

## **T/V *Margara* Emergency Restoration Inspection October 19-21, 2006**

A site inspection of the emergency restoration efforts led by Continental Shelf Associates and supported by Trustee staff at the impact sites of the T/V *Margara* was conducted from October 19-21, 2006 by the Trustees. The goal of the inspection was to determine if any additional work was required. The inspection team consisted of Craig Lilyestrom and Edwin Rodriguez (Puerto Rico Department of Natural & Environmental Resources), Michael Nemeth and Sean Griffin (Lighthouse Technical Consultants, Inc.), and Tom Moore and Kevin Kirsch (National Oceanic & Atmospheric Administration).

The Trustees agreed that the majority of work across the site has been completed, but some work remains. The work that remains is additional anti-fouling paint removal and the reattachment of hard and soft corals. Where possible, the Trustees included photographs illustrating these areas. The following is a list of the Trustees' observations including areas where additional work remains.

### Southern Injury –refer to Figure 1

#### A. Site 146 – **Additional work required**

There are at least 5 areas where anti-fouling paint needs to be removed (see Figure 2a & b).

#### B. Site 145 – **Additional work required**

#### C. Unmarked site northeast of 147 – **Additional work required**

There is a small area (10 cm x 10 cm) of anti-fouling paint to be removed.

#### D. I-11 – **Additional work required**

There are 5-6 patches, ~50 cm in diameter each, of anti-fouling paint that need to be removed. There are also 8 hard corals that need to be reattached.

### Northern Injury – refer to Figure 3

#### E. Site 119

Length and width measurements were taken at this site. This site is composed of two impact areas on top of the same pinnacle with a small area in between. The northern area was measured as 35' x 18' (10.6 meters x 5.5 meters). The southern area was measured as 60' x 22' (18.3 meters x 6.7 meters).

#### F. Site 158 – **Additional work required**

Approximately 100 hard coral pieces and 200-250 soft corals that need to be reattached were cached south of the marker (see Figure 5).

**G. North of Site 158 – Additional work required**

There is anti-fouling paint to be removed.

**H. Site 117 – Additional work required**

Approximately 150 hard coral pieces and 200-250 soft corals were cached that need to be reattached (see Figure 4). There is also additional anti-fouling paint that needs to be removed.

**I. Southeast corner of grid – Additional work required**

There are five 10 cm x 10 cm areas of anti-fouling paint that need to be removed.

**J. Site 124, east of the grid line – Additional work required**

There is a 1 meter x 0.5 meter area of anti-fouling paint that needs to be removed (see Figure 6).

Sites K, L, & M – These three impacts were located north of Site 131. It is believed that they were found during the initial triage and designated I-21, T-15, and I-22, respectively. However, the positions collected for these sites during the triage proved to be inaccurate. These three sites run in a line from southwest to northeast. A GPS coordinate was taken at the center (L) impact ( $17^{\circ} 57.238'N$ ,  $66^{\circ} 43.875'W$ ).

**K. Impact north of 131 – Work required**

There is anti-fouling paint to be removed and coral to be reattached. The site was measured as 25' x 14' (7.6 m x 4.3 m).

**L. Impact north of 131 – Work required**

There is anti-fouling paint to be removed and coral to be reattached. The site was measured as 34' x 17' (10.4 m x 5.2 m). (see Figure 7 & 8)

**M. Impact north of 131**

The site is composed of two impacts. The first was measured as 12' x 11' (3.6 m x 3.4 m). The second was measured as 37' x 18' (11.3 m x 5.5 m).

N. Site 132

This site was measured as 82' long (25 meters) with widths of 13' (4 meters), 18' (5.5 meters) and 23' (7 meters).

O. Previously undiscovered impact east of 132 – **Work required**

There is a 7' x 7' (2.1 meter x 2.1 meter) impact east of 132 that needs anti-fouling paint removed.

P. Site 156

This site was measured as 8.7 meters x 4.4 meters.

Q. Site I-9 – **Work required**

There are 10-15 hard corals that were cached at this site during the triage that need to be reattached. Due to the small size of the impact, it is recommended that these corals be moved to I-10 for reattachment.

R. Site I-10 – **Work required**

There are 30-40 corals cached at this site that need to be reattached.

