

Background

Elk Treponeme-associated hoof disease (TAHD) causes limping and lameness due to abnormal hoof growth, lesions and, in severe cases, sloughing of the hoof capsule. TAHD is a form of digital dermatitis, a disease strongly associated with a group of bacteria known as treponemes. Although digital dermatitis has affected the livestock industry for decades, TAHD is the first known instance of digital dermatitis in a wild ungulate.

The disease is currently concentrated in southwestern Washington where prevalence is highest in Cowlitz, Wahkiakum, and western Lewis counties. The Washington Department of Fish and Wildlife (WDFW) has confirmed the disease in eight formally recognized elk populations across 17 Washington counties. The disease appears to be highly infectious among elk and it progresses rapidly in individual elk. Preliminary findings from ongoing research on the Mount St. Helens elk population indicate diseased adult female elk have depressed survival and pregnancy rates compared with healthy elk. This study also documented lower harvest rates for diseased elk, possibly due to hunter avoidance.

With no realistic curative treatments or vaccines available for TAHD, efforts to reduce disease prevalence and distribution are limited to selective lethal removal of diseased elk. Although wildlife agencies commonly manage ungulate diseases through selective removal, the strategy's effectiveness for combatting TAHD is unknown.

Elk are an important game species in Washington, and WDFW must carefully evaluate any proposed disease management actions for feasibility and impacts to population sustainability or recreational opportunity in accordance with WDFW's mission. WDFW recognizes the high value of elk to the public, tribes, and sportspeople and their interest in elk and TAHD management. In August 2019, a subcommittee of WDFW's TAHD internal working group began to develop a program with the primary goal evaluating the feasibility of reducing disease prevalence by incentivizing the harvest of diseased elk.

Since then, the subcommittee has developed and evaluated a suite of options for incentivizing hunters to target elk displaying clinical signs of TAHD (e.g., limping gait, deformed hooves). The subcommittee evaluated incentive options for feasibility (e.g., scale, cost), incorporation into current elk regulations/seasons (or need for newly created regulations e.g., permits), ability to monitor outcomes, potential impact to elk populations, WDFW staff time commitments, management of incentive(s) and/or recipients, and public acceptance.

Incentive program proposal

To reduce the prevalence of TAHD in western Washington (400, 500, and 600 series GMUs), the subcommittee proposes a pilot management program of multiple independent but complementary components. The primary component incentivizes hunters to harvest a diseased elk in existing general or special permit seasons. The other components focus on diseased elk that are typically unavailable or undesirable to harvest in current hunting opportunities. To do so, WDFW proposes the creation of TAHD-specific special permits and fine-scale intensive management. Below is an outline of the proposed pilot program followed by additional details about each proposed component.

Proposal structure:

Option A: Incentive program

- a. General season and special permit incentive
 - i. Any west-side (400, 500, 600 series GMUs) elk hunter can participate
 - ii. Participating hunters submit the hooves of their harvest to WDFW for evaluation
 - iii. Any participating hunter receives a reward
 - iv. Participating hunters that harvest an elk with hoof abnormalities (an index of TAHD) are placed in an exclusive draw for the following license year
 - v. WDFW will offer multiple incentive tags and may include multiple species
 - vi. The goal is to increase the proportion of diseased elk within total harvest, but total harvest is not expected to increase

Option B: Master Hunter TAHD special permits

- i. Creation of new special permits under the “Master Hunter elk hunts” special permit category as a second elk opportunity
- ii. Under this permit, Master Hunters are permitted for the harvest of an animal displaying clinical signs of hoof disease within permitted areas/GMUs western Washington
- iii. Master Hunters are required to submit the hooves of their harvest for evaluation by WDFW staff
- iv. Selection for this permit is itself an incentive, and Master Hunters that harvest a diseased elk under this permit are not included in the incentive draw opportunity in option 2a above
- v. Permits will be customized for each district/region, and initially offered at low levels

