

Eileen Maher
Port of San Diego
Environmental Services
3165 Pacific Highway
San Diego, California 92101-1128

**Re: Marina Trash Skimmer Monitoring
3rd Quarterly Report – April 2010 – June 2010
San Diego, California**

Dear Ms. Maher:

1.0 SIGNIFICANT MILESTONES

- Successful operation of four trash skimmers, one at a new location.
- Signage was added to the trash skimmer at Half Moon Marina, to prevent concert goers from standing on the skimmer as well as to inform the dock-side public of the project.

2.0 SUMMARY

This third quarterly report provides a summary of debris collected between April 1 and June 31, 2010 for trash skimmers installed at four marinas within San Diego Bay. The previous quarterly report documented the transfer of one of the trash skimmers from Harbor Island West to Cabrillo Isle Marina. This report includes the results of its performance at the new location.

2.1 Marina Trash Logs

2.1.1 Cabrillo Island Marina (formerly Harbor Island West Marina)

The Harbor Island West Marina trash skimmer was relocated to the Cabrillo Isle Marina in April 2010. Trash data collected between April 15, 2010 and June 2010 at the Cabrillo Isle Marina following its move is provided in Table 1. A total of approximately 597.25 gallons of trash were collected during the quarter at this location; 262 gallons in April, 213.75 gallons in May, and 121.5 gallons in June. Kelp and leaves were the predominant type of trash collected. The bilge pad was changed twice during the quarter, although a sheen was never observed at the site.

Table 1. Cabrillo Isle Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
4/15/2010	9:00AM	8.5	KL = 8%, LV = 0.5%		X		cloudy
4/16/2010	3:05PM	24	KL = 79%, PL = 4%, LV = 8%, WD = 8%		X		sunny and windy
4/17/2010	10:00AM	10	KL = 70%, WD = 10%, LV = 20%		X		overcast
4/18/2010	9:05AM	13.5	KL = 59%, SF = 4%, LV = 15%, WD = 22%		X		cloudy
4/19/2010	9:30AM	24	LV = 100%		X		sunny and windy
4/20/2010	9:20AM	16	KL = 75%, PL = 6%, LV = 6%, WD = 13%		X		cloudy
4/21/2010	9:05AM	8	KL = 75%, WD = 12%, LV = 13%			x	cloudy
4/22/2010	9:30AM	24.5	KL = 98%, OR = 2%		X		cloudy with slight rain
4/23/2010	9:30AM	1	KL = 100%		X		sunny
4/24/2010	9:30AM	12	GB = 17%, OR = 83%		X		sunny
4/25/2010	9:10AM	8.5	KL = 71%, PL = 6%, LV = 12%, WD = 12%		X		cloudy
4/26/2010	9:15AM	24	SF = 83%, LV = 17%		X		cloudy
4/27/2010	9:10AM	10	KL = 89%, WD = 10%		X		cloudy
4/28/2010	9:20AM	13	KL = 77%, WD = 8%, LV = 15%		X		cloudy
4/29/2010	9:15AM	41	KL = 72%, PL = 3%			X	sunny
4/30/2010	9:30AM	24	KL = 92%, PL = 8%		X		sunny
Total Volume (gal) for April = 262							
5/1/2010	10:00AM	4	KL = 75%, PL = 13%, WD = 13%		X		sunny

Table 1. Cabrillo Isle Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
5/2/2010	9:50AM	2	KL = 100%		X		cloudy
5/3/2010	9:15AM	10	KL = 100%		X		sunny
5/4/2010	9:20AM	9	KL = 89%, LV = 11%		X		sunny
5/5/2010	9:30AM	15	KL = 93%, OR = 7%		X		sunny
5/6/2010	9:15AM	3	KL = 67%, LV = 33%		X		sunny
5/7/2010	9:30AM	10	KL = 100%		X		sunny
5/8/2010	9:30AM	0	0		X		sunny
5/9/2010	9:15AM	11	KL = 73%, WD = 18%, LV = 9%		X		cloudy
5/10/2010	9:20AM	10	KL = 100%		X		sunny
5/11/2010	9:10AM	2	KL = 100%		X		cloudy
5/12/2010	9:15AM	5	KL = 100%		X		sunny
5/13/2010	9:10AM	2	KL = 50%, PL = 25%, WD = 25%		X		partly sunny
5/14/2010	9:15AM	5	KL = 100%		X		sunny
5/15/2010	9:00AM	1	KL = 100%		X		cloudy
5/16/2010	9:30AM	20.5	KL = 88%, PL = 10%, GB = 2%		X		cloudy
5/17/2010	9:20AM	10	KL = 100%		X		cloudy
5/18/2010	N/A						
5/19/2010	N/A						
5/20/2010	9:00AM	6	LV = 8%, SC = 8%, PL = 83%		X		sunny and clear
5/21/2010	9:15AM	10	KL = 100%		X		cloudy
5/22/2010	9:30AM	1.5	KL = 100%		X		cloudy
5/23/2010	9:30AM	3	KL = 100%		X		cloudy/windy
5/24/2010	9:30AM	20	KL = 100%		X		sunny
5/25/2010	9:15AM	10	KL = 100%		X		cloudy
5/26/2010	9:17AM	11.75	KL = 93%, WD = 5% PL = 2%		X		sunny
5/27/2010	9:15AM	20	KL = 100%		X		sunny
5/28/2010	9:30AM	6	KL = 100%		X		sunny
5/29/2010	9:30AM	3	KL = 33%, OR = 33%, WD = 33%		X		sunny
5/30/2010	9:20AM	2	KL = 100%		X		sunny
5/31/2010	9:20AM	1	KL = 100%		X		sunny



