

NOTE: If you wish to address the MWD Board of Directors during discussion of an agenda item, or during the PUBLIC FORUM, please complete a Speaker Request card (blue in color) and give it to the Board Secretary. Unless a detailed presentation of an agenda item is required by the Board of Directors, it is requested that each speaker limit comments to FIVE MINUTES. All testimony given before the Board of Directors is tape recorded.

A G E N D A
BIG BEAR MUNICIPAL WATER DISTRICT

BOARD OF DIRECTORS
Regular Meeting
February 4, 2010

PLACE: Big Bear Municipal Water District
40524 Lakeview Drive, Big Bear Lake, CA 92315

Next Resolution Number: 2010- 02

OPEN SESSION: 1:00 P.M.

- 1. CALL TO ORDER**
- 2. PLEDGE OF ALLEGIANCE**
- 3. DISCUSSION AND ACTION ON CLOSED SESSION ITEMS**
- 4. REPORTS**
 - A. General Manager
 - B. Lake Manager
 - C. Legal
 - D. Committee
 - E. Other
- 5. CONSENT CALENDAR**
 - A. Minutes of an Adjourned Regular Meeting of January 25, 2010
 - B. Warrant List Dated January 29, 2010 for \$14,480.10
- 6. BUSINESS**
 - A. Quagga Initiative Update for summer 2010 – Receive report (no action)
 - B. Dam Maintenance Access Bridge – Receive report and discuss financing (no action)
 - C. Authorize staff to solicit proposals for CEQA work for Big Bear Marina Dredge project

7. PUBLIC FORUM

(The Board will receive comments from the public on items not on the agenda; no action is permitted on these items. Time set aside not to exceed 30 minutes total by all participants)

8. ANNOUNCEMENTS

9. DIRECTOR COMMENTS

10. ADJOURNMENT

NEXT MEETING: Open Session at 1:00 P.M.
Thursday, February 18, 2010
Big Bear Municipal Water District
40524 Lakeview Drive, Big Bear Lake, CA

***MINUTES OF AN ADJOURNED REGULAR MEETING OF
BIG BEAR MUNICIPAL WATER DISTRICT
HELD ON MONDAY, JANUARY 25, 2010***

CALL TO ORDER

President Fashempour called the Open Session to order at 1:00 PM. Those in attendance included Director Eminger, Director Suhay, Director Smith, Director Murphy, General Manager Scott Heule, Lake Manager Mike Stephenson, and Board Secretary Vicki Sheppard.

REPORTS

Mr. Heule reported that due to heavy snow the office closed at 3:30 pm on Wednesday, January, 20th. He stated that on Thursday the office opened late (about 9:00 am) and closed early at 2:00 pm, and on Friday, January 22, the office was closed all day. He commented that John Tuttle and Eric Turney came in early Thursday morning and worked hard plowing the parking lot. He added that Travis Carroll shoveled snow out of the patrol boat at Big Bear Marina Thursday afternoon and then again Friday and Sunday because it was threatening to swamp the boat. Mr. Heule reported that Saturday, the Big Bear Marina office nearly sank due to the weight of the snow. He added that the fire department helped Alan Sharp and his crew pump water and shovel snow. Mr. Heule reported that he has been in touch with Rob Richardson of Flatiron Construction to be sure we are on the same page should the need arise to release water from the lake. He explained that theoretically there is not any problem for their construction should the spillway gates need to be opened for a lake release. He added that we will need to reschedule the Watershed/Lake Improvement and Facilities Committee meetings that were cancelled last week. He added that the lake has come up a foot in the last few days.

Mr. Stephenson reported that he and Eric Turney have been plowing snow since 5am this morning. He explained that John Tuttle is out with the flu. He added that Jim Weber has been checking lake tributaries.

Mr. Heule reported that legal is working on the Conroy case.

APPROVAL OF CONSENT CALENDAR

Upon a motion by Director Eminger, seconded by Director Suhay, the following consent items were unanimously approved:

- Minutes of a Regular Meeting of January 7, 2010
- Warrant List Dated January 15, 2010 for \$118,753.26

CONSIDER APPROVAL OF NEW, YEAR ROUND RAMP ATTENDANT SUPERVISOR POSITION

Mr. Heule reported that the past two boating seasons have required significant increases in seasonal staffing levels at the District's two public launch ramps. He explained that seasonal staffing increased from three full time positions in 2007, to 6 full time positions and one part time position in 2008, and five full time and two part time positions in 2009. He added that in 2009, seasonal ramp attendant positions were supplemented with once a week, four hour shifts, by two District office staffers. He stated that as a result of this increase in seasonal staffing, existing District staff has not been able to provide the supervision at the ramps that is necessary to assure that all District interests are being protected. He explained that current ramp supervisory responsibilities are included in the job description of the Lake Operations Supervisor who is also responsible for four Lake Patrol Officers, Dispatch, and the private dock program.

