

Merkel & Associates, Inc.

5434 Ruffin Road, San Diego, CA 92123

Tel: 858/560-5465 • Fax: 858/560-7779

e-mail: associates@merkelinc.com

January 12, 2009
M&A #07-046-03

Eileen Maher
San Diego Unified Port District
P.O. Box 120488
San Diego, CA 92112

**Re: Fish Enhancement Structures Installation
Chula Vista Tidelands Park Borrow Pit, San Diego Bay, California**

Dear Eileen:

Merkel & Associates, Inc. (M&A) installed fish enhancement structures in the former borrow pit off Chula Vista Tidelands Park, San Diego Bay, California, on December 11, 2008 (Figure 1). A total of 400 A-Jacks were used for the project. The A-Jacks were dropped in groups of either 8 or 16 pieces, creating forty-four artificial reef structures.

The spatial arrangement of the placed structures is illustrated in Figure 1. There were 38 placed reef structures consisting of 8 A-Jacks each; these are denoted as red circles in Figure 1. Six placements were made where two bundles of 8 were dropped simultaneously to form larger complexes of 16 units each; these are represented as red ovals in Figure 1. Coordinates for each placement are also provided in Lat/Long (WGS84).

Photo pages illustrating the installation process are included as Attachment A. A CD containing all project photos is also included with this letter.

Quarterly monitoring will be conducted at the site to determine the flora and fauna that recruit to the structures.

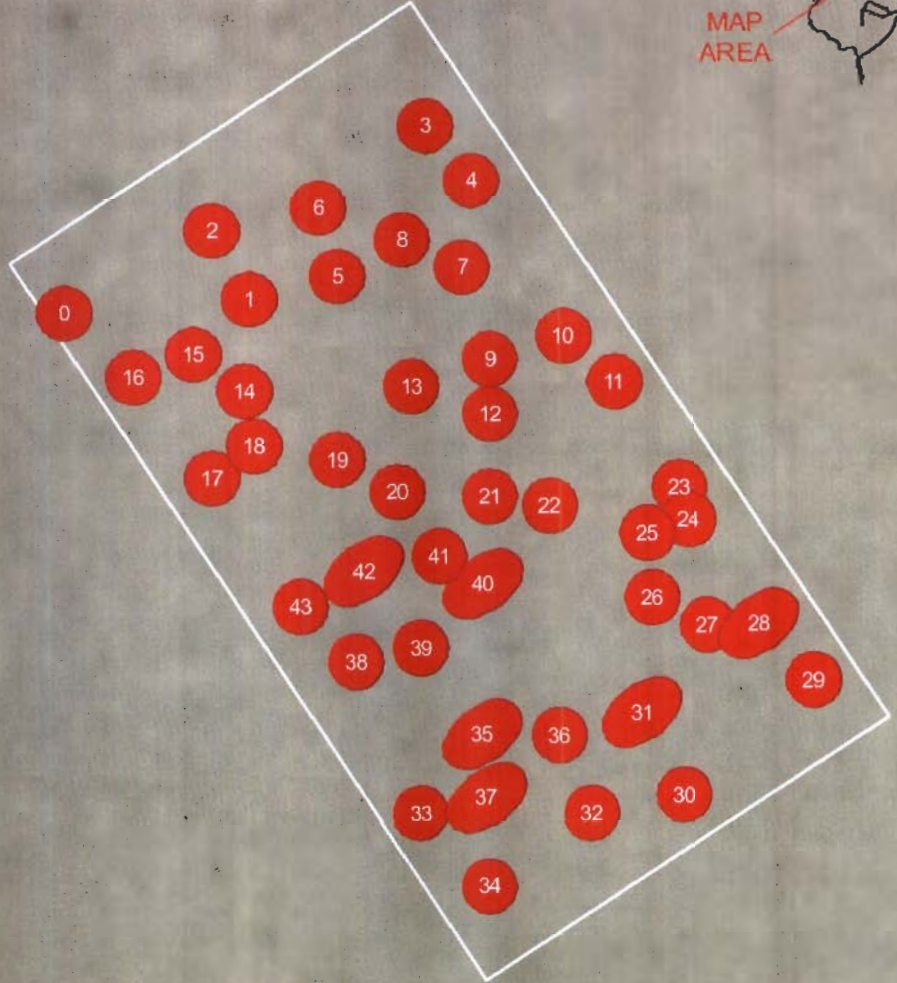
It has been a pleasure working on this project. We look forward to the successful colonization of the structures and the beneficial uses they will provide to San Diego Bay. If you have any questions regarding this letter or the included materials, please contact me at (858) 560-5465.

Sincerely,

A handwritten signature in black ink that reads "Robert Mooney". The signature is written in a cursive, flowing style.

Robert Mooney, Ph.D.
Senior Biologist

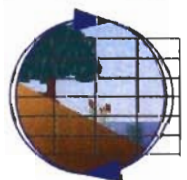
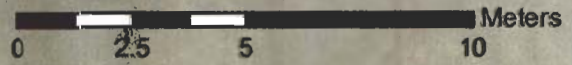
FID	LON	LAT
0	-117.11488	32.62375
1	-117.11483	32.62375
2	-117.11484	32.62376
3	-117.11479	32.62378
4	-117.11478	32.62377
5	-117.11481	32.62375
6	-117.11482	32.62377
7	-117.11478	32.62376
8	-117.11480	32.62376
9	-117.11478	32.62374
10	-117.11476	32.62374
11	-117.11475	32.62373
12	-117.11478	32.62373
13	-117.11480	32.62373
14	-117.11483	32.62373
15	-117.11485	32.62374
16	-117.11486	32.62373
17	-117.11484	32.62371
18	-117.11483	32.62372
19	-117.11481	32.62372
20	-117.11480	32.62371
21	-117.11478	32.62371
22	-117.11476	32.62371
23	-117.11473	32.62371
24	-117.11473	32.62371
25	-117.11474	32.62370
26	-117.11474	32.62369
27	-117.11473	32.62368
28	-117.11471	32.62368
29	-117.11470	32.62367
30	-117.11473	32.62365
31	-117.11474	32.62367
32	-117.11475	32.62365
33	-117.11479	32.62365
34	-117.11478	32.62363
35	-117.11478	32.62366
36	-117.11476	32.62366
37	-117.11478	32.62365
38	-117.11481	32.62368
39	-117.11479	32.62368
40	-117.11478	32.62369
41	-117.11479	32.62370
42	-117.11481	32.62370
43	-117.11482	32.62369



Fish Enhancement Structures

- 8 A-jacks
- 16 A-jacks

Reef Bounding Box



Fish Enhancement Structures Installation

Chula Vista Tidelands Park Former Borrow Pit
San Diego Bay, California

Figure 1



Photo 1. A-Jack reef components being assembled and bound.



Photo 2. A-Jack reef components being assembled and bound.



Photo 3. A-Jacks being bundled into groups of 8 components.



Photo 4. Bundles of A-Jacks waiting to be transferred to the transport vessel.



Photo 5. Bundle of A-Jacks being positioned for transfer to the transport vessel.



Photo 6. A-Jacks bundle being lowered onto transport vessel.



Photo 7. A-Jack bundle loaded onto transport vessel.



Photo 8. A-Jacks bundle on transport vessel being taken to placement vessel.



Photo 9. Placement vessel waiting to receive next bundle of A-Jacks.



Photo 10. A-Jacks bundle being moved from transport vessel to placement vessel..



Photo 11. A-Jacks bundle being moved from transport vessel to placement vessel.



Photo 12. A-Jacks bundle being lowered into the water.