

**SANTA BARBARA HARBOR
WATER QUALITY TEST RESULTS 2012**

APR 18 2013
#6

Total Coliform MPN/100mls					
Station	May	June	July	August	October
SBH #7	52	20	10	419	10
SBH #8	609	170	74	631	52
SBH #9	86	41	132	309	156
SBH #10	31	20	41	110	63
SBH #11	86	30	97	132	31
SBH #12	160	<10	110	10	<10
SBH #13	<10	<10	<10	<10	<10
Limit: <10,000 MPN/100mls					

Fecal Coliform MPN/100mls					
Station	May	June	July	August	October
SBH #7	10	<10	<10	272	<10
SBH #8	10	20	<10	20	10
SBH #9	<10	<10	<10	10	41
SBH #10	10	10	<10	63	31
SBH #11	20	10	10	10	<10
SBH #12	85	<10	86	10	<10
SBH #13	<10	<10	<10	<10	<10
Limit: < 400 MPN/100mls					

Enterococcus MPN/100mls					
Station	May	June	July	August	October
SBH #7	<10	<10	<10	20	10
SBH #8	<10	<10	<10	10	<10
SBH #9	<10	10	30	<10	<10
SBH #10	<10	10	<10	<10	10
SBH #11	10	<10	<10	<10	<10
SBH #12	<10	20	10	<10	<10
SBH #13	<10	20	<10	<10	<10
Limit: < 104 MPN/100mls					

