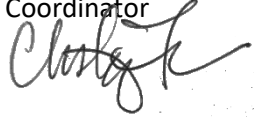




UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

MEMORANDUM FOR: FILE

FROM: Christy Fellas, DWH Environmental Compliance Coordinator
NOAA Restoration Center, Southeast Region 

DATE: February 21, 2023

SUBJECT: Florida TIG RP/EA #2: Project Changes to Assessing Risk and Conducting Public Outreach to Reduce Vessel Strikes on Sea Turtles along Florida's Gulf Coast, No Additional ESA, EFH or MMPA Reviews Required

Based on my review of project materials including emails and updated maps (January 2023), the NOAA Restoration Center (RC) determined that the project location change does not alter the previous determinations to species or habitats listed under the Endangered Species Act (ESA), designated Essential Fish Habitat (EFH) or animals protected by the Marine Mammal Protection Act under the jurisdiction of National Marine Fisheries Service (NMFS). For NMFS ESA, the project implementer from Florida State University holds a NMFS sea turtle research permit.

The project has been updated to include the use of drones into the project to perform some of the surveys due to heavy boat traffic, shallow waters, or multiple channels. Additionally, surveys will extend into the bays that are connected to the three pass areas as well as the adjacent shoreline to get the most complete picture of vessel use in this area (see attached maps). For the use of drones, the project implementer will follow the NMFS viewing guidelines and scan the area for marine mammals before launching drones (see attached email correspondence).

This project change will not require further evaluation under ESA, EFH or MMPA for species or habitats under the jurisdiction of NMFS. The new site is within the bounds of the analyses made during preparation of Florida TIG RP/EA #2, permits held to conduct the work include the new location and NMFS has made recommendations on how to operate drones in the project area. No additional effects are expected beyond what was considered in previous analyses. If the project is further modified, in a way that could change these determinations, it will be reevaluated as appropriate.