Mr. Heule made a PowerPoint presentation explaining that the Lake Operations Supervisor's span of control is too large to provide adequate oversight of seasonal launch ramp employees that provide staffing at the ramps seven days a week and up to 13 hours each day. He reported that employee morale, accountability, and customer service has suffered. He stated that staff is recommending adding a year round full time Launch Ramp Attendant Supervisor position with benefits who would report to the Lake Operations Supervisor. He explained that the responsibilities of this new position would include direct supervision of ramp attendants and part time ramp attendant duties in addition to occasional Lake Patrol fill-in and off season maintenance technician and during the boating season, this position will be scheduled for weekends with two weekdays off. Mr. Heule reported that this position would be advertised at a pay scale range of \$2,410 (\$15.06/hr) to \$3,230 per month (\$20.18/hr) depending on qualifications. He stated that adding this position beginning March 1, 2010 has a neutral impact on the current fiscal year budget for two reasons: (1) The District has realized savings due to vacating the Maintenance Technician position and postponed replacement of the Maintenance Coordinator position. The Maintenance Technician position will be eliminated. The Maintenance Coordinator position has been filled with an employee at the lowest step replacing an employee who had reached the highest step several years ago.

(2) During the boating season the Launch Ramp Attendant Supervisor will eliminate one part time position at the ramps, saving the District a minimum of 16 hours weekly. Mr. Heule explained that the financial impact for FY 2009-10 should show a budget savings of about \$30,000 adding that if summer staffing remains similar to existing conditions in subsequent years, payroll costs will decrease below FY2009-10 budget levels by about \$20,000. (See PowerPoint attached)

Director Suhay asked what the new person would be doing in the off season. Mr. Heule stated that they would be stationed at the East Ramp during the boating season and during the off season would work maintenance and be stationed at the Lake Patrol desk in the main office.

President Fashempour asked if seasonal Lake Patrol would be excused earlier in the season due to this new position. Mr. Stephenson stated that the Lake Patrol officers are usually used in maintenance as the season winds down. Mr. Heule stated that the District will capitalize on the strong points of the new employee depending on his skills (Lake Patrol and/or Maintenance).

President Fashempour asked how many projects will be carried over to the off season. Mr. Heule explained that there will be plenty of work to keep the new person busy in the off season.

Director Smith commented that if the new person is going to be responsible for supervising the launch ramp attendants, shouldn't that person have been a ramp attendant so they understand first-hand the duties of the position. He asked if there was a seasonal employee that the District could move up into this position instead of having to re-train someone new. Mr. Heule stated that there is a chance that no ramp attendants will be returning but there is one seasonal who may be applying for the new position.

Director Smith asked for clarification of the employee morale issue. Mr. Heule explained that seasonal employees are physically removed from the main office employees and they feel isolated. He added that they receive low pay and in order to keep morale up they need to be kept in the loop of day to day District activities and information.

Director Suhay moved approval of new, year round ramp attendant supervisor position.

Director Murphy seconded the motion and it was unanimously approved.

PUBLIC FORUM

No comments were made

ANNOUNCEMENTS

Mr. Heule reported that the Operations Committee has concluded that enough time and effort has gone into the issue of kayak rental businesses and is ready to make a recommendation to the full Board for consideration. He commented that so far there has been good response to the Ramp Attendant and Maintenance positions that are being advertised.

DIRECTOR COMMENTS

No comments were made

ADJOURNMENT

There being no further business, the meeting was adjourned at 1:32 P.M.

NEXT MEETING

Open Session at 1:00 P.M.
Thursday, February 4, 2010
Big Bear Municipal Water District
40524 Lakeview Drive, Big Bear Lake, CA

Vicki Sheppard
Secretary to the Board
Big Bear Municipal Water District

(SEAL)

January 25, 2010
Consider Approval of New
Ramp Attendant Supervisor Position

Big Bear Municipal Water District



Recommendation

- Conceptually discussed with Administrative Committee on October 27, 2009
- Scheduling conflict prevented a Committee recommendation
- New position being proposed by Staff

Background

- During 2007 and earlier three full time ramp attendants
- In 2008 staffing increased to six full time and one part time seasonal ramp attendants
- In 2009 staffing included five full time, two part time and weekly four hour shifts by two office staffers
- Lake Operations Supervisor supervises Lake Patrol, Ramp Attendants , Dispatch and manages the lake dock program (12 seasonals)

