

**PA Game Commission
Woodrat trapping (FY 2019)**

I. SCOPE OF WORK

The Pennsylvania Game Commission (PGC) requires a contractor to trap nine (9) identified active Allegheny woodrat (*Neotoma magister*) habitat sites to coincide with habitat improvement work being performed under a separate contract. ****Note:** all contractors bidding must demonstrate previous woodrat trapping and handling skills, be able to determine sex and age (juvenile versus adult), and must possess a PGC special use permit for State-threatened Allegheny woodrats. In addition, this purchase order requires the contractor to provide the supervision, tools, materials, equipment, labor, insurance, and all expenses to complete this contract per the following specifications. The only **exception** will be one hundred (100) Tomahawk-brand live traps that can be made available for contractor use only if needed during this project. Any additional traps needed to fulfill this contract is the contractor's responsibility. All borrowed traps must be returned to the PGC at the completion of each field season. Damaged, inoperable, or lost traps will be replaced at the contractor's expense.

Any questions concerning the technical aspects of this bid, trapping procedures, equipment, methods, and protocols should be directed to:

Greg Turner, Endangered and Nongame Mammal Section Supervisor
Bureau of Wildlife Management
2001 Elmerton Ave.
Harrisburg, PA 17110
grturner@pa.gov
717-433-5497

Questions concerning location and site conditions can be directed to:

Justin Vreeland, Regional Wildlife Management Supervisor
PGC, Southcentral Region
8627 William Penn Highway
Huntingdon, PA 16652
jvreeland@pa.gov
(814) 643-1831 Ext 412
Fax 814-643-2952

Questions concerning the bidding process should be directed to the Contracts and Procurement Division at 717-787-6594.

Trapping Site Names and Locations:

(**Note: there is no preference to order of completion).

- (1) "Fowler Hollow." Tuscarora State Forest, Perry County, Toboyne Twp.
- (2) "Ross Siding." Tiadaghton State Forest, Lycoming County, McHenry Twp.
- (3) "West Branch." property of The Nature Conservancy, Clinton County, Grugan Twp.
- (4) "Shade Mountain." Tuscarora State Forest, Juniata County, Tuscarora Twp.
- (5) "Wolf Run." Tiadaghton State Forest, Lycoming County, McHenry Twp.
- (6) "Bucktail State Park Natural Area." Sproul State Forest, Clinton County, Grugan Twp.
- (7) "Thousand Steps." State Game Land 112, Huntingdon County, Brady Twp.
- (8) "Jacks Narrows." State Game Land 112, Huntingdon County, Brady Twp.
- (9) "Ellendale Forge." State Game Land 211, Dauphin County, Middle Paxton Twp.

II. CONTRACT TASKS:

Trapping Equipment and materials:

1. Tomahawk-brand live traps, sufficient to cover each site, with *minimum* level of effort equal to 2-3 traps every 30 yards of suitable habitat. Higher trap density in higher quality habitats is encouraged, with up to 3-4 traps being possible in close proximity (within 10 yards) to capture family units (females with subadults). Traps should measure 6" x 6" x 19" (squirrel size) with wire mesh no larger than 1" x 1".
2. Scales capable of measuring to the nearest 10 grams (300-gram and 1000-gram recommended if using spring scales) for weighing woodrats.
3. Animal handling cone or Erickson adjustable small-mammal holder.
4. Thermometer capable of recording min/max temperatures to nearest 0.1 degree F (Kestrel or similar).
5. WAAS-capable GPS unit capable of recording locations in decimal degrees and degrees-minutes-seconds to nearest 0.00001 decimal degrees in WGS84, NAD83, and NAD27 datums
6. Ear tags. E.g., National Band and Tag Company self-piercing tags (Style 1005-1) capable of displaying unique 4-digit alphanumeric digits.
7. Bait: any effective combination of peanut butter, fresh apple slices, and "COB" horse feed ("COB" = corn, oats, barley, usually obtainable with or without molasses).
8. 50mL centrifuge tubes or clean ziplock or whirlpak bags (need not be sterile).
9. Picnic cooler or similar device with freezer packs (not dry ice, not wet ice).

Trapping requirements: Woodrat sites will be trapped such that all traps will be placed in habitat suitable for Allegheny woodrats. **All trapping for woodrats should take place prior to Sept 30th.** Trapping must be done with Tomahawk-brand live traps.

Trapping will take place for exactly 5 nights at each site, regardless of capture success (if the same individuals continue to be captured, trap location can be adjusted slightly, but 5 nights of

trapping is still required). Regardless of whether rain is expected or not, all traps should whenever possible be placed beneath rock overhangs and generally as far back into rock crevices as possible and secured with a combination of rock(s) on the top and sides of the trap, both for protection from any inclement weather and to deter trap movement by larger mammals, such as raccoons. If overnight temperatures are expected to fall below 50°F, a softball-sized wad of dry leaves, cotton batting, or compressed grass should be placed in each trap for captured animals to use as thermal cover. When possible, traps should be covered with available leaf or grass litter to provide additional thermal protection. Trapping will be suspended if heavy rain is predicted or occurs during trapping. In this instance, this will **not** count as a trap-night. The only exception to this is if all traps are sufficiently protected from rain to remain dry all night. *Note: Trapping will **also not occur** when ambient temperatures fall below 40°F at any time during a 24-hour period during the specified 5 trap-night period. In this instance, that trap night will also not count towards the 5-night total.

