

**UNITED STATES
SECURITIES AND EXCHANGE
COMMISSION**

Washington, D.C. 20549

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934
(Amendment No. 1)*

OMB APPROVAL

OMB Number:
3235-0145

Expires: December 31, 2005

Estimated average burden hours
per response. . 11

Great Lakes Dredge & Dock Corporation

(Name of Issuer)

Common Stock, par value \$0.0001 per share

(Title of Class of Securities)

390607 10 9

(CUSIP Number)

Madison Dearborn Partners, L.L.C.

70 W. Madison Street, Suite 3800

Chicago, Illinois 60602

(312) 895-1000

c/o Mark Tresnowski, General Counsel

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

COPY TO:

Carol Anne Huff

Kirkland & Ellis LLP

200 E. Randolph Drive

Chicago, Illinois 60601

(312) 861-2000

August 1, 2006

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. o

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See Instructions)
00

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization
Delaware

7. Sole Voting Power
None

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power
14,257,572 shares of Common Stock

9. Sole Dispositive Power
None

10. Shared Dispositive Power
14,257,572 shares of Common Stock

11. Aggregate Amount Beneficially Owned by Each Reporting Person
14,257,572 shares of Common Stock (See Item 5)

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)
24.5% of Common Stock (See Item 5)

14. Type of Reporting Person (See Instructions)
PN

1. Names of Reporting Persons.
I.R.S. Identification Nos. of above persons (entities only)
Madison Dearborn Partners IV, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See Instructions)
00

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization
Delaware

7. Sole Voting Power
None

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power
14,257,572 shares of Common Stock

9. Sole Dispositive Power
None

10. Shared Dispositive Power
14,257,572 shares of Common Stock

11. Aggregate Amount Beneficially Owned by Each Reporting Person
14,257,572 shares of Common Stock (See Item 5)

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)
24.5% of Common Stock (See Item 5)

14. Type of Reporting Person (See Instructions)
PN

Item 1. Security and Issuer.

The class of equity security to which this statement relates is the Common Stock, par value \$0.0001 per share (the "Common Stock"), of Great Lakes Dredge & Dock Corporation, a Delaware corporation (the "Company"). The principal executive offices of the Company are located at 2122 York Road, Oak Brook, Illinois 60523.

Item 2. Identity and Background.

This statement is being jointly filed by each of the following persons pursuant to Rule 13d-1(k) promulgated by the Securities and Exchange Commission (the "Commission") pursuant to Section 13 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"):

- (i) Madison Dearborn Capital Partners IV, L.P. ("MDCP IV"), a Delaware limited partnership, by virtue of its being the record holder of 14,257,572 shares of Common Stock of the Company; and
- (ii) Madison Dearborn Partners IV, L.P. ("MDP IV"), a Delaware limited partnership, by virtue of its being the general partner of MDCP IV,

all of whom are collectively referred to as the "Reporting Persons." The Reporting Persons have entered into a Joint Filing Agreement dated January 5, 2007, incorporated by reference in Exhibit A hereto, pursuant to which the Reporting Persons have agreed to file this statement jointly in accordance with the provisions of Rule 13d-1(k)(1) under the Exchange Act. The Reporting Persons expressly disclaim that they have agreed to act as a group other than as described in this statement.

Pursuant to Rule 13d-4 of the Exchange Act, the Reporting Persons expressly declare that the filing of this statement shall not be construed as an admission that any such person is, for the purposes of Section 13(d) and/or Section 13(g) of the Exchange Act or otherwise, the beneficial owner of any securities covered by this statement held by any other person.

Certain information required by this Item 2 concerning the limited partner committee of MDP IV is set forth on *Schedule A* attached hereto, which is incorporated herein by reference.

The address of the principal business office of each of MDCP IV and MDP IV is c/o Madison Dearborn Partners, L.L.C., 70 W. Madison Street, Suite 3800, Chicago, Illinois 60602.

MDCP IV is a private equity investment fund. MDP IV is engaged primarily in the business of serving as the general partner of MDCP IV.