The Need

- Seasonal employees need closer supervision and more attention than year round employees
- Span of control of Lake Operations Supervisor is too wide
- Morale suffers - customer service suffers – employee frustration
- Accountability is lacking (financial and job duties) and Districts' interests are suffering

Proposed Job Duties

- Reports to Lake Operations Supervisor
- Summertime work includes weekends
- Onsite direct supervision of Ramp Attendants
- Manage all ramp operations
- Schedules, assign duties, cash handling oversight, off season maintenance/Lake Patrol
- Replace one part time Ramp Attendant (16-24 hrs/week)

Finances

	Budget FY 09-10	Actual FY 09-10	Proposed Actual FY 09-10	Proposed Budget FY 10-11
Maintenance Coordinator	\$54,974	\$33,997	\$33,997	\$39,062
Maintenance Technician	\$30,388	\$10,519	\$10,519	\$0.00
Proposed Ramp Supervisor	\$0.00	\$0.00	\$10,304	\$35,148
Total	\$85,362	\$44,516	\$54,820	\$74,210

(Spreadsheet does not show salary savings of one part time Ramp Attendant position, \$9,069 min.)

**Big Bear Municipal Water District
 Computer & Manual Check Register
 Current and History Files, After 01/15/10
 Account 10010-00-001, Sessions 000000 to 001786**

**Active Sessions (Not Included in Report)
 001760**

<u>Check</u>	<u>Payment / Vendor Information</u>	<u>Ck Date</u>	<u>Prty</u>	<u>Invoice</u>	<u>Session</u>	<u>Reference</u>	<u>Amount</u>
Checking Account: 10010-00-001							
147765	ALLPRO / All Protection Alarm Co.	01/26/10	2	31944	001785	FACILMAINT	135.00
147765		01/26/10	2	31945	001785	FACILMAINT	30.00
147765		01/26/10	2	32019	001785	MAINT-SHOP	60.00
147765		01/26/10	2	32060	001785	FACILMAINT	35.00
147765		01/26/10	2	32341	001785	FACILMAINT	175.00
147765		01/26/10	2	32570	001785	DAM MAINT	120.00
ALLPRO Subtotal :							555.00
147766	ASPENP / Aspen Publishers, Inc.	01/26/10	2	68271808	001785	SUBSCRIPTO	351.00
ASPENP Subtotal :							351.00
147767	ATT785 / AT&T	01/26/10	2	01132010	001785	PHONE-LD	30.27
ATT785 Subtotal :							30.27
147768	BBPRIN / BIG BEAR PRINTING & GRAPHICS	01/26/10	2	5662	001785	QUAGGAPRIN	251.42
BBPRIN Subtotal :							251.42
147769	BBSHET / Big Bear Sheet Metal	01/26/10	2	01082010	001785	FACILMAINT	305.64
BBSHET Subtotal :							305.64
147770	BUTCHR / Butcher's Block & Building Materi	01/26/10	2	293050	001785	DAM MAINT	59.79
147770		01/26/10	2	293458	001785	FACILMAINT	2.94
147770		01/26/10	2	294000	001785	RVMAINT	9.22
147770		01/26/10	2	294802	001785	DAM MAINT	21.70
147770		01/26/10	2	294803	001785	SHOP MAINT	27.67
BUTCHR Subtotal :							121.32
147771	BVELEC / Bear Valley Electric	01/26/10	2	01072010A	001785	UTIL-RV	67.56
147771		01/26/10	2	01072010B	001785	UTIL-MAIN	2059.96
147771		01/26/10	2	01072010C	001785	UTIL-MAIN	19.15
147771		01/26/10	2	123109	001785	UTIL-DAM	13.12
BVELEC Subtotal :							2159.79
147772	BVPRIN / Bear Valley Printing	01/26/10	2	79302	001785	QUAGGAPRIN	245.75
147772		01/26/10	2	79305	001785	PRINTING	217.50
BVPRIN Subtotal :							463.25
147773		01/26/10	2	79304	001785	QUAGGAPRIN	282.83
BVPRIN Subtotal :							282.83

**Big Bear Municipal Water District
 Computer & Manual Check Register
 Current and History Files, After 01/15/10
 Account 10010-00-001, Sessions 000000 to 001786**

