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PROSPECTUS SUPPLEMENT
(To Prospectus dated December 4, 2009)

2,958,952 Shares



Great Lakes Dredge & Dock Corporation

Common Stock

The selling stockholders named herein may offer and sell from time to time up to 2,958,952 shares of our common stock covered by this prospectus. The selling stockholders will receive all of the proceeds from any sales of their shares. We will not receive any of the proceeds, but we will incur expenses in connection with the offering.

Our registration of the shares of common stock covered by this prospectus does not mean that the selling stockholders will offer or sell any of the shares. The selling stockholders may sell the shares of common stock covered by this prospectus in a number of different ways and at varying prices. We provide more information about how the selling stockholders may sell the shares in the section entitled "Plan of Distribution" beginning on page S-16.

Our common stock is traded on the NASDAQ Global Market under the symbol "GLDD." On December 9, 2009, the last reported sale price of our common stock on the NASDAQ Global Market was \$6.09 per share.

Investing in our common stock involves risks. See "Risk Factors" on page S-2.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is December 10, 2009.

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ABOUT THIS PROSPECTUS SUPPLEMENT

Unless the context otherwise requires, references in this prospectus supplement to "Great Lakes," "we," "our," "us" and similar terms refer to Great Lakes Dredge & Dock Corporation and its subsidiaries.

This prospectus supplement and the accompanying prospectus relate to 2,958,952 shares of our common stock owned by the selling stockholders identified in this prospectus supplement. See "*Selling Stockholders*" in this prospectus supplement. These shares of common stock owned by the selling stockholders are covered by an investor rights agreement, dated as of December 26, 2006, referred to in this prospectus as the "investor rights agreement." Holders of at least a majority of shares of our common stock held by certain former directors and officers of Aldabra Acquisition Corporation have the right to demand registration under the Securities Act of 1933, as amended, of all or any portion of their registrable securities subject to certain amount and time limitations. In order to comply with our obligations under the investor rights agreement, this prospectus supplement and accompanying prospectus are required because the selling stockholders named in this prospectus supplement have exercised the foregoing demand right. You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference therein. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate only as of the date on those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, when making your investment decision. To the extent information in this prospectus supplement regarding this offering by the selling stockholders of our common stock is inconsistent with the accompanying prospectus or any of the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, you should rely on this prospectus supplement. You should also read and consider the information in the documents we have referred you to in the section of the prospectus entitled "*Where You Can Find More Information*."

As the offering for sale of our common stock by the selling stockholders identified in this prospectus does not involve the issuance of any new shares of our common stock, it will not result in a change in the number of our shares of common stock that are outstanding.

RISK FACTORS***Risks Related to Our Business***

We depend on our ability to continue to obtain federal government dredging contracts, and are therefore greatly impacted by the amount of government funding for dredging projects. A reduction in government funding for dredging contracts can materially reduce our revenues and profits.

A substantial portion of our revenue is derived from federal government dredging contracts. Revenues related to contracts with federal agencies or companies operating under contracts with federal agencies and its percentage as a total of dredging revenue for the nine months ended September 30, 2009 and 2008 and the years ended December 31, 2008, 2007 and 2006 were as follows:

	Nine Months Ended September 30,		Year Ended December 31,		
	2009	2008	2008	2007	2006
Federal government dredging revenue (in US \$1,000)	\$ 231,536	\$ 199,150	\$ 285,183	\$ 186,694	\$ 156,348
Percent of dredging revenue from federal government	55%	60%	59%	42%	41%

Therefore, a reduction in government funding for dredging contracts can materially reduce our revenues and profits.

If we are unable, in the future, to obtain bonding or letters of credit for our dredging contracts, our ability to obtain future dredging contracts will be limited, thereby adversely affecting our business.

We, like all dredging service providers, are generally required to post bonds in connection with our domestic dredging contracts or letters of credit with our foreign dredging contracts to ensure job completion if we fail to finish a project. We have entered into a bonding agreement with Travelers Casualty and Surety Company of America, referred to in this prospectus supplement as "Travelers," pursuant to which Travelers acts as surety, issues bid bonds, performance bonds and payment bonds, and obligates itself upon other contracts of guaranty required by us in the day-to-day operations of our dredging business. However, Travelers is not obligated under the bonding agreement to issue future bonds for us. With respect to our foreign dredging business, we generally obtain letters of credit under our senior credit facility and a separate facility which is supported by the Export-Import Bank of the United States, referred to in this prospectus supplement as "Ex-Im," under Ex-Im's Working Capital Guarantee Program. However, the amount of letters of credit under these facilities is limited. In addition, access to the senior credit facility and the Ex-Im facility may be limited by failure to meet certain financial requirements or other defined requirements. If we were unable to obtain bonds or letters of credit, our ability to take on future work would be severely limited.

Our business is subject to significant operating risks and hazards that could result in damage or destruction to persons or property, which could result in losses or liabilities to us.

The dredging and demolition businesses are generally subject to a number of risks and hazards, including environmental hazards, industrial accidents, encountering unusual or unexpected geological formations, cave-ins below water levels, collisions, disruption of transportation services and flooding. These risks could result in damage to, or destruction of, dredges, transportation vessels, other maritime structures and buildings, and could also result in personal injury, environmental damage, performance delays, monetary losses or legal liability to third parties.

We are subject to risks related to our international operations.

Revenue from foreign contracts and its percentage to total dredging revenue for the nine months ended September 30, 2009 and 2008 and the years ended December 31, 2008, 2007 and 2006 is as follows:

	Nine Months Ended September 30,		Year Ended December 31,		
	2009	2008	2008	2007	2006
Foreign dredging revenue (in US \$1,000)	\$ 115,040	\$ 118,959	\$ 172,345	\$ 140,468	\$ 86,039
Percent of dredging revenue from foreign contracts	27%	36%	36%	32%	23%

International operations subject us to additional potential risks, including:

- uncertainties concerning import and export license requirements, tariffs and other trade barriers;
- reduced Middle Eastern demand as a result of fluctuations in the price of oil, the region's primary export;
- restrictions on repatriating foreign profits back to the United States;
- changes in foreign laws, policies and regulatory requirements;
- difficulties in staffing and managing international operations;
- taxation issues;
- greater difficulty in accounts receivable collection and longer collection periods;
- compliance with the U.S. Foreign Corrupt Practices Act;
- difficulty in enforcing our contractual rights;
- currency fluctuations; and
- political, cultural and economic uncertainties, including acts of terrorism.

The work currently performed internationally is primarily with one customer.

Revenue from contracts with the government of Bahrain and entities with which it does business and its percentage to total foreign dredging revenue for the nine months ended September 30, 2009 and 2008 and the years ended December 31, 2008, 2007 and 2006 is as follows:

	Nine Months Ended September 30,		Year Ended December 31,		
	2009	2008	2008	2007	2006
Bahrain government dredging revenue (in US \$1,000)	\$ 106,558	\$ 111,687	\$ 161,254	\$ 106,119	\$ 78,183
Percent of foreign dredging revenue from the Bahrain government	93%	94%	94%	76%	91%

Revenue from foreign projects over the last three years has been concentrated in Bahrain and primarily with the government of Bahrain. The recent decline in oil prices and contraction in the Middle East real estate market has slowed the rate of the region's infrastructure development. For example, the downturn has impacted the scope of our Diyar land reclamation project. In the first quarter of 2009, part of the contracted backlog became an option that the customer may or may not award. In addition, the renegotiated contract provides longer payment terms. As a result of these

factors, we expect revenue from this customer to decline, and if the government of Bahrain further curtails its infrastructure investment or diversifies its use of dredging vendors, our revenue from this customer could decline further.

The amount of our estimated backlog is subject to change and not necessarily indicative of future revenues.

Our dredging contract backlog represents our estimate of the revenues that we will realize under the portion of the contracts remaining to be performed based upon estimates relating to, among other things, the time required to mobilize the necessary assets to and from the project site, as well as the amount and type of material to be dredged. However, these estimates are necessarily subject to fluctuations based upon the amount and type of material that actually must be dredged. Because of these factors, as well as factors affecting the time required to complete each job, backlog is not necessarily indicative of future revenues or profitability. In addition, a significant amount of our dredging backlog relates to federal government contracts, which can be canceled at any time without penalty, subject to our right, in some cases, to recover our actual committed costs and profit on work performed up to the date of cancellation.

Below is our dredging backlog from federal government contracts as of September 30, 2009 and 2008 and December 31, 2008, 2007 and 2006 and the percentage of those contracts to total backlog as of the same period.