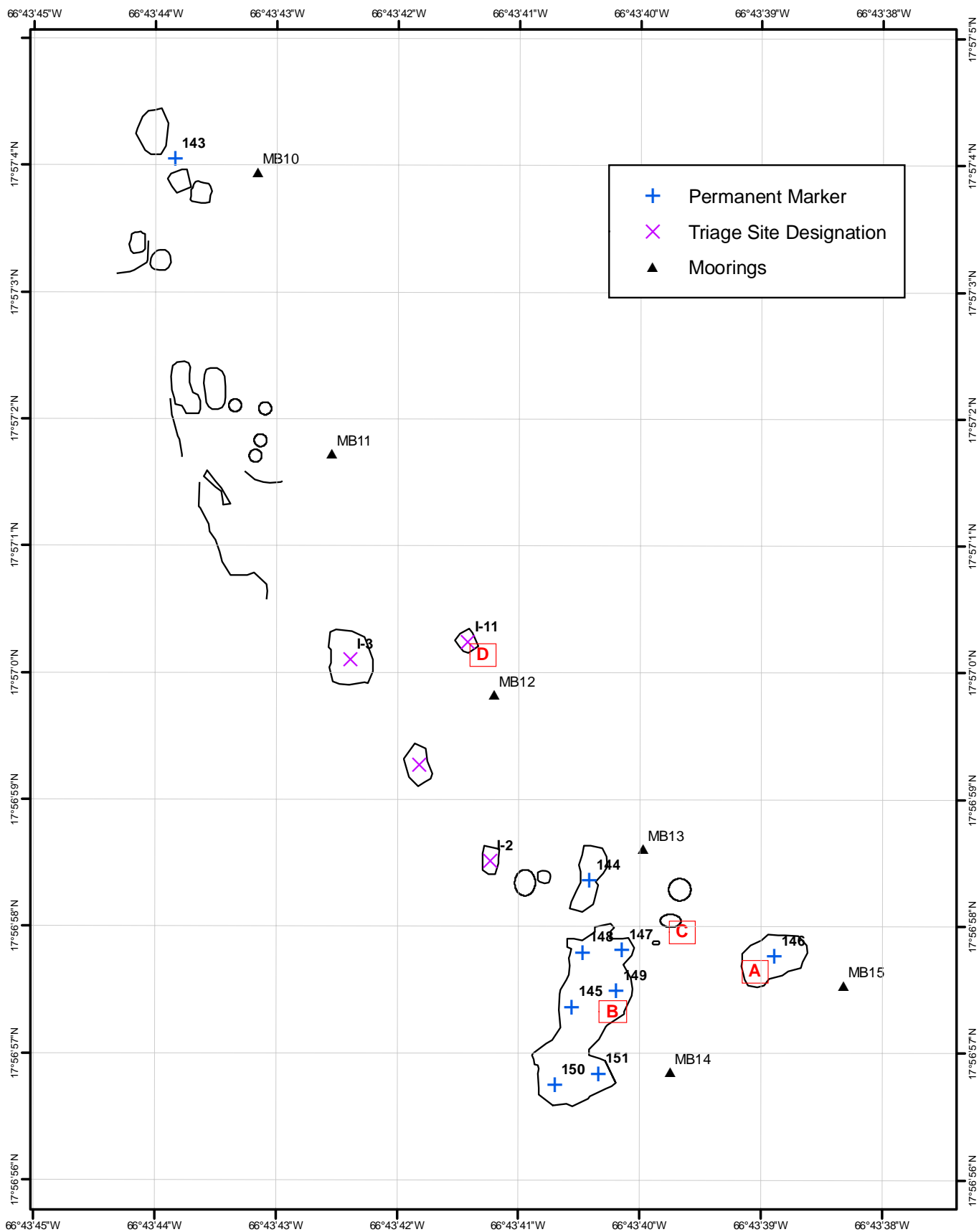


Figure 1. Southern injury, red letters indicate areas where additional emergency restoration work is needed

