

Preventing Rabies Risks from Bats through IPM

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Five Levels of Government

- Federal
- State
- Tribal
- County
- Municipal



Federal Regulatory Laws

- Lacey Act of 1900
 - Prohibits interstate and foreign commerce of fish, wildlife and plants that were sold or taken
- Migratory Bird Treaty Act of 1918
 - Illegal to take, hunt, kill, migratory birds, eggs or product
- Animal Damage Control Act of 1931
 - Manages conflict between humans and wildlife
- Endangered Species Act of 1973
 - Provides broad protection for fish, wildlife, and plants
 - www.fws.gov

Select Bat Species Implicated in Human Deaths

- Silver-haired bat (solitary)
- Mexican Free-tailed bat (colony) does not migrate



Building Owners and Property Managers



- Public property owners and managers have a responsibility to provide a safe environment.
- A few public health laws may apply to bat infestations.
- For schools IPM rules play a large role in ensuring safety for staff and students

State Rabies Intervention Laws for Rabies Control

- THSC Chapter 826 and Section 169 – Rabies Control Act and Rules
- TX Parks and Wildlife Code 63
- THSC Chapter 341 and 343
- THSC Chapter 81 and Section 97

Rabies Control Act and Rules



- Bats are listed as a high-risk rabies species.
- A bat must be submitted for rabies testing if a person or animal could have been exposed to rabies.

Texas Parks & Wildlife



- Chapter 12 – Powers & Duties Concerning Wildlife
 - An employee of the department acting within the scope of the employee's authority may possess, take, transport, release, and manage any of the wildlife and fish in this state for investigation, propagation, distribution, education, disease diagnosis or prevention, or scientific purposes.
- Chapter 43 – Special Licenses & Permits
 - (a) A person who has evidence clearly showing that wildlife protected by this code is causing serious damage to agricultural, horticultural, or aquicultural interests or other property, or is a threat to public safety, and who desires to kill the protected wildlife shall give written notice of the facts to the county judge of the county or to the mayor of the municipality in which the damage or threat occurs

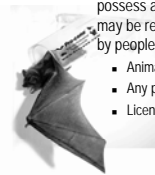
Texas Parks and Wildlife Dept.



- Title 5. Wildlife and Plant Conservation
 - Chapter 43 – Special Licenses & Permits
 - APPLICATION FOR PERMIT. (a) A person who has evidence of damage by depredation or threat to public safety may file with the department an application for a permit to kill the protected wildlife.
 - Must be in writing
 - Must have an agreement with Dept
 - Must have a written statement from Dept
 - Certified by County Commissioner

Texas Parks and Wildlife Dept.

- Title 5. Wildlife and Plant Conservation
 - Chapter 63.101. PROTECTION OF BATS
 - (a) Except as provided by Subsections (b) and (c), no person may: (1) hunt a bat; or (2) sell, offer for sale, purchase, offer to purchase, or possess after purchase a bat or any part of a bat, dead or alive. (b) A bat may be removed or hunted if the bat is inside or on a building occupied by people. (c) This section does not apply to:
 - Animal control, peace officer or other official who captures a bat
 - Any person who is transporting bat to lab for testing
 - Licensed pest control applicator



Texas Department of Agriculture Structural Pest Control

- Chapter 1951 – Individual performing pest control work on own or employers premises
 - Can use pesticides, fumigants, allied chemicals, or substances or mechanical devices designed to prevent, control, or eliminate pest infestations.
 - Does not apply to: an apartment building; day-care centers; hospitals; nursing homes; hotel, motel, or lodge; warehouse; food-processing establishment; (8) a facility owned by the state or a political subdivision of the state, (9) school (all educational institutions).
 - Requires a noncommercial license
 - Does not apply to bat exclusion as of 2009

2009 80th Legislative Session



- HB 693
 - Falconers using raptors to control pests or scare away pestiferous wildlife – exempt from SPCS license
- SB 768
 - Falconers, chimney sweeps, use of live traps, mechanical weed removal and installation of non-pesticidal barriers – exempt from SPCS license



Title 5 Sanitation and Environmental Quality Health & Safety Code

- Chapter 341.011 – Nuisance
- Chapter 341.012 – Abatement of Nuisance
- Chapter 821 – Treatment of Animals
 - In this subchapter, "animal" includes every living dumb creature.
- Chapter 825 –Predatory Animals
 - Provides regulations to prosecute if persons tamper with traps and the animals being trapped
- Chapter 826 – Rabies
 - Provides for the state or local agencies to quarantine or test animals for rabies



THSC Chapter 341 (Sub. B) Nuisances and General Sanitation



- Sanitation laws fall under the responsibility of sanitarians, code enforcement officers, and local health authorities.
- Some aspects of the laws are vague.

