

# Memorandum

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ALAMEDA POINT  
SSIC NO. 5090.3

TO: Michael McClelland  
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DATE: August 17, 2001

FROM: Jim Haas, Sacramento Fish and Wildlife Office

SUBJECT: Comments on Draft Skeet Range Evaluation Work Plan, Alameda Point, CA

Thank you for giving me the opportunity to comment on the draft Skeet Range (IR Site 2) Evaluation Work Plan, Alameda Point, California. I appreciate your attention to this issue, which has concerned me for some time. In general, the work plan seems sufficient to address those concerns. However, I have some specific questions and suggestions regarding the ecological risk assessment, as follows:

#### Section 3.2.2.1 Exposure Assessment.

1. The discussion in this section explicitly assumes that diving ducks foraging for grit select the grit particles one piece at a time. Another possibility is that the birds select a quantity of sediment, and retain particles of a certain size in the gizzard. In this case, the birds could be selecting a variable number of lead pellets and grit simultaneously, and equation 2 might not be appropriate. Therefore, any citations supporting the assumed grit selection behavior of the birds should be provided.
2. The discussion also assumes that the birds are selecting grit and pellets randomly. While the Service is aware of no data to suggest otherwise, this assumption should be clearly stated.
3. Equation 1 is intended to provide the probability of an individual bird ingesting "at least"  $r$  lead shot particles in  $n$  probes for grit. However, equation 1 seems to provide the probability of a bird ingesting exactly  $r$  lead shot particles. The equation for the probability of ingesting a number of pellets  $\geq r$  would be given by placing the summation from  $r$  to  $n$  in equation 1.
4. Proposed parameters for  $r$  and  $n$ , including the time interval in which probes occur, should be provided for discussion at the earliest opportunity.

#### Section 3.2.2.3 Risk Characterization.

1. The appropriateness of the State of Oregon guidelines for bird exposure has to be evaluated in relation to the effects postulated from ingestion of  $\geq r$  lead shot and the life history characteristics of the receptors. Some limited population modeling might be needed to develop acceptable parameters for this project.

2. Citations and an example of the application of equation 3 should be provided. It is not clear from the discussion why summation term is required, or how the calculation of  $x$  is accomplished in the proposed equation.

3. As with equation 1, the proposed value of  $N$  should be discussed in the next version of the document.

If you have any questions regarding these comments, please contact me at (916) 414-6604 or by email ([james\\_haas@fws.gov](mailto:james_haas@fws.gov)).