

**PA Game Commission  
Bureau of Wildlife Management  
Bat Netting and Acoustics on State Game Lands in Northwest Region**

**GENERAL SPECIFICATIONS**

**I. SCOPE OF WORK:**

- A. The Pennsylvania Game Commission (PGC), Bureau of Wildlife Management, seeks an organization with a bat surveying team to net and acoustically-monitor 20 total survey areas on State Game Lands in the Northwest Region prior to June 30, 2025. The goal of this survey is to document and confirm the presence of as many bat species as possible, and this goal should be the primary driver for site selection by the Qualified Bat Surveyors (QBS). To this end, acoustic and net locations should be dispersed amongst a diversity of habitat types, thereby allowing the PGC to characterize habitat preference by bat species. Services provided shall include, but not be limited to, specific site selection, the furnishing of all labor and equipment for the deployment of bat mist nets and acoustic detectors, and the processing and reporting of all data. Appendix A provides 10 GPS points on State Game Lands (SGL) that represent the areas to be surveyed. These sites are 'paired', with each SGL containing two points. Each survey area will be scouted by the organization's QBSs before final site selection occurs and will have a minimum of 2 net sets and an acoustic monitoring station. This netting and acoustics for the paired sites will occur on the same night, during optimal weather conditions. The deployment of autonomous recording units should be placed in an appropriate location to record high quality calls but also be located to try and gather species presence that may not be detected via the netting effort, with the recording effort to start 30 minutes prior to sunset and cease 30 minutes after sunrise. For the netting locations, there must be a minimum of 2 net sets spaced apart as described below, with *each* net site having a total netting effort that must meet or exceed 420 Units of Effort (UE; described in more detail below) on a given night. These nets must be deployed for no less than 5 hours, and with one of these net sets having at least 3 stacked nets to capture bats flying higher in the forest canopy. For each provided survey area, every netting and acoustic survey location deployed by the QBS must have GPS coordinates taken and be surveyed on the *same night*. This means each 0.5-mile circle (each containing 2 or more nets and 1 detector) must be manned by a staff member that is on the PA approved bat surveyor list and registered as a QBS. Additional quantity and skill level of staffing to aid in operational duties is at the discretion of the bidder. Site access will be provided by the Pennsylvania Game Commission. More detailed and specific requirements are provided below. **Those wishing to bid must demonstrate their ability to meet proper qualifications, by completing and submitting Appendix B (an Attachment to this bid on the PA Supplier Portal) with their bid.**

- B. Any questions concerning the technical or administrative aspects of this bid should be directed to:

Mike Scafini  
Endangered Mammal Specialist  
PA Game Commission  
2001 Elmerton Ave  
Harrisburg, PA 17110  
717-409-2848  
mscafini@pa.gov

Questions concerning the Purchase Order should be directed to Bobbi Mercer at 717-787-4250.

## II. **CONTRACT (Definitions and requirements):**

- A. **Qualifications:** Organization must demonstrate they meet the minimum skills and requirements to have bid considered. Those qualifications are found in Appendix B (an Attachment to this bid on the PA Supplier Portal). The organization must submit the answers/documentation to demonstrate qualification along with bid. Please send directly to Mike Scafani at [mscafani@pa.gov](mailto:mscafani@pa.gov) if this cannot be attached with your application.
- B. **Project Locations:** The PGC has provided 10 paired survey areas, represented by a GPS location found in Appendix A. These locations are also identified on the attached maps in Appendix A. These are situated within 5 separate State Game Lands in Venango, Clarion, and Jefferson Counties in the Northwest Region. These *paired* survey areas (i.e both 0.5-mile circles within a State Game Land) are to be surveyed on the same night, and *each* survey area will have a QBS on site.
- C. **Survey Areas:** The survey areas are to originate from the provided GPS location. These survey areas will encompass appropriate habitat within 0.5 miles of each provided location, on State Game Land property.
- D. **Level of effort within a survey area:** each net set must be greater than >50 m (164 ft) from each other. It is preferred that the ecological conditions (i.e, field edge, forested stream, forested path/road, etc.) differ between the locations as much as possible to encounter the greatest diversity of species.
- E. **Permits.** The contractor must apply for a special use permit (no fee involved) and receive that permit before commencing work. The PGC will assist with this task. Please factor at least 2 weeks minimum for this to occur.
- F. If the contractor desires to follow bats to a maternity roost using telemetry or to go above and beyond in any other manner, such a task will need to be on the permit. Any additional tasks such as these are not being asked for in this bid, and this will not be a factor considered in any way when selection of lowest bid occurs.
- G. Effort should be made to collect guano from little brown bats (goal of 3 bats per site). Vials and instructions will be provided. This is most easily done by leaving these bats in paper bags, usually <10 minutes.
- H. The QBS for each site will first scout the area for ideal locations to perform the survey, with the goal being to maximize the total capture of bats and verify as many species present as possible. The QBS will then select at least two ideal locations within the survey area to conduct bat surveys.
- I. Organization that was awarded bid must complete bat surveys between May 15 and June 30, 2025. A summary report must be submitted, and all data must be entered into the PGC's SQL database electronically by July 30, 2025.
- J. Each Net Site will have a minimum level of netting and acoustic effort. Additional effort is at the discretion of the contractor. Netting protocols will follow the latest USFWS netting guidelines for the capture and handling of bats.