East Pass survey design

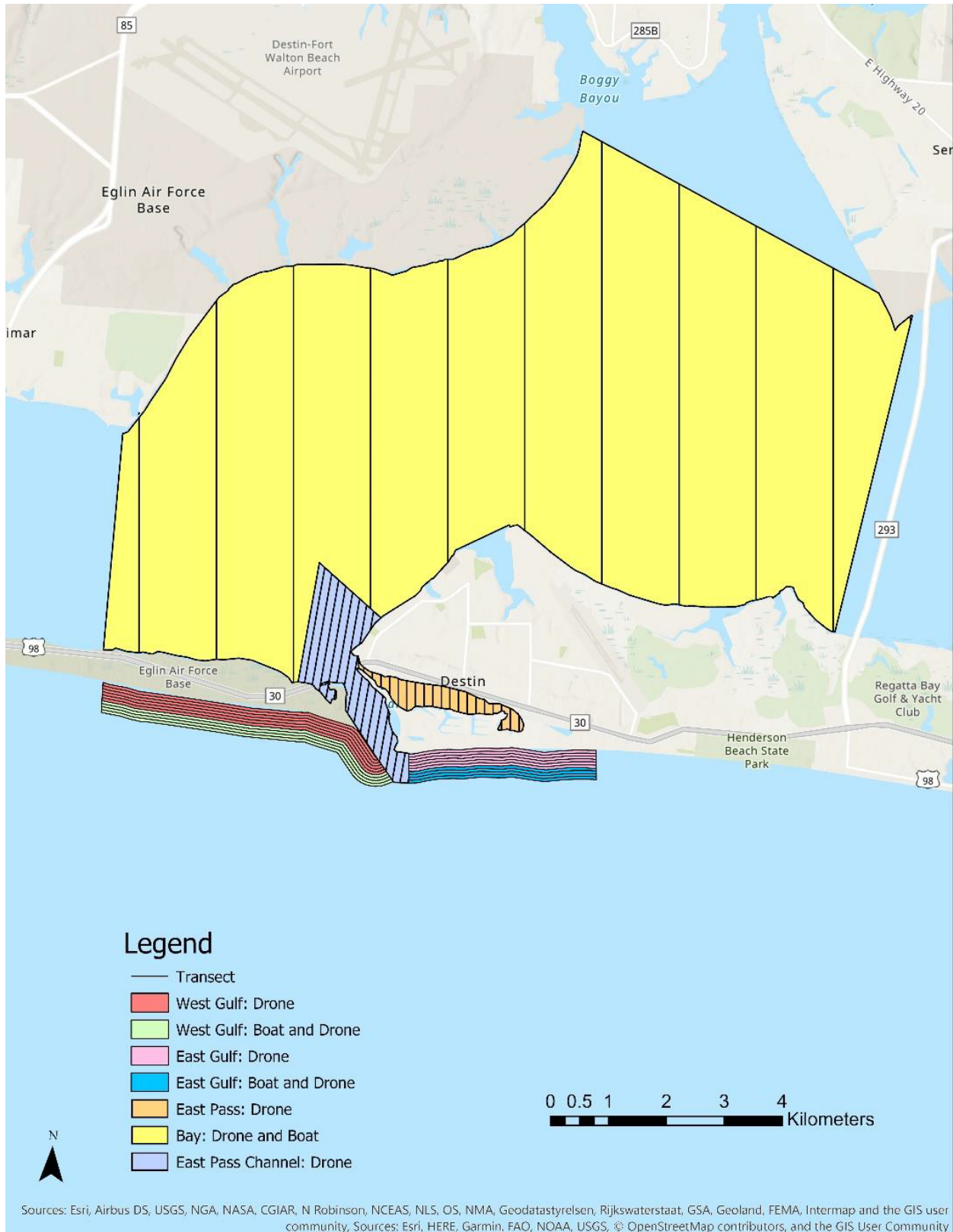


Figure 1. East Pass survey design.