	Nine Months Ended September 30,		Year Ended December 31,		
	2009	2008	2008	2007	2006
Government contracts in backlog (in US \$1,000)	\$ 307,650	\$ 453,230	\$ 180,002	\$ 212,313	\$ 75,315
Percent of government contracts to total backlog	77%	47%	43%	66%	21%

Our profitability is subject to inherent risks because of the fixed-price nature of most of our contracts.

Substantially all of our contracts with our customers are fixed-price contracts. Under a fixed-price contract, the customer agrees to pay a specified price for our performance. Fixed-price contracts carry inherent risks, including risks of losses from underestimating costs, operational difficulties and other changes that may occur over the contract period. One of the most significant factors affecting the profitability of a dredging project is the weather at the project site. Inclement or hazardous weather conditions that exceed our estimates can result in substantial delays in dredging and additional contract expenses. Due to these factors, it is possible that we will not be able to perform our obligations under fixed-price contracts without incurring additional expenses. If we were to significantly underestimate the costs on one or more significant contracts, the resulting losses could have a material adverse effect on our business, operating results, cash flows or financial condition.

Our business could suffer in the event of a work stoppage by our unionized labor force.

We are a party to numerous collective bargaining agreements in the U.S. that govern our relationships with our unionized hourly workforce. Specifically, four primary agreements apply to approximately 84% of these employees. Our two contracts with Local 25 Operators Union for the northern and southern regions, representing approximately 51% of our unionized workforce expired in September 2009. A new contract has been negotiated and was ratified in December 2009 by the Local 25 Operators Union. The inability to successfully renegotiate contracts with these unions as they expire, any future strikes, employee slowdowns or similar actions by one or more unions could have a material adverse effect on our ability to operate our business.

Our business would be adversely affected if we failed to comply with the Jones Act provisions on coastwise trade, or if those provisions were modified or repealed.

We are subject to Section 27 of the Merchant Marine Act of 1920, referred to in this prospectus supplement as the "Jones Act," and other federal laws that restrict dredging in U.S. waters and maritime transportation between points in the United States to vessels operating under the U.S. flag, built in the United States, at least 75% owned and operated by U.S. citizens and manned by U.S. crews. Compliance with these laws increases our operating costs in comparison to non-U.S. dredging operations. We are responsible for monitoring the ownership of our common stock to ensure our compliance with these laws. If we do not comply with these restrictions, we would be prohibited from operating our vessels in the U.S. market, and under certain circumstances we would be deemed to have undertaken an unapproved foreign transfer, resulting in severe penalties, including permanent loss of U.S. dredging rights for our vessels, fines or forfeiture of the vessels.

In the past, interest groups have lobbied Congress to modify or repeal the Jones Act to facilitate foreign flag competition for trades and cargoes currently reserved for U.S. flag vessels under the Jones Act. We believe that continued efforts may be made to modify or repeal the Jones Act laws currently benefiting U.S. flag vessels. If these efforts are successful, it could result in significantly increased competition and have a material adverse effect on our business, results of operations, cash flows or financial condition.

We have a significant amount of indebtedness, which makes us more vulnerable to adverse economic and competitive conditions.

We have a significant amount of indebtedness. As of September 30, 2009, we had outstanding senior secured indebtedness of \$30.0 million and senior subordinated notes of \$175.0 million. This amount of debt is substantial and our debt could:

- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- place us at a competitive disadvantage compared to our less leveraged competitors; or
- increase our vulnerability to both general and industry-specific adverse economic conditions; and limit, among other things, our ability to borrow additional funds.

Capital expenditures and other costs necessary to operate and maintain our vessels tend to increase with the age of the vessel and may also increase due to changes in governmental regulations, safety or other equipment standards.

Capital expenditures and other costs necessary to operate and maintain our vessels tend to increase with the age of the vessel. Accordingly, it is likely that the operating costs of our older vessels will increase.

The average age of our more significant vessels as of September 30, 2009, by equipment type, is as follows:

<u>Type of Equipment</u>	<u>Quantity</u>	<u>Average Age in Years</u>
Hydraulic Dredges	11	41
Hopper Dredges	10	27
Mechanical Dredges	5	33
Unloaders	2	24
Drillboats	2	18
Material and Other Barges	87	29
Total	117	31

Remaining economic life has not been presented because it is not reasonably quantifiable because, to the extent that market conditions warrant the expenditures, we can prolong the vessels' lives indefinitely. We operate in an industry where a significant portion of competitors' equipment is of a similar age. It is common in the dredging industry to make maintenance and capital expenditures in order to extend the economic life of equipment.

In addition, changes in governmental regulations, safety or other equipment standards, as well as compliance with standards imposed by maritime self-regulatory organizations and customer requirements or competition, may require us to make additional expenditures. For example, if the U.S. Coast Guard enacts new standards, we may be required to make significant expenditures for alterations or the addition of new equipment. In order to satisfy any such requirement, we may need to take our vessels out of service for extended periods of time, with corresponding losses of revenues. In the future, market conditions may not justify these expenditures or enable us to operate our older vessels profitably during the remainder of their economic lives.

Our use of the percentage-of-completion method of accounting could result in a reduction or reversal of previously recorded revenue and profit.

We recognize contract revenue using the percentage-of-completion method. The majority of our work is performed on a fixed-price basis. Contract revenue is accrued based on engineering estimates for the physical percent complete for dredging and estimates of remaining costs to complete for demolition. We follow the guidance of generally accepted accounting principles for accounting policies relating to our use of the percentage-of-completion method, estimating costs, revenue recognition, combining and segmenting contracts and change order/claim recognition. Percentage-of-completion accounting relies on the use of significant estimates in the process of determining income earned. The cumulative impact of revisions to estimates is reflected in the period in which these changes become known. Due to the various estimates inherent in our contract accounting, actual results could differ from those estimates, which may result in a reduction or reversal of previously recorded revenue and profit.

Our employees are covered by federal laws that may provide seagoing employees remedies for job-related claims in addition to those provided by state laws.

All of our seagoing employees are covered by provisions of the Jones Act and general maritime law. These laws typically operate to make liability limits established by state workers' compensation laws inapplicable to these employees and to permit these employees and their representatives to pursue actions against employers for job-related injuries in federal or state courts. Because we are not generally protected by the limits imposed by state workers' compensation statutes, we have greater

exposure for claims made by these employees as compared to employers whose employees are not covered by these provisions.

Our current insurance coverage may not be adequate, and we may not be able to obtain insurance at acceptable rates, or at all.

We maintain various insurance policies, including hull and machinery, general liability and personal injury. We partially self-insure risks covered by our policies. We are not required to, and do not, specifically set aside funds for the self-insured portion of claims. At any given time, we are subject to multiple personal injury claims and we maintain substantial loss accruals for these claims. Our insurance policies may not be adequate to protect us from liabilities that we incur in our business. We may not be able to obtain similar levels of insurance on reasonable terms, or at all. Our inability to obtain such insurance coverage at acceptable rates or at all could have a material adverse effect on our business, operating results, cash flows or financial condition.

A portion of our self-insurance for personal injury of our maritime workforce is affected through our membership in The West of England Ship Owners Mutual Insurance Association (Luxembourg) referred to in this prospectus supplement as "West of England", an international protection and indemnity club that provides its members with liability insurance and ancillary cover. Under West of England's rules, its members for any policy year are required to pay certain amounts (referred to as "calls") to West of England based on its estimates of, among other things, requirements in respect of claims, reinsurance premiums and expenses for such policy year. For each policy year, West of England assesses members "advance calls" which constitute the members' basic rate of contributions. West of England may also assess its members "additional calls" for any open policy year in order to provide West of England with the amount of funds needed to satisfy its liquidity needs for the applicable policy year. Accordingly, we have exposure to West of England's investment volatility and claims experience.

Environmental regulations could force us to incur significant capital and operational costs.

Our operations and facilities are subject to various environmental laws and regulations relating to, among other things: dredging operations; the disposal of dredged material; protection of wetlands; storm water and waste water discharges; demolition activities; asbestos removal; transportation and disposal of other hazardous substances and materials; and air emissions. We are also subject to laws designed to protect certain marine species and habitats. Compliance with these statutes and regulations can delay permitting and/or performance of particular projects and increase related project costs. These delays and increased costs could have a material adverse effect on our results of operations or cash flows.