None of the Reporting Persons nor, to the best of their knowledge, the Reporting Persons' executive officers, managing directors or general partners (as applicable) has, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

None of the Reporting Persons nor, to the best of their knowledge, the Reporting Persons' executive officers, managing directors or general partners (as applicable) has, during the last five years, been party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

Information with respect to each Reporting Person is given solely by such Reporting Person and no Reporting Person assumes responsibility for the accuracy or completeness of the information furnished by another Reporting Person. The Reporting Persons expressly disclaim that they have agreed to act as a group other than as described herein.

Item 3. Source and Amount of Funds or Other Consideration.

On August 1, 2007, MDCP IV and certain other selling stockholders of the Company entered into an underwriting agreement with Banc of America Securities LLC and Lehman Brothers Inc., as joint book-running managers, whereby MDCP IV agreed to sell 12,450,830 shares of Common Stock. MDCP IV sold 12,450,830 shares of Common Stock to the underwriters pursuant to a final prospectus filed with the Commission on August 2, 2007, Commission File Number 333-143888. The underwriting agreement and the final prospectus are incorporated by reference in Exhibits B and C hereto.

Item 4. Purpose of Transaction.

The Reporting Persons are engaged in the investment business and based on their analysis have determined to dispose of a portion of their holdings in the Company at this time.

As previously disclosed, the Company, MDCP IV and certain other stockholders of the Company are parties to an investor rights agreement dated December 26, 2006. The investor rights agreement provides that, from and after the time that MDCP IV is no longer entitled to designate directors with multiple votes (as determined by the Company's certificate of incorporation), MDCP IV will have the right to designate a number of directors to the Company's board proportional to the voting power represented by the shares of the Company's capital stock that MDCP IV owns until such time as MDCP IV owns less than 5% of the voting power of all of the outstanding capital stock of the Company. Holders of more than 25% of the MDCP IV shares will have certain information and inspection rights. Additionally, the investor rights agreement sets forth affirmative and negative covenants to which the Company will be subject to as long as MDCP IV owns more than 25% of the voting power of the Company. The negative covenants restrict the Company from conducting certain activities or taking certain actions, including, without limitation, making distributions on its capital stock, redemptions, purchase or acquisitions of its equity securities, issuance of debt or convertible or exchangeable debt securities, mergers and acquisitions, asset sales, liquidations, recapitalizations, non-

ordinary business activities, change of organizational documents, and change of arrangements with its officers, directors, employees and other related persons. Pursuant to the affirmative covenants, without the prior written consent of MDCP IV, the Company is required to perform certain activities, including, without limitation, preservation of its corporate existence and material licenses, authorizations and permits necessary to the conduct of its business, maintenance of its material properties, discharge of certain statutory liens, performance under material contracts, compliance with applicable laws and regulations, preservation of adequate insurance coverage, and maintenance of proper books of record and account.

The investor rights agreement also provides for certain registration rights with respect to shares held by the stockholders that are party to the investor rights agreement. Holders of at least a majority of the shares acquired by MDCP IV will have the right to demand registration under the Securities Act of all or any portion of their registrable securities subject to certain limitations. Holders of these shares may demand three long-form registrations and an unlimited number of short-form registrations. Additionally, whenever the Company proposes 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, MDCP IV may request the inclusion of its registrable securities in such registration.

6

Except as set forth in the preceding paragraphs, as of the date hereof, the Reporting Persons do not have any plan or proposal that relates to or would result in:

- (a) The acquisition by any person of additional securities of the Company, or the disposition of securities of the Company;
- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Company or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Company or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Company, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Company;
- (f) Any other material change in the Company's business or corporate structure;
- (g) Changes in the Company's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Company by any person;
- (h) Causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or
- (j) Any action similar to any of those enumerated above.

Notwithstanding the foregoing, the Reporting Persons reserve the right to effect any such actions as any of them may deem necessary or appropriate in the future.

The foregoing discussion is qualified in its entirety by reference to the investor rights agreement, incorporated by reference as Exhibit D hereto.