Option A cont'd: As currently proposed, WDFW will incentivize general season and special permit hunters to harvest diseased elk by offering entry into an exclusive special permit draw for the following license year for those hunters that harvest a diseased animal, as evinced by a hoof abnormality (e.g., lesion, overgrowth, broken or sloughed hoof capsule). WDFW will offer multiple hunt options similar to the early reporting incentive program currently administered by WDFW. WDFW is considering several hoof disease incentive permit opportunities, examples include late-September bull elk, antlerless elk, and possibly other desirous permits for species like deer or bear. The goal is to offer quality opportunities at levels which produce a legitimate incentive (i.e., realistic probability of drawing a desired permit). The subcommittee and Regional staff will work together to determine the number and details of these permits with respect to population sustainability and to minimize conflict with other hunting opportunities. To maximize participation and demonstrate appreciation to participating hunters, any participating hunter will receive a gift, for example a WDFW emblmed waterproof license holder (see image below), regardless of the disease status of their harvest.

Any western Washington general season or special permit elk hunter of any weapon type in the designated program areas can participate in the program by submitting all four hooves from their harvest – missing identifying information or an incomplete hoof set will disqualify entry into the exclusive draw – in one of several secure and convenient collection locations (e.g., collection barrels or WDFW Regional Offices). Ideally, collection locations will have a limited supply of bags, labels, and data cards necessary for complete submission similar to grouse wing barrels. WDFW staff or volunteers will collect hooves at frequent intervals and evaluate hooves in-season. WDFW will clean hooves of mud and debris to evaluate for visual signs of hoof disease (i.e., lesions, overgrown hoof claw, cracked or broken hoof capsules). The subcommittee and Internal Working Group will establish simple and transparent evaluation criteria to be available in the WDFW Regulation Pamphlet, at collection points, and on WDFW’s website. Game Division will work with Science Division to develop data collection and storage systems.

WDFW will develop outreach materials, including a dedicated webpage, to publicize the program and provide direction to interested hunters (e.g., instructions on collection, hunter-provided supplies, etc.).

Similar to WDFW's recent effort to solicit hunters to submit black-tailed deer teeth, staff will develop instructional videos and protocols clearly outlining the collection, submission, and evaluation process. In addition, WDFW plans to develop a look-up field notifying hunters of their incentive permit draw status.

The subcommittee does not anticipate increased harvest by incentivizing current general season and special permit opportunities. The goal is for diseased elk to represent a larger proportion of harvest. A strong, well-publicized incentive should encourage hunters with antlerless permits to select diseased animals. However, for general seasons, the majority of TAHD-affected areas are under a 3pt minimum antler point regulation, and hunters are likely harvesting the first legal animal available regardless of disease status, so change in the proportion of infected vs. uninfected animals harvested during general seasons may be limited.

Option B cont'd: To target diseased elk more directly, the subcommittee proposes piloting the concept of "TAHD special permits" under the Master Hunter permit hunt category. These Master Hunter TAHD permits are intended to provide the opportunity to take diseased elk in age or sex classes otherwise unavailable to harvest or diseased elk that are available to general harvest but may otherwise not be targeted. As proposed, TAHD permits are offered as second elk opportunities valid for antlerless elk during dates and seasons offered at the discretion of Regional staff and customized to local needs and considerations.

Selection and regulation of these permits will follow current Master Hunter permits. Master Hunter permits are not restricted to private land. Regional and district level staff will determine the hunt area. Like other Master Hunter permits, WDFW will send a letter to awarded hunters specifying permit conditions. The subcommittee has identified potential TAHD permit areas and quantities (Table 1) where the disease is most prevalent and will continue to evaluate potential permit opportunities with Regional staff on a District by District basis. WDFW will offer Master Hunter TAHD permits at low levels while evaluating the program with the potential for increase in the future.