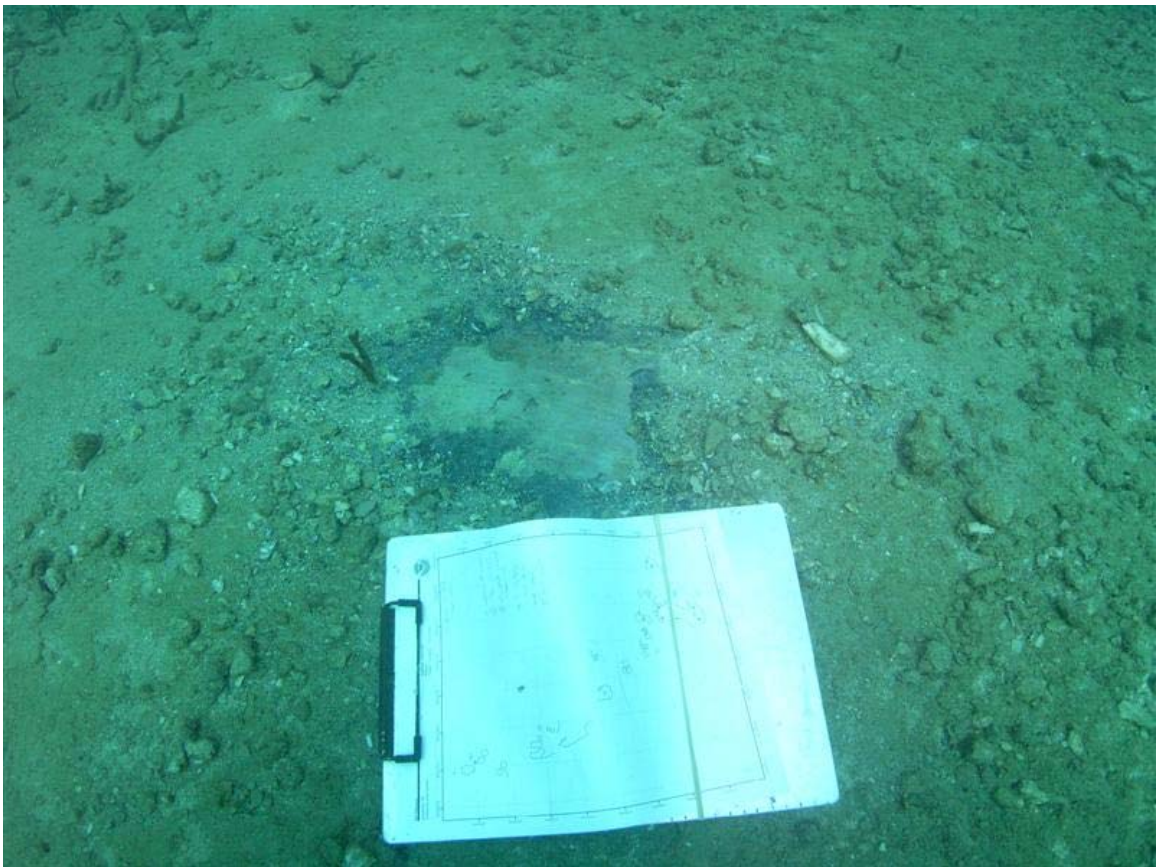


Figure 2a. Representative photos of remaining areas of anti-fouling paint at Site 146