Big Sarasota Pass/New Pass survey design

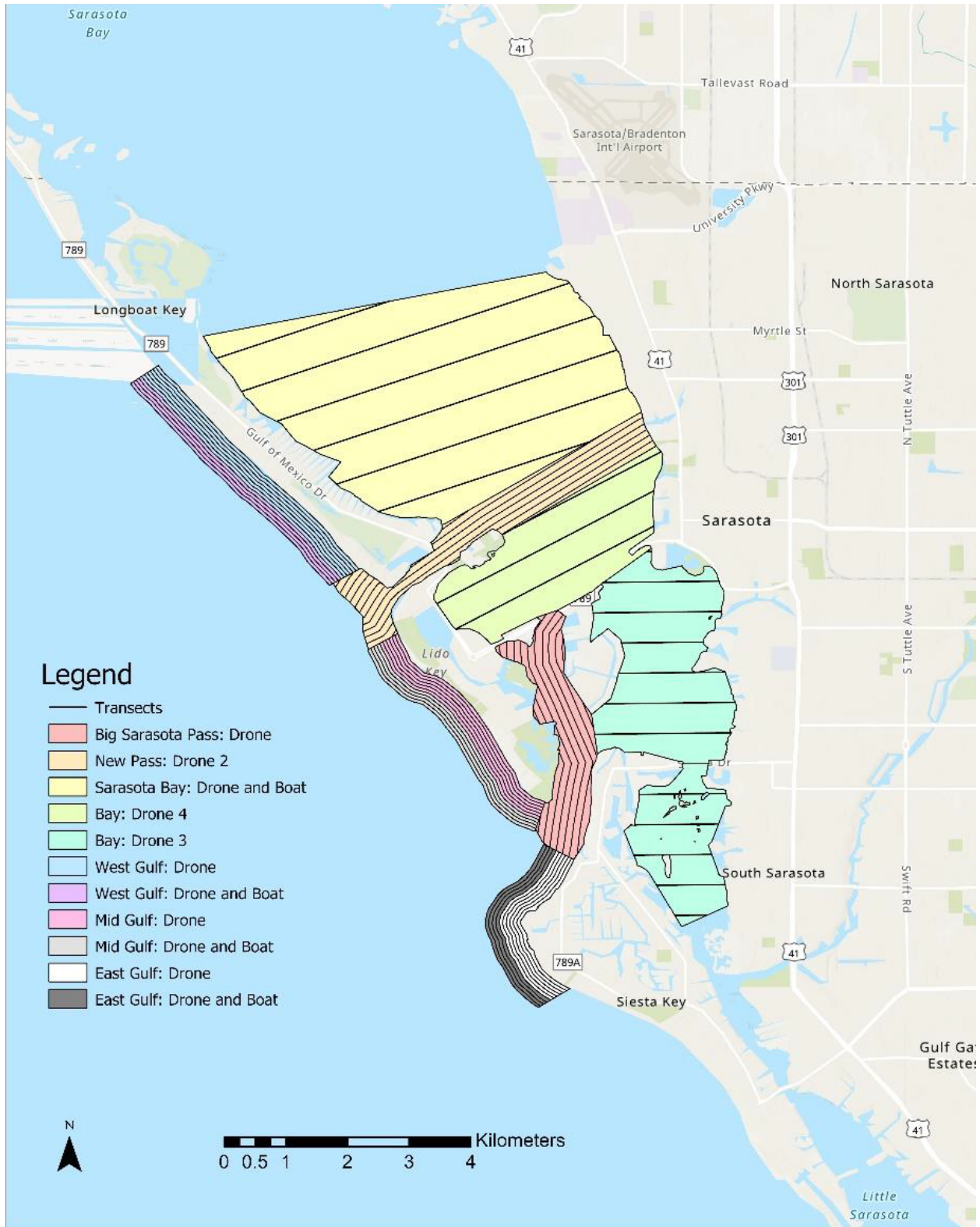


Figure 2. Big Sarasota Pas/New Pass survey design

From: [Erin Markin - NOAA Federal](#)
To: [Mariana Fuentes](#)
Cc: [Amy Hapeman - NOAA Federal](#); [Koperski, Meghan](#); [Sophie Mills](#)
Subject: Re: Use of drone in conjunction with authorized work under permit 19496
Date: Tuesday, December 6, 2022 12:02:38 PM

Hi,

It was great chatting with you Sophie! As promised, here are links to [NMFS Marine Life Viewing Guidelines](#) and the [Southeast U.S. Marine Mammal and Sea Turtle Viewing Guidelines](#). As I mentioned on the call, we cannot authorize incidental harassment or take of marine mammals under a sea turtle research permit, so our guidance to researchers is to follow the viewing guidelines. Prior to launching your drone, scan the area for marine mammals and if they are in the vicinity, wait until they leave before launching. Also, keep your vessel at least 50 yards away from dolphins. If you encounter other species, the viewing distances may be different (e.g., 100 yards for large whales), so just be familiar with the guidelines.

Please let us know if you have additional questions now or once you start your surveys.

Thanks again for reaching out to us and I hope you enjoy your afternoon.

Erin

On Mon, Nov 28, 2022 at 7:46 PM Mariana Fuentes <mfuentes@fsu.edu> wrote:

Thanks, Erin much appreciated, below some answers to your questions and a summary of our questions in relation to protocols:

1. Distance transect may cover – Up to 76 sq/km (Tampa 14sq/km, Sarasota 35sq/km, Destin 27sq/km).
2. Pathway of transect – we are still working through our transect design, but likely zigzag. This may change depending on the outcome of the models we run.
3. Altitude – 30 meters, speed of 10km/h. We can change the altitude if this helps with reducing impact.

To summarize our questions:

- If a marine mammal enters the pathway of the drone, do we need to land the drone immediately or is there a certain length of time over the animal that determines if we land it?
- Is there a length of time we need to keep the drone grounded before resuming our transect?
- We will usually need to land the drone on the boat – is there a distance from the animal we will need to position the boat in order to land the drone?
- Can we stop the transect and move the drone out of the pathway of the animal, and then resume the transect after a suggested length of time, instead of landing the drone?

Thanks in advance

Mariana Fuentes

Dr. Mariana Fuentes

Associate Professor

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From: Erin Markin - NOAA Federal <erin.markin@noaa.gov>

Sent: Monday, November 28, 2022 2:45 PM

To: Mariana Fuentes <mfuentes@fsu.edu>

Cc: Amy Hapeman - NOAA Federal <amy.hapeman@noaa.gov>; Koperski, Meghan <Meghan.Koperski@myfwc.com>; Sophie Mills <skm22d@fsu.edu>

Subject: Re: Use of drone in conjunction with authorized work under permit 19496

Hi Mariana,

I'll chat with some colleagues this week about your questions and will be back in touch early next week if that works for you. If needed, I'd be happy to also schedule a call for us to discuss this further.