Our projects may involve demolition, excavation, transportation, management and disposal of hazardous waste and other hazardous substances and materials. Various laws strictly regulate the removal, treatment and transportation of hazardous waste and other hazardous substances and materials and impose liability for human health effects and environmental contamination caused by these materials. Our demolition business, for example, requires us to transport and dispose of hazardous substances and materials, such as asbestos. Services rendered in connection with hazardous substance and material removal and site development may involve professional judgments by licensed experts about the nature of soil conditions and other physical conditions, including the extent to which hazardous substances and materials are present, and about the probable effect of procedures to mitigate problems or otherwise affect those conditions. If the judgments and the recommendations based upon those judgments are incorrect, we may be liable for resulting damages that our customers incur, which may be material. The failure of certain contractual protections, including any indemnification from our customers or subcontractors, to protect us from incurring such liability could have a material adverse effect on our business, operating results, cash flows or financial condition.

Our demolition business (NASDI) depends on key customer relationships and our reputation in the Boston construction market, both of which have been developed and maintained by one individual. Loss of any of these elements would materially reduce our demolition revenues and profits.

Demolition contracts are entered into on a project by project basis, so NASDI does not have continuing contractual commitments with its demolition customers beyond the terms of the current contract. We benefit from key relationships with certain general and construction contractors in the Boston market. We also benefit from our reputation in the Boston market developed over years of successfully performing on projects. Both of these aspects of the business were developed and are maintained by the president of NASDI's parent company. The inability to maintain relationships with these customers or obtain new customers based on NASDI's reputation would reduce the revenue and profitability from demolition contracts. The inability of NASDI to retain this individual would have a material adverse affect on NASDI's current customer relationships and reputation.

If we fail to comply with government contracting regulations, our revenue could suffer.

Our contracts with federal, state and local governmental customers are subject to various procurement regulations and other contract provisions. Certain violations of government contracting regulations could result in the imposition of civil and criminal penalties, which may include termination of contracts, forfeiture of profits, suspension of payments and fines, and suspension from future government contracting. If we are suspended from government work for any reason, we could suffer a material reduction in revenue and cash flows.

In addition, we may be subject to litigation brought by private individuals on behalf of the government relating to our government contracts, referred to in this prospectus supplement as "qui tam," which could include claims for up to treble damages. Qui tam actions are sealed by the court at the time of filing. The only parties privy to the information in the complaint are the complainant, the U.S. government, and the court. Therefore, it is possible that qui tam actions have been filed against us and that we are not aware of such actions or have been ordered by the court not to discuss them until the seal is lifted. Thus, it is possible that we are subject to liability exposure under the False Claims Act based on qui tam actions.

Risks Related to Our Common Stock and this Offering

Our common stock is subject to restrictions on foreign ownership.

We are subject to government regulations pursuant to the Jones Act, the Foreign Dredge Act of 1906, the Shipping Act of 1916, and the vessel documentation laws set forth in Chapter 121 of Title 46 of the United States Code. These statutes require vessels engaged in the transport of merchandise or passengers or dredging in the navigable waters of the U.S. to be owned and controlled by U.S. citizens. The U.S. citizenship ownership and control standards require the vessel-owning entity to be at least 75% U.S.-citizen owned. Our certificate of incorporation contains provisions limiting non-citizenship ownership of our capital stock. If our board of directors determines that persons who are not citizens of the U.S. own more than 22.5% of our outstanding capital stock or more than 22.5% of our voting power, we may redeem such stock. The required redemption price could be materially different from the current price of the common stock or the price at which the non-citizen acquired the common stock. If a non-citizen purchases the common stock, there can be no assurance that he will not be required to divest the shares and such divestiture could result in a material loss. Such restrictions and redemption rights may make our equity securities less attractive to potential investors, which may result in our common stock having a lower market price than it might have in the absence of such restrictions and redemption rights.

Delaware law and our charter documents may impede or discourage a takeover that you may consider favorable.

The provisions of our certificate of incorporation and bylaws may also deter, delay or prevent a third-party from acquiring us. These provisions include:

- limitations on the ability of stockholders to amend our charter documents, including stockholder supermajority voting requirements;
- the inability of stockholders to call special meetings;
- a classified board of directors with staggered three-year terms;
- advance notice requirements for nominations for election to the board of directors and for stockholder proposals; and
- the authority of our board of directors to issue, without stockholder approval, up to 1,000,000 shares of preferred stock with such terms as the board of directors may determine and to issue additional shares of our common stock.

No stockholder has the right to call a special meeting. We are also subject to the protections of Section 203 of the Delaware General Corporation Law, which prevents us from engaging in a business combination with a person who acquires at least 15% of our common stock for a period of three years from the date such person acquired such common stock, unless board or stockholder approval were obtained.

These provisions could have the effect of delaying, deferring or preventing a change in control of our company, discourage others from making tender offers for our shares, lower the market price of our stock or impede the ability of our stockholders to change our management, even if such changes would be beneficial to our stockholders.

Our stockholders may not receive dividends because of restrictions in our debt agreements, Delaware law and state regulatory requirements.

Our ability to pay dividends is restricted by the agreements governing our debt, including our senior credit facilities and the indenture governing our senior subordinated notes, as well as Delaware law and state regulatory requirements. In addition, we and our subsidiaries are permitted under the terms of our debt agreements to incur additional indebtedness that may restrict or prohibit the payment of dividends. Under Delaware law, our board of directors may not authorize payment of a dividend unless it is either paid out of our surplus, as calculated in accordance with the Delaware General Corporation Law, or, if we do not have a surplus, it is paid out of our net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. To the extent we do not have adequate surplus or net profits, we will be prohibited from paying dividends.

Our quarterly operating results may vary significantly, which could negatively impact our stock price.

Our quarterly results of operations have fluctuated in the past and will continue to fluctuate in the future. You should not rely on the results of any past quarter or quarters as an indication of future performance in our business operations or stock price. Our operating results could vary greatly from quarter to quarter due to factors such as:

- inclement or hazardous weather conditions that may result in substantial delays in dredging and additional contract expenses;
- unplanned equipment downtime;

- environmental restrictions requiring that certain projects be performed in winter months to protect wildlife habitats; and
- equipment mobilization to and from projects.

If our results of operations from quarter to quarter fail to meet the expectations of public market analysts and investors, our stock price could suffer or be negatively impacted.

The market price of our common stock may fluctuate significantly, and this may make it difficult for holders to resell our common stock when they want or at prices that they find attractive.

The price of our common stock on the NASDAQ Global Market constantly changes. We expect that the market price of our common stock will continue to fluctuate. The market price of our common stock may fluctuate as a result of a variety of factors, many of which are beyond our control. These factors include:

- changes in market conditions;
- quarterly variations in our operating results;
- operating results that vary from the expectations of management, securities analysts and investors;
- changes in expectations as to our future financial performance;
- announcements of strategic developments, significant contracts, acquisitions and other material events by us or our competitors;
- the operating and securities price performance of other companies that investors believe are comparable to us;
- future sales of our equity or equity-related securities;
- changes in the economy and the financial markets;
- departures of key personnel;
- changes in governmental regulations; and
- geopolitical conditions, such as acts or threats of terrorism or military conflicts.

In addition, in recent years, global equity markets have experienced extreme price and volume fluctuations. This volatility has had a significant effect on the market price of securities issued by many companies for reasons often unrelated to their operating performance. These broad market fluctuations may adversely affect the market price of our common stock, regardless of our operating results.

Future issuances of our common stock will dilute the ownership interests of stockholders and may adversely affect the trading price of our common stock.

Future sales of substantial amounts of our common stock or equity-related securities in the public market, or the perception that such sales could occur, could materially and adversely affect prevailing trading prices of our common stock.

Risks Relating to Financial Markets

Adverse capital and credit market conditions may significantly affect our ability to meet liquidity needs, access to capital and cost of capital.

The domestic and worldwide capital and credit markets have experienced and are experiencing significant volatility, disruptions and dislocations with respect to price and credit availability. There is

continued uncertainty as to if and when the capital and credit markets will improve. Should we need additional funds or to refinance our existing indebtedness, we may not be able to obtain such additional funds.

We need liquidity to pay our operating expenses, interest on our debt and dividends on our capital stock. Without sufficient liquidity, we will be forced to curtail our operations, and our business will suffer. The principal sources of our liquidity are cash flow from our operations and borrowings under our senior credit facility. In the event these resources do not satisfy our liquidity needs, we may have to seek additional financing. The availability of additional financing will depend on a variety of factors such as market conditions, the general availability of credit, the volume of trading activities, our credit ratings and credit capacity, as well as the possibility that customers or lenders could develop a negative perception of our long- or short-term financial prospects if the level of our business activity decreased due to a market downturn. In late 2008, Lehman Brothers, a 6.5% participant in our credit facility, filed for bankruptcy and stopped funding its share of our revolver borrowings. As Lehman Brothers is a defaulting lender, we are no longer able to draw upon their pro-rata portion of the revolver commitment. As of September 30, 2009, we had drawn \$1.9 million of the \$10 million applicable to Lehman Brothers. As such, Lehman Brothers' remaining \$8.1 million commitment has not been included in our availability under our credit facility. It is uncertain whether a new lender will purchase Lehman Brothers' interest in our senior credit facility and fund the shortfall. In addition, there can be no assurance that our other lenders will continue to fund our senior credit facility. If our internal sources of liquidity prove to be insufficient, we may not be able to successfully obtain additional financing on favorable terms, or at all.

