NOAA UAS Working Group
Marine debris surveys, Northwestern Hawaiian Islands

**Emergency Procedures**
(Revised 8/7/2007)

## 1. Aircraft in Unsafe Condition

The aircraft operator, project scientist, or the ship's aviation safety officer will determine whether the aircraft is in an unsafe condition. The pilot will terminate the flight of aircraft by the most expedient means to ensure safety to persons and property within the flight footprint. The flight footprint will be planned so that the fly away range of the aircraft will not include any persons beside the crew of the NOAA ship.

## 2. Fly-away

If the fly-away is due to failure of the autopilot or control surfaces or is due to an incorrectly programmed way point, the operator will attempt to establish manual control of the aircraft and then terminate the flight in an expedient and safe manner.

## 3. Structural damage to airframe while in flight

The operator will attempt to establish manual control of the aircraft and initiate an emergency landing procedure which involves de-activating the electric motor powering the propeller and deploying the parachute for a soft landing on the water.

## 4. Engine failure during take off

Operator will attempt an un-powered landing in the water directly in front of the launch site. Note that protocol mandates that a safety boundary extending 1200 feet in front of launch area (10 Seconds flying time at max speed of 70 knots) be established prior to every launch.

## 5. Engine failure during landing

Standard water landing procedure involves de-activating the aircraft motor and deploying a parachute for a soft landing on the water.

## 6. Engine failure during flight

The operator should attempt to gain control of the aircraft and deploy the parachute or perform an un-powered landing on the water. Position data should be noted to help facilitate recovery of the aircraft by small boat.

## 7. Parachute fails to deploy

Standard operating procedure is to choose landing sites in the open ocean. Also, since over flights of people or property are not authorized, the likely scenario of a parachute failing to deploy is that the aircraft will experience a hard landing on the water. If sufficient clear space exists, the operator may attempt to take manual control of the aircraft and climb to a safe altitude and orbit. After informing mission personnel of the situation, the operator may then attempt a stall-type landing near the water's surface to minimize damage to the airframe upon impact.