**Active Sessions (Not Included in Report)
 001760**

<u>Check</u>	<u>Payment / Vendor Information</u>	<u>Ck Date</u>	<u>Prty</u>	<u>Invoice</u>	<u>Session</u>	<u>Reference</u>	<u>Amount</u>
147774	CBSOA / CA Boating Safety Officers Assoc.	01/26/10	2	2010	001785	MEMBERSHIP	50.00
						CBSOA Subtotal :	50.00
147775	DISH / Dish Network	01/26/10	2	01042010	001785	UTIL-MAIN	50.98
						DISH Subtotal :	50.98
147776	DIVERS / Diversified Products, Inc.	01/26/10	2	9081352	001785	PATROLMAIN	93.18
						DIVERS Subtotal :	93.18
147777	ENDURA / Endura Steel, Inc.	01/26/10	2	5394074	001785	RVMAINT	108.75
						ENDURA Subtotal :	108.75
147778	FEDRAL / Federal Express, Corp.	01/26/10	2	946049308	001785	SHIPPING	9.47
						FEDRAL Subtotal :	9.47
147779	IDEARC / Idearc Media Corp.	01/26/10	2	01012010	001785	PHONE-MAIN	62.75
147779		01/26/10	2	01192010	001785	PHONE-WEB	29.95
						IDEARC Subtotal :	92.70
147780	MERCER / Mercer Tire Co.	01/26/10	2	38471	001785	OFFRDMMAINT	25.00
						MERCER Subtotal :	25.00
147781	NOS / NOS Communications, Inc.	01/26/10	2	01182010	001785	PHONE-LD	347.36
						NOS Subtotal :	347.36
147782	PERS / Public Employees' Retirement Syst	01/26/10	2	0120103	001785	PERS	3906.57
						PERS Subtotal :	3906.57
147783	PITNY / PITNEY BOWES (RENTAL)	01/26/10	2	JA10	001785	POSTAGE	121.00
						PITNY Subtotal :	121.00
147784	RDIOSH / RadioShack	01/26/10	2	496097	001785	RADIOBASE	21.72
						RDIOSH Subtotal :	21.72
147785	SWSTGS / Southwest Gas Corp	01/26/10	2	01182010A	001785	UTIL-MAIN	473.84
147785		01/26/10	2	01182010B	001785	UTIL-RV	55.85
						SWSTGS Subtotal :	529.69
147786	TERMIN / TERMINIX INTERNATIONAL	01/26/10	2	291926657	001785	FACILMAINT	47.00
147786		01/26/10	2	292121484	001785	FACILMAINT	39.00

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 Current and History Files, After 01/15/10
 Account 10010-00-001, Sessions 000000 to 001786**

**Active Sessions (Not Included in Report)
 001760**

<u>Check</u>	<u>Payment / Vendor Information</u>	<u>Ck Date</u>	<u>Prty</u>	<u>Invoice</u>	<u>Session</u>	<u>Reference</u>	<u>Amount</u>
						TERMIN Subtotal :	86.00
147787	VERIZO / Verizon California	01/26/10	2	010110A	001785	PHONE-MAIN	590.42
147787		01/26/10	2	010110B	001785	PHONE-MAIN	50.78
147787		01/26/10	2	010110C	001785	PHONE-RAMP	41.32
147787		01/26/10	2	010110D	001785	PHONE-RAMP	40.59
147787		01/26/10	2	010110E	001785	PHONE-RAMP	42.59
147787		01/26/10	2	01132010	001785	PHONE-MAIN	48.42
147787		01/26/10	2	122509	001785	PHONE-WS	31.70
						VERIZO Subtotal :	845.82
147788	VERWIR / Verizon Wireless	01/26/10	2	830335518	001785	PHONE-CELL	197.38
						VERWIR Subtotal :	197.38
147789	WAXIE / WAXIE	01/26/10	2	71729515	001785	JANITSUPPL	470.78
						WAXIE Subtotal :	470.78
147790	XEROX / Xerox Corporation	01/26/10	2	45455941	001785	COPIER	3003.18
						XEROX Subtotal :	3003.18
						Total For Check Account: 10010-00-001	14480.10
						Check Register Total :	14480.10

**BIG BEAR MUNICIPAL WATER DISTRICT
REPORT TO BOARD OF DIRECTORS**

MEETING DATE: FEBRUARY 4, 2010

AGENDA ITEM: 6B

SUBJECT: DAM MAINTENANCE ACCESS BRIDGE REPORT - NO ACTION

RECOMMENDATION:

The General Manager and the Facilities Committee (Directors Fashempour and Smith) would like to discuss financing of this project.

DISCUSSION/FINDINGS:

The General Manager received an e-mail dated January 20th from Bryce Johnston (Caltrans) regarding Caltrans funding of replacement of the maintenance bridge. The message indicates that Mr. Johnston spoke with federal highway officials who helped provide funding for the new highway bridge project. They are in agreement with the direction Caltrans is moving to build the maintenance bridge as a part of the new highway bridge project. Mr. Johnston wants to meet again to determine what contribution will be needed from the District. During previous conversations with Mr. Johnston he indicated that a change order maintenance bridge project will be more costly than if it were bid separately. For planning purposes the Committee is assuming the construction cost for the maintenance bridge will be on the order of \$1.4 million with \$990,000 coming from Caltrans.