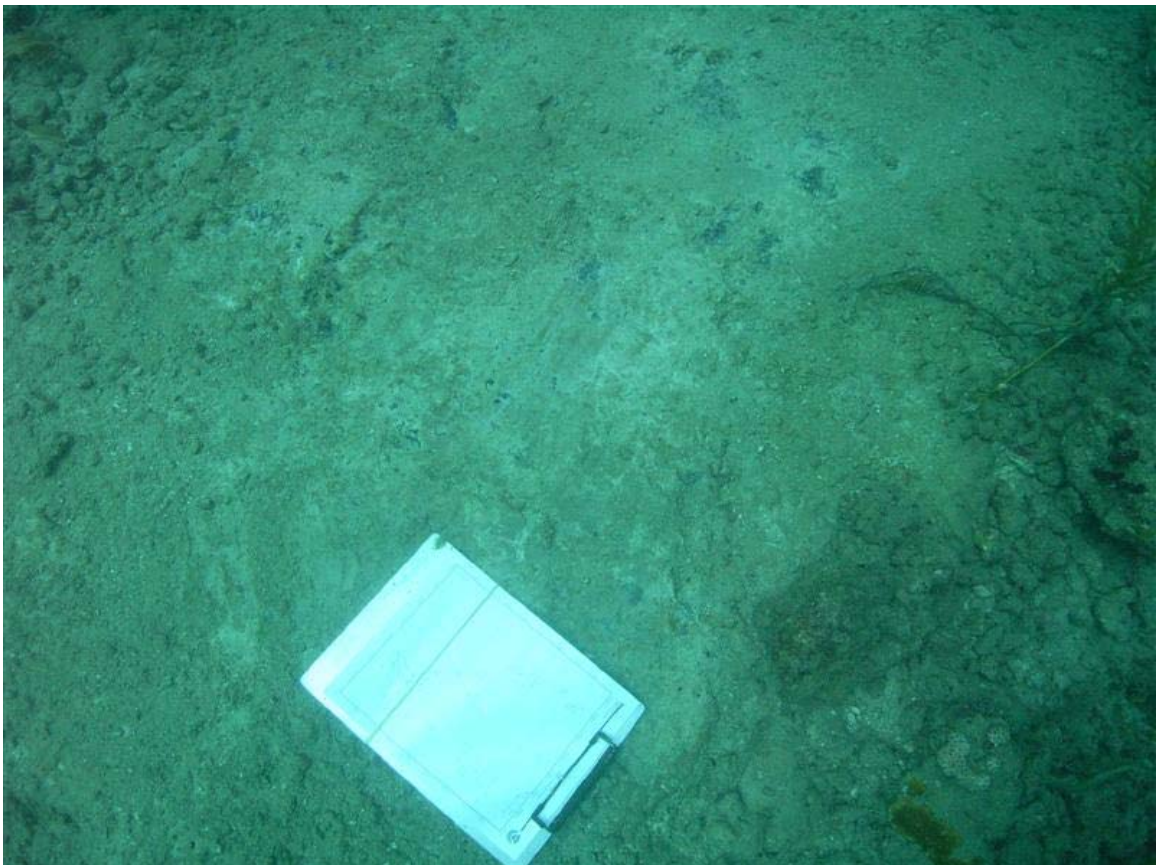
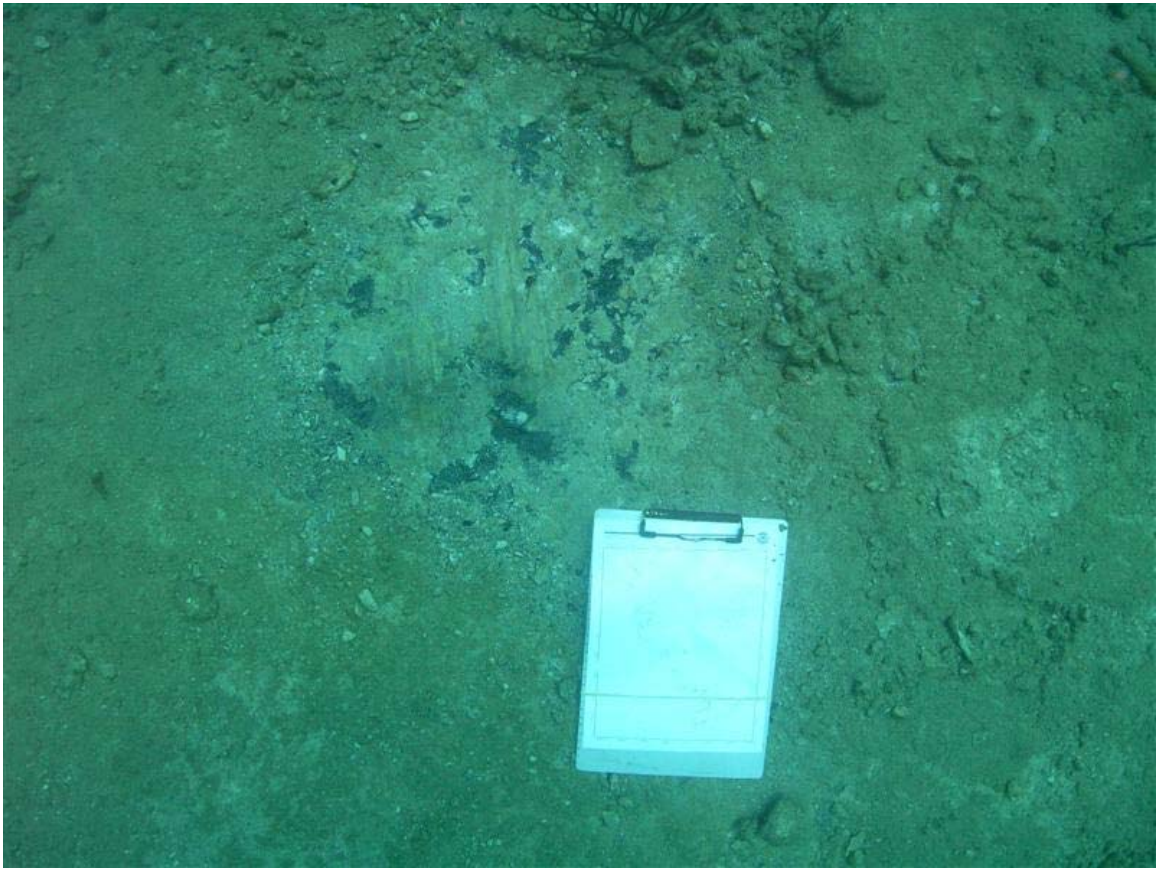