Difficult conditions in the global capital markets and the current economic recession may materially adversely affect our business and results of operations and we do not expect these conditions to improve in the near future.

Our results of operations are materially affected by conditions in the global capital markets and the economy generally, both in the U.S. and elsewhere around the world. The stress experienced by global capital markets that began in the second half of 2007 continued and substantially increased during the third and fourth quarter of 2008. Concerns over inflation, energy costs, geopolitical issues, the availability and cost of credit, the U.S. mortgage market and a declining real estate market in the U.S. have contributed to increased volatility and diminished expectations for the economy and the markets going forward. These factors, combined with volatile oil prices, declining business and consumer confidence and increased unemployment, have resulted in a global economic recession. Domestic and international equity markets have been experiencing heightened volatility and turmoil. These events and the continuing market upheavals may have an adverse effect on us. In the event of extreme prolonged market events, such as the global credit crisis, we could incur significant losses.

There can be no assurance that actions of the U.S. government, Federal Reserve and other governmental and regulatory bodies for the purpose of stabilizing the financial markets will achieve the intended effect.

In response to the financial crises affecting the banking system and financial markets and going concern threats to investment banks and other financial institutions, numerous regulatory and governmental actions have been proposed. The Federal Reserve has taken action through reduced federal funds rates and the expansion of acceptable collateral for its loans to provide additional liquidity. Additionally, the American Recovery and Reinvestment Act of 2009 was signed into law in February 2009. The American Recovery and Reinvestment Act is intended to provide a stimulus to the U.S. economy and includes federal tax cuts, expansion of unemployment benefits and other social welfare provisions, and domestic spending in education, health care and infrastructure, including marine infrastructure and dredging. There can be no assurance as to what impact such actions will have on our business or the financial markets, including the extreme levels of volatility, or that the American

Recovery and Reinvestment Act or any monetary or fiscal actions of the U.S. Federal Reserve Board will have a stabilizing effect on the economy or a beneficial impact on economic growth. It is not possible to predict whether or when such actions may occur or what impact, if any, such actions could have on our business, results of operations or financial condition or the trading price of our common stock.

The current weakness in the economic environment and other factors could lead to our goodwill and other intangible assets becoming impaired, which may require us to take significant non-cash charges against earnings.

Under current accounting guidelines, we must assess, at least annually and potentially more frequently, whether the value of our goodwill and other intangible assets have been impaired. We performed our annual test of impairment as of July 1, 2009 for the goodwill in both the dredging and demolition segments with no indication of goodwill impairment as of the test date. The decline in the operating results and related cash flow forecasts in the demolition segment during the past year has reduced the amount by which the estimated fair value of the demolition segment exceeds the carrying value of the demolition segment's assets. A more than insignificant decline in the demolition segment's future operating results or cash flow forecasts versus the segment's current forecasts could potentially trigger a goodwill impairment charge in a future period. In addition, a significant and sustained decline in the our future cash flows, a significant adverse change in the economic environment, slower growth rates or if our stock price falls below our net book value per share for a sustained period could result in the need to perform additional impairment analysis in future periods. If we were to conclude that a future write-down of goodwill or other intangible assets is necessary, then we would be required to record a non-cash charge against earnings, which, in turn, could have a material adverse affect on our reported net income and the book value of our stockholders' equity. See "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates*" in our Annual Report on Form 10-K for the year ended December 31, 2008 which is incorporated by reference in this prospectus supplement.

FORWARD-LOOKING STATEMENTS

Cautionary Note Regarding Forward-Looking Statements

Certain statements in this prospectus supplement may constitute "forward-looking" statements as defined in Section 27A of the Securities Act of 1933 (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act"), the Private Securities Litigation Reform Act of 1995 (the "PSLRA") or in releases made by the Securities and Exchange Commission ("SEC"), all as may be amended from time to time. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause our actual results, performance or achievements and/or of our subsidiaries, or industry results, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements. Statements that are not historical fact are forward-looking statements. Forward-looking statements can be identified by, among other things, the use of forward-looking language, such as the words "plan," "believe," "expect," "anticipate," "intend," "estimate," "project," "may," "will," "would," "could," "should," "seeks," or "scheduled to," or other similar words, or the negative of these terms or other variations of these terms or comparable language, or by discussion of strategy or intentions. These cautionary statements are being made pursuant to the Securities Act, the Exchange Act and the PSLRA with the intention of obtaining the benefits of the "safe harbor" provisions of such laws. We caution investors that any forward-looking statements made by us are not guarantees or indicative of future performance. Important assumptions and other important factors that could cause actual results to differ materially from those forward-looking statements with respect to us and our business, include, but are not limited to, risks and uncertainties that are described in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2008, in our quarterly reports on Form 10-Q and in our other securities filings with the SEC.

Although we believe that our plans, intentions and expectations reflected in or suggested by such forward-looking statements are reasonable, actual results could differ materially from a projection or assumption in any forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to change and inherent risks and uncertainties. The forward-looking statements contained in this prospectus supplement are made only as of the date hereof and we do not have or undertake any obligation to update or revise any forward-looking statements whether as a result of new information, subsequent events or otherwise, unless otherwise required by law.

USE OF PROCEEDS

The selling stockholders will receive all net proceeds from the sale of common stock to be sold in this offering, including any proceeds they receive if the underwriters exercise the option to purchase additional shares. Accordingly, we will not receive any proceeds from the sale of common stock by the selling stockholders.

SELLING STOCKHOLDERS

Pursuant to the investor rights agreement, holders of at least a majority of shares of our common stock held by certain former directors and officers of Aldabra Acquisition Corporation, referred to in this prospectus supplement as "Aldabra," have the right to demand registration under the Securities Act of 1933, as amended, of all or any portion of their registrable securities subject to certain amount and time limitations. In order to comply with our obligations under the investor rights agreement, this prospectus supplement and accompanying prospectus are required because the selling stockholders named in this prospectus supplement have exercised this demand registration right.

The selling stockholders are not making any representation that any shares covered by this prospectus supplement will be offered for sale. The selling stockholders reserve the right to accept or reject, in whole or in part, any proposed sale of shares. The following table sets forth, as of December 9, 2009, certain information regarding the ownership of our common stock by the selling stockholders, the number of shares being offered hereby and information with respect to shares to be beneficially owned by each selling stockholder after completion of this offering. The percentages in the following table reflect the shares beneficially owned by each selling stockholder as a percentage of the total number of shares of our common stock outstanding as of December 9, 2009.

<u>Name</u>	<u>Shares Beneficially Owned Prior to this Offering(1)</u>		<u>Shares Being Sold in this Offering</u>	<u>Shares Beneficially Owned After this Offering(2)</u>	
	<u>Number</u>	<u>Percent</u>		<u>Number</u>	<u>Percent</u>
Nathan Leight(3)	1,791,274	3.1%	1,365,363	58,661	*
Elizabeth Barkin Leight, as trustee(4)	367,250	*	367,250	—	*
Jason Weiss(5)	929,055	1.6%	907,294	21,761	*
Murray Sprung, as trustee(6)	248,119	*	248,119	—	*
Jonathan Berger(7)	34,674	*	23,013	11,661	*
Peter Deutsch(8)	36,974	*	24,413	12,561	*
Stewart Gross(9)	23,500	*	23,500	—	*

* Denotes less than 1%

- (1) Beneficial ownership is determined in accordance with rules of the SEC and includes voting power and/or investment power with respect to securities. Shares of common stock subject to options currently exercisable or exercisable within 60 days of December 9, 2009 are deemed outstanding for computing the percentage beneficially owned by the person holding such options but are not deemed outstanding for computing the percentage beneficially owned by any other person.
- (2) Assumes that each selling stockholder (i) disposes of all of the shares of common stock included in this prospectus supplement and (ii) does not acquire beneficial ownership of any additional shares.
- (3) Includes for purposes of beneficial ownership (i) 367,250 shares of common stock held by the Leight Family 1998 Irrevocable Trust, a trust established for the benefit of Mr. Leight's family of which his wife is the trustee, (ii) 43,000 shares of common stock held by the wife of Mr. Leight, and (iii) 4,000 shares of common stock held by various family trusts. The business address for Mr. Leight is c/o Terrapin Partners LLC, 540 Madison Avenue, 17th Floor, New York, New York 10022. The 367,250 shares of common stock held in the Leight Family 1998 Irrevocable Trust are not included in Mr. Leight's total number of shares being registered in this offering as such shares are included as being sold by Elizabeth Barkin Leight as trustee elsewhere in the table above. Mr. Leight is currently a director and has served as a member of our Board since the merger on December 26, 2006 of GLDD Acquisitions Corp., then our parent corporation, with a subsidiary of Aldabra, referred to in this prospectus supplement as the "Aldabra Merger." He was Aldabra's

Chairman of the Board of Directors from its inception in 2004 until completion of the Aldabra Merger.