Note: USFWS and PGC defines a *net set* as a single or stacked group of nets between two poles, and a *net site* as a group of one or more *net sets*. A staff of two biologists, with one being a QBS, must be present at each net site. Net sets will not closer than 50 m (164 feet) from each other. All *net sets* within a *net site* must be able to be walked between and checked within a 10-minute period.

- K. Netting effort at each net site will contain a *minimum* of 2 Net Sets, each deployed for 5 hours. One net set must have 3 or 4 stacked nets between poles to net as close to the forest canopy as possible. The dimensions (width and height) of the second (or any additional) net set, along with any additional net sets the contractor wishes to deploy, are at the surveyors' discretion.
- L. Minimum netting effort at each net site will be 420 units of effort (UE). One unit of effort is equal to 1m<sup>2</sup> of net area in place for 1 hour : (total m<sup>2</sup> of capture area) x (minutes in place/60). For example, 2 sets-each measuring 7 m high by 6 m wide in place for the required 5 hours would meet the minimum effort of 420 UE: ((7 m x 6 m) + (7 m x 6 m)) x 5 hrs = 420 UE. Exact location of each Net Set is under the discretion of the contractor, but both must be located within 0.5 miles (0.8 km) of the associated mapped location and be >50 m (164 feet) from one another. Different habitat types should be selected at each provided location (road, stream, edge, interior) whenever possible, as the goal is to obtain the greatest bat species diversity.
- M. One acoustical detector (make/model of your choosing) must be placed in the best location at each Net Site. The habitat type does not need to be the same as either of the net sets, but priority should be given on selecting a location that records high quality calls. Detector should be at least 100 ft (30.5 meters) away from any net set (or other acoustic detector, if you choose to deploy additional detectors) but not greater than 300 ft (91.4 meters).
- N. All bats caught in mist nets must be weighed, measured, and photographed (see below for photography requirements). All data requested on the PGC forms (Appendix C) are required and must be electronically submitted **prior to August 31, 2025**. All acoustic calls must be analyzed and reported to the PGC on the Acoustic Site Info and Acoustic Survey Results tabs of the USFWS's Bat Reporting Spreadsheet, which can be found at: Bat Reporting Spreadsheets | FWS.gov. This form should be returned to Mike Scafani: mscafani@pa.gov, or by calling 717-409-2848 to make other arrangements.
- O. All species besides big brown bats (*Eptesicus fuscus*) must be photographed as to show defining characteristics. Assumed big brown bats with forearms less than 44 mm must be photographed as well, since they have the potential to be an Evening bat (*Nycticeius humeralis*). Please include forearm and a ruler showing its length in a separate photo as well. A map and table of GPS locations for all netting locations and associated acoustic detectors must be provided. A consistent nomenclature for sites should be used. For example, we prefer 3-digit game lands number, site number (found in table below), and net set/detector number. The detector should be labeled in accordance with its nearest net set (e.g.: SGL054\_NW1\_DETEC near net 01, 02, etc).

