

## INSTRUCTIONS

**If you are interested in volunteering with the Wisconsin Frog and Toad Survey, please first contact the Bureau of Natural Heritage Conservation so we can inform you if we are in need of volunteers in your area.** Our survey goal is two routes per county, if there are less than 2 routes being run in your county we will either assign you a previously established route or we will have you establish a new survey route. If you have been asked to set up a new WFTS route please follow the directions below.

### ESTABLISHING A NEW SURVEY ROUTE

1. Determine a route consisting of 10 wetland listening sites.

All listening sites must be easily accessible at night, preferably along roadsides. You do not need to be able to physically reach every stream, wetland, etc., but you do need to be close enough to each site that you are confident you will be able to hear every species calling. Do NOT choose sites that require trespassing on private lands. The route should extend no more than approximately 35 miles, and may be quite short (e.g., it may be contained within a particular State Wildlife Area, arboretum, or city), so long as the observer cannot hear the same individual frogs or toads from 2 different sites. Sites must be  $\geq 0.5$  miles apart. Routes should not overlap county boundaries.

Select a variety of wetland types that represents the range of breeding sites available. Consider large vs. small, open vs. shrubby vs. wooded, stagnant vs. flowing, permanent vs. temporary, natural vs. artificial, and remote vs. agricultural vs. urban sites. Do not avoid ponds that dry up during the year, for they are often very productive throughout the spring. Do avoid swift streams, and deep or denuded shores of lakes. Also avoid areas with heavy background noise such as busy streets or highways, certain industrial sites, or farms with barking dogs.

Cooperators sometimes discover the first year that one or more of the sites originally chosen turn out to be unsuitable breeding habitat, or are poor sites because of unforeseen background noise, access problems, etc... In these cases it is usually necessary to replace the problem site with a new site sometime after the first survey run, thus voiding the entire first year's monitoring data. To avoid this, it is recommended that you begin with 11 or 12 sites the first year and choose only the 10 most reliable sites for the permanent route. At the end of the first year, report results only for the 10 permanent sites. It is often beneficial to drive the route during the day or at night prior to actually conducting the survey to assess all 12 sites for suitability (e.g. traffic, background noise, site location).

2. Describe your route.

After choosing your sites, clearly and precisely mark the locations on a county map (provided upon request). We will then provide you with a set of topographic maps for your specific area of the county and a "Survey Route Description" form ("Survey Route Description" form, sample "Survey Route Description" form, and sample maps are located at the end of this manual). Mark the precise locations of your 10 sites on the topographic maps, and describe each listening point and wetland on the "Survey Route Description" form. This form should be precise enough that another observer could use only this form and conduct calling surveys from the exact same locations. Sites should be numbered in a convenient route sequence. Return the maps and route description with your completed data at the end of the field season.

3. Enlist one or more additional observers.

These observers should become familiar with the frog calls, route, and survey methods, and be able to run the route in the event that you are temporarily or permanently unable to do so. Please include their names and contact information on the data sheet.

## SURVEYING A ROUTE:

### 1. Obtain and review instructional materials and data sheets.

The primary, designated cooperator for each established route will automatically receive these materials in late March or early April each year. Please contact us if you have not received this information by April 7th. Packets will include:

- a) Cover letter
- b) Route description
- c) Route map (county)
- d) Route map (topographic)
- e) Survey Manual (includes instructions and natural history information)
- f) Field data sheet (2 copies)

### 2. Know the calls, phenology, and general ranges of Wisconsin anurans.

All cooperators are required to have listened to and learned the Wisconsin anuran calls prior to conducting their first survey. At no charge, new cooperators can learn calls by visiting the U.S. Geological Survey Frog Quiz Website:

USGS Frog Quiz

<http://www.pwrc.usgs.gov/frogquiz/index.cfm?fuseaction=main.lookup>

For more information, volunteers can view the Wisconsin Frog and Toad Survey's species videos to learn all of Wisconsin's anuran breeding calls as well as their ecology and statewide distribution:

Wisconsin Frog & Toad Survey Videos

<http://wiatri.net/inventory/frogtoadsurvey/WIfrogs/>

In addition, if cooperators would also like to receive a CD or cassette tape of "Wisconsin Frogs and Toads," this can be purchased through:

Madison Audubon Society  
1400 E. Washington Ave. #170  
Madison, WI 53703  
608-255-2473

[madisonaudubon.org/store/wisconsin-frogs-and-toads-soundtrack-and-guide](http://madisonaudubon.org/store/wisconsin-frogs-and-toads-soundtrack-and-guide)

New and experienced observers will find it helpful to review the calls periodically and to take recordings along during surveys to help identify uncertain calls. New observers can learn the calls gradually by starting with those species that may be calling during the early spring survey period (wood frog, boreal chorus frogs, spring peeper, northern leopard frog, and pickerel frog), followed by those that begin calling in late spring (American toad, gray treefrog, and Cope's gray treefrog), and finally by those species that begin to call during the summer (Blanchard's cricket frog, mink frog, green frog, and American bullfrog). It is highly recommended that new observers practice distinguishing calls in the field with the help of a more experienced observer.