Table 1. Cabrillo Isle Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
Total Volume (gal) for May = 213.75							
6/1/2010	9:15AM	10	KL = 100%		X		cloudy
6/2/2010	9:05AM	1	KL = 100%		X		cloudy
6/3/2010	9:15AM	4					
6/4/2010	9:15AM	4	KL = 100%		X		cloudy
6/5/2010	OFF						
6/6/2010	9:30AM	1	KL = 100%		X		sunny
6/7/2010	9:15AM	6	KL = 100%		X		cloudy
6/8/2010	9:15AM	1.5	KL = 100%		X		cloudy
6/9/2010	9:10AM	0.5	KL = 100%		X		
6/10/2010	9:10AM	4	KL = 100%		X		cloudy
6/11/2010	9:15AM	4	KL = 100%		X		cloudy/windy
6/12/2010	9:15AM	0			X		sunny/windy
6/13/2010	9:50AM	2	KL = 100%		X		sunny
6/14/2010	9:10AM	6	KL = 100%		X		sunny
6/15/2010	OFF						
6/16/2010	OFF						
6/17/2010	OFF						
6/18/2010	OFF						
6/19/2010	9:10AM	0			X		sunny
6/20/2010	9:20AM	6.5	KL = 95%, WD = 5%		X		sunny
6/21/2010	9:15AM	10	KL = 100%		X		cloudy
6/22/2010	9:15AM	6	KL = 83%, WD = 17%		X		sunny
6/23/2010	9:15AM	10	KL = 100%		X		sunny
6/24/2010	9:20AM	10	KL = 100%		X		sunny
6/25/2010	9:15AM	10	KL = 100%		X		sunny
6/26/2010	OFF						
6/27/2010	9:20AM	7	KL = 71%, WD = 29%		X		cloudy
6/28/2010	9:15AM	6	KL = 100%		X		cloudy
6/29/2010	9:20AM	2	KL = 100%		X		cloudy
6/30/2010	9:15AM	10	KL = 100%		X		cloudy
Total Volume (gal) for June = 121.5							
Total Volume (gal) April-June = 597.25							

Trash Codes:

Animal	=	AN	Scum	=	SC
Cigarette Butt	=	CB	Styrofoam	=	SF
Glass Bottle	=	GB	Toys/Balls	=	TY
Kelp	=	KL	Wood	=	WD
Leaves	=	LV	Other	=	OR
Plastic (bottle/container/wrapper)	=	PL			

2.1.2 Point Loma Marina

The trash skimmer at the Point Loma Marina is installed along the east side of the main dock located in the northeast corner of America’s Cup Harbor, an area that tends to collect debris via prevailing winds and current circulation (Figure 3). An elevated public walkway with shops, restaurants and businesses overlooks this area.

From April to June 2010 the Point Loma Marina skimmer collected a total of approximately 102 pounds of trash; 38 pounds in April, 21 pounds in May, and 43 pounds in June (Table 2). A variety of trash types were collected, again dominated by leaves and kelp by weight. A sheen was never observed at this site, although a bilge pad was maintained at this location.

Table 2. Point Loma Trash Skimmer Log 2010 Q2

Date	Time	Weight of Trash (lbs)	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
4/5/2010	9:00AM	5		LV = 90%, CB = 10%		X		cloudy
4/7/2010	10:00AM	6		CB = 3%, PL = 1%, LV = 96%		X		clear
4/9/2010	1:00PM	12		WD = 2%, LV = 5%, PL = 1%, CB = 1%, KL = 93%		X		clear
4/12/2010	8:00AM	5		LV = 95%, CB = 5%		X		rain
4/14/2010	7:30AM	1		LV = 75%, CB = 20%, PL = 5%		X		clear
4/16/2010	9:00AM	3		KL = 70%, PL = 20%, CB = 10%		X		clear
4/19/2010	8:00AM	2		KL = 100%		X		clear
4/21/2010	11:00AM	1		KL = 100%				cloudy
4/24/2010	10:00AM	1		KL = 100%				cloudy
4/26/2010	9:00AM	1		LV = 100%				cloudy
4/28/2010	9:00AM	1		LV = 95%, CB = 5%				cloudy
Total Weight (lbs) for April = 38								
5/1/2010	8:00AM	0.5		KL = 100%		X		clear
5/3/2010	9:00AM	0.5		KL = 100%		X		clear
5/5/2010	9:00AM	0.5		KL = 100%		X		clear
5/8/2010	9:00AM	0.5		KL = 100%		X		clear
5/10/2010	7:30AM	0.5		KL = 100%		X		clear