### III. CONTRACT REQUIREMENTS:

- A. **A valid PGC permit must be obtained for this work.**
- B. The contractor agrees to comply with specifications listed in the contract tasks.
- C. All field work must be completed by **June 30, 2025**.
- D. All data entry and reporting should be completed no later than **August 31, 2025** (2 months from field work completion date). The summary report should include maps/coordinates of netting locations, and all physical trap captures (species/sex/weight, including photographs), plus acoustic results (as described in the USFWS Reporting Spreadsheet) for each site. **NOTE: PGC does NOT require all Raw call files, nor all the filtered calls, does require the ten best voucher calls for each species per site.**

- E. An invoice shall be provided for the amount of winning bid and provided when all tasks are completed, but no later than **August 31, 2025**.

#### **IV. INSURANCE REQUIREMENTS:**

- A. The contractor will provide Workmen's Compensation insurance sufficient to cover all the employees of contractor working to fulfill this contract.
- B. Comprehensive General Liability Insurance, including bodily injury and property damage insurance, to protect the Commonwealth and the contractor from claims arising out of the performance of the contract. The amount of bodily injury insurance shall not be less than \$300,000.00 for injury to or death of persons per occurrence. The amount of Property Damage Insurance shall not be less than \$300,000.00 per occurrence.

**Such policies shall name the Commonwealth as an additional insured.** Prior to the commencement of work under this contract, the contractor must provide the Commonwealth with their current Certificates of Insurance. This Certificate shall contain a provision that coverages afforded under the policy shall not be canceled or changed until at least thirty (30) days prior written notice has been given to the Commonwealth.

#### **V. HOLD HARMLESS:**

- A. The contractor shall be responsible for and agrees to indemnify and hold harmless the Commonwealth from and against damages to property or injuries (including death) to any persons and other losses, damages, expenses, claims, demands, suits, and actions by any party against the Commonwealth in connection with the work performed by the contractor.

#### **VI. BIDDING:**

- A. **RECEIVING AND OPENING BIDS** - Bids must be submitted via the PA Supplier Portal, to be found at [www.pasupplierportal.state.pa.us](http://www.pasupplierportal.state.pa.us). Faxed bids and mailed bids will NOT be accepted.

The price shall include all labor, equipment, tools, insurance, and all items necessary for the completion of the project. Prices bid shall be in dollar and cents only.

- B. **BID RESULTS** - Bidders can obtain results at [www.emarketplace.state.pa.us/bidtabs.aspx](http://www.emarketplace.state.pa.us/bidtabs.aspx)

The posted results will contain the information of the apparent bidders, and all bids are under review until final award of the purchase order.

Quantities herein are only estimates and may increase or decrease dependent upon the needs of the Commission. Operator shall be paid at the unit price bid for actual services performed.

The Commission reserves the right to reject any or all bids and award contracts as it determines to be in the best interest of the Commission.

#### **VII. OPERATOR REFERENCES**

After bid opening and prior to awarding the Purchase Order(s), the Commission has the right to request

three (3) references (name, addresses and telephone numbers) of similar work performed in the previous two (2) years as proof of qualifications to perform the work involved in this project.

**VIII. CONTRACT TERM:**

The contract term shall begin upon notification of award. All netting and acoustics should be completed by June 30, 2025. All bat netting data and summarized acoustic results must be submitted by July 30, 2025.

**IX. PAYMENT TERMS:**

Payment shall be dispersed after completion of all field work, entry of all data, and approval of the summary report (see details above) submitted with an invoice. Payment will be by ACH (direct deposit) on a reimbursement basis for netting and acoustic surveys completed with data submitted and confirmed by a PA Game Commission employee unless otherwise agreed to by the Commission.

**X. PURCHASE ORDER(S) TERMINATION**

The Commonwealth may terminate the Purchase Order(s) for its convenience if the Commonwealth determines termination to be in its best interest. Operator shall be paid for work completed.

## APPENDIX A.

Table 1. All Northwest locations (2 per SGL). At least two (2) Net Sets and one (1) acoustic detector must be placed within a 0.5-mile buffer around each provided location. Both locations on each SGL must be surveyed simultaneously.