The information set forth in Item 3 of this Schedule 13D/A is hereby incorporated by reference.

Item 5. Interest in Securities of the Issuer.

- (a)-(b) MDCP IV has the shared power to vote and dispose of 14,257,572 shares, constituting approximately 24.5% of the outstanding Common Stock. MDP IV, as the general partner of MDCP IV, may also be deemed to share the power to vote and dispose of the shares held by MDCP IV.

The Reporting Persons expressly disclaim that they have agreed to act as a group other than as described herein. The filing of this Schedule 13D/A by MDCP IV and MDP IV shall not be considered an admission that such Reporting Persons, for the purpose of Section 13(d) of the Exchange Act, are the beneficial owners of any of the shares.

7

All of the percentages calculated in this Schedule 13D/A are based upon an aggregate of 58,459,824 shares of Common Stock outstanding as of August 1, 2007.

- (c) Except for the transactions described herein, there have been no other transactions in the securities of the Company effected by the Reporting Persons in the last 60 days.
- (d) To the knowledge of the Reporting Persons, no other persons have the right to receive or the power to direct the receipt of dividends from, or proceeds from the sale of, the shares.

(e) Inapplicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

The investor rights agreement described in Item 4 of this Schedule 13D/A is hereby incorporated by reference. Except for the investor rights agreement, to the best knowledge of the Reporting Persons, there are no contracts, arrangements, understandings or relationships (legal or otherwise) between the persons enumerated in Item 2 of this Schedule 13D/A, and any other person, with respect to any securities of the Company, including, but not limited to, transfer or voting of any of the securities, finder's fees, joint ventures, loan or option agreements, puts or calls, guarantees of profits, divisions of profits or loss, or the giving or withholding of proxies.

Item 7. Material to be filed as Exhibits.

Exhibit A—Schedule 13D Joint Filing Agreement (incorporated by reference to Exhibit A to the Reporting Persons' Schedule 13D filed with the Commission on January 5, 2007, Commission File Number 005-82317)

Exhibit B—Underwriting Agreement (incorporated by reference to Exhibit 1.1 to the Company's S-1/A filed with the Commission on July 20, 2007, Commission File Number 333-143888)

Exhibit C—Final Prospectus (incorporated by reference to the Prospectus filed pursuant to 424(b)4 with the Commission on August 2, 2007, Commission File Number 333-143888)

Exhibit D—Investor Rights Agreement (incorporated by reference to Exhibit 10.17 to Aldabra Acquisition Corporation's Current Report on Form 8-K filed with the Commission on December 26, 2006, Commission File Number 000-51150)

8

SIGNATURES

After reasonable inquiry and to the best of each of the undersigned's knowledge and belief, each of the undersigned certify that the information set forth in this statement is true, complete and correct.

Date: August 10, 2007

Madison Dearborn Capital Partners IV, L.P.

By: Madison Dearborn Partners IV, L.P.
Its: General Partner

By: Madison Dearborn Partners, L.L.C.
Its: General Partner

By: /s/ Thomas S. Souleles
Name: Thomas S. Souleles
Its: Managing Director

Madison Dearborn Partners IV, L.P.

By: Madison Dearborn Partners, L.L.C.
Its: General Partner

By: /s/ Thomas S. Souleles
Name: Thomas S. Souleles
Its: Managing Director

9

SCHEDULE A

Persons Controlling MDP IV: John A. Canning, Jr., Paul J. Finnegan and Samuel M. Menco are the sole members of a limited partner committee of MDP IV that has the power, acting by majority vote, to vote or dispose of the shares held by MDCP. The general partner of MDP IV is Madison Dearborn Partners, L.L.C., a Delaware limited liability company, whose principal business is serving as the general partner of MDP IV and certain other affiliated investment funds. The principal business address of each of these individuals and of Madison Dearborn Partners, L.L.C. is c/o Madison Dearborn Partners, L.L.C., 70 W. Madison, Suite 3800, Chicago, Illinois 60602, telephone (312) 895-1000. Each of these persons is a United States citizen.