ATTACHMENT #1

**SANTA BARBARA HARBOR
WATER QUALITY TEST RESULTS 2012**

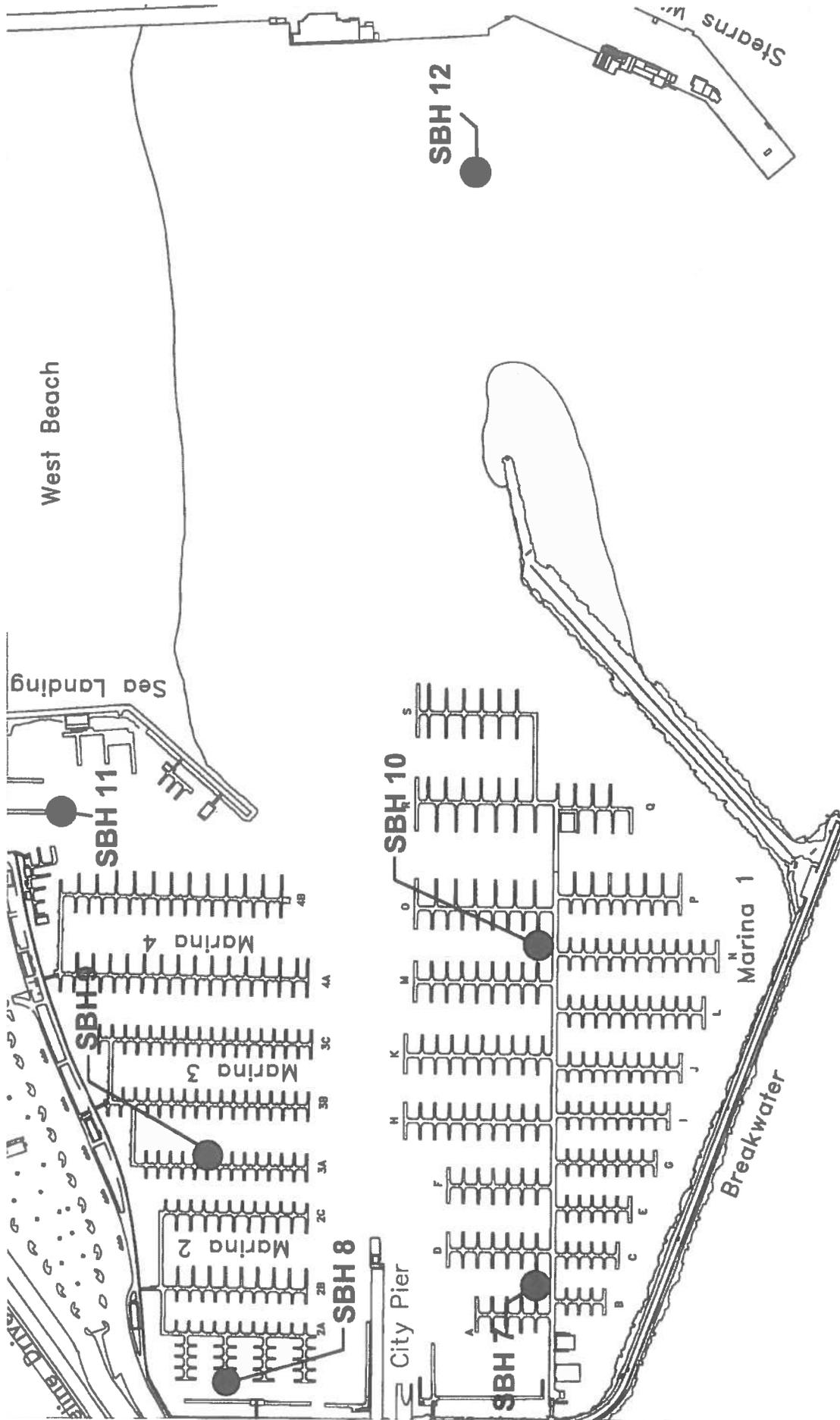
APR 18 2013
#6

MBAS MPN/I		
Station	April	June
SBH #7	ND	ND
SBH #8	ND	ND
SBH #9	ND	ND
SBH #10	ND	ND
SBH #11	ND	ND
SBH #12	ND	ND
SBH #13	ND	ND
Limit: < .2 MPN mg/l		

ATTACHMENT

#1

APR 18 2013 #6



Water Quality Sampling Locations

ATTACHMENT #2

EAST BEACH MOORING WATER QUALITY TEST RESULTS 2012

APR 18 2013
#6

Total Coliform MPN/100ml			
Station	July	September	October
EBM #1	<10	<10	<10
EBM #2	<10	<10	<10
EBM #3	<10	<10	<10
EBM #4	<10	<10	<10
EBM #5	<10	10	<10
EBM #6	<10	<10	<10
CONTROL	<10	<10	<10
Limit:		< 10,000 MPN/100 ml	