SGL 54	NW1	41.261985	-78.88666
SGL 54	NW2	41.292938	-78.875082
SGL 45	NW3	41.329853	-79.630004
SGL 45	NW4	41.310366	-79.600544
SGL 283	NW5	41.300916	-79.208813
SGL 283	NW6	41.301577	-79.169052
SGL 74	NW7	41.237508	-79.285844
SGL 74	NW8	41.234685	-79.234995
SGL 72	NW9	41.258098	-79.372216
SGL 72	NW10	41.241392	-79.369245

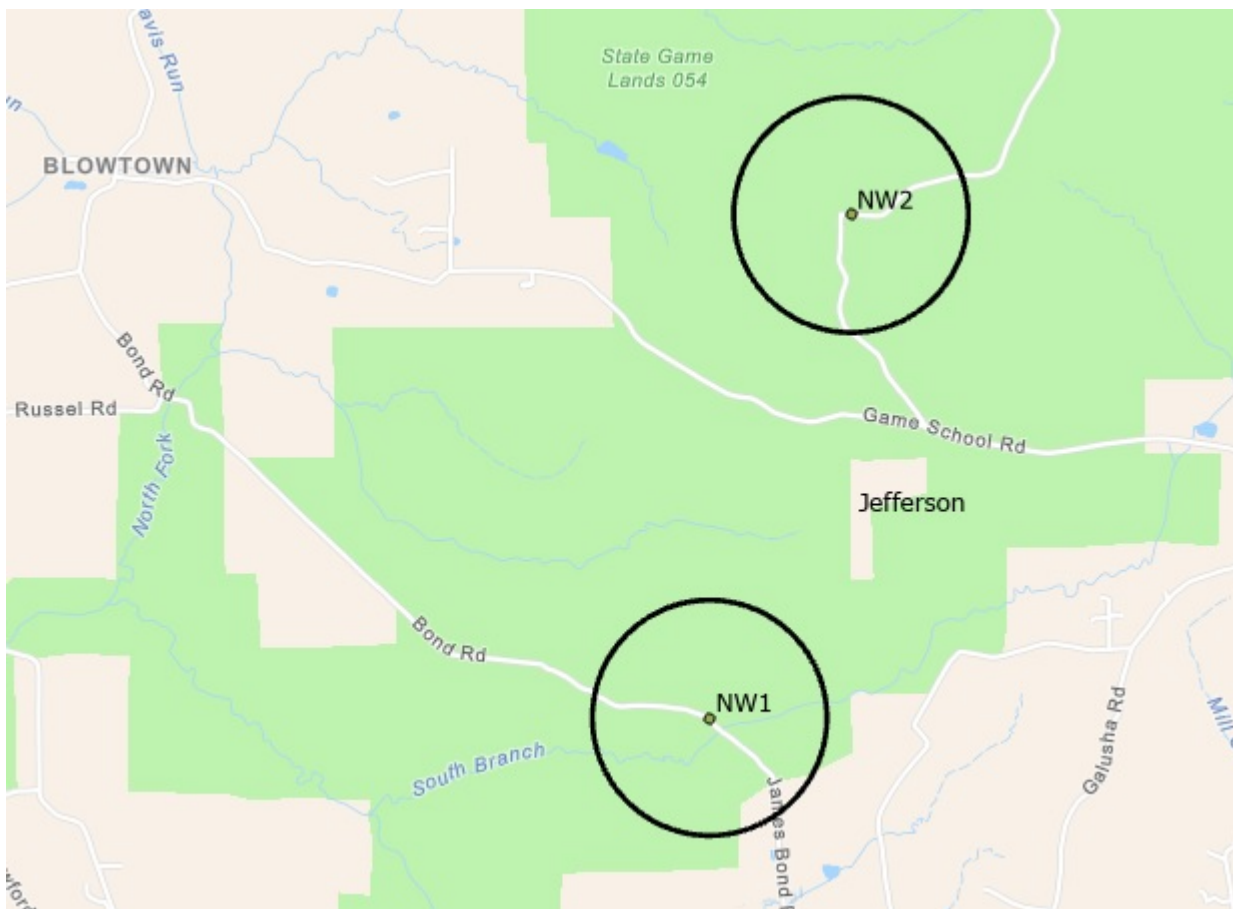


Figure 1. Two preselected points (NW1 & NW2) within SGL 054 (Jefferson Co.) with associated 0.5-mile buffers. **NOTE:** areas that fall outside of State Game Land boundaries are NOT acceptable for this work.