- (4) Shares held by Elizabeth Barkin Leight as trustee of the Leight Family 1998 Irrevocable Trust.
- (5) Includes for purposes of beneficial ownership (i) 914,681 shares of common stock held by the Jason G. Weiss Revocable Trust dated August 2, 2000 and (ii) 100 shares of common stock held by the wife of Mr. Weiss. The business address for Mr. Weiss is c/o Terrapin Palisades Ventures LLC, 1001 Rivas Canyon Road, Pacific Palisades, California 90272. This amount excludes 248,119 shares of common stock held by the Weiss Family Trust dated August 7, 2000 of which Mr. Weiss does not have beneficial ownership. Mr. Weiss is currently a director and has served as a member of our Board since the Aldabra Merger. He was Aldabra's Chief Executive Officer, Secretary and a member of Aldabra's Board of Directors from Aldabra's inception in 2004 until the completion of the Aldabra Merger.
- (6) Shares held by Murray Sprung as trustee of the Weiss Family Trust dated August 7, 2000.
- (7) The business address for Mr. Berger is c/o Tellurian Partners, LLC, 1170 Peachtree Street NE, Atlanta, Georgia 30309. Mr. Berger is currently a director and has served as a member of our Board since the Aldabra Merger.
- (8) The business address for Mr. Deutsch is P.O. Box 817689, Hollywood, Florida 33081. Mr. Deutsch is currently a director and has served as a member of our Board since the Aldabra Merger. He was a member of Aldabra's Board of Directors from its inception in 2004 until the completion of the Aldabra Merger.
- (9) Mr. Gross was a member of Aldabra's Board of Directors until the completion of the Aldabra Merger.

PLAN OF DISTRIBUTION

The selling stockholders and any of their donees, pledgees, assignees or other successors-in-interest, all of which are included when we refer to "selling stockholders" in this section of this prospectus supplement, may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at prevailing market prices, at prices related to such market prices or at other fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker dealer solicits purchasers;
- block trades in which the broker dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker dealer as principal and resale by the broker dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- market sales (both long and short to the extent permitted under the federal securities laws);
- in connection with the writing of non-traded and exchange-traded call options, in hedge transactions and in settlement of other transactions in standardized or over-the-counter options, if permitted under the securities laws;
- settlement of short sales;
- broker dealers may agree with the selling stockholders to sell a specified number of shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of our common stock and deliver these securities to close out short positions, short and deliver the common stock to close out short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities.

Broker dealers engaged by the selling stockholders may arrange for other broker dealers to participate in sales. Broker dealers may receive commissions or discounts from the selling stockholders (or, if any broker dealer acts as agent for the purchase of shares, from the purchaser) in amounts to be negotiated. These commissions or discounts may exceed those customary in the types of transactions involved. Broker dealers may agree with a selling stockholder to sell a specified number of shares of our common stock at a stipulated price per share, and, to the extent such broker dealer is unable to do so acting as agent for the selling stockholder, to purchase as principal any unsold shares of our common stock at the price required to fulfill the broker dealer commitment to the selling stockholder. Broker dealers who acquire shares of our common stock as principal may thereafter resell such shares of our common stock from time to time in transactions (which may involve block transactions and sales to and through other broker dealers, including transactions of the nature described above) at prices and on terms then prevailing at the time of sale, at prices then related to then-current market price or in negotiated transactions. In connection with such resales, broker dealers may pay to or receive from the purchasers of shares of our common stock commissions as described above. Any discounts, commissions, concessions or profit they earn on any resale of the common stock may be underwriting discounts and commissions under the Securities Act. In addition, any of the shares covered by this

prospectus supplement that qualify for sale pursuant to Rule 144 under the Securities Act of 1933, may be sold under Rule 144 rather than pursuant to this prospectus supplement.

The selling stockholders and any broker dealers or agents that are involved in selling the shares of our common stock offered hereunder may be deemed to be "underwriters" within the meaning of the Securities Act of 1933 in connection with such sales. In such event, any discounts, commissions or concessions received by such broker dealers or agents and any profit on the resale of the shares by them may be deemed to be underwriting commissions or discounts under the Securities Act of 1933. The selling stockholders have informed us that they do not have any agreement or understanding, directly or indirectly, with any person to distribute the common stock. The anti-manipulation provisions of Regulation M promulgated under the Securities Exchange Act of 1934 may apply to sales of our common stock by the selling stockholders in the market.

Pursuant to the investor rights agreement with the selling stockholders, all expenses of the registration of our common stock will be paid by us, including, without limitation, the SEC filing fees; provided, however, that the selling stockholders will pay all underwriting discounts and selling commissions, if any. The selling stockholders will be indemnified by us against certain civil liabilities, including certain liabilities under the Securities Act of 1933, or will be entitled to contribution in connection therewith. We will be indemnified by the selling stockholders severally against certain civil liabilities, including certain liabilities under the Securities Act of 1933, or will be entitled to contribution in connection therewith.

WHERE YOU CAN FIND MORE INFORMATION

The following documents, which have been filed with the SEC by us, are incorporated by reference in this prospectus supplement (other than portions of these documents that are either (1) described in paragraph (e) of Item 201 of Registration S-K or paragraphs (d)(1)-(3) and (e)(5) of Item 407 of Regulation S-K promulgated by the SEC or (2) furnished under Item 2.02 or Item 7.01 of a Current Report on Form 8-K):

- (1) our Annual Report on Form 10-K for the year ended December 31, 2008;
- (2) our Quarterly Report on Form 10-Q for the quarters ended March 31, 2009, June 30, 2009 and September 30, 2009;
- (3) our Current Reports on Form 8-K filed on February 5, 2009, February 19, 2009, March 11, 2009, April 29, 2009, May 18, 2009, June 1, 2009, August 10, 2009, August 14, 2009, September 1, 2009, September 2, 2009, October 5, 2009, October 9, 2009 and December 1, 2009; and
- (4) our proxy statement for the 2009 annual meeting of stockholders filed on April 6, 2009.

We also incorporate by reference the information contained in all other documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than portions of these documents that are either (1) described in paragraph (e) of Item 201 of Registration S-K or paragraphs (d)(1)-(3) and (e)(5) of Item 407 of Regulation S-K promulgated by the SEC or (2) furnished under Item 2.02 or Item 7.01 of a Current Report on Form 8-K, unless otherwise indicated therein) after the date of this prospectus supplement and prior to the termination of this offering. The information contained in any such document will be considered part of this prospectus supplement from the date the document is filed with the SEC.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus supplement will be deemed to be modified or superseded to the extent that a statement contained in this prospectus supplement or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus supplement modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

You may read and copy any reports, proxy statements or other materials and information we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Copies of such materials also can be obtained at the SEC's website, www.sec.gov, free of charge, or by mail from the Public Reference Room of the SEC, at prescribed rates. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our SEC filings are also available to the public, free of charge, on our corporate website, www.gldd.com as soon as reasonably practicable after we electronically file such material with, or furnishes it to, the SEC.

We undertake to provide without charge to any person, including any beneficial owner, to whom a copy of this prospectus supplement is delivered, upon oral or written request of such person, a copy of any or all of the documents that have been incorporated by reference in this prospectus supplement, other than exhibits to such other documents (unless such exhibits are specifically incorporated by reference therein). Requests for such copies should be directed to:

Great Lakes Dredge & Dock Corporation
2122 York Road
Oak Brook, IL
Attn: Assistant General Counsel
Telephone: (630) 574-3000

4,341,194 Shares



GREAT LAKES DREDGE & DOCK CORPORATION

Common Stock

The selling stockholders, including members of our management, named herein may offer and sell from time to time up to 4,341,194 shares of our common stock covered by this prospectus. The selling stockholders will receive all of the proceeds from any sales of their shares. We will not receive any of the proceeds, but we will incur expenses in connection with the offering.