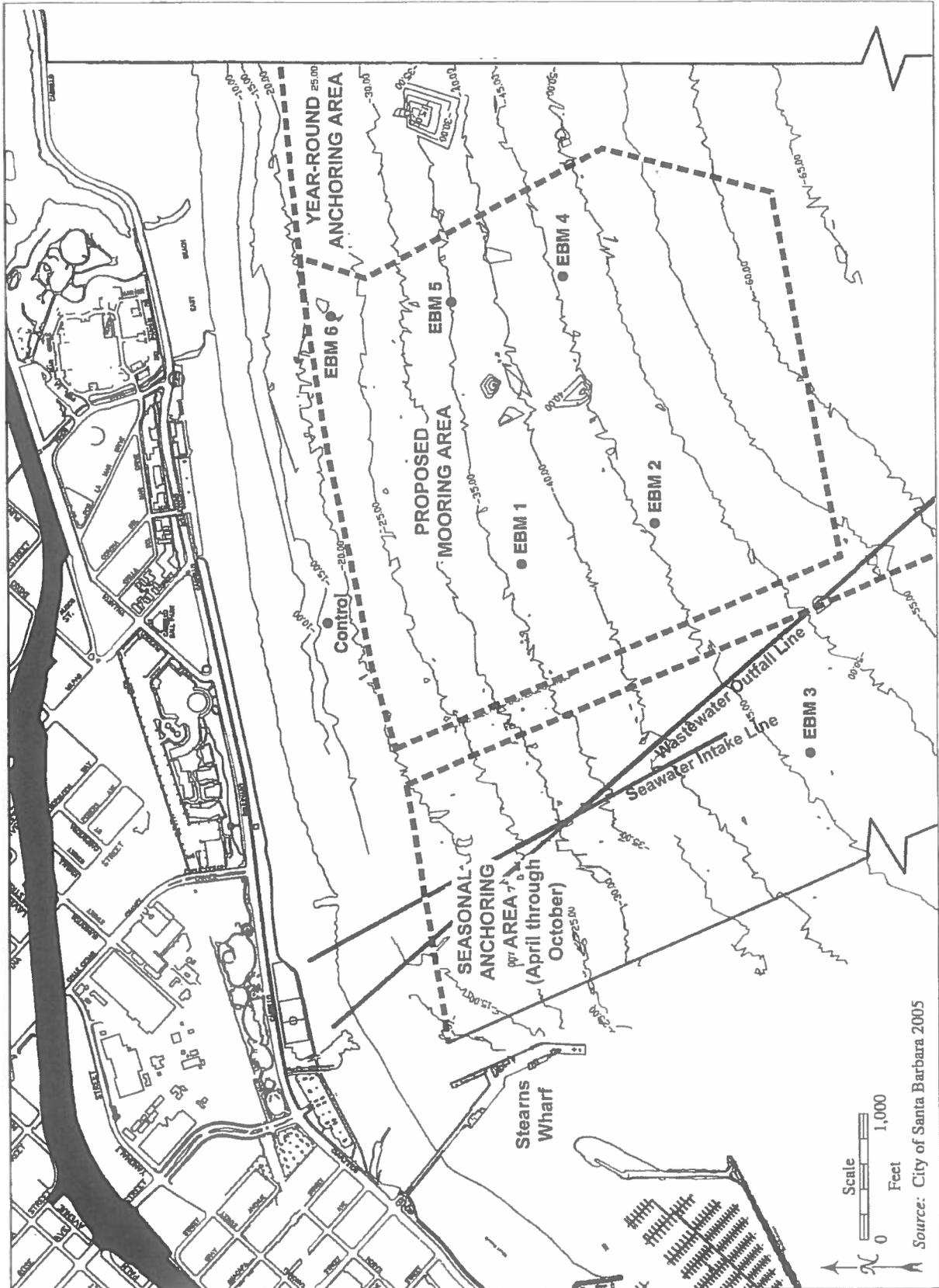
Fecal Coliform MPN/100ml			
Station	July	September	October
EBM #1	<10	<10	<10
EBM #2	<10	<10	<10
EBM #3	<10	<10	<10
EBM #4	<10	<10	<10
EBM #5	<10	<10	<10
EBM #6	<10	<10	<10
CONTROL	<10	<10	<10
Limit:		< 400 MPN/100ml	

Enterococcus MPN/100ml			
Station	July	September	October
EBM #1	<10	20	<10
EBM #2	<10	<10	<10
EBM #3	<10	<10	<10
EBM #4	<10	<10	<10
EBM #5	<10	<10	<10
EBM #6	10	<10	<10
CONTROL	<10	<10	10
Limit:		< 104 MPN/100ml	

ATTACHMENT
#3

APR 18 2013

#6



Map 1. Proposed Mooring and Anchoring Areas

ATTACHMENT #4

APR 18 2013

Dissolved Oxygen Levels in the Harbor

1/25/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	5.81 mg/l	6.08 mg/l
Station #8	Marina 2B300	6.24 mg/l	5.43 mg/l
Station #9	Marina 3A030	6.36 mg/l	6.80 mg/l
Station #10	Marina 1M001	6.42 mg/l	7.02 mg/l
Station #11	West Finger of Launch Ramp	5.56 mg/l	6.23 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.13 mg/l	7.61 mg/l
Station #13	Control, 100 yards Offshore	7.27 mg/l	7.36 mg/l

2/22/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	5.18 mg/l	5.24 mg/l
Station #8	Marina 2B300	5.43 mg/l	4.94 mg/l
Station #9	Marina 3A030	5.36 mg/l	6.05 mg/l
Station #10	Marina 1M001	5.73 mg/l	5.67 mg/l
Station #11	West Finger of Launch Ramp	5.47 mg/l	5.48 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.28 mg/l	7.50 mg/l
Station #13	Control, 100 yards Offshore	8.03 mg/l	7.88 mg/l