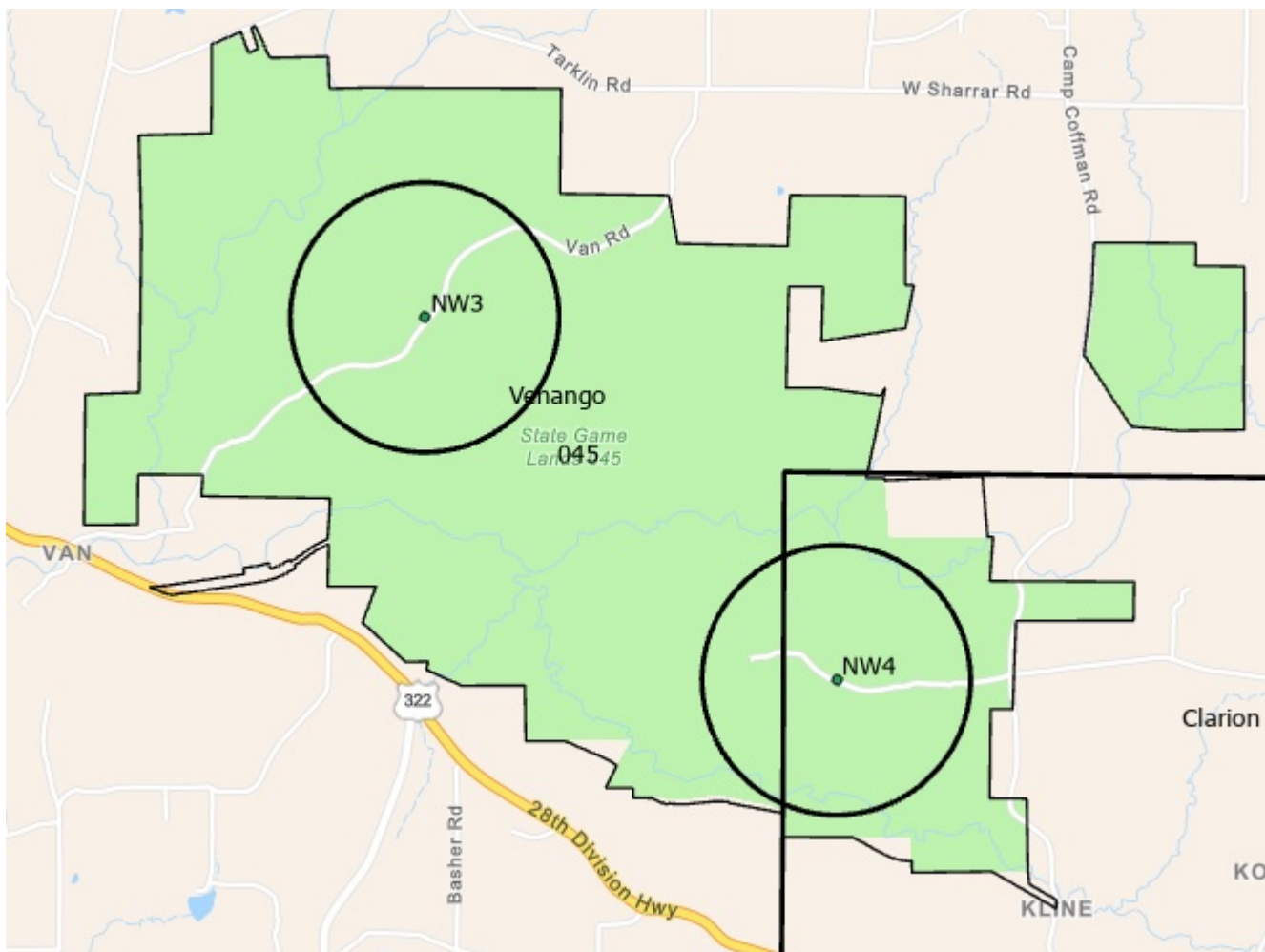


Figure 2. Two preselected points (NW3 in Venango Co. & NW4 in Venango/Clarion Co.) within SGL 045 with associated 0.5-mile buffers. **NOTE:** areas that fall outside of State Game Land boundaries are NOT acceptable for this work.



Figure 3. Two preselected points (NW5 at the border of Clarion and Jefferson Cos. & NW6 in Jefferson Co.) within SGL 283 with associated 0.5-mile buffers. **NOTE:** areas that fall outside of State Game Land boundaries are NOT acceptable for this work.

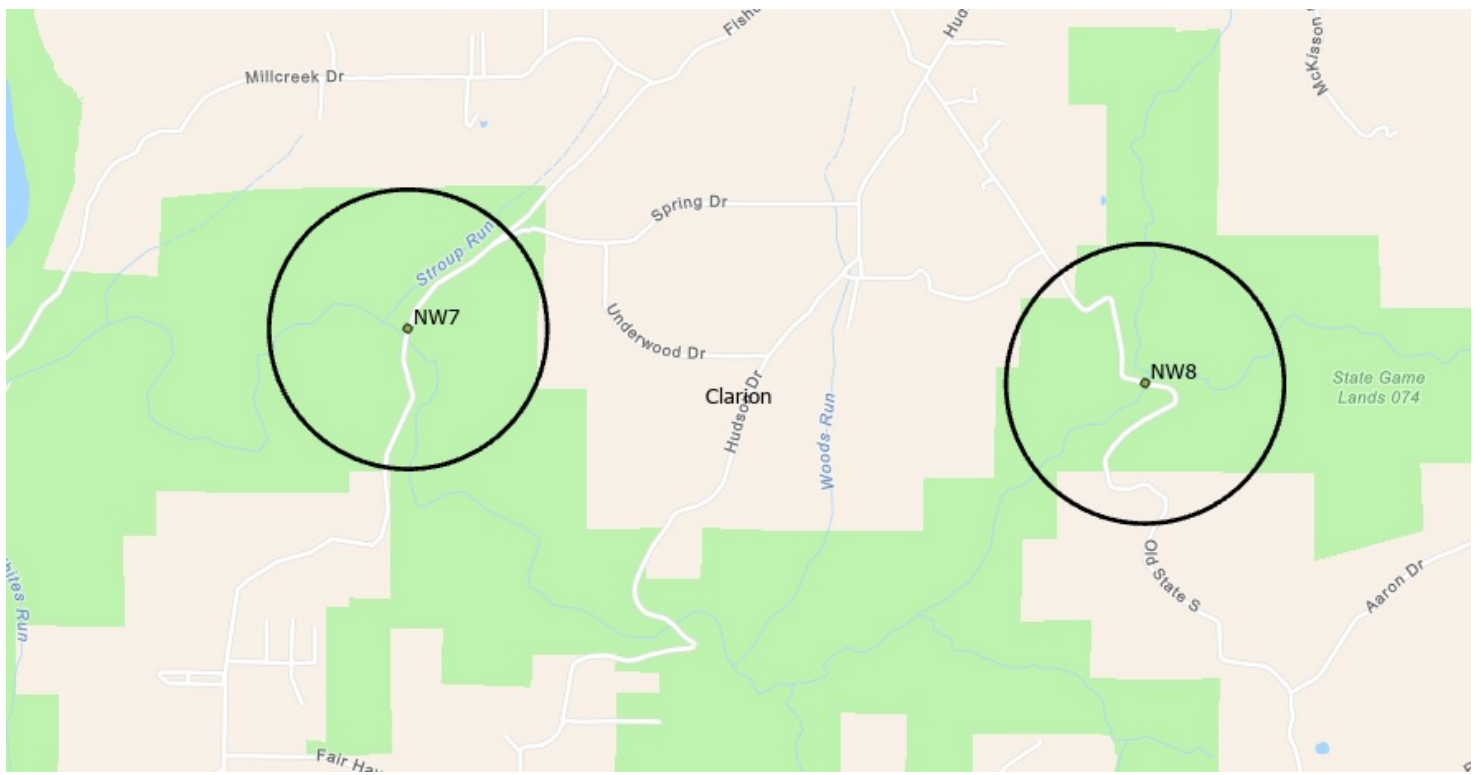


Figure 4. Two preselected points (NW7 & NW8) within SGL 074 (Clarion Co.) with associated 0.5-mile buffers. **NOTE:** areas that fall outside of State Game Land boundaries are NOT acceptable for this work.