Contractors should reconnoiter each site prior to deploying traps to look for sites with food caches and/or toilet areas for trap placement. **All** trap locations **must** be recorded with a GPS coordinate. Upon request, contractor will be provided with GPS locations of some known activity centers at these 9 sites to help narrow down trap placement. Traps will be baited and opened within two hours before official sunset and checked within two hours after official sunrise, then closed for the remainder of the day. Traps will be freshly baited daily prior to reopening. They should be reopened and closed on this schedule until the above-noted trapping requirements are met.

Timeline: The timeline for this scope of work is expected to begin in July 2019. Contract will last one year. All 9 sites will be trapped once per year. **All trapping should take place prior to Sept 30th.**

Level of Effort: Level of effort will vary greatly depending upon the extent and suitability of rock habitat at each site and the overall size of each site (see Section III below). For example, rock may or may not be in continuous formations, and may have forested habitat between rock outcrops. Generally, the goal should be to deploy enough Tomahawk traps to catch >90% of all woodrats present within each “site”.

Bait Requirements: Any effective combination of peanut butter, fresh apple slices, and “COB” horse feed (“COB” = corn, oats, barley, usually obtainable with or without molasses), placed in the back of the Tomahawk trap. If bait is untouched (both by small mammals or insects) the bait may be left in place for the following evening. If it has been disturbed, it should be discarded and replaced with fresh bait. Discarded bait should be completely removed from the site to prevent drawing target animals away from traps.

Data Collection and Reporting: Each woodrat capture will be recorded on PGC datasheet WD-NEMA-TRAP, (see attached).

For each woodrat captured, the following data must be collected: sex, weight to nearest 0.1 gram, reproductive condition [specify each category here], capture location (coordinates/trap site), date of capture, general condition (e.g., alive but moribund). All trapped woodrats will be tagged with ear tags to ensure identification during future trapping events, placing tags in lower, posterior section of ears, with ID numbers facing out. Each woodrat will be **processed and released** at the original capture location.

Woodrat scat collection (requirement for 2019**):** Scat will be collected and stored in 2019 for future genetic work. Please collect individual woodrat scat samples that are not cross-contaminated with other woodrat scat (single scats isolated from other scat). Scat can be collected by one of three methods: (1) nitrile gloves (not bare hands), (2) sterile (treated with alcohol pads between uses) forceps, or (3) fresh Ziploc bag flipped inside out, to simulate a clean glove. These should then be placed individually in Corning 2mL tubes (catalog #430659), preserved with 95% ethanol. Scat must be placed immediately into tubes to avoid mold growth. The freshest, isolated scat should be targeted. Only one scat should be placed in each tube, and then labeled with a unique ID, which corresponds to an ID, Date, GPS location, and any relevant comments on a datasheet. Collecting 1-2 fresh pellets at toilets and 2-3 fresh pellets from each trapped individuals should be the goal. When known, please include the ear tag numbers for the corresponding woodrat. If unsure of individual woodrat, just include nearest trap number or its GPS location.

Woodrat ear punches (requirement for 2019**):** In addition, DNA samples will be taken from each captured individual by taking a 2mm hole punch from *each ear*, via a compound action punch. These will then be placed in 2mL tubes with 95% ethanol (same as above) and labeled with Date, ear tag numbers, and unique ID. Both ear punches can be placed in the same tube.

Raccoon scat collection: When encountered while trapping, contractors must collect all raccoon scat found at any of the 9 sites in an ongoing effort to monitor the spread of raccoon roundworm (*Baylisascaris procyonis*) throughout woodrat habitat. All scat collected will be placed in either a 50mL centrifuge tube (one for each site at a minimum) or a clean ziplock or whirlpak bag, labeled with site and date information. These should then be frozen immediately upon returning from the field.

The completed data form(s) and a summary report including the methods used, results, and any conclusions are to be submitted to the Pennsylvania Game Commission no later than 90 days after trapping is completed. One copy of the report and datasheets should be emailed (if less than 10 MB) or mailed (if 10 MB or larger) to Greg Turner, grturner@pa.gov. A second copy of the report and datasheets should be mailed to Greg Turner, Bureau of Wildlife Management, 2001 Elmerton Avenue, Harrisburg PA 17110.

In addition, any mortalities must be reported within 48 hours with written correspondence to both Greg Turner (grturner@pa.gov) and Mike Scafani (mscafani@pa.gov). The carcass must be kept dry and frozen **as soon as possible** until contact is made and specific guidance on disposition is provided.