3/4/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	6.56 mg/l	6.90 mg/l
Station #8	Marina 2B300	5.50 mg/l	5.76 mg/l
Station #9	Marina 3A030	5.77 mg/l	6.88 mg/l
Station #10	Marina 1M001	6.04 mg/l	6.05 mg/l
Station #11	West Finger of Launch Ramp	5.75 mg/l	5.69 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.35 mg/l	7.58 mg/l
Station #13	Control, 100 yards Offshore	7.91 mg/l	7.60 mg/l

4/18/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	5.06 mg/l	4.51 mg/l
Station #8	Marina 2B300	4.75 mg/l	3.94 mg/l
Station #9	Marina 3A030	4.93 mg/l	4.28 mg/l
Station #10	Marina 1M001	6.28 mg/l	4.93 mg/l
Station #11	West Finger of Launch Ramp	5.36 mg/l	4.82 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	6.74 mg/l	6.62 mg/l
Station #13	Control, 100 yards Offshore	7.09 mg/l	7.20 mg/l

5/16/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	6.69 mg/l	7.69 mg/l
Station #8	Marina 2B300	6.80 mg/l	7.38 mg/l
Station #9	Marina 3A030	6.72 mg/l	7.29 mg/l
Station #10	Marina 1M001	7.15 mg/l	7.65 mg/l
Station #11	West Finger of Launch Ramp	6.65 mg/l	6.97 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.68 mg/l	8.60 mg/l
Station #13	Control, 100 yards Offshore	8.50 mg/l	9.77 mg/l

6/13/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	6.06 mg/l	7.15 mg/l
Station #8	Marina 2B300	5.62 mg/l	5.71 mg/l
Station #9	Marina 3A030	5.86 mg/l	6.03 mg/l
Station #10	Marina 1M001	5.74 mg/l	6.35 mg/l
Station #11	West Finger of Launch Ramp	4.64 mg/l	5.17 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	6.68 mg/l	6.65 mg/l
Station #13	Control, 100 yards Offshore	8.45 mg/l	9.13 mg/l

ATTACHMENT

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APR 18 2013 #6

Dissolved Oxygen Levels in the Harbor

7/24/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	5.57 mg/l	4.99 mg/l
Station #8	Marina 2B300	4.52 mg/l	4.80 mg/l
Station #9	Marina 3A030	5.71 mg/l	6.17 mg/l
Station #10	Marina 1M001	5.49 mg/l	4.59 mg/l
Station #11	West Finger of Launch Ramp	4.83 mg/l	4.82 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.02 mg/l	7.22 mg/l
Station #13	Control, 100 yards Offshore	7.15 mg/l	7.61 mg/l

8/2/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	5.84 mg/l	6.05 mg/l
Station #8	Marina 2B300	5.80 mg/l	6.43 mg/l
Station #9	Marina 3A030	5.56 mg/l	6.14 mg/l
Station #10	Marina 1M001	6.31 mg/l	6.06 mg/l
Station #11	West Finger of Launch Ramp	5.44 mg/l	5.25 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	8.36 mg/l	8.01 mg/l
Station #13	Control, 100 yards Offshore	8.37 mg/l	8.79 mg/l

8/28/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	6.30 mg/l	5.99 mg/l
Station #8	Marina 2B300	5.57 mg/l	4.92 mg/l
Station #9	Marina 3A030	5.62 mg/l	5.82 mg/l
Station #10	Marina 1M001	5.77 mg/l	5.61 mg/l
Station #11	West Finger of Launch Ramp	5.73 mg/l	5.91 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.48 mg/l	7.71 mg/l
Station #13	Control, 100 yards Offshore	7.93 mg/l	8.45 mg/l

9/27/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	4.77 mg/l	4.29 mg/l
Station #8	Marina 2B300	4.06 mg/l	4.56 mg/l
Station #9	Marina 3A030	4.57 mg/l	5.20 mg/l
Station #10	Marina 1M001	4.64 mg/l	5.48 mg/l
Station #11	West Finger of Launch Ramp	4.36 mg/l	4.04 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.34 mg/l	7.67 mg/l
Station #13	Control, 100 yards Offshore	7.65 mg/l	7.84 mg/l

