

## #TMNTuesday November 9<sup>th</sup> with Nate Fuller

If bats are listed as Endangered – are there then more regulations implemented once that occurs?

Yes. ESA listing means that the management of the animal involved federal regulations on take and handling, in addition to any other state regulations that may be in place. It causes great difficulty for construction and power generation because they need to mitigate impacts to bats, or whatever species of concern is there. It's the same kind of efforts that are involved with golden-cheeked warblers or freshwater mussels.

What about Mexican free tail bats living in an old TDCJ cotton warehouse in Huntsville. Can they be monitored with detector? TDCJ wants to evict them but bats love the warehouse

We are in discussions with TDCJ about that structure. They are wanting to tear it down because the building, namely its roof, is unstable. Unfortunately, the bats will have to be carefully evicted so that site can be torn down. Bats have a place and it's not in a failing building in a downtown area. The hope is that the bats will move to nearby bat condos built by TDCJ. TPWD will be very involved in the process and we will do our best to make sure the bats are safe.

How could you vaccinate that many bats? Is it an injection per bat? Something you could mist into their roost?

Currently the vaccine is delivered orally to bats one at a time. In the future, we are going to test spray devices that can be used on hibernating clusters. It's difficult because we need to ensure an adequate dosage per animal and that they do not hibernate right away afterward, such that their immune system won't respond. A very delicate balancing act. Right now we are still exploring options.

Please provide some insight into what happens with bat communities who have been dealing with white nose or other pathogens for a longer time span. For example, do those communities recover on their own or do the population numbers stay low?

Since 2006, populations that have not vanished within the first 3 years following first observation of WNS typically stick around but at very low levels. Across the board, we have about a 70% decline in total population of heavily impacted species (90% of hibernating populations). There are some hints that bats may recover but I don't buy that we're seeing anything more than seasonal variation. It's possible that bats will recover but probably not within our lifetimes. Our goal is to protect those survivors the best we can.

As a land owner, what can I do to help support the bats and make the property appealing and safe for them?

1. Provide water/a pond so you can have standing water for bats to drink and will also provide habitat for bugs. To keep mosquitoes at bay, get some mosquito fish and encourage emergent vegetation so you attract aerial predators such as dragonflies.
2. Maintain natural habitats as best you can. Bats depend on bugs and bugs are sensitive to habitat changes

### 3. Bat boxes cant hurt

I have a camp of bats living in my attic. I became aware of them last year and they seem to have survived the freeze. Do you have any recommendations / suggestions? Do I need to report them to NABat / manage them at all / leave them?

If they aren't bothering you or getting into your house, they shouldn't do any harm. But you might want to figure out where they are and make sure they aren't filling your walls with droppings. You could talk to an excluder or read about bat exclusions, which will keep the bats out of your house. In this case, sealing up the house so the bats cant get in and then placing a bat box nearby may encourage them to move. If you get regular counts and know what species they are, NABat might be interested.

What percentage of bats are considered rabid and where are they located? I am a medical provider and if a bat is found in a room that a person was sleeping, the rule is to treat them for rabies regardless of if a bite is found. Since most bat bites may not be noticeable. Thanks!

Depends where you live and comes with a few things to understand. First, the bats that are sampled for rabies are themselves a subset and a biased sample. Bats typically avoid humans. When you see a bat, the probability it's having trouble increases quite a bit. The general bat population is much larger. So, of the tested bats, I believe about 6% of them are positive for rabies. In all, it's a very low proportion. However, if you encounter a bat in a weird circumstance, it's worthwhile to be very careful and/or call animal control. This is the typical advice and I tend to agree with it. There is no (pre-mortem) test for rabies in humans and if you develop symptoms, you die. Any time you cant rule out a bite, post-exposure treatment is the best approach.