Following other Master Hunter permits, Master Hunters can use any weapon to fill the TAHD permit, regardless of the weapon type of their first transport tag, except during overlapping general seasons where they are restricted to the general season weapon type. If a Master Hunter successfully harvests a diseased elk under a TAHD special permit as his or her first elk of the license year, the Department can issue an additional TAHD permit to that hunter not to exceed District Biologist recommendations for permit totals or two total elk opportunities per hunter. The Department will require permitted Master Hunters to submit all four hooves from their harvest to evaluate the effectiveness of this permit opportunity. Harvest under this permit type does not qualify for entry into the incentive draw proposed in Option 2a. Selection for this permit is itself an incentive, in addition to representing a second elk opportunity for some Master Hunters.

Master Hunters participating in this program are expected to be relatively independent, meaning that these are not managed or administered hunts and WDFW will not coordinate Master Hunters with landowners. Master Hunters are expected to scout for potential opportunities to harvest a diseased elk and, when necessary, obtain permission for private property access on their own.

This is a unique opportunity for hunters to participate in disease management. As such, WDFW expects Master Hunters to make the utmost effort to harvest an elk displaying signs of hoof disease (i.e., limping gait, hoof abnormality). WDFW will not penalize Master Hunters that inadvertently harvest a healthy elk (i.e., no signs of hoof disease). However, WDFW will terminate this permit opportunity if inadvertent take of healthy elk is deemed too high. WDFW staff will follow up with participating Master Hunters post-season to collect information on hunter success, effort/participation, and to solicit suggestions for program improvement.

Washington Department of Fish and Wildlife
 Incentive program draft proposal 08/11/20

Table 1. Proposed TAHD Master Hunter permits by Region (*in progress*). Permit areas and dates were chosen based on access and to avoid overlap with other state or tribal established hunting opportunities, including other WDFW Master Hunter agricultural damage hunts. Permit levels were chosen based on knowledge of local elk abundance and disease prevalence.

Hunt Name	Hunt Dates	Legal elk	Unit/Area	Permits
District 10	Dec 1 - Mar 15	Antlerless	501, 503, 504, 505, 506, 520, 524 (except CLOSED in Elk Area 5066), 530, 550	15
District 9	Dec 1 - Mar 15	Antlerless	554, 560, 564, 568, 572, 574, 578 (except CLOSED in Elk Area 5062), 388, 382	10
District 17	Dec 1 - Mar 15	Antlerless	658 (except closed in Elk Area 6010), 660, 663, 672, 673, 681	15

No evidence to date suggests that meat from elk with hoof disease is unsuitable for human consumption. For that reason, WDFW does not provide replacement transport tags to hunters who harvest an elk with TAHD. This policy will continue if the incentive program proposed above is adopted. Participation in the incentive program is voluntary, and harvest of an elk with hoof disease is optional (Option A) or part of the permit's conditions (Option B). The above policy may discourage the harvest of a diseased elk, and WDFW will attempt to quantify the magnitude of such an effect through hunter outreach and surveys in the off-season of every pilot year.

For both options A and B, the subcommittee proposes an initial three-year pilot for the above program, but it will be evaluated annually and could be terminated earlier if deemed ineffective after year one or two. Ideally, the Ungulate Section will hire additional staff to address increased capacity needs produced by this incentive program. The Ungulate Section will pursue Rocky Mountain Elk Foundation (RMEF) grants to assist with funding temporary staff and the participation gift as necessary. WDFW Game, Regional, and Public Affairs staff will develop outreach, marketing, and public feedback strategies for the above incentive program. Public scoping will additionally be facilitated by coupling with the 2021-23 3-year season setting process.

WDFW will use hunter participation, rate of diseased hoof submission, hunter and staff feedback, harvest statistics (e.g., hunter indexed prevalence), and other metrics (e.g., aerial prevalence estimates) to inform and evaluate the pilot program.

Example participation reward:

