including PSDDA analysis), permitting, and design for dredging of 24,000 cubic yards of



sediment from the marina. Explored beneficial use of material by the U.S. Army Corps of Engineers on a capping project. (1999)

**Permeable Wave Barrier Research Program, Seattle, Washington.** Project engineer responsible for management of design, fabrication, installation, and analysis of data from pressure and wave measurement equipment on Bell Street Pier in Seattle, Washington. Assisted in coordination of model testing at the Oregon State University, O.H. Hinsdale Wave Research Laboratory, and the U.S. Naval Academy Hydromechanics Laboratory. Assisted in development of revised design methodology. (1996 - 1999)

**Hurlen Construction & Boyer Alaska Barge Lines, Duwamish River Maintenance Dredging, Seattle, Washington.** Project engineer who managed environmental analysis (including PSDDA analysis), permitting, and design for dredging of 23,000 cubic yards of sediment from berthing, staging, and loading area on the Duwamish River in the South Park area of Seattle. (1998)

**San Francisco Airport Authority, International Airport Offshore Runway Concept Study, San Francisco, California.** Project engineer whose work included evaluation of existing offshore soil conditions and concept design for soil improvements and an open-cell sheet pile bulkhead containment system. The proposed \$1.9 billion dollar project included use of prefabricated vertical drains to achieve 100% primary consolidation in less than a year on the 30 to 90 feet of soft Young Bay Mud. Work included static and seismic stability analysis. The proposed construction schedule had to take into account the existing active on nearby runways so constraints were imposed on hours of work, personnel and equipment access, crane heights, and security issues. (1997 - 1998)

**U.S. Oil, Blair Waterway Emergency Dredging, Tacoma, Washington.** Project engineer who provided design and management assistance in the regulatory process to obtain an expedited permit under emergency provisions. In January 1997, U.S. Oil & Refining of Tacoma, Washington suffered a small underwater bank failure at their tanker berthing facility on the Blair Waterway. The slumped material prevented the full utilization of the berth by the large incoming tankers. (1997)

**Port of Anacortes, CapSante Marina/Curtis Wharf, Pier 1/Dakota Creek Industries Dredging Evaluation, Anacortes, Washington.** Project engineer who provided design for environmental analysis (including PSDDA analysis), permitting, and design for dredging of up to 695,000 cubic yards of sediment from all sites for the Port of Anacortes. (1996 - 1997)

**Makah Native American Tribe, Dredging and Mitigation Beach Makah Marina, Neah Bay, Washington.** Project engineer who provided coastal and dredging engineering direction for the design of a new 200-slip marina to accommodate commercial and recreational vessels up to 90 ft. in length. Design included 48,000 cubic yards of dredging and a mitigation plan for placement of material on an adjacent tract of land to form a beach for mitigation purposes. (1996)

**Nygarrd Logging, Tansey Point Log Dock, Warrenton, Oregon.** Designer and resident engineer who provided design and construction administration services for a 500-foot sheetpile bulkhead dock on the Columbia River in Warrenton, Oregon. The dock was constructed using the OPEN CELL<sup>®</sup> concept, with a face approximately 32 feet above mudline. Project was completed on time and within budget, in spite of very wet and windy conditions throughout construction. Also provided inspection, design and oversight services for dock repairs in 2008. (1995 - 1996)

**White Pass and Yukon Railroad, Railroad Dock Project, Skagway, Alaska.** Resident on-site engineer for 50,000 cubic yards of dredging and the construction of 1600 feet of steel pipe pile supported dock. (1995 - 1996)



**Wave Studies for Akutan and Red Dog, Alaska.** Design engineer whose work included instrumentation, data collection, and analysis of data. (1994 - 1996)

**Wave Hindcasts and/or Design of Shoreline Protection, Various Locations.** Design engineer whose project sites included Port MacKenzie, Lena Point, Dutch Harbor, Cold Bay, Valdez, Whittier, and a variety of sites in Alaska, Washington, and Oregon. (1995 - 2005)

**Analysis and/or Design of Partially Penetrating (Permeable) Wave Barriers, Various Locations.** Design engineer whose project sites included Seattle and Blaine Harbor, Washington; Astoria, Oregon; and Whittier and Akutan, Alaska. (1995 - 2005)

**City of St. George, St. George Harbor Rock Dredging Program, St. George Island, Alaska.** Design and resident engineer provided permitting and design services, and acted as resident engineer for a 50,000-cubic-yard rock dredging project on St. George Island in the Bering Sea. Dredging was performed under force account by the client, the City of St. George. The project required close coordination of permitting, funding (State, Corps and private sources), design, procurement, and construction. Work included dock and mooring structure construction and planning, and harbor master building site civil work. (1993 - 1994)

**Great Lakes Dredge and Dock Company.** Field engineer whose responsibilities included most aspects of on-site engineering for a wide variety of dredging and beach nourishment projects requiring a broad range of equipment and methods. Following is a representative list of project locations and types. (1985 - 1990)

Maintenance Dredging (entrance and/or shipping channel)

Columbia River Bar	Brownsville, Texas
Freeport, Texas	Galveston, Texas
Sabine Pass, Texas	Cameron, Louisiana
South Pass, Louisiana	Southwest Pass, Louisiana
Gulfport, Mississippi	Mobile, Alabama
Jacksonville, Florida	Hilton Head, South Carolina
Oregon Inlet, North Carolina	Morehead City, Delaware
Chesapeake Bay	

Maintenance Dredging with Upland Disposal (entrance and/or shipping channel)

Tampa, Florida	Philadelphia, Pennsylvania
Albany (Hudson River), New York	

Beach Nourishment

Miami, Florida	Dania Beach, Florida
Fort Lauderdale, Florida	Virginia Beach, Virginia
Sandy Hook, New Jersey	

Sand Mining

South Amboy, New Jersey

Misc.

Assorted projects in New York Harbor and surrounding area including maintenance and new work dredging, drilling and blasting, excavation and placement of submerged sewer line, and survey work.



## **PUBLICATIONS AND PRESENTATIONS**

William Gerken, Pedro Aronchi, Anne Fitzpatrick, Élide Hulgado, Marcello Batista and Luiz Antonio Escobar, "An Interim Remedy to Contain Sediment Contamination at an Active Steel Mill in Brazil". Battelle 9th International Conference on Remediation of Chlorinated and Recalcitrant Compounds 2014. Battelle 8th International Conference on Remediation and Management of Contaminated Sediments 2015.

Gerken, W.J., D. Kriebel, and C. Sollitt, "Wave Forces on a Vertical Wave Barrier", ASCE Coastal Engineering '98 Conference, Copenhagen, Denmark, 1998.

Gerken, William J. and J. F. Gilman, "Dredging in the Bering Sea, St. George Island 1993-94 Harbor Dredging Project", ASCE Dredging '94 Conference, Orlando, Florida, 1994.

Gerken, William J., "Random Wave Reflection in a Two-dimensional Wave Tank", NSF, 1992.