Our registration of the shares of common stock covered by this prospectus does not mean that the selling stockholders will offer or sell any of the shares. The selling stockholders may sell the shares of common stock covered by this prospectus in a number of different ways and at varying prices. We provide more information about how the selling stockholders may sell the shares in the section entitled "Plan of Distribution" beginning on page 7.

Our common stock is traded on the NASDAQ Global Market under the symbol "GLDD." On November 24, 2009, the last reported sale price of our common stock on the NASDAQ Global Market was \$6.18 per share.

Investing in our common stock involves risks. See "Risk Factors" on page 2.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in or incorporated by reference into this prospectus and any applicable prospectus supplements. We have not authorized anyone to provide you with different or additional information. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of common stock. This prospectus is not an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstances under which the offer or solicitation is unlawful.

OUR COMPANY

Overview

We are the largest provider of dredging services in the United States. Dredging generally involves the enhancement or preservation of navigability of waterways or the protection of shorelines through the removal or replenishment of soil, sand or rock. The U.S. dredging market consists of three primary types of work: capital, beach nourishment and maintenance. Our "bid market" is defined as the aggregate dollar value of domestic projects on which we bid or could have bid if not for capacity constraints. Our fleet of 26 dredges, 22 material transportation barges, two drillboats, and numerous other specialized support vessels is the largest and most diverse fleet of any U.S. dredging company. Across the three sectors of the dredging industry, we achieved the leading U.S. market share of projects awarded within our bid market, averaging 42% over the last three years. The mobility of our fleet enables us to move equipment in response to changes in demand for dredging services to take advantage of the most attractive utilization opportunities. We estimate the replacement cost of our fleet to be in excess of \$1.5 billion in the current market. We operate in two reportable segments: dredging and demolition.

Domestic Dredging Operations

Over our 119-year history, we have grown to be a leader in capital, beach nourishment and maintenance dredging in the U.S.

Domestic Capital. Capital dredging projects consist primarily of port expansion projects, which involve the deepening of channels to allow access by larger, deeper draft ships and the provision of land fill used to expand port facilities. In addition to port work, capital projects also include land reclamations, trench digging for pipelines, tunnels and cables, and other dredging related to the construction of breakwaters, jetties, canals and other marine structures. Although capital work can be impacted by budgetary constraints and economic conditions, these projects typically generate an immediate economic benefit to the ports and surrounding communities.

Maintenance. Maintenance dredging consists of the re-dredging of previously deepened waterways and harbors to remove silt, sand and other accumulated sediments. Due to natural sedimentation, most channels generally require maintenance dredging every one to three years, thus creating a recurring source of dredging work that is typically non-deferrable if optimal navigability is to be maintained. In addition, severe weather such as hurricanes and flooding can also cause the accumulation of sediments and drive the need for maintenance dredging.

Beach Nourishment. Beach nourishment projects generally involve moving sand from the ocean floor to shoreline locations when erosion threatens shoreline assets. Beach erosion is a continuous problem that has intensified with the rise in coastal development and has become an important issue for state and local governments concerned with protecting beachfront tourism and real estate. Beach nourishment is often viewed as a better response to erosion than trapping sand through the use of sea walls and jetties, or relocating buildings and other assets away from the shoreline. Generally, beach nourishment projects take place during the fall and winter months to minimize interference with bird and marine life migration and breeding patterns and coastal recreation activities.

Foreign Dredging Operations

Foreign capital projects typically relate to land reclamations, channel deepening and port infrastructure development. We target foreign opportunities that are well suited to our equipment and where we face reduced competition from our European competitors. Maintaining a presence in foreign markets has enabled us to diversify our customer base. Over the last ten years, we have performed

dredging work in the Middle East, Africa, India, the Caribbean and Central America. Most recently, we have focused our efforts on opportunities in the Middle East.

Demolition Operations

We also provide demolition services through our majority owned subsidiary, NASDI, LLC, which is headquartered in Boston, Massachusetts. NASDI, whose corporate predecessor was founded in 1976, is a major U.S. provider of commercial and industrial demolition services. The majority of NASDI's work is performed in the New England area. NASDI's core business is exterior and interior demolition. Exterior demolition involves the complete dismantling and demolition of structures and foundations. Interior demolition involves removing specific structures within a building. Other business activities include site development and since the acquisition of Yankee Environmental Services LLC, the removal of asbestos and other hazardous materials. Yankee does not take possession of hazardous materials, which remain the property of the site owner. In January 2009, we acquired a majority interest in Yankee Environmental Services LLC, and entered into the business of asbestos and other hazardous material removal. NASDI typically performs numerous small projects (each generating revenue of \$0.1 million to \$1.0 million) but NASDI is one of a few providers in New England with the required licenses, operating expertise, equipment fleet and access to bonding to execute larger, complex industrial demolition projects.

RISK FACTORS

Our business is subject to significant risks. You should carefully consider the risks and uncertainties described in this prospectus and the documents incorporated by reference herein. The risks and uncertainties described in this prospectus and the documents incorporated by reference herein are not the only ones facing us. Additional risks and uncertainties that we do not presently know about or that we currently believe are not material may also adversely affect our business. If any of the risks and uncertainties described in this prospectus or the documents incorporated by reference herein actually occur, our business, cash flows, financial condition and results of operations could be adversely affected in a material way. This could cause the trading price of our common stock to decline, perhaps significantly, and you may lose part or all of your investment. For more information see "Where You Can Find More Information" on page 9 of this prospectus.

FORWARD LOOKING STATEMENTS

Certain statements in this prospectus may constitute "forward-looking" statements as defined in Section 27A of the Securities Act of 1933 (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act"), the Private Securities Litigation Reform Act of 1995 (the "PSLRA") or in releases made by the Securities and Exchange Commission ("SEC"), all as may be amended from time to time. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause our actual results, performance or achievements and/or of our subsidiaries, or industry results, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements. Statements that are not historical fact are forward-looking statements. Forward-looking statements can be identified by, among other things, the use of forward-looking language, such as the words "plan," "believe," "expect," "anticipate," "intend," "estimate," "project," "may," "will," "would," "could," "should," "seeks," or "scheduled to," or other similar words, or the negative of these terms or other variations of these terms or comparable language, or by discussion of strategy or intentions. These cautionary statements are being made pursuant to the Securities Act, the Exchange Act and the PSLRA with the intention of obtaining the benefits of the "safe harbor" provisions of such laws. We caution investors that any forward-looking statements made by us are not guarantees or indicative of future performance. Important assumptions and other important factors that could cause actual results to differ materially

from those forward-looking statements with respect to us and our business, include, but are not limited to, risks and uncertainties that are described in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2008, in our quarterly reports on Form 10-Q and in our other securities filings with the SEC.

Although we believe that our plans, intentions and expectations reflected in or suggested by such forward-looking statements are reasonable, actual results could differ materially from a projection or assumption in any forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to change and inherent risks and uncertainties. The forward-looking statements contained in this prospectus are made only as of the date hereof and we do not have or undertake any obligation to update or revise any forward-looking statements whether as a result of new information, subsequent events or otherwise, unless otherwise required by law.

SELLING STOCKHOLDERS

Beneficial Ownership: The following table sets forth, as of November 24, 2009, certain information regarding the ownership of our common stock by the selling stockholders, including members of our management, the number of shares being registered hereby and information with respect to shares to be beneficially owned by each selling stockholder after completion of this offering. The percentages in the following table reflect the shares beneficially owned by each selling stockholder as a percentage of the total number of shares of our common stock outstanding as of November 24, 2009.

