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**Subject:** pedestrian buffer  
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Mike:

I wanted to follow-up on our call last week and provide you some additional information regarding pedestrian buffers around breeding piping plovers. Generally speaking, I didn't find a reference that could be considered the authority on buffers for chicks. Most papers referenced in the PIPL Recovery Plan did not measure that type of disturbance or, if so, did not do it in sufficient detail to develop a "standard" buffer distance. For example, Hoopes (1993; referenced as Hoopes et al., 1992 in recovery plan) reported disturbance to chicks by pedestrians at a mean of 23 meters and dogs and pets at a distance of 46 m, but no ranges are given. They also provide data on the numbers of PIPL observed in 90m square grids with the number of pedestrians present. In summary, the numbers (and proportions) of PIPL decrease as the number of pedestrians increase. Unfortunately, their meaning may be difficult to interpret along with the disturbance data because it appears that PIPL numbers were very low in areas with more people. For example, numbers of plovers in low density areas (<10 people) are very high (n = 201), but as soon as the number of people exceed 10 the numbers of plovers drop to fewer than 5 PIPL.

Another reference (Strauss, 1990) used a set distance of 100 m to assess disturbance as measured by foraging activity. They reported that chicks were significantly more likely to stop feeding and start running when pedestrians were within 100m, as compared to when pedestrians were greater than 100m away. However, this does not mean that PIPL were not disturbed when pedestrians were greater than 100 m away.

Loegering (1992) might provide data most applicable to CAHA since he noted that PIPL were more sensitive at Assateague than other northerly parks (similar to CAHA). He conducted various analyses and then provided a recommendation of 225 m around all breeding activity. This was based on the greatest flushing distance observed (174 m) and a minimal agitation distance (50 m).

I believe that Assateague uses this distance (roughly) as a rule today. At least the last annual report that I saw (ASIS, 2006) included the statement "at locations where plovers and the public compete for space, a standard 200 m buffer is provided for plover breeding activity unless observations of a particular pair indicate that a shorter distance is sufficient while insuring against disturbance or displacement."

Anyway, I hope this helps.

David

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