

**CLARIFICATION (Oct. 18, 2024):** In Episode 1 of Human Footprint, “Strangers in Paradise,” we tackled the challenging issue of wild horse management in the American west. In 2022, when the episode was filmed, the Bureau of Land Management (BLM) gathered more than 20,000 horses, which – according to a peer-reviewed estimate of wild horse populations (Schoenecker et al. 2021) – represents less than 10% of free-living horses across the west. The PBS Public Editor received some audience feedback questioning this population estimate and [summarized his findings here](#), recommending that we clarify the sources for the numbers used in the episode.

The figures in the episode are derived from data collected by the BLM, U.S. Forest Service, National Tribal Horse Coalition, and various researchers publishing their work in peer-reviewed scientific journals. The federal agencies tasked with wild horse management conduct regular surveys on federal lands. Population estimates from other lands, particularly tribal lands, are more challenging. But using available data (e.g., Beever et al. 2018, Wallace et al. 2021), Schoenecker et al. (2021) concluded:

*“We estimate conservatively the national population in the United States to be almost 300,000 horses across multiple land jurisdictions, with more free-ranging horses found on sovereign tribal lands today than on BLM and USFS lands.”*

There is broad consensus among paleontologists, wildlife biologists, ecologists, and land managers that modern horses are not native to North America. For example, Davies and Boyd (2019) write: “Wild horses (*Equus* sp.) went extinct in North America approximately 10,500 to 13,000 years ago. Self-sustaining populations of free-roaming domestic horses (*Equus caballus*) in North America ... [are descended from] domestic stock introduced by Spanish explorers.” These “free-roaming domestic horses” have also been shown to have detrimental effects on western North American ecosystems (e.g., Davies and Boyd 2019, Eldridge et al. 2020). Whether wild horses *belong* in the American West, however, is a question of values, and this is the question at the heart of the story presented in our program.

Finally, some viewers asked whether cattle and sheep constituted an even greater threat to Western ecosystems than horses. These viewers raise an excellent point – the impacts of grazing livestock on Western landscapes are widespread and profound. However, our episode “Strangers In Paradise” focused on invasive species – i.e., non-native species living in the wild – without human assistance – and causing detrimental effects on native species and/or ecosystems. Horses fit this description, but managed livestock like cattle and sheep do not. We hope, however, to explore the planetary impacts of livestock in a future season of *Human Footprint*.

- Human Footprint Directors Neil Losin, Ph.D. and Nathan Dappen, Ph.D.

**Sources cited above:**

- Schoenecker, K. A., S. R. B. King, T. A. Messner. (2021) The wildlife profession’s duty in achieving science-based sustainable management of free-roaming Equids. *The Journal of Wildlife Management* 85(6):1057-1061.

- Beaver, E. A., L. Huntsinger, S. L. Petersen. (2018) Conservation challenges emerging from free-roaming horse management: A vexing social-ecological mismatch. *Biological Conservation* 226:321-328.
- Wallace, Z. P., R. M. Neilson, D. W. Stahlecker, G. T. DiDonato, M. B. Ruehmann, J. Cole. (2021) An abundance estimate of free-roaming horses on the Navajo Nation. *Rangeland Ecology & Management* 74:100-109.
- Davies, K. W., C. S. Boyd. (2019) Ecological effects of free-roaming horses in North American rangelands. *BioScience* 69:558-565.
- Eldridge, D. J., J. Ding, S. K. Travers. (2020) Feral horse activity reduces environmental quality in ecosystems globally. *Biological Conservation* 241:108367.