Name	Shares Beneficially Owned Prior to This Offering(1)		Shares Being Sold in This Offering(2)	Shares Beneficially Owned After This Offering(3)	
	Number	Percent		Number	Percent
Douglas B. Mackie(4)(5)	335,320	*	410,922	12,000	*
Richard M. Lowry(4)(12)	438,260	*	491,653	—	*
Deborah A. Wensel(4)(13)	99,967	*	134,457	—	*
David E. Simonelli(4)(14)	68,155	*	10,000	58,155	*
Kyle Johnson(4)(15)	46,773	*	10,000	36,773	*
Thomas S. Souleles(6)	—	*	—	—	*
Nathan Leight(7)	1,791,274	3.1%	1,365,363	58,661	*
Jason Weiss(8)	929,055	1.6%	907,294	21,761	*
Jonathan Berger(9)	34,674	*	23,013	11,661	*
Peter Deutsch(10)	36,974	*	24,413	12,561	*
Bruce J. Biemeck(11)	16,774	*	—	16,774	*
Bradley T. Hansen(4)(16)	44,777	*	9,500	35,277	*
William H. Hanson(4)(17)	22,859	*	20,000	2,859	*
John F. Karas(4)(18)	34,584	*	14,042	20,542	*
Steven F. O'Hara(4)(19)	16,240	*	79,579	—	*
William F. Pagendarm(4)(20)	41,813	*	12,000	29,813	*
All directors and executive officers as a group	3,973,915	6.9%	3,512,236	316,837	*
Other selling shareholders:					
Steven R. Auernhamer(4)(21)	13,934	*	18,319	—	*
David C. Cizek(4)(21)	12,912	*	10,000	2,912	*
Arthur Fletcher(22)	—	*	10,029	—	*
Stewart Gross(23)	23,500	*	23,500	—	*
Katherine Hayes(4)(21)	2,413	*	11,964	—	*
Patrick Hughes(4)(21)	13,607	*	16,586	—	*
Elizabeth Barkin Leight, as trustee(24)	367,250	*	367,250	—	*
Donald Luce(4)(21)	2,982	*	6,000	—	*
Robert F. Mackay(4)(21)	10,042	*	14,979	—	*
Christopher T. Mackie(25)	14,409	*	14,409	—	*
Kathleen Mackie LaVoy(21)(25)	15,571	*	17,563	—	*
Natalie A. Mackie(25)	15,909	*	15,909	—	*
Madeline C. Mackie(25)	22,770	*	22,770	—	*
Philip D. Mackie(25)	21,420	*	22,270	—	*
Robert Ramsdell(4)	13,984	*	9,291	4,693	*
Murray Sprung, as trustee(26)	248,119	*	248,119	—	*

- (1) Beneficial ownership is determined in accordance with rules of the SEC and includes voting power and/or investment power with respect to securities. Shares of common stock subject to options currently exercisable or exercisable within 60 days of November 24, 2009 are deemed outstanding

for computing the percentage beneficially owned by the person holding such options but are not deemed outstanding for computing the percentage beneficially owned by any other person.

- (2) Includes all shares of common stock requested to be registered that are owned, all shares of common stock which are requested to be registered which are issuable upon vesting of restricted stock units (which will vest within the next three years), and all shares of common stock requested to be registered that are issuable upon exercise of stock options (which will be exercisable within the next three years).
- (3) Assumes that each selling stockholder (i) disposes of all of the shares of common stock requested to be included in this prospectus (including, within the next three years, any shares of common stock which are issuable upon vesting of restricted stock units and any shares of common stock which are issuable upon exercise of stock options) covered by this prospectus and (ii) does not acquire beneficial ownership of any additional shares. The registration of these shares does not necessarily mean that the selling stockholders will sell all or any portion of the shares covered by this prospectus. Shares that are shown to be beneficially owned after the offering represent shares that the selling shareholder did not elect to include in this prospectus.
- (4) The address for each of Messrs. Mackie, Lowry, Simonelli, Johnson, Hansen, Hanson, Karas, O'Hara, Pagendarm, Auernhamer, Cizek, Hughes, Luce, Mackay and Ramsdell and Mses. Wensel and Hayes is c/o Great Lakes Dredge & Dock Corporation, 2122 York Road, Oak Brook, Illinois 60523.
- (5) Includes for purposes of beneficial ownership 12,000 shares of common stock held by the wife of Mr. Mackie. Mr. Mackie has been President, Chief Executive Officer and a director of the Company since 1995.
- (6) Mr. Souleles has served as a member of our Board since the acquisition of Great Lakes by MDP in December 2003, and has remained a director since the Aldabra Merger. The address for Mr. Souleles is c/o Madison Dearborn Partners, LLC, 70 W. Madison Street, Suite 4600, Chicago, Illinois 60602.
- (7) Includes for purposes of beneficial ownership (i) 367,250 shares of common stock held by the Leight Family 1998 Irrevocable Trust, a trust established for the benefit of Mr. Leight's family of which his wife is the trustee, (ii) 43,000 shares of common stock held by the wife of Mr. Leight, and (iii) 4,000 shares of common stock held by various family trusts. The business address for Mr. Leight is c/o Terrapin Partners LLC, 540 Madison Avenue, 17th Floor, New York, New York 10022. The 367,250 shares of common stock held in the Leight Family 1998 Irrevocable Trust are not included in Mr. Leight's total number of shares being registered in this offering as such shares are included as being sold by Elizabeth Barkin Leight as trustee elsewhere in the table above. Mr. Leight is currently a director and has served as a member of our Board since the Aldabra Merger. He was Aldabra's Chairman of the Board of Directors from its inception in 2004 until completion of the Aldabra Merger.
- (8) Includes for purposes of beneficial ownership (i) 914,681 shares of common stock held by the Jason G. Weiss Revocable Trust dated August 2, 2000 and (ii) 100 shares of common stock held by the wife of Mr. Weiss. The business address for Mr. Weiss is c/o Terrapin Palisades Ventures LLC, 1001 Rivas Canyon Road, Pacific Palisades, California 90272. This amount excludes 248,119 shares of common stock held by the Weiss Family Trust dated August 7, 2000 of which Mr. Weiss does not have beneficial ownership. Mr. Weiss is currently a director and has served as a member of our Board since the Aldabra Merger. He was Aldabra's Chief Executive Officer, Secretary and a member of Aldabra's Board of Directors from Aldabra's inception in 2004 until the completion of the Aldabra Merger.

- (9) The business address for Mr. Berger is c/o Tellurian Partners, LLC, 1170 Peachtree Street NE, Atlanta, Georgia 30309. Mr. Berger is currently a director and has served as a member of our Board since the Aldabra Merger.
- (10) The business address for Mr. Deutsch is P.O. Box 817689, Hollywood, Florida 33081. Mr. Deutsch is currently a director and has served as a member of our Board since the Aldabra Merger. He was a member of Aldabra's Board of Directors from its inception in 2004 until the completion of the Aldabra Merger.
- (11) The address for Mr. Biemeck is 39851 N. Old Stage Road, Cave Creek, AZ 85331. Mr. Biemeck is currently a director and has served as a member of our Board since the Aldabra Merger. From 1994 to April 1999, Mr. Biemeck was Senior Vice President, Chief Financial Officer and Treasurer of Great Lakes.
- (12) Mr. Lowry has been the Executive Vice President and Chief Operating Officer of the Company since 1995.
- (13) Ms. Wensel has been the Chief Financial Officer and Treasurer of the Company since April 1999 and was named Senior Vice President in 2002.
- (14) Mr. Simonelli has been a Vice President of the Company since 2002 and was named Special Projects Manager in 1996.
- (15) Mr. Johnson has been Chief Contract Manager of the Company since 2006 and was named a Vice President in 2002.
- (16) Mr. Hansen has been a Vice President and Division Manager of the Company since 1995.
- (17) Mr. Hanson has been a Vice President of the Company since 2006 and joined the Company in 1988 as an Area Engineer in its Staten Island Division Office.
- (18) Mr. Karas has been Vice President and Chief Estimator since 1992.
- (19) Mr. O'Hara has been a Division Manager of the Company since 1987 and was named a Vice President in 1988.
- (20) Mr. Pagendarm has been a Vice President and Division Manager of the Company since 1985.
- (21) The individual is currently an employee of Great Lakes Dredge and Dock Corporation or one of its subsidiaries or affiliates.
- (22) Mr. Fletcher was an employee of Great Lakes Dredge and Dock Corporation or one of its subsidiaries until August 1, 2007.
- (23) Mr. Gross was a member of Aldabra's Board of Directors until the completion of the Aldabra Merger.
- (24) Shares held by Elizabeth Barkin Leight as trustee of the Leight Family 1998 Irrevocable Trust.
- (25) A son or daughter, as applicable, of Douglas B. Mackie, our President and Chief Executive Officer and a director of the Company.
- (26) Shares held by Murray Sprung as trustee of the Weiss Family Trust dated August 7, 2000.