Simon Wong submitted a proposal to complete the plans and specifications for the maintenance bridge construction as a change order to the existing contract for the highway bridge. Simon Wong estimates that the work can be completed within about 12 weeks and the prices quoted will remain good for 12 months. The price for the engineering work comes to \$138,000. Including the railing study (\$4,900) and the original "Advance Planning Study" (\$13,200) the total engineering design costs for the maintenance bridge will come to \$156,000. The Committee then reviewed project costs assuming the \$990,000 contribution from Caltrans, and concluded that it is likely that to complete the project the District might be paying on the order of \$566,000 to complete the new maintenance bridge. The Facilities Committee would like to wait until the District has a written commitment from Caltrans regarding their participation before authorizing Simon Wong to proceed with the work outlined in their \$138,000 proposal.

OTHER AGENCY INVOLVEMENT: None

FINANCING: See above

Submitted by: Scott Heule, General Manager

**BIG BEAR MUNICIPAL WATER DISTRICT
REPORT TO BOARD OF DIRECTORS**

MEETING DATE: FEBRUARY 4, 2010

AGENDA ITEM: 6C

SUBJECT: AUTHORIZE STAFF TO SOLICIT PROPOSALS FOR CEQA WORK FOR BIG BEAR MARINA DREDGE PROJECT

RECOMMENDATION:

The General Manager and the Watershed/Lake Improvement Committee recommend that the Board authorize Staff to solicit proposals for preparation of an EIR for the Big Bear Marina Deepening Project.

DISCUSSION/FINDINGS:

The Watershed/Lake Improvement Committee reviewed the attached project description and final dredge project layout prepared by Moffatt & Nichol for the Big Bear Marina Dredge project. The plan includes five priority numbered dredge areas. The project is a balanced cut and fill operation that will result in the extension of the peninsula on the west side of Big Bear Marina. Area 1 is 75 feet wide by 560 feet long immediately west of the peninsula. Area 2 is located inside the marina proper measuring 75 feet wide and about 520 feet long. Area 3 abuts the Area 1 dredge and Area 4 will provide navigable water during the lowest lake levels for operations of the fuel dock and rental offices at Big Bear Marina. The design depth of all dredge areas is 18 feet below spillway elevation. Although the Committee does not believe the District can afford the entire project as designed, the engineer is drafting specifications that will allow flexibility during the project bidding process to maximize the dredge based on the bid results. The entire project would remove 23,650 cubic yards of soil from the lake and use it to extend the peninsula at the marina. While Moffatt & Nichol is finalizing drawings and specifications, the District needs to complete environmental work on the project. Staff used the project description to draft the attached "Request For Proposal" to solicit proposals from a select group of consultants to prepare the necessary EIR for the project. Providing staff is authorized to solicit this work, proposals will be ready for the Committee to review and make a recommendation for Board approval at the meeting on March 4, 2010.

OTHER AGENCY INVOLVEMENT: None

FINANCING: Financing for the environmental work will come from the 2003 Bond (COP) Dredge Fund.

Submitted by: Scott Heule, General Manager

REQUEST FOR PROPOSAL

PREPARATION OF EIR FOR BIG BEAR MARINA DEEPENING PROJECT

February 4, 2010

The Big Bear Municipal Water District (District) is soliciting proposals from qualified consulting firms to prepare an Environmental Impact Report for the Big Bear Marina Deepening Project. General and background information about the District can be reviewed on the web page at www.bbmwd.org. The District will secure the required 404 permit from Army Corps of Engineers, 1602 permit from California Department of Fish and Game and the 401 Certification from the Santa Ana Regional Water Quality Control Board.

The proposed project has three basic objectives. One is to improve public safety by creating a navigable waterway during low lake level conditions for Lake Patrol vessels close to the District emergency dispatch offices. The second objective is to improve navigation for the public who use the District owned but lessee operated Big Bear Marina launch ramp and fueling station. Finally, the project will facilitate a more consistent location for marina dock systems keeping more lake surface available for public use.

Time is of the essence on preparing and circulating the EIR in order to avoid business impacts to the seasonal marina operation when the project actually gets underway. Requests for proposals are being solicited from a select list of consultants and are due at the District offices by 4:00 PM Wednesday February 24, 2010. District Staff and District Lake Improvement Committee will review the proposals and then make a recommendation of award to the Board of Directors at the meeting on March 4, 2010. The award will be based on the following considerations.

