Beaver population helps battle drought

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Beavers can help mitigate the effects of drought and should not be pushed away from wetlands for industrial and residential development, a University of Alberta study says. Credit: Glynnis Hood, University of Alberta

They may be considered pests, but beaver can help mitigate the effects of drought, and because of that, their removal from wetlands to accommodate industrial, urban and agricultural demands should be avoided, according to a new University of Alberta study.

“Removal of beaver should be considered an environmental disturbance on par with in-filling, peat mining and industrial water extraction,” said researcher Glynnis Hood, lead author on the study and an assistant professor of Environmental Sciences at the University of Alberta’s Augustana Campus in Camrose, Canada.

In examining how beaver influenced some of Alberta’s wetlands in Elk

Island National Park over a 54-year period, Hood and her co-investigator, Professor Suzanne Bayley, discovered that the presence of beaver and their dams increased by up to nine times, the presence of open water.

Climate models predict the incidence of drought in parts of North America will increase in frequency and length over the next 100 years, and beaver will likely play an important role in maintaining open water and mitigating the impact, Hood said. The infilling and drainage of wetlands has increased to make way for urban and industrial expansion, and beaver colonies are being removed both inside and outside of protected areas, which means a continued loss of water resources, Hood noted.

“In times of drought they may be one of the most effective ways to mitigate wetland loss,” said Hood. “Some people believe climate is driving everything, but the presence of beaver has a dramatic effect on the availability of open water in an area. Beaver are helping to keep water in areas that would otherwise be dry.” Even during drought, where beaver were present, there was 60 per cent more open water than those same areas during previous drought periods when beaver were absent.

The study, published recently in the online edition of *Biological Conservation*, also found that temperature, precipitation and other climate variables were much less important than beaver in maintaining open water areas in the wetlands of the mixed-wood boreal forest.

The role of beaver in sustaining open water is critical for several reasons. Flooding caused by beaver dams provides habitat and water resources used by land animals and amphibians, and even provides water for livestock. It can also recharge groundwater reserves.

Source: University of Alberta