



prion research center

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Re: Support for mitigating catastrophic wildfire damage and environmental CWD contamination using wild horse grazing.

To Whom It May Concern:

My name is Mark Zabel. I am associate director of the Prion Research Center at Colorado State University, one of the leading centers for prion research worldwide. Prions are infectious proteins that cause fatal neurodegenerative diseases in many mammalian species, including scrapie in sheep, bovine spongiform encephalopathy in cattle (commonly called “mad cow disease”), several rare human diseases and chronic wasting disease (CWD) in deer, elk, moose, and reindeer.

One of the many unique features of prions as a pathogen is its extreme resistance to destruction that kill most other pathogens. Prions can exist in the environment for years, even decades, and substantial experimental evidence and mathematical modeling of disease spread indicate environmental contamination by prions excreted in saliva, urine and feces. Accumulating evidence suggests that these CWD prion sources may contaminate surfaces of plants (grasses, etc.), which may act as vectors for indirect CWD transmission.

CWD has now been found in half of the lower 48 United States, with some herds having up to half of its members infected. This obviously presents a huge management/mitigation issue due in part to the large geographical areas affected by this fatal disease, threatening not just wildlife populations, but also state and local economies that rely on hunting as a significant industry. Mitigation and management options become limited at this scale, leading me to suggest that

reducing potentially contaminated forage may significantly reduce disease vectors for CWD transmission to cervids (deer, elk and moose).

While prion diseases affect many mammalian species, scientists have shown that equine species are extremely resistant to prion disease. This observation supports the idea of deploying wild horses into CWD endemic habitats to graze and consume a potentially significant source of environmental CWD prions, preventing consumption by CWD susceptible cervids.

Since the large geographical distribution of CWD limits options for controlling its further spread, wild horses that are naturally resistant to CWD and consume huge amounts of forage could represent one of the few viable means of stemming the tide of CWD sweeping across the continent. Given the amounts of vegetative materials that can be consumed daily by a single wild horse (est. 30lbs/adult animal), equids may provide a potential solution to interrupt potential CWD vectors, while also aid in reducing dry vegetative materials that kindle wildfires.

Data accumulated through numerous studies correlate frequency, severity and duration of wildfires with a reduction or absence of large herbivores. Wild horse grazing would have the additional benefit of reducing brush and tinder responsible for igniting vast forest fires we see consuming landscapes and threatening homes and communities across the west every year. It certainly represents an idea that warrants further consideration. I support the implementation of a pilot study to explore this idea further. One opportunity could be to use of some or all of the ~40,000 wild horses currently being held in corrals by the BLM for this purpose.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark', with a stylized, cursive script.

Mark