Can you send me a little more information about your transects such as 1) distance the transect may cover; 2) pathway of the transect (e.g., out and back or zig-zag), and 3) altitude? If you don't know the specifics yet then any information will be helpful to me when I chat with my colleagues.

Thanksgiving break was nice; thanks for asking.

Hope all is well.

Erin

P.S. You should receive your modified permit for signature today or tomorrow. I just need one more signature and I am hoping to get that today.

On Mon, Nov 28, 2022 at 12:57 PM Mariana Fuentes <mfuentes@fsu.edu> wrote:

Hi Erin

I hope you had a nice thanksgiving break. We are now developing our drone surveys in the Gulf and I wanted to clarify the restrictions and protocols of flying the drone if we encounter a marine mammal in our transect. For example, our drone will follow a pre defined transect, if we sight a dolphin during that transect, swimming across the transect, do we need to stop the transect? Basically, will the drone likely move away from the dolphin as it completes the transect. also if we have to stop and return the drone to boat we might re-encounter the dolphin as we return the drone? I am just trying to figure out,

if every time we see a dolphin if we need to stop everything, or if we only need to stop if the dolphin continues in the path of the transect. Perhaps its easier to have a chat about this. Please let us know

Mariana

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From: Erin Markin - NOAA Federal <erin.markin@noaa.gov>

Sent: Thursday, August 25, 2022 11:42 AM

To: Mariana Fuentes <mfuentes@fsu.edu>

Cc: Amy Hapeman - NOAA Federal <amy.hapeman@noaa.gov>; Koperski, Meghan <Meghan.Koperski@myfwc.com>

Subject: Re: Use of drone in conjunction with authorized work under permit 19496

Hi,

I should have also pointed out that drones cannot be flown over marine mammals. If one enters your transect pathway, you'll need to immediately have the drone return to the ground station and halt until it has left.

Again, let me know if you have any questions.

Erin

On Thu, Aug 25, 2022 at 11:36 AM Mariana Fuentes <mfuentes@fsu.edu> wrote:

Thanks Erin for the information.

Meghan can you let us know the permitting requirements at state level ?

Thanks
Mariana

Sent from my iPhone

On Aug 25, 2022, at 11:29 AM, Erin Markin - NOAA Federal <erin.markin@noaa.gov> wrote:

Hi Mariana,

Thanks for your question. Yes, you do not need a permit from us to use a drone for surveying sea turtles as long as you are 1) not pursuing and 2) not spending >5 minutes with a turtle. It sounds like you will just be flying transects that will not hover over any individual so you can conduct that work with us needing to modify your current permit. However, keep in mind that the state or other local entities may require permits to operate a drone. There are also FAA requirements you may want to check out.

Please let us know if you have any additional questions.

Take care.

Erin

On Thu, Aug 25, 2022 at 9:35 AM Mariana Fuentes <mfuentes@fsu.edu> wrote:

Dear Erin, Amy and Meghan

I am writing to gauge whether a permit is needed to fly drones in conjunction with vessel surveys associated with permit 19496. This work would focus in Crystal River (Citrus County), East Pass (Walton County), Blind Pass (Pinellas County), San Carlos Bay Entrance (Lee County). We would conduct 15-20 minutes drone transects flying at a height of 30m. The idea is not to follow a specific turtle, but to count turtles within our transects. I am happy to have a phone call to discuss this.

thanks in advance

Mariana

Dr. Mariana Fuentes

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Erin Markin, PhD

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MTRECG – Drone flying protocols

Responsibilities of operating a drone

Drone controller:

- Lab supervisors (Project Manager and/or Postdoc) will oversee all drone operations to ensure the safety of lab personnel, non-participants (i.e., the public), and equipment.
- Will grant permission to operate the drone and ensure that all operators are certified and capable of safely completing drone activities.
- Will establish a safety checklist to cover all operations from take-off to landing, and ensuring these checklists are completed with the drone operator for each stratum and transect to be surveyed. Including:
 - Aircraft
 - Environment
 - Checking flight conditions using 1800-WX-brief.com and/or METARs, ASOS, AWOSS, ARTCCs, <https://www.aviationweather.gov/>
 - External factors (people, wildlife etc.)
- Will supervise drone operations and the drone operator.
- Will delegate tasks to other members of the crew (e.g., visual observer, drone operator).
- Can terminate operations at any time when they are deemed unsafe or in the event of an emergency.
- Drone operators:
 - Must hold a Part 107, Remote Pilot Certificate with a small UAS rating or be under the direct supervision of a Part 107 certified Remote Pilot in Command.
 - Should know how to over-ride any app controls (e.g., when flying planned routes) and fly the drone completely independently of an app (e.g., Litchi). This is an FAA requirement.
 - Must receive prior authorization to fly as required per each location (using the B4UFly app to determine), using either LAANC or airspace authorization.
 - Cannot act as a remote drone operator for more than one unmanned aircraft at a time.
 - Must be in good physical and mental condition to carry out their duties.
 - Must wear long sleeves, eye protection, and thick gloves if drone is being caught at landing.
 - Those without should remain 5m away when at 10m height.
 - The drone should be launched at least 50m away from any dolphins and 15 m from birds.
- Visual observers:
 - When possible, a visual observer (VO, second set of eyes) should provide support for the drone operator before, during and after each flight.
 - Must be aware, before each flight, of the situations that can affect flight such as weather conditions, ground, and airborne hazards.
 - Must scan the skies, using a series of short regularly spaced eye movements to search each 10 degrees sector.
 - Must know all rules and regulations of the FAA regarding drone flight.
 - Will take over control of the drone if the primary drone operator is no longer able to fly the drone (e.g., loses control, or their ability to fly is impaired).
 - Will maintain contact with the boat captain using radios to report any deviations in the flight path.

Flying from the beach

Launching/operation/landing

- The launch area should be carefully selected to be 50m from non-participants, buildings, structures, and 100m from wildlife.

- The drone should never exceed 120m (400ft) altitude (over land or structures) unless an emergency occurs when an airborne obstacle needs to be avoided.
- Take off from a large landing pad, preferably from a damp area so that sand will not be kicked up into the air.
- Careful consideration should be taken with regards to wind and the weather.
 - The wind should be no more than two-thirds of the maximum speed of the drone. For our operations, which the drone will fly at 10kmh we should avoid flying the drone at winds higher than 7kmh.
 - No flights will occur during inclement weather (e.g., thunderstorms, tropical cyclones).
 - The drone must stay 150m (500ft) below the cloud ceiling, and 600m (2000ft) adjacent to clouds.
 - Ensure you have at least 3 statute miles (sm) visibility before take-off.
- Operation over human beings: sustained flight over people (following or circling a person) is prohibited unless they are “directly participating in the operation”, an FAA-defined term, or “located under a covered structure or inside a stationary vehicle that can provide reasonable protection from a small unmanned aircraft.”
- Never allow your drone to fly outside visual sightlines. If line of sight is lost, the drone must stop moving until light of sight is restored.
- Aircraft should only be flown within 30 minutes between sunrise and sunset.
- The drone should land with 30% battery and should be turned around with no less than 50% battery when flying out and back routes.

Emergency operations

If safety is deemed to be diminished, or a loss of control of the drone should occur, the app controlling the flight (in this case, Litchi) should be over-ride to fly the drone manually. The VO should ensure that all persons near the designated landing pad are 15m away. The drone should immediately and slowly be returned to the landing pad, regardless of how much is left of the transect. The safety of persons and wildlife is paramount, and is put before any potential damage to the drone. If the drone is heading towards a crash landing, all persons in the vicinity need to be made aware, and the location of the landing to be cleared (e.g., if in the ocean, there needs to be a clear understanding of boats and people nearby). Any serious injuries or damage upwards of \$500 (excluding cost of drone) need to be reported within 10 days to the FAA, and should also be reported to the drone controller(s) and Dr. Fuentes.

Protocols after drone surveys

- Complete drone logs (as per Marine Lab one).
- Conduct a debrief after every day which includes a review of the equipment, a structured review of any deviations, any recommendations, and any learnings (similar to our trip logs).