THSC Chapter 341 (Sub. B) Nuisances and General Sanitation



- "A public health nuisance is ... :
- an object, place, or condition that is a possible and probable medium of disease transmission to or between humans."

THSC Chapter 341 (Sub. B) Nuisances and General Sanitation



- The phrase "possible and probable" is often interpreted as meaning there is a greater than 50% chance of disease transmission. Bat colonies in buildings can rarely be justified as having a > 50% health risk.

Under the law your options are

- The control measures that apply to bat colonies include:
 - Disinfestation (bats are removed/ excluded)
 - Disinfection (bats' waste is removed)



Chap. 81.082

What to remember



- Bats can be removed
- In certain situations could require mandate to do so
- Elimination should be done by a trained and licensed person or company
- Schools should train personnel for proper removal
 - There should be an action plan on file with the Superintendent as to how the district will respond – don't wait for the media to show up.

What is IPM – TDA rules §7.114 Integrated Pest Management

A pest management strategy that relies on accurate identification and scientific knowledge of target pests, reliable monitoring methods to assess pest presence, thresholds to determine when pesticides are needed, and both preventative and corrective control measures. Under IPM, whenever economical and practical, multiple control tactics should be used to achieve best control of pests. These tactics will possibly include, but are not limited to, the judicious use of pesticides.

Review of School IPM Rules

- TDA rules are codified under Texas Administrative Code (TAC)
- Texas Dept of Ag – Pesticide Regulations
 - TAC, Title 4, Part 1, Chapter 7, Subchapter A-G
 - General, nurserymen, regulated and state-limited use
- Structural Rules are under
 - TAC, Title 4, Part 1, Chapter 7, Subchapter H
- School IPM rules Occupations Code – Title 12, Subtitle B; Chapter 1951, section 1951-212
 - TAC, Title 4, Chapter 7, Subchapter H, Division 3, Rule §7.150

RULE §7.150 Integrated Pest Management Program for School Districts

- Responsibility of School Districts to Adopt an IPM Program. Each school district shall establish, implement, and maintain an Integrated Pest Management (IPM) program. An IPM program is a regular set of procedures for preventing and managing pest problems using an integrated pest management strategy, as defined in §7.114 of this title (relating to Definition of Terms). The school district is responsible for the IPM Coordinator (s) compliance with these regulations.

Bat management plan

- To prevent health problems caused by bats and to respond quickly and appropriately to bat sightings, school officials and integrated pest management (IPM) coordinators should implement a bat-management plan that addresses prevention, training, and response



Prevention of human/bat contact

- The plan should focus on preventing direct contact with bats.
 - Direct contact with a bat means touching it, handling it, or being bitten by it. Just seeing a bat is not direct contact.
- Everyone, especially children, should be taught never to touch a bat or any other wild animal without wearing heavy gloves.
 - A bat on the ground or any bat that can be approached by people is more likely than other bats to be sick.

The best way to prevent people and bats from coming into contact is exclusion

- Screen all attic and soffit vents with ¼- to 1/6-inch hardware cloth or screen.
- Seal all holes in siding: gaps around gutters, pipes, fascia boards, and molding; and openings at other exterior penetration points. Use netting (1/6-inch mesh), caulk, foam, or concrete patch.
- Keep window screens in good repair.
- Keep gymnasium doors closed during the early evening to keep bats from flying into the building to catch insects.
- When buildings are being constructed, crews should watch for potential areas where bats can enter and seal them before a colony is established.

Removal of a bat colony

- Bats that commonly roost in Texas buildings can be evicted using special exclusion techniques that work for all bat species.
 - The best time for eviction efforts is between late August and mid-May, depending on your location in the state.
- If bats are seen in or near the building:
 - identify the bat species,
 - inspect the building for entry points,
 - erect alternate bat housing,
 - seal potential entry points,
 - make and install bat-eviction devices,
 - clean up the area once the bats have been evicted.