Figure 2b. Representative photos of remaining areas of anti-fouling paint at Site 146

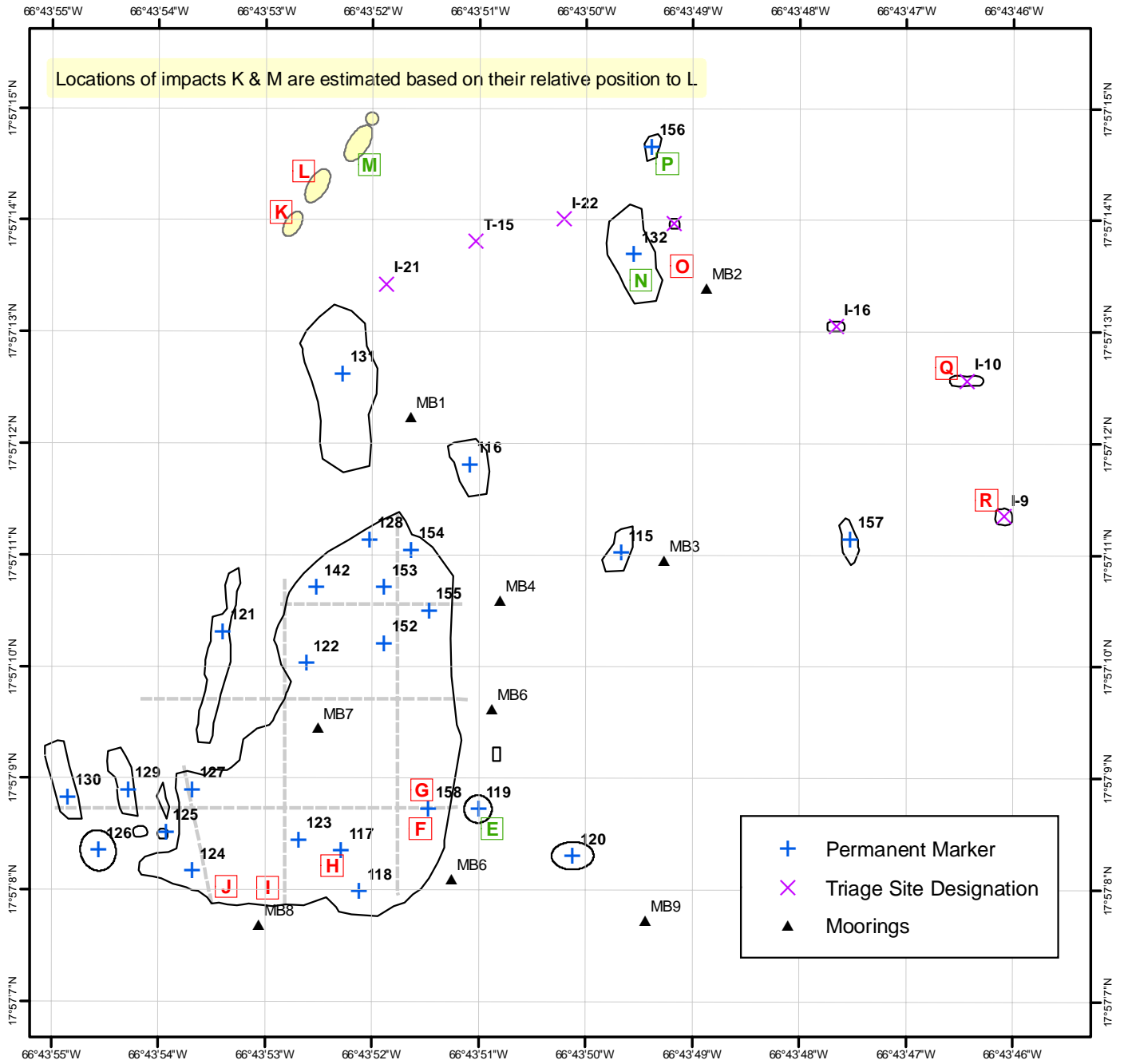


Figure 3. Northern injury; red letters indicate areas where