Table 2. Point Loma Trash Skimmer Log 2010 Q2

Date	Time	Weight of Trash (lbs)	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
5/12/2010	9:00AM	0.5		KL = 90%, CB = 10%, PL = 10%		X		cloudy
5/16/2010	10:00AM	0.5		KL = 100%		X		clear
5/17/2010	8:00AM	0.5		KL = 100%		X		cloudy
5/20/2010	8:30AM	3		KL = 100%		X		clear
5/22/2010	3:00PM	1		KL = 100%		X		clear
5/24/2010	8:00AM	1		KL = 100%		X		clear
5/27/2010	9:30AM	3		KL = 98%, CB = 1%, PL = 1%		X		clear
5/29/2010	2:30PM	4		KL = 100%		X		clear
5/31/2010	3:00PM	5		KL = 100%		X		clear
Total Weight (lbs) for May = 21								
6/3/2010	9:00AM	3		KL = 100%		X		clear
6/5/2010	10:00AM	5		KL = 100%		X		clear
6/7/2010	9:00AM	5		KL = 98%, CB = 2%		X		cloudy
6/10/2010	7:30AM	9		KL = 100%		X		cloudy
6/12/2010	7:30AM	5		KL = 100%		X		cloudy
6/19/2010	9:00AM	1		KL = 100%		X		clear
6/21/2010	8:00AM	2		KL = 100%		X		cloudy
6/24/2010	7:30AM	3		KL = 100%		X		cloudy
6/28/2010	8:00AM	10		KL = 100%		X		clear
Total Weight (lbs) for June = 43								
Total Weight (lbs) for April – June = 102								

2.1.3 Half Moon Marina

The skimmer at Half Moon Marina is located at the eastern end of the Shelter Island Basin (Figure 4). The location is immediately adjacent to an open concert venue at Humphrey's By the Bay (Humphrey's), an inner harbor area with limited flushing that chronically accumulates debris and often has a visible surface sheen. The Humphrey's concert venue overlooks the marina, providing an optimum location for signage recognizing the Port's environmental stewardship. However, this proximity to the concert venue proved to be a problem, as boaters would stand on the top of the trash skimmer's lid to gain a better view of the adjacent Humphrey's concerts. Half Moon Marina addressed this issue by commissioning and constructing a railing and informative signage describing the project skimmers and requesting boaters to 'Keep Off'. Photographic documentation of the new signage is included as an enclosure (Image #1).

From April to June 2010 the Half Moon Marina skimmer collected a total of approximately 2,125 gallons of trash; 745 gallons in April, 800 gallons in May, and approximately 580 gallons in June (Table 3). A variety of trash types were collected, dominated by leaves and plastic debris by weight. Compared to other locations, the occurrence of a sheen was much greater at the Half Moon Marina. There were 12 occasions when a sheen was observed at this site, and as a consequence the bilge pad was changed 10 times during the quarter.

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
4/1/2010	2:30PM		off				
4/2/2010	2:30PM		off				
4/5/2010	2:30PM	70	LV = 50%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, OR = 10%				cloudy/rain
4/6/2010	2:30PM	80	LV = 60%, PL = 30%, WD = 5%, OR = 5%	X		X	sunny/clear
4/7/2010	2:30PM	40	LV = 50%, PL = 30%, WD = 3%, GB = 5%, OR = 12%	X			sunny/clear
4/8/2010	2:30PM	30	LV = 40%, PL = 20%, GB = 5%, WD = 5%, CB = 5%, TY = 10%, OR = 15%	X		X	
4/9/2010	2:30PM	30	LV = 50%, PL = 30%, WD = 5%, CB = 5%, TY = 5%, OR = 5%				

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
4/12/2010	2:30PM	40	LV = 40%, PL = 20%, WD = 10%, TY = 5%, GB = 5%, CB = 5%, OR = 15%				cloudy/rain
4/13/2010	2:30PM	70	LV = 50%, PL = 30%, WD = 10%, OR = 5%, CB = 5%				cloudy/wind
4/14/2010	2:30PM	50	LV = 40%, PL = 30%, WD = 5%, TY = 10%, GB = 5%, OR = 10%			X	cloudy/wind
4/15/2010	2:30PM	30	LV = 50%, PL = 20%, WD = 10%, GB = 5%, CB = 10%, OR = 5%	X			sunny/clear
4/16/2010	2:30PM	40	LV = 40%, PL = 30%, WD = 10%, GB = 5%, CB = 5%, OR = 10%				sunny/clear
4/19/2010	2:30PM	30	LV = 45%, PL = 30%, WD = 5%, GB = 5%, CB = 5%, OR = 10%				sunny/clear
4/20/2010	2:30PM	40	LV = 50%, PL = 20%, WD = 10%, TY = 5%, GB = 5%, OR = 10%		X		sunny/clear

