0030336

From: Mike Murray
To: Britta Muiznieks
Cc: Thayer Broili; Laura Pickens; Darrell Echols; Doug McGee
Subject: long-term data needs
Date: 11/29/2010 10:31 AM

Britta,

One of the adaptive management initiatives stated in the FEIS is as follows:

Piping plover chick buffer distance: An adaptive management study to evaluate whether a reduced ORV or pedestrian buffer distance (i.e., less than that stated in this plan) after a certain time period, such as 2 weeks after chicks have hatched, would be adequate to prevent disturbance of piping plover chicks by ORVs and/or pedestrians using adjacent areas during daylight hours.

I'd like to figure out what we need to do over the next five years to be in a position, when we conduct the first periodic review, to evaluate whether or not it would be reasonable and prudent to make any adjustment in the PIPL chick buffer, either the distance and/or the timing (How long the 1000 m buffer is in effect). For example, if data supported it, is it possible to have the 1000 meter buffer for some time period less than the full period of time it takes the chicks to fledge (e.g., if the chicks typically move greater distances in the first week or two after hatching), then reduce the buffer to a lesser distance (whatever distance is supported by the data) for the remainder of the period until the chicks fledge. At this point, I not saying we can, will or should reduce the buffer; I am saying that I want the Seashore to be in a position to have good enough data five years from now in order to evaluate whether an adjustment in the buffer distance or timing is appropriate and supportable.

Two thoughts on how to approach this: 1) Develop and routinely use a field data collection method that would enable us to document how far PIPL chicks move from their nest and when/how often they move larger distances before they fledge; so that after five years, we would have plenty of data, presumably mappable in GIS, to show what the various broods have done and in order to calculate the range of travel distances and/or timing of movement. I realize that it may not be practical or desirable to try to take GPS readings on PIPL chick locations every day (is it?), but is it possible to take such readings once a week, or after any significant move (e.g., > 200 meters)? It seems to me that we almost do this already in terms of mapping the chicks foraging areas in the annual report. Is it possible to fine tune that information collection so that not only the foraging locations is documented, but also the distance(s) traveled and the timing of moves > 200 meters (i.e., which day of the chick's life did the "big moves" occur?).; 2) It may be possible or desirable to approach this as a research project (e.g., have a researcher radio tag and track PIPL chick movements over a two-season period to develop data on distance and timing of moves); but a research approach could have some challenging issues to resolve (such as funding, permitting, risk to chicks, do we have enough chicks to make the research worthwhile, etc.).

Bottom line: Please be thinking about whether it is feasible to adjust our field monitoring data collection to include distances and days that chicks move > 200 meters (or whatever distance you think is an appropriate "threshold"), so that the data can be analyzed in five years to determine if there are any statistically significant patterns to PIPL chick movements, such as in distance or timing, that can

inform future adaptation of the PIPL chick buffer distance. It seems to me that we need to set up a system sooner, rather than later, to provide the data we would need in five years.

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