Material Relationships:

Investor Rights Agreement. In connection with the merger of our predecessor GLDD Acquisitions Corp. into a subsidiary of Aldabra Acquisition Corporation ("Aldabra") on December 26, 2006 (the "Aldabra Merger"), Aldabra, Great Lakes, and certain other investors entered into an investor rights agreement. The investor rights agreement provides for certain registration rights with respect to shares

of common stock held by former Aldabra stockholders who are party to the investor rights agreements (the "Aldabra Registrable Securities") and other Great Lakes stockholders who are party to the investor rights agreement (the "Other Registrable Securities"). Holders of at least a majority of Aldabra Registrable Securities since February 17, 2008 have had the right to demand registration under the Securities Act of all or any portion of their registrable securities subject to certain amount and time limitations. Holders of the Aldabra Registrable Securities may only demand one long-form registration and one short-form registration. Additionally, whenever we propose to register any of its securities under the Securities Act and the registration form to be used may be used for the registration of registrable securities, holders of Aldabra Registrable Securities or Other Registrable Securities will have the right to request the inclusion of their registrable securities in such registration.

USE OF PROCEEDS

All of the shares of common stock offered by the selling stockholders pursuant to this prospectus will be sold by the selling stockholders for their account. We will not receive any of the proceeds from these sales.

PLAN OF DISTRIBUTION

We are registering 4,341,194 shares of our common stock for possible sale by the selling stockholders. Unless the context otherwise requires, as used in this prospectus, "selling stockholders" includes the selling stockholders named in the table above and donees, pledgees, transferees or other successors-in-interest selling shares received from the selling stockholders as a gift, pledge, partnership distribution or other transfer after the date of this prospectus.

The selling stockholders may offer and sell all or a portion of the shares covered by this prospectus from time to time, in one or more or any combination of the following transactions:

- on the NASDAQ Global Market, in the over-the-counter market or on any other national securities exchange on which our shares are listed or traded;
- in privately negotiated transactions;
- in underwritten transactions;
- in a block trade in which a broker-dealer will attempt to sell the offered shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through purchases by a broker-dealer as principal and resale by the broker-dealer for its account pursuant to this prospectus;
- in ordinary brokerage transactions and transactions in which the broker solicits purchasers; and
- through the writing of options (including put or call options), whether the options are listed on an options exchange or otherwise.

The selling stockholders may sell the shares at prices then prevailing or related to the then current market price or at negotiated prices. The offering price of the shares from time to time will be determined by the selling stockholders and, at the time of the determination, may be higher or lower than the market price of our common stock on the NASDAQ Global Market or any other exchange or market.

The shares may be sold directly or through broker-dealers acting as principal or agent, or pursuant to a distribution by one or more underwriters on a firm commitment or best-efforts basis. The selling stockholders may also enter into hedging transactions with broker-dealers. In connection with such transactions, broker-dealers of other financial institutions may engage in short sales of our common stock in the course of hedging the positions they assume with the selling stockholders. The selling stockholders may also enter into options or other transactions with broker-dealers or other financial institutions which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). In connection with an underwritten offering, underwriters or agents may receive compensation in the form of discounts, concessions or commissions from the selling stockholders or from purchasers of the offered shares for whom they may act as agents. In addition, underwriters may sell the shares to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents. The selling stockholders and any underwriters, dealers or agents participating in a distribution of the shares may be deemed to be "underwriters" within the meaning of the Securities Act, and any profit on the sale of the shares by the selling stockholders and any commissions received by broker-dealers may be deemed to be underwriting commissions under the Securities Act.

The selling stockholders may agree to indemnify an underwriter, broker-dealer or agent against certain liabilities related to the selling of the common stock, including liabilities arising under the Securities Act. Under the investor rights agreement, we have agreed to indemnify the selling stockholders against certain liabilities related to the sale of the common stock, including certain liabilities arising under the Securities Act. Under the investor rights agreement, we have also agreed to pay certain costs, expenses and fees of registering the shares of common stock; however, the selling stockholders will pay any underwriting discounts or commissions relating to the sale of the shares of common stock in any underwritten offering.

The selling stockholders have advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their shares. Upon our notification by a selling stockholder that any material arrangement has been entered into with an underwriter or broker-dealer for the sale of shares through a block trade, special offering, exchange distribution, secondary distribution or a purchase by an underwriter or broker-dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing certain material information, including:

- the name of the selling stockholder;
- the number of shares being offered;
- the terms of the offering;
- the names of the participating underwriters, broker-dealers or agents;
- any discounts, commissions or other compensation paid to underwriters or broker-dealers and any discounts, commissions or concessions allowed or reallocated or paid by any underwriters to dealers;
- the public offering price; and
- other material terms of the offering.

In addition, upon being notified by a selling stockholder that a donee, pledgee, transferee, other successor-in-interest intends to sell more than 500 shares, we will, to the extent required, promptly file a supplement to this prospectus to name specifically such person as a selling stockholder.

The selling stockholders are subject to the applicable provisions of the Securities Exchange Act of 1934, as amended, or Exchange Act, and the rules and regulations under the Exchange Act, including Regulation M. This regulation may limit the timing of purchases and sales of any of the shares of common stock offered in this prospectus by the selling stockholders. The anti-manipulation rules under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. Furthermore, Regulation M may restrict the ability of any person engaged in the distribution of the shares to engage in market-making activities for the particular securities being distributed for a period of up to five business days before the distribution. The restrictions may affect the marketability of the shares and the ability of any person or entity to engage in market-making activities for the shares.

To the extent required, this prospectus may be amended and/or supplemented from time to time to describe a specific plan of distribution. Instead of selling the shares of common stock under this prospectus, the selling stockholders may sell the shares of common stock in compliance with the provisions of Rule 144 under the Securities Act, if available, or pursuant to other available exemptions from the registration requirements of the Securities Act.

LEGAL MATTERS

The validity of the shares of common stock offered pursuant to this prospectus will be passed upon by Neal, Gerber & Eisenberg LLP, Chicago, Illinois.

EXPERTS

The consolidated financial statements, and the related financial statement schedule, incorporated in this prospectus by reference from the Company's Current Report on Form 8-K filed on August 10, 2009, and the effectiveness of Great Lakes Dredge & Dock Corporation and subsidiaries' internal control over financial reporting incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2008, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such consolidated financial statements and financial statement schedule have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

The financial statements of Amboy Aggregates (Joint Venture) and Subsidiary as of December 31, 2008 and 2007, and for each of the three years in the period ended December 31, 2008 appearing in our Form 10-K for the year ended December 31, 2008 have been audited by J.H. Cohn LLP, an independent public accounting firm, and are incorporated by reference herein upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

The following documents, which have been filed with the SEC by us, are incorporated by reference in this prospectus (other than portions of these documents that are either (1) described in paragraph (e) of Item 201 of Registration S-K or paragraphs (d)(1)-(3) and (e)(5) of Item 407 of Regulation S-K promulgated by the SEC or (2) furnished under Item 2.02 or Item 7.01 of a Current Report on Form 8-K):

- (1) our Annual Report on Form 10-K for the year ended December 31, 2008;
- (2) our Quarterly Report on Form 10-Q for the quarters ended March 31, 2009, June 30, 2009 and September 30, 2009;

(3) our Current Reports on Form 8-K filed on February 5, 2009, February 19, 2009, March 11, 2009, April 29, 2009, May 18, 2009, June 1, 2009, August 10, 2009, August 14, 2009, September 1, 2009, September 2, 2009, October 5, 2009 and October 9, 2009;

(4) our proxy statement for the 2009 annual meeting of stockholders filed on April 6, 2009; and

(5) the description of our Common Stock, par value \$.0001 per share, as contained in our registration statement on Form S-1 filed on June 19, 2007 including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference the information contained in all other documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than portions of these documents that are either (1) described in paragraph (e) of Item 201 of Regulation S-K or paragraphs (d)(1)-(3) and (e)(5) of Item 407 of Regulation S-K promulgated by the SEC or (2) furnished under Item 2.02 or Item 7.01 of a Current Report on Form 8-K, unless otherwise indicated therein) after the date of this prospectus and prior to the termination of this offering. The information contained in any such document will be considered part of this prospectus from the date the document is filed with the SEC.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed to be modified or superseded to the extent that a statement contained in this prospectus or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may read and copy any reports, proxy statements or other materials and information we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Copies of such materials also can be obtained at the SEC's website, www.sec.gov, free of charge, or by mail from the Public Reference Room of the SEC, at prescribed rates. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our SEC filings are also available to the public, free of charge, on our corporate website, www.gldd.com as soon as reasonably practicable after we electronically file such material with, or furnishes it to, the SEC.

We undertake to provide without charge to any person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon oral or written request of such person, a copy of any or all of the documents that have been incorporated by reference in this prospectus, other than exhibits to such other documents (unless such exhibits are specifically incorporated by reference therein). Requests for such copies should be directed to:

Great Lakes Dredge & Dock Corporation
2122 York Road
Oak Brook, IL
Attn: Assistant General Counsel
Telephone: (630) 574-3000