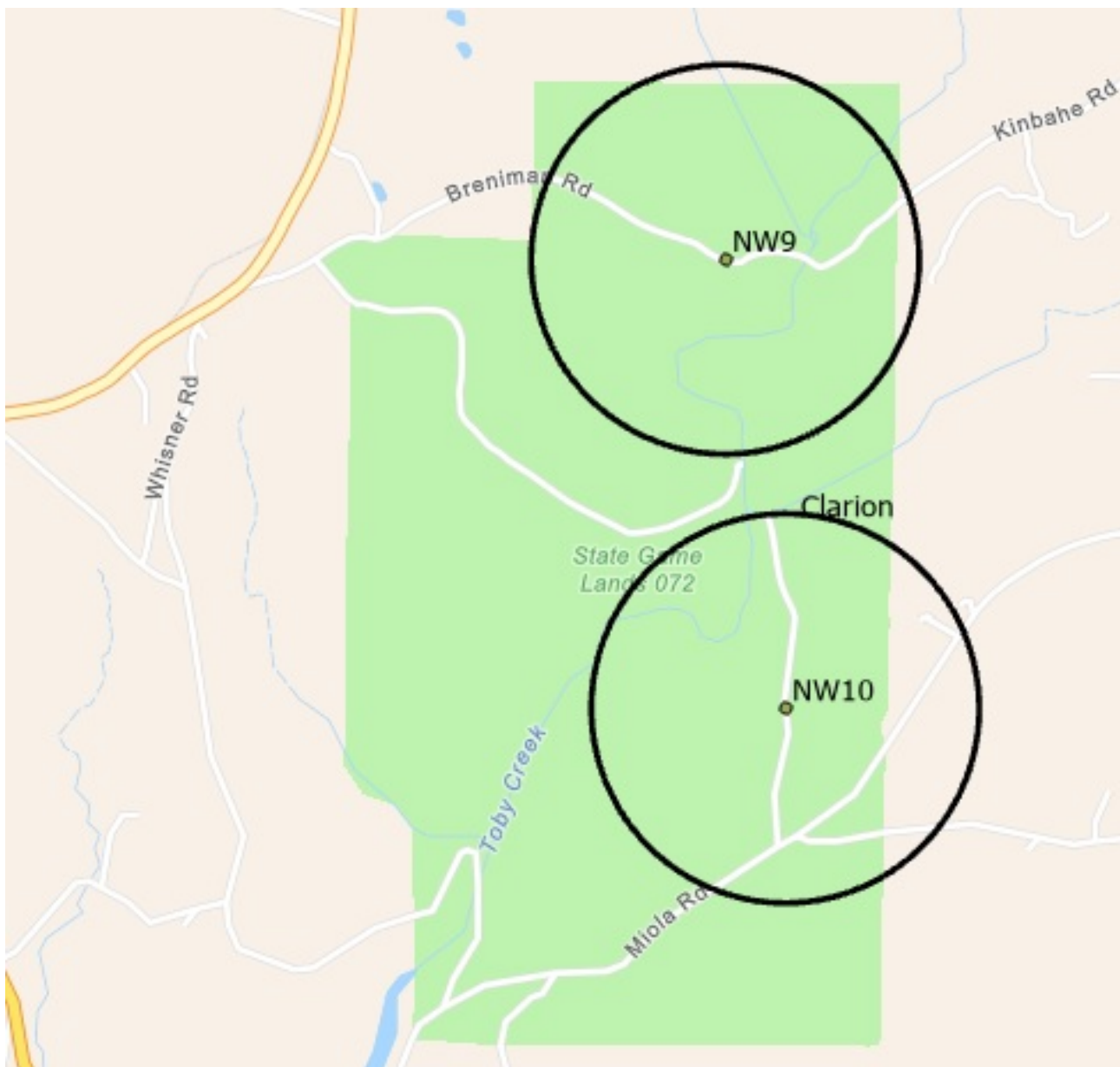


Figure 5. Two preselected points (NW9 & NW10) within SGL 072 (Clarion Co.) with associated 0.5-mile buffers.  
**NOTE:** areas that fall outside of State Game Land boundaries are NOT acceptable for this work.