- Consultants' successful experience
- Qualifications of staff that will be assigned to the project
- Cost
- Clarity of written communication and expression of thoughts presented in the proposal.

The design engineer of record for this work is Devon Beach at Moffatt & Nichol in San Diego (619-220-6050). Moffatt & Nichol have prepared the attached project description for your use in responding to this request. Please feel free to contact the design engineer or the District's Lake Manager Mike Stephenson or General Manager Scott Heule if you have questions.

Big Bear Marina Deepening Project

Project Description

The project area is within the Big Bear Municipal Water District marina, which the District owns and leases to an operator. The project limit covers approximately 11 acres extending 900 ft north of existing boat ramp and 300 ft east and west of existing peninsula. The project includes extending and widening the existing peninsula and deepening the lake bottom adjacent to the peninsula. The purpose of the project is to repair and rehabilitate the marina facilities including navigation channels and protection groin to:

1. Improve the ingress and egress for Lake Patrol vessels and essential vessels, thereby improving emergency response time;
2. Provide more reliable public boat launching access to Big Bear Lake, especially in times of low lake levels; and
3. Facilitate a more consistent location for the marina dock systems and boat house, keeping more lake surface available for public use;

The dredging portion of the project will be designed to a depth of 18 ft below spillway datum (+6725.2 ft mean sea level (MSL)); which will provide mooring access along the west channel for patrol boats and BBMWD essential vessels as well as small craft ingress and egress from the existing boat ramp along the east channel. The design depth will allow access to floating docks and the existing boat ramp in the east channel during periods of low lake levels. At the time of the April, 2009, topographic survey, the lake level was 5.2 ft below spillway datum (+6738.0 ft MSL). The proposed dredge layout has been divided into 5 separate areas with Dredge Areas 1 and 2 being the minimum required. Dredge Areas 3, 4, and 5 are optional areas that can be dredged at the discretion of BBMWD. The dredge material will be disposed onsite to supplement the existing peninsula northward towards the lake and capped with armor stone and quarry run layer to prevent erosion due to wave action. The dredge footprints for Dredge Areas 1 to 5 and peninsula disposal limits are shown on figure 1.

Dredge Areas 1 and 2: The proposed Dredge Area 1 extends approximately 500 ft north from the existing shoreline along the west channel and 75 ft west from the existing peninsula. This will create a 75-ft wide channel necessary for mooring patrol boats and BBMWD essential vessels. Dredge Area 2 extends approximately 700 ft north from existing boat launch ramp along the east channel and 75 ft east from existing peninsula. This will create a 75-ft wide channel for small-craft access to the existing launch ramp during periods of low lake levels. The toe for Dredge Areas 1 and 2 will daylight into existing shoreline with 3:1 (horizontal:vertical) slopes and with 10:1 slopes within the lake. Material removed within Dredge Areas 1 and 2 will be disposed north of the existing peninsula extending the peninsula by approximately 380 ft north to a final elevation of 2 ft above spillway datum (+6745.2 ft MSL).

Dredge Areas 3, 4, and 5: Dredging within areas 3, 4, and 5 are optional and will be dredged at the discretion of BBMWD. Dredge Area 3 extends Dredge Area 1 westward by

Disposal Fill Limits by Dredge Area	Armor Stone (tons)	Quarry Run (tons)
Base Bid:		
Dredge Areas 1 & 2	2,000	3,000
Optional Bid:		
Dredge Area 3	800	550
Dredge Area 4	150	500
Dredge Area 5	400	250
Sub Total	1,350	1,300
Total	3,350	4,300

The proposed existing peninsula extension will be capped with a 12 inch layer of Quarry Run around the entire sloped perimeter of the peninsula. An 18 inch thick layer of Armor Stone is proposed to be placed over the Quarry Run along the west facing slope and approximately the north half of the east facing slope.

Project Methodology

With the current lake levels at 5.2 ft below spillway datum (+6738.0 ft MSL) it is assumed only a small portion of dredging will be conducted by land based equipment with the remaining dredging performed from the water. Dredging will most likely occur using a medium sized excavator (class 330 or equivalent) located either on land or on top of a float. Upon removal, dredged material will be directly placed on to the existing peninsula by the excavator and pushed into final grade using a bulldozer (D9 or equivalent) in a south to north direction. A stockpile area for the armor stone and quarry run rock is assumed to be located across the street from BBMWD office building and will be loaded into end dump trucks by a front end loader (980 or equivalent) and transported to the disposal site and placed by excavator. Typical construction equipment that is assumed to be used during construction activities include one or two excavators, bulldozer, front end loader, two or three end dump trucks for hauling rock from rock stockpile area, water truck, oiler truck for service and maintenance, contractor pickup trucks, and delivery trucks for mobilization and demobilization efforts.