11/28/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	5.02 mg/l	5.08 mg/l
Station #8	Marina 2B300	4.63 mg/l	4.64 mg/l
Station #9	Marina 3A030	4.76 mg/l	5.40 mg/l
Station #10	Marina 1M001	5.24 mg/l	5.34 mg/l
Station #11	West Finger of Launch Ramp	4.65 mg/l	4.74 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.64 mg/l	7.67 mg/l
Station #13	Control, 100 yards Offshore	7.80 mg/l	7.70 mg/l

12/11/2012

		<i>Near Surface DO</i>	<i>Near Bottom DO</i>
Station #7	Marina 1A002	5.92 mg/l	5.63 mg/l
Station #8	Marina 2B300	5.86 mg/l	5.62 mg/l
Station #9	Marina 3A030	5.50 mg/l	5.87 mg/l
Station #10	Marina 1M001	5.94 mg/l	6.28 mg/l
Station #11	West Finger of Launch Ramp	5.15 mg/l	4.71 mg/l
Station #12	Red Bouy #10, Mouth of Harbor	7.28 mg/l	7.16 mg/l
Station #13	Control, 100 yards Offshore	7.80 mg/l	7.80 mg/l

ATTACHMENT
#5

CUSHMAN CONTRACTING CORPORATION
P.O. Box 147
Goleta, CA 93116-0147

APR 18 2013 #6

Subject: Harbor Debris Cleanup: July, 2012-March, 2013
Date: March 26, 2013

During the course of our Harbor Debris cleanup efforts much regularity has been noticed.

Most west-facing docks and fingers are the primary collecting spots for debris. The reason this side collects more debris is most likely due to the direction in which debris are moving. The wind, along with the out-to-sea current at low tide is in an easterly direction. This results in a "comb like" effect, trapping the debris in these areas. Area "G" on the west fingers has been the area where we pick up the most trash on a bi-weekly basis; every time we show up this area is always dirty. Area "H" usually only has a small amount of trash; but after a storm there is always a good amount of trash. We use a skiff on a regular basis in this area. Because there are more areas for trash and debris to collect in at these areas "G" and "H", this is where our main effort has been concentrated.

A second collection area for debris is in the areas of the Harbor designated as "A" and "B" on the maintenance map. Area "A" is in the vicinity of the storm drain outfall in the northwest corner of the harbor closest to Shoreline Drive. Area "B" is all along the north side of the harbor in the rocks below the seawall in Marinas 2, 3 & 4. For cleanup, a skiff or some small vessel is the only way to reach these areas. These areas are monitored at least once a month and always after holidays. The majority of trash when picked up in this area is after a storm; otherwise it is usually one of the cleanest areas in the harbor.

A third collection area for debris is in the area of the Harbor designated as "C" on the maintenance map. Area "C" is in the vicinity of the boat launch. The main collection point in this area is along the east side of the harbor along the rock jetty. This is most likely due to the same easterly moving debris direction described above. This area sometimes requires cleanup by skiff or some small vessel; although we mainly get the rock area by foot. The trash usually stays right by the drain located in the rocks.