additional emergency restoration work is needed; green letters indicate areas of note within the text.

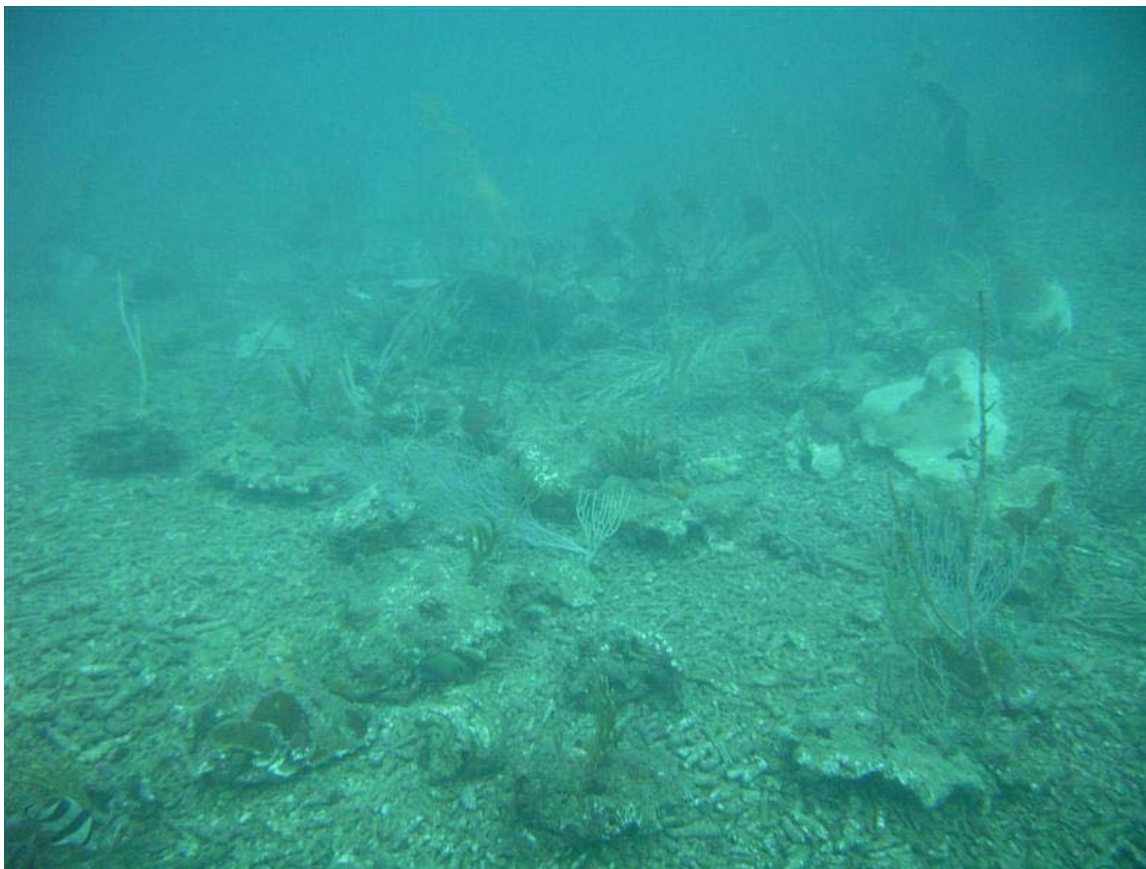


Figure 4. Photos of corals cached at Site 117.