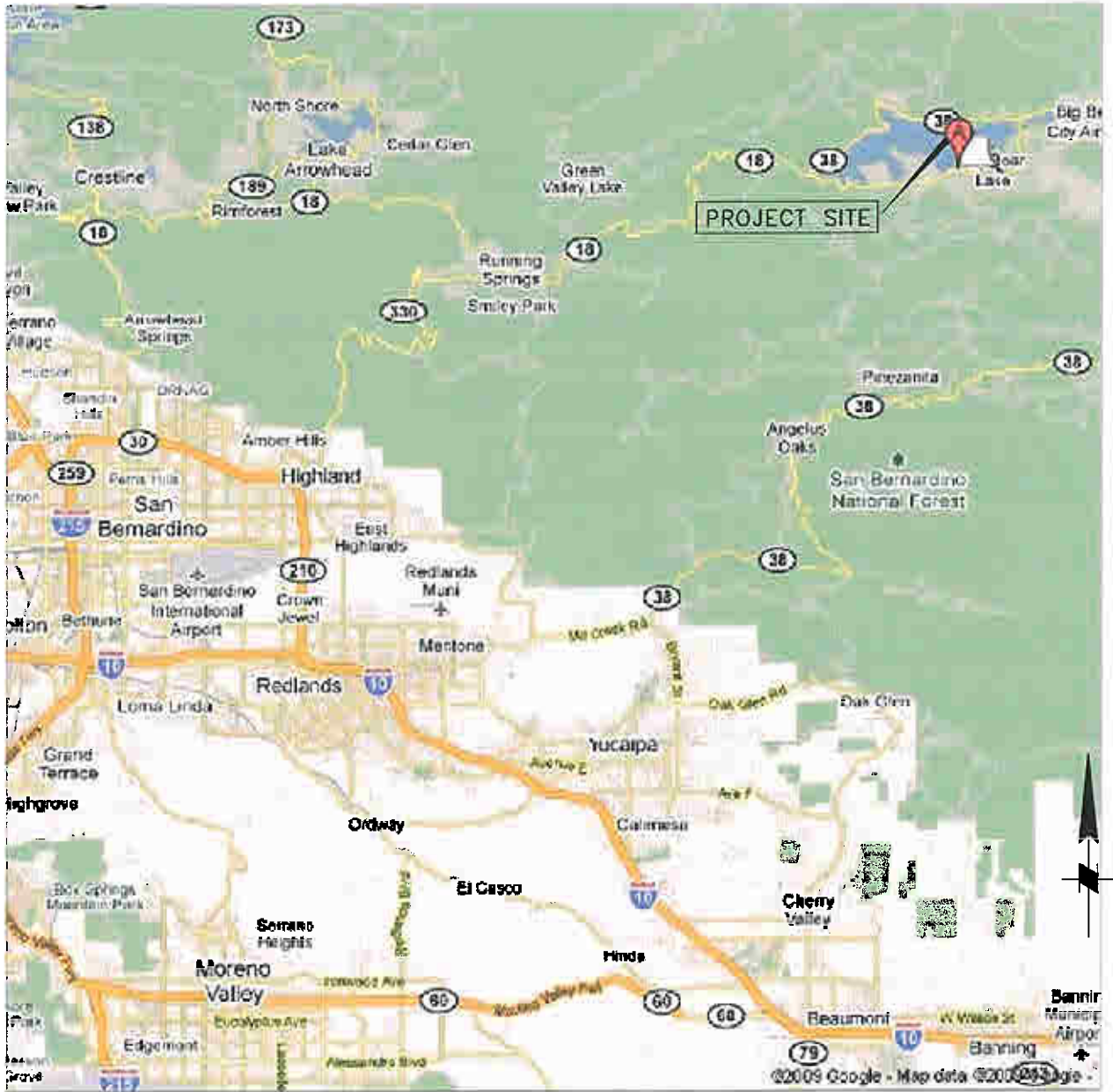
Project Duration

The volume of material removed and disposed per day will vary based on site conditions, weather, and the contractor's selection of equipment. Dredging rate is assumed to be approximately 500 cy per day (2,500 cy per week) and armor rock and quarry run placement is assumed approximately 150 tons per day. The schedule to remove all the dredge material in Dredge Areas 1 through 5 (23,500 cy) is approximately 10 weeks (assuming a 5 day