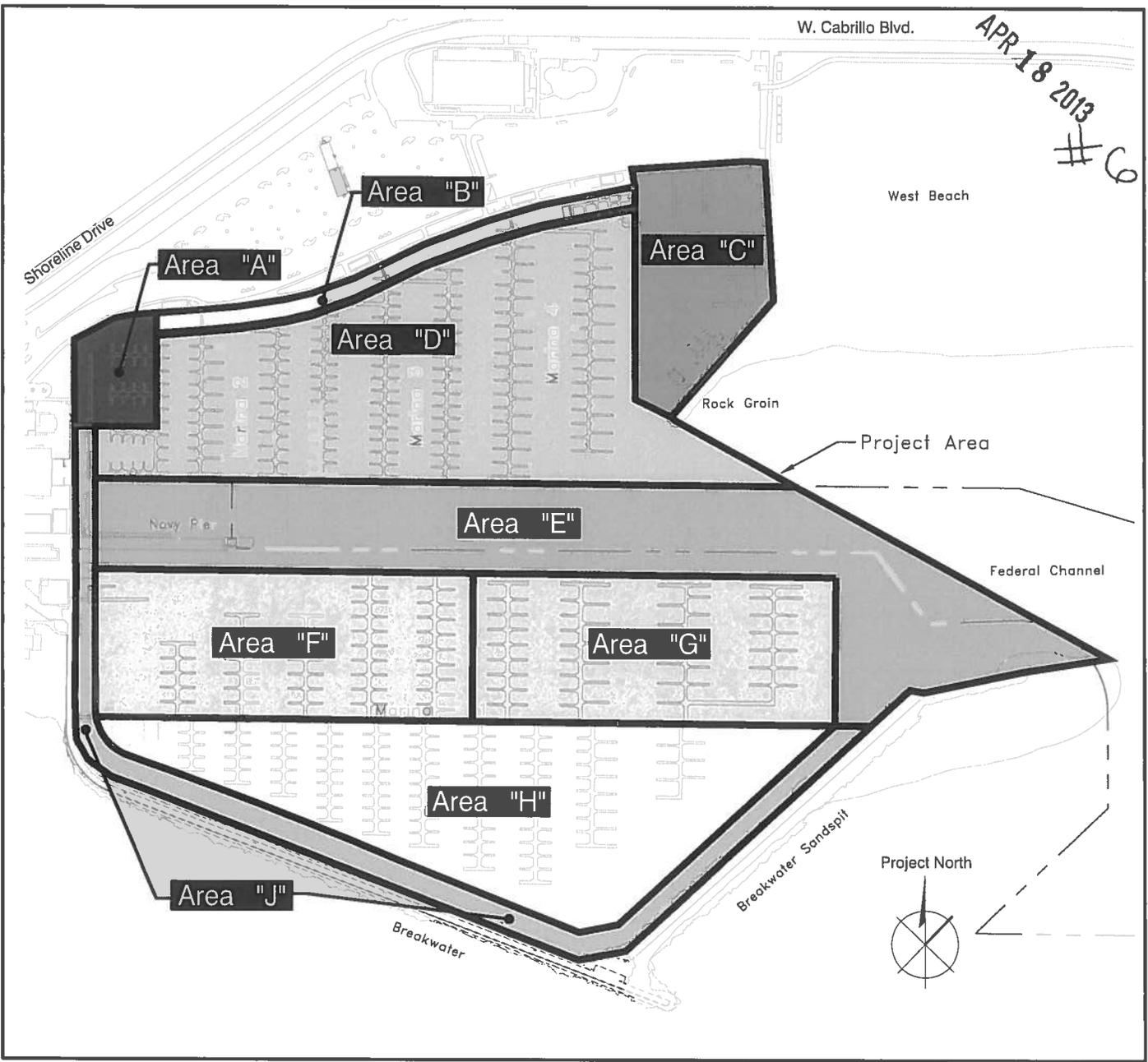
The debris collected that can be categorized as regular or reoccurring consist of; newspapers, cigarettes, plastic bottles and buckets, bags, styrofoam, candy and food wrappers, aluminum cans, tennis balls, rope, kelp, dead birds, big limbs, and bamboo.

We have found that walking along the marinas and docks is more time efficient, covers a larger area and produces a much higher volume of debris than working from a skiff. A skiff is used in areas inaccessible by foot, for removal of larger debris and where it is more efficient.

There appears to be more dead birds this year than last year. Over 20 birds have been found to date. Many are mangled, as if caught in props underwater while diving for food.

ATTACHMENT #6

APR 18 2013
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Cleanup Date: _____ Operator: _____

Cleanup Hours: _____

Debris Profile:

- Area "A"
- Area "B"
- Area "C"
- Area "D"
- Area "E"
- Area "F"
- Area "G"
- Area "H"
- Area "J"

General Comments:

ATTACHMENT

#7

DATE PLOTTED: 04/18/2013 10:00:00 AM