This survey manual includes a "natural history" section that summarizes the geographic range, physical description, breeding habitat, breeding phenology, call, and status of each species in Wisconsin. Use this information to help determine which species are likely to occur in a given region, habitat, or season. Although it is entirely possible that you may find an unusually early or late singer, or a breeding population outside a species' previously documented range, you should be aware that these unusual

occurrences may require special scrutiny or verification. To help us document unusual species in your area, please audio record the calls and submit them for verification.

3. Run each route 3 times, once during each designated period.

The timing of the survey with the phenology of frog calling is essential. **Calling surveys must be conducted within the designated survey periods** (Table 1). Data collected from outside the designated survey periods are difficult to interpret and impossible to compare between years or areas. Additionally, all 10 sites on a route must be surveyed on the same evening for the data to be considered valid. Be sure to also consider minimum water temperatures, especially for the early spring survey period.

Table 1. Wisconsin frog calling survey periods.

Survey Period	Range of Dates	Minimum Water Temperature	Species Surveyed*
Early Spring	April 8-30	50°F	wood frog, boreal chorus frog, spring peeper, northern leopard frog, pickerel frog
Late Spring	May 20 - June 5	60°F	American toad, gray treefrog, Cope's gray treefrog
Summer	July 1-15	70°F	Blanchard's cricket frog, mink frog, green frog, American bullfrog

*\* The calling of these species peaks during the given survey period. These species are most commonly encountered during the given period, but may also be heard in other periods.*

4. Run surveys after dark, under favorable weather conditions.

Choose an evening when water temperatures are at or above the minimums stated above and when wind is less than 12 mph (wind code value of 0, 1, 2, or 3), however a wind speed of 7 mph or less is preferred (wind code value of 0, 1, or 2). Warm, cloudy evenings with little or no wind and high humidity (even drizzle) are ideal. However surveys should not be conducted during a steady rain. Humidity and cloud cover are not critical, but temperature is: a sudden drop in air temperature will cause most anurans to cease calling. If part way through a survey run you find that conditions deteriorate significantly (e.g., rain begins, temperature drops, or wind increases), stop the survey and rerun the entire survey (not just the sites missed on the first try) at the nearest opportunity within the survey period. All 10 sites on a route must be surveyed on the same evening for surveys to be valid.

5. Listen for calls at each site.

Approach a listening point so as to cause minimal disturbance. The arrival of a car or a person on foot may cause frogs to stop calling for a short time. If this occurs, wait until the frogs begin calling again to start your 5 minute survey. Listen for 5 minutes and record all calls audible from your listening point, not just those emanating from a particular pond, one side of the road, etc. Some calls may be drowned out by others, especially by the full chorus of spring peepers or chorus frogs. Where you suspect this to be the case, and after carefully listening and recording your initial data, you may try to silence the chorus by making a loud noise with the horn, car door, or your voice; and then listen for the less

conspicuous species as the calling gradually resumes. A tape recorder will enable you to record questionable situations that can be listened to and confirmed at a later time or date.

Where feasible, during the early spring survey period, place a thermometer in the water near where the frogs are calling (don't forget to take it when you leave that site!). Water temperatures should be taken at all locations where access to the water is convenient and is possible without trespassing.

6. Record your observations on the field data sheet.

Include route number, year, county, observers' names and addresses, date, time, weather conditions, temperatures, and additional comments. Additional comments may include information on noise levels, attempts to silence loud choruses, changes in habitat since previous visits, site observations, or additional species observed. Record total mileage (mi) and all volunteer hours (hr/min) that were accumulated for each of your three survey runs. This data will be used to track and summarize all volunteer contributions for the WFTS. At each site record the abundance value for each species heard, according to the call index (Table 2). For species not calling, do not record a 0, instead leave the space blank.

Table 2. Wisconsin frog call index.

Call Index	Criteria
1	Individuals can be counted; there is space between calls (no overlapping of calls).
2	Calls of individuals can be distinguished but there is some overlapping of calls.
3	Full chorus. Calls are constant, continuous, and overlapping; individual calls cannot be distinguished

7. Verify records of rare or extralimital occurrences.

Verification is required for all records of the endangered Blanchard's cricket frog and any species found outside its previously documented range as indicated by the range maps. Verification can be accomplished by: a) an audio recording, b) testimony of 2 experienced observers, or c) a photograph. After an observer has verified a species, future verification of that particular species in the area may not be required.

8. Return your completed data sheet(s) by August 15th.

Be sure to keep one copy of the field data sheet for your records (this is especially important if the data are lost in the mail). If you would like copies of other materials, please photocopy them, download information from the WFTS website (<http://wiatri.net/inventory/frogtoadsurvey/>), or request extra hard copies.

9. Important: Maintain one or more alternate observers.

These observers should be able to produce results comparable to yours in case you are not able to run the survey temporarily or permanently. The alternate(s) should accompany you on the survey periodically and be familiar with the frog calls, route, and survey methods.