

# Lithium Battery Safety Notice

28 April 2020

**This notice shall be incorporated into the Small Boat Operations Manual with an attachment that identifies any specific preventive or operational considerations.**

This safety notice is a supplement to the previously issued September 19<sup>th</sup>, 2019 notice regarding the use and charging of lithium batteries on small boats. There is an increased use of battery powered devices to support small boat operations and the deployment of higher voltage mission devices is becoming more common. The fleet has had a number of incidents caused by lithium batteries overheating. This warrants a risk assessment and mitigation plan.

The Small Boat Safety Board and Program Office are requiring immediate implementation of the following:

## **Universal Policy on Lithium battery use on NOAA small boats**

- Distinguish between consumer devices (cell, laptop, cordless tools, radios) and mission devices (higher voltage science gear, submerged devices, autonomous vehicles, custom built instruments)
- Maintain an inventory of standard consumer devices and their locations.
- Identify projects that include mission equipment powered by lithium batteries
- Incorporate Lithium battery fire hazards and response into existing fire drills and training
- Explain this battery device policy and local procedures during vessel orientations

## **Requirements for consumer devices:**

- Prohibit unattended charging of consumer devices in berthing spaces
- Use only chargers that are compatible with the device as defined by the manufacturer
- Devices must be attended during charging on any surface that is potentially flammable
- Require regular inspection (monthly, each use, etc.) of battery powered devices
- Remove from service, and the vessel, battery cases or devices that are - physically damaged, swollen, cracked, or show evidence of overheating
- Do not store or charge devices in proximity to flammable materials

### **Requirements for mission devices:**

- Require device specific procedures and responsibilities for proper handling, charging and monitoring.
  - Identify any custom / prototype chargers that do not have rate, overcurrent, or heat monitoring features and consider them to be high risk devices.
- Identify and maintain areas suitable for high risk recharging and service.
  - These areas require a posting, monitored charging only and a means of fire containment. Containment may include the use of charging bags, metal dividers or cans.
  - Location should be dry, open air and allow for overboard jettison whenever possible.
  - Location must not be near flammable surfaces or in areas that would impede egress.
  - A suitable fire extinguisher shall be located within close proximity of any designated charging station - Class B or ABC rating. Provide posting and instruction on fighting a Lithium battery fire.
- Do not store or charge devices in proximity to flammable material storage.

In addition, VOCs and program leads shall review operations that require the use of lithium batteries and develop supplemental procedures for any specialized operation not covered under this policy.