10/7/2024 – Migratory bird and plan, SpaceX, FAA, Mig birds, ES

Kelli Stone, Wade Harrell, Kristin Madden

Mary Orms Stephanie Bilodeau

Stacey Zee Amy Hanson

Anthony Greco Brandon Conroy, Kelsey Condell, Andrew Leske Brady O’Neal

Try to get in now for Flight 5 and can be modified later as we go.

Brady is consultant with Raba, they are familiar with launch site and would be helpful to mitigate reduce impacts and if other good times before migratory bird season.

Most efficient to jump into FWS recommendations and questions:

Brady – how did it come about thought behind proposal. Goal was to identify the extent of potential impact that the plume may have in relation to ground nesting shorebirds In this area. Obviously more impact in flat habitat but use to collect more data in other habitats and see what different impacts are in other habitats. .10-mile monitoring stations .25, .50 mile… vegetated beach and sand flat habitats and at each designated distance from the VLA we could se what impact is occurring from the launch. There was a comment about the north area of VLA not anticipated to be impacted because of wall blocking potential particular material and why included to get data to include in analysis where we would have scientific data to stand on. This side would help impact for this species. Overall goal is identifying the extent of impact and believed 1 mile good and while we were out there and start testing some deterrent designs. Nest built of each time of habitat, experimental nest with deterrent structures in front of nest and if we see damage to it and if we see no damage to artificial nest good to determine good deterrent. Set up a station at each station and that will include some sort of monitoring card is basically at varying height will allow us to visualize that particulate and the volume and maybe the material was done following the CBBP report. Wanted to test that. Want size of plume, material particulate velocity…

Kristen, why no wall on south side. Build on southside on pad to prevent the plume from getting on flats. Why not do that instead of enclosures.

Kelsey, don’t have the space right now and would get knocked down and would require Corp permit.

Brady north side pad stations at this point we see there may be more debris on south but there still is someone the north side and more of a theory that won’t have take on north side because of wall and this may be able to quantify. Beach stations quantify and test.

How about heat and sound. Temperature sensors around pad and could put on various distances off the pad. Returns back to ambient off the pad. Then sound and vibration. Have sound at different areas and can incorporate and vibration monitoring on flight 5.

Asking for independent reviewer, application any additional experiments. FAA does want to be involved in the design and we can have another discussion on independent reviewer. Happy to have a sidebar with just the Service,

Several concerns with enclosures. WE don’t know how they will react on high stress situation and maybe just have a barrier instead of enclosures. Predators etc..

Closer to these nests and can be potential for harassment. This proposal is a conceptual ideal where we are starting. The use of enclosures because they are tested in past. Along with chance to research how deter predation. Cumulative effect is increased. For this launch Raba was going to try as a concept and have another deterrent with that setup without enclosure.

Are the enclosures will get new information.

Kelli -= further discussions about this flight about what to do about real nests. Very frustrating and a challenge and adding enclosures. On beach enclosures worse for predators coming in.

Brady – agrees on beach. There is a chance predators’ zone I non it.

Stephanie – distances is there any evidence that would go out as far as a mile and if we lessen the distance and bring in closer and more and we might get more. There is just1 station and we need more sites in that area of concern.

Kelsy I think we could do that and no evidence so far that has gone as afar as a mile. CBBP are up to.3 miles in sand flats were nests of concerned.

Kristen vegetation areas?

Brady nests may be found in vegetation areas and could have nests behind brush, or mangrove or brush. They don’t know what type of enclosure or deterrent at different types of things and those control nests that plover nests in front of shrub and maybe the one did not so shows maybe vegetation would have deterred it.

Amy – There would be discussions after data and see what the data needs would be for next flight and what proposals would be drawn up for the deterrents. SpaceX is going to give locations for noise, vibration and heat studies but can use that data accordingly. Want a concurrence on moving forward on this initial discussion.

Kristen agrees other conversations. Have consensus on that. Kelsey was to get the other monitoring.

How are those stations going to be staked down, the cameras and protective devices?

Brady cameras reinforced t posts and on this trail cams that has security box instead of lens. For the deterrent experimental locations use t posts to make sheet field hardened pvc sheets and those attached to t post being with braided wire. Maybe other concepts may not have to involve t post maybe shorter rebar and those in the works well.

Recommendation of viable eggs, and impacting embryos.

Brady thins good idea and not sure if they can get some out there, but not for flight 5 maybe for other.

Flight 5 after October 11,

When next? FAA does not have that information.

Availability for wed