Background:
Based on stakeholder assessments in 2007, 2014, and 2017-18, Idaho elk, mule deer, and white-tailed deer hunters have concerns about crowding (previously referred to as congestion). The extent to which these concerns are subjective and value-laden versus objective and density-/frequency-dependent is unknown. Though an important component of the crowding issue, understanding perceptions of crowding is moot without the additional understanding of what regulations—within the capability of the agency and managers to implement, monitor, and enforce—stakeholders prefer to alleviate hunter crowding and density. For example, how do hunters negotiate tradeoffs between season length, timing, species, weapon, and/or location and choose alternative hunt regulations in the context of alleviating crowding and density? This project will assess perceptions of crowding and preferences for management policies designed to address crowding and density among Idaho elk, mule deer, and white-tailed deer hunters.

From the human dimensions perspective, crowding is defined as a negative evaluation of density; it is a subjective value judgment made by users in relation to their experiences. In contrast, density is an objective measure of the number of users per unit area. Questions regarding crowding and density are examples of social carrying capacity research, which is designed to assess the level or type of use beyond which the effect on user experience exceeds acceptable levels. Within the context of hunting, crowding is a contributory factor of hunt quality and hunter satisfaction. Moreover, as crowding has an individual perceptual basis, it will vary among hunter types. For example, A-tag elk hunters in Unit 27 may perceive any evidence of another hunter during their trip as crowding, whereas the threshold for crowding among Over-the-counter tag deer hunters in Unit 39 could be much higher (or nonexistent). This variability, in combination with the scale and diversity of hunting within the state, highlights the complexity of crowding. As such, it is necessary to apply novel methods that will help managers and the Commission determine how best to manage resident hunters and perceived crowding. The primary objective of this project is to use stated choice methods designed for wildlife management to examine how regulatory attributes that underpin wildlife management in Idaho can influence hunter preferences for alternative management policy scenarios designed to reduce hunter crowding.

To begin the process of addressing hunter congestion, the Commission has proposed a rule awaiting legislative approval that would give the Commission authority to limit nonresident participation in general deer and elk hunts. In addition, the Department will introduce a bill in this legislative session to increase the cost of nonresident fees. The Department will survey and monitor resident hunter response to these proposed actions and respond accordingly to further address hunter congestion issues as needed.

Statutory Authority and/or Policy Issues:
N/A

Public Involvement Process:
IDFG staff and the University of Idaho Human Dimensions staff will engage sportsmen to assess their perspectives on crowding and potential solutions.

OBJECTIVES
1. Assess Idaho elk, mule deer, and white-tailed deer hunters’ perceptions of crowding
2. Assess the relationship between perceptions of crowding and associated variables
3. Assess hunters’ preferences for regulations designed to address crowding and density
4. Ascertain differences between methods to assess hunter preferences

DESIGN AND METHODS
The project will be designed to comprehensively gauge hunters’ perceptions of crowding and their preferences and tolerances for various IDFG regulatory solutions.

Participants and Sampling Design

Populations. We have identified three populations of interest to the scope of this project: Idaho resident (1) elk, (2) white-tailed deer, and (3) mule deer hunters.

Sample frame. IDFG database of 2019 Idaho resident elk, white-tailed deer, and mule deer tag purchasers.

Sample. Random selection of XXXX hunters per strata within each population from IDFG database.

Strata. To assure representativeness and coverage

Measures

Perception of Crowding. We will use the traditional measure of perceived crowding, which is measured on 1-9 scale (i.e., not at all, slightly, moderately, extremely crowded), to assure comparison with previous and future studies:

Additional Variables. We will measure variables related to crowding. These include, for example, experience with crowding; effect of crowding on hunting enjoyment, hunting outcome; who and what causes crowding; have any phenomena (e.g., UTV regulations) clustered hunters in certain areas; perceptions of (in)accessibility. Additionally, participants will rate their level of agreement for the reasons for crowding: time or season of use; resource abundance or availability; resource location or geography; resource accessibility or convenience; leisure/recreational activity; type of use (consumptive/non); with management action/regulatory policy

Discrete Choice Experiment. A survey approach that forces respondents to choose their preferred option between sets of distinct scenarios, based on realistic management regulation options, is a useful method to gather public input that is salient and actionable. This method, called a discrete choice experiment, is relatively easy to apply in practice and will be more informative than traditional stakeholder surveys that ask respondents to make positive-negative evaluations of options, i.e., their attitude towards management regulation options. We will design a discrete choice experiment and analysis that ranks hunters’ preferences for management regulation options under consideration by IDFG. Discrete choice experiments explain behavior by ranking preference via respondents indicating their preference from ≥2 alternative scenarios. Scenarios are comprised of attributes (e.g., season length, timing, species, weapon, location) that characterize hunting regulations thought to be able to address hunter crowding (with each attribute having varying levels; e.g., open, controlled, stratified hunts). This project will also provide an opportunity to assess differences between preference analysis methods.

Justification:
This agenda item is for Commission information on the status of the hunter congestion project being conducted in collaboration with the University of Idaho. Information from this agenda item will aid Commissioners as they respond to requests, recommendations, or other input from the public related to hunter congestion.
Staff Recommendation:
None. This agenda item is for Commission information.

Action Requested:
N/A.