Google maps

Address **Big Bear Lake, CA**

Notes **Big Bear Municipal Water District,
Marina Improvement Project**



VICINITY MAP
NO SCALE

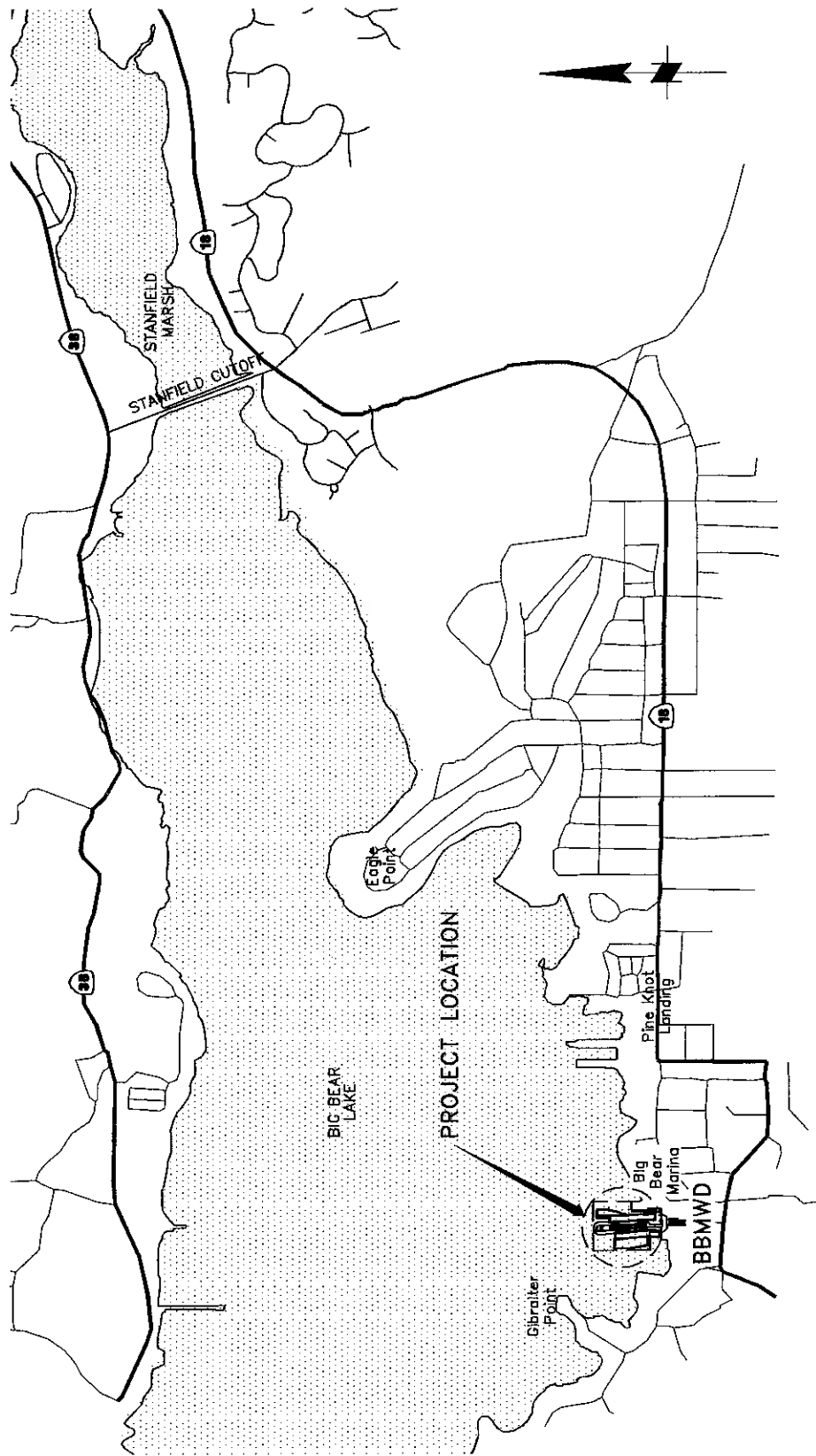
THIS FILE: P:\6898\7 Design Information\Project Description - Vicinity Map.dwg, Jan. 25, 2010 - 12:00pm

MOFFATT & NICHOL
SAN DIEGO, CALIFORNIA

**BIG BEAR MUNICIPAL WATER DISTRICT MARINA
REHABILITATION AND IMPROVEMENT PROJECT**
VICINITY MAP
BIG BEAR, CA

DATE
JAN. 25, 2010
FIG.
1

THIS FILE IS: 68987 Design Information\Project Description - Project Map.dwg; Jan. 25, 2010 - 12:01pm;



PROJECT LOCATION
NO SCALE



BIG BEAR MUNICIPAL WATER DISTRICT MARINA
REHABILITATION AND IMPROVEMENT PROJECT
PROJECT LOCATION
BIG BEAR, CA

DATE
JAN. 25, 2010
FIG.
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