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
4/21/2010	2:30PM	30	LV = 40%, PL = 30%, WD = 10%, GB = 5%, CB = 5%, OR = 10%				sunny/cloudy
4/22/2010	2:30PM	20	LV = 50%, PL = 40%, WD = 5%, OR = 5%	X			sunny/cloudy
4/23/2010	2:30PM	25	LV = 40%, PL = 30%, WD = 10%, GB = 5%, CB = 5%, OR = 10%				sunny/clear
4/26/2010	2:30PM	20	LV = 50%, PL = 30%, WD = 10%, OCB = 5%, OR = 5%				sunny/clear
4/27/2010	2:30PM	20	LV = 60%, PL = 40%	X	X		cloudy/windy
4/28/2010	2:30PM	30	LV = 40%, PL = 40%, WD = 5%, CB = 5%, GB = 5%, OR = 5%				cloudy/windy
4/29/2010	2:30PM	30	LV = 40%, PL = 30%, WD = 10%, GB = 5%, CB = 5%, TY = 5%, OR = 5%	X			sunny/clear
4/30/2010	2:30PM	20	LV = 60%, PL = 20%, WD = 5%, GB = 5%, CB = 5%, OR = 5%				sunny/clear
Total Volume (gal) for April = 745							

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
5/3/2010	2:30PM	50	LV = 40%, PL = 20%, CB = 5%, GB = 5%, WD = 10%, OR = 20%				sunny/clear
5/4/2010	2:30PM	30	LV = 50%, PL = 15%, WD = 10%, CB = 5%, GB = 5%, OR = 15%				sunny/clear
5/5/2010	2:30PM	50	LV = 60%, PL = 15%, WD = 10%, CB = 5%, GB = 5%, OR = 5%	X		X	sunny/clear
5/6/2010	2:30PM	40	LV = 40%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, TY = 5%, OR = 15%				sunny/clear
5/7/2010	2:30PM	80	LV = 50%, PL = 20%, WD = 10%, GB = 5%, TY = 5%, OR = 10%				sunny/clear
5/10/2010	2:30PM	40	LV = 40%, PL = 30%, WD = 10%, CB = 5%, GB = 5%, OR = 10%				sunny/clear

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
5/12/2010	2:30PM	20	LV = 30%, PL = 20%, WD = 10%, TY = 5%, CB = 5%, GB = 5%, OR = 20%, KL = 5%				sunny/clear
5/12/2010	2:30PM	30	LV = 50%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, OR = 10%			X	sunny/clear
5/13/2010	2:30PM	50	LV = 40%, PL = 30%, WD = 5%, SF = 5%, CB = 5%, GB = 5%, OR = 10%				sunny/clear
5/14/2010	2:30PM	60	LV = 40%, PL = 30%, WD = 10%, CB = 5%, GB = 5%, SC = 5%, OR = 5%	X			sunny/clear
5/17/2010	2:30PM	40	LV = 50%, PL = 20%, WD = 5%, TY = 5%, CB = 5%, GB = 5%, OR = 10%				cloudy
5/18/2010	2:30PM	30	LV = 40%, PL = 30%, WD = 5%, TY = 5%, CB = 5%, GB = 5%, OR = 10%				cloudy

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
5/19/2010	2:30PM	20	LV = 40%, PL = 30%, WD = 10%, TY = 5%, SF = 5%, OR = 10%			X	cloudy
5/20/2010	2:30PM	30	LV = 50%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, OR = 10%				cloudy/sunny
5/21/2010	2:30PM	30	LV = 40%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, SF = 5%, OR = 15%				cloudy/sunny
5/24/2010	2:30PM	40	LV = 50%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, OR = 10%				cloudy/sunny
5/25/2010	2:30PM	20	LV = 40%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, TY = 5%, OR = 15%	X			cloudy/sunny
5/26/2010	2:30PM	50	LV = 40%, PL = 30%, WD = 5%, CB = 5%, GB = 5%, TY = 5%, OR = 10%				cloudy/sunny

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
5/27/2010	2:30PM	30	LV = 50%, PL = 30%, WD = 10%, CB = 5%, GB = 5%, SC = 5%, OR = 5%			X	cloudy/sunny
5/28/2010	2:30PM	30	LV = 40%, PL = 20%, WD = 15%, CB = 5%, GB = 5%, SF = 5%, OR = 10%				cloudy/sunny
5/31/2010	2:30PM	30	LV = 40%, PL = 15%, WD = 10%, SF = 5%, TY = 5%, CB = 5%, GB = 5%, SC = 10%, OR = 15%				cloudy/sunny
Total Volume (gal) for May = 800							
6/1/2010	2:30PM	20	PL = 40%, LV = 40%, GB = 1%, OR = 15%	X		X	sunny
6/2/2010	2:30PM	20	LV = 40%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, SF = 10%, OR = 10%				sunny
6/3/2010	2:30PM	30	LV = 60%, PL = 20%, WD = 10%				sunny