Inspect the buildings for entry points

- Identify areas in and around buildings where bats can enter.
 - This step is extremely important in identifying where to place bat-eviction tubes and nets.
 - Will need to watch building at dawn and dusk for a few days to determine entrance and exit ways
- During cooler months, this step may need to be repeated several nights in a row to establish exit/entry points, as bats do not leave the roost at night if temperatures are too cold.
 - *Tadarida brasiliensis* Subspecies: *T. b. Mexicana* (migratory)
 - *T. b. cynocephala* (non-migratory) (Mexican free tail who likes Texas)
- When inspecting the exterior of the building:
 - look along roof lines and behind gutter placement for rub marks.
 - Bats will leave some evidence, similar to rodents, but it's more difficult to see.
 - Look at ground level for guano – in most cases bat-entry points will have some guano build up in the colony is large enough.

Evidence of staining



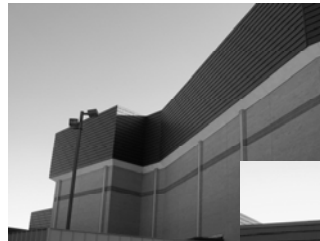
Entry into building?



After exclusion efforts

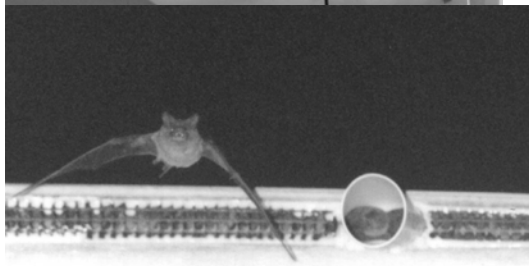


How big this job was!



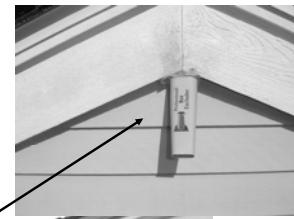
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Exclusion techniques



Fly By Night, Inc.
www.flybynightinc.org

Exclusion techniques



Beware of how you
angle exclusion device
Black good Red bad



Exclusion is hard work



Bat exclusion work requires working
on high ladders, heights and basically
hanging off a building. Does your staff
have the correct equipment for the job.

Signs & Fixtures are GREAT for harboring bats



Netting to prevent roosting



FIGURE 10
Install bird netting under eaves to prevent bats from entering.

Alternative Control Methods

- Repelling – not always works
 - Light the thought that illuminating the roosting could help drive them out
 - Air movement the thought that high speed fans can also deter them
- Outside roosts
 - Building bat houses
 - Tree maintenance

Installing alternative roosts



Artificial Bark For Bats



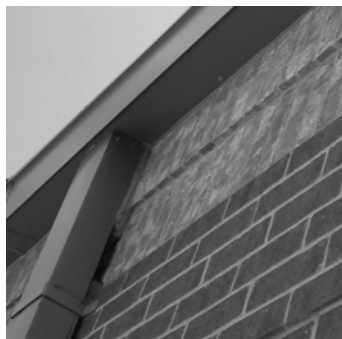
Bats roost in palm trees



Trim trees in
winter months
Not
May – Aug

An Ounce of Prevention

- Tack down flashing
- Seal or caulk around wall gutters
- Cover/ seal old chimneys or incinerators



Training

- School districts should designate and train a responder for each campus or facility.
 - Trained responder is an IPM coordinator, licensed pest-control applicator, or person who has been trained by an IPM coordinator or animal-control specialist to safely remove bats.
- Trained responders should:
 - Protect themselves and others against rabies transmission.
 - Be able to identify the bat species on school property.
 - Safely evict all bats found in school buildings.
 - Respond appropriately if a person is bitten by a bat.
 - Report bat incidents to the proper authorities.
 - Ensure that roosting areas are cleaned properly after the bats have left.

Living with Bats

- Identify areas of known bat activity
- Work with other agencies in your area
 - Health Dept., Animal Control, Parks & Wildlife
- Develop detailed plans for how you will react when a bat visits your area
 - Chain of Command
 - What to do when
 - Training personnel
 - When to remove/evict bats
 - Exclusion, exclusion, exclusion

Thank You

<http://agrifeweb.tamu.edu/batsinschools/>

