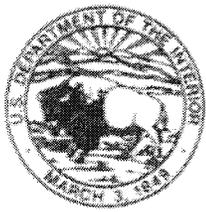


MAY 7, 2010

EXHIBIT 22



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240In Response Reply to:
FWS/AES/R6/044066

MAR 27 2010

Mr. Josh Skorz
Sweetwater County Weed and Pest Control
BOX 173
Farson, Wyoming

Dear Mr. Skorz:

Thank you for your letter of February 12, 2010, to Senator John Barrasso regarding the tapeworm, *Echinococcus granulosus* (*E.g.*), and requesting information about the presence of *E.g.* in Wyoming and efforts to alert the public about possible human health risks. Senator Barrasso has asked the U.S. Fish and Wildlife Service (Service) to respond directly to you and we apologize for the delay.

Echinococcus granulosus is a small tapeworm (about one-quarter inch long) that lives in the intestine of canids (wolves, coyotes, foxes, and dogs) as an adult or in various tissues of ungulates (moose, elk, deer, cattle or sheep) in its developmental stage. Eggs shed by the adult worm pass into the environment in canine feces, are consumed by ungulates during grazing, develop into cysts (hydatid cysts, usually in lungs or liver, but can occur in other locations), and are returned to a canine host by consumption during predation or scavenging. The parasite poses no health risk to the canine host, and only rarely causes enough tissue damage to affect ungulate health.

Although wolves reintroduced to Yellowstone and central Idaho were treated with drugs to destroy *E.g.*, wolves in these ecosystems currently have a relatively high prevalence of the parasite. The source of the parasite in these ecosystems is not known. *E.g.* may have been already present at low levels in resident coyotes, foxes, and/or dogs, may have been brought in by dogs or naturally dispersing wild canids, or inadvertently brought in with reintroduced wolves.

E.g. poses a very low health risk to people. Humans can be exposed through inadvertent ingestion of infective eggs (note that not all eggs are infective). This usually results from contaminated hands after working with infected canids or canine feces. Human exposure is most common in rural communities when dogs are fed or otherwise scavenge raw offal from infected domestic animals or hunter-killed wildlife. Once established in a dog-livestock cycle, parasite prevalence in areas close to humans can dramatically increase human exposure. The Centers for Disease Control indicate that most infections do not cause symptoms in humans, especially when exposed to a low infective dose. Hydatid cysts usually occur in the lung or liver, but can also

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occur in other tissues. *E.g.* is usually treated with anthelmintics (drugs to kill parasites) and surgical removal of the cyst.

Humans have existed with *E.g.* presence for decades, with very few human cases being reported, particularly in areas with better hygiene and education. *E.g.* is common in most sheep-raising areas of the world. Most North American cases are associated with native villages feeding sled dogs raw infected wildlife organs. Wildlife maintains the disease on the landscape, permitting infection of domestic dogs which pose the greatest risk to humans. Most outbreaks in humans are managed by education about the parasite life cycle and the important role of domestic dogs, proper hygiene, and appropriate veterinary care of dogs. Such management greatly decreases or eliminates human cases.

The public should treat all wildlife, including canids, as potential vectors of disease. *E.g.* is just one of many zoonotic diseases (diseases transmissible to humans) in wildlife. When handling canids or canid feces, we recommend wearing gloves, not smoking, eating or drinking, and washing-up afterwards. These simple precautions decrease exposure to a negligible level. These types of public health advisories are appropriate for those engaged in wolf hunting or other wildlife pursuits that include handling of any canine species, tissues or scat. We also recommend not feeding uncooked wild or domestic ungulate organs to dogs and maintaining proper veterinary care of dogs and their parasites.

State fish and wildlife agencies advise the public on these routine precautions in the handling of wildlife tissues and scat. For example, Idaho Fish and Game, Montana Fish, Wildlife and Parks and Washington Department of Wildlife all provide specific information about *E.g.* on their respective websites, which are easily accessible by the public. In order to further raise awareness of this issue, we intend to distribute this letter to our partners and post it on the Northern Rocky Mountain gray wolf website.

I hope this information is useful. If you need further assistance, please contact me or Mr. Steve Guertin, the Service's, Mountain-Prairie Regional Director at 303-236-7920.

Sincerely,



Deputy

DIRECTOR

cc: Senator John Barrasso