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
6/4/2010	2:30PM	20	LV = 40%, PL = 30% WD = 5%, CB = 5%, GB = 5%, OR = 15%				cloudy/sunny
6/7/2010	2:30PM	30	LV = 50%, PL = 30%, WD = 10%, OR = 10%				cloudy/sunny
6/8/2010	2:30PM	40	LV = 30%, PL = 30%, WD = 5%, TY = 10%, CB = 5%, GB = 5%, OR = 5%, SF = 10%				cloudy/sunny
6/9/2010	2:30PM	30	LV = 50%, PL = 30%, WD = 10%, OR = 5%, CB = 5%			X	cloudy/sunny
6/10/2010	2:30PM	40	LV = 40%, PL = 30%, WD = 10%, CB = 5%, TY = 5%, OR = 10%				cloudy
6/11/2010	2:30PM	20	LV = 40%, PL = 30%, WD = 15%, SF = 5%, OR = 10%				cloudy
6/14/2010	2:30PM	20	LV = 50%, PL = 20%, WD = 10%, CB = 5%, GB = 5%, OR = 10%				cloudy/sunny

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
6/15/2010	2:30PM	10	LV = 40%, PL = 30%, WD = 5%, CB = 5%, GB = 5%, TY = 5%, OR = 10%	X			cloudy/sunny
6/16/2010	2:30PM	20	LV = 50%, PL = 30%, WD = 10%, CB = 5%, GB = 5%				cloudy/sunny
6/17/2010	2:30PM	10	LV = 40%, PL = 30%, WD = 15%, CB = 5%, GB = 5%, OR = 5%				cloudy/sunny
6/18/2010	2:30PM	30	LV = 40%, PL = 30%, WD = 10%, CB = 5%, GB = 5%, OR = 10%			X	cloudy/sunny
6/21/2010	2:30PM	40	LV = 30%, PL = 30%, WD = 10%, OR = 10%, CB = 5%, GB = 5%, TY = 5%, SF = 5%				cloudy/sunny
6/22/2010	2:30PM	30	LV = 40%, PL = 30%, WD = 10%, CB = 5%, GB = 5%, OR = 10%				cloudy/sunny

Table 3. Half Moon Marina Trash Skimmer Log 2010 Q2

Date	Time	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
6/23/2010	2:30PM	50	LV = 40%, PL = 30%, WD = 10%, CB = 5%, GB = 5%, OR = 10%				cloudy/sunny
6/24/2010	2:30PM	30	LV = 50%, PL = 30%, WD = 10%, TY = 5%, OR = 5%				cloudy/sunny
6/25/2010	2:30PM	20	LV = 40%, PL = 30%, WD = 10%, SF = 5%, GB = 5%, OR = 10%	X		X	cloudy/sunny
6/28/2010	2:30PM	20	LV = 50%, PL = 30%, WD = 10%, OR = 10%				cloudy
6/29/2010	2:30PM	30	LV = 30%, PL = 30%, WD = 10%, GB = 5%, CB = 5%, TY = 5%, OR = 15%				cloudy
6/30/2010	2:30PM	20	LV = 50%, PL = 20%, WD = 10%, GB = 5%, CB = 5%, OR = 10%				cloudy
Total Volume (gal) for June = 580							
Total Volume (gal) for April-June = 2,125							

2.1.4 Pier 32 Marina

The skimmer at the Pier 32 Marina, like the others, is also located in an area that receives limited tidal flushing (Figure 5). Its location in the northeast corner of the marina is protected from predominant winds by a rip-rap breakwater that extends approximately 20 feet above the water surface at mean low tide. The skimmer is highly visible and can be viewed from the landside walkway above the rip-rap. Nearby is the marina's BBQ/picnic area as well as an open public area known as "The Beach".

From April to June 2010 the skimmer at the Pier 32 Marina collected a total of approximately 248.5 pounds of trash; 76.5 pounds in April, 117 pounds in May, and 55 pounds in June; however, June logs conclude on June 12 due to the trash skimmer being taken off line due to a maintenance issue (Table 4). This maintenance issue was addressed in early July and the skimmer was turned back online. A variety of trash types were collected, although the dominant fraction was unspecified as "other", followed by plastic. Although a surface sheen was only observed twice at this location, a bilge pad was maintained in the skimmer at all times as a preventive measure at this site.

Table 4. Pier 32 Trash Skimmer Log 2010 Q2

Date	Time	Weight of Trash (lbs)	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
4/1/2010	7:40AM	2		OR = 100%		X		clear
4/2/2010	7:30AM	5		OR = 100%		X		cloudy
4/3/2010	7:30AM	15		OR = 99%, PL = 1%		X		clear
4/4/2010	8:00AM	5		OR = 100%		X		cloudy
4/5/2010	7:30AM	3		OR = 100%		X		cloudy
4/6/2010	8:00AM	1		OR = 100%		X		clear
4/7/2010	8:30AM	3		OR = 100%		X		clear
4/8/2010	9:00AM	2		OR = 100%		X		clear
4/9/2010	8:30AM	1		OR = 95%, PL = 5%		X		clear
4/10/2010	7:30AM	5		OR = 100%		X		clear
4/11/2010	3:00PM	3		OR = 100%		X		cloudy
4/12/2010	3:00PM	3		OR = 100%		X		rainy
4/13/2010	7:30AM	1		OR = 100%		X		clear
4/14/2010	3:30PM	2		OR = 100%		X		clear
4/15/2010	7:30AM	1		OR = 100%		X		clear
4/16/2010	7:30AM	1		OR = 100%		X		cloudy
4/17/2010	9:00AM	3		OR = 100%		X		clear
4/18/2010	12:00PM	3		OR = 100%		X		clear
4/19/2010	2:00PM	1		OR = 100%		X		clear
4/20/2010	2:00PM	5		OR = 100%		X		clear
4/21/2010	1:50PM	1		OR = 100%		X		cloudy

Table 4. Pier 32 Trash Skimmer Log 2010 Q2

Date	Time	Weight of Trash (lbs)	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
4/22/2010	8:00AM	1		OR = 100%		X		clear
4/23/2010	1:00PM	3		OR = 100%		X		clear
4/24/2010	7:30AM	1		OR = 100%		X		clear
4/25/2010	3:00PM	0.5		OR = 100%		X		clear
4/26/2010	9:30AM	1		OR = 100%		X		clear
4/27/2010	9:30AM	1		OR = 100%		X		clear
4/28/2010	8:00AM	1		OR = 100%		X		clear
4/29/2010	9:30AM	1		OR = 100%		X		clear
4/30/2010	8:00AM	1		OR = 100%		X		clear
Total Weight (lbs) for April = 76.5								
5/1/2010	7:30AM	3		OR = 100%		X		clear
5/2/2010	7:30AM	1		OR = 100%		X		cloudy
5/3/2010	7:30AM	0.5		OR = 100%		X		clear sunny
5/4/2010	7:30AM	2		OR = 100%		X		clear sunny
5/5/2010	7:30AM	1		OR = 100%		X		clear
5/6/2010	9:00AM	3		OR = 100%		X		clear
5/7/2010	10:00AM	1		OR = 100%		X		clear
5/8/2010	12:00PM	20		OR = 100%		X		clear
5/9/2010	7:30AM	40		OR = 100%		X		cloudy
5/10/2010	8:00AM	7		OR = 100%		X		cloudy
5/11/2010	8:00AM	2		OR = 100%		X		cloudy
5/12/2010	8:00AM	1		OR = 100%		X		clear
5/13/2010	7:30AM	2		OR = 100%		X		clear
5/14/2010	7:30AM	1		OR = 100%		X		clear
5/15/2010	7:30AM	1		OR = 100%		X		cloudy
5/16/2010	7:30AM	3		OR = 100%		X		cloudy
5/17/2010	7:30AM	2		OR = 100%		X		cloudy
5/18/2010	7:30AM	0.5		OR = 100%		X		cloudy
5/19/2010	8:00AM	1		OR = 100%		X		cloudy
5/20/2010	8:00AM	3		OR = 100%		X		cloudy
5/21/2010	9:30AM	2		OR = 100%		X		clear
5/22/2010	9:30AM	1		OR = 100%		X		clear
5/23/2010	9:30AM	1		OR = 100%		X		sunny
5/24/2010	7:30AM	2		OR = 100%		X		sunny
5/25/2010	7:30AM	1		OR = 100%		X		clear
5/26/2010	9:00AM	1		OR = 100%		X		clear
5/27/2010	9:00AM	1		OR = 100%		X		clear
5/28/2010	8:00AM	1		OR = 100%		X		-
5/29/2010	8:00AM	1		OR = 100%		X		-

Table 4. Pier 32 Trash Skimmer Log 2010 Q2

Date	Time	Weight of Trash (lbs)	Vol of Trash (gal)	Type and Percentage of Trash	Sheen	Bilge Pad	Pad Changed	Weather (clear, rain, wind, rain in previous days)
5/30/2010	8:00AM	3		OR = 100%		X		-
5/31/2010	8:00AM	5		OR = 100%		X		-
5/31/2010	3:00PM	3		OR = 100%		X		-
Total Weight (lbs) for May = 117								
6/1/2010	7:30AM	3		OR = 100%		X		cloudy
6/2/2010	7:30AM	3		OR = 100%	X	X		cloudy
6/3/2010	7:30AM	3		OR = 100%		X		cloudy
6/4/2010	7:30AM	3		OR = 100%		X		clear
6/5/2010	7:30AM	5		OR = 100%		X		cloudy
6/6/2010	10:00AM	3		OR = 100%		X		clear
6/7/2010	9:00AM	3		OR = 100%		X		clear
6/8/2010	7:30AM	3		OR = 100%	X			cloudy
6/9/2010	7:30AM	2		OR = 100%		X		cloudy
6/10/2010	7:30AM	5		OR = 100%		X		cloudy
6/11/2010	8:30AM	16		OR = 100%		X		cloudy
6/12/2010	7:30AM	6		OR = 100%		X		cloudy
6/13/2010	Trash skimmer off line due to a maintenance issue							
6/14/2010	Trash skimmer off line due to a maintenance issue							
6/15/2010	Trash skimmer off line due to a maintenance issue							
6/16/2010	Trash skimmer off line due to a maintenance issue							
6/17/2010	Trash skimmer off line due to a maintenance issue							
6/18/2010	Trash skimmer off line due to a maintenance issue							
6/19/2010	Trash skimmer off line due to a maintenance issue							
6/20/2010	Trash skimmer off line due to a maintenance issue							
6/21/2010	Trash skimmer off line due to a maintenance issue							
6/22/2010	Trash skimmer off line due to a maintenance issue							
6/23/2010	Trash skimmer off line due to a maintenance issue							
6/24/2010	Trash skimmer off line due to a maintenance issue							
6/25/2010	Trash skimmer off line due to a maintenance issue							
6/26/2010	Trash skimmer off line due to a maintenance issue							
6/27/2010	Trash skimmer off line due to a maintenance issue							
6/28/2010	Trash skimmer off line due to a maintenance issue							
6/29/2010	Trash skimmer off line due to a maintenance issue							
6/30/2010	Trash skimmer off line due to a maintenance issue							
Total Weight (lbs) for June = 55								
Total Weight (lbs) for April - June = 248.5								

If you have any questions or concerns regarding this report, please contact me at 858-300-4300 or by email at tyler.huff@amec.com.

Respectfully submitted,

AMEC Earth & Environmental, Inc.

A handwritten signature in black ink, appearing to read "Tyler Huff". The signature is fluid and cursive.

Tyler Huff
Aquatic Scientist

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Enclosures:

- | | |
|------------------|--|
| Photograph No. 1 | Half Moon Marina Trash Skimmer Railing and Signage |
| Figure 1 | Marina Trash Skimmer Locations - April 2010 |
| Figure 2 | Cabrillo Isle Marina Trash Skimmer Location |
| Figure 3 | Point Loma Marina Trash Skimmer Location |
| Figure 4 | Half Moon Marina Trash Skimmer Location |
| Figure 5 | Pier 32 Marina Trash Skimmer Location |

Port of San Diego
Marina Trash Skimmer Monitoring
3rd Quarterly Report – April 2010 – June 2010
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26 August 2010



PHOTOGRAPHIC LOG

PORT OF SAN DIEGO
MARINA TRASH SKIMMER MONITORING
3rd Quarterly Report – April 2010 - June 2010

PHOTOGRAPHIC LOG



Photograph No. 1

Half Moon Marina Trash Skimmer Railing and Signage

AMEC Job No.
9151000900.0001

Reviewed By:
Huff Tyler

Prepared By:
Huff Tyler



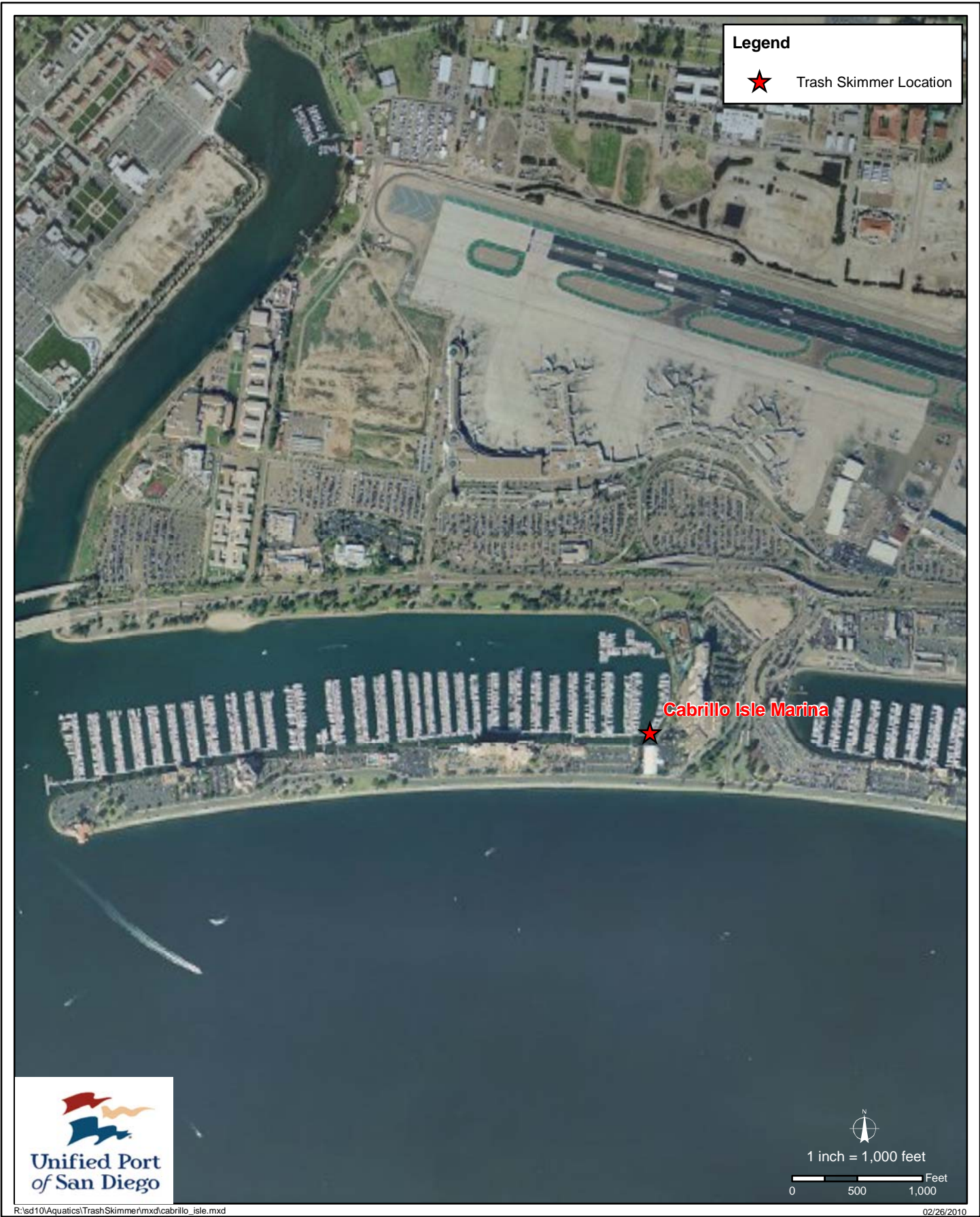
FIGURES



Marina Trash Skimmer Locations
 April 2010

FIGURE
1

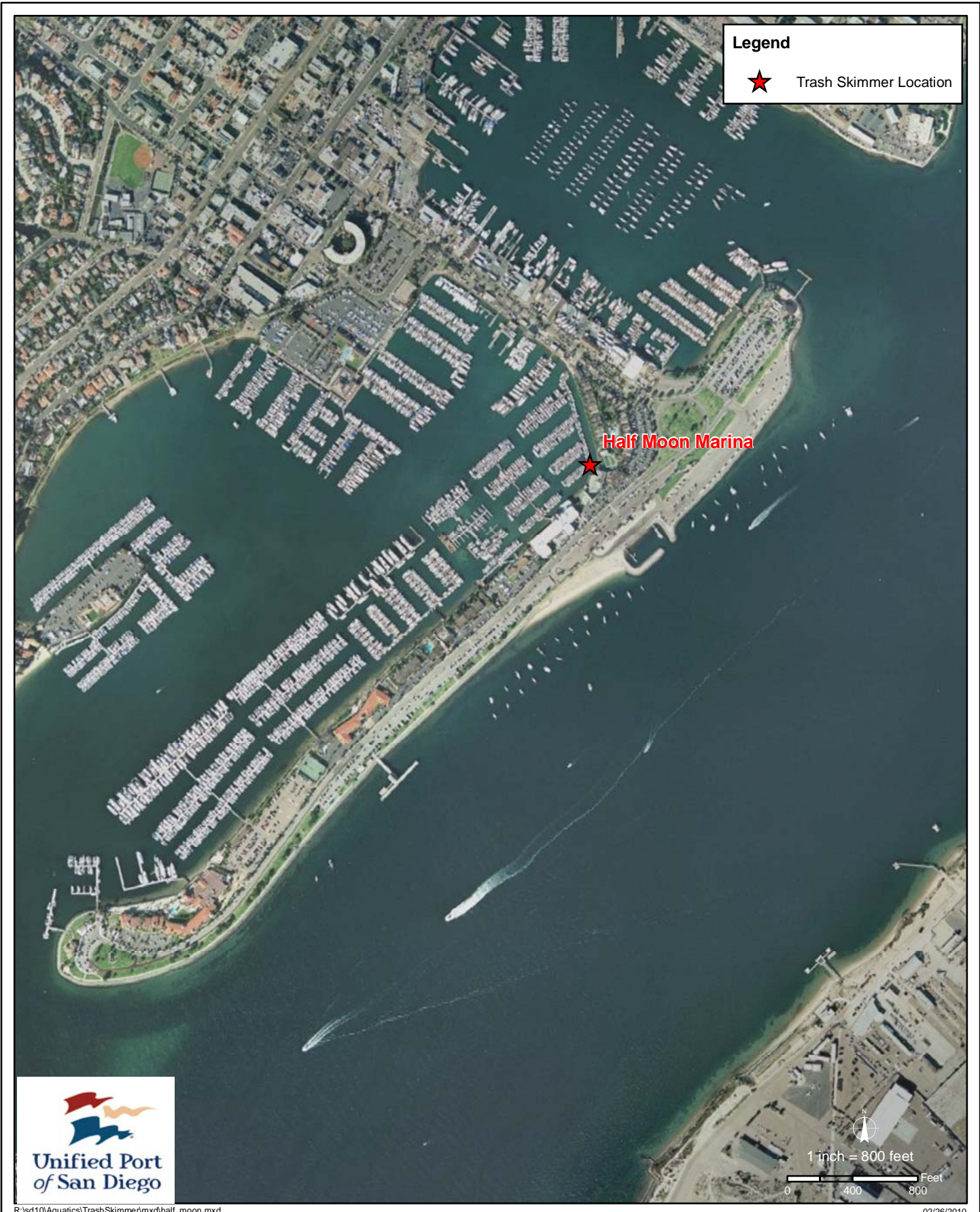






Point Loma Marina
Trash Skimmer Location

FIGURE
3



Half Moon Marina
Trash Skimmer Location

FIGURE
4



**Pier 32 Marina
Trash Skimmer Location**

**FIGURE
5**