Figure 5. Corals cached south of Site 158.



Figure 6. Area of anti-fouling paint that needs to be removed, at letter J in Figure 3.

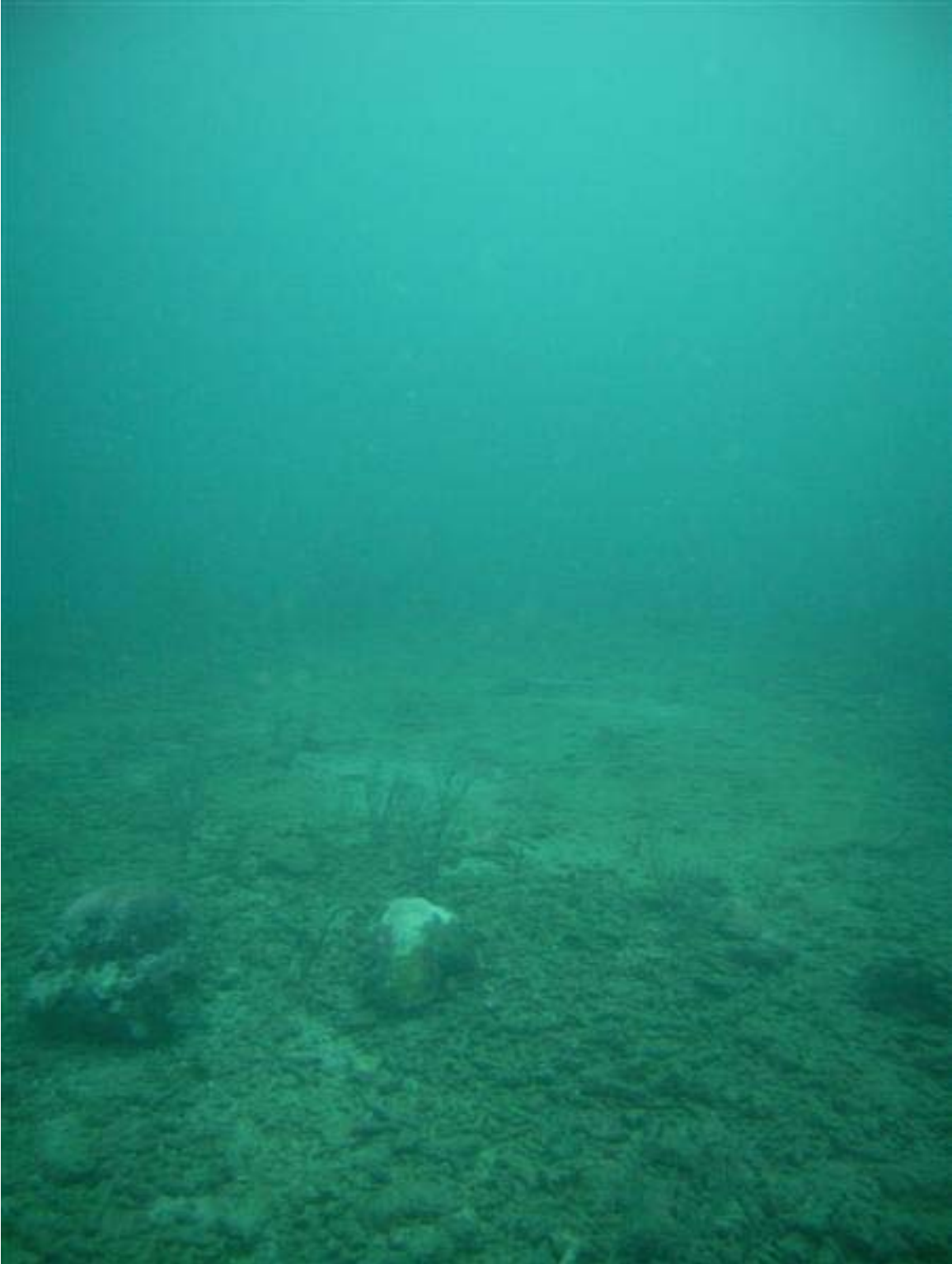


Figure 7. Photo of Site T-15.



Figure 8. Close-up of Site T-15 showing areas of anti-fouling paint.